

**BIOLOGICAL TECHNICAL REPORT**  
**SYCAMORE TO PEÑASQUITOS 230 KILOVOLT TRANSMISSION LINE PROJECT**  
**CITY OF SAN DIEGO**  
**SAN DIEGO COUNTY, CALIFORNIA**

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## ACRONYMS AND ABBREVIATIONS

amsl	above mean sea level
APLIC	Avian Power Line Interaction Committee
APM	Applicant Proposed Measure
BBS	Busby Biological Services, Inc.
BGEPA	Bald and Golden Eagle Protection Act
Caltrans	California Department of Transportation
CASIO	California Independent System Operator
CBR	considered but rejected
CCA	California Coastal Act of 1972
CCC	California Coastal Commission
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFR	Code of Federal Register
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
County	County of San Diego
CPUC	California Public Utilities Commission
CRPR	California Rare Plant Ranks
CVT	capacitor voltage transformer
CWA	Clean Water Act of 1972
CZMA	Coastal Zone Management Act of 1972
CZMP	Coastal Zone Management Program
DoD	Department of Defense
EI	Environmental Intelligence, LLC
ESA	Endangered Species Act of 1973
ESHA	Environmentally Sensitive Habitat Areas
GIS	Geographic Information System
GPS	Global Positioning Systems
HCPs	Habitat Conservation Plans
Hwy	Highway
ILAs	Incidental Landing Areas
INRMP	Integrated Natural Resources Management Plan
I-15	Interstate 15
kV	kilovolt
LCPs	Local Coastal Programs
MBTA	Migratory Bird Treaty of 1918
MCAS	Marine Corps Air Station
MHPA	Multi-Habitat Planning Area
MSCP	Multiple Species Conservation Program
NCCP	<i>Subregional Natural Community Conservation Plan</i>
NEPA	National Environmental Policy Act
NOAA	National Oceanic and Atmospheric Administration
NPPA	Native Plant Protection Act
NRCS	National Resources Conservation Service
NWI	National Wetlands Inventory
OCRM	Ocean and Resource Management
OHWM	Ordinary High Water Mark
OPGW	optical ground wire
O & M	operation and maintenance

**ACRONYMS AND ABBREVIATIONS**  
**(Continued)**

PCR	post construction report
PSR	pre-activity survey report
QCB	Quino checkerspot butterfly
RFP	Request for Proposal
ROW	right-of-way
RPW	Relatively Permanent Waters
RWQCB	Regional Water Quality Control Board
SanGIS	San Diego Geographic Information Source
SAA	Streambed Alteration Agreement
SDG&E	San Diego Gas and Electric Company
SDNHM	San Diego Natural History Museum
SWPPP	Storm Water Pollution Prevention Plan
SWANCC	Solid Waste Agency of Northern Cook County
SWRCB	State Water Resources Control Board
TL	Transmission Line
TNW	Traditional Navigable Waters
TOB	Top of bank
TRC	TRC Solutions, Inc.
USACE	U.S. Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WDRs	Waste Discharge Requirements
WoS	Waters of the State
WoUS	Waters of the United States

## SECTION 1.0 – EXECUTIVE SUMMARY

The California Independent System Operator (CAISO) has identified a policy-driven need for a new 230 kilovolt (kV) transmission line to connect the existing San Diego Gas & Electric Company (SDG&E) Sycamore Canyon and Peñasquitos Substations in an effort to increase the efficiency and supply of renewable generated power to the CAISO grid. SDG&E proposes to construct and operate a new, approximately 16.7-mile 230 kV transmission line between the existing SDG&E Sycamore Canyon and Peñasquitos Substations (Proposed Project). The Proposed Project would also include the consolidation of two existing 69 kV power lines onto new double-circuit, steel structures that would replace existing, predominantly wood structures. All new transmission line facilities would be located within existing SDG&E ROW or within franchise position within existing public roadways.

TRC Solutions, Inc. (TRC) contracted with Busby Biological Services, Inc. (BBS) to conduct vegetation mapping, special-status plant surveys, and special-status wildlife surveys and with Environmental Intelligence, LLC (EI) to perform wetland studies within the approximately 1,058.88-acre Biological Survey Area (BSA) for the Proposed Project, which included a 500-foot-wide survey corridor along the Proposed Project alignment as well as other associated work areas.

