Biological Resources Assessment

San Diego Gas & Electric Company

South Orange County Reliability Enhancement Project

Orange County, California

USGS Cañada Gobernadora, San Juan Capistrano,

San Clemente, and Dana Point Quadrangles

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Acronyms List

APMs	Applicant Proposed Measures
ACOE	United States Army Corps of Engineers
BCC	Birds of Conservation Concern
Camp Pendleton	United States Marine Corps Base Camp Pendleton
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFG	California Fish and Game
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CPUC	California Public Utilities Commission
CSS	coastal sage scrub
CWA	Clean Water Act
FE	federally endangered
FESA	Federal Endangered Species Act
FT	federally threatened
FP	fully protected
FWCA	Fish and Wildlife Conservation Act of 1980
GIS	Geographic Information Systems
GPS	Global Positioning System
HCP	Habitat Conservation Plan
kV	kilovolt
LSAA	Lake or Streambed Alteration Agreement
Manual	1987 Wetland Delineation Manual
MBTA	Migratory Bird Treaty Act
msl	Mean Sea Level
NCCP	Natural Community Conservation Plan
NMFS	National Marine Fisheries Service
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OHWM	ordinary high water mark
PEA	Proponent's Environmental Assessment
Proposed Project	South Orange County Reliability Enhancement Project
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SDG&E	San Diego Gas & Electric
SE	state endangered
SSC	Species of Special Concern
ST	state threatened
SWS	southern willow scrub
TRC	TRC Solutions, Inc.
USDA	United States Department of Agriculture

USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WL	watch listed
WUS	Waters of the United States

1.0 INTRODUCTION

The San Diego Gas & Electric Company (SDG&E) is a regulated public utility that provides electric service to three and a half million customers within a 4,100 square mile service area, covering parts of southern Orange County and San Diego County. The South Orange County Reliability Enhancement Project (Proposed Project) is intended to meet the area load growth and service reliability for approximately 118,000 customers (462 megawatts) within southern Orange County.

The purpose of this Biological Resources Assessment report is to document the findings of reconnaissance-level focused and biological surveys, analyze Proposed Project impacts, and outline mitigation measures to compensate for unavoidable impacts. This report will be included as a supplement to SDG&E's Proponent's Environmental Assessment (PEA) for the Proposed Project, and filed as part of its application for a Certificate of Public Convenience and Necessity submitted to the California Public Utilities Commission (CPUC). TRC Solutions, Inc. (TRC) prepared this report on behalf of SDG&E.

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2.0 PROPOSED PROJECT DESCRIPTION

The Proposed Project will involve rebuilding the existing 138/12 kilovolt (kV) Capistrano Substation with a new 230/138/12kV substation, conducting minor alterations to the existing Talega Substation, and bringing two new 230kV transmission lines into the southern Orange County area by replacing an existing 138kV transmission line between the Talega and Capistrano Substations. The transmission line portion of the Proposed Project is approximately eight miles in length. As shown in Figure 1, Project Overview Map, the Proposed Project components are primarily located in portions of the cities of San Juan Capistrano and San Clemente, as well as unincorporated Orange County, and the United States Marine Corps Base Camp Pendleton (Camp Pendleton). This Proposed Project has an anticipated in-service date of November 2017. The following sections describe each segment in more detail.

2.1 CAPISTRANO SUBSTATION

The existing Capistrano Substation site is 6.4 acres and is located within an urbanized area in the City of San Juan Capistrano. The Proposed Project entails rebuilding the existing Capistrano Substation to a new combined bulk power transmission and distribution substation (230/138/12kV). The new substation will be named the San Juan Capistrano Substation.

This segment of the Proposed Project will involve:

- Replacement of the aging and obsolete 138/12kV substation that currently exists on the Capistrano Substation site;
- Addition of a new 230kV gas insulated substation; and
- Rebuilding and expanding the existing 12kV distribution substation and the 138kV transmission substation, utilizing gas insulated technology (138kV only).

2.2 TALEGA SUBSTATION

The existing facilities at the Talega Substation are located on a 6.1 acre property located on Camp Pendleton. The existing facility is a 230/138/69kV bulk transmission substation. This segment of the Proposed Project will involve:

- Connection of one new 138kV and two new 230kV transmission line to the existing substation;
- Rearranging the 138kV and 230kV transmission line configurations and eliminating two 230/138kV transformer banks; and
- Disconnection of one 230kV transmission line.

2.3 TRANSMISSION LINES

The Proposed Project will involve the installation of new 69kV, 138kV, and 230kV structures, overhead conductor and underground cable, and removal of existing transmission structures. All transmission line work will be completed within SDG&E's existing right-of-way (ROW) between the Capistrano Substation and the Talega Substation, as well as within small portions of acquired additional ROW near the Talega Substation and Rancho San Juan development. For the

purposes of this discussion, the transmission line work associated with the Proposed Project has been divided into four segments which are discussed in more detail below.

2.3.1 Segment 1 – San Juan Capistrano Substation to Rancho San Juan

The San Juan Capistrano Substation to Rancho San Juan segment of the Proposed Project will involve:

- Installation of 2.66 miles of new 230kV double circuit overhead transmission line;
- Removal of 20 138kV wood transmission structures, and 11 steel 138kV structures;
- Installation of 16 new 230 kV steel structures; and
- Installation of approximately 1,400 feet of 138kV underground transmission line.

2.3.2 Segment 2 – Rancho San Juan

The Rancho San Juan segment of the Proposed Project will involve:

- Installation of approximately 0.4 mile of two separate 230kV underground cable system in conduit packages;
- Installation of four new 230kV steel cable riser structure;
- Removal of two existing 138kV steel cable riser structures; and
- Replacement of one existing 138kV double-circuit steel cable riser structure.

2.3.3 Segment 3 – Rancho San Juan to Talega Hub

The Rancho San Juan to Talega Hub segment of the Proposed Project will involve:

- Installation of approximately 4.2 miles of new 230kV overhead transmission line;
- Removal of approximately 32 138kV wood structures; and
- Installation of 22 new 230kV double-circuit steel structures.

2.3.4 Segment 4 – Talega Hub to Talega Substation

The Talega Hub to Talega Substation segment of the Proposed Project will involve:

- Installation of approximately 3,230 feet of new 230kV overhead transmission lines;
- Relocation of 138kV and 69kV lines;
- Removal of 13 69kV wood structures and replaced with nine steel structures;
- Removal of 21 138kV wood structures, and two 138kV steel structures;
- Installation of 15 new 138kV steel structures; and
- Removal of one 230kV steel structure, and installation of eight 230kV steel structures.

2.4 CONSTRUCTION AREAS AND TEMPORARY IMPACT AREAS

2.4.1 Access Roads

Some new spur roads may be required to access the new structure sites. These roads would be graded and will generally be 14 feet wide for straight sections and up to 20 feet wide at curves. Since the Proposed Project will follow an existing transmission corridor, construction access to most new structure sites will be available by way of existing access roads.

2.4.2 Temporary Impact Areas

Temporarily disturbed areas include materials storage and staging areas, as well as pull and tension sites, and splice sites. SDG&E will make attempts to locate previously disturbed areas along the route to temporarily store materials and stage equipment. The staging areas will generally be approximately two acres in size and will only be used temporarily during construction. SDG&E will also utilize existing substations and other properties to store materials and equipment. Some of these areas may be outside of the SDG&E ROW.

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3.0 REGULATORY BACKGROUND

3.1 FEDERAL REGULATIONS

3.1.1 Federal Endangered Species Act

The United States Congress passed the Federal Endangered Species Act (FESA) in 1973. FESA protects plants and wildlife that are listed as "endangered" or "threatened" by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). It also requires the evaluation of effects to "proposed" and "candidate" species. Section 9 of FESA prohibits the "take" of endangered wildlife, where take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 CFR Section 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging-up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 USC 1538). Under Section 7 of FESA, federal agencies are required to consult with the USFWS and/or NMFS if their actions, including permit approvals or funding, could adversely affect an endangered plant or wildlife species or its habitat, or could adversely affect designated critical habitat. Through consultation and the issuance of a biological opinion, the USFWS and/or NMFS may issue an "incidental take statement" allowing take of the species, provided the action will not jeopardize the continued existence of any federally listed species or result in the destruction or adverse modification of habitat of such species. Section 10 of FESA provides for issuance of incidental take permits to private parties without a federal nexus provided a Habitat Conservation Plan (HCP) is developed.

3.1.2 Federal Clean Water Act

The purpose of the Clean Water Act (CWA) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into Waters of the United States (WUS) without a permit from the United States Army Corps of Engineers (ACOE). In addition, Section 401 of the CWA (33 USC 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into WUS, to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards. A Water Quality Certification or waiver pursuant to Section 401 is required for Section 404 permit actions, and is issued by the Regional Water Quality Control Board (RWQCB).

"Discharges of fill material" are defined as the addition of fill material into WUS including, but not limited to, the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; or fill for intake and outfall pipes and subaqueous utility lines (33 CFR Section 328.2[f]). The definition of WUS includes rivers, streams, estuaries, the territorial seas, ponds, lakes, mudflats, sandflats, sloughs, wet meadows, and wetlands. Boundaries between jurisdictional waters and uplands are determined in a variety of ways depending on which type of water is present. A brief overview of methods for delineating wetlands and non-tidal waters are described below.

Wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR Section 328.3[b]). The methodology set forth in the 1987 Wetlands Delineation Manual (Manual) (ACOE, 1987) and the Arid West Supplement (ACOE, 2006, 2008) generally require that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics, often referred to as a 'three-parameter wetland.'

The lateral extent of non-tidal waters is determined by delineating the ordinary high water mark (OHWM) (33 CFR Section 328.4(c) (1)). The OHWM is defined by the ACOE as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (33 CFR Section 328.3[e]).

3.1.3 Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA), first enacted in 1916, prohibits any person, unless permitted by regulation, to:

> *…pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatsoever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention . . . for the protection of migratory birds . . . or any part, nest, or egg of any such bird (16 USC 703).*

As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal.

The list of migratory birds includes nearly all bird species native to the United States. The Migratory Bird Treaty Reform Act of 2004 further defined species protected under the act and excluded all non-native species. The statute was extended in 1974 to include parts of birds, as well as eggs and nests. Thus, it is illegal under the MBTA to directly kill, or destroy a nest of, nearly any bird species, not just endangered species. Activities that result in removal or destruction of an active nest (a nest with eggs or young being attended by one or more adults) would violate the MBTA.

3.1.4 Birds of Conservation Concern

Birds of Conservation Concern (BCC) is a USFWS list of bird species identified to have the highest conservation priority, and with the potential for becoming candidates for listing as federally threatened or endangered. The chief legal authority for BCC is the Fish and Wildlife Conservation Act of 1980 (FWCA). Other authorities include the FESA, the Fish and Wildlife Act of 1956, and the Department of the Interior U.S Code (16 U.S.C. § 701). The 1988 amendment to the FWCA (Public Law 100-653, Title VIII) requires the Secretary of the Interior,

through the USFWS, to "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973" (USFWS, 2008a).

3.2 STATE REGULATIONS

3.2.1 California Environmental Quality Act Significance Criteria

Section 15064.7 of the *California Environmental Quality Act (CEQA) Guidelines* encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the Initial Study checklist contained in Appendix G of the *CEQA Guidelines*. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if a project would result in any of the following:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game (CDFG) or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFG or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted HCP, Natural Community Conservation Plan (NCCP), or other approved local, regional or state HCP.

An evaluation of whether or not an impact on biological resources would be significant must consider both the resource itself and how that resource fits into a regional or local context. Significant impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA. This is necessary because although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish, or result in the permanent loss of, an important resource on a population-wide or region-wide basis.

3.2.2 California Endangered Species Act

The State of California enacted the California Endangered Species Act (CESA) in 1984. CESA directs agencies to consult with CDFG on projects or actions that could affect listed species, directs CDFG to determine whether jeopardy would occur, and allows CDFG to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. CESA generally parallels the main provisions of FESA, but unlike its federal counterpart, CESA applies the "take" prohibitions to species proposed for listing (called "candidates" by the State). "Take" is defined in Section 86 of the California Fish and Game (CFG) Code as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Section 2080 of the CFG Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Under CFG Code Section 2081, CESA allows CDFG to authorize exceptions to the state's prohibition against "take" of a listed species (except for designated "fully protected species") if the "take" of a listed species is incidental to carrying out an otherwise lawful project that has been approved under CEQA. Section 2080.1 of the CFG Code allows for "take" once an applicant obtains a Federal Incidental Take Statement, submits it to the CDFG Director in writing, and receives a confirmed determination that the federal statement is "consistent" with CESA (a Consistency Determination letter). There is a 30-day window for issuance of a Consistency Determination letter. If, however, the Federal Incidental Take Statement is not determined to be consistent with CESA, then a State Incidental Take Permit under Section 2081(b) of the CFG Code must be applied for. Both sections 2081 and 2080.1 require that take be minimized and fully mitigated.

3.2.3 California Fully Protected Species

The State of California first began to designate "fully protected" (FP) species prior to the creation of CESA and FESA. Lists of FP species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, amphibians and reptiles, birds, and mammals. Most FP species have since been listed as threatened or endangered under CESA and/or FESA. The regulations that implement the Fully Protected Species Statute (CFG Code Section 4700) state that FP species may not be taken or possessed at any time. Furthermore, CDFG prohibits any state agency from issuing incidental take permits for fully protected species, except for necessary scientific research.

In September 2011, the California Legislature sent the Governor legislation authorizing CDFG to permit the incidental take of 36 fully protected species pursuant to an NCCP approved by CDFG (Senate Bill 618 [Wolk]). The legislation gives FP species the same level of protection as is provided under the NCCP Act for endangered and threatened species (CFC Code § 2835). The NCCP Act, enacted in the 1990s, authorizes the incidental take of species "whose conservation and management" is provided for in a conservation plan approved by CDFG.

3.2.4 California Species of Special Concern

In addition to formal listing under FESA and CESA, species receive additional consideration by CDFG and lead agencies during the CEQA process. Species that may be considered for review are included on a list of "Species of Special Concern" (SSC) developed by CDFG. The list tracks species in California whose numbers, reproductive success, or habitat may be in decline.

3.2.5 California Fish and Game Code for Birds of Prey

Section 3503.5 of the CFG Code states that it is:

> *…unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.*

Disturbance activities that result in abandonment of an active bird-of-prey nest in areas adjacent to the disturbance may also be considered a violation of the CFG Code.

3.2.6 California Native Plant Protection Act and California Native Plant Society

The California Native Plant Protection Act of 1977 (CFG Code Sections 1900-1913) affords the CFG Commission the authority to designate native plants as endangered or rare and protects such endangered or rare plants from take. In addition, plants that are not state-listed, but meet the standards for listing, are also protected under CEQA (*CEQA Guidelines, Section 15380*). The California Native Plant Society (CNPS) maintains a list of plant species native to California with low population numbers, limited distribution, or that are otherwise threatened with extinction. Potential impacts to populations of CNPS listed plants receive consideration under CEQA review. Typically, special status plants are considered those on lists 1A, 1B, and 2. The definitions for each of the CNPS listings are below:

- List 1A: Plants presumed Extinct in California
- List 1B: Plants Rare, Threatened, or Endangered in California and elsewhere
- List 2: Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere
- List 3: Plants about which we need more information — A Review List
- List 4: Plants of limited distribution — A Watch List

3.2.7 California Lake and Streambed Alteration Program

Sections 1600 through 1616 of the CFG Code require that a Lake and Streambed Alteration Agreement (LSAA) Program Notification Package be submitted to CDFG for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." CDFG reviews the proposed actions and, if necessary, provides the applicant with a proposal for measures to protect affected fish and wildlife resources. The final proposal on which CDFG and the applicant agree is an LSAA signed by both parties. Often, projects that require an LSAA also require a permit from the ACOE under Section 404 of the CWA and the RWQCB under Section 401 of the CWA. In these instances, the conditions of the Section 404/401 permits and the LSAA may overlap.

3.3 LOCAL REGULATIONS

3.3.1 SDG&E Subregional Natural Community Conservation Plan

In December 1995, the USFWS and the CDFG approved *SDG&E's Subregional Natural Community Conservation Plan* (*SDG&E Subregional NCCP*), developed in coordination with such agencies, that addresses potential impacts to sensitive resources associated with SDG&E's ongoing installation, use, maintenance, and repair of its gas and electric systems, and typical expansion to those systems throughout much of SDG&E's existing service territory (SDG&E Subregional NCCP, 1995a). As a part of the *SDG&E Subregional NCCP*, SDG&E has been issued incidental take permits (Permit PRT-809637) by the USFWS and the CDFG for 110 Covered Species. The *SDG&E Subregional NCCP* was developed by following the multiple species and habitat conservation planning approach. Even with the *SDG&E Subregional NCCP*, SDG&E's goal is to avoid "take" of Covered Species whenever possible and to implement measures to minimize and mitigate any take to the maximum extent possible. The *SDG&E Subregional NCCP* includes mitigation measures and operational protocols designed to avoid potential impacts and to provide appropriate mitigation where such impacts are unavoidable, to ensure the protection and conservation of federal and state listed species and Covered Species. The Proposed Project falls within the area in which SDG&E's utility operations are governed by *SDG&E's Subregional NCCP*. For this Proposed Project, SDG&E has adopted the mitigation measures and operational protocols contained in the *SDG&E Subregional NCCP* and project-specific Applicant Proposed Measures (APMs).

SDG&E is a public utility whose public activities are regulated by the CPUC. As described in the *SDG&E Subregional NCCP Memorandum of Understanding*, local governments are precluded from regulating public utilities through their zoning laws, land use laws, ordinances and other police powers (including other NCCPs or HCPs) by the exclusive jurisdiction of the CPUC. Therefore, the *SDG&E Subregional NCCP* is independent of other NCCP/HCPs and the Covered Species for which Incidental Take is authorized under the Take Authorizations is not dependent upon the implementation of such plans (SDG&E, 1995b)."

3.3.2 Southern Orange County Subregional Natural Community Conservation Plan

The Southern Orange County Subregional Natural Community Conservation Plan *(Southern Orange County Subregional NCCP*) is a comprehensive, long-term HCP developed to provide conservation for multiple species and the preservation of natural vegetation communities in

southern Orange County (County of Orange, 2006). The *Southern Orange County Subregional NCCP* serves as an NCCP under the NCCP Act of 2001, a Master Services Alteration Agreement under Sections 1600 through 1616 of the CFG Code, and as well as a HCP pursuant to Section 10(a)(1)(B) of the FESA of 1973. The *Southern Orange County Subregional NCCP* involves three Participating Landowners: the County of Orange, Rancho Mission Viejo, and Santa Margarita Water District. The *Southern Orange County Subregional NCCP* area encompasses approximately 132,000 acres, including Rancho Mission Viejo land, as well as the Orange County property in the vicinity of Cleveland National Forest, the cities of Mission Viejo, San Juan Capistrano, and San Clemente.

The *Southern Orange County Subregional NCCP* creates a preservation area totaling 32,818 acres, including 16,536 acres of newly dedicated conservation lands. The entire preservation area will be managed to promote wildlife species. In exchange for the creation and management of the preserve area, USFWS and CDFG granted "Take Authorization" for otherwise lawful actions, such as public and private development, that may incidentally take or harm individual species or their habitat inside of the preservation area. The *Southern Orange County Subregional NCCP* covers 32 special status animal species and 10 vegetation communities, including seven federally listed species. In addition, the *Southern Orange County Subregional NCCP* has negotiated with CDFG for the permanent impacts of approximately 186 acres and temporary impacts of 80 acres of CDFG Jurisdiction.

The Proposed Project traverses through areas within the *Southern Orange County Subregional NCCP*, as shown in Figure 2, Local Habitat Conservation Plan. The Proposed Project is will occur within and follow the requirements of the *SDG&E Subregional NCCP*; therefore, no conflicts are expected with the *Southern Orange County Subregional NCCP*. If potential conflicts occur with the *Southern Orange County Subregional NCCP*, the Proposed Project will follow the requirements of the *SDG&E Subregional NCCP*. The *SDG&E Subregional NCCP* is independent of other NCCP/HCPs; and therefore is not dependent upon the implementation of such plans and is not superseded by other plans (SDG&E, 1995b). SDG&E will coordinate with the appropriate authorities during the Proposed Project approval process to ensure that the impacts, mitigation measures, and operational protocols are implemented for the Proposed Project under the *SDG&E Subregional NCCP*.

3.3.3 Other Conservation Plans

The Proposed Project traverses through areas with other adopted conservation plans and associated mitigation or preservation areas, including the Talega and Rancho San Juan developments. The Proposed Project is anticipated to occur within SDG&E's ROW; therefore no conflicts should occur with any other conservation plans or mitigation/preservation areas. . If potential conflicts occur with mitigation or preservation areas, the *SDG&E Subregional NCCP* is independent of other NCCP/HCPs; and therefore is not dependent upon the implementation of such plans and is not superseded by theirs (SDG&E, 1995b). SDG&E will coordinate with the appropriate authorities during the Proposed Project approval process to ensure that the impacts, mitigation measures, and operational protocols are implemented for the Proposed Project under the *SDG&E Subregional NCCP*.

3.3.4 City of San Juan Capistrano Tree Ordinance

The city of San Juan Capistrano's Municipal Code (Section 9-2.349) establishes regulations for removal of trees within their boundaries. The ordinance regulates the removal of trees over six inches in diameter measured three feet above grade. Tree removal permits are required for new development projects, utility easements, common landscape areas, nonresidential projects, city of San Juan Capistrano facilities and ROW, individual residential lots, and heritage trees.

Tree removals requiring city of San Juan Capistrano Community Development Department review and action take approximately one to three weeks. Trees requiring Planning Commission review will require one to three months for final action. Approved tree removal permits expire six months from the date of approval. If the permit expires and trees covered by the permit have not been removed, a new tree removal permit application is required

3.3.5 City of San Clemente Tree Ordinance

The city of San Clemente ordinance, City Owned Trees: Protection and Administration (Policy 301-2-1), provides the mechanism for protecting the community's urban forest and establishes a policy for managing trees owned by the city of San Clemente. The ordinance protects street trees and all trees planted on city of San Clemente land. This includes all trees at beaches, parks, golf courses, and conditionally those along public streets. This definition extends to trees that exist on any developed or undeveloped property owned and maintained by the city of San Clemente. Replacement of any trees removed will be considered and is at the discretion of the San Clemente Director of Beaches, Parks and Recreation.

4.0 METHODS

4.1 LITERATURE REVIEW

Prior to performing the biological field surveys, documentation relevant to the Proposed Project and surrounding area was reviewed, and a special status species list was prepared for the Proposed Project.

4.1.1 Special Status Species

A special status species list was prepared from record searches for the United States Geological Survey (USGS) 7.5-minute Cañada Gobernadora, San Juan Capistrano, San Clemente, and Dana Point quadrangles within three miles of the Proposed Project. Special status species include all federally and state listed endangered and threatened species, candidates for listing, species proposed for listing, FP species, SSC species), species listed as rare or endangered by CNPS, and special status species that are identified under the *SDG&E Subregional NCCP* that had ranges within Orange County and suitable habitat was present along the Proposed Project alignment, including Covered Species. A sensitive species was considered a potential inhabitant of the Proposed Project, if its known geographical distribution either encompassed part of the Proposed Project or was within the vicinity of the Proposed Project (within approximately three miles), and its general habitat requirements (e.g., roosting, nesting, or foraging habitat, specific soil type, permanent water source) were within the boundaries of the Proposed Project. Sources of information that were used to compile the species list included the CDFG California Natural Diversity Data Base (CNDDB, 2011), the CNPS online inventory (CNPS, 2011), and the *SDG&E Subregional NCCP Covered Species List* (SDG&E, 1995; Pages 43-45 and Table 3.1). A complete list of species assessed in included as Appendix A, CNDDB and CNPS Special Status Species Table.

4.1.2 Critical Habitat

The USFWS critical habitat areas for listed species were searched using Geographic Information Systems (GIS) shapefiles provided by the USFWS within three miles of the Proposed Project alignment.

4.1.3 Drainages and Other Water Features

The potential presence of drainages and other water resources was assessed by reviewing USGS topographic maps to identify any blue line streams (USGS, 1975,1981,1995, 1997), searching the USFWS National Wetlands Inventory (NWI) (USFWS, 2011), and by reviewing recent aerial images of the Proposed Project (Google, 2011).

4.1.4 Soils

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) online Soil Survey (NRCS, 2011) was used to assess soils mapped along the Proposed Project alignment, and GIS data was used to create a map.

4.2 FIELD SURVEYS

Field surveys were conducted in appropriate habitat within a 500-foot corridor, including approximately 250 feet on either side of the proposed transmission line alignment and substation boundaries (herein referred to as the Proposed Project survey area). The Proposed Project alignment will follow an existing SDG&E ROW, and substation activities will take place within the existing Capistrano and Talega Substation facilities. Some Proposed Project activities, such as staging areas or pull/tension sites, may occur outside of the existing ROW or facilities. The following sections describe the methods used for reconnaissance-level and habitat assessment surveys, rare plant surveys, and focused species surveys. In all instances, resources were mapped in the field using a Trimble handheld Global Positioning System (GPS) and/or drawn on a 200 scale color aerial photograph.

4.2.1 Reconnaissance-level and Habitat Assessment Surveys

Reconnaissance-level surveys and a general habitat assessment were conducted within the Proposed Project survey area by TRC Biologists Matthew Willis and Paula Potenza on February 26 through February 28, 2008 and March 25, 2008 to map existing vegetation communities and assess the potential for sensitive or listed plant and wildlife species, including species covered under the *SDG&E's Subregional NCCP*. Additional habitat assessments were conducted By TRC Biologist Ceri Williams-Dodd on September 28 through 30, October 11 through 12, and November 2, 2011. In addition TRC Biologist Travis Kegel conducted surveys on December 28 and 29, 2011, and February 16 and 28, 2012. Surveys were conducted using vehicles and on foot along access roads and around proposed tower locations. Meandering transects were also conducted on foot through the surrounding habitat within the 500-foot survey corridor. A meandering transect is a type of survey search pattern that minimizes overlap and maximizes survey coverage in a given area.

Suitable habitat for special status species was determined by the presence of diagnostic habitat elements, including but not limited to appropriate vegetation communities. The habitat assessment surveys were conducted along the Proposed Project in areas supporting vegetation. Therefore, in some case, the survey corridor was less than 500 feet (and sometime more due to staging areas outside) wide due to the presence of residential and commercial development. The assessment surveys determined which wildlife or plant species were present, had the potential to occur, or would require USFWS or CDFG protocol-level surveys. Animal species were either observed directly, with the aid of binoculars, or detected from calls, tracks, scat, or other sign.

Vegetation communities were recorded on aerial photographs and GPS, and were further refined during rare plant surveys. Mapped data was then digitized or downloaded in GIS. The vegetation mapping was based upon descriptions provided by Sawyer and Keeler-Wolf (1995 and 2009), *SDG&E's Subregional NCCP* Section 3.1 and Holland (1986).

4.2.2 Sensitive Status Plant Species and Vegetation Communities

Field surveys for sensitive plants were conducted in accordance with the standardized guidelines issued by the USFWS (2000), CDFG (2009), and the CNPS (2001). The surveys were intended to determine the presence/absence of listed and special status plant species within the Proposed Project survey area. Surveys for sensitive plant species were conducted on April 15, 17, and 18,

2008 by TRC biologist Marc Doalson and on April 19, 20, 21, 24, and 25, 2010 by TRC Biologists Darren Burton and Ken McDonald. The Proposed Project survey area was walked on foot, except in developed or residential areas. Meandering transects were performed, and all plants encountered were identified to a level necessary to ensure detection of sensitive species. The plant nomenclature used follows *The Jepson Manual: Higher Plants of California* (Hickman, 1993). A complete list of plant species observed during the surveys is provided as Appendix B.

4.2.3 Drainages and Other Water Features

Suspected jurisdictional areas identified during the literature review from aerial and USGS topographic maps were field checked for the presence of definable channels and/or wetland vegetation, soils and hydrology. Field checks were not limited to suspected jurisdictional areas identified during the literature review; the entire Proposed Project survey area was assessed for the presence of drainages, wetlands, and vernal pools. This involved physically identifying hydrologic, vegetative, and geomorphic characteristics within the Proposed Project survey area in order to delineate potentially jurisdictional waters and wetlands.

WUS were identified pursuant to criteria outlined in Section 401 and Section 404 of the CWA, including but not limited to the presence of an OHWM and connection to a downstream jurisdictional water body. The OHWM was determined by observing signs of flow including but not limited to shelving, drift lines, and disturbed vegetation. "Waters of the State" regulated by CDFG were identified pursuant to criteria outlined in Section 1600 of the CFG Code, including the presence of a defined bed and bank and any associated vegetation. Drainages that appeared to meet the criteria for "Waters of the State" were considered potentially jurisdictional, as any determination is subject to verification by the regulatory agencies.

Potential wetland habitats on the site were evaluated using the methodology set forth in the ACOE Manual (ACOE, 1987) and the *Regional Supplement to the Wetland Delineation Manual for the Arid West Region* (ACOE, 2006 and 2008). This involved digging pits to inspect soils in suspected wetland areas. Soil pits were generally at locations where hydrophytic vegetation was observed, or if other wetland indicators were observed or suspected. Soils were assessed for hydric indicators, texture, consistency, and color. The color was assessed using a Munsell chart and then cross-referenced with hydric soil lists. The locations of the soil pits were recorded using a handheld GPS unit. Hydrological and vegetation conditions were recorded for each soil pit using ACOE wetland delineation data forms. The wetland indicator status of the plants was determined using *The National List of Plant Species that Occur in Wetlands* (USFWS, 1998a).

Fieldwork for the delineation was conducted in May and July 2010 and December 2011 by TRC biologists Darren Burton, Ken McDonald, Travis Kegel, and Lauralyn K. Jensen. While in the field, the jurisdictional areas (lengths and widths) were recorded onto a 200-scale color aerial photograph using visible landmarks and/or were mapped with a Garmin e-trex GPS hand-held unit. Field data was then digitized using GIS to determine acreages. Additional details on the methodology are provided in the Jurisdictional Waters and Wetlands Delineation prepared for the Proposed Project included as Appendix C of this report.

4.2.4 Wildlife Surveys

Some of the vegetation communities within the Proposed Project survey area provide habitat for one or more of the special status species known to occur or with the potential to occur in the Proposed Project area. The region provides habitat for a number of federally endangered (FE), federally threatened (FT), state endangered (SE), and state threatened (ST) species. Appropriate habitat for the coastal California gnatcatcher (FT, SSC), least Bell's vireo (*Vireo bellii pusillus*, FE, SE) and southwestern willow flycatcher (*Empidonax traillii extimus*, FE, SE) was identified within the Proposed Project survey area. USFWS protocol-level surveys were therefore conducted in 2008 and 2010. Focused surveys for the Arroyo toad (*Bufo californicus*) (FE, SSC) were also conducted in 2010 to determine whether suitable breeding or upland habitat for the species was present in the Proposed Project survey area. Additional details on these surveys are provided below.

4.2.4.1 Coastal California Gnatcatcher

TRC conducted surveys for the coastal California gnatcatcher in 2008 and 2010. Permitted TRC biologists Paula Potenza (Permit No. TE-037508-1) and Vanessa Tisdale (Permit No. TE-163994-0) conducted surveys in 2008 with the aid of additional biologists under the direct supervision of an authorized biologist. The additional biologists are also listed under Permit No. TE-037508-1. Paula Potenza and supervised biologists repeated the surveys in 2010. Surveys for the coastal California gnatcatcher were conducted according to the *USFWS Coastal California Gnatcatcher Presence/Absence Survey Guidelines* for NCCPs (USFWS, 1997). Following this protocol, a minimum of three surveys were conducted at least one week apart. Only suitable coastal California gnatcatcher habitat, consisting of coastal sage scrub (CSS) and disturbed CSS, was surveyed. All focused surveys occurred within the coastal California gnatcatcher breeding season (March 15 through June 30). Surveys were often spread over more than one day to cover all suitable habitats, and each area surveyed had a different survey window due to staggered start times.

All surveys were conducted between approximately 6:00 a.m. and 12:35 p.m. Weather conditions during the surveys consisted of temperatures from 43 to 74 degrees Fahrenheit, winds from 0 to 10 miles per hour, and cloud cover from 0 to 100 percent. During periods of excessive heat, wind, rain, fog, or other inclement weather, surveys were either halted or postponed. Taped vocalizations and "pishing" sounds were used to initially locate gnatcatchers. Taped calls were not used to elicit or prompt further behaviors from birds once identified. Surveys were conducted by slowly walking survey routes and no more than 100 acres of suitable coastal California gnatcatcher habitat were surveyed per biologist per day. A detailed description of the methodology is included in the 2008 and 2010 survey reports provided as Appendices D (2008 Coastal California Gnatcatcher Survey Report) and E (2010 Coastal California Gnatcatcher Survey Report).

4.2.4.2 Least Bell's Vireo

TRC conducted protocol surveys for the least Bell's vireo in 2008 and 2010. TRC biologists Paula Potenza and Vanessa Tisdale conducted surveys in 2008, and Paula Potenza conducted surveys in 2010. The surveys were conducted according to the USFWS *Least Bell's Vireo Presence/Absence Survey Protocol* (USFWS, 1992) with modifications pursuant to the *SDG&E*

Subregional NCCP. The *SDG&E Subregional NCCP* states that "in situations where more than one visit may be necessary to identify a given species, such as certain birds, no more than three site visits shall be required" (*SDG&E's Subregional NCCP*, Section 7.1.3). As such, three surveys for least Bell's vireo occurred per habitat area. The surveys occurred within the least Bell's vireo breeding season (April 10 through July 31). Surveys were conducted in appropriate habitat for the species which included all riparian habitats within the Proposed Project survey area. Least bell's vireos were identified by calls/songs and by sight, and were watched and followed only if identification and location needed to be confirmed.

All surveys were conducted between approximately 6:45 a.m. and 11:35 a.m. Weather conditions during the surveys consisted of temperatures from 48 to 86 degrees Fahrenheit, winds from 0 to 6 miles per hour, and cloud cover from 0 to 100 percent. During periods of excessive heat, wind, rain, fog, or other inclement weather, surveys were halted or postponed. Surveys were conducted by slowly walking survey routes along the edges and through riparian vegetation. No more than 3 linear kilometers or 125 acres of least Bell's vireo habitat were surveyed per biologist per day. A detailed description of the methodology is included in the survey report provided as Appendix F, 2010 Least Bell's Vireo (*Vireo bellii pusillus*) Survey Result.

4.2.4.3 Southwestern Willow Flycatcher

Protocol surveys for southwestern willow flycatcher were conducted by TRC biologist Paula Potenza in 2008, and by Peter Bloom (Bloom Biological, Inc., Permit No. TE787376) in 2010. The most recent surveys were conducted on May 15 and June 5, 11, 17, and 25, 2010 in three locations (see Appendix G, Results of Protocol Surveys for Federally-Endangered Arroyo Toad and Southwestern Willow Flycatcher) that contained potential breeding habitat. The surveys were conducted according to the USFWS standard protocol as outlined within Sogge, *et. al.* (2010). Surveys included the use of taped southwestern willow flycatcher songs to simulate a territorial intrusion by another southwestern willow flycatcher, which generally will elicit a defensive response by the territorial bird, increasing its detectability. Taped calls were not used to elicit or prompt further behaviors from birds once individuals were identified. A detailed description of the methodology is included in the survey report provided as Appendix G.

4.2.4.4 Arroyo Toad

Protocol surveys for Arroyo toad were conducted by Peter Bloom on April 30, May 7, 15, 23, and 29, and June 5, 2010 in three locations that contained potential breeding habitat. The surveys were conducted according to the USFWS standard protocol as outlined within the USFWS *Survey Protocol for the Arroyo Toad* (USFWS, 1999a) and included both daytime and nighttime surveys. Daytime surveys were conducted by walking slowly along stream margins and in adjacent riparian habitat, visually searching for eggs, larvae, and juveniles. Nighttime surveys were conducted by walking slowly and carefully on stream banks. Surveyors would stop periodically and remain still and silent for approximately 15 minutes at appropriate sites to wait for Arroyo toads to begin calling. A detailed description of the methodology is included in the survey report provided as Appendix G.

5.0 RESULTS

5.1 LITERATURE REVIEW

5.1.1 Special Status Species

Special status species were identified as having a potential to occur in the Proposed Project survey area based on the database searches and known occurrences of species in the area. CNDDB maps within three miles of the Proposed Project are provided for flora, as Figure 3, CNDDB Special Status Flora Species and for fauna as Figure 4, CNDDB Special Status Fauna Species. A list of potential special status wildlife and plant species is also provided as a table in Appendix A of this report. The map and table were used during the field surveys to consider the presence, or potential presence, of the identified species.

5.1.2 Critical Habitat

The Proposed Project survey area covers areas of USFWS critical habitat for the coastal California gnatcatcher, Arroyo toad, San Diego fairy shrimp (*Branchinecta sandiegonensis*) and thread-leaved brodiaea (*Brodiaea filifolia*). Habitat for the coastal California gnatcatcher owned by SDG&E and covered under the *SDG&E Subregional NCCP* is specifically excluded the designation of critical habitat (Federal Register, 2007). A critical habitat map within three miles of the Proposed Project is provided as Figure 5, Critical Habitat Map.

5.1.3 Drainages and Other Water Features

Potential drainages were identified based on the review of aerial and USGS maps. These maps were considered during the field surveys to ensure the identified drainages were studied, in addition to any drainage not mapped by USGS or visible on aerials. Five named blue-line drainages were identified on USGS topographic maps. The named drainages include Horno Creek, San Juan Creek, Prima Deshecha Cañada, Segunda Deshecha Cañada, and Christianitos Creek.

5.1.4 Soils

Fourteen soil series are mapped within the Proposed Project survey area: Alo Clay, Bosanko Clay, Botella Clay Loam, Callegus Clay Loam, Cieneba Sandy Loam, Corralitos Loamy Sand, Cropley Clay, Huerhuero Loam, Myford Sandy Loam, Riverwash, Soboba Cobbly Loamy Sand, Sorrento Loam, and Yorba Gravelly Sandy Loam. A map is provided as Figure 6, Soils Map, and a summary of each soil series is provided below.

5.1.4.1 Alo Clay

The Alo Clay series are well drained and composed of clay and weathered bedrock. The parent materials consist of residuum weathered from sedimentary rock. At 25 to 29 inches in depth, weathered bedrock is found. These soils occur on hills at 200 to 3,250 feet above mean sea level (msl).

5.1.4.2 Bosanko Clay

The Bosanko Clay series are well drained and composed of clay, clay loam, silty clay and weathered bedrock. The parent material consists of residuum weathered from granite. At 22 to 36 inches in depth, weathered paralithic bedrock is found. These soils occur on the back slopes of hills at 300 to 2,500 feet msl.

5.1.4.3 Botella Clay Loam

Botella Clay Loam is well drained and composed of clay loam, silty and sandy clay loam. The parent material is alluvium derived from sedimentary rock. At more than 80 inches in depth a restrictive feature is found. These soils occur at alluvial fans at 500 to 800 feet msl.

5.1.4.4 Callegus Clay Loam

Callegus Clay Loam is well drained and composed of clay loam and weathered bedrock. The parent material is residuum weathered from calcareous shale. At 15 to 19 inches in depth, paralithic bedrock is found. These soils occur on the back slopes of hills at 200 to 2,500 feet msl.

5.1.4.5 Cieneba Sandy Loam

The Cieneba Sandy Loam series are somewhat excessively drained and are composed of coarse sandy loam and weathered bedrock. The parent material is a residuum of weathered granite. At 4 to 20 inches in depth, paralithic bedrock is found. These soils occur on hillsides at 500 to 4,000 feet msl.

5.1.4.6 Corralitos Loamy Sand

The Corralitos Loamy Sand series are somewhat excessively well drained and are composed of loamy sand and stratified sand. The parent material is alluvium derived from mixed sources. At more than 80 inches in depth a restrictive feature is found. These soils occur on alluvial fans at 30 to 1,000 feet msl.

5.1.4.7 Cropley Clay

Cropley Clay is well drained and composed of clay, silty clay and clay loam. At more than 80 inches depth a restrictive feature is found. These soils occur on alluvial fans at 50 to 1,500 feet msl.

5.1.4.8 Huerhuero Loam

Huerhuero Loam is moderately well drained and composed of loam, clay loam, clay, stratified sand, and sandy loam. The parent material is calcareous alluvium derived from sedimentary rock. At more than 80 inches depth a restrictive feature is found. These soils occur on marine terraces at 1,000 feet msl.

5.1.4.9 Myford Sandy Loam

The Myford Sandy Loam series are moderately well drained and composed of sandy loam, sandy clay and sandy clay loam. The parent material is alluvium derived from mix sources. At more than 80 inches in depth a restrictive feature is found. These soils occur on landform terraces at 1,500 feet msl.

5.1.4.10 Riverwash

Riverwash is not well drained and composed of sand and stratified course sand to sandy loam. The parent material is sandy and gravelly alluvium. These soils occur on fans at diverse elevations.

5.1.4.11 Soboba Cobbly Loamy Sand

Soboba Cobbly Loamy Sand is excessively drained and composed of very cobbly loamy sand. The parent material is sandy and gravelly alluvium derived from mixed sources. At more than 80 inches depth a restrictive feature is found. These soils occur on alluvial fans at 30 to 4,200 feet msl.

5.1.4.12 Sorrento Loam

The Sorrento Loam series are well drained and composed of loam, silty clay loam, clay loam, and stratified loamy fine sand to silt loam. The parent material is alluvium derived from sedimentary rock. At more than 80 inches depth a restrictive feature is found. These soils occur on alluvial fans at 80 to 1,800 feet msl.

5.1.4.13 Yorba Gravelly Sandy Loam

The Yorba Gravelly Sandy Loam series are well drained and composed of gravelly sandy loam, very gravelly sandy clay loam, and very gravelly sandy loam. The parent material is sandy and gravelly alluvium derived from mixed sources. At more than 80 inches depth a restrictive feature is found. These soils occur on landform terraces at 100 to 2,500 feet. Both Yorba Gravelly Sandy Loam 15 to 30 percent slope and Yorba Gravelly Sandy Loam 30 to 65 percent slope is mapped within the Proposed Project survey area msl.

5.2 VEGETATION

Eleven vegetation communities were observed in the Proposed Project survey area as mapped on the figures provided in Appendix H, Vegetation and Sensitive Species Maps, of this report, including CSS habitats, willow and riparian habitats, disturbed areas, ornamental, dirt roads, and developed areas with ornamental landscaping. Representative photographs depicting general conditions are included as Appendix I of this report. Table 1 below summarizes acreages of each vegetation community found within the Proposed Project survey area.

Table 1

Vegetation Communities in Proposed Project Survey Area

Vegetation Community	Acres
Coastal Sage Scrub	121.16
Disturbed Coastal Sage Scrub	61.19
Coastal Freshwater Marsh	0.20
Southern Willow Scrub	9.18
Disturbed Southern Willow Scrub	0.78
Riparian Scrub	2.65
Ruderal	139.55
Disturbed	28.89
Ornamental	63.34
Dirt Roads	20.42
Developed	121.13
Total	**568.49**

5.2.1 Coastal Sage Scrub (Holland Code 32000)

CSS is comprised of low, soft-woody subshrubs approximately one meter in height, many of which are facultatively drought-deciduous. This association is typically found on dry sites, such as steep, south-facing slopes or clay-rich soils that are slow to release stored water (Holland, 1986). Dominant shrub species in this vegetation type may vary, depending on local site factors and levels of disturbance. Plant species commonly observed within this community include coyote bush (*Baccharis pilularis*), California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), white sage (*Salvia apiana*), and laurel sumac (*Malosma laurina*).

CSS is the dominant native vegetation community within the Proposed Project survey area, comprising a total of 121.16 acres of CSS (see Appendix H). Plant species commonly observed within this community in the Proposed Project survey area included coyote bush, California sagebrush, California buckwheat, white sage, black sage (*Salvia mellifera*), California encelia

(*Encelia californica*), toyon (*Heteromeles arbutifolia*), prickly pear cactus (*Opuntia littoralis*), goldenbush (*Isocoma menziesii*), Mexican elderberry (*Sambucus mexicana*), lemonade berry (*Rhus integrifolia*), laurel sumac, coyote gourd (*Cucurbita palmata*), ragweed (*Ambrosia psilostachya*), giant wild rye (*Leymus condensatus*), orange bush monkeyflower (*Mimulus aurantiacus*), deerweed (*Lotus scoparius*), and oaks (*Quercus* spp., including coast live oak/*Q. agrifolia*). Much of the CSS along the Proposed Project's survey area is found in scattered patches surrounded by disturbed and ruderal habitats, and often in close proximity to residential areas. Several patches are located in the vicinity of the Prima Deshecha Landfill and one moderate-sized patch is located approximately 0.5 mile south of the landfill. The largest area of this vegetation community is found along the easternmost 1.5 miles of the Proposed Project where the transmission line connects to the Talega Substation. Most of this area is comprised of CSS, bordered by a commercial area to the north and a golf course to the south. Small areas of CSS located in the vicinity of the golf course near the Talega substation are dominated by broom baccharis (*Baccharis sarothroides*). Some areas of CSS also appear to have been planted based on the presence of surface irrigation lines, possibly as mitigation, primarily in the Rancho San Juan and Talega areas.

5.2.2 Disturbed CSS (Holland Code 32000)

Disturbed CSS has similar characteristics to CSS with more areas of human disturbance and/or invasion of non-native plant species. This vegetation community tends to have a lower amount of native species cover and a higher amount of non-native plant species. Non-native species prevalent in disturbed CSS include black mustard (*Brassica nigra*), thistle (*Silybum* spp.), and non-native grasses (e.g., *Bromus* spp.).

A total of 61.19 acres of disturbed CSS occur in the Proposed Project survey area (refer to Appendix H), most often bordering or adjacent to intact areas of CSS. The disturbed CSS is similar in species composition and structure to intact CSS; however, the disturbed CSS has a higher cover of non-native plant species. Non-native species observed in the disturbed CSS include black mustard, artichoke thistle (*Cynara cardunculus*), brome grasses, fennel (*Foeniculum vulgare*), and other species also observed in adjacent ruderal areas.

5.2.3 Coastal Freshwater Marsh (Holland 52410)

Freshwater marsh plant communities are dominated by perennial, emergent monocots, up to three meters tall. Bulrush (*Scirpus* spp.) and cattails (*Typha* spp.) are often dominant, typically forming completely closed canopies. Freshwater marsh plant communities are found in sites lacking significant flow, that are permanently flooded by fresh water, and in areas where there is prolonged saturation with the accumulation of deep, peaty soils (Holland, 1986).

A total of 0.20 acre of Coastal Freshwater Marsh areas occur within the Proposed Project survey area (refer to Appendix H, Sheets 14 and 16). These areas are found in association with drainage systems in the south of the Proposed Project survey area, namely in Tributary to Segunda Deshecha Cañada 3, and Tributary to Christianitos Creek 1. These areas are monocultures of cattails and bulrushes within permanently saturated areas fed by urban run-off. Both areas of Coastal Freshwater Marsh were determined to be ACOE wetlands and are described further in Appendix C. Additionally, in both areas of Coastal Freshwater Marsh, it appears as if the area has been revegetated to create this vegetation community.

5.2.4 Southern Willow Scrub (Holland Code 63320)

Southern willow scrub (SWS) communities are generally composed of dense, winter-deciduous broadleaf species, dominated by a variety of willow species (*Salix* spp.). Often present are occasional Fremont cottonwood (*Populus freemontii*) and California sycamore (*Platanus racemosa*). Tree stands are generally too dense for development of an understory. These communities are found on loose, fine or sandy gravelly alluvium near stream channels and experience repeated flooding (Holland, 1986).

A total of 9.18 acres of SWS occur in the Proposed Project survey area (refer to Appendix H), just east of the I-5 freeway at San Juan Creek, Segunda Deshecha Cañada, and near the southern terminus of the alignment in Tributary to Christianitos Creek 1. Smaller patches of SWS are also found where the Proposed Project survey area crosses smaller creeks and tributaries. Dominant species observed in this vegetation community included various willows (*Salix* sp.), mulefat (*Baccharis salicifolia*), giant reed (*Arundo donax*), and cattails (*Typha latifolia*).

5.2.5 Disturbed Southern Willow Scrub (Holland Code 63320)

Disturbed SWS has similar characteristics to SWS with more areas of human disturbance and/or invasion of non-native plant species. This vegetation community tends to have a lower amount of native species cover and a higher amount of non-native plant species.

A total of 0.78 acre of disturbed SWS occur in the Proposed Project survey area (refer to Appendix H), generally bordering intact areas of SWS. The disturbed SWS are similar in species composition and structure to intact SWS; however, the disturbed SWS have a higher cover of non-native plant species. Examples of non-native species observed in disturbed SWS include black mustard, artichoke thistle, brome grasses, and giant reed (*Arundo donax*).

5.2.6 Riparian Scrub (Holland Code 63000)

Riparian scrub is found on or adjacent to the banks of rivers or streams, typically in drier areas that experience flooding. Riparian plants can include a variety of species such as mulefat, cottonwood trees, coast live oak, and willows.

A total of 2.65 acres of Riparian scrub occur in the Proposed Project survey area (refer to Appendix H), predominately within and adjacent to Tributary to Prima Deshecha Cañada and Tributary to Christianitos Creek 1. Prevalent species in the Proposed Project's survey area included mulefat, willow species (including arroyo willow/*Salix lasiolepis*), coast live oak, horseweed (*Conyza canadiensis*), stinging nettle (*Urtica dioica*), ragweed, and a few scattered CSS species such as California sagebush, prickly pear cactus, lemonadeberry, poison oak (*Toxicodendron diversilobum*), and California buckwheat.

5.2.7 Ruderal (No Holland Code)

Ruderal vegetation is dominated by non-native weedy species in areas that have been significantly disturbed by agriculture, construction, or other land-clearing activities. Ruderal communities generally occupy waste areas, often on roadsides with heavily compacted soils with little available oxygen. These areas may be maintained but not typically on a regular basis,

therefore allowing the establishment of a more dense cover of vegetation. Typical species can vary depending on the site and level of disturbance, but are often dominated by herbaceous annuals and grasses. Species can include black mustard, radish (*Raphinus sativus*), wild oat (*Avena* spp.), ripgut grass (*Bromus diandrus*), foxtail chess (*Bromus madritensis* ssp. *rubens*), Australian saltbush (*Atriplex semibaccata*), tocalote (*Centaurea melitensis*), fennel, telegraph weed (*Heterotheca grandiflora*), crown daisy (*Chrysanthemum coronarium*), castor bean (*Ricinus communis*), pineapple-weed (*Chamomilla suaveloens*), common knotweed (*Polygonum arenastrum*), sowthistle (*Sonchus oleraceus*), horseweed, common fiddleneck (*Amsinckia menziesii*), Russian thistle (*Salsola tragus*), tree tobacco (*Nicotiana glauca*), bristly ox-tongue (*Lactuca serriola*), and goosefoot (*Chenopodium* spp.). Ornamental species may also colonize and proliferate in ruderal communities (Holland and Keil, 1995).