The biological surveys conducted to date were performed during late summer/fall 2013. Focused special-status plant surveys and sensitive wildlife surveys for the targeted species were performed in accordance with survey protocols set forth by the California Department of Fish and Wildlife (CDFW), the California Native Plant Society (CNPS), and United States Fish and Wildlife Service (USFWS) survey guidelines. Wetlands were delineated using the United States Army Corps of Engineers (USACE), Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region; evaluation of state jurisdiction followed guidance in the Fish and Game Code and related CDFW materials. Additional focused special-status species surveys are planned for spring and summer 2014.

The Proposed Project would result in approximately 7.56 acres (approximately 329,668 square feet) of permanent impacts and approximately 75.03 acres (approximately 3,268,126 square feet) of temporary impacts. Permanent impacts associated with the implementation of the Proposed Project include the installation of new transmission and power line structures and associated maintenance work pads, and the creation of new spur roads. Temporary impacts associated with the implementation of the Proposed Project include material storage and staging yards, stringing sites, structure work areas, guard structures underground construction, construction vehicle staging and parking and turn around areas. Temporary work areas will be required for construction of new facilities, removal of existing facilities and storage and staging of construction equipment and materials.

The Proposed Project includes USACE jurisdictional areas (i.e., wetland Waters of the U.S. and non-wetland waters of U.S.), CDFW jurisdictional areas (i.e., wetland Waters of the State and non-wetland Waters of the State), Regional Water Quality Control Board (RWQCB) jurisdictional areas, and California Coastal Commission (CCC) jurisdictional areas. No impacts to these jurisdictional resources are anticipated.

SDG&E has incorporated project design features according to the *SDG&E's Subregional Natural Community Conservation Plan (NCCP)*, the *SDG&E Subregional NCCP Implementing Agreement*, and applicable permit conditions, which will ensure that project impacts will remain less than significant.

## SECTION 2.0 – PROPOSED PROJECT DESCRIPTION

### 2.1. PROPOSED PROJECT OVERVIEW

SDG&E is a regulated public utility that provides electric service to three million customers within a 4,100 square mile service area, covering parts of two counties and 25 cities in the San Diego area. In an effort to increase the efficiency and supply of renewable generated power to the CAISO grid, CAISO has identified a policy-driven need for a new 230 kilovolt (kV) transmission line to connect the existing SDG&E Sycamore Canyon and Peñasquitos Substations. In response to the CAISO Request for Proposal (RFP) for this new 230 kV transmission line, SDG&E proposes to construct and operate a new, approximately 16.7-mile 230 kV transmission line (TL 230XX<sup>1</sup>) between the existing SDG&E Sycamore Canyon and Peñasquitos Substations (Proposed Project). The Proposed Project would also include the consolidation of two existing 69 kV power lines onto new double-circuit, steel structures that would replace existing, predominantly wood structures. All new transmission line facilities would be located within existing SDG&E Rights-of-Way (ROW) or within franchise position within existing public roadways<sup>2</sup>.

The Proposed Project would include the following primary components:

- Construction of approximately 38 new double-circuit tubular steel 230 kV transmission line poles and two new single-circuit 138 kV power line poles between the existing Sycamore Canyon Substation and Carmel Valley Road (approximately 8.31 miles) all within existing SDG&E ROW;
- Installation of a new, approximately 2.84-mile 230 kV underground transmission line in Carmel Valley Road utilizing existing franchise position for almost the entire segment<sup>2</sup>;
- Installation of two new 230 kV cables pole structures at each corridor end of the Carmel Valley Road underground segment, all within existing SDG&E ROW. The new 230 kV cable pole located on the west end of the Carmel Valley Road underground segment would replace an existing 230 kV steel lattice tower and the cable pole on the east end would replace a 138 kV wood H-frame structure;
- Installation of a new 230 kV conductor on the existing 230 kV steel structures (double-circuit 230 kV steel lattice towers currently supporting TL 23001 and TL 23004) between Carmel Valley Road and Peñasquitos Junction all within existing SDG&E ROW;

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<sup>1</sup> Transmission Line number (TL) to be assigned at a later date.

<sup>2</sup> Note that one small section of underground rights through existing SDG&E ROW would need to be acquired through an amendment to the existing ROW easements at this location.