A total of 139.55acres of Ruderal vegetation occur throughout the Proposed Project survey area in areas of historical disturbance (refer to Appendix H). Weedy and disturbance-loving plants were identified in these areas included species such as artichoke thistle, brome grasses, short pod mustard, wild oats, curly dock (*Rumex crispus*), telegraph weed, Russian thistle, tree tobacco, bristly ox-tongue, doveweed (*Croton setigerus*), castor bean (*Ricinus communis*), red-stem filaree (*Erodium cicutarium*), fennel, various thistle and sunflower species (these species were dead at the time of the survey and could not be positively identified), and cheeseweed (*Malva parviflora*). Some scattered native species were also observed including, but not limited to, species such as coyote bush, goldenbush, common fiddleneck, and coast live oak. Only one ruderal area, directly north of San Juan Creek, contained coast live oak and appeared associated with a revegetation project.

5.2.8 Disturbed (Holland Code 11300)

Disturbed areas are composed entirely, or predominately, of unvegetated ground due to ongoing maintenance, and may support only a few isolated individuals of non-native and/or native species. These species are generally composed of the same plants found in ruderal vegetation communities.

A total of 28.89 acres of Disturbed areas occur in the Proposed Project survey area, primarily comprised of regularly maintained sites around the transmission poles (refer to Appendix H). The areas were predominately bare, with a few weedy and disturbance-loving species such as mustard, doveweed (*Croton setigerus*), red-stem filaree, and cheeseweed, in addition to scattered individuals of CSS species.

5.2.9 Ornamental (Holland Code 11100)

Ornamental consists of landscaped areas most commonly associated with developments (residential or commercial) and open areas such as parks, which have been planted with either a variety of non-native trees and shrubs, or monocultures of one species. These non-native plants can include many different species including, but not limited to, pines (*Pinus* sp.) and eucalyptus (*Eucalyptus* sp.). Whilst ornamental more typically comprises non-native plants it may also include native species such as oaks (*Quercus* spp.), sycamores (*Platanus racemosa*), and cottonwoods (*Populus fremontii*). Generally ornamental areas are planted as a windbreak, or for aesthetic and horticultural purposes around houses and other developed areas. The understory of ornamental areas are typically lacking due to maintenance or, in the case of eucalyptus trees,

chemicals in the leaves. These chemicals build up in the soil from debris and leaf-litter and prevent the establishment of most other plants. Eucalyptus trees are not native, but many species of eucalyptus have become naturalized and have invaded natural riparian areas. Ornamental vegetation can provide nesting habitat for several bird and raptor species.

A total of 63.34 acres of Ornamental vegetation occur throughout the Proposed Project survey area (refer to Appendix H). These areas comprise predominately non-native species, including a small eucalyptus grove that borders the Proposed Project survey area just west of the San Juan Creek crossing that is dominated by several species of eucalyptus. Native ornamental areas were also observed, including coast live oaks and sycamores within Arroyo Park in San Juan Capistrano, and areas of CSS associated with the Talega development appeared to have been planted as landscaping. Some Ornamental areas were observed to include a mix of native and non-native species, including a park west of the Capistrano Substation that was planted with non-native pines and both native cottonwoods and sycamores. Additional species observed in Serra Park and Marbella Golf and Country Club in San Juan Capistrano included alder (*Alnus rhombifolia*), pepper trees (*Schinus terebinthifolius* and *S. molle*), bougainvillea (*Bougainvillea spectabilis*), bottlebrush (*Callistemon* spp.), and palm trees (*Washingtonia robusta* and *Phoenix* sp.).

5.2.10 Dirt Roads (No Holland Code)

Dirt roads are unpaved roads that are typically used for access only.

A total of 20.42 acres of Dirt roads occur throughout the Proposed Project survey area (refer to Appendix H), consisting of cleared, maintained access roads to the structure sites.

5.2.11 Developed (Holland Code 12000)

Developed areas typically include paved roads, structures, and associated infrastructure, and may also include ornamental landscaping.

A total of 121.13 acres of Developed areas occur throughout the Proposed Project survey area (refer to Appendix H), primarily including paved roads, and commercial or residential structures with associated landscaping.

5.3 WILDLIFE

During the field surveys, numerous common and special status wildlife species, both native and non-native, were observed within the Proposed Project survey area. A complete list of species observed is included as Appendix B of this report. Species commonly observed include the following (for special status wildlife see Section 5.6 of this report):

- Avifauna commonly observed included red-tailed hawk (*Buteo jamaicensis*), house finch (*Carpodacus cassinii*), lesser goldfinch (*Carduelis psaltria*), common raven (*Corvus corax*), house sparrow (*Passer domesticus*), northern mockingbird (*Mimus polyglottos*), California towhee (*Pipilo crissalis*), spotted towhee (*Pipilo maculatus*), European starling (*Sturnus vulgaris*), California thrasher (*Toxostoma redivivum*), Bewick's wren (*Thryomanes bewickii*), and western kingbird (*Tyrannus verticalis*).
- Reptiles commonly observed included side-blotched lizard (*Uta stansburiana*) and western fence lizard (*Sceloporus occidentalis*).
- Mammals commonly observed or deduced through diagnostic sign, included coyote (*Canis latrans*), California ground squirrel (*Spermophilus beecheyi*), and Audubon's cottontail (*Sylvilagus audubonii*).

5.4 SPECIAL STATUS VEGETATION COMMUNITIES

Some of the vegetation communities occurring within the Proposed Project's survey area are considered sensitive or have special status due to their natural rarity and their decline as a result of development, and/or due to the number of sensitive plant or animal species dependent upon them. Sensitive habitats also include those regulated by the federal government under the CWA (i.e., jurisdictional wetlands) or the FESA (i.e., site-specific designated critical habitat areas for federally listed wildlife species). Special status vegetation communities in the survey area include CSS, disturbed CSS, and riparian communities (SWS, Emergent Freshwater Marsh, and Riparian Scrub) which include jurisdictional areas (see Section 5.8 of the report).

CSS is considered a sensitive habitat type by both federal and state resource agencies, local jurisdictions, and conservation organizations throughout southern California. Losses of up to 85

percent have been estimated for CSS in southern California, largely attributable to residential development and agricultural activities. The trend for continued losses has resulted in the selection of this community as the focus of the state of California's first habitat-based conservation planning program, the NCCP Act. CSS provides habitat for the coastal California gnatcatcher, a federally threatened species, as well as a variety of other animal and plant species which are candidates for federal listing, state species of special concern, or considered sensitive by local jurisdictions.

All riparian communities in southern California, including SWS, are considered sensitive by federal and state resource agencies. Estimated losses of riparian habitat in southern California range as high as 95 to 97 percent. Habitat destruction and degradation has resulted from wetland conversion for agricultural purposes, urban development, and flood control projects. Riparian vegetation provides shelter, food, and breeding habitat for numerous plant and wildlife species.

5.5 SPECIAL STATUS PLANTS

Seventy four sensitive plant species were identified from the literature review as having the potential to occur within three miles of the Proposed Project survey area. Appendix A provides a list of these species, as well as their status and potential to occur in the Proposed Project area. This list was derived from CNDDB and CNPS records searches, *SDG&E Subregional NCCP* species, and suitable habitat identified during the rare plant and habitat assessment surveys (see Section 4.2.1 and 4.2.2 of this report). With the exception of three species, cliff spurge (*Euphorbia misera*), white rabbit-tobacco (*Pseudognaphalium leucocephalum*), and chaparral ragwort (*Senecio aphanactis*), all plant species were surveyed for during the appropriate blooming season. Of the three species surveyed outside their blooming period, one is an obvious shrub and the other two are unlikely to occur within or adjacent to the ROW due to habitat requirements that do not exist within the Proposed Project survey area. No special status plants were observed during the focused plant surveys. A complete list of all plant species observed during the focused surveys can be found in Appendix B.

Five of the plant species: big-leaved crownbeard (*Verbesina dissita*), Encinitas baccharis (*Baccharis vanessae*), Laguna Beach dudleya (*Dudleya stolonifera*), Santa Monica dudleya (*Dudleya cymosa* ssp. *ovatifolia*), and thread-leaved brodiaea (*Brodiaea filifolia*) are federal or state-listed species. These species are discussed in more detail below.

5.5.1 Big-leaved crownbeard (*Verbesina dissita*; FT, ST)

Big-leaved crownbeard occurs in maritime chaparral and coastal scrub habitats at an elevation range of 45 and 205 meters. The blooming period is April to July. There are only four known occurrences which are near southern Laguna Beach (CNPS, 2011). CNDDB records indicate that there are no documented occurrences within a three-mile radius of the Proposed Project survey area. This species were not observed during the focused plant surveys or any other surveys conducted for the Proposed Project. Therefore, this species is unlikely to occur in the Proposed Project survey area.

5.5.2 Encinitas baccharis (*Baccharis vanessae*; FT, SE)

Encinitas baccharis occurs in maritime chaparral and cismontane woodland at an elevation range of 60 and 720 meters. This species is commonly found in sandstone substrate. The blooming period is August to November. CNDDB records indicate that there are documented occurrences within a three-mile radius of the Proposed Project survey area. This species was not observed during the focused plant surveys or any other surveys conducted for the Proposed Project. Therefore, this species is unlikely to occur in the Proposed Project survey area.

5.5.3 Laguna Beach dudleya (*Dudleya stolonifera*; FT, ST)

Laguna Beach dudleya occurs in chaparral cistmontane woodland, coastal scrub, valley and foothill grasslands at an elevation range of 10 and 260 meters. This species is commonly found in rocky substrate. The blooming period is May to July. Threats to Laguna Beach dudleya include development, recreation, and non-native plants, and possibly by horticultural collecting (CNPS, 2011). CNDDB records indicate that there are no documented occurrences within a three-mile radius of the Proposed Project survey area. No species were observed during the focused plant surveys or any other surveys conducted for the Proposed Project. Therefore, this species is unlikely to occur in the Proposed Project survey area.

5.5.4 Santa Monica dudleya (*Dudleya cymosa* ssp. *ovatifolia*; FT)

Santa Monica dudleya occurs in chaparral and coastal scrub at an elevation range of 150 and 1,675 meters. This species is commonly found in volcanic or sedimentary, rocky substrate. The blooming period is May to July. CNDDB records indicate that there are no documented occurrences within a three-mile radius of the Proposed Project survey area. This species was not observed during the focused plant surveys or any other surveys conducted for the Proposed Project. Therefore, this species is unlikely to occur in the Proposed Project survey area.

5.5.5 Thread-leaved brodiaea (*Brodiaea filifolia*; FT, SE, Covered Species)

Thread-leaved brodiaea occurs in chaparral, cismontane woodland, CSS, playas, valley and foothill grasslands, and vernal pools and at an elevation range between 25 to 1,219 meters. This species is commonly found in clay substrate. The blooming period is from March to June. Threats to thread-leaved brodiaea include residential development, agriculture, foot traffic, grazing, illegal dumping, non-native plants, and vehicles. The species is known to hybridize with Orcutt's brodiaea (*B. orcuttii*) and dwarf brodiaea (*B. terrestris* ssp. *kernensis*), which is facilitated by European honeybees (CNPS, 2011).

Ten CNDDB records dated from 1995 to 2007 exist for the species within three miles of the Proposed Project area. Some of these records indicate hundreds to thousands of plants observed, with the nearest CNDDB record for this species occurring within 0.5 mile of the Proposed Project alignment. Although suitable habitat is present this species was not observed during the focused plant surveys or any other surveys conducted for the Proposed Project. Therefore, this species is unlikely to occur in the Proposed Project survey area.

5.6 SPECIAL STATUS WILDLIFE

Some of the vegetation communities and waterways within the Proposed Project survey area provide habitat for one or more sensitive or *SDG&E Subregional NCCP* Covered Species known to occur or with potential to occur in the Proposed Project survey area. Based on the literature search, reconnaissance and habitat assessment surveys, and additional focused biological surveys, 36 special status wildlife species are known to occur or have the potential to occur in the Proposed Project survey area. These species, their status, documented occurrence, and the potential for their presence within the Proposed Project survey area are summarized in Appendix A. A list of common and scientific names of wildlife species observed during the surveys can be found in Appendix B. The locations of any sensitive wildlife species that were seen during the field surveys were noted and are mapped in Appendix H.

In addition to the species identified in Appendix A, raptor species such as the red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), and American kestrel (*Falco sparverius*) have the potential to nest within the Proposed Project survey area. During habitat assessment and focused surveys conducted for this Proposed Project between February and June 2008, several stick nests, including two active red-tailed hawk nests, were identified on various tower structures within the Proposed Project survey area. Locations of these nests can also be found in Appendix H.

Of the 36 wildlife outlined in Appendix A, 20 species are discussed in more detail in the following sections because of their state, federal and/or local status, presence in the survey area, presence of critical habitat, and/or a moderate or high potential to occur within the Proposed Project survey area due to presence of suitable habitat.

5.6.1 Special Status Wildlife Found Onsite

Six special status wildlife species were observed in the Proposed Project survey area, including the following:

- American peregrine falcon (*Falco peregrinus anatum*, FP)
- coastal California gnatcatcher (FT, SSC)
- Cooper's hawk (*Accipiter cooperii*, watch listed [WL])
- least Bell's vireo (FE , SE, SSC)
- southwestern willow flycatcher (FE, SE)
- white tailed kite (*Elanus leucurus*, FP)

5.6.1.1 American peregrine falcon (*Falco peregrinus anatum*; BCC, FP, Covered Species)

The American peregrine falcon is widespread throughout California but prefers open habitat, coastlines, lake edges and mountain chains. This species nests on cliff sides or uses abandoned nests made from large birds, it is not known to build its own nest (Harlow, 1978).

One American peregrine falcon nest was observed within the Proposed Project survey area in 2008 near the southernmost portion of the alignment, approximately 2,500 feet west of the Talega Substation (Appendix H, Sheet 14). This nest was not found again during the December 2011 surveys; therefore, it is presumed that the nest location has changed since the initial observation. No peregrine falcons or peregrine falcon nests were identified in the most recent round of surveys in 2011. This species is FP under the CFG Code, prohibiting "take" of the species even when the activities have received take permits under the CESA and FESA.

5.6.1.2 Coastal California Gnatcatcher (*Polioptila californica californica*; FT, SSC, Covered Species)

This species is a local, uncommon, obligate resident of arid coastal scrub below sea level to approximately 500 meters from eastern Orange and southwestern Riverside counties south through the coastal foothills. Like other species that rely on CSS, the decline of the California gnatcatcher has been instigated by cumulative loss of CSS vegetation to urban and agricultural development (Atwood, 1992). The California gnatcatcher requires California sagebrush (*Artemisia californica*) and CSS for feeding; this species is known to glean insects from the foliage of shrubs in these habitat types (Atwood, 1993).

The designation of critical habitat for the coastal California gnatcatcher specifically excluded areas within functioning HCPs, such as SDG&E's *SDG&E Subregional NCCP*. Specifically, essential coastal California gnatcatcher habitat owned by SDG&E and covered under the *SDG&E Subregional NCCP* was determined to have greater benefits to coastal California gnatcatcher than from lands designated as critical habitat (Federal Register, 2007). Habitat for the coastal California gnatcatcher is located in several locations along the Proposed Project route as well as designated critical habitat. The CNDDB documents numerous sightings of coastal California gnatcatcher along the Proposed Project survey area.

Coastal California gnatcatchers were observed during protocol-level surveys in 2008 and 2010 in suitable habitat within the Proposed Project survey area. Sightings included breeding pairs, family groups, and individuals, and were observed in CSS from the Talega Substation on the south end of the survey area to south of San Juan Creek Road (refer to Appendices D and E).

In 2008, biologists made 19 coastal California gnatcatcher observations, totaling a minimum of 14 different individuals in the Proposed Project survey area. Separate individuals were determined by simultaneous sightings, proximity to previous sightings, and time lapse between consecutive sightings. Observations made in close temporal and spatial proximity were considered the same individual; therefore, the total minimum number of coastal California gnatcatchers is conservative. Four nesting pairs of coastal California gnatcatchers were confirmed. In addition, a minimum of five single males were identified. For further details refer to the survey report in Appendix D.

In 2010, biologists made 21 coastal California gnatcatcher observations, for a minimum estimation of 20 individuals (including adults and juveniles) in the survey area. Similarly to the 2008 surveys, the total minimum number of coastal California gnatcatchers may be conservative. Six pairs were confirmed with two of the pairs observed as part of a family group. Both of the family groups had at least two juveniles with the pair. In addition, a minimum of three single males were identified. For further details refer to the survey report in Appendices D and E.

5.6.1.3 Cooper's hawk (*Accipiter cooperii*, WL)

Cooper's hawk is an uncommon resident within the wooded portion of the state. Its general distribution ranges from sea level to above 2,700 meters (0 to 9,000 feet). Dense stands of live oak, riparian deciduous or other forest habitats near water are used most frequently by this species (Zeiner, *et. al.*1990).

This species was observed in riparian habitat and eucalyptus trees in the Proposed Project survey area where suitable nesting habitat is present, particularly in the vicinity of San Juan Creek.

5.6.1.4 Least Bell's Vireo (*Vireo bellii pusillus*; FE, SE, Covered Species)

Least Bell's vireo is a subspecies of the North American song bird Bell's vireo (*Vireo bellii*). Least Bell's vireo is a migratory species that spends its winters in Mexico and returns to southern California as a summer resident. Least Bell's vireo can be found in the region during breeding season which is from March to August. The decline of this species is predominately due to brood parasitism by brown-headed cowbirds (*Molothrus ater*) (Kus, 2002). They breed locally in willow riparian thickets with good over and understory vegetation.

Riparian vegetation suitable for Least Bell's vireo occupation can be found in many of the creeks and drainages scattered along the Proposed Project survey area. No portion of the Proposed Project survey area falls within critical habitat for the species. The CNDDB documents several occurrences of the species within three miles of the Proposed Project, including the nearest record which is within the Proposed Project survey area west of the Talega Substation.

Least bell's vireo was observed in numerous small, unnamed drainages crossed by the Proposed Project survey area during protocol-level surveys in 2008 and 2010. Refer to Appendix F for locations of least Bell's vireo sightings during project surveys.

5.6.1.5 Southwestern Willow Flycatcher (*Empidonax traillii extimus*; FE, SE, Covered Species)

Southwestern willow flycatcher is a migratory species which breeds in North America and winters in South and Central America. The species can be typically found in the region from early May to early to mid-September, individuals migrating further north may be seen earlier or later in the year. Southwestern willow flycatchers nest in dense riparian areas. Threats to the species include loss, fragmentation and modification of riparian habitat required for breeding, as well as brood parasitism by brown-headed cowbirds. The CNDDB documents two occurrences of southwestern willow flycatcher approximately two miles northeast of the Rancho San Juan Segment of the Proposed Project survey area, in riparian habitat along San Juan Creek.

Surveys for the southwestern willow flycatcher were conducted in 2008 and 2010 by Peter Bloom (Bloom, 2008 and 2010). In the 2008 focused surveys, this species was observed at two separate locations, approximately 0.5 mile southwest and one mile west of the Talega Substation. In both instances southwestern willow flycatcher was observed during only one survey within the bird's migratory period. Due to the timing and number of observations it is assumed that these birds were migratory and were only briefly within the Proposed Project survey area. No

southwestern willow flycatchers were identified during the 2010 surveys. The 2010 survey report is included as Appendix G.

5.6.1.6 White-tailed kite (*Elanus leucurus*, FP)

White-tailed kites are annual residents of lowland terrestrial habitats, particularly, riparian woodland and oak or sycamore groves near grasslands and are uncommonly found away from agricultural fields (Eisenmann, 1971). This species makes nests out of sticks and can be found near the tops of dense trees such as dense willow or oak approximately 20 to 100 feet above ground (Dixon, *et. al*., 1957).

The white-tailed kite was observed uncommonly throughout the Proposed Project survey area foraging over CSS and ruderal vegetation, particularly in the areas between San Juan Creek and the Talega community. The white tailed kite is a fully protected species, meaning that no take of this species can occur.

5.6.2 Special Status Wildlife with Potential to Be On-Site

5.6.2.1 Arroyo Chub (*Gila orcuttii*; SSC)

The Arroyo chub is a small fish species native to coastal streams of southern California. The species is now scarce within its native range due to the disappearance of low-gradient streams (Moyle, *et. al.*, 1995). The species prefers slow-moving or backwater sections of warm to cool streams with sandy or muddy substrates. Spawning typically occurs in pools or quiet edge water. The species is omnivorous and feeds heavily on aquatic vegetation and associated invertebrates such as insects and small crustaceans.

The Arroyo chub is native to San Juan Creek (Moyle, *et. al*., 1995) and CNDDB records document the species upstream, downstream, and directly within the portion of the creek spanned by the Proposed Project. Suitable habitat exists in the Proposed Project survey area and occurrences have been documented by CNDDB within the northern Proposed Project survey area in San Juan Capistrano. Specifically, species may occur in San Juan Creek where the survey area crosses the creek, as well as upstream and downstream of the area and in nearby tributaries. There is a high potential for occurrence of this species within San Juan Creek.

5.6.2.2 Arroyo Toad (*Bufo californicus*; FE, SSC, Covered Species)

The Arroyo toad is a small, light greenish-gray or tan toad restricted to rivers with shallow, gravelly pools with adjacent sand bars or terraces. During the breeding season, from late March to mid-June, they can be found in large streams or rivers containing shallow pools with minimal current and sand or pea-gravel bottom. The Arroyo toad is of particular concern because it is difficult to detect during certain times in its life cycle. The Arroyo toad breeds in stream habitats, but migrates through and hibernates in upland habitats up to 1 kilometer (0.6 mile) from known breeding sites, where it remains underground for much of the winter (Stebbins, 1954; 1972; 1985). Records from the CNDDB document the species within San Juan Creek, San Mateo Creek and Canyon, Cristianitos Creek, Talega Canyon, and Gabino Canyon. Suitable upland foraging habitat exists in the Proposed Project survey area.

Protocol surveys for the Arroyo toad were conducted during the summer of 2010. The Arroyo toad was absent from all the survey areas. It was determined that areas within 0.9 mile of Cristianitos and Gabino Creeks would be considered suitable upland habitat for the species, but not suitable for breeding. No individuals or sign were found during focused surveys, although potential suitable upland foraging habitat was identified within the Proposed Project survey area. For further details refer to Appendix G.

5.6.2.3 Burrowing Owl (*Athene cunicularia*; SSC, Covered Species)

Burrowing owls are crepuscular small ground-dwelling owls with a round head and no ear tufts. Typical habitat for this species includes open, dry grasslands, agricultural fields, sparse shrub lands, as well as developed areas with sufficient food sources. Common burrowing mammals that are associated with burrowing owls are ground squirrels, prairie dogs and badgers.

This species was not observed during habitat assessment surveys; however suitable grassland habitat was noted to be present in the vicinity of the Prima Deshecha Landfill. Recent CNDDB records document the presence of the species in the immediate vicinity of the Proposed Project survey area in the Prima Deshecha Landfill. Thus, the potential for this species to be within the Proposed Project survey area is high.

5.6.2.4 Coast horned lizard (*Phrynosoma coronatum blainvillei*; SSC, Covered Species)

The coast horned lizard inhabits valley-foothill hardwood, conifer, riparian and annual grasslands (Pianka and Parker, 1975). This species occurs from the Sierra Nevada foothills, throughout central California and the southern California coast. This species prefers open terrain, sandy substrates and washes often found near ant mounds (Stebbins, 1954).

Suitable habitat exists in the Proposed Project survey area and occurrences have been documented within 0.2 mile of the Proposed Project survey area by CNDDB. The species may be present in CSS habitat within the Proposed Project survey area. There is a moderate potential for occurrence of this species based on its habitat requirements.

5.6.2.5 Mountain lion (*Felis concolor*; Covered Species)

Mountain lions inhabit many different types of habitat throughout a large range. This carnivorous species requires extensive riparian vegetation, bushy stages of various habitats along with irregular terrain such as rocky outcrops and tree edges. Typically habitats remote mountainous areas near reliable water sources but are capable of abstaining from drinking water for long periods (Williams, 1986). 60 to 80 percent of this species diet comprises of mule deer (Currier, 1983). The home range of a male is usually a minimum of 15 square miles and a female is between three and 12 square miles (Russell, 1978) while young adult cougars establish home ranges as vacancies as occur (Seidensticker *et al*., 1973).

Marginal habitat exists in the less disturbed areas of the Proposed Project survey area and in the vicinity of Camp Pendleton. There is a high potential for occurrence based on its habitat requirements.

5.6.2.6 Northern red-diamond rattlesnake (*Crotalus ruber ruber*; SSC, Covered Species)

The red-diamond rattlesnake is found in chaparral, woodland, grassland, and desert habitat areas from coastal San Diego County to the eastern slopes of the mountains. Prefers rocky areas and dense vegetation and requires rodent burrows, cracks in rocks or other surface cover objects (Klauber, 1972).

This species may be present in CSS habitats within the Proposed Project survey area; although it's preferred habitat of rocky areas and dense habitat is not present. The nearest CNDDB record is 1.3 miles northeast of the Rancho San Juan segment, in CSS. There is a moderate potential for occurrence of this species based on its habitat requirements.

5.6.2.7 Orange-throated whiptail (*Aspidoscelis hyperythra*; SSC, Covered Species)

Orange-throated whiptail lizards are uncommon to fairly common over much of its range in Orange, Riverside, and San Diego counties, especially in areas with summer morning fog. It inhabits low-elevation coastal scrub, chamise-redshank chaparral, mixed chaparral, and valley-foothill hardwood habitats (Bostic, 1965).

Suitable habitat exists in the Proposed Project survey area in CSS habitats, and occurrences have been documented within 0.3 mile by CNDDB. Therefore, there is a moderate potential for occurrence of this species based on its habitat requirements and CNDDB observations.

5.6.2.8 Riverside Fairy Shrimp (*Streptocephalus woottoni*; FE, Covered Species)

The Riverside Fairy Shrimp is a small freshwater crustacean typically found in deep, cool vernal pools that retain water through late spring. Their range extends from southwestern Riverside County, to northwestern Baja California. Threats to the Riverside fairy shrimp include habitat loss and degradation due to urban and agricultural development, off-road vehicle use, cattle trampling, human trampling, livestock grazing, trash dumping, invasion from weedy non-native plants, drainage or watershed alterations, road development, military activities, fire and fire suppression activities, and drought. Two CNDDB occurrences document the species in vernal pools located approximately 1.5 miles northeast of the Rancho San Juan segment and one mile south the Talega Substation.

No suitable habitat (vernal pools, ponded areas, or road ruts) were identified within the Proposed Project survey area, therefore there is no potential for this species to occur.

5.6.2.9 San Diego Fairy Shrimp (*Branchinecta sandiegonensis*; FE, Covered Species)

The San Diego fairy shrimp is a small freshwater crustacean found in small, shallow vernal pools. They may also occur in ditches and road ruts that can support suitable conditions (USFWS, 1994). The species is primarily found in vernal pools within San Diego County, however small populations also occur in Orange County. The San Diego fairy shrimp is known to occur on Camp Pendleton. Two recent CNDDB occurrences document the species in vernal pools located approximately one and 1.2 mile northeast of the Rancho San Juan segment of the Proposed Project.

No suitable habitat (vernal pools, ponded areas, or road ruts) was identified within the Proposed Project survey area; therefore, there is no potential for this species to occur.

5.6.2.10 Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*, WL, Covered Species)

The Southern California rufous-crowned sparrow exhibits a distinct preference for rocky hillsides and steep slopes in open grass and CSS in areas ranging from roughly 200 to 4,500 feet in elevation. They also thrive in areas that have recently been burned and sometimes remain in these grassy, successional habitats for a number of years. In general, pairs nest on the ground in rock hollows or under clumps of grass or low brush (Pemberton, 1910). This species is tolerant of edge effects, small habitat patches, low shrub volume, and short-term habitat disturbance.

Due to the suitable CSS habitat within the Proposed Project survey area and CNDDB records within the Proposed Project survey area near Talega, there is a moderate potential for occurrence.

5.6.2.11 Stephen's kangaroo rat (*Dipodomys stephensi*; FE. ST)

Stephen's kangaroo rats inhabit annual and perennial grasslands, coastal scrub and sagebrush with sparse canopy cover (Thomas, 1973). Stephens' kangaroo rat will burrow into firm soil and has been observed to occupy gopher burrows. This moderate-sized granivore species prefers buckwheat, chamise, brome grass and filaree vegetation (Thomas, 1975). Suitable habitat exists in the Proposed Project survey area and occurrences have been documented 2.5 miles west of the Proposed Project survey area within San Diego County by CNDDB.

There is a moderate potential for occurrence based on its habitat requirements, however there are no CNDDB records for Stephen's kangaroo rats within three miles of the Proposed Project in Orange County. The *SDG&E Subregional NCCP* does not cover impacts to this species in Orange County; take is only authorized in northern San Diego County.

5.6.2.12 Tidewater Goby (*Eucyclogobius newberryi*; FE, SSC)

The tidewater goby is a small fish species which is endemic to California and found primarily in the brackish waters of coastal lagoons, estuaries, and marshes. The historic range of the species is from Tillas Slough in Del Norte County, near the Oregon border, south to Agua Hedionda Lagoon in northern San Diego County (USFWS, 2008b). The species is currently found throughout this historic range, but resides in fewer localities than historically occurred, having been extirpated from some sites as a result of drainage, water quality changes, introduced predators, and drought. It is uncertain if the species still occurs at approximately 50 percent of its 134 documented localities (USFWS, 2005). Threats to the tidewater goby include loss and modification of habitat, water diversions, introduction of non-native predators and fish species, habitat channelization, and degraded water quality (Eschmeyer and Herald, 1983).

The tidewater goby often migrates up to 0.5 mile upstream into tributaries; however the species has been documented up to five miles upstream at locations in Mendocino and Santa Barbara Counties (USFWS, 2005). Tidewater gobies were last seen in San Juan Creek in 1968, up to 2.5 miles upstream from the coast, and were not found during a sampling conducted in 1992

(CNDDB, 2011; USFWS, 2005). Therefore, there is low potential for the species to occur in the Proposed Project survey area.

5.6.2.13 Two-striped garter snake (*Thamnphis hammondii*; SSC, Covered Species)

Two-striped garter snake inhabits the coastal region of southern California to 2,135 meters elevation. This species can be found in or near permanent fresh water. Prefers streams with rocky beds and riparian growth (Jennings and Hayes, 1994).

There is suitable habitat for this species and CNDDB records have been found within San Juan Creek. Therefore is a moderate potential for occurrence of this species within the perennially wet creeks and drainages crossing the Proposed Project survey area, specifically in Horno Creek, San Juan Creek, Segunda Deshecha Cañada, Tributary to Segunda Deshecha Cañada 3, and Tributary to Christianitos Creek 1.

5.6.2.14 Western pond turtle (*Emys marmorata*; SSC)

Western pond turtles inhabit ponds, lakes, rivers, streams, creeks, marshes and irrigation ditches, with abundant vegetation, and either rocky or muddy bottoms, in woodland, forest, and grassland. Inside streams this species prefers pools to shallower areas. Logs, rocks, cattail mats, and exposed banks are required for sun basking. This species is known to enter brackish water and even seawater.

There is suitable foraging habitat for this species and CNDDB records have been found within San Clemente Creek. Therefore is a moderate potential for occurrence of this species within the perennially wet creeks and drainages crossing the Proposed Project survey area, specifically in Horno Creek, San Juan Creek, Segunda Deshecha Cañada, Tributary to Segunda Deshecha Cañada 3, and Tributary to Christianitos Creek 1.

5.6.2.15 Western spadefoot (*Spea hammondii*; SSC, Covered Species)

Western spadefoot toad occurs primarily in grassland habitats, although can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.

Suitable habitat exists in the Proposed Project survey area and occurrences have been documented within 2.25 miles by CNDDB. Species may forage in CSS within the Proposed Project survey area. There is a moderate potential for occurrence of this species based on its habitat requirements.

5.7 WILDLIFE CORRIDORS

It is not anticipated that the Proposed Project will have a significant effect on wildlife movement corridors. The Proposed Project will be located within an existing ROW, primarily within urbanized areas, where transmission lines are already present. The Proposed Project would not significantly impact or restrict general wildlife movement due to the intermittent locations of construction activity and its temporary nature. Wildlife would not be physically prevented from moving around project equipment in the transmission corridor. During operation of the Proposed

Project, the widely spaced towers and/or poles would not physically obstruct wildlife movement; wildlife could move under and around the towers and poles.

5.8 JURISDICTIONAL DELINEATION OF WATERS AND WETLANDS

The Proposed Project survey area supports twelve different drainages. These drainages include eight relatively permanent waters, known as Horno Creek, San Juan Creek, Segunda Deshecha Cañada, Tributary to Segunda Deshecha Cañada 1, 2, and 3, and Tributary to Christianitos Creek 1 and 3. The remaining four drainages are non-relatively permanent waters known as the Tributary to Prima Deshecha Cañada, Tributary to San Juan Creek, the Rancho San Juan Drainage, and Tributary to Christianitos Creek 2. All drainages within the Proposed Project survey area total approximately 6.69 acres of WUS of which 3.43 acres are wetland, and 13.83 acres of "Waters of the State," of which 13.52 acres are riparian. The locations and boundaries of these jurisdictional waters are depicted in the attached Appendix C, Figures 2-7. A summary of jurisdiction by acreage is provided below in Table 2: Potentially Jurisdictional Waters in Proposed Project Survey Area.

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Table 2: Potentially Jurisdictional Waters in Proposed Project Survey Area

Drainage Name	ACOE Wetland	Total ACOE[1]	CDFG Riparian	Total CDFG[2]	Linear Feet
Horno Creek	0.05	**0.19**	1.08	**1.08**	540
San Juan Creek	2.00	**3.86**	4.86	**4.86**	665
Tributary to San Juan Creek	0.00	**0.05**	0.00	**0.05**	1,630
Whispering Hills Drainage	0.00	**0.94**	2.55	**2.55**	960
Tributary to Prima Deshecha Cañada	0.00	**0.22**	0.59	**0.72**	3,880
Segunda Deshecha Cañada	0.68	**0.68**	1.38	**1.38**	1,040
Tributary to Segunda Deshecha Cañada 1	0.01	**0.04**	0.01	**0.04**	155
Tributary to Segunda Deshecha Cañada 2	0.00	**0.03**	0.00	**0.03**	715
Tributary to Segunda Deshecha Cañada 3	0.26	**0.28**	0.55	**0.56**	515
Tributary to Christianitos Creek 1	0.26	**0.34**	2.24	**2.25**	1,040
Tributary to Christianitos Creek 2	0.00	**0.04**	0.00	**0.04**	610
Tributary to Christianitos Creek 3	0.00	**0.02**	0.26	**0.27**	630
Totals	***3.26***	***6.69***	***13.52***	***13.83***	***12,380***

[1] Includes all wetlands and waters (RPW and non-RPW).
[2] Includes bed and bank and associated riparian habitat, where present.

6.0 IMPACTS

The following section discusses the potential impacts to biological resources as a result of construction, operation and maintenance of the Proposed Project, and analyses the significance of those impacts. Impacts, whether or not they are significant, can be direct or indirect, and permanent or temporary. Direct permanent impacts are those effects that take a biological resource which cannot be replaced on-site, such as removing native vegetation to construct a building. Direct, temporary impacts include effects, such as those from construction staging, that are only temporary and can be restored to similar conditions prior to the impact. Indirect permanent impacts result from permanent surrounding influence, such as noise, light, or invasive species from a permanent source, such as a road, an airport, or a lighted sports facility. Indirect temporary effects are surrounding effects such as construction noise that will only last temporarily during construction activities of a project.

The operational protocols, habitat enhancement measures and mitigation set forth in Sections 7.1, 7.2 and 7.4, respectively, of the *SDG&E Subregional NCCP* were determined sufficient to reduce any impacts to special status species from the Proposed Project (including those species not covered under the *SDG&E Subregional NCCP*) to a less-than-significant level. Therefore, no additional APMs were determined required to avoid or minimize potential impacts to biological resources. Maps displaying the location of temporary and permanent construction impacts are provided in Appendix J. Details on the potential impacts and avoidance, minimization and mitigation measures are provided below.

6.1 CONSTRUCTION IMPACTS

The following discussion describes the Proposed Project's potential to impact sensitive species and habitats during construction of the Proposed Project. SDG&E would be operating under *SDG&E Subregional NCCP* which was established according to the FESA and CESA and the state's NCCP Act. This would include compliance with Section 7.1, *Operation Protocols* and Section 7.2, *Habitat Enhancement Measures* of the *SDG&E Subregional NCCP*.

Construction of the Proposed Project could result in temporary disturbance to and/or permanent loss of sensitive vegetation communities, rare plant communities, and sensitive plant species. Temporary disturbance includes short-term impacts during construction for new pole structures and removal of existing towers and work at staging/laydown areas. Permanent loss involves long-term impacts associated with permanent Proposed Project features such as new transmission towers and substation modifications, or any new access roads or improvements to existing access roads.

6.1.1 Impacts to Vegetation Communities

Impacts to vegetation communities could result in impacts to habitats for special status species, including Covered Species. Impacts could result from blading, scraping, excavation, and erosion, along with fragmentation and human access to restricted areas. Modification of habitat may reduce the prey base or other biological resources for special status species and thereby affect their ability to survive. The *SDG&E Subregional NCCP* allows for impacts to habitats when incidental to otherwise lawful activities and when conducted in full compliance with the *SDG&E Subregional* NCCP. Compliance with the *SDG&E Subregional NCCP* intends to avoid impacts

whenever possible and to implement measures to minimize and mitigate any take to the maximum extent possible.

The Proposed Project would permanently impact approximately 0.85 acre of CSS, 0.72 acre of Disturbed CSS, 2.38 acres of Ruderal vegetation, 2.83 acres of Disturbed habitat, 2.34 acres of Ornamental vegetation, 1.23 acres of existing Dirt roads and 10.05 acres of Developed land. The Proposed Project would also temporarily impact 0.44 acre of CSS, 0.86 acre of Disturbed CSS, 8.69 acres of Ruderal vegetation, 5.3 acres of Disturbed habitat, 1.16 acres of Ornamental vegetation, 1.41 acres of Dirt roads, and 4.84 acres of Developed areas. There would be no permanent or temporary impacts to Coastal Freshwater Marsh, SWS, Disturbed SWS, or Riparian Scrub habitat. Minimal impacts to sensitive habitats are expected due to the Proposed Project and are limited to CSS and Disturbed CSS. A map of temporary and permanent construction impacts to vegetation communities is provided in Appendix J. These impacts are also summarized in Table 3: Vegetation Community Impacts.

Consistent with the *SDG&E Subregional NCCP*, the Proposed Project has been designed to avoid sensitive habitat areas when possible, including not placing poles in drainage areas, using existing access roads to the greatest extent possible, and placing any new facilities, staging areas, or access roads outside habitats when feasible. Where avoidance of sensitive habitat areas (CSS and Disturbed CSS) is not possible, or where sensitive habitat areas exist adjacent to Proposed Project work areas, implementation of the measures in Section 7.1 and 7.2 of the *SDG&E Subregional NCCP* will reduce these impacts to less-than-significant, including but not limited to those listed below. The relevant *SDG&E Subregional NCCP* section is provided in brackets and can be used to reference the *SDG&E Subregional NCCP* for additional details.

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Table 3: Vegetation Community Impacts

Vegetation Community	Permanent Impacts (Acres)	Temporary Impacts (Acres)
Sensitive Habitats		
Coastal Sage Scrub	0.85	0.44
Disturbed Coastal Sage Scrub	0.72	0.86
Coastal Freshwater Marsh	0	0
Southern Willow Scrub	0	0
Disturbed Southern Willow Scrub	0	0
Riparian Scrub	0	0
Subtotal	*1.57*	*1.30*
Non-sensitive Habitats		
Ruderal	2.38	8.69
Disturbed	2.83	5.30
Ornamental	2.34	1.16
Dirt Roads	1.23	1.41
Developed	10.05	4.84
Subtotal	*18.83*	*21.4*
Total	***20.4***	***22.7***

***SDG&E Subregional NCCP* Operation Protocols, Habitat Enhancement Measures and Mitigation**

- Vehicles will be kept on access roads and limited to 15 miles per hour (Section 7.1.1, 1.).
- No plants will be collected (Section 7.1.1, 2.).
- Measures to prevent or minimize wild fires will be implemented, including exercising care when driving and not parking vehicles where catalytic converters can ignite dry vegetation (Section 7.1.1, 9.).
- Field crews will refer all environmental issues, including questions regarding environmental impacts, to the Environmental Surveyor (Section 7.1.1, 10.).
- All SDG&E personnel will participate in an environmental training program conducted by SDG&E, with annual updates (Section 7.1.2, 11.).
- The Environmental Surveyor will conduct pre-activity studies for all activities occurring in natural areas, and will complete a pre-activity study form including recommendations for review by a biologist and construction monitoring, if appropriate. The form will be provided to CDFG and USFWS but does not require their approval (Section 7.1.3, 13.).
- The Environmental Surveyor will flag boundaries of habitats to be avoided and, if necessary, the construction work boundaries (Section 7.1.3, 14.).
- The Environmental Surveyor will conduct monitoring as recommended in the pre-activity study form (Section 7.1.4, 35.).
- Fugitive dust will be controlled by regular watering and speed limits (Section 7.1.4, 39.).
- New access roads will be designed and constructed according to the SDG&E *Guide for Encroachment on Transmission Rights-of-Way (4/91)* (Section 7.1.6, 46.)
- Impacts to CSS and Disturbed CSS habitat for new facilities will be mitigated for permanent impacts at a 2:1 ratio in preserve areas and at a 1:1 ratio outside preserve areas (Section 7.2). SDG&E Mitigation Credits will be used for the Proposed Project.
- Impacts to CSS and Disturbed CSS habitat for new facilities will be mitigated for temporary impacts through basic site remediation, including hydro seeding for erosion control, if necessary. For areas greater than 500 square feet, any acreage not meeting the success criteria shall be deducted from SDG&E Mitigation Credits at a 1:1 ratio. For areas of less than 500 square feet, success criteria will not be required to be met (Sections 7.2 and 7.4). Vegetation restoration methods and success criteria are outlined in Section 7.2.1. Habitat reclamation, involving the removal of exotic vegetation, will be considered when re-seeding would be an ineffective habitat enhancement method (Section 7.2.2).

6.1.2 Impacts to Sensitive Plant Species

The *SDG&E Subregional NCCP* allows for the take of Covered Species and impacts to their habitats when incidental to otherwise lawful activities and when conducted in full compliance with the *SDG&E Subregional* NCCP. Compliance with the *SDG&E Subregional NCCP* intends to avoid take of Covered Species whenever possible and to implement measures to minimize and

mitigate any take to the maximum extent possible. Take of Narrow Endemic Covered Species, including certain plant species, is to be avoided except for emergencies and unavoidable impacts from repairs to existing facilities.

All sensitive plant species identified in the literature search are unlikely to occur within the Proposed Project survey area based on focused field surveys and observations. Based on the results of the field survey, the potential for occurrence was determined for each plant species and is included as Appendix A of this report. No sensitive plant species were found during habitat assessments or rare plant surveys conducted in 2008 and 2010.

Since special status plant species were not observed in the Proposed Project survey area and determined to have an unlikely potential to occur, no impacts to these species are expected. Pre-activity surveys required pursuant to the *SDG&E Subregional NCCP* will confirm absence of special status plants. If any are found, compliance with Sections 7.1 and 7.2 of the *SDG&E Subregional NCCP* will reduce any impacts to a less-than-significant level. These include measures outlined in Section 6.1.1 of this report.

6.1.3 Impacts to Sensitive Wildlife Species

Take can occur from impacts to individual animals, such as harassment, death or displacement, or impacts to habitats (see discussion in Section 6.1.1 of this report). Harassment is the most common impact to individual animals and can occur as an unavoidable and unintentional consequence of factors such as human activity, operation of machinery or equipment, and associated noise. Harassment can also result in the disruption of normal behaviors and abandonment of nests. Direct killing or injury to individuals may result from being struck by vehicles or equipment, or being crushed or trapped in their burrows. Displacement may occur when individual animals move away from the work area to surrounding areas, either temporarily or permanently, either due to noise or removal of nests or nesting/foraging habitat. Some wildlife may be temporarily displaced during construction of the Proposed Project, at least during daylight hours. However, once the work ends, no lasting effects are anticipated that would preclude wildlife from returning to their normal routines. Permanent displacement results in animals being forced to compete with other animals in new areas for food and living space. The Proposed Project will result in a temporary loss of approximately 10.01 acres of suitable foraging and cover habitat, and the permanent loss of approximately 3.95 acres of suitable foraging and cover habitat. Suitable habitat within the Proposed Project area includes native and non-native vegetation classified as CSS, Disturbed CSS, or Ruderal areas. Other potential impacts include wildlife falling into and becoming trapped within transmission pole excavation areas or inside equipment/supplies.

The *SDG&E Subregional NCCP* allows for the take of Covered Species and impacts to their habitats when incidental to otherwise lawful activities and when conducted in full compliance with the *SDG&E Subregional* NCCP. Compliance with the *SDG&E Subregional NCCP* intends to avoid take of Covered Species whenever possible and to implement measures to minimize and mitigate any take to the maximum extent possible. Take of Narrow Endemic Covered Species, including certain animal species, is to be avoided except for emergencies and unavoidable impacts from repairs to existing facilities.

As summarized in Section 5.6 of this document, 34 sensitive wildlife species have a potential to occur (30 of which are Covered Species) and six are found within and in the vicinity of the Proposed Project survey area (of which only one, white-tailed kite, is not a Covered Species). The potential presence of species is based on their known or recorded occurrence within the region, and/or appropriate habitat being present in the project area.

While no impacts to riparian vegetation communities are included within the Proposed Project, impacts to areas adjacent to riparian habitat may indirectly affect special status riparian species. Specifically, potential impacts to arroyo toad, least Bell's vireo, and southwestern willow flycatcher will be assessed through pre-construction and clearance surveys pursuant to the *SDG&E Subregional NCCP*.

Consistent with the *SDG&E Subregional NCCP*, the Proposed Project has been designed to avoid sensitive habitat areas that may support special status wildlife species when possible, including not placing poles in drainage areas, using existing access roads to the greatest extent possible, and placing any new facilities, staging areas, or access roads outside habitats when feasible. Due to the small permanent footprint of the Proposed Project, and the presence of potential foraging adjacent to the Proposed Project, wildlife habitat is not expected to be adversely affected. Where avoidance of sensitive habitat areas supporting special status wildlife is not possible, or where sensitive habitat areas exist adjacent to Proposed Project work areas, implementation of the measures in Section 7.1 and 7.2 of the *SDG&E Subregional NCCP* will reduce these impacts to less-than-significant, including but not limited to those listed in Section 6.1.1 and additional measures below. The applicable *SDG&E Subregional NCCP* section is provided in brackets and can be used to reference the *SDG&E Subregional NCCP* for additional details. Compliance with the *SDG&E Subregional NCCP* would reduce impacts to Covered Species to a less-than-significant level, including mitigation for loss of habitat. Pre-activity surveys required pursuant to the *SDG&E Subregional NCCP* will also confirm the absence of any other special status species not covered under the *SDG&E Subregional NCCP*. If any non-Covered Species special status species are found or suspected, compliance with Sections 7.1 and 7.2 of the *SDG&E Subregional NCCP* will allow avoidance, minimization and mitigation of impacts, as applicable. CDFG and/or USFWS will be consulted if impacts to non-Covered Species cannot be avoided. Based on Section 5.6.2 of this report, presence or potential presence of non-Covered Species is expected to be limited to white-tailed kite, arroyo chub, and Stephen's kangaroo rat. No impacts will occur to arroyo chub habitat as result of the Proposed Project, and avoidance of any impacts to white tailed kite and Stephen's kangaroo rat (if present) is expected through compliance measures in the *SDG&E Subregional NCCP*.

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- No wildlife, including rattlesnakes, will be collected or harmed, except to protect life and limb (Section 7.1.1, 2. and 7.).
- Feeding of wildlife is not allowed (Section 7.1.1, 4.).
- No pets are allowed within the right-of-way (Section 7.1.1, 5.).
- Littering is not allowed, and no food or waste will be left on the right-of-way or adjacent properties (Section 7.1.1, 8.).

- Field crews will refer all environmental issues, including wildlife relocation, dead or sick wildlife, or questions regarding environmental impacts to the Environmental Surveyor. Biologists or experts in wildlife handling may be necessary to assist with wildlife relocations (Section 7.1.1, 10.).
- Supplies, equipment, or construction excavations where wildlife could hide (e.g., pipes, culverts, pole holes, trenches) will be inspected prior to moving or working on/in them (Section 7.1.4, 37. and 38.).
- During the nesting season, the presence or absence of nesting species shall be determined by a biologist who will recommend appropriate avoidance and minimization measures (Section 7.1.6, 50.).

6.1.4 Raptors and Other Nesting Bird Species

Construction activities could potentially impact nesting raptors, passerines, and other sensitive bird species such as migratory birds protected under the MBTA. Impacts may include the removal of potential nesting habitat and the disruption of nesting behavior due to a temporary increase in noise from construction equipment and vehicles. SDG&E would comply with Sections 7.1 and 7.2 of the *SDG&E Subregional NCCP*, including pre-activity surveys (see Section 6.1.1 of this report), determining the presence or absence of nesting species (see Section 6.1.3 of this report), and implementing avoidance and minimization measures (see Section 6.1.3 of this report). These measures will also comply with the MBTA. Through compliance with the *SDG&E Subregional NCCP*, impacts to breeding and nesting birds are expected to be less-than-significant.

Transmission lines and other structures provide potential perching opportunities for raptor species, which can increase the potential for predation of wildlife by raptors. Since the Proposed Project is within an existing transmission ROW, the extent of predation on sensitive and common wildlife species is not anticipated to change from existing conditions.

Concerns regarding potential electrocution impacts from transmission lines to wildlife species are primarily focused on avian species. Electrocution with avian species can occur from wing contact as avian species perch, land, or take off from a utility pole by contact with two conductors to complete the electrical circuit, simultaneous contact with energized phase conductors and other equipment, and simultaneous contact with energized wire and a grounded wire. Electrocution of avian species is more of a potential hazard to larger birds, such as raptors, because their body size and wing span are large enough to span the distance between the conductor wires and, thus, complete the electrical circuit. As part of the Proposed Project, SDG&E will be utilizing underground transmission lines in certain portions of the alignment in place of existing overhead transmission lines, which will reduce the possibility of avian electrocution. Where overhead transmission lines are required, design and construction will occur in compliance with the Avian Power Line Interaction Committee's Suggested Practices for Avian Protection on Power Lines. As outlined in Section 2.0, VIII of the *SDG&E Subregional NCCP*, SDG&E may also coordinate with wildlife agencies and consider the installation of bird guards on the poles and towers to prevent perching/nesting activities. The type of bird guards will be considered on a case by case basis. The *SDG&E Subregional NCCP* also requires that if nests interfere with the safe operation of a transmission system, that removal of the nest be

avoided during the months of January through June. With compliance of the *SDG&E Subregional NCCP*, impacts to birds as a result of electrocution are expected to be less-than-significant.

6.1.5 Wildlife Movement Corridors

It is not anticipated that the Proposed Project will have a significant effect on wildlife movement corridors. The Proposed Project will be located within an existing ROW where transmission lines are currently present. Placement of pole and tower structures for the new overhead transmission line will occur in the vicinity of existing structures within the ROW, and due to their small footprint will maintain wide natural areas to allow the continued movement of wildlife species. The Proposed Project will also avoid or span existing drainages that often serve as wildlife movement corridors. Some local wildlife movement may be temporarily disrupted during construction, at least during daylight hours. However, once construction is completed, no lasting effects are expected that would preclude wildlife from returning. Therefore, impacts to wildlife movement corridors are anticipated to be less-than-significant.

Since the Proposed Project will be located in an existing utility ROW, currently occupied by numerous structures and circuits, the addition of new circuits and structures will not significantly impact migrating birds. Furthermore, the measures outlined in Section 6.1.3 of this report will avoid or minimize impacts associated with construction. Therefore, impacts to migrating birds are anticipated to be less-than-significant.

Based on the above and Sections 6.1.1 and 6.1.3 of this report, it is expected that regional wildlife movement will not be significantly impacted by the Proposed Project due to minimal loss of protective cover (vegetation), roosts, forage habitat, or movement corridors. Therefore, the potential impacts to wildlife movement corridors are anticipated to be less-than-significant.

6.1.6 Impacts to Jurisdictional Waters

Construction of the Proposed Project would result in no permanent impacts to waters under the jurisdiction of the ACOE, RWQCB, and CDFG. A total of approximately 0.0006 acre of ephemeral jurisdictional waters would be temporarily impacted. The temporary impacts are to a 25-foot linear ephemeral drainage with a one-foot width located within Tributary to Prima Deshecha Cañada. This water has a low biological value and has no associated riparian vegetation. Nevertheless, SDG&E would avoid this drainage to the greatest extent possible, obtain permits from the regulatory agencies, and mitigate for impacts as described in the *SDG&E Subregional NCCP* (Sections 7.1 and 7.2) and as required by the permitting process. Through compliance of the *SDG&E Subregional NCCP* and permits to be obtained from the regulatory agencies, direct impacts to jurisdictional waters will be less-than-significant. Indirect impacts to jurisdictional drainages will be avoided through the use of state-of-the art technical design and construction techniques to minimize avoid erosion and siltation into any creeks, streams, rivers, or bodies of water by use of BMPs (*SDG&E Subregional NCCP* Section 7.1.4, 20.).

6.2 OPERATIONS AND MAINTENANCE IMPACTS

Standard operational and maintenance activities, such as road grading, tree trimming, structure installation, and replacement and repairs, could potentially impact special status species,

including *SDG&E Subregional NCCP* Covered Species, if present in the Proposed Project area. Potential impacts from SDG&E's standard operations and maintenance activities are already accounted for in the *SDG&E Subregional NCCP*. Through compliance of measures outlined in the *SDG&E Subregional NCCP*, the potential impacts to special status species as a result of operation and maintenance of the Proposed Project is expected to be less-than-significant.

6.2.1 Wildlife Electrocution

Concerns regarding potential electrocution impacts to wildlife are primarily focused on avian species. An electric circuit (and resultant electrocution) is created when a bird simultaneously touches an energized conductor and the neutral wire or grounded hardware. Most bird electrocutions occur on distribution systems at the relatively lower voltages. This is due primarily to the spacing of the electrical conductors. On transmission towers the wires are separated by seven to 30 feet. In distribution systems the spacing is two to six feet. The closer spacing is more of a potential hazard to raptors and other large birds because their body size and wingspan are big enough to span the distance between the conductor wires, completing an electrical circuit. A second shock hazard exists from a neutral wire and metal hardware that is connected to a ground wire. Through implementation of the Avian Power Line Interaction Committee's Suggested Practices for Avian Protection on Power Lines, and Section 2.0, VIII of the *SDG&E Subregional NCCP* (also discussion in Section 6.1.3 of this report), impacts from avian electrocution is considered less-than-significant.

Electrocution of non-avian species is rare. When it occurs, it is generally caused by climbing animals that come into contact with energized components at substations rather than on transmission lines. Typical non-avian electrocution impacts could occur to non-sensitive wildlife species such as squirrels (*Spermophilus* sp.), raccoons (*Procyon lotor*), and domestic cats (*Felis domesticus*). Infrequent electrocution of non-sensitive wildlife species is not considered a significant impact.

6.2.2 Collision

Collision impacts of avian species with existing transmission facilities can be a significant impact. Collision impacts typically occur to migratory bird species and are generally due to poor visibility of electrical lines. Factors leading to avian collisions with existing transmission lines include a lack of visual cues that make the lines stand out against the surrounding environment. Disorientation of avian species can be caused by "light dazzle" from city/industrial light sources during evening hours, by spatial configuration of the electrical lines, and proximity to heavily used major avian flyways.

The Proposed Project's overhead transmission line crosses open fields that provide foraging habitat for generally solitary raptors, as well as riparian areas, which could be utilized by migratory birds. Since the Proposed Project's overhead facilities are within an existing SDG&E ROW, these added facilities are not expected to result in a significant increase in avian collision. Therefore, the potential impacts of increased avian collisions are anticipated to be less-than-significant.

6.3 SUMMARY OF IMPACTS

Direct and indirect impacts to special status habitats, plant and wildlife species, including Covered Species, will be avoided, minimized, or mitigated through compliance with measures outlined in the *SDG&E Subregional NCCP*, implementation of the Avian Power Line Interaction Committee's Suggested Practices for Avian Protection on Power Lines, and regulatory permitting for jurisdictional waters, thereby reducing impacts to a less-than-significant level. Details on those compliance measures are provided in Section 6.1 and 6.2 of this report. Since compliance with the existing *SDG&E Subregional NCCP* and regulatory permitting is considered adequate to address impacts to sensitive biological resources, no additional APMs are necessary.

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Appendix A
CNDDB and CNPS Special Status Species Table

APPENDIX A CNDDB and CNPS Special Status Species Table

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Plants					
Allen's daisy	*Pentachaeta aurea* ssp. *allesnii*	Federal: None State: None CNPS:1B.1 NCCP: None	Coastal scrub, valley and foothill grasslands. Prefers sandy substrate and openings. Occurs between 75 and 520 m.	March to June Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Aphanisma	*Aphanisma blitoides*	Federal: None State: None CNPS: 1B.2 NCCP: CS	Coastal bluff scrub, Coastal dunes, Coastal scrub. Prefers sandy substrate. Occurs between 1 and 305 m.	March to June Annual	**Unlikely.** No suitable habitat identified in the Proposed Project survey area also, no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Big-leaved crownbeard	*Verbesina dissita*	Federal:FT State: ST CNPS: 1B.1 NCCP: None	Chaparral (maritime) and coastal scrub. Occurs at 45 and 205 m.	April to July Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Blochman's dudleya	*Dudleya blochmaniae* ssp. *blochmaniae*	Federal: None State: None CNPS:1B.1 NCCP: None	Coastal bluff scrub, Chaparral, Coastal scrub, Valley and foothill grassland. Perfers rocky, often clay or serpentinite soils. Occurs between 5 and 450 m.	April to June Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 3.0 miles of the survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
California satintail	*Imperata brevifolia*	Federal: None State: None CNPS: 2.1 NCCP: None	Chaparral, Coastal scrub, Mojavean desert scrub, Meadows and seeps often alkali, Riparian scrub. Prefers mesic soils. Occurs between 0 and 500 m.	September to May Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record is within 2.5 miles of the survey area.
Chaparral nolina	*Nolina cismontana*	Federal: None State: None CNPS: 1B.2 NCCP: None	Chaparral, coastal scrub. Prefers sandstone or gabbro soils. Occurs between 140 and 1,275 m.	May to July Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Chaparral ragwort	*Senecio aphanactis*	Federal: None State: None CNPS: 2.2 NCCP: None	Chaparral, cismontane woodland, coastal scrub. Occurs between 15 and 800 m.	January to April Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Chaparral sand-verbena	*Abronia villosa* var. *aurita*	Federal: None State: None CNPS: 1B.1 NCCP: None	Chaparral, coastal scrub, desert dunes/sandy soils. Occurs between 80 and 1,600 m.	January to September Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. No CNDDB records within 3.0 miles of survey area.
Cliff spurge	*Euphorbia misera*	Federal: None State: None CNPS: 2.2 NCCP: None	Coastal bluff scrub, coastal scrub, and mojavean desert scrub. Occurs between 10 and 500 m.	December to August Evergreen	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Coulter's matilija poppy	*Romneya coulteri*	Federal: None State: None CNPS: 4.2 NCCP: None	Chaparral and coastal scrub. Occurs between 20 and 1,200 m.	March to July Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Coulter's saltbush	*Atriplex coulteri*	Federal: None State: None CNPS: 1B.2 NCCP: None	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. Occurs between 3 and 460 m.	March to October Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 0.1 mile of the survey area.
Engelmann oak	*Quercus engelmannii*	Federal: None State: None CNPS: 4.2 NCCP: None	Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland. Occurs between 120 and 1,300 m.	March to May Evergreen	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Estuary seablite	*Suaeda esteroa*	Federal: None State: None CNPS: 1B.2 NCCP: None	Marshes and swamps (coastal salt) Occurs between 0 and 5 m.	May to January Perennial	**Unlikely.** No **s**uitable habitat identified in the Proposed Project survey area also, no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Felt-leaved monardella	*Monardella hypoleuca* ssp. *lanata*	Federal: None State: None CNPS: 1B.2 NCCP: CS	Chaparral, cismontane woodland. Occurs between 300 and 1,190 m.	June to August Perennial	**Unlikely.** No suitable habitat identified in the Proposed Project survey area also, no occurrences were identified during focused surveys and outside of known elevation range. No CNDDB records within 3.0 miles of survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Hall's monardella	*Monardella macrantha* ssp. *hallii*	Federal: None State: None CNPS: 1B.3 NCCP: None	Broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Occurs between 730 and 2,195 m elevation.	June to October Perennial	**Unlikely.** No suitable habitat identified in the Proposed Project survey area also, no occurrences were identified during focused surveys and outside of known elevation range. No CNDDB records within 3.0 miles of survey area.
Intermediate mariposa lily	*Calochortus weedii* var. *intermedius*	Federal: None State: None CNPS: 1B.2 NCCP: None	Rocky and calcareous substrate. Chaparral, coastal scrub, valley and foothill grassland. Occurs between 105 and 855 m.	May to July Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 0.75 mile of the survey area.
Laguna beach dudleya	*Dudleya stolonifera*	Federal: FT State: ST CNPS: 1B.1 NCCP: None	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Prefers rocky substrate. Occurs between 10 and 260 m.	May to July Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Little mousetail	*Myosurus minimus* ssp. *apus*	Federal: None State: None CNPS: 3.1 NCCP: CS	Valley and foothill grassland, vernal pools (alkaline). Occurs between 20 and 640 m.	March to June Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Long-spined spineflower	*Chorizanthe polygonoides* var. *longispina*	Federal: None State: None CNPS: 1B.2 NCCP: None	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland. Often prefers clay soils. Occurs between 30 and 1,530 m.	April to July Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Many-stemmed dudleya	*Dudleya multicaulis*	Federal: None State: None CNPS: 1B.2 NCCP: CS	Chaparral, coastal scrub, valley and foothill grassland. Prefers clay soils. Occurs between 15 and 790 m.	April to July Perennial	**Unlikely**. Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 0.43 mile of the survey area..
Mesa horkelia	*Horkelia cuneata* ssp. *puberula*	Federal: None State: None CNPS: 1B.1 NCCP: None	Chaparral, cismontane woodland, coastal scrub. Prefers sandy or gravelly soil. Occurs between 70 and 810 m.	February to September Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Mud nama	*Nama stenocarpum*	Federal: None State: None CNPS: 2.2 NCCP: None	Marshes and swamps (lake margins, riverbanks). Occurs between 5 and 500 m.	January to July Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Nuttall's scrub oak	*Quercus dumosa*	Federal: None State: None CNPS: 1B.1 NCCP: None	Closed-con coniferous forest, chaparral, and coastal scrub. Prefers sandy, clay loam substrate. Occurs between 15 and 400 m.	February to August Evergreen	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 0.75 mile of the survey area.
Orcutt's pincushion	*Chaenactis glabriuscula* var. *orcuttiana*	Federal: None State: None CNPS: 1B.1 NCCP: None	Coastal bluff scrub (sandy), coastal dunes. Occurs between 3 and 100 m.	January to August Annual	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Palmer's grapplinghook	*Harpagonella palmeri*	Federal: None State: None CNPS: 4.2 NCCP: CS	Chaparral, coastal scrub, valley and foothill grassland. Occurs between 20 and 955 m.	March to May Annual	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 1.0 mile of the survey area.
Parry's tetracoccus	*Tetracoccus dioicus*	Federal: None State: None CNPS: 1B.2 NCCP: CS	Chaparral, coastal scrub. Occurs between 165 and 1,000 m.	April to May Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 1.0 mile of the survey area.
Peninsular nolina	*Nolina cismontana*	Federal: None State: None CNPS: 1B.2 NCCP: None	Chaparral, coastal scrub. Prefers sandstone or gabbro soils. Occurs between 140 and 1,275 m.	May to July Evergreen	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Plummer's mariposa lily	*Calochortus plummerae*	Federal: None State: None CNPS: 1B.2 NCCP: None	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Prefers granitic or rocky substrate. Occurs between 100 and 1,700 m.	May to July Evergreen	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Prostrate vernal pool navarretia	*Navarretia prostrata*	Federal: None State :None CNPS:1B.1 NCCP: None	Coastal scrub, meadows and seeps, valley and foothill grassland (alkaline), vernal pools. Prefers mesic soils. Occurs between 15 and 1,210 m.	April to July Annual	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Robinson's pepper-grass	*Lepidium virginicum* var. *robinsonii*	Federal :None State: None CNPS: 1B.2 NCCP: None	Chaparral and coastal scrub. Occurs between 1 and 885 m elevation.	January to July Annual	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Salt spring checkered bloom	*Sidalcea neomexicana*	Federal: None State: None CNPS: 2.2 NCCP: None	Chaparral, coastal scrub, lower montane coniferous forest, mojavean desert scrub, playas. Prefers alkaline and mesic soils. Occurs between 15 and 1,530 m.	March to June Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 2.5 miles of the survey area.
San Bernardino aster	*Symphyotrichum defoliatum*	Federal :None State: None CNPS: 1B.2 NCCP: None	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic). Prefers ditches, streams and springs. Occurs between 2 and 2,040 m.	July to November Perennial	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
San Miguel savory	*Satureja chandleri*	Federal: None State: None CNPS: 1B.2 NCCP: CS	Chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Prefers rocky, gabbroic or metavolcanic soils. Occurs between 120 and 1,075 m elevation.	March to July	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Santa Catalina Island desert-thorn	*Lycium brevipes* var. *hassei*	Federal: None State: None CNPS: 1B.1 NCCP: None	Coastal bluff scrub, coastal scrub. Occurs between 10 to 300 m.	June	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Santa Monica dudleya	*Dudleya cymosa* ssp. *ovatifolia*	Federal: FT State: None CNPS: 1B.2 NCCP: None	Chaparral, coastal scrub. Prefers volcanic or sedimentary, rocky substrate. Occurs between 150 and 1,675 m.	March to June	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Smooth tarplant	*Centromadia pungens*	Federal: None State: None CNPS: 1B.1 NCCP: None	Chenopod scrub, meadows and seeps, playas, riparian woodland and valley and foothill grassland. Prefers alkaline soils. Occurs between 0 and 640 m.	April to September	**Unlikely.** No suitable habitat identified in the Proposed Project survey area also, no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
South coast saltscale	*Artiplex pacifica*	Federal: None State: None CNPS: 1B.2 NCCP: None	Coastal bluff scrub, coastal dunes, coastal scrub, playas. Occurs between 0 and 140 m.	March to August	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Southern tarplant	*Centromadia parryi* ssp. *australis*	Federal: None State: None CNPS: 1B.1 NCCP: None	Marshes, swamps, valley and foothill grassland (vernally mesic), vernal pools. Occurs between 0 and 425 m.	March to August	**Unlikely.** No suitable habitat identified in the Proposed Project survey area, also no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Sticky dudleya	*Dudleya viscida*	Federal: None State: None CNPS: 1B.2 NCCP: CS	Coastal bluff scrub, chaparral, coastal scrub. Occurs between 10 and 550 m.	April to June Evergreen shrub	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Summer holly	*Comarostaphylis diversifolia* ssp. *diversifolia*	Federal: None State: None CNPS: 1B.2 NCCP: None	Chaparral, cismontane woodland. Occurs between 30 and 550 m.	May to June Evergreen shrub	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Tecate cypress	*Hesperocyparis forbesii*	Federal: None State: None CNPS: 1B.1 NCCP: CS	Clay, gabbroic or metavolcanic, closed-cone coniferous forest, chaparral. Occurs 80 to 1500 m.	April to June Evergreen shrub	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.
Thread-leaved brodiaea	*Brodiaea filifolia*	Federal: FT State: SE CNPS: 1B.1 NCCP: CS	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools. Prefers clay substrate. Occurs between 25 to 1,219 m.	March to June Perennial herb	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 0.5 mile of the survey area.
White rabbit-tobacco	*Pseudognaphalium leucocephalum*	Federal: None State: None CNPS: 2.2 NCCP: None	Chaparral, cismontane woodland, coastal scrub, riparian woodland. Prefers sandy or gravelly. Occurs between 0 to 2,100 m.	July to December Perennial herb	**Unlikely.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. No CNDDB records within 3.0 miles of survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Invertebrates					
Riverside fairy shrimp	*Streptocephalus woottoni*	Federal: FE State: None NCCP: CS	Coastal scrub, valley and foothill grassland, vernal pool, wetland.		**None.** No suitable habitat identified in the Proposed Project survey area. The nearest CNDDB record for this species is within 1.25 miles of the survey area.
San Diego fairy shrimp	*Branchinecta sandiegonensis*	Federal: FE State: None NCCP: CS	Found in small, shallow vernal pools, and occasionally in ditches and road cuts with suitable conditions.		**None.** No suitable habitat identified in the Proposed Project survey area. The nearest CNDDB record for this species is within 1.25 miles of the survey area.
Amphibians/Fish					
Arroyo chub	*Gila orcuttii*	Federal: None State: SSC NCCP: None	Found in slow-moving or backwater sections of southern California coastal streams with muddy or sandy substrates.		**High.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. CNDDB records document the species occurring in San Juan Creek where the Proposed Project survey area crosses the creek, as well as upstream and downstream of the area and in nearby tributaries.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Arroyo toad	*Bufo californicus*	Federal: FE State: SSC NCCP: CS	Occurs in washes or intermittent streams, including valley-foothill and desert washes. Prefers rivers with sandy banks, willows, cottonwoods, and sycamores and loose, gravelly areas of streams in the drier parts of its range. Breeds in open sandy and gravelly streams.		**Moderate.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused field surveys. The nearest CNDDB record for this species is within 0.1 mile of the survey area. Specifically, along San Juan Creek, as well as along Cristianitos Canyon and Gabino Creeks.
Southern steelhead southern California DPS	*Oncorhynchus mykiss irideus*	Federal: FE State: SSC NCCP: None	Historically found in major southern California coastal streams.		**Low.** The species is not documented to occur along creeks within the Proposed Project survey area. The nearest CNDDB record for this species is within 1.5 miles of the survey area in San Mateo Creek; the stream will not be crossed by the Proposed Project.
Tidewater goby	*Eucyclogobius newberryi*	Federal: FE State: SSC NCCP: None	Found primarily in brackish waters of coastal lagoons, estuaries, and marshes.		**None.** No suitable habitat identified in the Proposed Project survey area. The nearest CNDDB record for this species is within 1.5 miles of the survey area in Aliso Creek;
Western spadefoot	*Spea hammondii*	Federal: None State: SSC NCCP: CS	Occurs in grasslands, scrub, chaparral, and oak woodlands where soil is suitable for burrowing. Vernal pools are required for breeding and egg-laying. Species is nocturnal and spends most of the year underground.		**Moderate.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during focused surveys. The nearest CNDDB record for this species is within 2.25 miles of the survey area in Horno Creek.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Reptiles					
Coast horned lizard	*Phrynosoma coronatum blainvillei*	Federal: None State: SSC NCCP: CS	Low Occurs in a variety of habitats including grasslands, coastal sage scrub, chaparral, oak woodland, riparian woodland, pinyon-juniper woodland, and coniferous forest. Prefers friable, rocky, or shallow sandy soils.		**Moderate.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 0.2 mile of the survey area. Species may be present in coastal sage scrub habitat along Proposed Project survey area.
Coastal rosy boa	*Lichanura trivirgata*	Federal: None State: None NCCP: CS	Occurs in desert and chaparral habitats from the coast of southern California to the Mojave and Colorado deserts. Prefers moderate to dense vegetation and rocky cover. Has been observed in diverse locations such as hillsides, desert canyons, washes and mountains. Little is known of seasonality, but most commonly found in late spring/early summer.		**Low.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. No CNDDB records are present within 3.0 miles of the survey area.
Belding's orange-throated whiptail	*Aspidoscelis hyperythra*	Federal: None State: SSC NCCP: CS	Coastal sage scrub, chaparral, and valley-foothill hardwood habitats. Prefers sandy areas with patches of brush and rocks.		**Moderate.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 0.3 mile of the survey area. species

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Northern red-diamond rattlesnake	*Crotalus ruber ruber*	Federal: None State: SSC NCCP: CS	Chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains. Prefers rocky areas and dense vegetation and requires rodent burrows, cracks in rocks or other surface cover objects.		**Moderate.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species within 1.25 miles of the survey area.
Two-striped garter snake	*Thamnophis hammondii*	Federal: None State: SSC NCCP: CS	Found in permanent or semi-permanent waterways, prefers streams with rocky beds and riparian growth.		**Moderate.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species within 1.25 miles of the survey area. Specifically, species there is potential for this species within the perennially wet creeks and drainages crossing the Proposed Project survey area.
Western pond turtle	*Emys marmorata*	Federal: None State: SSC NCCP: CS	Ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation, and either rocky or muddy bottoms, in woodland, forest, and grassland. In streams, prefers pools to shallower areas. Logs, rocks, cattail mats, and exposed banks are required for basking. May enter brackish water and even seawater.		**Moderate.** Suitable habitat identified in the Proposed Project survey area, also no occurrences were identified during field surveys. The nearest CNDDB record for this species within 0.3 mile of the survey area. Specifically, there is potential for this species within the perennially wet creeks and drainages crossing the Proposed Project survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Birds					
American peregrine falcon	*Falco peregrinus anatum*	Federal: BCC State: FP NCCP: CS	Widespread throughout California, prefers open habitat, coastlines, lake edges and mountain chains. Nests on cliff sides or utilized abandoned nests made by large birds but does not build its own nest.		**Present.** Suitable nesting and foraging habitat identified in the Proposed Project survey area; occurrences were identified during field surveys. No CNDDB records within 3.0 miles of survey area.
Burrowing owl	*Athene cunicularia*	Federal: BCC State: SSC NCCP: CS	Habitat includes arid and semi-arid environments with mammal burrows and low vegetation, such as grasslands, pasturelands, scrublands, and agricultural fields.		**High.** Suitable nesting and foraging habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is located within the Proposed Project survey area near the Prima Desecha Landfill. species
Coastal (San Diego) cactus wren	*Campylorhynchus brunneicapillus sandiegensis*	Federal: None State: SSC NCCP: CS	Foraging and breeding habitat is coastal sage scrub with patches of tall prickly pear and coastal cholla (*Opuntia littoralis* and *O. oricola*). Nests almost exclusively in prickly pear and coastal cholla.		**Low.** Suitable foraging habitat identified in the Proposed Project survey area; however, Proposed Project survey area lacks cacti and succulents typically associated with this species and required for nesting. No occurrences were identified during field surveys. The nearest CNDDB record for this species is within 0.10 mile of the survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Coastal California gnatcatcher	*Polioptila californica californica*	Federal: FT State: SSC NCCP: CS	Obligate, permanent resident of coastal sage scrub below 2,500 feet in southern California. This species is known to occur in low, coastal sage scrub in arid washes, on mesas and slopes. Suitable coastal sage scrub vegetation exists throughout the Proposed Project's Proposed Project survey area.		**Present.** Suitable nesting and foraging habitat identified in the Proposed Project survey area; numerous occurrences were identified during focused surveys. Observed and documented in both 2008 and 2010 during habitat assessment and focused surveys..
Cooper's hawk	*Accipiter cooperii*	Federal: None State: WL NCCP: CS	Inhabits broken woodlands, woodland edges and streamside groves. Nests in open woodlands or in deciduous trees in riparian areas. The riparian habitat and eucalyptus grove located along the Proposed Project survey area provides suitable nesting habitat.		**Present.** Suitable nesting and foraging habitat identified in the Proposed Project survey area. This species was observed in riparian habitat and eucalyptus trees along the Proposed Project survey area.
Golden eagle	*Aquila chrysaetos*	Federal: BCC State: FP NCCP: CS	Usually in mountainous areas, rare in grasslands, desert and open country. Nests on cliffs or tall trees.		**Low.** Low quality foraging habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. Marginally suitable nesting habitat present on towers or tall trees. No CNDDB records within 3.0 miles of survey area.
Grasshopper sparrow	*Ammodramus savannarum*	Federal: None State: None NCCP: CS	Grassland habitat - ground-nesting species.		**Low.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. No CNDDB records within 3.0 miles of survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Least Bell's vireo	*Vireo bellii pusillus*	Federal: FE State: SE NCCP: CS	Typically found foraging and nesting in low riparian areas in the vicinity of water or in dry river bottoms. Nests often found in willow, baccharis or mesquite. Occurs below 610 meters elevation.		**Present.** Suitable nesting and foraging habitat identified in the Proposed Project survey area. The species was observed and documented during focused surveys at four drainage locations spanned or paralleled by the Proposed Project survey area.
Northern harrier	*Circus cyaneus hudsonius*	Federal: None State: SSC NCCP: CS	Coastal salt and freshwater marsh. Will nest and forage in grasslands, from salt grass in desert sinks to mountain cienegas. Nests on ground in shrubby vegetation, usually at marsh edge.		**Low.** Suitable nesting and foraging habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. Appropriate foraging habitat is present in the more open grassland and sage scrub habitat within the Proposed Project survey area. No CNDDB records within 3.0 miles of survey area.
Southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	Federal: None State: WL NCCP: CS	Coastal sage scrub and sparse mixed chaparral, often on rocky hillsides with patches of grass and herbaceous vegetation.		**Moderate.** Suitable nesting and foraging habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 2.5 miles of the survey area

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Southwestern willow flycatcher	*Empidonax traillii extimus*	Federal: FE State: SE NCCP: CS	Cottonwood-willow and tamarisk riparian forest.		**Present.** Suitable habitat identified in the Proposed Project survey area. Focused surveys conducted in 2008 observed species migratory individuals in the riparian habitat west of the Talega Substation. No observations during the 2010 focused surveys for the species. The nearest CNDDB record for this species is within 0.25 mile of the survey area. species
Tricolored blackbird	*Agelaius tricolor*	Federal: BCC State: SSC NCCP: CS	Occurs in grassland, riparian, and marsh habitats. Requires thick vegetation for nesting purposes and often nests near water sources. They require a relatively small foraging area that includes surrounding agricultural fields and grasslands.		**Low.** Small patches of suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 2.4 miles of the survey area.
White-tailed kite	*Elanus leucurus*	Federal: None State: FP NCCP: None	Lowland terrestrial habitats, in particular, riparian woodlands, and oak or sycamore groves near grasslands.		**Present.** Suitable nesting and foraging habitat identified in the Proposed Project survey area; occurrences were identified during field surveys. The nearest CNDDB record for this species is within 0.25 mile of the survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Mammals					
Dulzura pocket mouse	*Chaetodipus californicus femoralis*	Federal: None State: SSC NCCP: CS	Coastal sage scrub, chaparral, and grassland and is attracted to grass/chaparral edges.		**Low.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 2.5 miles of the survey area.
Mexican long-tongued bat	*Choeronycteris mexicana*	Federal: None State: SSC NCCP: None	Desert, montane, riparian, to pinyon-juniper habitats. Most frequently found roosting in desert canyons, deep caves, mines, or rock crevices. In urban environments, use abandoned buildings for day roosts.		**Low.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 2.0 miles of the survey area.
Mountain lion	*Puma concolor browni*	Federal: None State: SSC NCCP: CS	Many different habitats within a large range. It typically inhabits remote mountainous areas near reliable water sources.		**High.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. Marginal habitat exists in the less disturbed areas of the Proposed Project Proposed Project survey area and in the vicinity of Camp Pendleton. No CNDDB records within 3.0 miles of survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Pallid bat	*Antrozous pallidus*	Federal: None State: SSC NCCP: None	Occurs in low elevations throughout California. Deserts, grasslands, shrublands, woodlands, and forests. Most commonly found in open, dry habitats with rocky areas for roosting.		**Low.** Low quality habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 1.75 miles of the survey area.
San Diego black-tailed jackrabbit	*Lepus californicus bennettii*	Federal: None State: None NCCP: CS	Intermediate canopy stages of shrub habitats and in open shrub/herbaceous and tree/herbaceous edges in Southern California west of the .		**Moderate.** Suitable habitat identified in the Proposed Project survey area also, no occurrences were identified during field surveys. Suitable habitat within areas of disturbed and intact coastal sage scrub vegetation found within Proposed Project survey area. No CNDDB records within 3.0 miles of survey area.
San Diego desert woodrat	*Neotoma lepida intermedia*	Federal: None State: SSC NCCP: CS	Occurs in Joshua tree woodlands, pinyon-juniper woodlands, mixed chaparral, sagebrush, and desert habitats. Particularly abundant in areas of rocky outcrops, cliffs, and slopes.		**Low.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. No CNDDB records within 3.0 miles of survey area.
Southern mule deer	*Odocoileus hemionus*	Federal: None State: None NCCP: CS	Coniferous forest, desert shrubs, chaparral, and grassland with shrubs.		**High.** Suitable habitat identified in the Proposed Project survey area in the vicinity of Camp Pendleton; no occurrences were identified during field surveys. No CNDDB records within 3.0 miles of survey area.

COMMON NAME	SCIENTIFIC NAME	LISTING STATUS	HABITAT REQUIREMENTS	FLOWERING/ PHENOLOGY	POTENTIAL FOR OCCURRENCE
Stephen's kangaroo rat	*Dipodomys stephensi*	Federal: FE State: None NCCP: CS	Annual and perennial grasslands, coastal scrub and sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass, and filaree. This species will burrow into firm soil.		**Moderate.** Suitable habitat identified in the Proposed Project survey area, also no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 2.5 miles of the survey area within highly disturbed non-native grassland habitat on Camp Pendleton. .
Western mastiff bat	*Eumops perotis californicus*	Federal: None State: SSC NCCP: CS	Open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices, cliff faces, high buildings, trees, and tunnels.		**Low.** Suitable habitat identified in the Proposed Project survey area; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 3.0 miles of the Site.
Yuma myotis	*Myotis yumanensis*	Federal: None State: None NCCP: CS	Woodland and grassland habitats; require caves or other undisturbed areas to roost.		**Low.** Foraging habitat may be present but the Proposed Project survey area lacks suitable roosting areas; no occurrences were identified during field surveys. The nearest CNDDB record for this species is within 1.5 miles of the survey area.

Legend

Federal (U.S. Fish and Wildlife Service)

FE Federally listed, endangered: species in danger of extinction throughout a significant portion of its range

FT Federally listed, threatened: species likely to become endangered within the foreseeable future

State (California Department of Fish and Game)

SE State listed, endangered

ST State listed, threatened

FP Fully Protected

SSC California Species of Special Concern: administrative designation for vertebrate species that appear vulnerable to extinction because of declining populations, limited ranges, and/or continuing threats

WL Watch List

CNPS (California Native Plant Society)

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

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

3 Need more information - a review list

4 Limited distribution - a watch list

.1 Seriously threatened in California

.2 Fairly threatened in California

.3 Not very threatened in California

Appendix B:
Plants and Wildlife Observed On-site

PLANTS

Aceraceae - Maple Family
**Acer* sp. - maple

Adoxaceae - Elderberry Family
Sambucus mexicana - Mexican elderberry

Aizoaceae - Ice Plant Family
**Aptenia cordifolia* - baby sun rose
**Carpobrotus edulis* - hottentot-fig
**Lampranthus spectabilis* - trailing iceplant
**Mesembryanthemum crystallinum* - crystalline iceplant

Alliaceae - Onion Family
Dichelostemma capitatum - blue dicks/wild hyacinth

Amaranthaceae - Amaranth family
**Amaranthus albus* - tumbling pigweed

Anacardiaceae - Sumac Family
Malosma laurina - laurel sumac
Rhus integrifolia - lemonade berry
Rhus ovata - sugar bush
**Schinus molle* - Peruvian pepper tree/California pepper tree
**Schinus terebinthifolius* - Brazilian pepper tree
Toxicodendron diversilobum - poison oak

Apiaceae - Carrot Family
Apiastrum angustifolium - mock-parsley
**Apium graveolens* - celery
Bowlesia incana - bowlesia
Conium maculatum - poison hemlock
Daucus pusillus - wild carrot/ rattlesnake weed
**Foeniculum vulgare* - fennel
Sanicula bipinnata - poison sanicle
**Sanicula crassicaulis* - Pacific sanicle

Apocynaceae - Dogbane Family
** Nerium oleander* - oleander

Asclepiadaceae - Dogbane Family
Asclepias fascicularis - narrow-leaf milkweed

Araliaceae - Ginseng Family
***Hedera helix* - English ivy**

Arecaceae - Palm Tree Family
**Washingtonia robusta* - Mexican fan palm*
**Phoenix dactylifera* - date palm

Asteraceae - Sunflower Family
Achyrachaena mollis - blow-wives
Achillea millefoliu - common yarrow
Artemisia californica - California sagebrush
Artemisia douglasiana - mugwort
Ambrosia psilostachya - western ragweed
Baccharis pilularis - coyote bush
Baccharis salicifolia - mulefat
Baccharis sarothroides - broom baccharis
**Carduus pycnocephalus* - Italian thistle
**Centaurea melitensis* - tocalote/malta star thistle
**Cirsium vulgare* - bull thistle
**Chamomilla suaveolens* - pineapple weed
**Chrysanthemum coronarium* - garland chrysanthemum
Conyza sp. - horseweed
Corethrogyne filaginifolia - common sandaster
**Cynara cardunculus* - artichoke thistle
**Dimorphotheca sinuate* - African daisy
Encelia farinose - brittlebush
Encelia californica - California encelia
Eriophyllum confertiflorum - golden yarrow
Eriophyllum confertiflorum var. *confertiflorum* - Long-stem golden yarrow
**Filago gallica* - narrow-leaved filago
**Gazania linearis* - treasure flower
Gnaphalium bicolor - bicolored cudweed
Gnaphalium californicum - California everlasting
Grindelia camporum var. *bracteosa* - rayless gumplant
Gutierrezia californica – matchweed
Gutierrezia sarothrae – common snakeweed
Hazardia squarrosa – saw toothed goldenbush
**Hedypnois cretica* – Crete weed
Helianthus annuus - common sunflower
Heterotheca grandiflora - telegraph weed
**Hypochaeris glabra* - smooth cat's ear
Isocoma menziesii - white flowered goldenbush
Isocoma menziesii var. *menziesii* - Menzies' goldenbush
**Lactuca serriola* - prickly-lettuce

Malacothrix saxatilis - cliff malacothrix
Picris echioides - bristly ox-tongue
Pseudognaphalium bicolor – twocolor cudweed
Pseudognaphalium canescens - Wright's cudweed
Rafinesquia californica - California chicory
**Senecio vulgaris* - old man of spring
**Silybum marianum* - milk thistle
Stephanomeria exigua ssp. *exigua* - small wreath plant
**Sonchus asper* ssp. *asper* - prickly sow-thistle
**Sonchus oleraceus* - sow thistle
**Taraxacum officinale* - common dandelion
**Uropappus lindleyi* - silver puffs
Xanthium spinosum - spiny cocklebur
Xanthium strumarium - cocklebur

Berberidaceae - Barberry Family
**Nandima domestica* - sacred bamboo

Betulaceae - Birch Family
Alnus rhombifolia - white alder

Bignoniaceae - Bignonia Family
**Jacaranda mimosifolia* - jacaranda

Boraginaceae - Borage Family
**Echium candicans* - pride of Madeira

Brassicaceae - Mustard Family
**Brassica nigra* - black mustard
**Capsella bursa-pastoris* - Shepherd's purse
**Coronopus didymus* - lesser wart-cress
**Hirschfeldia incana* - shortpod mustard
**Raphanus sativus* - wild radish

Boraginaceae - Borage Family
Amsinckia menziesii var. *intermedia* - common fiddleneck
Amsinckia menziesii var. *menziesii* - rigid fiddleneck
Cryptantha intermedia - popcorn flower

Cactaceae - Cactus Family
Opuntia littoralis - coast prickly-pear
**Opuntia ficus-indica* - Indian fig

Capparaceae - Caper Family
Isomeris arborea - bladderpod

Caryophyllaceae - Pink Family
**Cerastium glomeratum* - mouse-ear chickweed
**Silene gallica* - common catchfly
**Spergularia rubra* - ruby sand-spurry

Chenopodiaceae - Goosefoot Family
**Atriplex lentiformis* - quail brush
**Atriplex semibaccata* - Australian saltbush
**Chenopodium album* - lamb's quarters
**Chenopodium* sp. - goosefoot
**Salsola tragus* - Russian thistle

Convolvulaceae - Morning-glory family
**Convolvulus arvensis* - bindweed
***** *Convolvulus* sp. - bindweed
***** *Ipomoea purpurea* - common morning-glory

Crassulaceae – Orpine Family
Dudleya pulverulenta - chalk dudleya

Cucurbitaceae - Gourd Family
Cucurbita foetissima - coyote gourd/melon
Cucurbita foetidissima - calabazilla
Marah fabaceus - manroot/wild cucumber

Cupressaceae - Cypress Family
**Cupressus sempervirens* - Italian cypress

Ericaceae - Heath Family
Xylococcus bicolor - mission manzanita

Euphorbiaceae - Spurge Family
**Chamaesyce maculate* - spotted spurge
** Chamaesyce prostrata* - prostrate spurge
Croton setigerus - doveweed
**Ricinus communis* - castor bean

Fabaceae - Legume Family
Astragalus trichopodus - southern California locoweed
**Medicago lupulina* - black medick
**Medicago polymorpha* - bur-clover
**Melilotus alba* - white sweetclover
**Melilotus indica* - sourclover

**Melilotus officinalis* - yellow sweetclover
**Lathyrus* sp. - sweet pea
Lupinus biocolor - miniature lupine
Lupinus sp. - lupine
**Lupinus succulentus* - arroyo lupine
**Lotus hamatus* - grab lotus
Lotus scoparius - deerweed
**Spartium* sp. - broom
**Trifolium repens* - white clover
Trifolium willdenovii - tomcat clover

Fagaceae - Beech Family
Quercus agrifolia - coast live oak/ interior live oak
Quercus berberidifolia - scrub oak

Geraniaceae - Geranium Family
**Erodium cicutarium* - red-stem filaree/stork's bill
*Erodium botrys - long-beak filaree
**Geranium carolinianum* - Carolina geranium
**Geranium dissectum* - cut-leaf geranium

Grossulariaceae - Currant Family
Ribes speciosum - fushsia-flower gooseberry

Hydrophyllaceae - Waterleaf Family
Nemophila menziesii - baby blue-eyes
Phacelia cicutarium - caterpillar phacelia
Phacelia minor - California bluebells
Phacelia ramosissima - branching phacelia
Pholistoma auritum var. *auritum* - fiesta flower

Iridaceae - Iris Family
Sisyrinchium bellum - blue-eyed grass

Juncaceae - Rush Family
Juncus bufonius var. *bufonius* - common toad rush

Lamiaceae - Mint Family
**Lavandula stoechas* - French lavender
**Marrubium vulgare* - common horehound
Salvia apiana - white sage
Salvia columbariae - chia
Salvia mellifera - black sage

Stachys ajugoides var. *rigida* - hedge-nettle

Liliaceae - Lily Family
Bloomeria crocea var. *crocea*- Common goldenstar
Yucca schidigera - Mojave yucca
Yucca whipplei - our Lord's candle/chaparral yucca

Malvaceae - Mallow Family
Malacothamnus densiflorus - many-flowered mallow
Malacothamnus fasciculatus - Mendocino bushmallow
**Malva parviflora* - cheeseweed
Malva sp. - mallow
**Malva sylvestris* - high mallow

Moraceae - Mulberry Family
**Ficus carica* - edible fig
**Ficus macrophylla* - bay fig
**Ficus pumila* - creeping fig

Myoporaceae - Emu Bush Family
**Myoporum laetum* - ngaio tree/ lollypop tree

Myrtaceae - Myrtle family
**Callistemon* sp. - bottlebrush tree
**Eucalyptus globulus* - blue gum
**Eucalyptus polyanthemos* - silver dollar gum
**Medlaeuca* sp. - paperbark

Nyctaginaceae - Four-O'Clock Family
Mirabilis laevis var. *crassifolia* - California four o'clock
Mirabilis lavis – desert wishbone bush
Bougainvillea spectabilis - bougainvillea

Oleaceae - Olive Family
**Ligustrum* sp. - privet
**Olea europaea* - olive tree

Onagraceae - Evening Primrose Family
Camissonia bistorta - suncups
Camissonia californica - California evening primrose
Epilobium ciliatum ssp. *ciliatum* - willow herb
Oenothera elata ssp. *hirsutissima* – great marsh evening primrose

Orobanchaceae - Broomrape Family
Castilleja sp. - Indian paintbrush

Papaveraceae - Poppy Family
Eschscholzia californica - California poppy

Pinaceae - Pine Family
**Pinus* sp. - pine

Plantaginaceae - Plantain Family
Plantago erecta - California plantain
Plantago ovata - woolly plantain

Platanaceae - Plane-tree Family
Platanus racemosa - western sycamore

Plumbaginaceae - Leadwort Family
**Limonium perezii* - Perez's marsh-rosemary/Canarian sea lavender
**Limonium* sp. - statice

Poaceae - Grass Family
**Arundo donax* - giant reed
**Avena barbata* - slender wild oat
**Avena fatua* - wild oat
**Bromus diandrus* - ripgut
**Bromus hordeaceus* - soft chess
**Bromus madritensis* ssp. *rubens* - red brome/foxtail chess
**Bromus carinatus* var. *carinatus* - California brome
**Cortaderia* sp. - pampas grass
**Cortaderia selloana* - pampas grass
**Cynodon dactylon* - Bermuda grass
Distichlis spicata - saltgrass
**Hordeum murinum* - glaucous foxtail barely
**Hordeum murinum* ssp. *leporinum* - farmer's foxtail
Leymus condensatus - giant wildrye
**Lamarckia aurea* - goldentop
**Lolium multiflorum* - Italian rye grass
**Lolium perenne* - perennial ryegrass
**Lolium* sp. - ryegrass
Nassella pulchra - purple needle grass
**Pennisetum setaceum* - fountain grass

**Phalaris aquatica* - harding grass
Phalaris sp. - Canary grass
Poa secunda ssp. *secunda* - one-sided bluegrass
**Schismus barbatus* - common Mediterranean grass
Vulpia microstachys var. *pauciflora* – Pacific fescue
**Vulpia* sp. - fescue

Polemoniaceae - Phlox Family
Navarreita hamata - hooked navarretia

Polygonaceae - Buckwheat Family
Eriogonum fasciculatum var. *fasciculatum* - California buckwheat
**Polygonum arenastrum* - common knotweed
**Polypogon monspeliensis* - annual beard grass/ rabbits foot grass
**Rumex crispus* - curly dock

Portulacaceae - Purslane Family
Calandrinia ciliata - red maids
Calyptridium monandrum - common calyptridium
Claytonia parviflora ssp. *parviflora* - Utah miner's lettuce
Claytonia perfoliata ssp. *perfoliata* - miner's lettuce

Primulaceae - Primrose Family
**Anagallis arvensis* - scarlet pimpernel

Pteridaeae - Brake Family
Pentagramma triangularis ssp. *triangularis* - gold back fern

Ranunculaceae - Buttercup or Crowfoot family
Ranunculus californica - California buttercup

Rhamnaceae - Buckthorn Family
Rhamnus crocea - spiny redberry
Ceanothus spp. - ceanothus

Rosaceae - Family
Adenostoma fasciculatum - chamise
Adenostoma sparsifolium - redshank
**Eriobotrya japonica* - loquat
Heteromeles arbutifolia - toyon
Potentilla glandulosa ssp. *glandulosa* - sticky cinquefoil
Rosa californica - California wild rose

Rosa sp. - ornamental rose

Rubiaceae - Coffee or Madder Family
Galium angustifolium var. *angustifolium* - narrowleaf bedstraw
Galium aparine - common bedstraw

Salicaceae - Willow Family
Populus fremontii ssp. *fremontii* - Fremont's cottonwood
Salix exigua - Narrow-leaved willow
Salix gooddingii - Goodding's black willow
Salix lasiolepis - arroyo willow
Salix laevigata - red willow

Sapinoaceae - Soapberry Family
*Cupaniopsis anacardioides - carrotwood

Saururaceae - Lizard Tail Family
Anemopsis californica - yerba mansa

Scrophulariaceae - Figwort Family
Antirrhinum coulterianum - white snapdragon
**Kickxia elatine* - fluellin
Mimulus aurantiacus - bush monkey flower

Solanaceae-Night Shade Family
Datura wrightii - sacred datura
**Datura stramonium* - annual jimson weed
Nicotiana quadrivalvis - coyote tobacco
**Nicotiana glauca* - tree tobacco
Solanum douglasii - Douglas's nightshade

Tamaricaceae - Tamarisk
**Tamarix ramosissima* - tamarisk

Tropaeolaceae - Nasturtium Family
**Tropaeolum majus* - garden nasturtium

Typhaceae - Cattail Family
**Typha latifolia* - common cattail
**Typha* sp. - cattail

Urticaceae - Nettle Family
Urtica dioica ssp. *holosericea* - hoary nettle
**Urtica urens* - dwarf nettle

Verbenaceae - Verbena Family
Verbena lasiostachys - western verbena
Verbena sp. - verbena

Vitaceae - Grape Family
Vitis girdiana - desert wild grape

WILDLIFE

Invertebrates
Anthocharis sara - sara orangetip
Erynnis funeralis - funereal duskywing
Nymphalis antiopa - mourning cloak
Pieris rapae - cabbage white
Vanessa annabella - west coast lady
Vanessa cardui - painted lady

Amphibians
Hyla regilla - Pacific treefrog
Hyla cadaverina - California tree frog
Bufo boreas - western toad
Rana catesbeiana - bullfrogs

Reptiles
Crotalus viridis helleri - southern pacific rattlesnake
Lampropeltis getula - common kingsnake
Pituophis catenifer - gopher snake
Sceloporus occidentalis - western fence lizard
Uta stansburiana- side-blotched lizard

Birds
Accipiter cooperii - Cooper's hawk (WL)
Agelaius phoeniceus - red-winged blackbird
Aphelocoma californica - western scrub-jay
Ardea alba - great egret
Buteo jamaicensis - red-tailed hawk
Buteo lineatus - red-shouldered hawk

Callipepla californica - California quail
Calypte anna - Anna's hummingbird
Carduelis psaltria - lesser goldfinch
Carduelis tristis - American goldfinch
Carpodacus mexicanus - house finch
Cathartes aura - turkey vulture
Chamaea fasciata - wrentit
Charadrius vociferous - killdeer
Columba livia - rock dove
Corvus brachyrhynchos - American crow
Corvus corax - common raven
Dendroica cornata - yellow-rumped warbler
Elanus leucurus - white-tailed kite (FP)
Empidonax traillii extimus - southwestern willow flycatcher (FE, SE)
Falco peregrines - peregrine falcon (FP)
Falco sparverius - American kestrel
Geococcyx californianus - greater roadrunner
Geothlypis trichas - common yellowthroat
Icterus bullockii - Bullock's oriole
Icterus cucullatus - hooded oriole
Melanerpes formicivorus - acorn woodpecker
Melospiza melodia - song sparrow
Mimus polyglottos - northern mockingbird
Molothrus ater - brown-headed cowbirds
Passerina caerulea - blue grosbeak
Petrochelidon pyrrhonota - cliff swallow
Phainopepla nitens - phainopepla
Picoides nuttallii - Nuttall's woodpecker
Pipilo crissalis - California towhee
Pipilo maculates - spotted towhee
Polioptila californica californica - California gnatcatcher (FT, SSC)
Psaltriparus minimus - bushtit
Sayornis nigricans - Black phoebe
Sayornis saya - Say's phoebe
Selasphorus sasin - Allen's hummingbbird
Sialia mexicana - western bluebird
Stelgidopteryx serripennis - northern rough-winged swallow
Sturnella neglecta - western meadowlark
Sturnus vulgaris - European starling
Thryomanes bewickii - Bewick's wren

Toxostoma redivivum - California thrasher
Troglodytes aedon - house wren
Tyrannus verticalis - western kingbird
Vireo bellii pusillus - least Bell's vireo (FE, SE)
Zenaida macroura - mourning dove
Zonotrichia leucophrys - white-crowned sparrow

Mammals
Canis latrans - coyote
Lynx rufus - bobcat
Spermophilus beecheyi nudipes - California ground squirrel
Sylvilagus audubonii - Audubon's cottontail
Thomomys bottae - botta pocket gopher
Odocoileus hemionus - mule deer

Legend
* = Non-native species
FP - California Department of Fish and Game, Fully Protected Species
FT - California Department of Fish and Game, Federally Threatened
FE - California Department of Fish and Game, Federally Endangered
SE - State Endangered
SCC - California Department of Fish and Game, Species of Special Concern
WL - California Department of Fish and Game, Watch List

Appendix C: Jurisdictional Waters and Wetland Delineation

Jurisdictional Waters and Wetlands Delineation

South Orange County Reliability Enhancement Project

Orange County, California

May 2012

Prepared For:
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Prepared By:
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Acronyms List

ACOE	United States Army Corps of Engineers
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CFG	California Fish and Game Code
CFR	Code of Federal Register
CWA	Clean Water Act
FAC	Facultative
FACU	Facultative upland
FACW	Facultative wetland
GIS	Geographic Information Systems
GPS	Global Positioning System
kV	kilovolt
Manual	1987 Wetland Delineation Manual
msl	Mean Sea Level
NRCS	National Resource Conservation Service
NWI	National Wetlands Inventory
OBL	Obligate wetland vegetation
OHWM	Ordinary High Water Mark
Proposed Project	South Orange County Reliability Enhancement Project
Rapanos	*Rapanos v. United States and Carabell v. United States*
RPW	Relatively Permanent Waters
RWQCB	Regional Water Quality Control Board
SDG&E	San Diego Gas & Electric

SWANCC	*Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, et. al.*
SWRCB	State Water Resources Control Board
TNW	Traditional Navigable Waters
TRC	TRC Solutions, Inc.
UPL	Upland vegetation
U.S.	United States
U.S. EPA	United States Environmental Protection Agency
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WDR	Waste Discharge Requirements

1.0 INTRODUCTION

On behalf of San Diego Gas & Electric (SDG&E), a delineation of jurisdictional waters and wetlands was conducted by TRC Solutions, Inc. (TRC) for the South Orange County Reliability Enhancement Project (Proposed Project), located in Orange County, California (Figure 1, *Vicinity and Overview Map*). The delineation included a review of United States Geological Survey (USGS) topographic maps, aerial imagery (Google, 2012), and the National Wetlands Inventory (NWI), in addition to field surveys.

This report summarizes our methodology and findings of jurisdictional waters and wetlands as regulated by the United States Army Corps of Engineers (ACOE), Regional Water Quality Board (RWQCB), and California Department of Fish and Game (CDFG) for the above-referenced Proposed Project. These findings are subject to confirmation by the regulatory agencies. [1]

1.1 PROJECT OVERVIEW

SDG&E is a regulated public utility that provides electric service to three and a half million customers within a 4,100 square mile service area, covering parts of southern Orange County and San Diego County. The Proposed Project is intended to meet the area load growth and service reliability for approximately 118,000 customers (462 megawatts) within southern Orange County.

The Proposed Project will involve upgrading the existing 138/12 kilovolt (kV) Capistrano Substation with a new 230/138/12kV gas insulated substation, conducting minor alterations to the existing Talega Substation, and bringing two new 230kV transmission lines into the southern Orange County area by rebuilding an existing 138kV line between Talega and Capistrano Substations. The Proposed Project is approximately 8 miles in length. The Proposed Project is primarily located in portions of the cities of San Juan Capistrano and San Clemente, as well as unincorporated Orange and San Diego Counties, and the United States Marine Corps Base Camp Pendleton. This Proposed Project has an anticipated in-service date of 2017.

1.2 REGULATORY BACKGROUND

Jurisdictional limits between the agencies (ACOE, RWQCB, and CDFG) vary due to the different governing documents that define the limits of jurisdiction. The following is a summary of the governing documents as they pertain to the limits of jurisdiction.

1.2.1 United States Army Corps of Engineers

The ACOE administers and enforces Section 404 of the Clean Water Act (CWA). Pursuant to Section 404 of the CWA, the ACOE regulates the discharge of dredged and/or fill material into

[1]Only the regulatory agencies can make a final determination of jurisdictional boundaries. If a final jurisdictional determination is required, TRC can assist in getting written confirmation of jurisdictional boundaries from the agencies. Typically, only the ACOE will provide written confirmation.

waters of the United States (U.S.). The term "waters of the U.S." is defined in ACOE regulations at 33 Code of Federal Register (CFR) Part 328.3(a) as:

> *(1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;*
>
> *(2) All interstate waters including interstate wetlands;*
>
> *(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:*
>
> > *(i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or*
> >
> > *(ii) From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or*
> >
> > *(iii) Which are used or could be used for industrial purpose by industries in interstate commerce...*
>
> *(4) All impoundments of waters otherwise defined as waters of the United States under the definition;*
>
> *(5) Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;*
>
> *(6) The territorial seas;*
>
> *(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.*
>
> *(8) Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.*
>
> (9) *Waters of the United States do not include prior converted cropland.*[2] *Notwithstanding, the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the Environmental Protection Agency (U.S. EPA).*

[2] The term "prior converted cropland" is defined in the ACOE Regulatory Guidance Letter 90-7 (dated September 26, 1990) as "wetlands which were both manipulated (drained or otherwise physically altered to remove excess water from the land) and cropped before 23 December 1985, to the extent that they no longer exhibit important wetland values. Specifically, prior converted cropland is inundated for no more than 14 consecutive days during the growing season…." [Emphasis added.]

In the absence of wetlands, the limits of ACOE jurisdiction in non-tidal waters, such as intermittent streams, extend to the Ordinary High Water Mark (OHWM) which is defined at 33 CFR 328.3(e) as:

> *...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.*

Non-wetland waters are classified as either ephemeral, intermittent, or perennial waters as defined in the January 15, 2002 Federal Register notice:

Ephemeral Stream – An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral streambeds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Intermittent Stream – An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Perennial Stream – A perennial stream has flowing water year-round during a typical year. The water table is located above the streambed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

1.2.1.1 Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et. al.

The definition of "waters of the U.S." was altered by the January 9, 2001 U.S. Supreme Court Decision, *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, et. al.* (SWANCC). In the SWANCC decision, the Supreme Court held that the ACOE exceeded its authority by asserting CWA jurisdiction over an abandoned sand and gravel pit, solely because it provided habitat for migratory birds. The SWANCC rule is limited to waters that are non-navigable, isolated and intrastate and clarified that the ACOE staff should no longer rely on the use of waters by migratory birds as the sole basis for asserting jurisdiction.

Pursuant to Article I, Section 8 of the U.S. Constitution, federal regulatory authority extends only to activities that affect interstate commerce. In the early 1980s the ACOE interpreted the interstate commerce requirement in a manner that restricted ACOE jurisdiction on isolated (intrastate) waters. On September 12, 1985, the U.S. EPA asserted that ACOE jurisdiction extended to isolated waters that are used or could be used by migratory birds or endangered species, and the definition of "waters of the U.S." in ACOE regulations was modified as quoted above from 33 CFR 328.3(a).

In the SWANCC case the Court was asked whether use of an isolated, intrastate pond by migratory birds is a sufficient interstate commerce connection to bring the pond into federal

jurisdiction of Section 404 of the CWA. The written opinion notes that the Court's previous support of the ACOE's expansion of jurisdiction beyond navigable waters (*United States v. Riverside Bayview Homes, Inc*.) was for a wetland that abutted a navigable water and that the Court did not express any opinion on the question of the authority of the ACOE to regulate wetlands that are not adjacent to bodies of open water. The current opinion goes on to state:

> *In order to rule for the respondents here, we would have to hold that the jurisdiction of the ACOE extends to ponds that are not adjacent to open water. We conclude that the text of the statute will not allow this.*

Therefore, the Court's opinion may go beyond the migratory bird issue and says that no isolated, intrastate water is subject to the provisions of Section 404(a) of the CWA (regardless of any interstate commerce connection). However, the ACOE and U.S. EPA have issued a joint memorandum which states that they are interpreting the ruling to address only the migratory bird issue and leaving the other interstate commerce clause nexuses intact.

1.2.1.2 Rapanos v. United States and Carabell v. United States

On June 5, 2007, the U.S. EPA and ACOE issued joint guidance (U.S. EPA, 2008) that addresses the scope of jurisdiction pursuant to the CWA in light of the Supreme Court's decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (Rapanos). For project sites that include waters other than Traditional Navigable Waters (TNW) and/or their adjacent wetlands, or Relatively Permanent Waters (RPW) tributary to TNW and/or their adjacent wetlands, the ACOE must apply the significant nexus standard that is outlined in the *Approved Jurisdictional Determination Form* (ACOE, 2006). For "isolated" waters or wetlands, the joint guidance also requires an evaluation by the ACOE and U.S. EPA to determine whether other interstate commerce clause nexuses, not addressed in the SWANCC decision, are associated with isolated features on project sites for which a jurisdictional determination is being sought from the ACOE.

The agencies will assert jurisdiction over the following waters (U.S. EPA, 2008):

- TNWs;
- Wetlands adjacent to TNWs;
- Non-navigable tributaries of TNWs that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); and
- Wetlands that directly abut such tributaries.

The agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a TNW:

- Non-navigable tributaries that are not RPW;
- Wetlands adjacent to non-navigable tributaries that are not RPW; and
- Wetlands adjacent to but that does not directly abut a RPW non-navigable tributary.

The agencies generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent or short duration flow); and

- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

The agencies will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream TNWs; and
- Significant nexus includes consideration of hydrologic and ecologic factors.

1.2.1.3 Wetland Definition Pursuant to Section 404 of the Clean Water Act

The term “wetlands” (a subset of “waters of the U.S.”) is defined at 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions." In 1987 the ACOE published a manual to guide its field personnel in determining jurisdictional wetland boundaries. The methodology set forth in the 1987 Wetland Delineation Manual (Manual) (ACOE, 1987) and the Arid West Supplement (ACOE, 2006 and 2008) generally require that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics, often referred to as a ‘three-parameter wetland.’ While the Manual and Arid West Supplement provide great detail in methodology and allow for varying special conditions, a wetland should normally meet each of the following three criteria:

- More than 50 percent of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter in the National List of Plant Species that Occur in Wetlands (Reed, 1988);
- Soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and
- Indicators of wetland hydrology must be present, such as soil saturation. Whereas the Manual requires that hydrologic characteristics indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year, the Arid West Supplement does not include a quantitative criteria with the exception for areas with “problematic hydrophytic vegetation,” which require a minimum of 14 days of ponding to be considered a wetland.

1.2.2 Regional Water Quality Control Board

Pursuant to Section 401 of the CWA, the RWQCB regulates "waters of the U.S." with similar jurisdiction as the ACOE. The RWQCB focuses on the effects of a project on downstream water quality conditions and beneficial uses. In contrast to the ACOE, the RWQCB may assess jurisdiction over isolated features pursuant to the Porter-Cologne Water Quality Act. To obtain a Section 401 Water Quality Certification, the project must be in compliance with the California Environmental Quality Act (CEQA).

Subsequent to the SWANCC decision, the Chief Counsel for the State Water Resources Control Board (SWRCB) issued a memorandum that addressed the effects of the SWANCC decision on the Section 401 Water Quality Certification Program (Wilson, 2001). The memorandum states:

> *California's right and duty to evaluate certification requests under section 401 is pendant to (or dependent upon) a valid application for a section 404 permit from the ACOE, or another application for a federal license or permit. Thus if the ACOE determines that the water body in question is not subject to regulation under the ACOE's 404 program, for instance, no application for 401 certification will be required…*
>
> *The SWANCC decision does not affect the Porter Cologne authorities to regulate discharges to isolated, non-navigable waters of the states….*
>
> *Water Code section 13260 requires "any person discharging waste, or proposing to discharge waste, within any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements)." (Water Code § 13260(a)(1) (emphasis added).) The term "waters of the state" is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." (Water Code § 13050(e).) The U.S. Supreme Court's ruling in SWANCC has no bearing on the Porter-Cologne definition. While all waters of the United States that are within the borders of California are also waters of the state, the converse is not true—waters of the United States is a subset of waters of the state. Thus, since Porter-Cologne was enacted California always had and retains authority to regulate discharges of waste into any waters of the state, regardless of whether the ACOE has concurrent jurisdiction under section 404. The fact that often Regional Boards opted to regulate discharges to, e.g., vernal pools, through the 401 program in lieu of or in addition to issuing waste discharge requirements (or waivers thereof) does not preclude the regions from issuing waste discharge requirements (WDRs) in the absence of a request for 401 certification….*

In this memorandum the SWRCB's Chief Counsel has made the clear assumption that fill material to be discharged into isolated "waters of the U.S." is to be considered equivalent to "waste" and therefore subject to the authority of the Porter-Cologne Water Quality Act. However, while providing a recounting of the Act's definition of "waters of the U.S.", this memorandum fails to also reference the Act's own definition of waste:

> *"Waste" includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.* (California Resources Agency, 1969)

The lack of inclusion of a reference to "fill material," "dirt," "earth" or other similar terms in the Act's definition of "waste," or elsewhere in the Act, suggests that no such association was intended. Thus, the Chief Counsel's memorandum signals that the SWRCB is attempting to retain jurisdiction over discharge of fill material into isolated "waters of the U.S." by administratively expanding the definition of "waste" to include "fill material" without actually seeking amendment of the Act's definition of waste (an amendment would require action by the state legislature). Consequently, discharge of fill material into "waters of the State" not subject to the jurisdiction of the ACOE pursuant to Section 404 of the CWA may require authorization pursuant to the Porter Cologne Water Quality Act through application for WDRs or through waiver of WDRs, despite the lack of a clear regulatory imperative.

1.2.3 California Department of Fish and Game

Pursuant to Division 2, Chapter 6, Sections 1600-1603 of the California Fish and Game (CFG) Code, the CDFG regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife.

CDFG defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." CDFG's definition of "lake" includes "natural lakes or man-made reservoirs."

CDFG jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. CDFG's Legal Advisor has prepared the following opinion:

- Natural waterways that have been subsequently modified and which have the potential to contain fish, aquatic insects and riparian vegetation will be treated like natural waterways.
- Artificial waterways that have acquired the physical attributes of natural stream courses and which have been viewed by the community as natural stream courses, should be treated by (CDFG) as natural waterways.
- Artificial waterways without the attributes of natural waterways should generally not be subject to CFG Code provisions.

Thus, the types of water features that CDFG asserts jurisdiction on closely mirror those of the ACOE. Exceptions are CDFG's exclusion of isolated wetlands (those not associated with a river, stream, or lake), the addition of artificial stock ponds and irrigation ditches constructed on uplands, and the addition of riparian habitat supported by a river, stream, or lake regardless of the riparian area's federal wetland status. However, the limits of jurisdiction can differ between

the ACOE and CDFG in non-tidal waters depending on the physical characteristics. While the ACOE asserts jurisdiction over the OHWM, which is typically limited to the bed and lower banks of a drainage feature for example, CDFG asserts jurisdiction over the bed and bank and any associated vegetation. This includes to the top of bank and can also extend outside the top of bank to the drip line of associated riparian vegetation.

2.0 METHODS

Prior to beginning the field delineation, a 200-scale color aerial photograph, the U.S. Fish and Wildlife Service (USFWS) NWI (USFWS, 2011), U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil mapping data (NRCS, 2011a), historic aerials (Google, 2012), and USGS topographic maps (USGS, 1974a, 1974b, 1974c and 1997) were examined to determine the locations of potential areas of jurisdiction.

Fieldwork for the delineation was conducted in May 2010, July 2010, December 2011, and February 2012 by TRC biologists Darren Burton, Ken McDonald, Travis Kegel, and Lauralyn K. Jensen. The delineation field work involved walking the entire survey corridor, focusing on (but not limited to) potential areas identified during the literature search, and physically identifying any hydrologic, vegetative, and geomorphic characteristics in order to delineate potentially jurisdictional waters and wetlands. The Proposed Project survey area was approximately 8 miles long and width ranged in size from between 500 feet along the transmission corridors to 1,100 feet in areas buffering the substation locations. While in the field, notes were taken documenting the characteristics of the jurisdictional areas, and jurisdictional areas and widths were recorded onto a 200-scale color aerial photograph using visible landmarks and/or were mapped with a Trimble Global Positioning System (GPS) hand-held unit. Field data was then digitized using Geographic Information Systems (GIS) to determine acreages. A detailed delineation map was prepared illustrating the features that intersect the Proposed Project.

A field survey was conducted according to the technical guidelines provided in the Manual and the Arid West Supplement to identify and delineate wetlands that may be subject to regulatory jurisdiction under Section 404 of the CWA. Wetlands were identified by the "three-factor" approach, in which criteria for wetland hydrology, hydrophytic vegetation, and hydric soils must all be met to conclude that an area is a wetland, as described in the Manual and summarized below. Wetlands that appeared to meet the ACOE criteria were considered potentially jurisdictional as any determination is subject to verification by the regulatory agencies.

- Vegetation: Plant species were identified in the field and the indicator status of dominant plants was determined using The National List of Plant Species that Occur in Wetlands: Region 0 – California (Reed, 1988). Plant species were classified as obligate wetland vegetation (OBL) with greater than 99% probability of occurring in wetlands; facultative wetland (FACW) with 67% to 99% probability of occurring in wetlands; facultative (FAC) with 33% to 67% probability of occurring in wetlands; facultative upland (FACU) with 1% to 33% probability of occurring in wetlands; or upland vegetation (UPL) with less than 1% probability of occurring in wetlands.
- Hydrology: The presence of primary wetland hydrology indicators was determined by observing inundation, saturation, water marks, sediment deposits, drainage patterns,

and/or drift lines. Soil pits were dug to a depth of 18 inches, or until refusal, using a sharpshooter shovel, and allowed to stand undisturbed for at least 10 minutes. Observations were then recorded as to depth of free water in the pit, and depth of saturated soil.

- Soil: Soil profiles were examined for color and texture. Soil color was determined using a Munsell Soil Color Chart and hydric soil characteristics were identified (i.e., sulfidic odor, low chroma colors, mottling, etc.). All soil profile data were recorded onto the required data forms.

"Waters of the U.S." were identified pursuant to criteria outlined in Section 401 and Section 404 of the CWA, including but not limited to the presence of an OHWM and connection to a downstream jurisdictional water body. The OHWM was determined by observing signs of flow including but not limited to shelving, drift lines, and disturbed vegetation. "Waters of the State" were identified pursuant to criteria outlined in Section 1600 of the CFG Code, including the presence of a defined bed and bank and any associated vegetation. Drainages that appeared to meet the criteria for "waters of the U.S." or "waters of the State" were considered potentially jurisdictional as any determination is subject to verification by the regulatory agencies.

3.0 RESULTS

3.1 TOPOGRAPHY AND HYDROLOGY

The Proposed Project survey area comprises approximately 659 acres and contains named blue-line drainages (five in total), as depicted on the USGS topographic maps (Figure 1). The named drainages include Horno Creek, San Juan Creek, Prima Deshecha Cañada, Segunda Deshecha Cañada, and Christianitos Creek. Elevation within the Proposed Project survey area ranged from approximately 110 to 740 feet above mean sea level (msl).

The Proposed Project survey area transects a mixture of habitats and land uses including urbanized areas where local hydrology and drainage patterns have been significantly altered, along with undeveloped land comprised of rough foothills with steep valleys and ravines. The undeveloped areas are comprised primarily of coastal sage scrub and ruderal vegetation bordered by residential and commercial land uses. Surface water runoff within the Proposed Project survey area appears to be captured by perennial creeks and underground storm water systems associated with the urban developments.

3.2 LAND USE

Land use within the Proposed Project survey area consists primarily of undeveloped land, residential communities, and natural preserve areas. Outside of developed areas, non-native grassland and coastal sage scrub dominate the terrain.

3.3 SOILS

The NRCS has mapped the following soil types as occurring within the Proposed Project survey area. Only two soil types, Myford Sandy Loam series and Riverwash soil types, are identified as

hydric in the NRCS's publication, *Hydric Soils of the United States* (NRCS, 2011b), however, per the Arid West Supplement, all hydric soils must be confirmed in the field.

- Alo Clay - The Alo Clay series are well drained and composed of clay and weathered bedrock. The parent materials consist of residuum weathered from sedimentary rock. At 25 to 29 inches in depth, weathered bedrock is found. These soils occur on hills at 200 to 3,250 feet above msl.
- Bosanko Clay - The Bosanko Clay series are well drained and composed of clay, clay loam, silty clay and weathered bedrock. The parent material consists of residuum weathered from granite. At 22 to 36 inches in depth, weathered paralithic bedrock is found. These soils occur on the back slopes of hills at 300 to 2,500 feet above msl.
- Botella Clay Loam - Botella Clay Loam is well drained and composed of clay loam, silty and sandy clay loam. The parent material is alluvium derived from sedimentary rock. At more than 80 inches in depth a restrictive feature is found. These soils occur on alluvial fans at 500 to 800 feet above msl.
- Callegus Clay Loam - Callegus Clay Loam is well drained and composed of clay loam and weathered bedrock. The parent material is residuum weathered from calcareous shale. At 15 to 19 inches in depth, paralithic bedrock is found. These soils occur on the back slopes of hills at 200 to 2,500 feet above msl.
- Cieneba Sandy Loam - The Cieneba Sandy Loam series are somewhat excessively drained and are composed of coarse sandy loam and weathered bedrock. The parent material is a residuum of weathered granite. At four to 20 inches in depth, paralithic bedrock is found. These soils occur on hillsides at 500 to 4,000 feet above msl.
- Corralitos Loamy Sand - The Corralitos Loamy Sand series are somewhat excessively well drained and are composed of loamy sand and stratified sand. The parent material is alluvium derived from mixed sources. At more than 80 inches in depth a restrictive feature is found. These soils occur on alluvial fans at 30 to 1,000 feet above msl.
- Cropley Clay - Cropley Clay is well drained and composed of clay, silty clay and clay loam. At more than 80 inches depth a restrictive feature is found. These soils occur on alluvial fans at 50 to 1,500 feet above msl.
- Huerhuero Loam - Huerhuero Loam is moderately well drained and composed of loam, clay loam, clay, stratified sand and sandy loam. The parent material is calcareous alluvium derived from sedimentary rock. At more than 80 inches depth a restrictive feature is found. These soils occur on marine terraces at 1,000 feet above msl.
- Myford Sandy Loam - The Myford Sandy Loam series are moderately well drained and composed of sandy loam, sandy clay and sandy clay loam. The parent material is alluvium derived from mix sources. At more than 80 inches in depth a restrictive feature is found. These soils occur on landform terraces at 1,500 feet above msl.
- Riverwash - Riverwash is not well drained and composed of sand and stratified course sand to sandy loam. The parent material is sandy and gravelly alluvium. These soils occur on fans at diverse elevations above msl.

- Soboba Cobbly Loamy Sand - Soboba Cobbly Loamy Sand is excessively drained and composed of very cobbly loamy sand. The parent material is sandy and gravelly alluvium derived from mixed sources. At more than 80 inches depth a restrictive feature is found. These soils occur on alluvial fans at 30 to 4,200 feet above msl.
- Sorrento Loam - The Sorrento Loam series are well drained and composed of loam, silty clay loam, clay loam, and stratified loamy fine sand to silt loam. The parent material is alluvium derived from sedimentary rock. At more than 80 inches depth a restrictive feature is found. These soils occur on alluvial fans at 80 to 1,800 feet above msl.
- Sorrento Clay Loam series - These Sorrento clay loam soils occur on alluvial fans in relatively flat areas and are composed of loam, silty clay loam, stratified loamy fine sand, and silt loam. The soils are well drained and occur at elevations of 80 to 1,800 feet above msl.
- Yorba Gravelly Sandy Loam - The Yorba Gravelly Sandy Loam series are well drained and composed of gravelly sandy loam, very gravelly sandy clay loam and very gravelly sandy loam. The parent material is sandy and gravelly alluvium derived from mixed sources. At more than 80 inches depth a restrictive feature is found. These soils occur on landform terraces at 100 to 2,500 feet above msl.
- Yorba Cobbly Sandy Loam series - These Sorrento loam soils are composed of very cobbly sandy loam, very gravelly clay loam and very gravelly sandy loam. The soils are well drained and occur at elevations of 100 to 2,500 feet above msl.

3.4 UNITED STATES ARMY CORPS OF ENGINEERS JURISDICTION

The potential ACOE jurisdiction within the Proposed Project survey area totals approximately 6.65 acres, of which 3.35 acres is wetland. The location and limits of these ACOE jurisdictional areas are depicted on Figure 2, *Delineation Map Sheets 1-11*. Representative site photographs are provided as Appendix A, *Site Photographs*, and data forms are provided as Appendix B, *Wetland Determination Data Forms*.

The Proposed Project survey area supports twelve drainage systems. Of the drainage systems within the Proposed Project survey area, eight are RPWs and four are ephemeral systems. The eight RPWs are known as Horno Creek, San Juan Creek, Segunda Deshecha Cañada, and Tributary to Segunda Deshecha Cañada 1, 2, 3, and Tributary to Christianitos Creek 1 and 3. The Proposed Project's four ephemeral waters are known as the Tributary to San Juan Creek, Rancho San Juan Drainage, Tributary to Prima Deshecha Cañada, and the Tributary to Christianitos Creek 2. The acreage of all drainages broken out by ACOE waters and wetlands is listed in Table 1. A description of the drainages is also provided below.

Table 1: Summary of ACOE Jurisdiction

Drainage Name/ Types of Waters	ACOE Waters (Acres)	ACOE Wetland (Acres)	Total ACOE Jurisdiction (Acres)	Approximate Linear Feet
Horno Creek (RPW)	0.14	0.05	**0.19**	540
San Juan Creek (RPW)	1.86	2.00	**3.86**	665
Tributary to San Juan Creek (Ephemeral)	0.05	-	**0.05**	1,630
Rancho San Juan Drainage (Ephemeral)	0.94	-	**0.94**	960
Tributary to Prima Deshecha Cañada (Ephemeral)	0.22	-	**0.22**	3,880
Segunda Deshecha Cañada (RPW)	-	0.68	**0.68**	1,040
Tributary to Segunda Deshecha Cañada 1 (RPW)	0.03	0.01	**0.04**	515
Tributary to Segunda Deshecha Cañada 2 (RPW)	0.03	-	**0.03**	155
Tributary to Segunda Deshecha Cañada 3 (RPW)	0.02	0.26	**0.28**	715
Tributary to Christianitos Creek 1 (RPW)	0.08	0.26	**0.34**	1,040
Tributary to Christianitos Creek 2 (Ephemeral)	0.04	-	**0.04**	610
Tributary to Christianitos Creek 3 (RPW)	0.02	-	**0.02**	630
Totals	**3.43**	**3.26**	**6.69**	**12,380**

3.4.1 Horno Creek

The ACOE jurisdiction associated with Horno Creek within the Proposed Project survey area totals 0.19 acre, of which 0.05 acre is wetland. Horno Creek is a RPW that traverses the Proposed Project survey area from northeast to southwest and ultimately connects to San Juan Creek, which is tributary to the Pacific Ocean, the closest TNW. Horno Creek is a relatively narrow creek on the southeast side of Marbella Golf Course in San Juan Capistrano, in a densely wooded area east of Golf Club Drive between the golf course and a development off of Rancho Viejo Road. Flowing water was observed in this feature during the field surveys, and based on these observations the feature is expected to experience year-round hydrology. Results of the survey have been mapped on Figure 2, Sheet 1.

Vegetation associated with Horno Creek is composed mainly of non-native, ornamental, and disturbance-associated species including Mexican fan palms (*Washingtonia robusta*), ornamental ficus trees (*Ficus* sp.), eucalyptus (*Eucalyptus* sp.), ash (*Fraxinus* sp.) various weedy annual plants (e.g., rabbits foot grass (*Polypogon monspeliensis*), Johnson grass (*Sorghum halepense*), and relatively few native wetland species (e.g., willowherb (*Epilobium ciliatum*), mulefat (*Baccharis salicifolia*)). Intermittently along the creek, small areas dominated by ash and/or arroyo willow (*Salix lasiolepis*) meet the vegetation requirements for wetlands. A photograph of Horno Creek is included in Appendix A, Photo 1.

Soil pits were excavated in Horno Creek indicating wetland soils in one area. The area (approximately 100 feet in length) had soils with wetland characteristics and also met hydrology and vegetation requirements for wetland. Results of the data pits are recorded in Appendix B (Sampling Points 8-11).

3.4.2 San Juan Creek

The ACOE jurisdiction associated with San Juan Creek within the Proposed Project survey area totals 3.86 acres, of which 2.00 acres are wetland. San Juan Creek is a RPW that traverses the Proposed Project survey area from northeast to southwest and ultimately connects to the Pacific Ocean, the closest TNW. The nearest cross streets are Via Parra and Calle Del Campo on the western bank, and San Juan Creek Road and Avenida La Mancha on the eastern bank. The creek consists of wide, braided features that experience year-round hydrology and heavy scouring. An OHWM as well as flowing water was observed during the field survey. Results of the survey have been mapped on Figure 2, Sheet 2.

Vegetation associated with San Juan Creek is composed of dense riparian vegetation including various willows (*Salix* sp.), mulefat (*Baccharis salicifolia*), giant reed (*Arundo donax*) and cattails (*Typha latifolia*). Other areas of the creek were devoid of vegetation or had small patches of scattered riparian vegetation. Photographs of San Juan Creek are included as Appendix A, Photos 2 and 3.

Soil pits were excavated in San Juan Creek indicating wetland soils in some areas. Wetland soils were generally limited to areas without scour, where high velocity storm flows would not wash soils away. Results of the data pits are recorded in Appendix B (Sampling Points 1-7).

3.4.2.1 Adjacent Wetland to San Juan Creek

There is a two-foot outfall pipe approximately 280 feet northwest of San Juan Creek. Approximately one inch of standing water was present near the outfall. Hydric soils and hydrophytic vegetation were also present in the area of standing water. Results of the data pits are recorded in Appendix B (Sampling Points 16-17). The area meeting wetland characteristics was less than 14 feet in length. At the limit of the wetland, the water appeared to be absorbed into the groundwater and there is no sign of surface flow between the outfall pipe and San Juan Creek. However, due to the proximity to a RPW (San Juan Creek), the ACOE will likely assert jurisdiction over this adjacent wetland. The wetland totals 0.0006 acre, and for the purposes of this delineation will be added to the wetland totals of San Juan Creek. A photograph of this wetland is included as Appendix A, Photo 4. The location of the wetland is mapped on Figure 2, Sheet 2.

3.4.3 Tributary to San Juan Creek

The ACOE jurisdiction associated with the tributary to San Juan Creek within the Proposed Project survey area totals 0.05 acre. There are no wetlands associated with this tributary. The tributary is located approximately 1,250 feet southeast of the southern end of Paseo Riobo Road in San Juan Capistrano. The tributary is comprised of two drainages that begin within the Proposed Project survey area and flow south to north until leaving the Proposed Project survey area and eventually confluencing with San Juan Creek. The tributary can be characterized as ephemeral, flowing only during and directly following storm events. Results of the survey have been mapped on Figure 2, Sheet 3.

Vegetation associated with the tributary consists entirely of upland plants including California sagebrush (*Artemisia californica*), deer weed (*Lotus scoparius*), coyote bush (*Baccharis pilularis*), black mustard (*Brassica nigra*), artichoke thistle (*Cynara cardunculus*), and various non-native bromes (*Bromus* ssp.). A photograph of this tributary is included as Appendix A, Photo 5.

No soil pits were excavated due to a lack of wetland vegetation. Wetland soils are not expected in the tributary.

3.4.4 Rancho San Juan Drainage

The ACOE jurisdiction associated with the Rancho San Juan drainage totals 0.94 acre within the Proposed Project survey area. There are no wetlands associated with this drainage. The Rancho San Juan drainage is located approximately 300 feet southwest of the intersection of Vista Montana and Via Granada in San Juan Capistrano. The drainage begins within the Proposed Project survey area in a vegetated containment basin and continues east within a vegetated channel. The surrounding area is in the process of development; currently the feature receives water from surrounding uplands but it is expected to receive nuisance flows from the new development. The Rancho San Juan drainage flows generally east to west within the Proposed Project survey area, eventually meeting with San Juan Creek which ultimately connects to the Pacific Ocean, the closest TNW. Results of the survey have been mapped on Figure 2, Sheet 4.

The entire drainage has been revegetated with native species and appears to be maintained, as there were very few weedy or non-native species. Vegetation associated with the feature

included: arroyo willow (*Salix lasiolepis*), sandbar willow (*Salix exigua*), alkali bulrush (*Scirpus maritimus*), mulefat, California sycamore (*Platanus racemosa*), deer weed, and coyote bush. Photographs of this drainage are included as Appendix A, Photos 6 and 7.

No wetland soils were identified within the Rancho San Juan drainage. While no soil pits were excavated, based on observations and prior knowledge of the site, the drainage was recently constructed. Soils were comprised of hard clays consistent with recent excavation.

3.4.5 Tributary to Prima Deshecha Cañada

The ACOE jurisdiction associated with the Tributary to Prima Deshecha Cañada totals 0.22 acre within the Proposed Project survey area. There are no wetlands associated with the tributary. The tributary is located approximately 2,000 feet directly south of the southern end of La Pata road in the City of San Juan Capistrano. Tributary to Prima Deshecha Cañada is comprised of several ephemeral features that cross the Proposed Project survey area at multiple points in a northeast to southwest direction, continuing into downstream reaches of Prima Deshecha Cañada, and ultimately the Pacific Ocean. This ephemeral tributary can generally be described as incised with a distinct OHWM. Results of the survey have been mapped on Figure 2, Sheets 5 and 6.

Vegetation associated with the tributary is composed of annual weedy species such as black mustard, various non-native bromes, tocalote (*Centaurea melitensis*), as well as native upland species such as Mexican elderberry (*Sambucus mexicana*), California sagebrush, deer weed, and coyote bush. In addition, lower reaches contained riparian vegetation such as mulefat, arroyo willow, Himalayan blackberry (*Rubus discolor*), and stinging nettle (*Urtica dioica*). Photographs of this tributary are included as Appendix A, Photos 8 and 9.

No wetland soils were identified within the tributary. No soil pits were excavated, however, soils consisted primarily of hard clay and cobbles associated with high water velocities and consistent with the feature's deep incisions.

3.4.6 Segunda Deshecha Cañada

The ACOE jurisdiction associated with Segunda Deshecha Cañada within the Proposed Project survey area totals 0.68 acre, all of which is wetland. Segunda Deshecha Cañada is a RPW that traverses the Proposed Project survey area at two points. Segunda Deshecha Cañada generally travels northeast to southwest, exiting the Proposed Project survey area into an underground culvert that ultimately connects to the Pacific Ocean, the closest TNW. This drainage is located at the bottom of the canyon running generally parallel to Avenida La Plata road in the City of San Clemente. It contained flowing water during the field survey and is a RPW fed by nuisance flow from the surrounding residential communities. Results of the survey have been mapped on Figure 2, Sheets 7 and 8.

Vegetation on either bank consists of dense stands of Mexican elderberry, arroyo willow, and mulefat, as well as large swaths of cattails within the creek channel. A photograph of Segunda Deshecha Cañada is included as Appendix A, Photo 11.

Soil pits were excavated in Segunda Deshecha Cañada indicating wetland soils. Wetland soils were consistently identified within the OHWM of the drainage. Results of the data pits are recorded in Appendix B (Sampling Points 12-13).

3.4.7 Tributary to Segunda Deshecha Cañada 1

The ACOE jurisdiction associated with Tributary to Segunda Deshecha Cañada 1 totals 0.04 acre, of which 0.01 acre is wetland. It is located approximately 730 feet northeast of the intersection of La Pata and Vista Hermosa in the City of San Clemente. The tributary begins as it exits a box culvert and travels in a west-east direction, continuing into Segunda Deshecha Cañada. The tributary was flowing at the time of surveys and therefore is considered to be a RPW. Tributary to Segunda Deshecha 1 carries nuisance flows from surrounding developed areas. Results of the survey have been mapped on Figure 2, Sheet 7.

Vegetation associated with Tributary to Segunda Deshecha 1 includes coyote bush, black mustard, artichoke thistle, arroyo willow, cattails, and mulefat. A photograph of this tributary is included as Appendix A, Photo 10.

A soil pit was excavated in Tributary to Segunda Deshecha 1 indicating wetland soils in one small area located abutting the box culvert. Results of the data pit are recorded in Appendix B (Sampling Point 14).

3.4.8 Tributary to Segunda Deshecha Cañada 2

The ACOE jurisdiction associated with Tributary to Segunda Deshecha Cañada 2 within the Project survey area totals 0.03 acre. There are no wetlands associated with the tributary. The tributary is located approximately 850 feet southwest of the intersection of Vista Hermosa and Avenida Pico in the City of San Clemente. The tributary is contained within a 10 feet wide concrete box channel and appears to be part of a larger flood control facility. It continues into an underground box culvert that is expected to connect to downstream reaches of Segunda Deshecha Cañada and ultimately the Pacific Ocean. The feature was flowing during field investigations and is a RPW. Results of the survey have been mapped on Figure 2, Sheet 9.

Scattered weedy wetland vegetation was present in small pocket areas where sediment had collected within the box-culvert. Observed vegetation included rabbit's foot grass (*Polypogon monspeliensis*) and curly dock (*Rumex crispus*). A photograph of this tributary is included as Appendix A, Photo 12.

There were no soils associated with the tributary. Since it is contained within a concrete box channel, only shallow pockets of sediment were present within the tributary.

3.4.9 Tributary to Segunda Deshecha Cañada 3

The ACOE jurisdiction associated with Tributary to Segunda Deshecha Cañada 3 totals 0.28 acre, of which 0.26 acre is wetland. It is located approximately 750 feet southeast of the intersection of Calle Batido and Calle Alicante in the City of San Clemente. The feature transverses part of the Proposed Project survey area and travels in an east west direction, continuing into an underground box culvert that is expected to connect to downstream reaches of

Segunda Deshecha Cañada. Tributary to Segunda Deshecha 3 has two reaches associated with it. Reach 1 consists of an ephemeral two-foot feature that appears to convey flows from the surrounding upland areas. Reach 2 begins where a v-ditch confluences and supplies additional nuisance flows to the tributary creating dense riparian habitat. No surface water was identified at the time of the surveys. However, Reach 2 had saturation within 6 inches of the surface and is expected to have had flows lasting three months, and is therefore considered a RPW. Results of the survey have been mapped on Figure 2, Sheet 10.

Vegetation associated with the upland Reach 1 of the Tributary to Segunda Deshecha 3 includes California sagebrush, coyote bush, black mustard, and artichoke thistle. Vegetation associated with the riparian Reach 2 appears to have been revegetated with native species. In addition, Reach 2 appears to be maintained, as there were very few weedy or non-native species. The Reach 2 vegetation includes arroyo willow, sandbar willow, cattails, alkali bulrush, mulefat, and Mexican rush (*Juncus mexicanus*). A photograph of this tributary is included as Appendix A, Photo 13.

Soil pits were excavated in Tributary to Segunda Deshecha 3 indicating wetland soils. Wetland soils were only identified within Reach 2. Results of the data pits are recorded in Appendix B (Sampling Point 15).

3.4.10 Tributary to Christianitos Creek 1

The ACOE jurisdiction associated with tributary to Christianitos Creek 1 totals approximately 0.34 acre, of which 0.26 is wetland. The tributary is located north of the Talega Substation and south of Avenida Pico, in the City of San Clemente. The tributary generally travels west to east continuing out of the Proposed Project survey area and into Christianitos Creek. It begins in a flood control basin supporting wetlands. The feature then travels east through an outfall structure and under the access road to the Talega Substation. When the feature emerges there is a small area that has wetland characteristics. Surface water was present at the time of the surveys, presumably from urban runoff. Results of the survey have been mapped on Figure 2, Sheet 11.

Vegetation associated with the wetland portions of tributary to Christianitos Creek 1 were dominated by cattails, bulrushes, and arroyo willow. In the areas outside of the wetlands, dominant vegetation included poison oak (*Toxicodendron diversilobum*), stinging nettle and coast live oak (*Quercus agrifolia*). Photographs of this tributary are included as Appendix A, Photos 14 and 15.

Soil pits were excavated in tributary to Christianitos Creek 1 indicating wetland soils in most areas. The wetland soils were located in the flood control basin and surrounding the outfall structure south of the access road. Results of the data pits are recorded in Appendix B (Sampling Points 18-20).

3.4.11 Tributary to Christianitos Creek 2

The ACOE jurisdiction associated with tributary to Christianitos Creek 2 totals approximately 0.04 acre, none of which is wetland. The tributary begins west of the Talega Substation, is channelized underground through the Substation, and emerges on the east side of the Substation. Approximately 300 feet east of the substation the concrete channel stops and the drainage

becomes deeply incised. The drainage then continues east outside of the Proposed Project survey area and eventually to Christianitos Creek. The tributary is ephemeral in nature and had no surface water at the time of the survey. Results of the survey have been mapped on Figure 2, Sheet 11.

Vegetation associated with the unchannelized portion of the feature consists predominantly of upland plants dominated by deer weed, coyote bush, black mustard, and various non-native bromes. Few instances of poison oak and mulefat were also present. The channelized portion was free of vegetation. A photograph of this tributary is included as Appendix A, Photo 16.

No wetland soils were identified within the feature. No soil pits were excavated due to a lack of hydric vegetation. Soils consisted primarily of hard clay and cobbles associated with high water velocities and consistent with the feature's deep incisions.

3.4.12 Tributary to Christianitos Creek 3

The ACOE jurisdiction associated with tributary to Christianitos Creek 3 totals approximately 0.02 acre, none of which is wetland. The RPW tributary begins west of the Proposed Project survey area within the Pacific Golf Club. It flows southeast through the Proposed Project area, continues east outside of the Proposed Project survey area and eventually to Christianitos Creek. The tributary was wet at the time of survey primarily from nuisance flows from the golf course. The tributary was incised with the tributary bottom four to eight feet below the surrounding uplands. From the east boundary of the Project Survey area for approximately 480 feet, the tributary was vegetated with riparian species. Results of the survey have been mapped on Figure 2, Sheet 12.

Vegetation associated with the riparian portion of the feature was dominated by mulefat, tamarisk (*Tamarisk* sp.), coyote bush, ragweed, and various non-native bromes. Few instances of poison oak and ragweed were also present. Areas southeast of the riparian area were dominated by upland plants including black mustard, artichoke thistle, and coyote bush. A photograph of this tributary is included as Appendix A, Photo 17.

No wetland soils were identified within the feature. Soils consisted primarily of hard clay and cobbles associated with high water velocities and consistent with the feature's deep incisions.

3.5 REGIONAL WATER QUALITY CONTROL BOARD JURISDICTION

All waters identified as ACOE jurisdictional were also identified as RWQCB jurisdictional. RWQCB jurisdiction within the Proposed Project survey area therefore totals the same as the ACOE jurisdiction at approximately 6.65 acres. The locations of this jurisdiction are depicted on the enclosed maps (Figure 2) and photographs (Appendix A), and described in Section 3.4 of this report.

3.6 CALIFORNIA DEPARTMENT OF FISH AND GAME JURISDICTION

CDFG jurisdiction associated with the Proposed Project survey area totals approximately 13.82 acres of which 13.52 acres consists of vegetated riparian habitat and 0.31 acre consists of unvegetated streambed. This includes all areas within ACOE jurisdiction in addition to adjacent

associated riparian vegetation. Below is a brief description of the drainage characteristics; for a more detailed description of the drainages please refer to Section 3.4 of this report. The acreage of all drainages mapped during the field survey is listed in Table 2.

Table 2: Summary of CDFG Jurisdiction

Drainage Name	Unvegetated Streambed (Acres)	Riparian (Acres)	Total CDFG Jurisdiction (Acres)	Approximate Linear Feet
Horno Creek	-	1.08	**1.08**	540
San Juan Creek	-	4.86	**4.86**	665
Tributary to San Juan Creek	0.05	-	**0.05**	1,630
Rancho San Juan Drainage	-	2.55	**2.55**	960
Tributary to Prima Deshecha Cañada	0.13	0.59	**0.72**	3,880
Segunda Deshecha Cañada	-	1.38	**1.38**	1,040
Tributary to Segunda Deshecha Cañada 1	0.03	0.01	**0.04**	155
Tributary to Segunda Deshecha Cañada 2	0.03	-	**0.03**	715
Tributary to Segunda Deshecha Cañada 3	0.01	0.55	**0.56**	515
Tributary to Christianitos Creek 1	0.01	2.24	**2.25**	1,040
Tributary to Christianitos Creek 2	0.04	-	**0.04**	610
Tributary to Christianitos Creek 3	0.01	0.26	**0.27**	630
Totals	**0.31**	**13.52**	**13.83**	**12,380**

3.6.1 Horno Creek

The CDFG jurisdiction associated with Horno Creek totals 1.08 acres, all of which is vegetated riparian habitat. As previously discussed, vegetation associated with the drainage area is composed mainly of non-native, ornamental and disturbance-associated species, and relatively few native wetland species. Riparian areas for this drainage include those species within the bank and their associated drip lines.

3.6.2 San Juan Creek

The CDFG jurisdiction associated with San Juan Creek totals 4.86 acres, all of which is vegetated riparian habitat. As previously discussed, the associated vegetation was dense and included willows, mulefat, and cattails with instances of non-natives such as giant reed.

3.6.3 Tributary to San Juan Creek

The CDFG jurisdiction associated with Tributary to San Juan Creek totals 0.05 acre, all of which is unvegetated streambed. Vegetation associated with the drainage was composed of native and non-native upland species

3.6.4 Rancho San Juan Drainage

The CDFG jurisdiction associated with the Rancho San Juan drainage totals 2.55 acres, all of which is vegetated riparian habitat. The associated riparian habitat is dominated primarily by native riparian species including mulefat and arroyo willow.

3.6.5 Tributary to Prima Deshecha Cañada

The CDFG jurisdiction associated with the Tributary to Prima Deshecha Cañada totals 0.72 acre, including 0.13 acre of unvegetated streambed and 0.59 acre of riparian habitat. The associated riparian habitat is dominated primarily by mulefat and arroyo willow.

3.6.6 Segunda Deshecha Cañada

The CDFG jurisdiction associated with the Segunda Deshecha Cañada totals 1.38 acres, all of which is riparian habitat. The associated riparian habitat is dominated primarily by arroyo willow and mulefat, as well as large swaths of cattails within the channel.

3.6.7 Tributary to Segunda Deshecha Cañada 1

The CDFG jurisdiction associated with the Tributary to Segunda Deshecha Cañada 1 totals 0.04 acre, of which 0.03 acre is vegetated riparian habitat. The associated riparian habitat is dominated by cattails.

3.6.8 Tributary to Segunda Deshecha Cañada 2

The CDFG jurisdiction associated with the Tributary to Segunda Deshecha Cañada 2 totals 0.03 acre, all of which is unvegetated streambed. The channel consists of a maintained box concrete flood control channel that is relatively free of vegetation.

3.6.9 Tributary to Segunda Deshecha Cañada 3

The CDFG jurisdiction associated with the Tributary to Segunda Deshecha Cañada 3 totals 0.56 acre, of which 0.01 acre is unvegetated streambed and 0.55 acre is riparian habitat. The associated riparian habitat is dominated by arroyo willow and cattails.

3.6.10 Tributary to Christianitos Creek 1

The CDFG jurisdiction associated with the Tributary to Christianitos Creek 1 totals 2.25 acres, of which 0.01 acre is unvegetated streambed and 2.24 acres is vegetated riparian habitat. The drainage includes a detention basin dominated by cattails and bulrushes and a drainage dominated by willows, poison oak, and coast live oak. These associated riparian habitats are dominated by primarily native riparian species with few instances of non-natives.

3.6.11 Tributary to Christianitos Creek 2

The CDFG jurisdiction associated with the Tributary to Christianitos Creek 2 totals 0.04 acre, all of which is unvegetated streambed. The vegetation associated with the drainage is dominated coastal sage scrub and weedy non-native species.

3.6.12 Tributary to Christianitos Creek 3

The CDFG jurisdiction associated with the Tributary to Christianitos Creek 3 totals 0.27 acre, of which 0.01 acre is unvegetated streambed and 0.26 acre is vegetated riparian habitat. The associated riparian habitats are dominated by both native and non-native species.

3.7 NON JURISDICTIONAL SWALES

There are a number of non-jurisdictional swales located throughout the Proposed Project survey area. The swales are located primarily around the Talega substation and between the landfill and Talega residential community in the vicinity of San Clemente. Typically, the swales are low gradient vegetated areas located at the foot of hillsides or other minor changes in topography. The swales are not considered jurisdictional due to low volume, infrequent or short duration flow, and a lack of an OHWM.

4.0 POTENTIAL PERMTIT REQUIREMENTS FROM PROJECT IMPACTS TO JURISDICTIONAL FEATURES

Any permanent or temporary impacts to the drainages identified in this report would likely require permits from the regulatory agencies (ACOE, RWQCB, and CDFG). Impacts should be considered from Proposed Project activities including the removal and installation of structures, temporary work spaces, pull and tension sites, erosion and sediment controls, and project access

requirements. The jurisdictional limits identified in this report are subject to verification by the regulatory agencies. A Jurisdictional Determination letter confirming jurisdiction can be requested from ACOE by submitting an Approved Jurisdictional Determination Form, which involves a significant nexus analysis pursuant to Rapanos, in addition to supporting documentation. A Jurisdictional Determination letter is not a requirement, but can assist with the permitting process. The alternative to obtaining a Jurisdictional Determination is to ask the ACOE to take jurisdiction based on our delineation and assessment of jurisdiction. An analysis of impacts will be performed and potential permitting strategies developed, based upon the delineation in this report and the Proposed Project design. The results of the analysis will be presented in the Biological Resources Assessment for the Proposed Project. The impacts analysis, and ACOE Jurisdictional Determination letter (if obtained), would be used to prepare the permit applications pursuant to Sections 401 and 404 of the CWA (RWQCB and ACOE, respectively), and Section 1602 of the CFG Code (CDFG).

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5.0 REFERENCES

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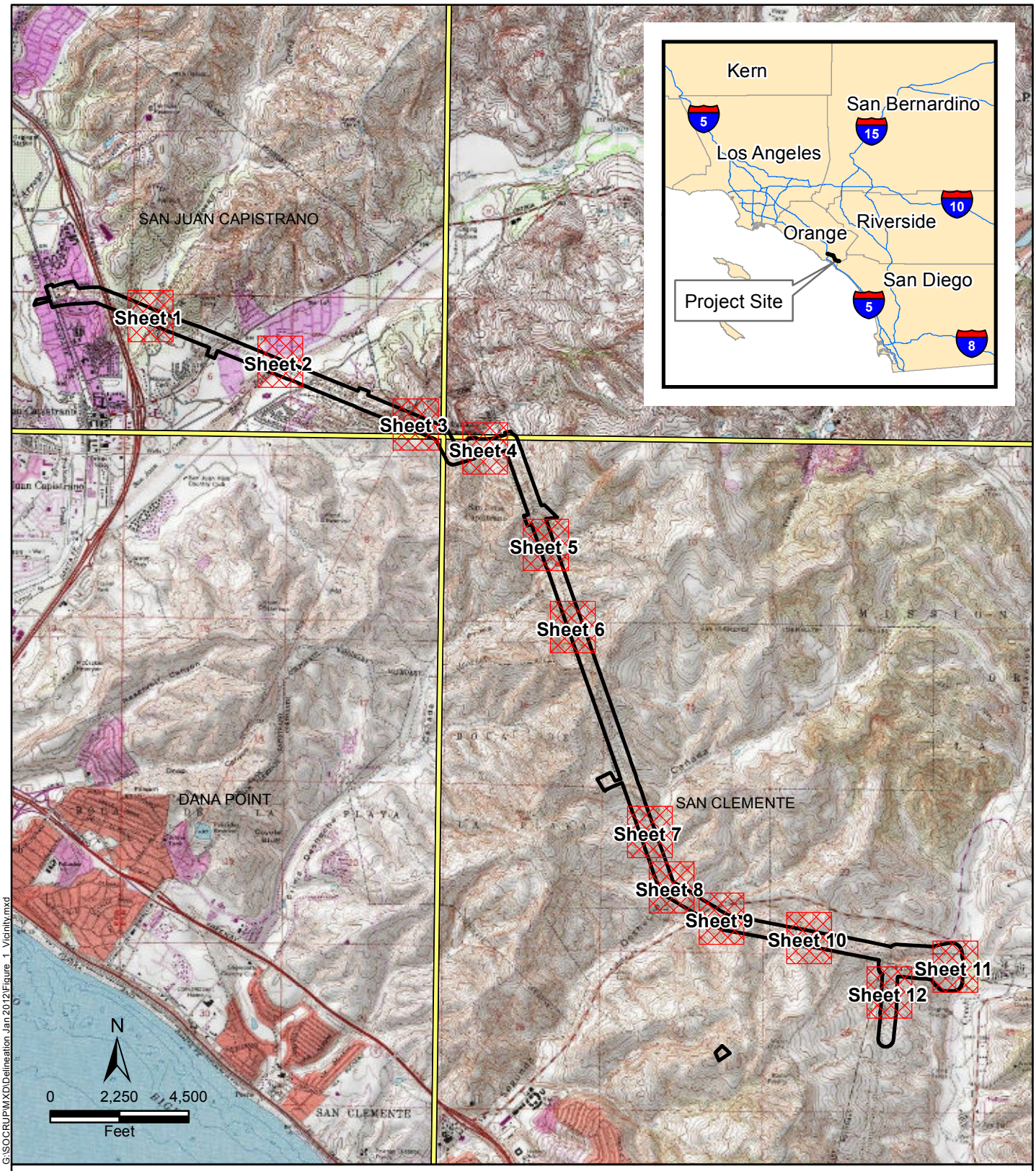

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South Orange County Reliability Enhancement Project

Vicinity and Overview Map

Figure 1

Created For:	Created By:
Mary Turley	TRC
Date: 4/25/2012	

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Legend

- Proposed Project Survey Area
- Delineation Sheet Number
- USGS Quadrangle Boundary

Source: USGS Topo Maps

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

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South Orange County Reliability Enhancement Project

Delineation Map

Figure 2

Sheet 1 of 12

Created For:	Created By:
Mary Turley	TRC

Date: 4/25/2012

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Source: Bing Maps Aerial Imagery

Legend

- Proposed Project Survey Area
- ACOE Waters
- ACOE Wetland
- CDFG Jurisdiction
- # Photo Location
- # Wetland Soil Pit Location

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE

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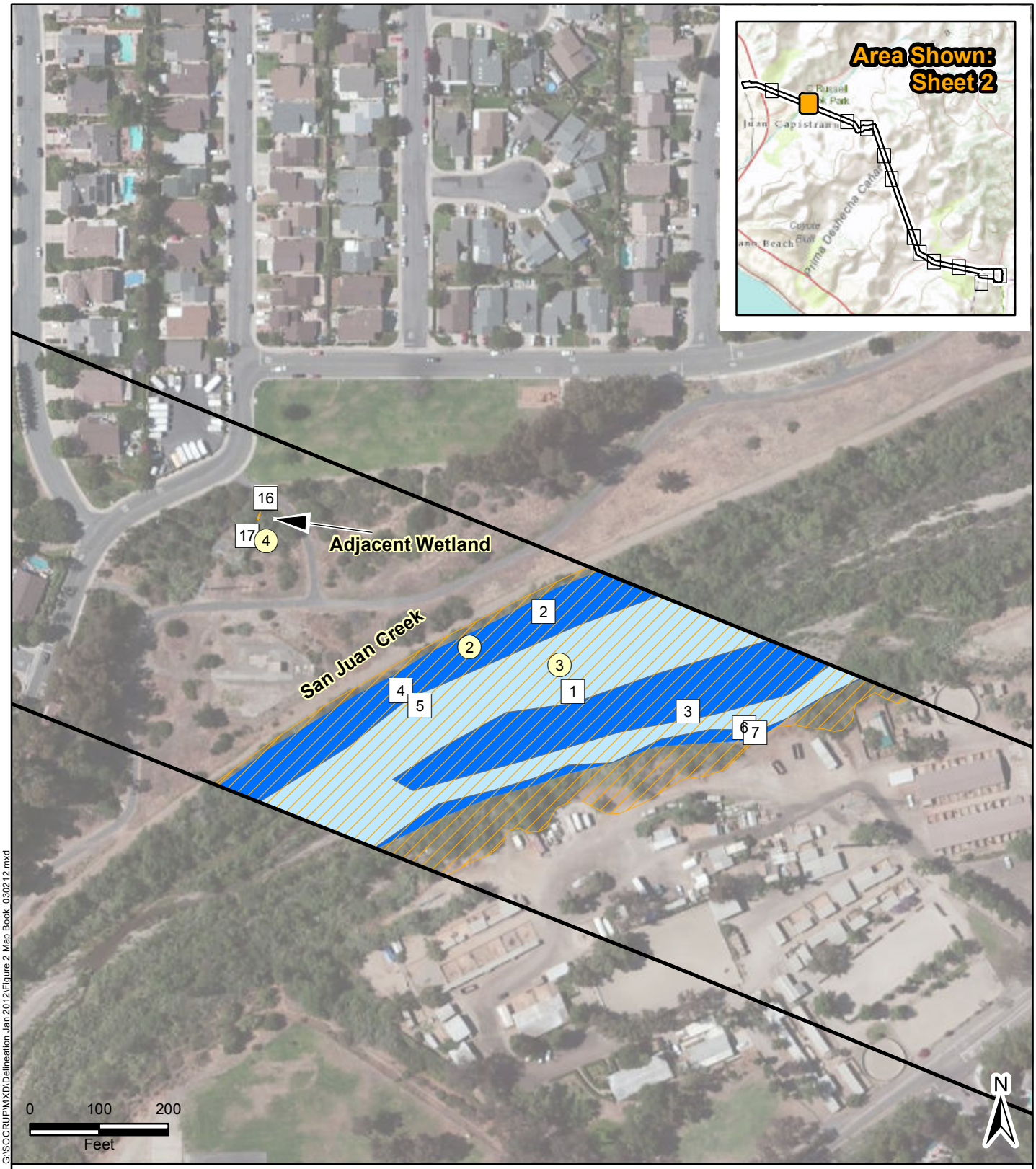

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South Orange County Reliability Enhancement Project

Delineation Map

Figure 2

Sheet 2 of 12

Created For:	Created By:
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Legend

- Proposed Project Survey Area
- ACOE Waters
- ACOE Wetland
- CDFG Jurisdiction
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SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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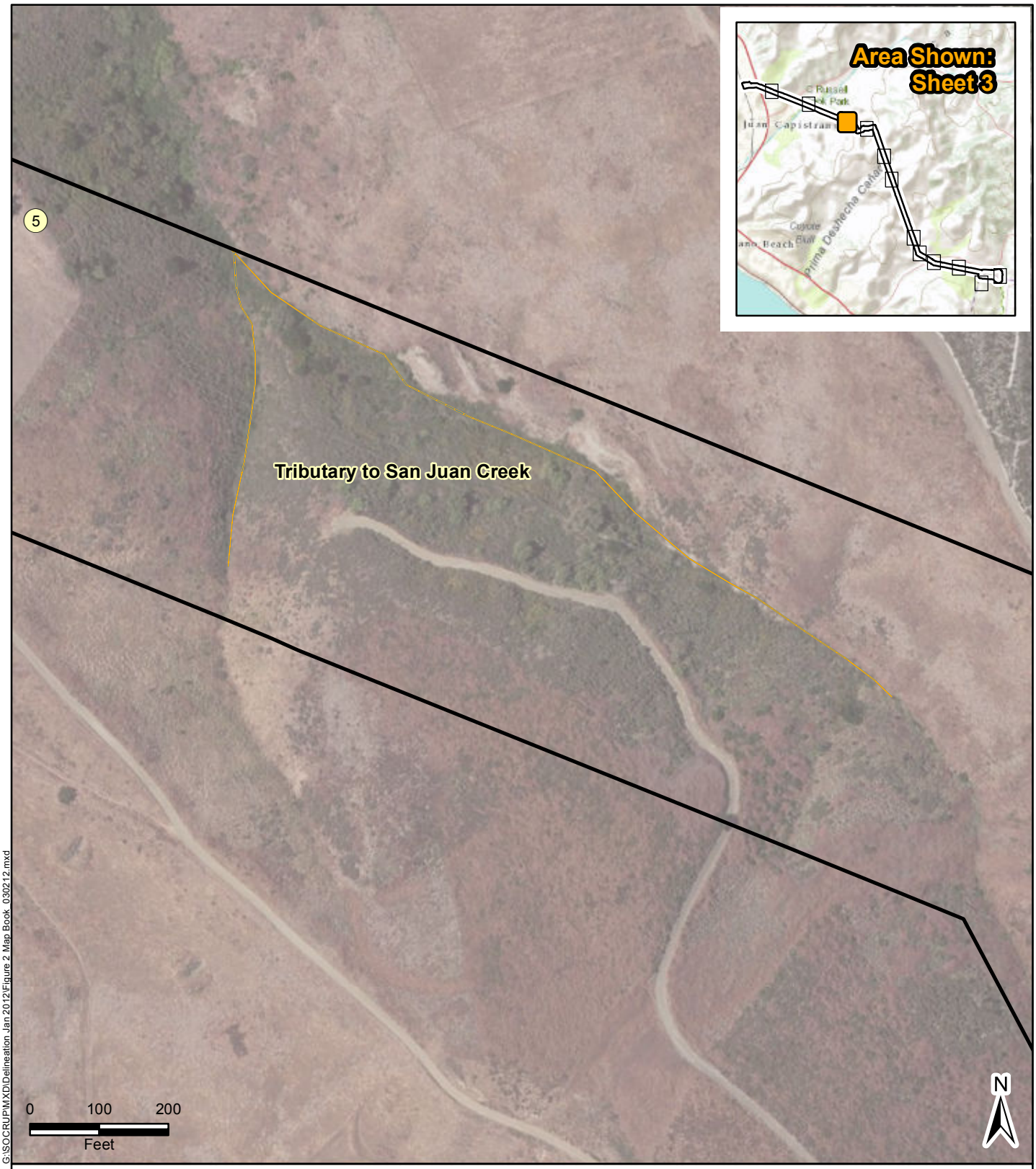

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South Orange County Reliability Enhancement Project

Delineation Map

Figure 2

Sheet 3 of 12

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Date: 4/25/2012	

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Legend

- Proposed Project Survey Area
- ACOE Waters
- ACOE Wetland
- CDFG Jurisdiction
- # Photo Location
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SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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South Orange County Reliability Enhancement Project

Delineation Map

Figure 2

Sheet 4 of 12

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Legend

- Proposed Project Survey Area
- ACOE Waters
- ACOE Wetland
- CDFG Jurisdiction
- # Photo Location
- # Wetland Soil Pit Location

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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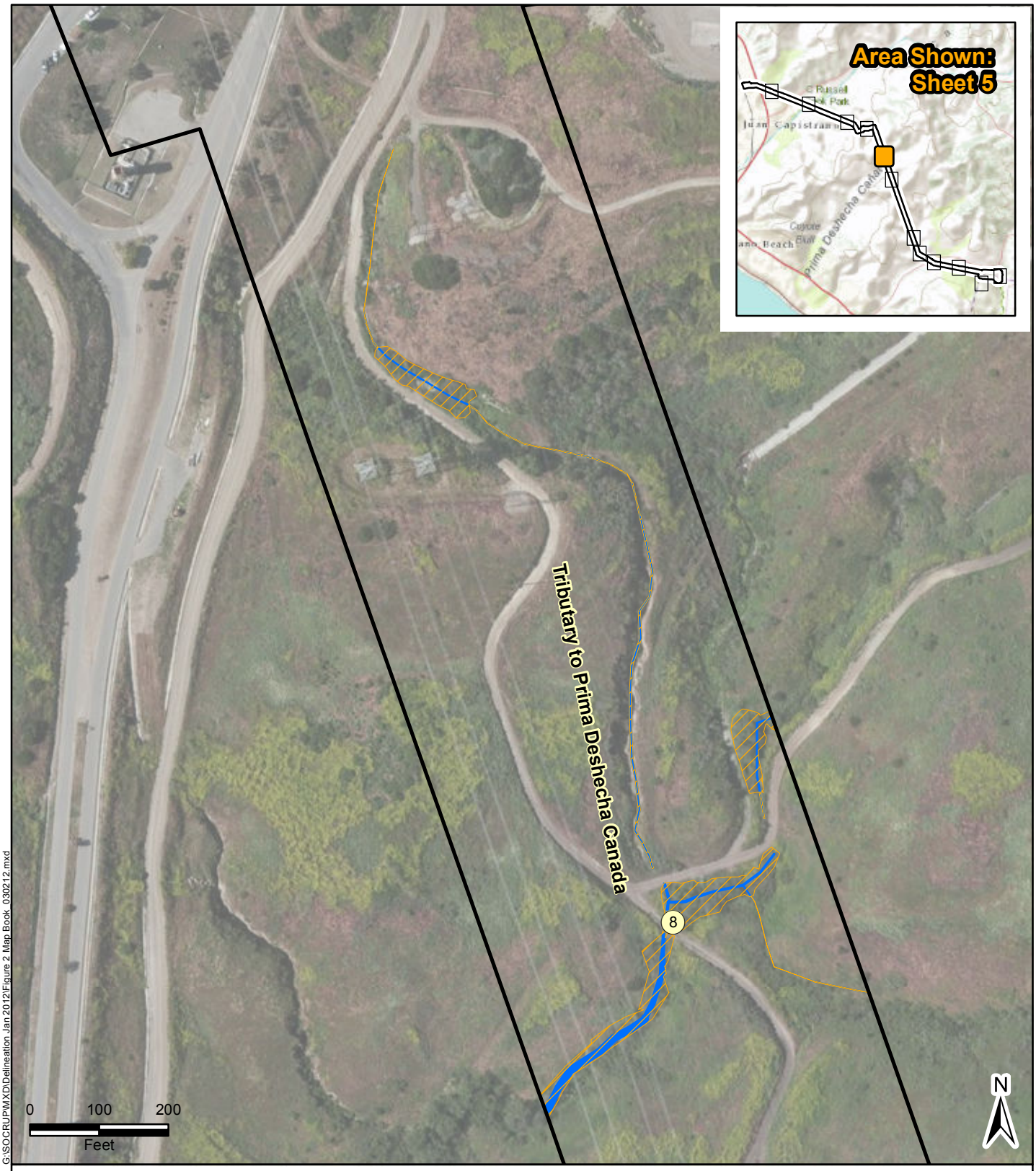

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South Orange County Reliability Enhancement Project

Delineation Map

Figure 2

Sheet 5 of 12

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Legend

- Proposed Project Survey Area
- ACOE Waters
- ACOE Wetland
- CDFG Jurisdiction
- # Photo Location
- # Wetland Soil Pit Location

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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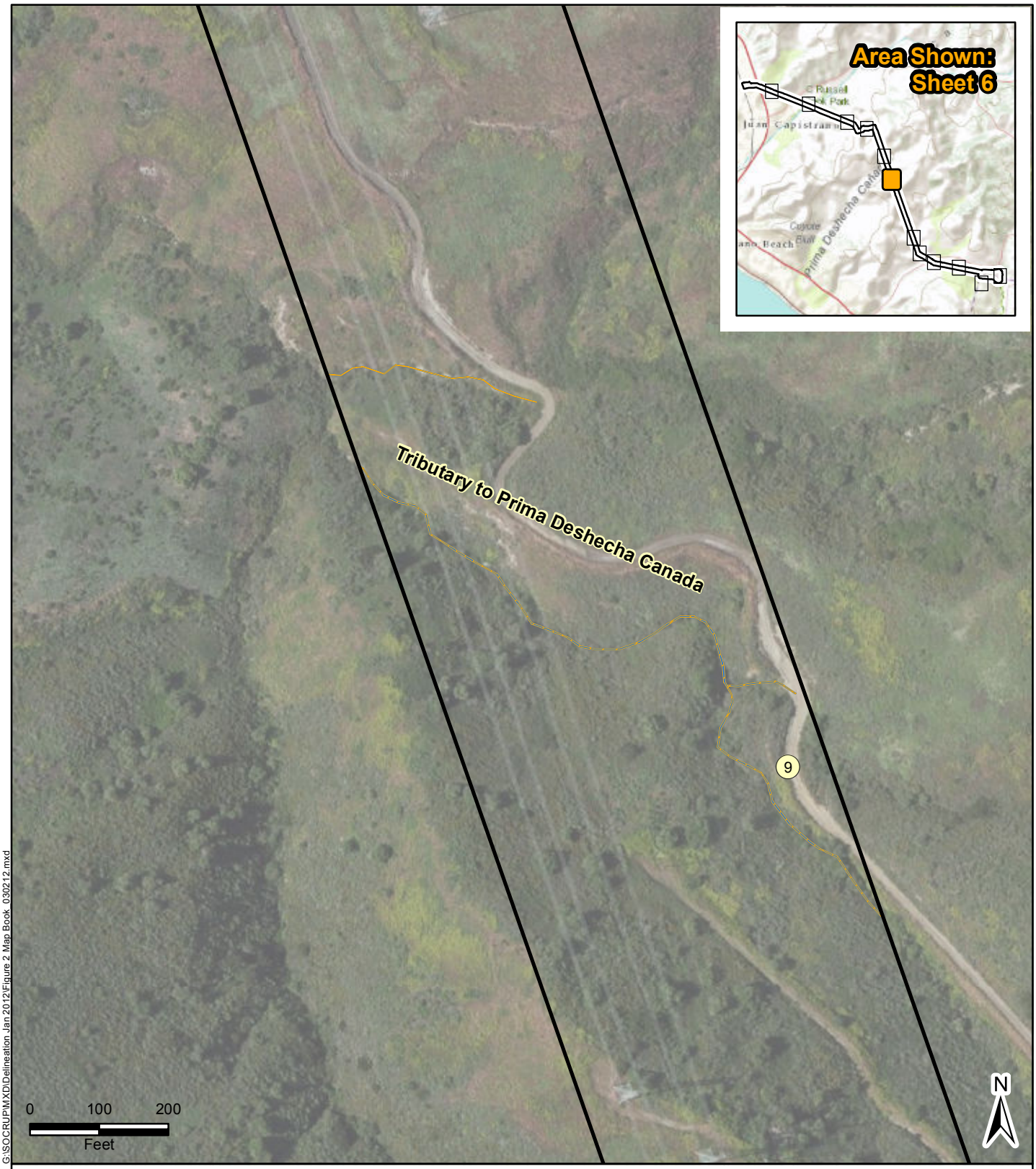

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South Orange County Reliability Enhancement Project

Delineation Map

Figure 2

Sheet 6 of 12

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Legend

- Proposed Project Survey Area
- ACOE Waters
- ACOE Wetland
- CDFG Jurisdiction
- (#) Photo Location
- [#] Wetland Soil Pit Location

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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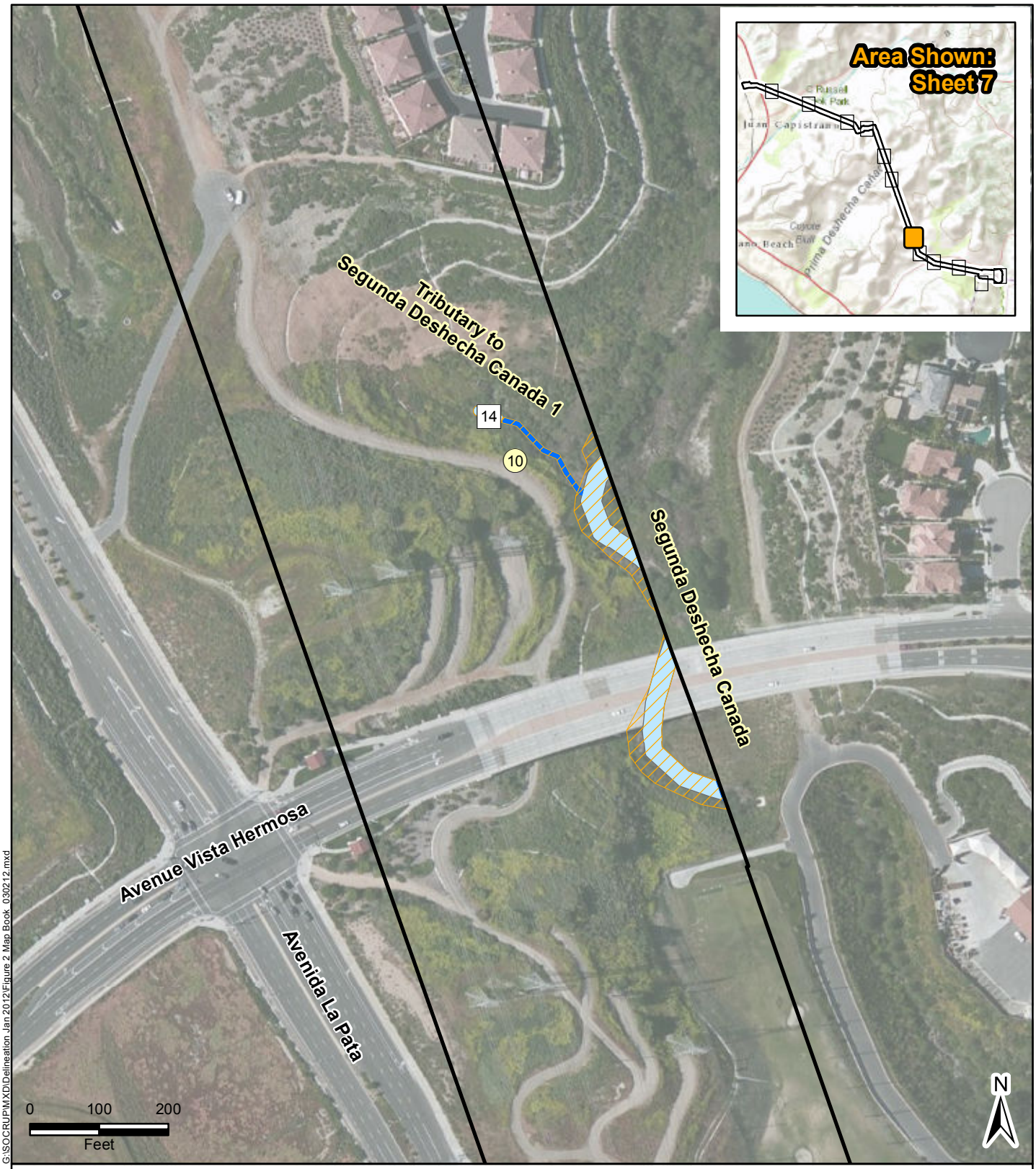

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South Orange County Reliability Enhancement Project

Delineation Map

Figure 2

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Legend

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- ACOE Waters
- ACOE Wetland
- CDFG Jurisdiction
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SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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South Orange County Reliability Enhancement Project

Delineation Map

Figure 2

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SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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South Orange County Reliability Enhancement Project

Delineation Map

Figure 2

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Legend

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SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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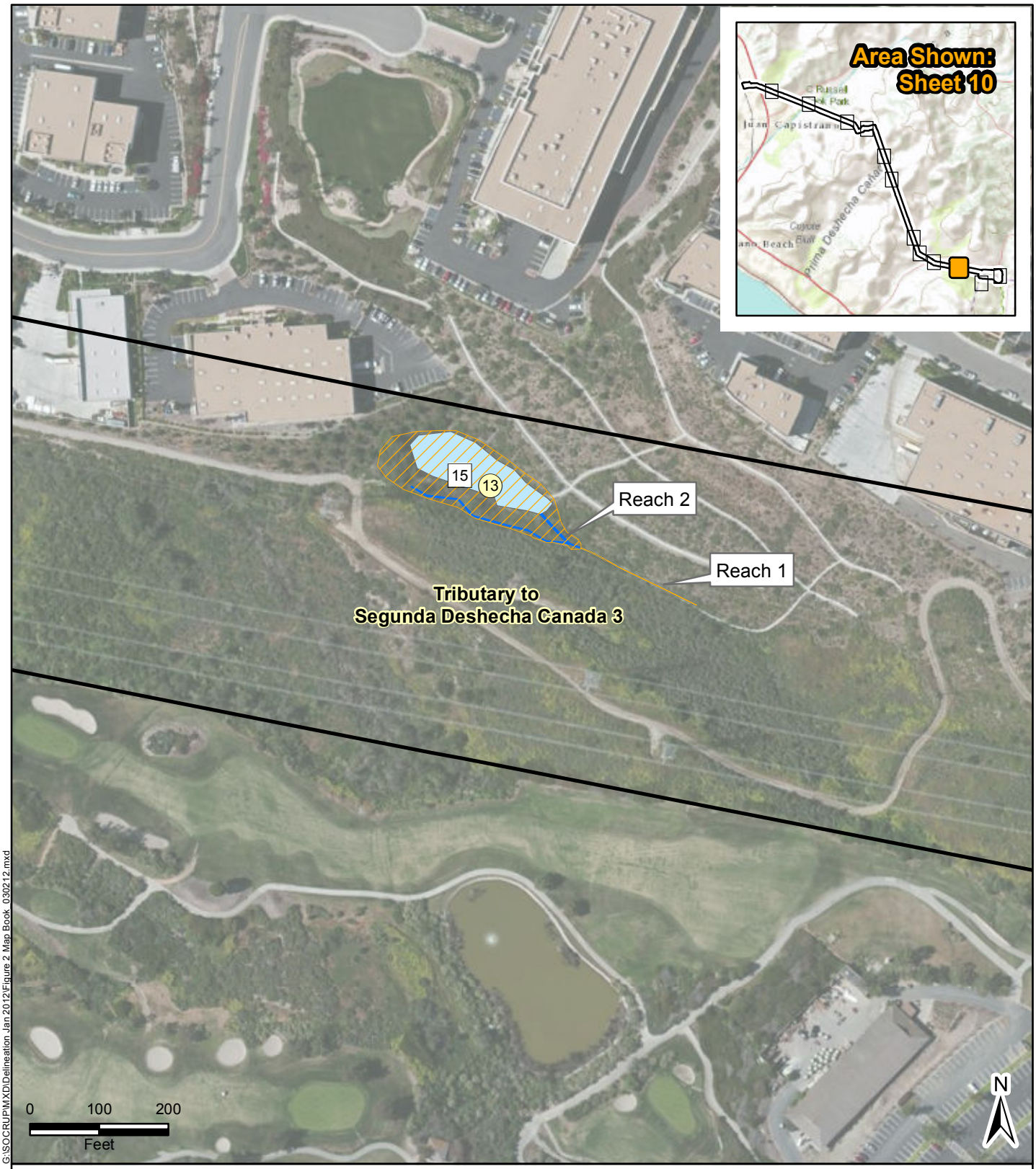

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South Orange County Reliability Enhancement Project

Delineation Map

Figure 2

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Legend

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- ACOE Waters
- ACOE Wetland
- CDFG Jurisdiction
- # Photo Location
- # Wetland Soil Pit Location

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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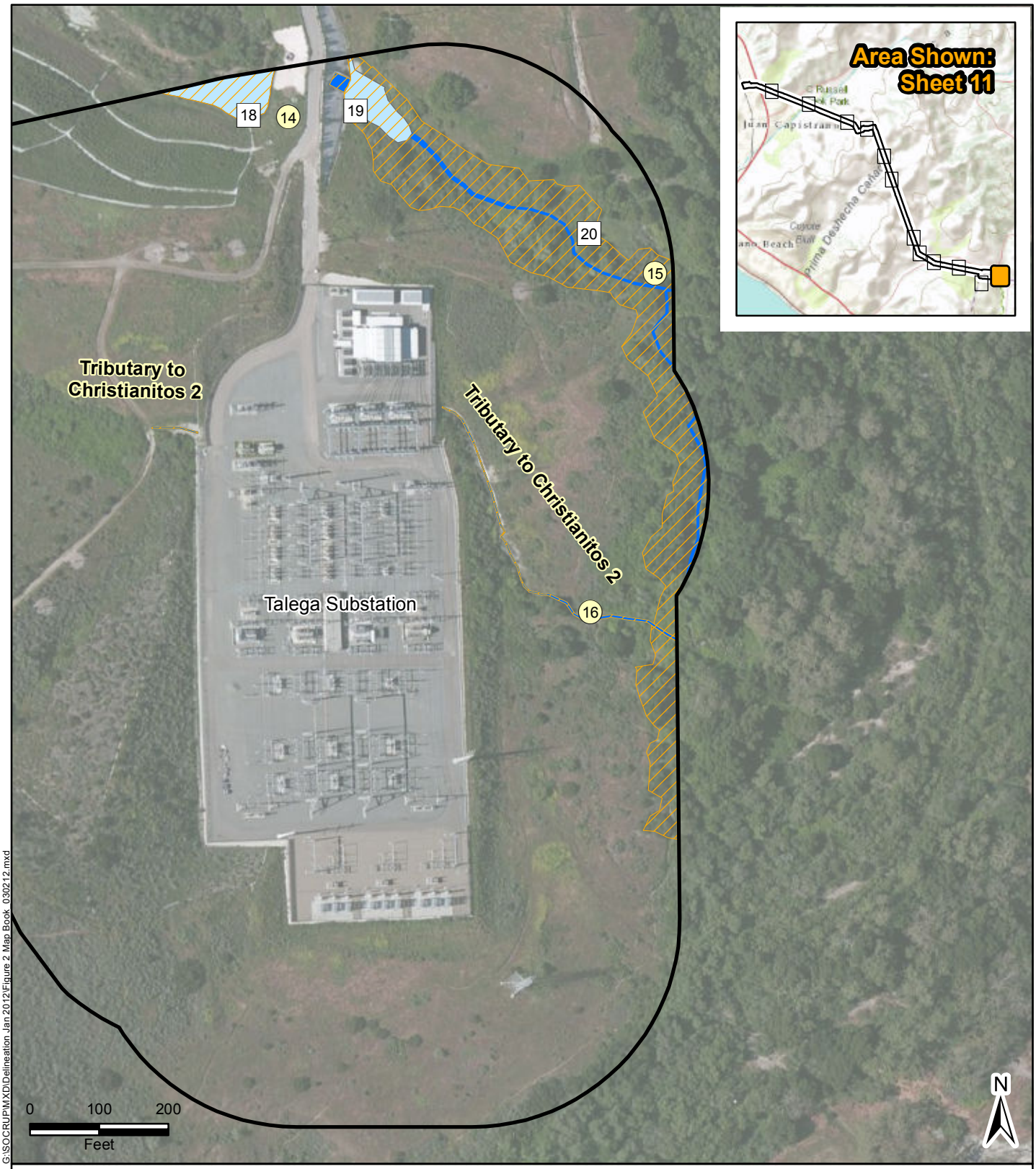

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South Orange County Reliability Enhancement Project

Delineation Map

Figure 2

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Legend

- Proposed Project Survey Area
- ACOE Waters
- ACOE Wetland
- CDFG Jurisdiction
- # Photo Location
- # Wetland Soil Pit Location

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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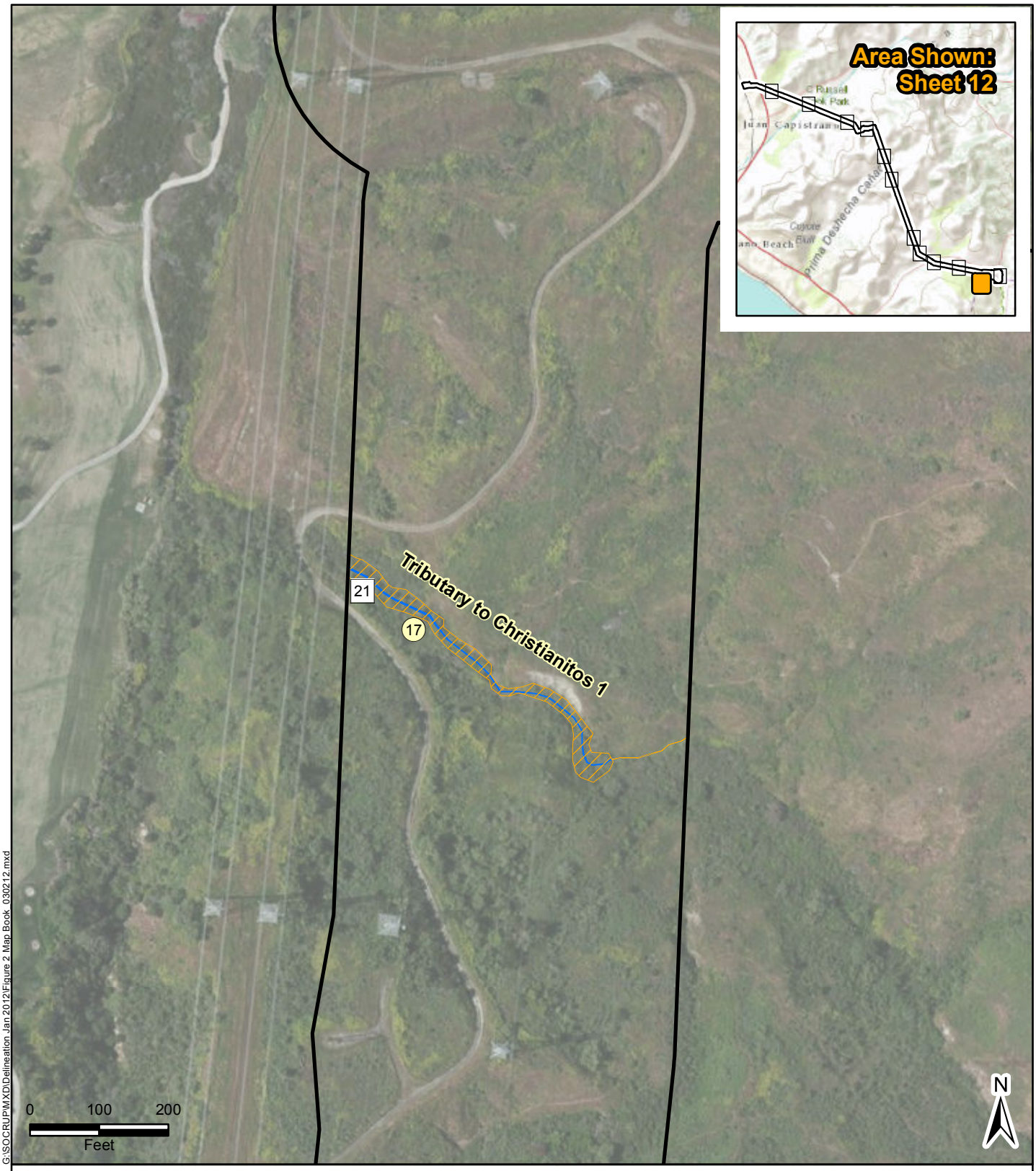

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South Orange County Reliability Enhancement Project

Delineation Map

Figure 2

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Legend

- Proposed Project Survey Area
- ACOE Waters
- ACOE Wetland
- CDFG Jurisdiction
- # Photo Location
- # Wetland Soil Pit Location

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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Appendix A: Site Photographs

Appendix A: Site Photographs

	Photo 1: View of Horno Creek facing south. Creek was relatively narrow and was dominated by non-native vegetation.
	Photo 2: View of San Juan Creek facing west. Note flowing water and riparian/wetland vegetation.

Appendix A: Site Photographs

	Photo 3: View of San Juan Creek facing north. This area of San Juan Creek was relatively free of vegetation due to high water velocities.
	Photo 4: View of Adjacent Wetland to San Juan Creek. The wetland was small and had no surface water connection to the Creek.

Appendix A: Site Photographs

	Photo 5: Overview of Tributary to San Juan Creek facing southeast.
	Photo 6: View of Rancho San Juan drainage basin facing northwest. Basin was dominated by mulefat.

	Photo 7: View of Rancho San Juan drainage channel. Note distinct low-flow sign and riparian vegetation.
	Photo 8: View of lower reach of Tributary to Prima Deshecha Cañada facing west. Area was heavily vegetated with riparian vegetation, dominated by mulefat.

	Photo 9: View of upper reach of Tributary to Prima Deshecha Cañada facing northwest. The tributary is dominated by upland vegetation with scattered riparian vegetation.
	Photo 10: View of Tributary Segunda Deshecha Cañada 1. The tributary is located in uplands with OHWM only after connection to an outfall structure (not visible in photo).

	Photo 11: View of Segunda Deshecha Cañada facing south. The drainage supported a mixture of both upland and riparian vegetation.
	Photo 12: View of Tributary Segunda Deshecha Cañada 2 facing west. The tributary is a maintained flood control facility.

	Photo 13: View of lower reach of Tributary Segunda Deshecha Cañada 3 facing north. The tributary is dominated by wetland and riparian vegetation.
	Photo 14: View of basin portion of Tributary to Christianitos Creek 1 facing north. The bottom of the basin was dominated by cattails.

	Photo 15: View of Tributary to Christianitos Creek 1 facing southwest in the lower reach of the drainage. The feature was slightly incised and was dominated by riparian vegetation.
	Photo 16: View of Tributary to Christianitos Creek 2 facing north. The feature was partially channelized in a two foot concrete channel.

Photo 17: View of Tributary to Christianitos Creek 3 facing southeast. A portion of the tributary was heavily vegetated with riparian vegetation.

Appendix B: Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: CA Sampling Point: #1

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 6, T8S, R7W

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

Subregion (LRR): _____ Lat: 33.5063 Long: 117.6432 Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Baccharis salicifolia	30	Y	FACW
2.			
3.			
4.			
5.			
	30 = Total Cover		
Herb Stratum (Plot size: 10x10)			
1. Xanthium strumarium	5	N	FAC
2. Gnaphalium sp.	5	N	NI
3.			
4.			
5.			
6.			
7.			
8.			
	10 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 90 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 1 (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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Pit is in an area that is seasonally scoured and inundated by overflow from the river.

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)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
1-15	5y 4/2	100					sand	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

Water Table Present? Yes ✓ No _____ Depth (inches): 15

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 12

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange Sampling Date: 5/26/10

Applicant/Owner: SDG&E State: CA Sampling Point: #2

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 6, T8S, R7W

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

Subregion (LRR): _____ Lat: 33.50643 Long: 117.64325 Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10x10)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	40	Y	FACW
2. Salix exigua	10	N	FACW
3.			
4.			
	50 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Baccharis salicifolia	50	Y	FACW
2. Salix exigua	5	N	FACW
3.			
4.			
5.			
	30 = Total Cover		
Herb Stratum (Plot size: 10x10)			
1. Pichris echioides	7	N	NI
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	7 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 93 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Pit is next to area of perennially running/wet region of San Juan Creek

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)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
1-3	5y 3/1	100					silty sand	
3-10	2.5y 3/2	100					sand	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

Water Table Present? Yes ✓ No _____ Depth (inches): 3

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ **No** _____

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

Remarks:

Sulfidic odor below 3 inches.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange Sampling Date: 5/26/10

Applicant/Owner: SDG&E State: CA Sampling Point: #3

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 5, T8S, R7W

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

Subregion (LRR): _____ Lat: 33.50602 Long: 117.64256 Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Baccharis salicifolia	50	Y	FACW
2. Salix exigua	5	N	FACW
3. Tamarix rammossissima	10	N	FACW
4.			
5.			
	65 = Total Cover		
Herb Stratum (Plot size: 10x10)			
1. Pichris echioides	7	N	NI
2. Scirpus sp.	10	Y	OBL
3. Cyperus sp.	5	N	OBL
4. Melilotus incana	10	Y	FAC
5.			
6.			
7.			
8.			
	32 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 68 % Cover of Biotic Crust 0

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Pit is next to area of perennially running/wet region of San Juan Creek

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
1-3	Gley 1 2.5/10y						silt	
3-10	Gley 1 2.5/10y						rocky clay	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

Sulfidic odor below 1 inch. Soil almost black.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

Water Table Present? Yes ✓ No _____ Depth (inches): 1

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ **No** _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: CA Sampling Point: #4

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 6, T8S, R7W

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

Subregion (LRR): Lat: 33.50611 Long: 117.64392 Datum: NAD 83

Soil Map Unit Name: NWI classification:

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10x10)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	5	Y	FACW
2.			
3.			
4.			
	5	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Baccharis salicifolia	10	Y	FACW
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 10x10)			
1. Carduus sp.	15	N	NI
2. Tropeolum majus	5	N	NI
3. Bromus diandrus	30	Y	NI
4. Ambrosia psylostachia	10	N	FAC
5.			
6.			
7.			
8.			
	32	= Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		= Total Cover	

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

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks:

Pit is approx. 10 feet from a small drainage leading to San Juan Creek and 20 ft from Pit #3.

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
1-4	2.5y - 3/3						sandy loam	
4-10	2.5y - 5/3						sand	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: CA Sampling Point: #5

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 6, T8S, R7W

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

Subregion (LRR): _____ Lat: 33.50605 Long: 117.64383 Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10x10)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	40	Y	FACW
2.			
3.			
4.			
	40 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Baccharis salicifolia	10	Y	FACW
2.			
3.			
4.			
5.			
	10 = Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

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

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Approx. 10 feet from water's edge.

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
1-6	10yr - 3/2	60	5yr - 5/8	40			sand	
6-10	2.5yr - 2.5/1						sandy silt	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

Sulfuric odor and organic streaking in sandy soil

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

Water Table Present? Yes ✓ No ✓ Depth (inches): 9

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 8

Wetland Hydrology Present? Yes ✓ **No** _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: CA Sampling Point: # 6

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 5, T8S, R7W

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

Subregion (LRR): Lat: 33.506 Long: 117.64227 Datum: NAD 83

Soil Map Unit Name: NWI classification:

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

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

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

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

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

Remarks:

Willow scrub with non-native weed understory.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10x10)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	10	Y	FACW
2.			
3.			
4.			
	10 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Salix exigua	5	Y	FACW
2. Baccharis sarothroides	5	Y	FACW
3.			
4.			
5.			
	10 = Total Cover		
Herb Stratum (Plot size: 10x10)			
1. Brassica nigra	20	Y	NI
2. Medicago indica	30	Y	FAC
3. Ambrosia psylostachya	5	N	FAC
4.			
5.			
6.			
7.			
8.			
	55 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 45 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

Prevalence Index is ≤3.0[1]

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

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks:

SOIL

Sampling Point: # 6

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
0-10	10yr - 4/4							

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Approx. 10 feet upslope from standing water in region between upland and riparian vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange County Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: CA Sampling Point: #7

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 5, T8S, R7W

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

Subregion (LRR): _____ Lat: 33.50601 Long: 117.64227 Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15x15)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	20	Y	FACW
2.			
3.			
4.			
	20 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Salix exigua	30	Y	OBL
2. Baccharis salicifolia	20	Y	FACW
3.			
4.			
5.			
	50 = Total Cover		
Herb Stratum (Plot size: 10x10)			
1. Juncus sp.	10	N	FACW
2. Polypogon monspeliensis	40	Y	FACW
3. Melilotus indica	10	N	FAC
4.			
5.			
6.			
7.			
8.			
	60 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1. N/A			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 50 % 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Approximately 6 feet from standing water.

SOIL

Sampling Point: #7

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
1-4	10y - 4/2						sandy clay	
4-8	10y - 3/2						silty sand	
8-10	5y - 3/1						silty sand	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

Water Table Present? Yes ✓ No _____ Depth (inches): 9

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 8

Wetland Hydrology Present? Yes ✓ **No** _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange County Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: CA Sampling Point: #8

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 6, T8S, R7W

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

Subregion (LRR): _____ Lat: 33.51004 Long: 117.6577 Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15x15)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ficus carica	10	N	NI
2. Eucalyptus citriadora	30	Y	NI
3. Acer negundo	20	N	NI
4.			
	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10x10)			
1.			
2.			
3.			
4.			
5.			
	_____	= Total Cover	
Herb Stratum (Plot size: 10x10)			
1. Fragaria x ananassa	90	Y	NI
2. Cyperus alternafolius	10	N	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1. N/A			
2.			
	_____	= Total Cover	

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 20 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 10	x 2 =	20
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A = 2

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

At the edge of a maintained golf course with lots of ornamental plant species.

SOIL

Sampling Point: #8

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
1-4	2.5y - 6/2		7.5yr - 6/8				loamyclay	streaking
4-10	2.5y - 4/1	97	5yr - 5/8	3			sandy clay	mottles

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange County Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: CA Sampling Point: #9

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 6, T8S, R7W

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

Subregion (LRR): _____ Lat: 33.5102 Long: 117.65761 Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15x15)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus sp.	30	Y	FACW
2. Salix lasiolepis	20	Y	FACW
3. Washingtonia robusta	10	N	NI
4. Acer negundo	10	N	NI
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1. N/A			
2.			
3.			
4.			
5.			
	_____	= Total Cover	
Herb Stratum (Plot size: _____)			
1. N/A			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1. N/A			
2.			
	_____	= Total Cover	

% Bare Ground in Herb Stratum 100 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Mostly ornamental trees at the edge of a working golf course and a small perennial stream, no understory.

SOIL

Sampling Point: #9

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
1-6	2.5y - 3/2		2.5yr - 5/8				loamyclay	
6-10	2.5yr 5/2		2.5yr - 4/8				clay	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ✓ **No** _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange County Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: CA Sampling Point: #10

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 6, T8S, R7W

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

Subregion (LRR): _____ Lat: 33.51027 Long: 117.65754 Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15x15)	Absolute % Cover	Dominant Species?	Indicator Status
1. Washingtonia robusta	30	Y	NI
2. Fraxinus sp.	50	Y	FACW
3. Acer negundo	10	N	NI
4.			
	90%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10x10)			
1. N/A			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 10x10)			
1. Cyperus alternafolia	40	Y	FACW
2. Oxalis per-caprae	10	N	NI
3.			
4.			
5.			
6.			
7.			
8.			
	50	= Total Cover	
Woody Vine Stratum (Plot size: 10x10)			
1. N/A			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust 0%

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Approximately 15 feet from running water.

SOIL

Sampling Point: #10

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
1-10	2.5yr - 5/3						sandy loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange County Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: CA Sampling Point: #11

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 6, T8S, R7W

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

Subregion (LRR): _____ Lat: 33.510 Long: 117.657 Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15x15)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus sp.	60	Y	FACW
2. Washingtonia robusta	20	Y	NI
3. Acer negundo	10	N	NI
4.			
	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10x10)			
1. N/A			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 10x10)			
1. Cyperus alternafolius	50	Y	FACW
2. Oxalis per-caprae	5	N	NI
3.			
4.			
5.			
6.			
7.			
8.			
	55	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 45 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Approximately 8 feet from Pit #10, closer to stream.

SOIL

Sampling Point: #11

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
1-6	2.5y - 3/1		5yr - 5/8	10			clay	
6-9	2.5y - 4/1		2.5yr - 5/8	40			sandy clay	
9-10	Gley 1 - 2.5/N							

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Third layer has sulfur odor; very high rusty streaking component.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 9

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

Approximately 3 feet from running water.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange County Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: CA Sampling Point: # 12

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 22, T8S, R7W

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

Subregion (LRR): Lat: 33.45998 Long: 117.60082 Datum: NAD 83

Soil Map Unit Name: NWI classification:

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

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

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

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

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

Remarks:

Approximately 5 feet from running water, just within the edge of riparian habitat and upland habitat.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	10		
2.			
3.			
4.			
	10 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Salix exigua	30	Y	OBL
2. Salix lasiolepis	30	Y	FACW
3. Typha sp.	30	Y	OBL
4.			
5.			
	90 = Total Cover		
Herb Stratum (Plot size: 10x10)			
1. Melilotus indica	50	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	50 = Total Cover		
Woody Vine Stratum (Plot size:)			
1. N/A			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 50 % 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks:

Plot is approx. 5 feet from edge of running stream.

SOIL

Sampling Point: # 12

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
1-6	2.5y - 3/2						loamy clay+	
6-10	2.5y - 3/2		2.5yr - 3				loamy clay+	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

Mottles and clay increase with depth. The pit extends below the level of the surface water, but the clay is likely preventing saturation seepage.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ✓ **No** _____

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

Remarks:

This drainage appears to have been altered in the past, and is likely fed by residential runoff. The toe of the slope is within feet of the drainage, and is covered with upland species along its length.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange County Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: _____ Sampling Point: #13

Investigator(s): D. Burton, K. McDonald Section, Township, Range: Sec 22, T8S, R7W

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

Subregion (LRR): _____ Lat: 33.460 Long: 117.601 Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

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

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

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

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

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

Remarks:

The pit is within 8 feet of running water, 2 feet from the toe of the slope. (least Bell's vireo observed immediately adjacent to the site)

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Baccharis salicifolia	50	Y	FACW
2. Isocoma menziesii	20	N	NI
3.			
4.			
5.			
	70 = Total Cover		
Herb Stratum (Plot size: 10x10)			
1. Ambrosia psilostachya	25	Y	FAC
2. Apium graveloens	5	N	FACW
3. Polypogon monspeliensis	40	Y	FACW
4. Picris echioides	10	N	FAC
5.			
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 20 % 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 55.9	x 2 = 111.8
FAC species 20.6	x 3 = 61.8
FACU species _____	x 4 = _____
UPL species 11.8	x 5 = 59
Column Totals: 88.3 (A)	232.6 (B)

Prevalence Index = B/A = 2.6

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: #13

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
1-11	2.5y - 3/2		2.5yr - 3/6				loamy clay	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 11

Wetland Hydrology Present? Yes ✓ **No** _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange Sampling Date: 5/27/10

Applicant/Owner: SDG&E State: CA Sampling Point: #14

Investigator(s): T. Kegel, L. Jensen Section, Township, Range: Sec 22, T8S, R7W

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

Subregion (LRR): _____ Lat: 33.465742 Long: 117.603443 Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Baccharis salicifolia	80	Y	FACW
2.			
3.			
4.			
5.			
	80 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Polypogon monspeliensis	5	N	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	5 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 90 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 1 (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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: #14

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
1-11	2.5y - 3/2	100					loamy clay	Hydrogn Sulfide Odor

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: ———

Depth (inches): ———

Hydric Soil Present? Yes ✓ No ———

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

~~Secondary Indicators (2 or more required)~~

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

Field Observations:

Surface Water Present? Yes ✓ No ——— Depth (inches): ———

Water Table Present? Yes ✓ No ——— Depth (inches): ———

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

Wetland Hydrology Present? Yes ✓ No ———

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCRUP City/County: Orange Sampling Date: 7/14/10

Applicant/Owner: SDG&E State: CA Sampling Point: #15

Investigator(s): T. Kegel, L. Jensen Section, Township, Range: Sec 26, T8S, R7W

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

Subregion (LRR): _____ Lat: 33.456041 Long: 117.586498 Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	100	Y	FACW
2.			
3.			
4.			
	100 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Typha ssp.	10	N	OBL
2.			
3.			
4.			
5.			
	10 = Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 1 (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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: #15

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
1-11	10GY	100					loamy clay	Strong Hydrogn Sulfide Odor

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ✓ **No** _____

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

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: SOCREP | City/County: San Juan Capistrano, Orange | Sampling Date: 12/28/2011

Applicant/Owner: SDG&E | State: CA | Sampling Point: 16

Investigator(s): T. Kegel & S. Underbrink | Section, Township, Range: Sec6, T8S, R7W

Landform (hillslope, terrace, etc.): Outfall Pipe | Local relief (concave, convex, none): Concave | Slope (%): 1-2%

Subregion (LRR): C - Mediterranean California | Lat: 33° 30.408' N | Long: 117°, 38.676' W | Datum:

Soil Map Unit Name: SORRENTO LOAM, 0 TO 2 PERCENT SLOPES | NWI classification:

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

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

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

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

Hydrophytic Vegetation Present?	Yes (●)	No ( )	
Hydric Soil Present?	Yes (●)	No ( )	**Is the Sampled Area within a Wetland?** Yes (●) No ( )
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quarcus agrifolia*	30	Yes	Not Listed
2. *Sambucus mexicana*	15	No	FACU
3. *Rhus ovata*	5	No	Not Listed
4. *Arundo donax*	5	No	FACW
Total Cover:	55 %		
Sapling/Shrub Stratum			
1. *Typha latifolia*	60	Yes	OBL
2. *Cyperus alternifolius*	10	No	OBL
3. *Salix lasiolepis*	2	No	FACW
4.			
5.			
Total Cover:	72 %		
Herb Stratum			
1. *Epilobium ciliatum*	5	No	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	5 %		
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: 1 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	70	x 1 =	70
FACW species	12	x 2 =	24
FAC species		x 3 =	0
FACU species	15	x 4 =	60
UPL species	35	x 5 =	175
Column Totals:	132 (A)		329 (B)

Prevalence Index = B/A = 2.49

Hydrophytic Vegetation Indicators:

- [ ] Dominance Test is >50%
- [x] 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 ( )

Remarks:

SOIL

Sampling Point: 16

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[3]	Remarks
0-14	2.5 Y 2.5/1	100					Loam	10% Organic
14-18	Gley 1 3/10GY	90	10 YR 6/6	10	C	M	Clay	

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

- [ ] Histosol (A1)
- [ ] Histic Epipedon (A2)
- [ ] Black Histic (A3)
- [x] Hydrogen Sulfide (A4)
- [ ] Stratified Layers (A5) (**LRR C**)
- [ ] 1 cm Muck (A9) (**LRR D**)
- [x] 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:[4]

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes (•) No ( )

Remarks: Strong Hydrogen Sulfide odor

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)

- [x] 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 (•)	No ( )	Depth (inches):	2
Water Table Present?	Yes (•)	No ( )	Depth (inches):	5
Saturation Present? (includes capillary fringe)	Yes (•)	No ( )	Depth (inches):	0

Wetland Hydrology Present? Yes (•) No ( )

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

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: SOCREP | City/County: San Juan Capistrano, Orange | Sampling Date: 12/28/2011

Applicant/Owner: SDG&E | State: CA | Sampling Point: 17

Investigator(s): T. Kegel & S. Underbrink | Section, Township, Range: Sec6, T8S, R7W

Landform (hillslope, terrace, etc.): Outfall Pipe | Local relief (concave, convex, none): Concave | Slope (%): 1-2%

Subregion (LRR): C - Mediterranean California | Lat: 33° 30.406' N | Long: 117°, 38.677' W | Datum:

Soil Map Unit Name: SORRENTO LOAM, 0 TO 2 PERCENT SLOPES | NWI classification:

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

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

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

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

Hydrophytic Vegetation Present?	Yes (●)	No ( )	
Hydric Soil Present?	Yes ( )	No (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quarcus agrifolia*	15		Not Listed
2.			
3.			
4.			
Total Cover:	15 %		
Sapling/Shrub Stratum			
1. *Typha latifolia*	10	No	OBL
2. *Arundo donax*	40	Yes	FACW
3.			
4.			
5.			
Total Cover:	50 %		
Herb Stratum			
1. *Epilobium ciliatum*	20	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	20 %		
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: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	60	x 2 =	120
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species	15	x 5 =	75
Column Totals:	85 (A)		205 (B)

Prevalence Index = B/A = 2.41

Hydrophytic Vegetation Indicators:

- [X] Dominance Test is >50%
- [X] 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 ( )

Remarks:

SOIL

Sampling Point: 17

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-5	2.5 Y 2.5/1	100					Loam	5% Organic
5-9	2.5 Y 3/1	100					sandy loam	
9-18	2.5 Y 5/3	100					sand	

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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:[4]

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks: Strong Hydrogen Sulfide odor

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): 8

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:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: SOCREP | City/County: San Juan Capistrano, Orange | Sampling Date: 12/29/2011

Applicant/Owner: SDG&E | State: CA | Sampling Point: 18

Investigator(s): T. Kegel & S. Underbrink | Section, Township, Range: s25,T8S,R7W

Landform (hillslope, terrace, etc.): Basin | Local relief (concave, convex, none): Concave | Slope (%): 1-2%

Subregion (LRR): C - Mediterranean California | Lat: 33° 27.308' N | Long: 117°, 34.314' W | Datum:

Soil Map Unit Name: ALO CLAY, 15 TO 30 PERCENT SLOPES | NWI classification:

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

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

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

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

Hydrophytic Vegetation Present?	Yes (●)	No ( )	
Hydric Soil Present?	Yes (●)	No ( )	**Is the Sampled Area within a Wetland?** Yes (●) No ( )
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1. *Typha latifolia*	80	Yes	OBL
2. *Scirpus americanus*	10	No	OBL
3.			
4.			
5.			
Total Cover:	90 %		
Herb Stratum			
1. *Eleocharis palustis*	10	No	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	10 %		
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: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	100	x 1 =	100
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	100 (A)		100 (B)

Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:

- [X] Dominance Test is >50%
- [X] 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 ( )

Remarks:

SOIL

Sampling Point: 18

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-4	2.5 Y 2.5/1	100					Loam	
4-18	10 YR 2/1	100					Clay	Histic

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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:[4]

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ◉ No ○

Remarks: Strong Hydrogen Sulfide odor

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): 5

Water Table Present? Yes ◉ No ○ Depth (inches): 5

Saturation Present? (includes capillary fringe) Yes ◉ No ○ Depth (inches): 0

Wetland Hydrology Present? Yes ◉ No ○

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

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: SOCREP | City/County: San Juan Capistrano, Orange | Sampling Date: 12/29/2011

Applicant/Owner: SDG&E | State: CA | Sampling Point: 19

Investigator(s): T. Kegel & S. Underbrink | Section, Township, Range: sec25, T8S, R7W

Landform (hillslope, terrace, etc.): Wash | Local relief (concave, convex, none): Concave | Slope (%): 2-3%

Subregion (LRR): C - Mediterranean California | Lat: 33° 27.309' N | Long: 117°, 34.284' W | Datum: NAD 83

Soil Map Unit Name: SORRENTO LOAM, 2 TO 9 PERCENT SLOPES | NWI classification:

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

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

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

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

Hydrophytic Vegetation Present?	Yes (●)	No ( )	
Hydric Soil Present?	Yes (●)	No ( )	**Is the Sampled Area within a Wetland?** Yes (●) No ( )
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix lasiolepis*	90	Yes	FACW
2.			
3.			
4.			
Total Cover:	90 %		
Sapling/Shrub Stratum			
1. *Typha latifolia*	15	No	OBL
2.			
3.			
4.			
5.			
Total Cover:	15 %		
Herb Stratum			
1. *Juncus mexicanus*	10	No	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	10 %		
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: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	100	x 2 =	200
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	115 (A)		215 (B)

Prevalence Index = B/A = 1.87

Hydrophytic Vegetation Indicators:

- [X] Dominance Test is >50%
- [X] 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 ( )

Remarks:

SOIL

Sampling Point: 19

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[3]	Remarks
0-18	10YR 4/1	75	Gley 2 2.5/5PB	25	RM	M	Clay	

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

- [ ] Histosol (A1)
- [ ] Histic Epipedon (A2)
- [ ] Black Histic (A3)
- [x] 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:[4]

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes (●) No ( )

Remarks: Strong Hydrogen Sulfide odor

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- [ ] 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 ( ) No (●)	Depth (inches):	
Water Table Present?	Yes (●) No ( )	Depth (inches):	15
Saturation Present? (includes capillary fringe)	Yes (●) No ( )	Depth (inches):	10

Wetland Hydrology Present? Yes (●) No ( )

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

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: SOCREP | City/County: San Juan Capistrano, Orange | Sampling Date: 12/29/2011

Applicant/Owner: SDG&E | State: CA | Sampling Point: 20

Investigator(s): T. Kegel & S. Underbrink | Section, Township, Range: sec25, T8S, R7W

Landform (hillslope, terrace, etc.): Wash | Local relief (concave, convex, none): Concave | Slope (%): 2-3%

Subregion (LRR): C - Mediterranean California | Lat: 33° 27.289' N | Long: 117°, 34.205' W | Datum: NAD 83

Soil Map Unit Name: SORRENTO LOAM, 2 TO 9 PERCENT SLOPES | NWI classification:

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

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

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

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

Hydrophytic Vegetation Present?	Yes (●)	No ( )	
Hydric Soil Present?	Yes ( )	No (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus agrifoloia*	5	No	Not Listed
2.			
3.			
4.			
Total Cover:	5 %		
Sapling/Shrub Stratum			
1. *Typha latifolia*	80	Yes	OBL
2. *Urtica dioica*	20	Yes	FACW
3.			
4.			
5.			
Total Cover:	100%		
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: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	80	x 1 =	80
FACW species	20	x 2 =	40
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species	5	x 5 =	25
Column Totals:	105 (A)		145 (B)

Prevalence Index = B/A = 1.38

Hydrophytic Vegetation Indicators:

- [X] Dominance Test is >50%
- [X] 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 ( )

Remarks:

SOIL

Sampling Point: 20

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

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

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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:[4]

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks: Strong Hydrogen Sulfide odor

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): 2

Wetland Hydrology Present? Yes ◉ No ○

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

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: SOCREP | City/County: San Diego County | Sampling Date: 02/28/2012

Applicant/Owner: SDG&E | State: CA | Sampling Point: 21

Investigator(s): T. Kegel & S. Underbrink | Section, Township, Range: Sec26, T8S,R7W

Landform (hillslope, terrace, etc.): Wash | Local relief (concave, convex, none): Concave | Slope (%): 2-3%

Subregion (LRR): C - Mediterranean California | Lat: 33°, 27', 0.0" N | Long: 117°, 34', 40.8" W | Datum: NAD 83

Soil Map Unit Name: | NWI classification:

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

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

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

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

Hydrophytic Vegetation Present?	Yes (●)	No ( )	
Hydric Soil Present?	Yes ( )	No (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Baccharis salicifolia*	70	Yes	FACW*
2.			
3.			
4.			
Total Cover:	70 %		
Sapling/Shrub Stratum			
1. *Toxicodendron diversilobum*	20	Yes	FACU
2.			
3.			
4.			
5.			
Total Cover:	20 %		
Herb Stratum			
1. *Ambrosia psilostachya*	10	No	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	10 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 15 % | % Cover of Biotic Crust %

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species	70	x 2 =	140
FAC species	10	x 3 =	30
FACU species	20	x 4 =	80
UPL species		x 5 =	0
Column Totals:	100 (A)		250 (B)

Prevalence Index = B/A = 2.50

Hydrophytic Vegetation Indicators:

- [ ] Dominance Test is >50%
- [x] 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 ( )

Remarks:

SOIL

Sampling Point: 21

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-18	2.5Y 3/2	95	7.5YR 4/6	5	C	M	Clay	

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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:[4]

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks:

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): 1

Water Table Present? Yes ◉ No ○ Depth (inches): 1

Saturation Present? (includes capillary fringe) Yes ◉ No ○ Depth (inches): 0

Wetland Hydrology Present? Yes ◉ No ○

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

Remarks:

Appendix D:
2008 Coastal California Gnatcatcher (*Polioptila californica californica*) Survey Report for San Diego Gas and Electric's Proposed Orange County Transmission Expansion Project

1903 Wright Place
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Carlsbad, CA 92008

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October 1, 2008

Ms. Sandra Marquez
U.S. Fish and Wildlife Service
6010 Hidden Valley Road
Carlsbad, California 92011

SUBJECT: 2008 Coastal California Gnatcatcher (*Polioptila californica californica*) Survey Report for San Diego Gas & Electric's Proposed Orange County Transmission Expansion Project (Revised: October 1, 2008)

Permit Number: TE-037508-1 and TE-162994-0

Dear Ms. Marquez:

This letter report summarizes the methodology and findings of protocol-level surveys for the federally and state listed threatened coastal California gnatcatcher *Polioptila californica californica* (gnatcatcher) conducted by TRC in 2008 for San Diego Gas & Electric's (SDG&E) proposed Orange County Transmission Expansion Project (project) located in San Juan Capistrano and San Clemente, in Orange County, California. The areas surveyed are located within SDG&E's existing transmission corridor from the Talega substation northeast of Camp Pendleton to the Capistrano substation in southwestern Orange County (refer to Figure 1). Surveys were conducted to determine the presence/absence of coastal California gnatcatchers.

SURVEY LOCATIONS

Surveys were conducted along the existing transmission corridor, and comprised 250 feet on either side of the transmission line (survey area). The survey area was divided into four segments. Segments 1 through 3 were surveyed separately; Segment 4 did not contain suitable gnatcatcher habitat, and was not surveyed (see Figure 1). Only suitable gnatcatcher habitat, consisting of coastal sage scrub, disturbed coastal sage scrub, and restored coastal sage scrub, was surveyed. Elevation in the survey area ranged from approximately 225 to 700 feet above sea

level. Within the survey area, gnatcatcher critical habitat [1] comprises 41.07 acres, excluded essential habitat[2] comprises 52.08 acres, and 33.37 acres is exempt[3] (refer to Figures 2, 3, and 4).

Survey Segment 1

Segment 1 is located west of the SDG&E Talega Substation at the east end of Pico Avenida, and terminates at the existing transmission corridor where it spans Avenida Pico (see Figure 1). This survey segment is within T.8S., R.7W. of the U.S. Geological Survey (USGS) San Clemente 7.5-minute quadrangle.

Survey Segment 2

Segment 2 is located north of Avenida Pico and heads north-northwest to just south of the Prima Deshecha Sanitary Landfill entrance at the end of La Plata Avenue (see Figure 1). This survey area is within T.8S., R.7W. of the USGS San Clemente 7.5-minute quadrangle.

Survey Segment 3

Segment 3 is located north of the Prima Deshecha Sanitary Landfill entrance at La Plata Avenue and heads northwest to San Juan Creek Road (see Figure 1). This survey area is within T.8S., R.7W. of the USGS San Clemente and San Juan Capistrano 7.5-minute quadrangles.

PLANT COMMUNITIES

Within the survey area, approximately 67.75 acres of moderate to good quality coastal sage scrub and 65.20 acres of disturbed and restored coastal sage scrub were surveyed. Dominant native shrub species observed include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), white sage (*Salvia apiana*), California broom (*Lotus scoparius*), lemonadeberry (*Rhus integrifolia*), laurel sumac (*Malosma laurina*), toyon (*Heteromeles arbutifolia*), coyote bush (*Baccharis piluaris*), mulefat (*Baccharis salicifolia*), and blue elderberry (*Sambucus mexicana*).

METHODOLOGY

Permitted biologists Paula Potenza (Permit No. TE-037508-1) and Vanessa Tisdale (Permit No. TE-162994-0), conducted the surveys according to the *USFWS Coastal California Gnatcatcher Presence/Absence Survey Protocol* for Natural Community Conservation Plan areas (USFWS, 1993). Matt Merscheim, Matt Willis, Kirstie Reynolds, Sommer Fisher, and Ryan Villanueva accompanied Paula Potenza as biologists authorized to conduct activities for gnatcatchers under the direct supervision of an independently authorized biologist. They are listed under or have recently been submitted to Permit No. TE-037508-1.

---

[1] United States Fish and Wildlife Service coastal California gnatcatcher final critical habitat, dated December 19, 2007, available online at http://criticalhabitat.fws.gov/. Critical habitat is considered essential for species survival.
[2] Excluded essential habitat is essential for the species but is administered under local plans, such as an HCP.
[3] Habitat within the jurisdiction of the Department of Defense is considered exempt.

Gnatcatcher surveys were conducted in appropriate vegetation within the survey area. Following protocol for SDG&E's Subregional Natural Community Conservation Plan (NCCP) presence/absence surveys, a minimum of three surveys were conducted at least one week apart. The surveys occurred within the gnatcatcher breeding season (March 15 through June 30). Table 1 below provides the survey dates.

Table 1: 2008 Survey Schedule

Survey Location	Surveyors	Survey Dates
Segment 1	Paula Potenza Matt Merscheim Matt Willis Kirstie Reynolds Sommer Fisher Ryan Villanueva	March 18, 19, 25, and 26; and April 1 and 2
Segment 2	Paula Potenza	April 15 and 29; and May 8
Segment 3	Vanessa Tisdale	May 28; and June 3 and 11

All surveys were conducted between approximately 7:00 a.m. and 12:35 p.m. Weather conditions during the surveys consisted of temperatures from 45 to 74 degrees Fahrenheit, winds from 0 to 10 miles per hour, and cloud cover from 0 to 100 percent. During periods of excessive heat, wind, rain, fog, or other inclement weather surveys were either halted or postponed. Taped vocalizations and "pishing" sounds were used to initially locate gnatcatchers. Taped calls were not used to elicit or prompt further behaviors from birds. Surveys were conducted by slowly walking survey routes and no more than 100 acres of suitable gnatcatcher habitat were surveyed per biologist per day. See Survey Data Summary attachment for a break down of survey conditions for each survey day.

RESULTS

During the surveys, biologists made 19 gnatcatcher observations, for a minimum of 14 individuals in the survey area. Separate individuals were determined by simultaneous sightings, proximity to previous sightings, and time lapse between consecutive sightings. Observations made in close temporal and spatial proximity are considered the same individual; therefore, the total minimum number of gnatcatchers is conservative. Four pairs were confirmed; two pair in Segment 3 and two nesting pair in Segment 1. See Figures 2, 3, 4, and 5 for depictions of the survey area and results on aerial maps and Figures 6 and 7 for depictions of the survey area and result on USGS 7.5 Quadrangles.

Survey Segment 1

Five gnatcatchers were identified; two nesting pairs and one single male (see Figure 2). Survey protocol for NCCP presence/absence surveys requires only three surveys to be conducted; therefore pair territories were not determined. The nesting sites for both pairs were identified based on adult gnatcatcher behaviors, but the nests were not approached. All observations were mapped. Pair 1 was observed in the survey area within good quality coastal sage scrub on a southeast facing slope approximately 425 feet west of the Talega Substation. Pair 2 was observed in the survey area within moderate (disturbed) quality coastal sage scrub on an east facing slope approximately 1,500 feet east of where the transmission corridor spans Pico Avenida. The single male was observed west of the second pair, approximately 1,000 feet east of where the transmission corridor spans Pico Avenida. The single male was observed in moderate (disturbed) coastal sage scrub in a north facing bowl adjacent to a commercial complex.

Survey Segment 2

Two gnatcatchers were identified in Segment 2 (see Figure 3). One male gnatcatcher responded to taped calls played by the surveyor (playback), and was observed just outside of the survey area. The male flew toward the taped calls from the west. After several minutes, the male flew several hundred feet east over a ridgeline and disappeared. The juvenile gnatcatcher responded to playback on May 8, 2008. The juvenile was observed in moderate (disturbed) coastal sage scrub on a west facing slope within the survey area. No adults were observed with the juvenile gnatcatcher.

Survey Segment 3

During the surveys, 11 gnatcatchers observations were made, for a minimum of seven individuals (see Figure 4). One male responded immediately to playback approximately 140 feet south of the survey area. An unknown individual simultaneously called within 100 feet of the male; therefore, these birds are considered Pair 3. Gnatcatchers were detected in this area on two of three surveys. Approximately 250 feet northwest, a male and female responded to playback and were observed together (Pair 4). These birds were detected on two of three surveys. In addition, three single individuals were detected; an unknown individual approximately 600 feet north of Pair 3 was detected on all three surveys, a female approximately 350 feet northwest of Pair 4 was observed on two of three surveys, and an unknown individual was heard calling in ruderal vegetation over 300 feet from known suitable coastal sage scrub.

Please contact me at (760) 603-1740 if you have any questions or comments regarding this letter.

Sincerely,

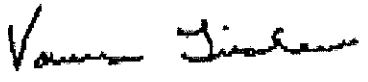
Paula Potenza
Lead Biologist

Attachments:
Surveyor Certification Statement
Survey Data Summary
Figure 1: Project Overview
Figure 2: Segment 1
Figure 3: Segment 2
Figure 4: Segment 3
Figure 5: Segment 4
Figure 6: USGS 7.5 Topographic Quadrangles
Figure 7: USGS 7.5 Topographic Quadrangles

Surveyor Certification Statement

The undersigned certify that this report and the included field data are a complete and accurate account of the findings and conclusions of year 2008 focused NCCP surveys for the coastal California gnatcatcher for the Orange County Transmission Expansion Project, Orange County, California.

Paula Potenza
Permit No. TE-037508-1
TRC
1903 Wright Place, Suite 190
Carlsbad, CA 92008



Vanessa Tisdale
Permit No. TE-162994-0
TRC
1903 Wright Place, Suite 190
Carlsbad, CA 92008

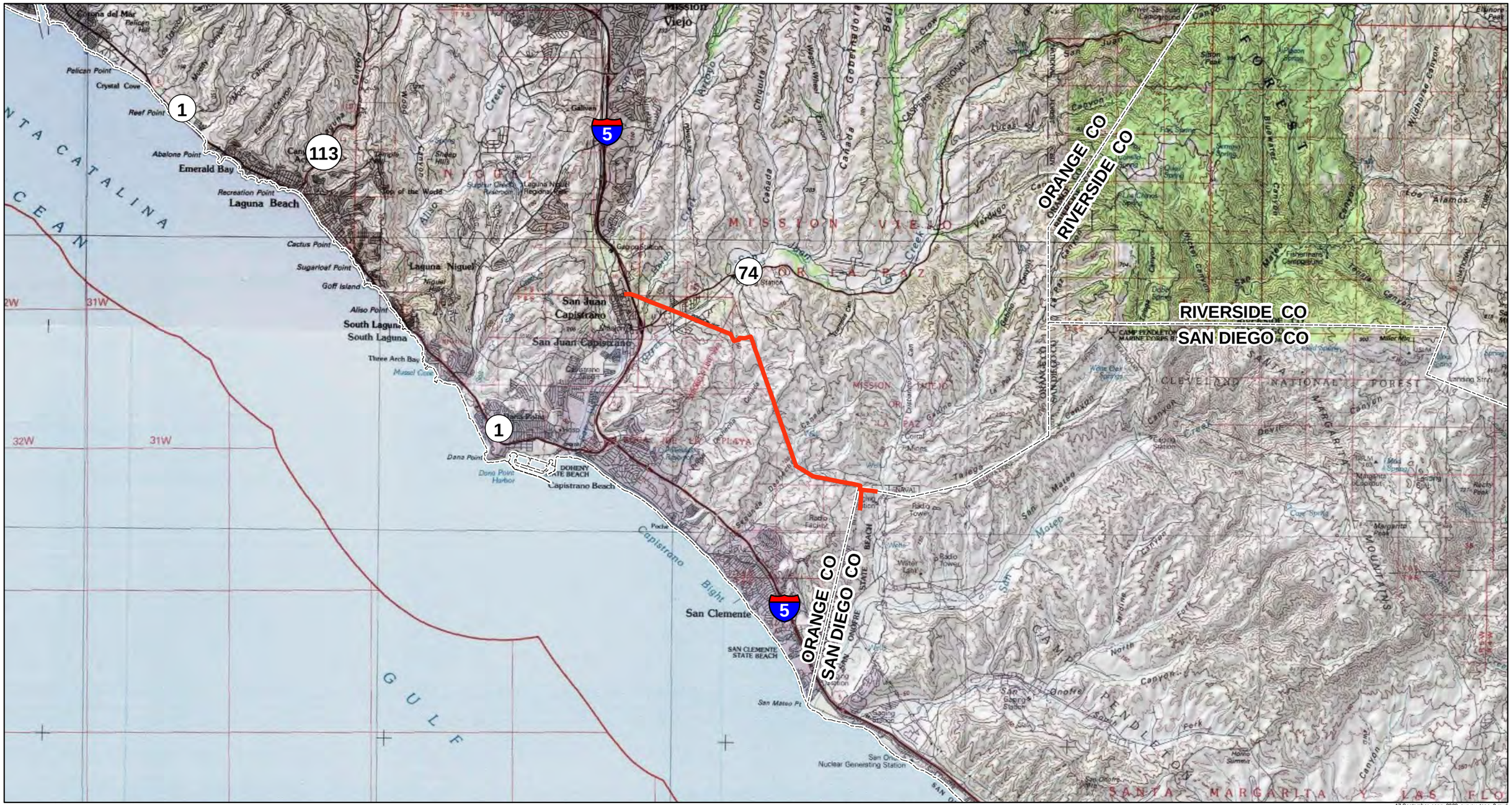
Survey Data Summary

2007/2008 Coastal California Gnatcatcher

Orange County Transmission Expansion Project

Date	Biologists	Hours	Weather Conditions
Segment 1			
18 March 2008	Paula Potenza	0800 to 1230	45° to 65° F, winds 2 to 5 (mph), cloud cover 0%
19 March 2008	P. Potenza	0800 to 1235	50° to 65° F, winds 0 to 8 (mph), cloud cover 100% to 30%
25 March 2008	P. Potenza Matt Merscheim Matt Willis	0745 to 1230	48° to 70° F, winds 2 to 8 (mph), cloud cover 100% to 0%
26 March 2008	P. Potenza Sommer Fisher Kirstie Reynolds Ryan Villanueva	0730 to 1205	48° to 68° F, winds 2 to 8 (mph), cloud cover 100%
1 April 2008	P. Potenza	0800 to 1200	58° to 60° F, winds 0 to 4 (mph), cloud cover 100%
2 April 2008	P. Potenza	0800 to 1215	55° to 65° F, winds 2 to 4 (mph), cloud cover 60% to 0%
Segment 2			
15 April 2008	P. Potenza	0830 to 1230	54° to 70° F, winds 3 to 10 (mph), cloud cover 100% to 10%
29 April 2008	P. Potenza	0700 to 1215	55° to 70° F, winds 0 to 6 (mph), cloud cover 100% to 0%
8 May 2008	P. Potenza	0800 to 1200	58° to 62° F, winds 0 to 8 (mph), cloud cover 100%
Segment 3			
29 May 2008	Vanessa Tisdale	0830 to 1230	63° to 70° F, winds 1 to 3 (mph), cloud cover 60% to 5%
3 June 2008	V. Tisdale	0800 to 1230	68° to 74° F, winds 0 to 2 (mph), cloud cover 95% to 0%
11 June 2008	V. Tisdale	0715 to 1045	63° to 70° F, winds 1 to 3 (mph), cloud cover 95% to 0%

Attachments:
Surveyor Certification Statement
Survey Data Summary
Figure 1: Project Overview
Figure 2: Segment 1
Figure 3: Segment 2
Figure 4: Segment 3
Figure 5: Segment 4
Figure 6: USGS 7.5 Topographic Quadrangles
Figure 7: USGS 7.5 Topographic Quadrangles



Project Span
County

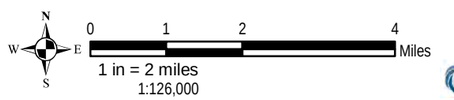
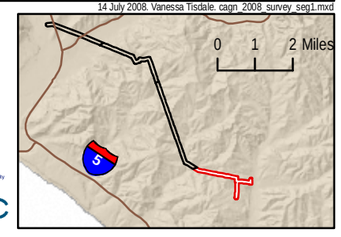


FIGURE 1 - VICINITY MAP
SOUTH ORANGE COUNTY RELIABILITY UPGRADE PROJECT | SDG&E

California gnatcatcher observations
California gnatcatcher nest locations
Substations
Potential California gnatcatcher habitat
Transmission line
250-foot survey area
USFWS California gnatcatcher critical habitat
USFWS Excluded essential habitat
USFWS Exempt habitat

14 July 2008. Vanessa Tisdale. cagn_2008_survey_seg1.mxd

N
W E
S
0 225 450 900 Feet
1 inch equals 900 feet
1:10,800



SDGE
A Sempra Energy utility
TRC

FIGURE 2 - SEGMENT 1
ORANGE COUNTY TRANSMISSION EXPANSION | SDG&E

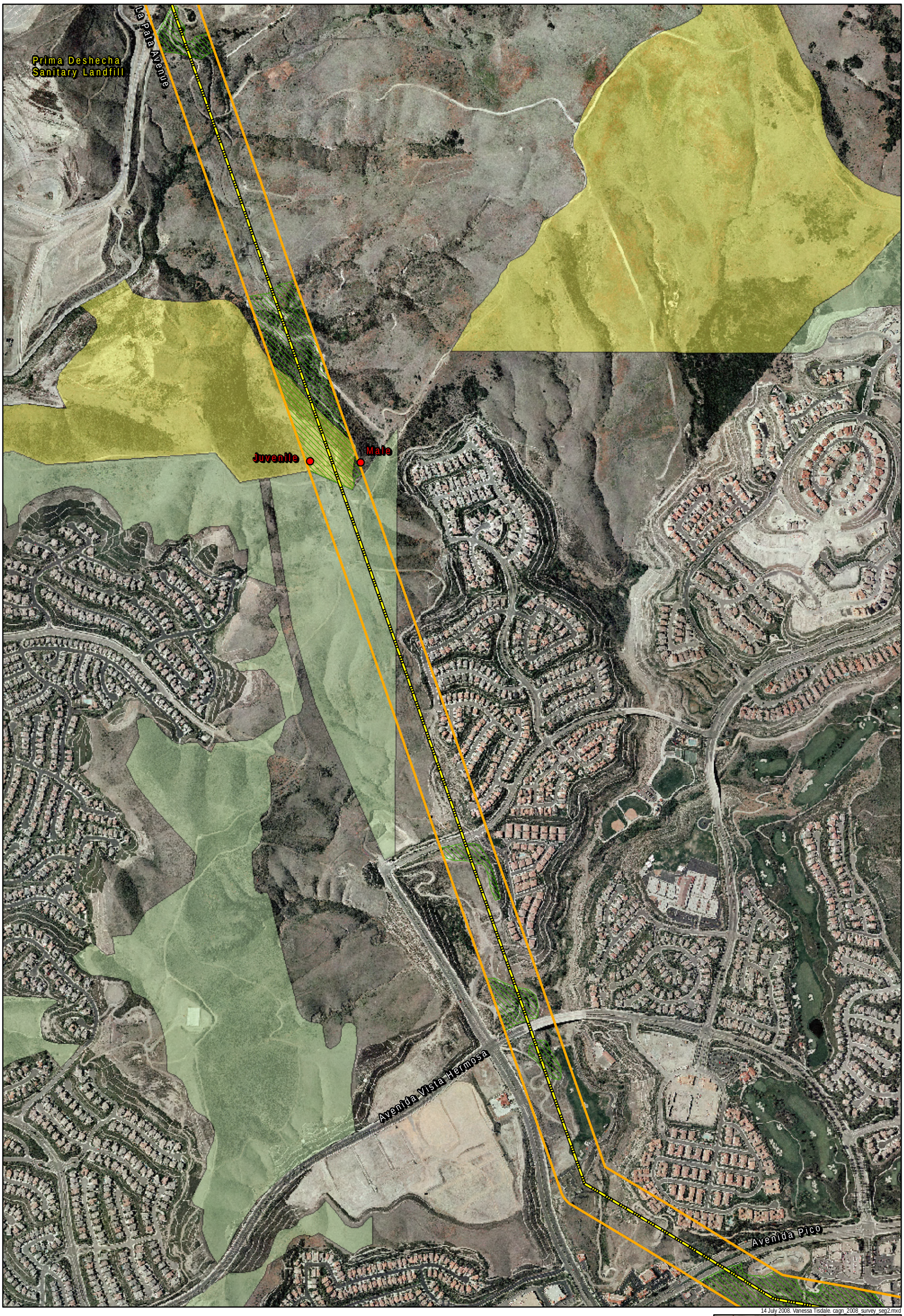


FIGURE 3 - SEGMENT 2

ORANGE COUNTY TRANSMISSION EXPANSION | SDG&E

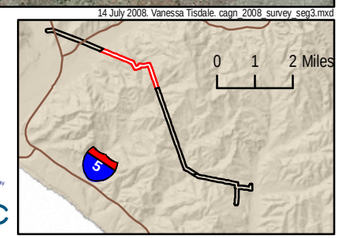
California gnatcatcher observations
California gnatcatcher nest locations
Substations
Potential California gnatcatcher habitat
Transmission line
250-foot survey area
USFWS California gnatcatcher critical habitat
USFWS Excluded essential habitat
USFWS Exempt habitat

14 July 2008. Vanessa Tisdale. cagn_2008_survey_seg3.mxd

N W E S

0 225 450 900 Feet

1 inch equals 900 feet
1:10,800



SDGE
A Sempra Energy utility
TRC

FIGURE 4 - SEGMENT 3
ORANGE COUNTY TRANSMISSION EXPANSION | SDG&E

14 July 2008. Vanessa Tisdale. cagn_2008_survey_seg4.mxd

- California gnatcatcher observations
- California gnatcatcher nest locations
- Substations
- Potential California gnatcatcher habitat
- Ttransmission line
- 250-foot survey area
- USFWS California gnatcatcher critical habitat
- USFWS Excluded essential habitat
- USFWS Exempt habitat

N W E S

0 225 450 900 Feet

1 inch equals 900 feet

1:10,800

SDGE A Sempra Energy utility

TRC

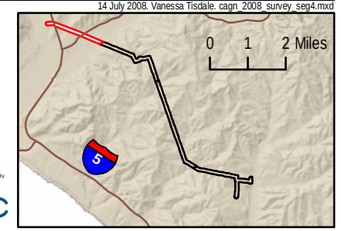


FIGURE 5 - SEGMENT 4

ORANGE COUNTY TRANSMISSION EXPANSION | SDG&E

Appendix E:
2010 Coastal California Gnatcatcher (*Polioptila californica californica*) Survey Report for San Diego Gas and Electric's Proposed South Orange County Reliability Upgrade Project

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June 23, 2010

Ms. Sandra Marquez
U.S. Fish and Wildlife Service
6010 Hidden Valley Road
Carlsbad, California 92011

SUBJECT: 2010 Coastal California Gnatcatcher (*Polioptila californica californica*) Survey Report for San Diego Gas & Electric's Proposed South Orange County Reliability Upgrade Project

Permit Number: TE-037508-1

Dear Ms. Marquez:

This letter report summarizes the methodology and findings of protocol-level surveys for the federally and state listed threatened coastal California gnatcatcher (*Polioptila californica californica*) (gnatcatcher) conducted by TRC in 2010 for San Diego Gas & Electric's (SDG&E) proposed South Orange County Reliability Upgrade Project (SOCRUP or "project") which runs between the cities of San Juan Capistrano and San Clemente, in southern Orange County, California as shown in Figure 1. The areas surveyed are located within SDG&E's existing transmission corridor from the Talega substation, located northeast of Camp Pendleton, to the Capistrano substation in southwestern Orange County (see Figures 2 and 3). Surveys were conducted to determine the presence/absence of coastal California gnatcatchers.

SURVEY LOCATIONS

Surveys were conducted along the existing transmission corridor, and comprised 250 feet on either side of the transmission line (survey area). The survey area was divided into two segments of the right-of-way. Each segment was surveyed on a separate day so that no more than 100 acres were surveyed per biologist per survey day. Only suitable gnatcatcher habitat, consisting of coastal sage scrub, disturbed coastal sage scrub, and restored coastal sage scrub, was surveyed. Elevation in the survey area ranged from approximately 225 to 700 feet above sea level. Within

the survey area, gnatcatcher critical habitat [1] comprises 41.07 acres, excluded essential habitat[2] comprises 52.08 acres, and 33.37 acres is exempt[3].

Survey Segment 1

Segment 1 is located in San Clemente, west of the SDG&E Talega Substation at the east end of Pico Avenida, continuing west and then north along the existing utility corridor, terminating on the south side of Calle Saluda. This survey segment is within Township 8S, Range 7W of the U.S. Geological Survey (USGS) San Clemente 7.5-minute quadrangle, as shown on Figure 2.

Survey Segment 2

Segment 2 is located north of Calle Saluda in San Clemente and follows the existing utility corridor north past the Prima Deshecha Sanitary Landfill and then turns northwest, terminating southeast of San Juan Creek Road in San Juan Capistrano. This survey area is within Township 8S, Range 7W of the USGS San Clemente and San Juan Capistrano 7.5-minute quadrangles, as shown on Figure 3.

PLANT COMMUNITIES

Within the survey area, approximately 67.75 acres of moderate to good quality coastal sage scrub and 65.20 acres of disturbed and restored coastal sage scrub were surveyed for a total of approximately 132.95 acres. Dominant native shrub species observed include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), white sage (*Salvia apiana*), California broom (*Lotus scoparius*), lemonadeberry (*Rhus integrifolia*), laurel sumac (*Malosma laurina*), toyon (*Heteromeles arbutifolia*), coyote bush (*Baccharis piluaris*), mulefat (*Baccharis salicifolia*), and blue elderberry (*Sambucus mexicana*).

METHODOLOGY

Permitted biologist Paula Potenza (Permit No. TE-037508-1), conducted the surveys according to the *USFWS Coastal California Gnatcatcher Presence/Absence Survey Protocol* for Natural Community Conservation Plan areas (USFWS, 1993). Under the direct supervision of Ms. Potenza, Lisa Gadsby, Britta Dahlke, and Martha Heath accompanied Ms. Potenza on several of the surveys so that they could accumulate hours toward gaining a permit to conduct survey activities for gnatcatchers. Gnatcatcher surveys were conducted in appropriate vegetation within the survey area. Following protocol for SDG&E's Subregional Natural Community Conservation Plan (NCCP) presence/absence surveys, a minimum of three surveys were conducted at least one week apart. The surveys occurred within the gnatcatcher breeding season (March 15 through June 30). Table 1 below provides the survey dates and conditions.

[1] United States Fish and Wildlife Service coastal California gnatcatcher final critical habitat, dated December 19, 2007, available online at http://criticalhabitat.fws.gov/. Critical habitat is considered essential for species survival.
[2] Excluded essential habitat is essential for the species but is administered under local plans, such as an HCP.
[3] Habitat within the jurisdiction of the Department of Defense is considered exempt.

Table 1: 2010 Survey Schedule and Data Summary

Date/Segment	Biologists	Hours	Weather Conditions
May 11 Segment 1	Paula Potenza Lisa Gadsby Martha Heath	0620 to 1235	50° to 65° F, winds 1 to 2 (mph), cloud cover 20%
May 17 Segment 2	P. Potenza	0630 to 1205	54° to 56° F, winds 0 to 2 (mph), cloud cover 100%
May 18 Segment 1	P. Potenza Britta Dahlka	0645 to 1235	58° to 68° F, winds 0 to 5 (mph), cloud cover 100%
May 24 Segment 2	P. Potenza M. Heath	0615 to 1225	54° to 62° F, winds 2 to 5 (mph), cloud cover 0 to 15%
May 25 Segment 1	P. Potenza M. Heath	0615 to 1220	43° to 69° F, winds 0 to 6 (mph), cloud cover 0 to 25%
May 31 Segment 2	P. Potenza M. Heath	0600 to 1225	59° to 69° F, winds 0 to 8 (mph), cloud cover 0 to 15%

All surveys were conducted between approximately 6:00 a.m. and 12:35 p.m. Weather conditions during the surveys consisted of temperatures from 43 to 69 degrees Fahrenheit, winds from 0 to 8 miles per hour, and cloud cover from 0 to 100 percent. During periods of excessive heat, wind, rain, fog, or other inclement weather surveys were either halted or postponed. Taped vocalizations and "pishing" sounds were used to initially locate gnatcatchers. Taped calls were not used to elicit or prompt further behaviors from birds. Surveys were conducted by slowly walking survey routes and no more than 100 acres of suitable gnatcatcher habitat were surveyed per biologist per day.

RESULTS

During the surveys, biologists made 21 gnatcatcher observations (which included single, pair, and family groups), for a minimum estimation of 20 individuals (including adults and juveniles) in the survey area. Separate individuals were determined by simultaneous sightings, proximity to previous sightings, and time lapse between consecutive sightings. Observations made in close temporal and spatial proximity are considered the same individual; therefore, the total minimum number of gnatcatchers may be conservative. Six pairs were confirmed with two of the pairs observed as part of a family group. Both of the family groups had at least two juveniles with the pair. In addition, a minimum of three single males were identified. See Figures 2 and 3 for depictions of the survey area and result on USGS 7.5 Quadrangles.

Survey Segment 1

Three pair, one family group of four individuals, and one single male were observed for a total of eleven individuals. See Figure 2: Pair 1, Pair 2, Single Male 1, Pair 3, and Family Group 1 for the location of the gnatcatcher observations on this segment. Survey protocol for NCCP presence/absence surveys requires only three surveys to be conducted; therefore pair territories were not determined. All observations were mapped and depicted on Figure 2.

- Pair 1 was observed once in the survey area near the southwest corner of the Talega Substation on an east facing slope with revegetated coastal sage scrub vegetation.

- Pair 2 was observed during two separate surveys in high quality coastal sage scrub vegetation on the east and north facing slopes of a steep bowl near an existing steel lattice tower overlooking the Talega Substation.

- Single Male 1's location shown on Figure 2 is where a single male was sighted during each of the three surveys and is being considered a single male based on behavior during the sightings and lack of another sighting of a single male in the same general location during the same survey. The single male was observed in moderate (disturbed or revegetated) coastal sage scrub vegetation on north and east facing slopes adjacent to a commercial complex.

- Pair 3 was observed during all three surveys on an east facing slope in good quality coastal sage scrub vegetation located between a commercial golf course to the south and a commercial complex to the north.

- Family Group 1 was observed in good quality (revegetated) coastal sage scrub vegetation just south of Calle Saluda on the west side of the survey corridor. The family group included a pair (male and female) and at least two juvenile gnatcatchers. The family group was identified and documented even though they were just outside of the survey corridor because the coastal sage scrub vegetation they were observed in was not far from vegetation that they could occupy located within the survey area.

Survey Segment 2

One pair, one family group of four individuals, and three single males were observed for a total of nine individuals. See Figure 3: Single Male 2, Pair 4, Single Male 3, Family Group 2, and Single Male 4 for the location of the gnatcatcher observations on this segment. Survey protocol for NCCP presence/absence surveys requires only three surveys to be conducted; therefore pair territories were not determined. All observations were mapped and shown on Figure 3, attached.

- Single Male 2 was observed only once during the May 31st survey and responded to taped calls played by the surveyor (playback). The male was only observed after playback, and after briefly responding vocally to the playback was observed foraging in good quality coastal sage scrub vegetation on an east facing slope near an existing utility access road.

- Pair 4 was only observed once during the May 31st survey and responded to playback of calls. Pair 4 was observed foraging in a large patch of good quality coastal sage scrub vegetation on a north facing slope immediately adjacent to La Pata Avenue, the main access road to the Prima Deshecha Landfill.

- Single Male 3 was observed on three different occasions. Because of the steepness of the slopes and the dense, moderate (disturbed) to good quality coastal sage scrub vegetation, the surveyor was unable to follow and determine if this was more than one individual. Based on the location of the three sightings, it was conservatively estimated as a single individual.

- Family Group 2 was observed in moderate (disturbed) coastal sage scrub vegetation located along a ridgeline with an existing utility access road and in moderate (revegetation) coastal sage scrub on an east facing slope. The family group included a pair (male and female) and at least two juvenile gnatcatchers. The family group was observed at this location on one occasion and on a subsequent survey a pair (male and female) gnatcatcher was observed in the same location and was assumed to be the adult pair from the earlier family group sighting.

- Single Male 4 was observed during all three surveys in the same location, a steep west facing slope with dense, good quality coastal sage scrub vegetation. This male responded aggressively to playback during the first survey. The male flew from the north toward the playback calls and called repeatedly before flying back to the north. Playback was only played the one time during the first survey and was not played again during the remaining surveys at this location. The male appeared territorial and was possible paired. No female gnatcatcher was observed in this area however.

Please contact me at (760) 603-1740 if you have any questions or comments regarding this letter.

Sincerely,

Paula Potenza
Lead Biologist

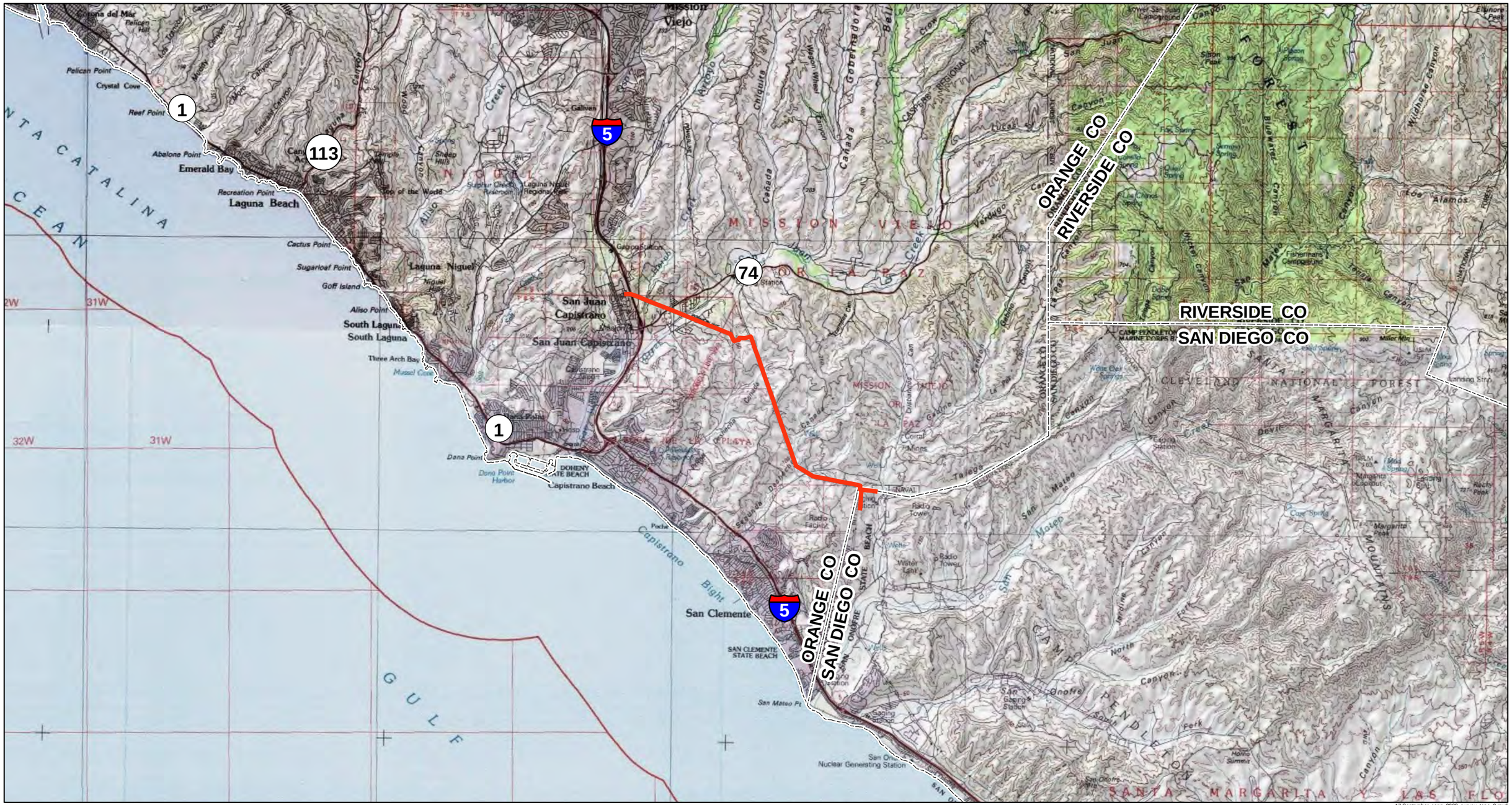
Attachments:
Surveyor Certification Statement
Figure 1: Vicinity Map
Figure 2: USGS 7.5 Topographic Quadrangles
Figure 3: USGS 7.5 Topographic Quadrangles

Surveyor Certification Statement

The undersigned certifies that this report and the included field data are a complete and accurate account of the findings and conclusions of year 2010 focused NCCP surveys for the coastal California gnatcatcher for SDG&E for the South Orange County Reliability Upgrade Project, Orange County, California.

June 8, 2010

Paula Potenza
Permit No. TE-037508-1
TRC
1903 Wright Place, Suite 190
Carlsbad, CA 92008



Project Span
County

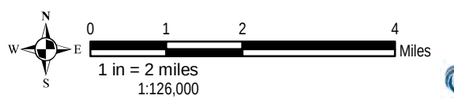


FIGURE 1 - VICINITY MAP
SOUTH ORANGE COUNTY RELIABILITY UPGRADE PROJECT | SDG&E

Single Male 2

Segment 2

Segment 1

Family Group 1

CRISTIANITOS

PICO

Single Male 1

Pair 3

TALEGA

Pair 2

Pair 1

Coastal California Gnatcatcher

Substations

Survey Area

Transmission line

Groupings

17 September 2008. cagn_2008_survey_topo_1.mxd

USGS 7.5 Topographic Quadrangles
Canada Gobernadora
Dana Point
San Clemente
San Juan Capistrano

0 500 1,000 2,000 Feet

1 inch = 2,000 feet
1:24,000

CANADA GOBERNADORA

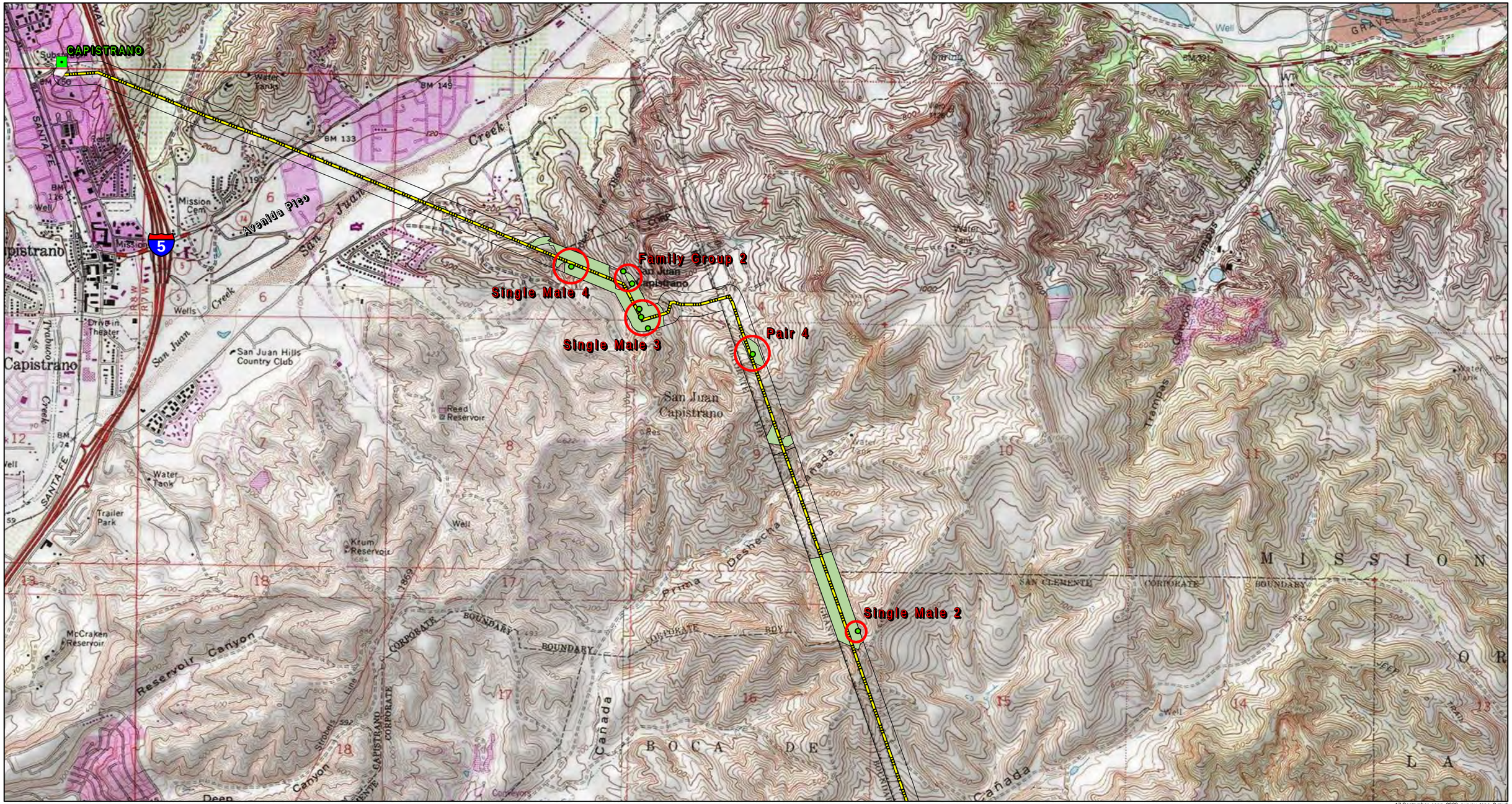
0 0.9 1.8 Miles

DANA POINT

SAN CLEMENTE

FIGURE 2 - USGS 7.5 TOPOGRAPHIC QUADRANGLES

SOUTH ORANGE COUNTY RELIABILITY UPGRADE PROJECT | SDG&E



17 September. capn_2008_survey_topo_2.mxd

- Coastal California Gnatcatcher
- Substations
- Survey Area
- Transmission line
- Groupings

FIGURE3 - USGS 7.5 TOPOGRAPHIC QUADRANGLES

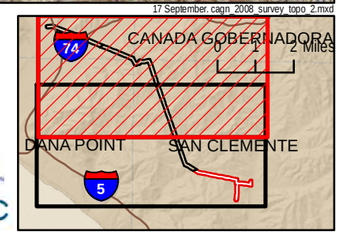
SOUTH ORANGE COUNTY RELIABILITY UPGRADE PROJECT | SDG&E

USGS 7.5 Topographic Quadrangles
Canada Gobernadora
Dana Point
San Clemente
San Juan Capistrano

N W E S

0 500 1,000 2,000 Feet

1 inch = 2,000 feet
1:24,000



Appendix F:
2010 Least Bell's Vireo (*Vireo bellii pusillus*) Survey Result for
San Diego Gas and Electric's Proposed South Orange County Reliability Upgrade Project

1903 Wright Place
Suite 190
Carlsbad, CA 92008

760.603.1740 PHONE
760.603.1750 FAX

www.TRCsolutions.com

June 23, 2010

Ms. Sandra Marquez
U.S. Fish and Wildlife Service
6010 Hidden Valley Road
Carlsbad, California 92011

SUBJECT: 2010 Least Bell's Vireo (*Vireo bellii pusillus*) Survey Report for San Diego Gas & Electric's Proposed South Orange County Reliability Upgrade Project

Dear Ms. Marquez:

This letter report summarizes the methodology and findings of protocol-level surveys for the federally and state endangered least Bell's vireo (vireo) conducted by TRC in 2010 for San Diego Gas & Electric's (SDG&E) proposed South Orange County Reliability Upgrade Project (SOCRUP or "project") which runs between the cities of San Juan Capistrano and San Clemente, in southern Orange County, California (as shown in Figure 1-Vicinity Map). The areas surveyed are located within SDG&E's existing transmission corridor from the Talega substation located northeast of Camp Pendleton to the Capistrano substation in southwestern Orange County (refer to Figures 2 and 3). Surveys were conducted to determine the presence/absence of least Bell's vireo.

SURVEY LOCATION

Surveys were conducted along a 250 foot width survey area along the existing transmission corridor. Only suitable vireo habitat, which included riparian woodland/scrub and mixed riparian/coastal sage scrub, was surveyed. Elevation in the survey area ranged from approximately 225 to 700 feet above sea level.

Riparian vegetation suitable for vireo occupation can be found in several creeks and drainages scattered throughout the survey area. Approximately 16 locations along the transmission corridor were surveyed. The northern most location occurring along a drainage with riparian vegetation west of Interstate 5, approximately 220 feet southeast of Golf Course Drive in San Juan Capistrano. The survey area heads southeast spanning San Juan Creek, several drainages with mixed willow riparian scrub/sage scrub south of the Prima Deshecha Sanitary Landfill to Pico Avenida, and several areas of mixed willow riparian scrub/baccharis scrub south of Pico Avenida along the Pacific Golf Course to the SDG&E Talega Substation, which is adjacent to Cristianitos Creek. The area surveyed is within T.8S., R.7W. of the U.S. Geological Survey (USGS) San Juan Capistrano and San Clemente 7.5-minute quadrangle.

PLANT COMMUNITIES

Within the survey area, approximately 40.22 acres of riparian and mixed riparian and coastal sage scrub vegetation were surveyed. Dominant native shrub species observed within the areas surveyed include willows (*Salix* sp.), western cottonwood (*Populus fremontii*), mule-fat (*Baccharis salicifolia*), blue elderberry (*Sambucus mexicana*), poison oak (*Toxicodendron diversilobum*), coyote brush (*Baccharis pilularis*), lemonadeberry (*Rhus integrifolia*), laurel sumac (*Malosma laurina*), toyon, (*Heteromeles arbutifolia*), California sagebrush (*Artemisia californica*), and California buckwheat (*Eriogonum fasciculatum*).

METHODOLOGY

Paula Potenza (TRC biologist) conducted three presence/absence surveys approximately ten days apart for least Bell's vireo Martha Heath accompanied Ms. Potenza on one of the surveys to gain experience with least Bell's vireo and the presence/absence survey protocol. The surveys were conducted on May 12, May 22, and June 1, 2010, according to the *USFWS Least Bell's Vireo Presence/Absence Survey Protocol* (USFWS, 1992). A minimum of three surveys were conducted per SDG&E's Subregional Natural Community Conservation Plan (NCCP) that states "in situations where more than one visit may be necessary to identify a given species, such as certain birds, no more than three site visits shall be required" (SDG&E's NCCP, Section 7.1.3, No. 13, p. 105, 1995). Because this was a presence/absence survey no vireo nest surveys were conducted, taped calls were not played, and vireos were typically not followed to prevent impacts to nests or nesting behaviors. Vireos were identified by calls/songs and by sight and were watched and followed only if identification and location needed to be confirmed. Table 1 below provides the survey dates and conditions.

Table 1: 2010 Survey Schedule and Data Summary

Date	Biologists	Hours	Weather Conditions
May 12	P. Potenza	0645 to 1110	48° to 65° F, winds 0 to 3 (mph), cloud cover 0%
May 22	P. Potenza	0715 to 1135	56° to 70° F, winds 0 to 4 (mph), cloud cover 55 to 95%
June 1	P. Potenza Martha Heath	0700 to 1135	61° to 62° F, winds 0 to 4 (mph), cloud cover 100%

All surveys were conducted between approximately 6:45 a.m. and 11:35 a.m. Weather conditions during the surveys consisted of temperatures from 48 to 70 degrees Fahrenheit, winds from 0 to 4 miles per hour, and cloud cover from 0 to 100 percent. During periods of excessive heat, wind, rain, fog, or other inclement weather surveys were halted or postponed. Surveys were conducted by slowly walking survey routes along the edges and through the riparian vegetation where possible and no more than 3 linear kilometers or 50 hectares of vireo habitat were surveyed on a single survey day.

RESULTS

An estimated total of seven individual least Bell's vireo were observed. Approximately 16 locations were surveyed and vireo was observed at six of those locations. During the surveys an estimated total of seven adults were heard and/or observed and none of the vireo appeared to be banded. The vireos were observed along six different drainages spanned or paralleled by the transmission corridor and one individual was observed in upland vegetation (see Figures 2 and 3). The least Bell's vireo sightings labeled 1 through 6 on Figures 2 and 3 were all located in small drainages with some riparian vegetation. One incidental vireo sighting (see vireo sighting labeled 6 on Figure 3) was made during a coastal California gnatcatcher survey. It was of a single male vireo calling from tree tobacco on a slope with coastal sage scrub vegetation. No drainage was observed in the immediate vicinity and the vireo was only observed this one time at this location. On Figures 2 and 3 were there are overlapping location "dots" for least Bell's vireo sightings, these sightings were counted as a single individual. Since only one vireo was either heard or observed at each of these overlapping "dot" locations, it was assumed that it was the same individual.

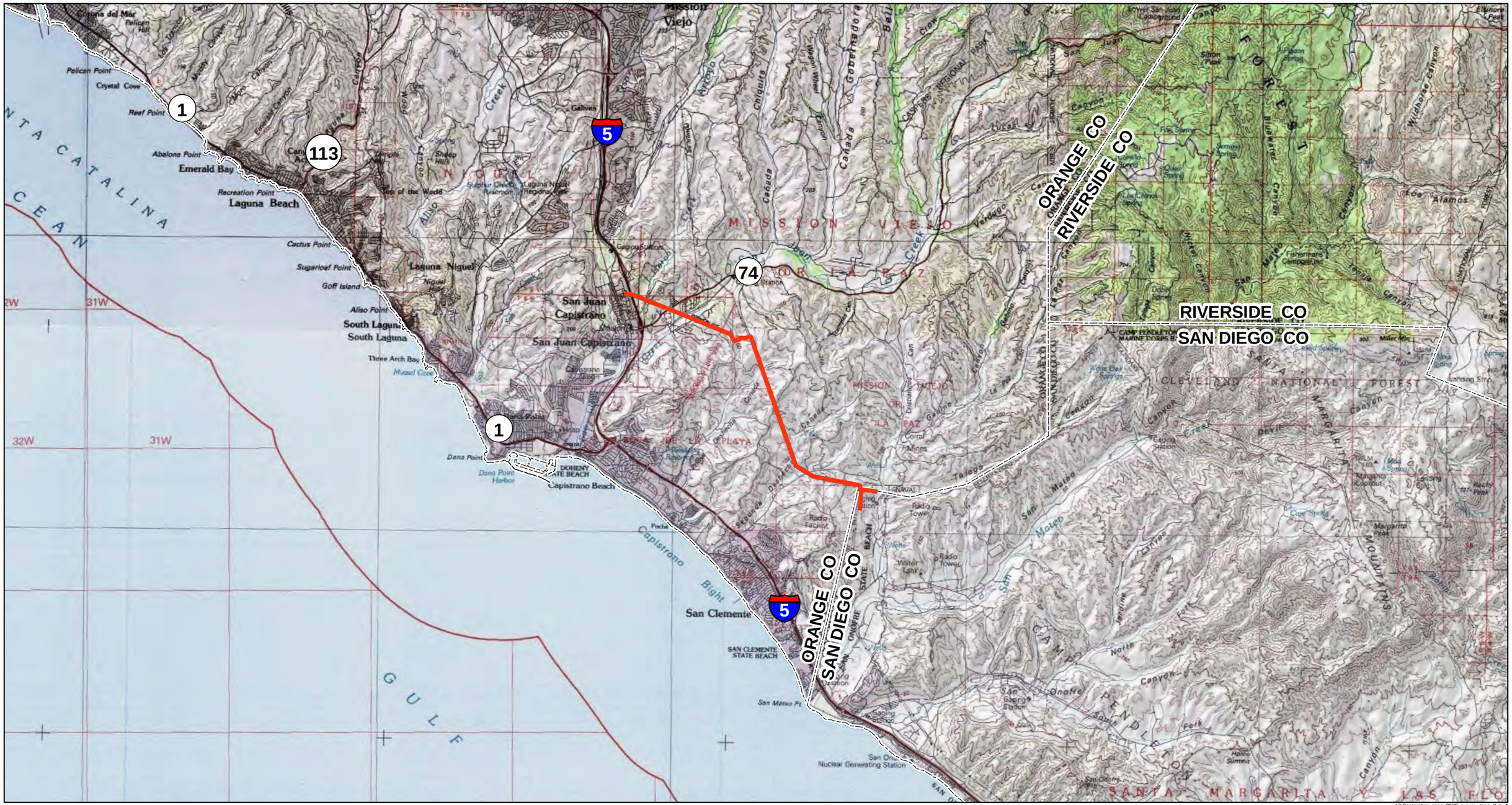
At least 6 brown-headed cowbirds (*Molothrus ater*), both males and females, were heard calling during all of the surveys in the San Juan Creek area (see Figure 3), but no cowbirds were directly observed. In the second drainage south of the Prima Deshecha Sanitary Landfill, a single least Bell's vireo male was observed during all three surveys. An actively baited brown-headed cowbird trap was located in this drainage as well, although the capture rate of brown-headed cowbirds is unknown.

Please contact me at (760) 603-1740 if you have any questions or comments regarding this letter.

Sincerely,

Paula Potenza
Lead Biologist

Attachments
Figure 1: Project Vicinity Map
Figure 2: USGS 7.5 Topographic Quadrangles
Figure 3: USGS 7.5 Topographic Quadrangles



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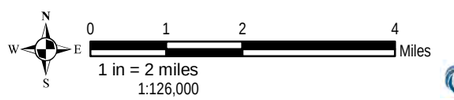


FIGURE 1 - VICINITY MAP
SOUTH ORANGE COUNTY RELIABILITY UPGRADE PROJECT | SDG&E

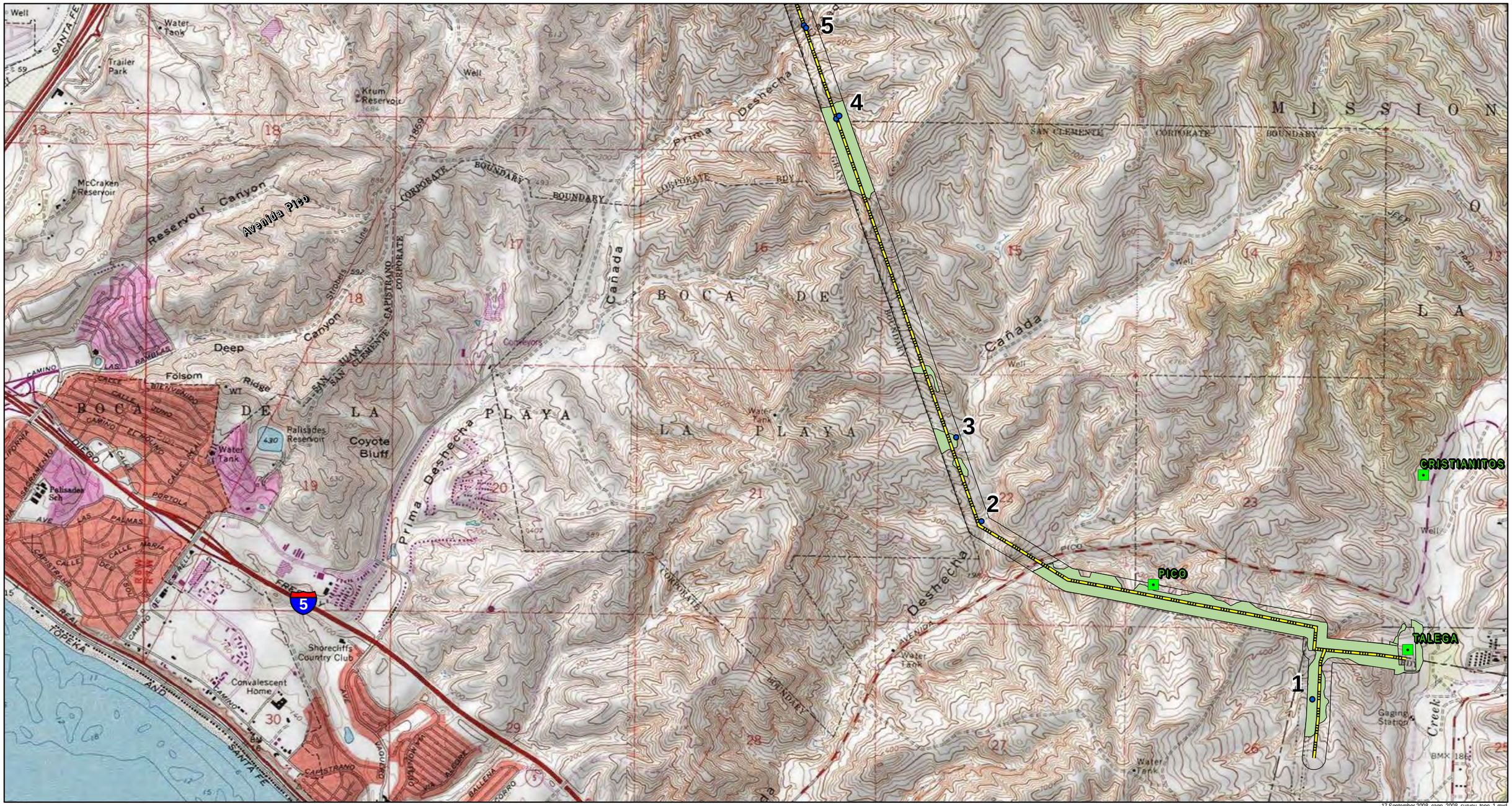
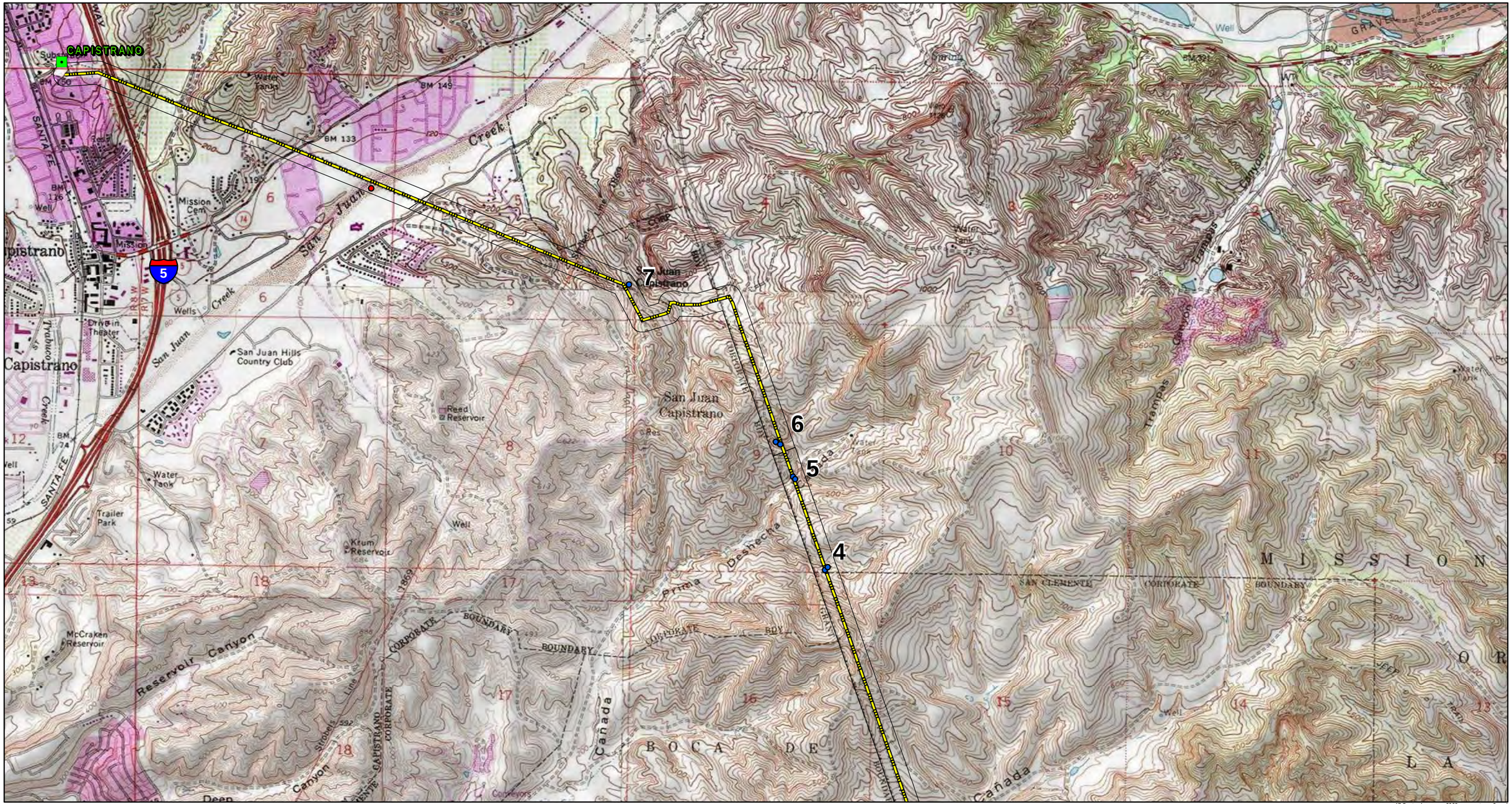


FIGURE 2 - USGS 7.5 TOPOGRAPHIC QUADRANGLES
SOUTH ORANGE COUNTY RELIABILITY UPGRADE PROJECT | SDG&E



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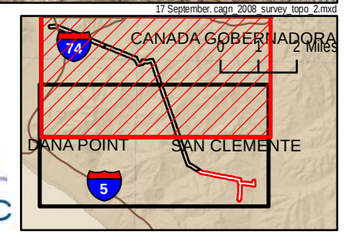


- BHCB
- LBV
- Substations
- Transmission line

FIGURE 2 - USGS 7.5 TOPOGRAPHIC QUADRANGLES
SOUTH ORANGE COUNTY RELIABILITY UPGRADE PROJECT | SDG&E

USGS 7.5 Topographic Quadrangles
Canada Gobernadora
Dana Point
San Clemente
San Juan Capistrano

N W E S
0 500 1,000 2,000 Feet
1 inch = 2,000 feet
1:24,000

SDGE
TRC

Appendix G:
Results of Protocol Surveys for Federally-Endangered Arroyo Toad (*Bufo californicus*) and Southwestern Willow Flycatcher (*Empidonax trailii extimus*) in Conjunction with San Diego Gas & Electric's Orange County Transmission Expansion Project located in Orange County, California

Bloom Biological, Inc.
Research | Consulting | Conservation

June 28, 2010

Ms. Sandra Marquez
Carlsbad Fish & Wildlife Office
6010 Hidden Valley Road
Carlsbad, California 92011

SUBJECT: Results of protocol surveys for federally-endangered Arroyo Toad (*Bufo californicus*) and Southwestern Willow Flycatcher (*Empidonax traillii extimus*) in conjunction with San Diego Gas & Electric's Orange County Transmission Expansion Project located in Orange County, California

Dear Ms. Marquez:

Bloom Biological, Incorporated (BBI) was retained by TRC Solutions, Incorporated to conduct surveys for federally-endangered Arroyo Toad (*Bufo californicus*) and Southwestern Willow Flycatcher (*Empidonax traillii extimus*) in conjunction with San Diego Gas & Electric's (SDG&E) Orange County Transmission Expansion Project located in Orange County, California. The three survey areas are within the SDG&E easement and a 250-foot buffer along San Juan Creek in the southeast corner of the USGS *San Juan Capistrano* 7.5' quadrangle (see attached topo exhibit) and Talega Creek in the southern portion of the USGS *San Clemente* 7.5' quadrangle . This letter describes the methods and the results of these surveys.

PROPOSED PROJECT DESCRIPTION

In order to increase reliability to its customers and substations in the southern Orange County region, SDG&E is proposing to rebuild the existing 138/12 kilovolt (kV) Capistrano Substation with a 230/138/12 kV substation. The South Orange County Reliability Upgrade project (Project) is intended to meet the area load growth and service reliability for approximately 118,000 customers (462 megawatts) within southern Orange County. This project includes upgrading the existing TL13835 (138 kV) with a twin 230 kV circuit and rebuilding the existing 138/12kV Capistrano substation into a new 230/138/12kV substation. The project will bring a new 230kV transmission source into southern Orange County for increased capacity and reliability. This project would have an anticipated in-service date of 2013.

The project would include the following primary components:

- Build new 230kV facilities at Capistrano Substation (Gas Insulated Substation);
- Relocate, rebuild and expand existing 138kV facilities at Capistrano Substation (Gas Insulated Substation);
- Relocate, rebuild and expand existing 12kV facilities at Capistrano Substation;
- New double-circuit 230kV transmission line within existing Talega to Capistrano utility corridor (new steel poles, replacing existing 138kV steel poles/towers/wood pole structures);
- Undergrounding of approximately 3000 feet of 230kV transmission line;
- Relocated 12kV distribution line both within and outside of the existing Talega to Capistrano utility corridor;
- Relocate existing 138kV transmission lines at Talega and add a new 138kV transmission line;
- Upgrade remote ends of all 138kV and 230kV transmission lines affected; and

- Changes to the Talega Substation to accommodate the new 230kV circuit..

METHODS

As previously stated, the three survey areas are within the SDG&E easement and a 250-foot buffer and, for the purposes of this report, will be referred to as Survey Areas A, B and C. These survey areas are as follows:

- Survey Area A - along San Juan Creek in the southeast corner of the USGS *San Juan Capistrano* 7.5' quadrangle. Approximate endpoints are 33° 30' 20.8", 117° 38' 33.0" and 33° 30' 22.3", 117° 38' 37.3".
- Survey Area B - along Talega Creek in the southern portion of the USGS *San Clemente* 7.5' quadrangle. Approximate endpoints are 33° 27' 21.6, 117° 35' 16.5" and 33° 27' 17.9", 117° 35' 13.2".
- Survey Area C – also along Talega Creek in the southern portion of the USGS *San Clemente* 7.5' quadrangle. Approximate endpoints are 33° 27' 04.0", 117° 34' 43.4" and 33° 27' 04.4", 117° 34' 44.2".

For all three sites, protocol surveys for Southwestern Willow Flycatcher were conducted on May 15 and June 5, 11, 17, and 25, 2010 following the Service's standard protocol for this species as described in Sogge *et al* (2010)[1]. Protocol surveys for Arroyo Toad were conducted on April 30; May 7, 15, 23, 29; and June 5, 2010 following the Service's standard protocol for this species as described in *USFWS Survey Protocol for the Arroyo Toad* (1999). All surveys were conducted by BBI biologist Peter Bloom (TE787376).

RESULTS

Southwestern Willow Flycatchers and Arroyo Toads are absent from all three survey areas.

Survey Area A

San Juan Creek in Survey Area A was the only survey location with surface water and the only site with potential, but unoccupied, breeding habitat for Arroyo Toad. Historically (~1994) this reach was occupied Arroyo Toad breeding and upland habitat. The species was extirpated more than a decade ago due to complete loss of upland habitat and permanent urban water runoff which created breeding conditions for Bulllfrogs (*Rana catesbeiana*) (Bloom pers. obs.). This location receives a substantial amount of urban runoff and contains a plant species mix that superficially appeared suitable for Southwestern Willow Flycatcher, however, the dense undergrowth found on this site probably inhibits nesting by this species. This area has potential to provide stopover habitat for migrating willow flycatchers and in some areas up and down stream, and may one day become occupied breeding habitat. Dominant plant species found in the survey area include *Typha latifolia*, *Salix lasiolepis*, *Arundo donax*, *Platanus racemosa*, *Quercus agrifolia*, *Eucalyptus globules*, *Artemisia californica*, *Baccharis salicifolia*, *B. pilularis* and *Salvia douglassiana*. Surrounding areas away from main drainage were dominated by non-native *Avena* and *Bromus* species. Bird species observed in the survey area were American Crow (*Corvus brachyrhynchos*), Anna's Hummingird (*Calypte anna*), Bullock's Oriole (*Icterus bullockii*),Bushtit (*Psaltriparus minimus*), California Gull (*Larus californicus*), California Quail (*Callipepla californica*), California Towhee (*Pipilo crissalis*), Cliff Swallow (*Petrochelidon pyrrhonota*), Common Yellowthroat (*Geothlypis trichas*), Great Blue Heron (*Ardea herodius*), House Finch (*Carpodacus mexicanus*),

[1] Sogge, M.K., Ahlers, D., and Sferra, S.J. 2010. A natural history summary and survey protocol for the Southwestern Willow Flycatcher: USGS Survey Techniques and Methods 2A-10.

House Sparrow (*Passer domesticus*), House Wren (*Troglodytes aedon*), Killdeer (*Charadrius vociferus*), Lesser Goldfinch (*Carduelis psaltria*), Mourning Dove (*Zenaida macroura*), Pacific-Slope Flycatcher (*Empidonax difficilis*), Red-shouldered Hawk (*Buteo lineatus*), Song Sparrow (*Melospiza melodia*), Turkey Vulture (*Cathartes aura*) and Western Scrub-Jay (*Aphelocoma californica*).

Survey Area B

Survey Area B is the larger (~ 200 m x 4 m) of two sites near Camp Pendleton and with occupied arroyo toad breeding habitat 400 meters away in San Mateo Creek. The site has no surface water but receives some runoff from an adjacent golf course. The soil type is a dense clay and while suitable upland foraging habitat for arroyo toads in the wet season, is low quality habitat in the dry season. Dominant plant species found in the survey area include *Salix lasiolepis*, *Quercus agrifolia*, *Baccharis salicifolia*, *B. pilularis* and *Artemisia californica*. Surrounding areas away from main drainage were dominated by non-native grasses. Bird species observed in the survey area were Anna's Hummingird (*Calypte anna*), Bushtit (*Psaltriparus minimus*), California Towhee (*Pipilo crissalis*), Common Raven (*Corvus corax*), House Finch (*Carpodacus mexicanus*), Lesser Goldfinch (*Carduelis psaltria*), Mourning Dove (*Zenaida macroura*), Northern Mockingbird (*Mimus polyglottos*), Red-tailed Hawk (*Buteo jamicensis*), Song Sparrow (*Melospiza melodia*), Western Meadowlark (*Sturnella neglecta*) and Wrentit (*Chamaea fasciata*).

Survey Area C

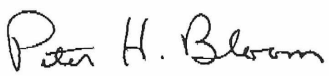
Survey Area C is the smaller (25 m x 25 m) of two sites near Camp Pendleton. Like Survey Area B, the site has no surface water, has an identical soil type and receives some runoff from an adjacent golf course. Dominant plant species found in the survey area are the same as those found at Survey Area B, except for the absence of *Quercus agrifolia* and the addition of dense stands of *Brassica nigra*. Bird species observed in the survey area were American Crow (*Corvus brachyrhynchos*), American Goldfinch (Carduelis tristis), Anna's Hummingird (*Calypte anna*), California Gnatcatcher (*Polioptila californica*), California Quail (*Callipepla californica*), California Thrasher (*Toxostoma redivivum*), California Towhee (*Pipilo crissalis*), Common Raven (*Corvus corax*), House Finch (*Carpodacus mexicanus*), Lesser Goldfinch (*Carduelis psaltria*), Mourning Dove (*Zenaida macroura*), Northern Rough-winged Swallow (Stelgidopteryx serripennis), Nuttall's Woodpecker (*Picoides nuttalli*), Red-tailed Hawk (*Buteo jamaicensis*), Say's Phoebe (Sayornis saya), Song Sparrow (*Melospiza melodia*), Western Kingbird (*Tyrannus verticalis*), Western Scrub-Jay (*Aphelocoma californica*), and Yellow-breasted Chat (*Icteria virens*).

CERTIFICATION: *I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.*

If you have any questions or comments regarding this letter please feel free to contact me at 714-544-6147.

Sincerely,

BLOOM BIOLOGICAL, INC.



Peter H. Bloom

Survey Area A

Survey Area B

Survey Area C

0 1200 2400 3600 ft

1:25000

UTM NAD83 Zone 11 Coordinates.
Map: Marcus C. England.
England Ecological. 29 June 2010.

Survey Area Locations

Bloom Biological, Inc.
Research | Consulting | Conservation

Appendix H: Vegetation and Sensitive Species Maps

G:\SOCRUP\MXD\BioTech Feb 2012\Appendix\VegandSpecies1.mxd 03-20-2012

Created For: Mary Turley

Created By: TRC

Date: 4/25/2012

SDG&E is providing this map with the understanding that the map is not survey grade.

Legend

- Proposed Project Survey Area
- 2008 Nest Location
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- Disturbed Southern Willow Scrub
- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 1 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

G:\SOCRUP\MXD\BioTech Feb 2012\Appendix\VegandSpecies1.mxd 03-20-2012

Created For: Mary Turley

Created By: TRC

Date: 4/25/2012

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South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

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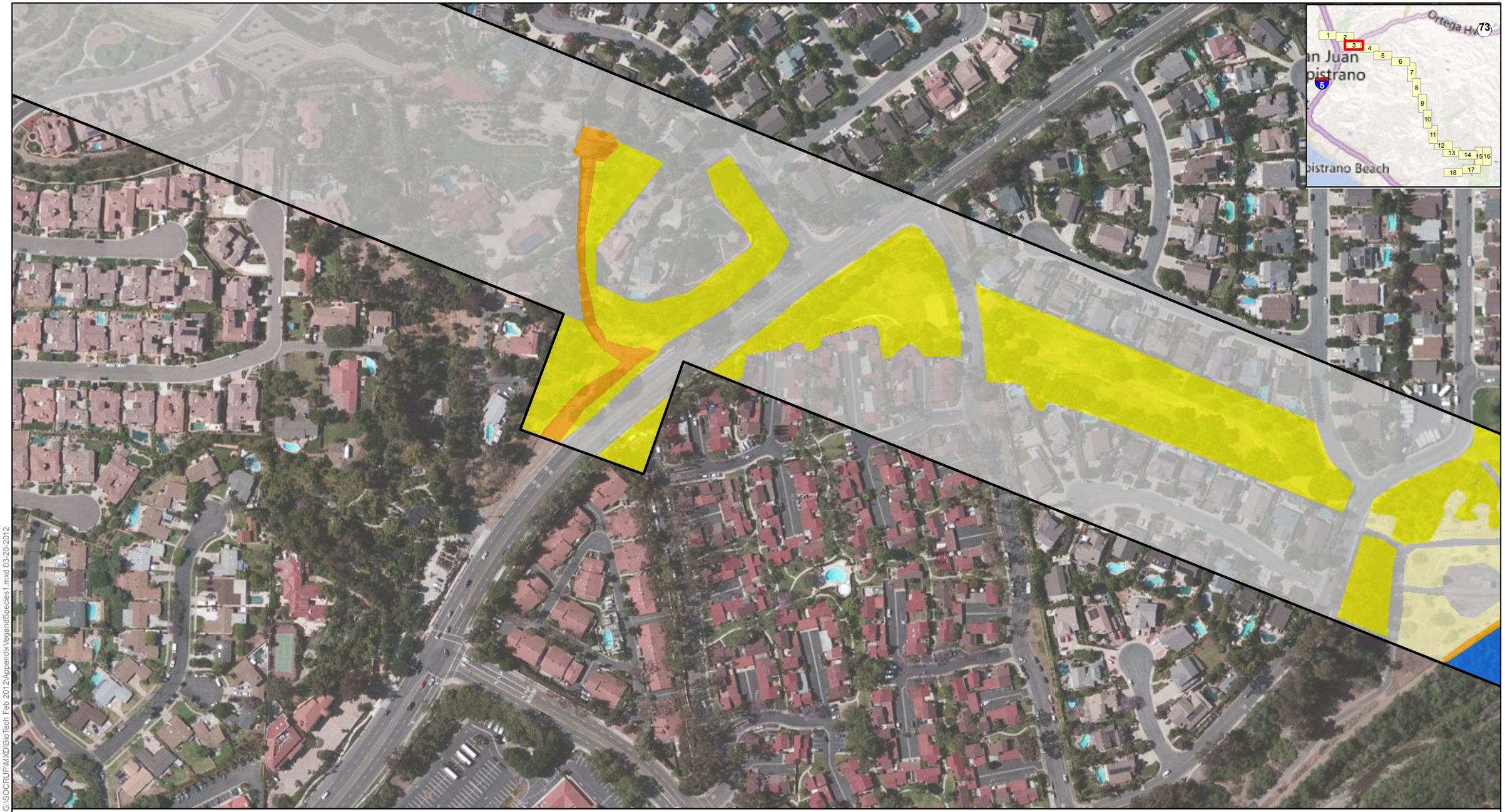
SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility



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South Orange County Reliability Enhancement Project

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South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 4 of 18

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South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 5 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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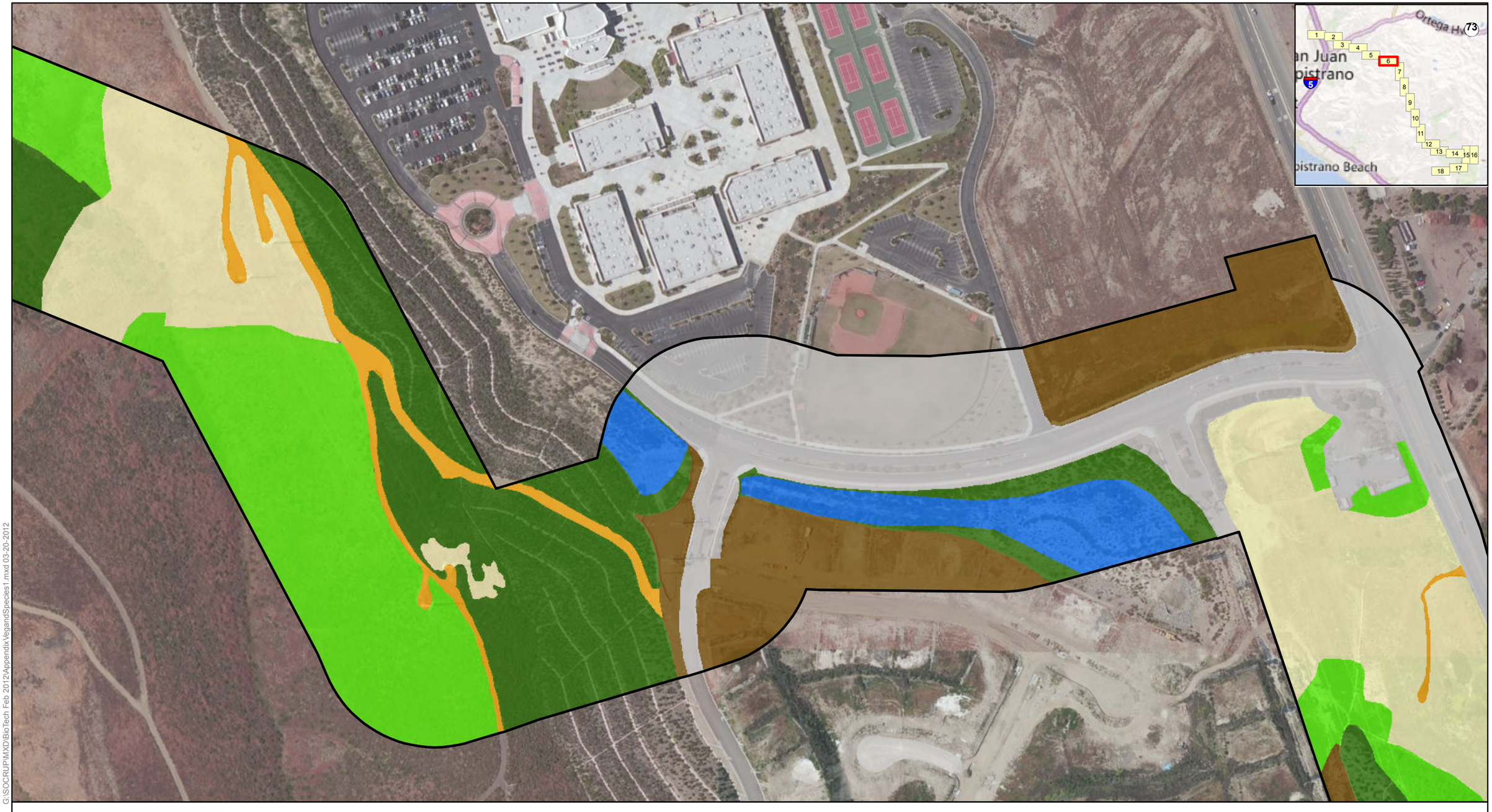

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South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

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SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

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South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 7 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

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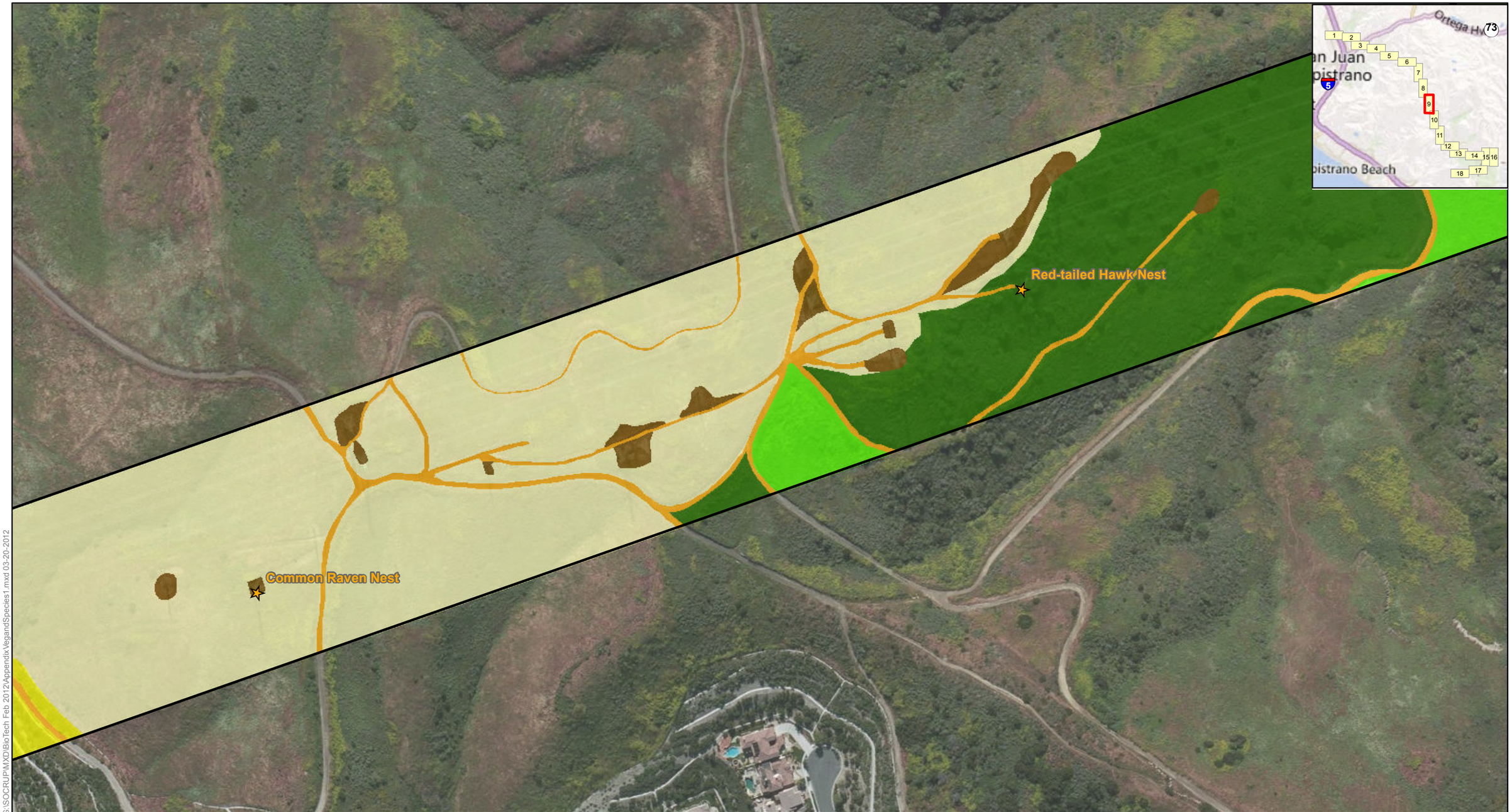
South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 8 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility



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South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 9 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 10 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

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N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 11 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

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0 100 200 400 Feet

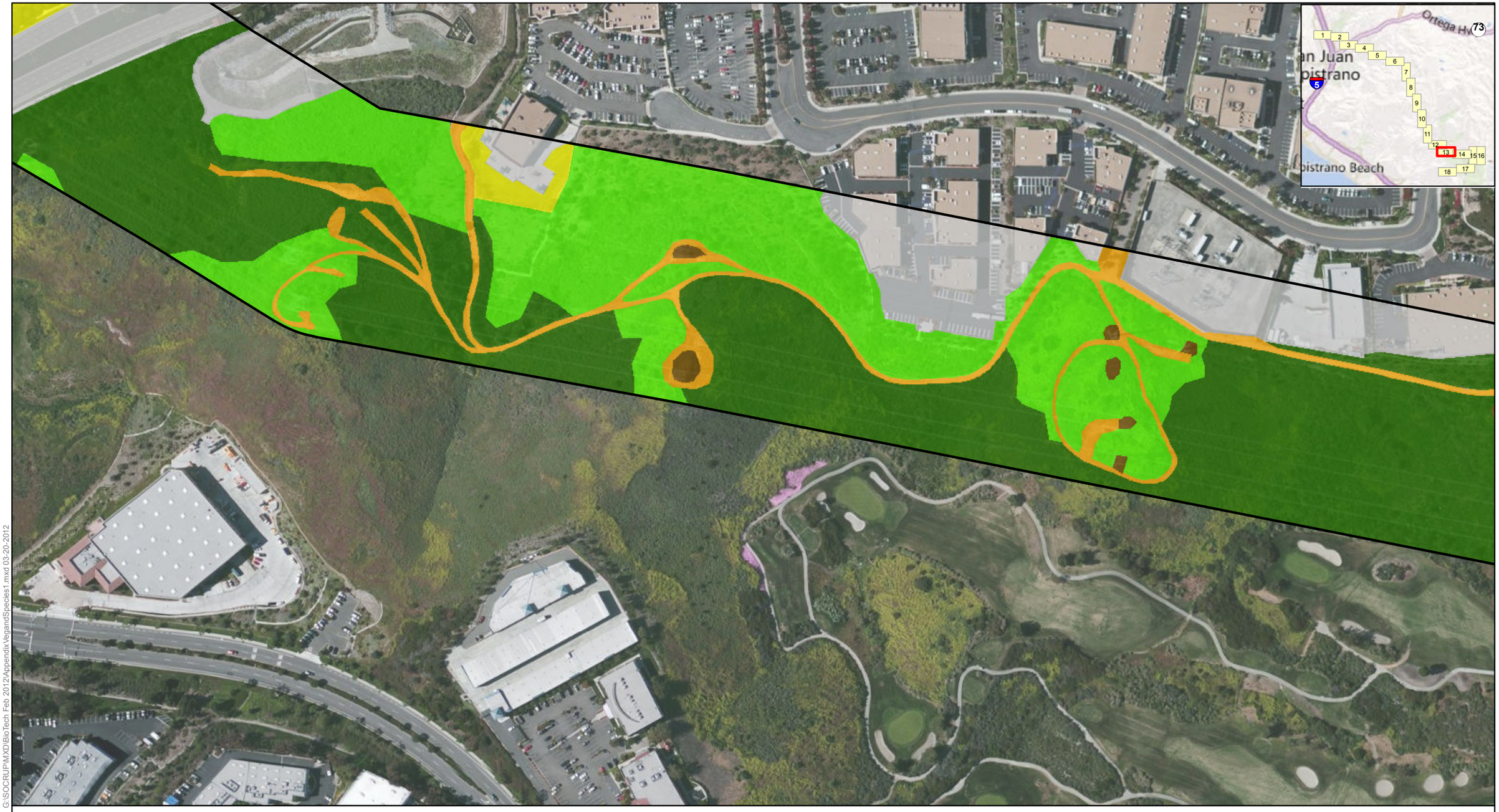
South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 12 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility



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N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 13 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

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N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 14 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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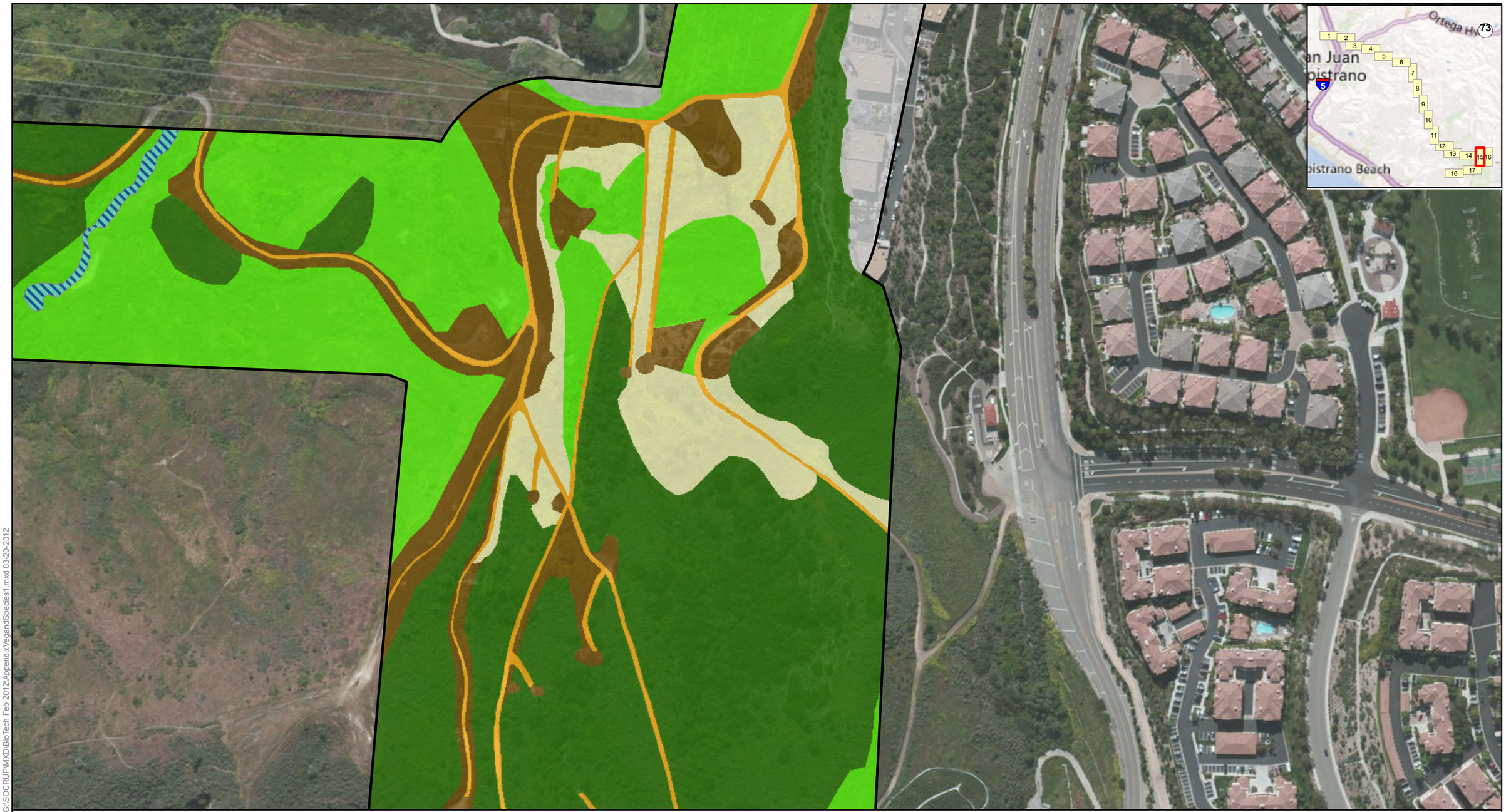

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N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 15 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

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N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 16 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

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N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 17 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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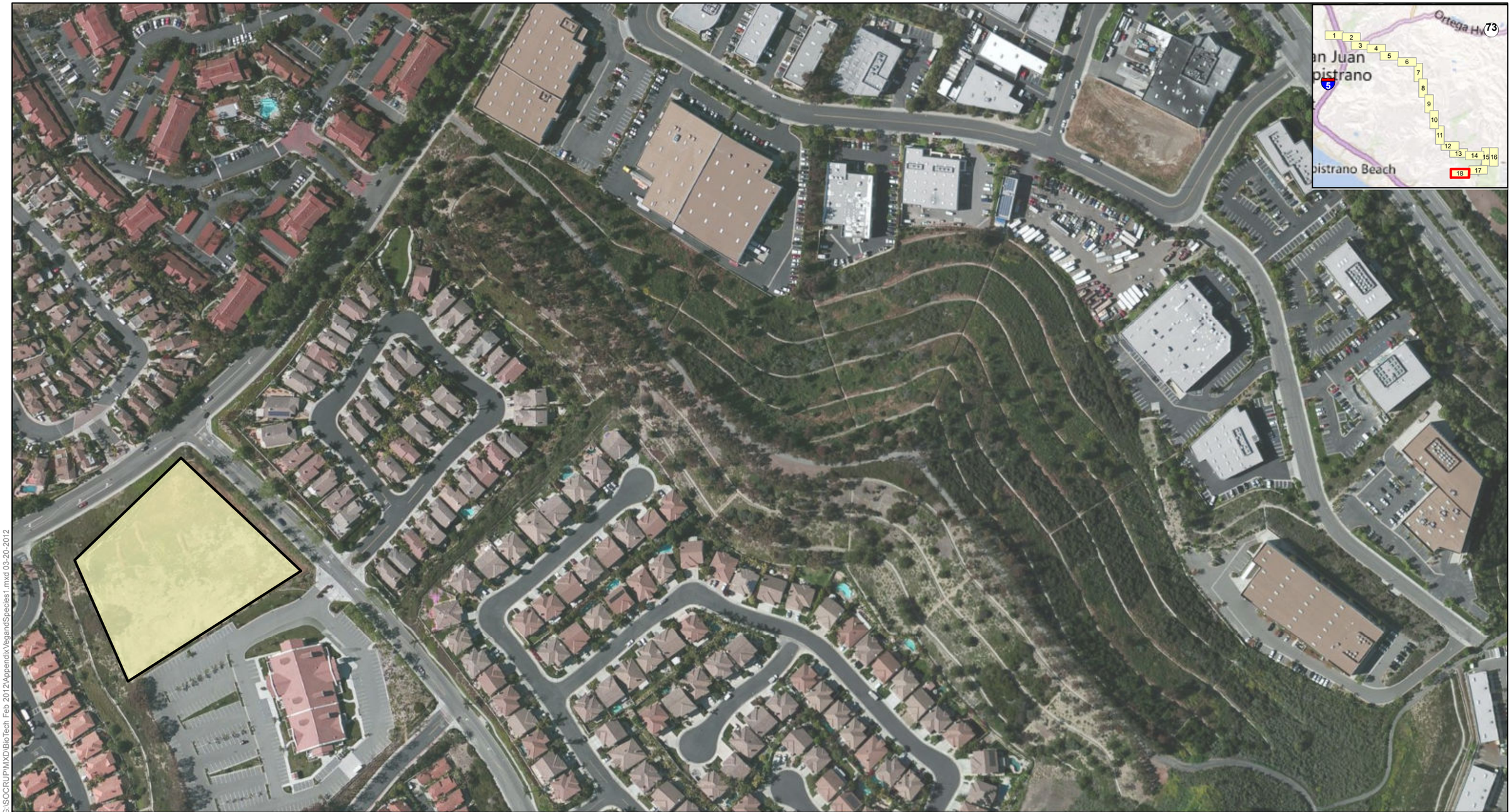

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N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Vegetation and Sensitive Species Maps

Sheet 18 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

Appendix I: Photo Exhibit

Appendix I: Photo Exhibit

	Photograph 1: View of coastal sage scrub (CSS) habitat within the survey corridor. Area was dense with native species and had few non native species.
	Photograph 2: View of disturbed CSS within the survey corridor. This habitat type is often seen at the interface between non-native habitats and CSS or CSS that has been historically disturbed through human activities (such as grazing or clearing).

Appendix I: Photo Exhibit

	Photograph 3: View of coastal freshwater marsh within Tributary to Christianitos Creek 1. Freshwater marsh plant communities are dominated by perennial, emergent monocots.
	Photograph 4: View of southern willow scrub (SWS) within San Juan Creek. SWS is found in areas adjacent water sources and includes a high percentage of native hydrophilic vegetation.

Appendix I: Photo Exhibit

	Photograph 5: View of disturbed SWS within San Juan Creek. Disturbed SWS has relatively open canopy due to disturbance that often leads to invasion of non-native species.
	Photograph 6: View of riparian scrub south of the Talega substation. Riparian scrub

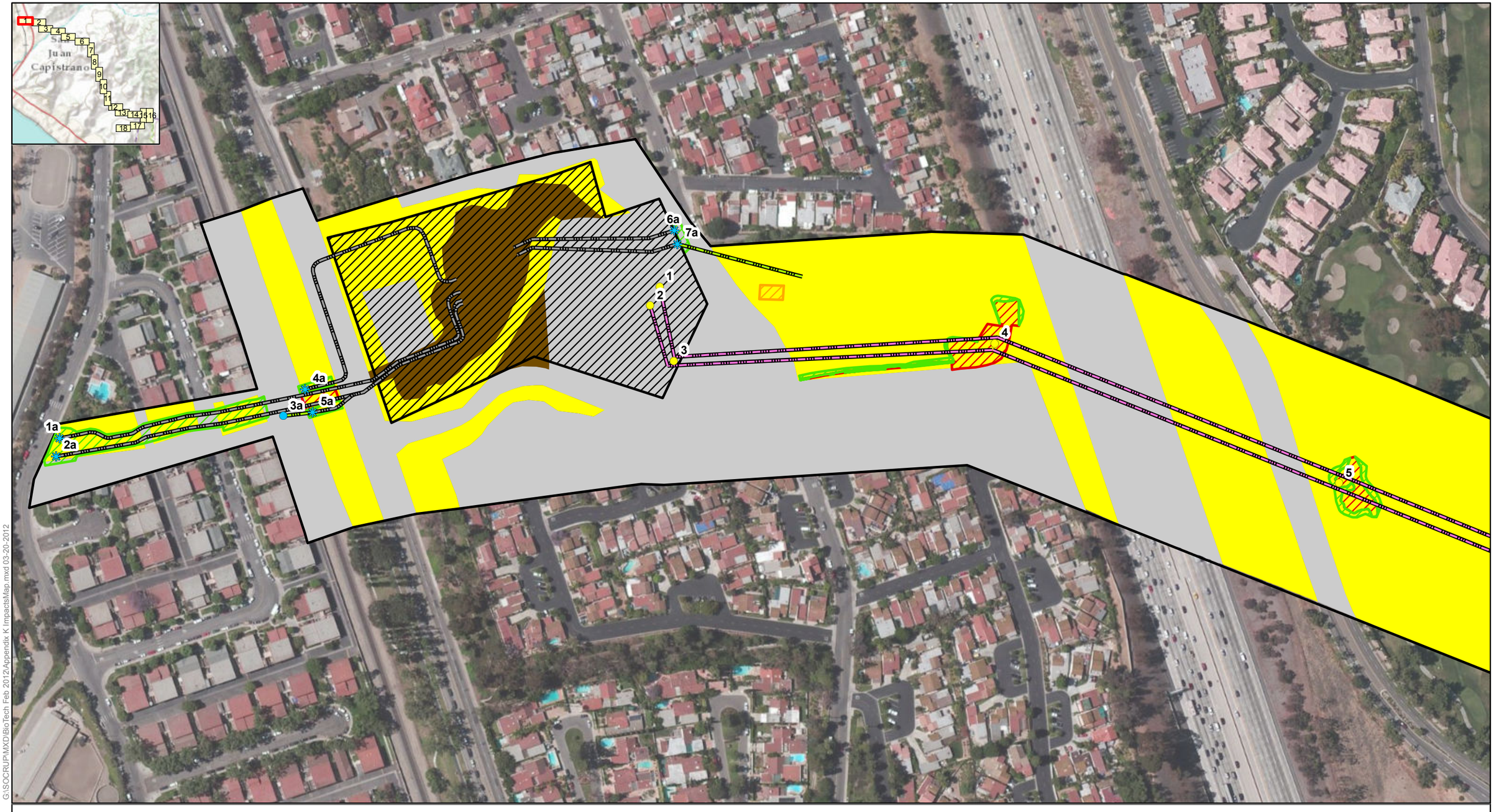
Appendix I: Photo Exhibit

	Photograph 7: View of ruderal habitat within the survey corridor. Ruderal habitat is generally associated with significant human disturbance and is often found near disturbed and developed areas.
	Photograph 8: View of disturbed habitat adjacent to an existing transmission pole. Disturbed areas are relatively free of vegetation due to ongoing maintenance or recent human activity.

	Photograph 9: View of ornamental vegetation adjacent to an existing transmission pole.
	Photograph 10: View of dirt road within the survey area. Dirt roads occur throughout the survey area and are typically used to access the existing transmission poles.

	Photograph 11: View of developed area at the Talega substation.

Appendix J: Impacts Maps



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Created For:
Mary Turley

Created By:
TRC

Date: 4/25/2012

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Impact Types
- Permanent Impact
- Temporary Impact
- Staging Site (Temporary)
- String Site (Temporary)
- Substation Site

New Poles
- 230kV Standard Pole
- 230kV Cable Pole
- 138kV Standard Pole
- 138kV Cable Pole
- 69kV Standard Pole
- 69kV Cable Pole

Proposed Transmission Lines
- 230kV Transmission Line - Overhead
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South Orange County Reliability Enhancement Project

Impacts Map

Sheet 1 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

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South Orange County Reliability Enhancement Project

Impacts Map

Sheet 2 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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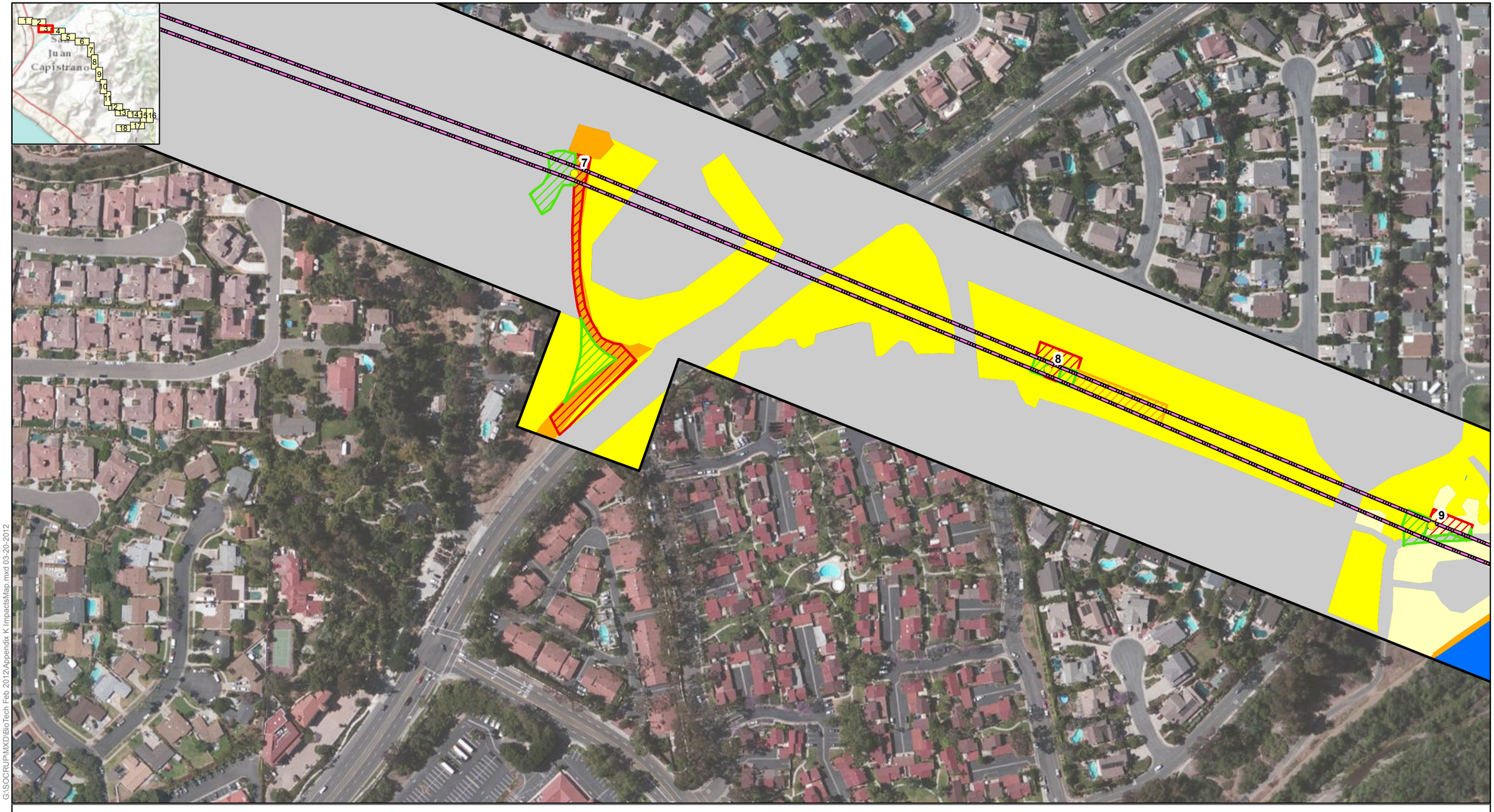

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South Orange County Reliability Enhancement Project

Impacts Map

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SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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South Orange County Reliability Enhancement Project

Impacts Map

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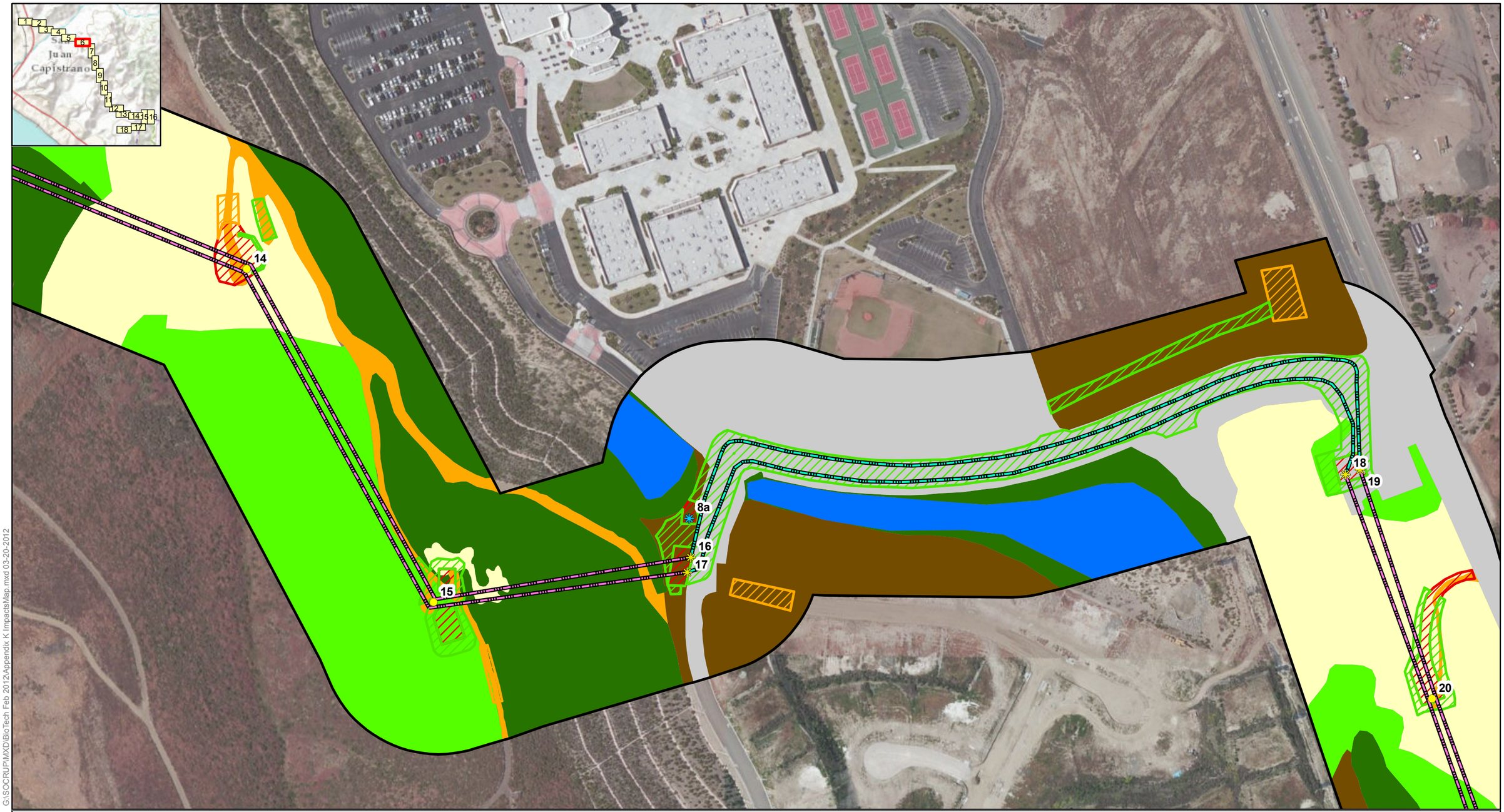

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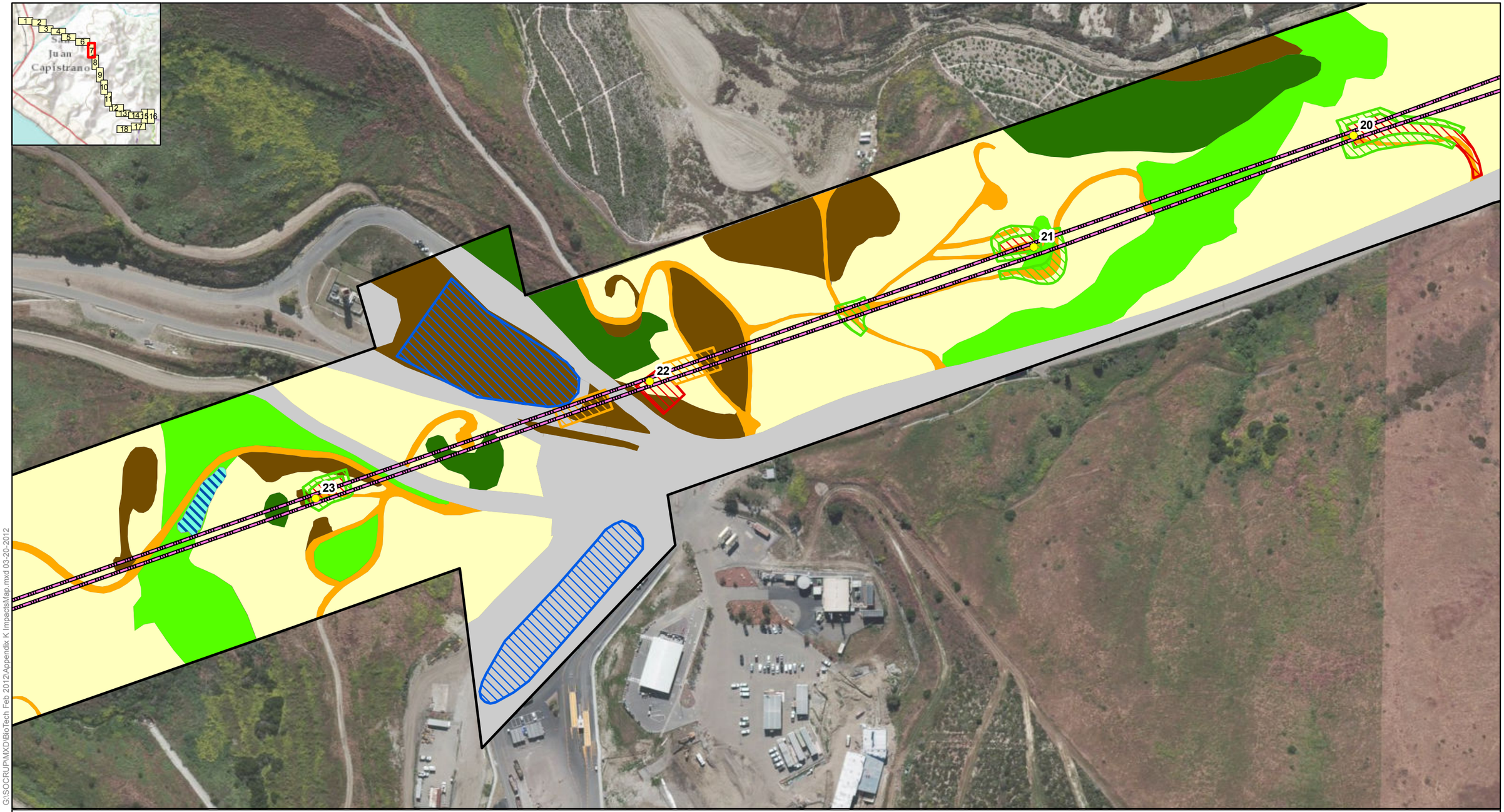
South Orange County Reliability Enhancement Project

Impacts Map

Sheet 6 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility



G:\SOCRUP\MXD\BioTech Feb 2012\Appendix K Impacts\Map.mxd 03.20.2012

Created For:
Mary Turley

Created By:
TRC

Date: 4/25/2012

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Impact Types
- Permanent Impact
- Temporary Impact
- Staging Site (Temporary)
- String Site (Temporary)
- Substation Site

New Poles
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- 230kV Cable Pole
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- 138kV Cable Pole
- 69kV Standard Pole
- 69kV Cable Pole

Proposed Transmission Lines
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- 69kV Transmission Line - Overhead
- 230kV Transmission Line - Underground
- 138kV Transmission Line - Underground
- 69kV Transmssion Line - Underground

Vegetation Types
- Coastal Sage Scrub
- Disturbed Coastal Sage Scrub
- Coastal Freshwater Marsh
- Southern Willow Scrub
- Disturbed Southern Willow Scrub
- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

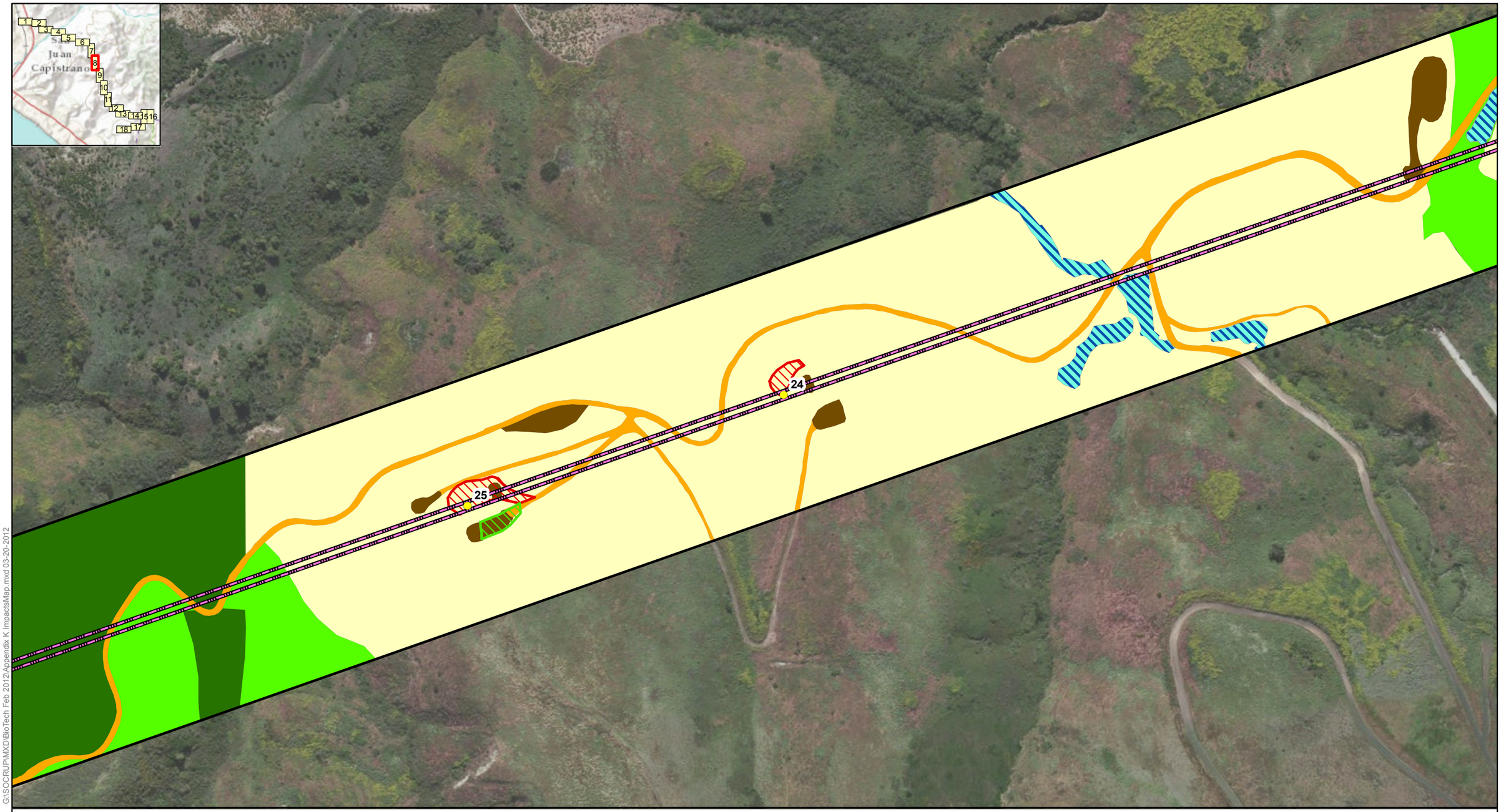
Impacts Map

Sheet 7 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE

A Sempra Energy utility



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- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Impacts Map

Sheet 8 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE

A Sempra Energy utility

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N

0 100 200 400 Feet

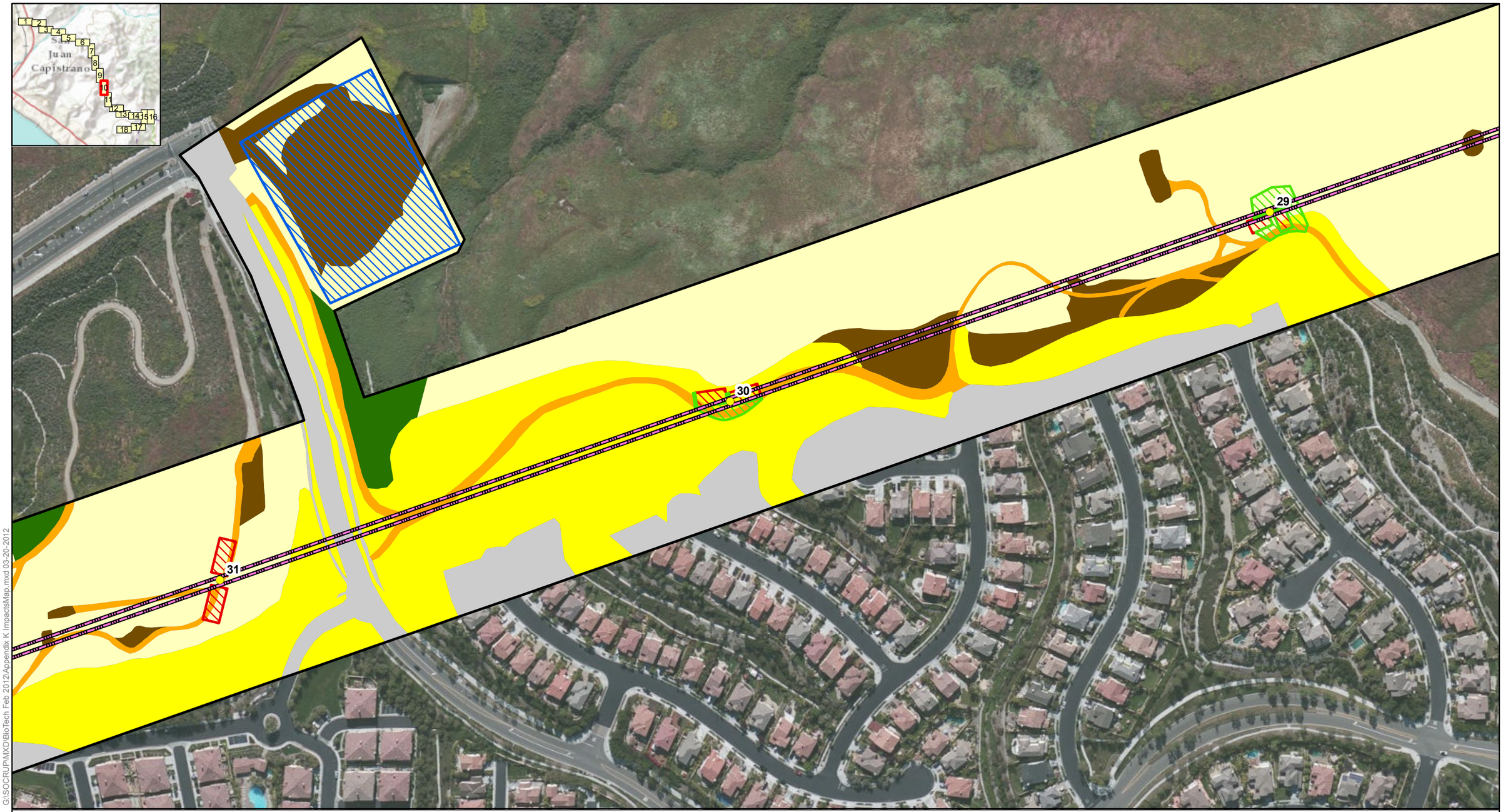
South Orange County Reliability Enhancement Project

Impacts Map

Sheet 9 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility



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- Disturbed
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N

0 100 200 400 Feet

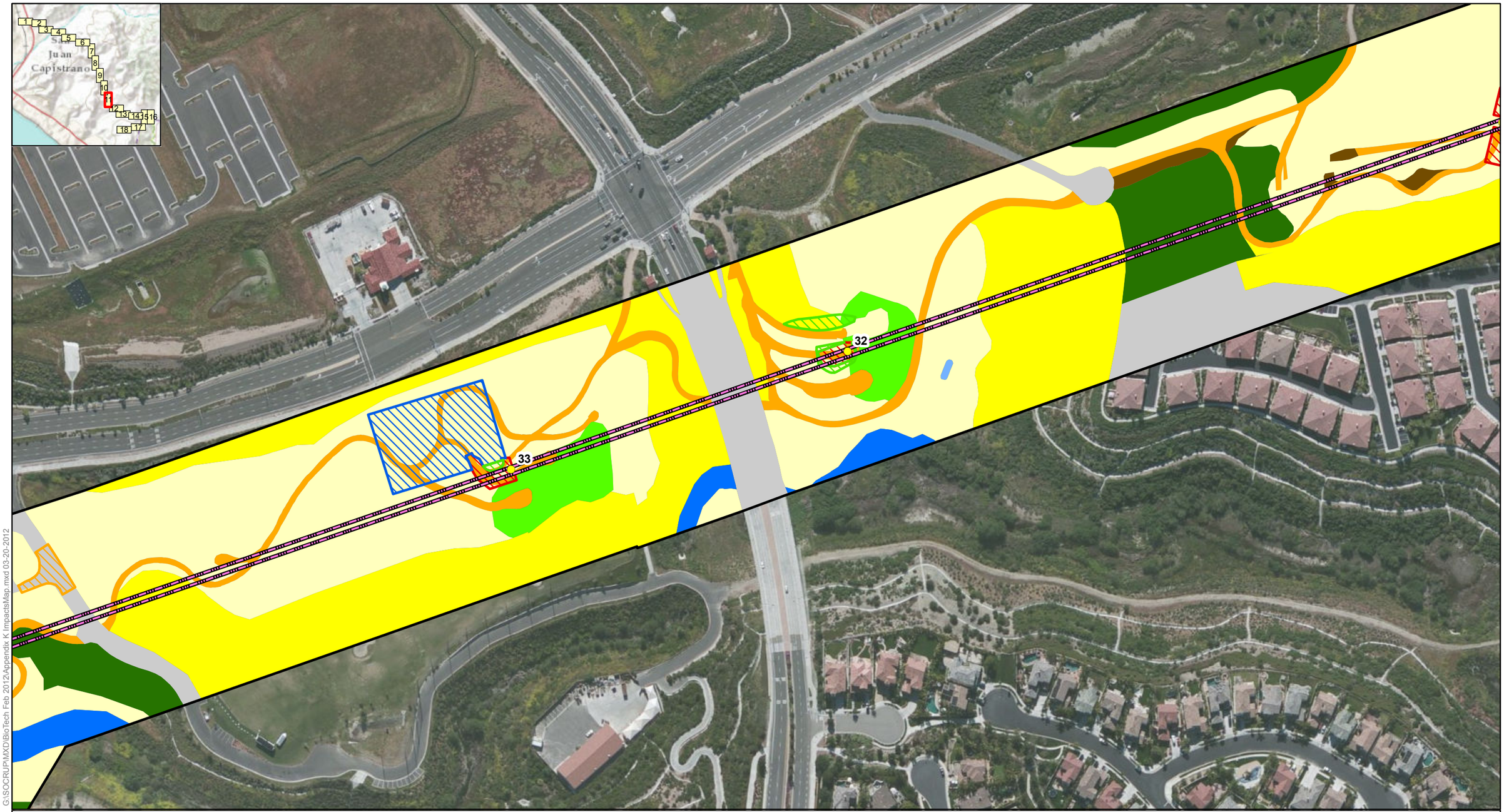
South Orange County Reliability Enhancement Project

Impacts Map

Sheet 10 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility



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- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

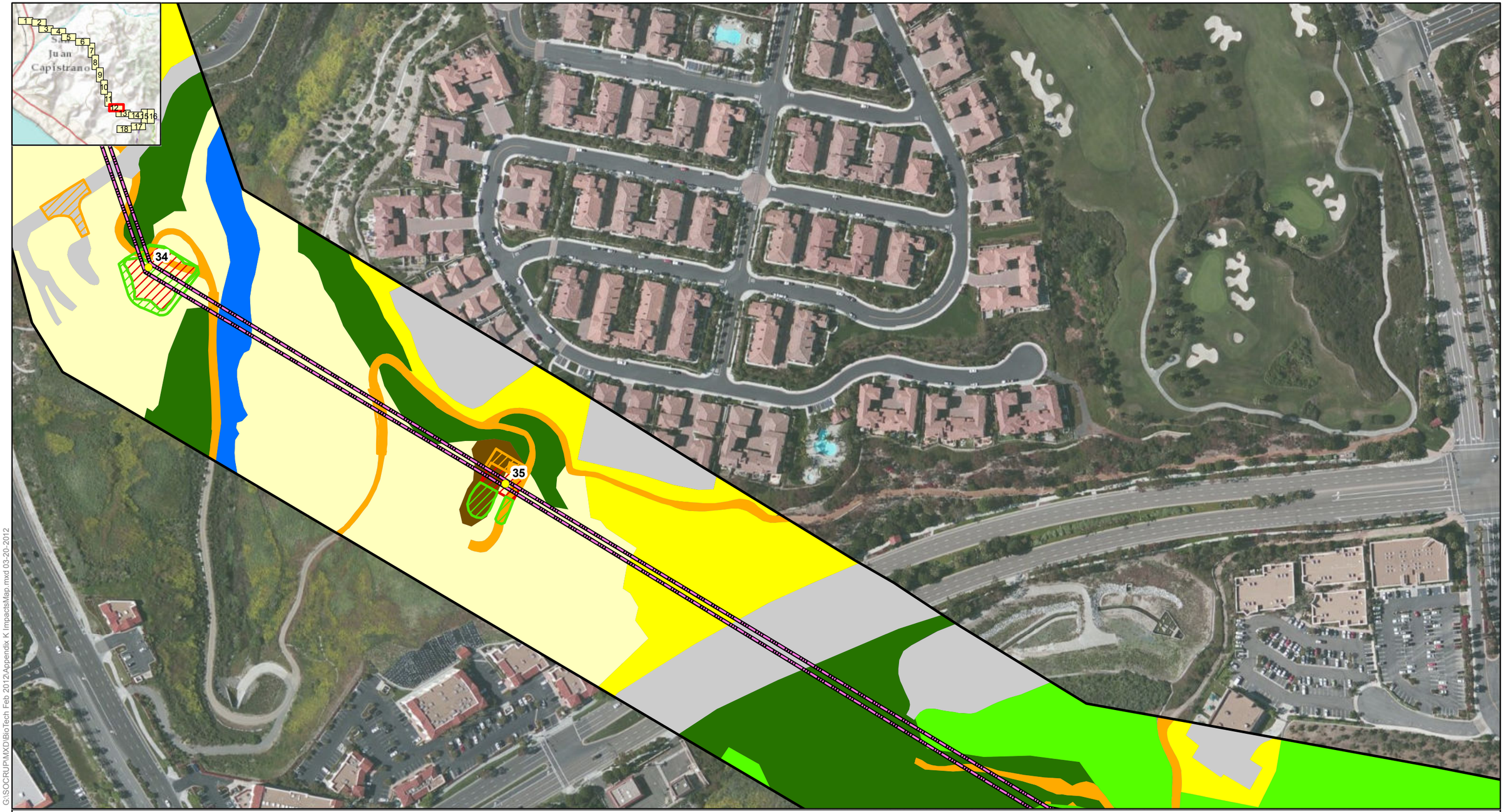
Impacts Map

Sheet 11 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE

Sempra Energy utility



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- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

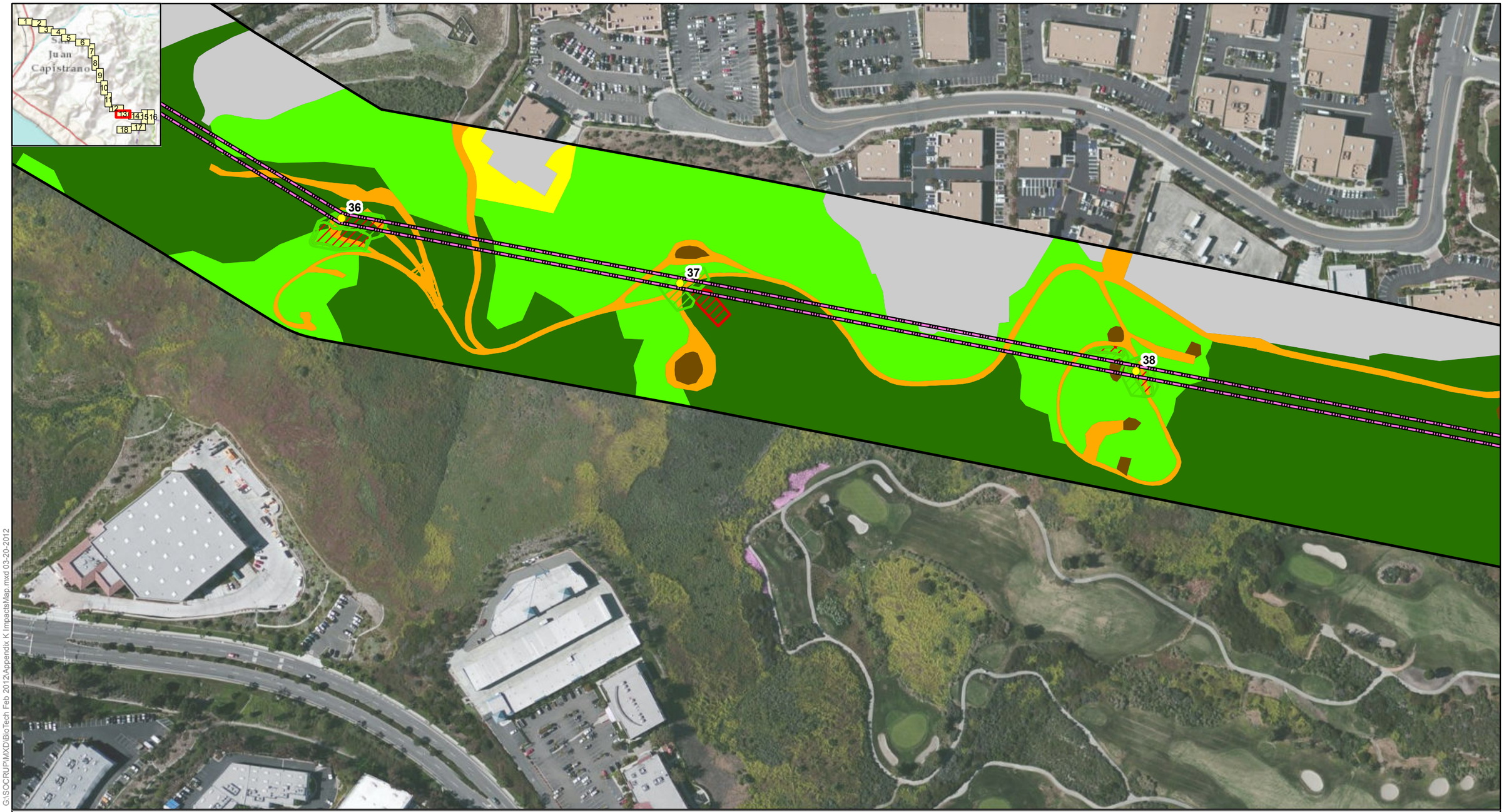
South Orange County Reliability Enhancement Project

Impacts Map

Sheet 12 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility



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- Ruderal
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- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Impacts Map

Sheet 13 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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- Riparian Scrub
- Ruderal
- Disturbed
- Ornamental
- Dirt Road
- Developed

N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

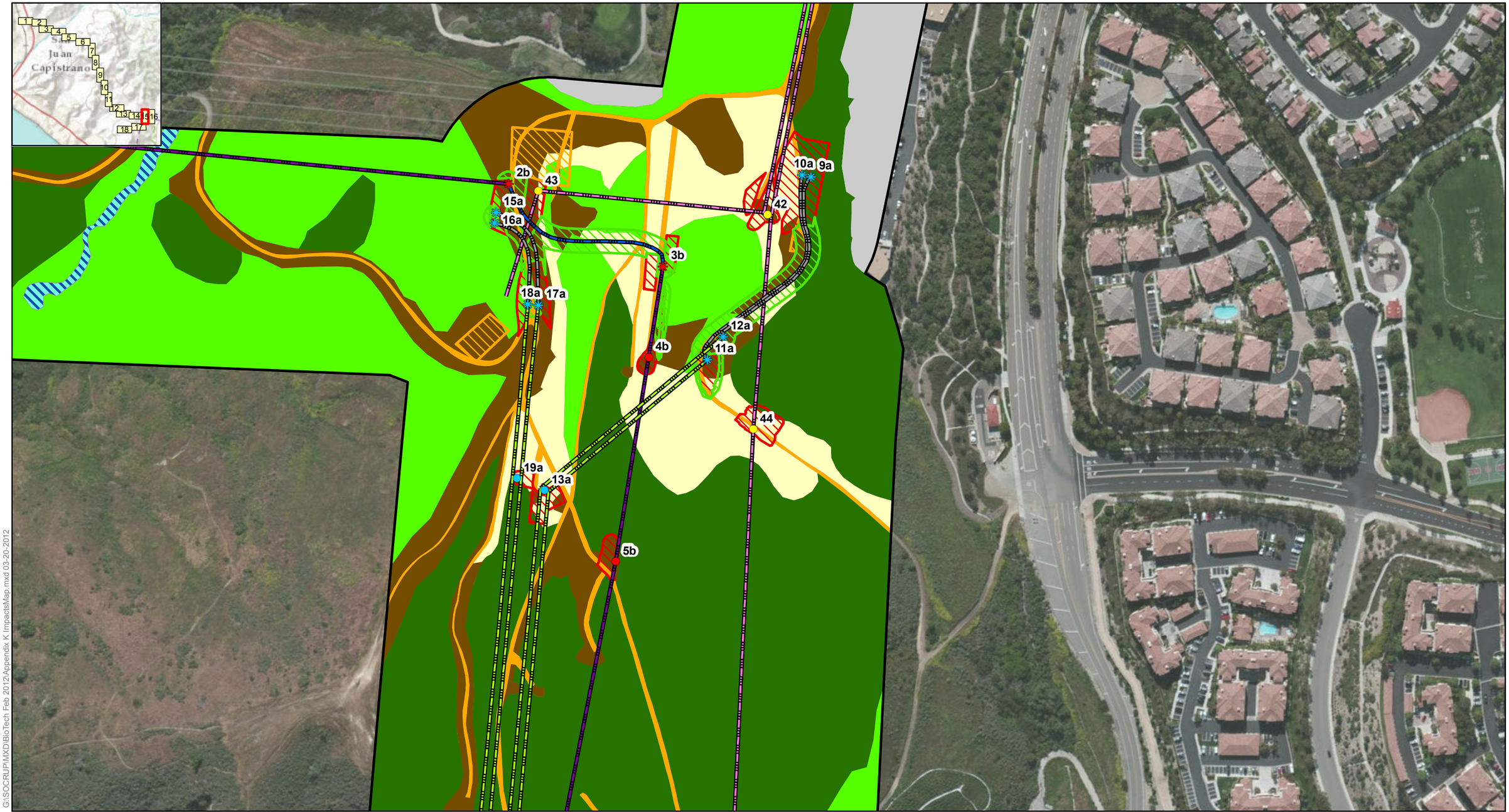
Impacts Map

Sheet 14 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE

A Sempra Energy utility



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- Ruderal
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- Ornamental
- Dirt Road
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N

0 100 200 400 Feet

South Orange County Reliability Enhancement Project

Impacts Map

Sheet 15 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

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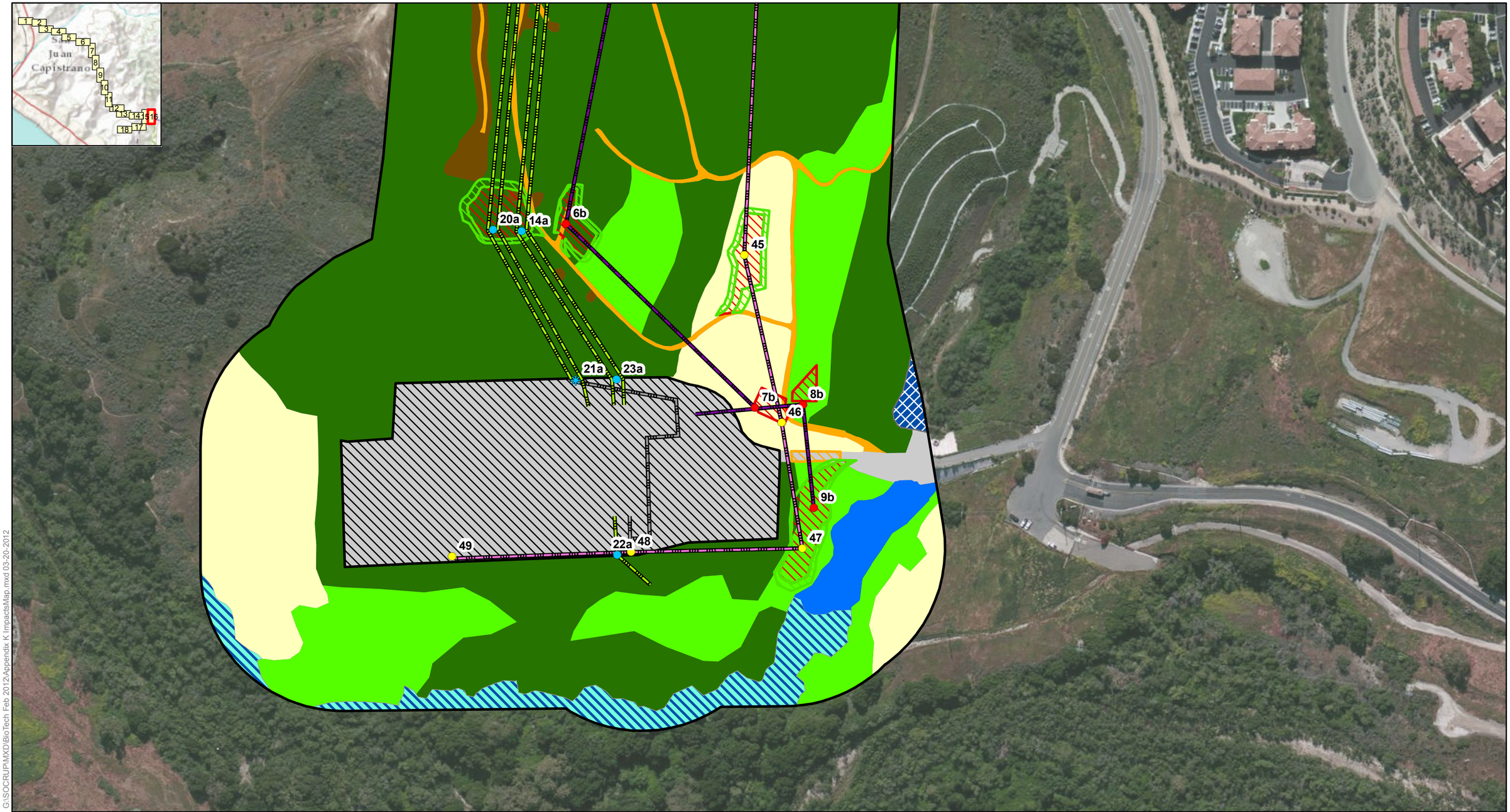

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- Ruderal
- Disturbed
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N

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South Orange County Reliability Enhancement Project

Impacts Map

Sheet 16 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

SDGE A Sempra Energy utility

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- Ruderal
- Disturbed
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- Dirt Road
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South Orange County Reliability Enhancement Project

Impacts Map

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SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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South Orange County Reliability Enhancement Project

Impacts Map

Sheet 18 of 18

SOUTH ORANGE COUNTY RELIABILITY ENHANCEMENT

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