- Installation of a new 230 kV conductor on vacated position of the existing double circuit 230 kV steel lattice towers currently supporting TL 13804 and TL 69063) between Peñasquitos Junction and Peñasquitos Substation all within existing SDG&E ROW;
- Construction of approximately 17 new 69 kV double-circuit tubular steel poles between the Peñasquitos Junction and the Peñasquitos Substation. The new poles would support the relocated TL 6906 and TL 675;
- Construction of two new 69 kV single-circuit steel cable poles outside of the existing Peñasquitos Substation that would replace existing single-circuit wood cable poles;
- Consolidation, relocation, and reconductoring of existing 230 kV transmission lines and 138 and 69 kV power lines within existing SDG&E ROW;
- Topping<sup>4</sup> of approximately five 138 kV wood H-frame structures that currently have distribution underbuild so that only a single pole and the distribution line remains; and
- Modifying the Sycamore Canyon and Peñasquitos Substations to allow for connection of the new 230 kV transmission line.

## 2.2. PROPOSED PROJECT LOCATION

The Proposed Project includes approximately 16.7 linear miles of transmission line as well as associated access roads and work areas, all of which are located within the City of San Diego and the City of Poway, California, and on the extreme northern portion of Marine Corps Air Station (MCAS) Miramar (Appendix A: Figures). The Proposed Project begins at Sycamore Canyon Substation in the east and traverses developed residential and commercial areas associated with the communities of Rancho Encantada, Scripps Miramar Ranch, Miramar Ranch North, Rancho Peñasquitos, Torrey Highlands, Del Mar Mesa, Carmel Valley, and Torrey Hills as well as densely vegetated undeveloped areas before ending at Peñasquitos Substation in the west. The Proposed Project will result in a new 230 kV transmission line that will connect the existing Sycamore Canyon and Peñasquitos Substations through utilization of existing SDG&E facilities, ROWs, and City of San Diego franchise position.

## 2.3. PROPOSED PROJECT COMPONENTS

The Proposed Project is divided into four segments (Segments A through D) based upon the type and location of proposed facilities (Appendix A: Figures). These segments are described briefly, below.

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<sup>3</sup> These structures were previously permitted by the CPUC to support 230 kV.

<sup>4</sup> Pole “topping” refers to the practice of removing only the top section of a pole that typically supports a power or transmission line and leaving a lower voltage (typically a distribution line) remaining on a now shortened structure.

### **2.3.1 Transmission Line Segments**

#### **2.3.1.1 Segment A – Sycamore Canyon Substation to Carmel Valley Road**

Segment A of the Proposed Project includes two major components, as follows:

- Construct approximately 8.31 miles of new 230 kV transmission line between the Sycamore Canyon Substation and Carmel Valley Road, including the construction of approximately 38 new 230 kV and 2 new 138 kV tubular steel poles;
- Removal of approximately 46 existing wood and steel power line structures; and
- Relocate existing 138 kV power lines (TL 13820 and TL 138255,6) to second position on new 230 kV steel poles.

#### **2.3.1.2 Segment B – Carmel Valley Road**

Segment B of the Proposed Project includes two major components, as follows:

- Construct approximately 2.84 miles of new 230 kV underground transmission line, mainly through existing Carmel Valley Road (franchise position); and
- Construct two new 230 kV cable pole structures at the east and west end of the proposed new underground transmission line.

#### **2.3.1.3 Segment C – Carmel Valley Road to Peñasquitos Junction**

Segment C of the Proposed Project includes four major components, as follows:

- Reconductor and bundle approximately 2.19 miles of existing 230 kV circuit between Carmel Valley Road and Peñasquitos Junction;
- Replace one existing double-circuit 230 kV steel lattice tower (Structure No. R49) with a new double-circuit 230 kV tubular steel pole (Structure No. P43) at the Peñasquitos Junction;
- Remove existing shield wire from steel lattice towers and install new optical ground wire (OPGW) from new cable pole (Structure No. P42) to proposed new tubular steel pole (Structure No. P43) at Peñasquitos Junction; and
- Install new bundled 230 kV conductor on vacated position of the existing 230 kV steel lattice towers and new 230 kV tubular steel pole.

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<sup>5</sup> TL 13820 will be collocated on the new 230 kV structures between the Sycamore Canyon Substation and the Chicarita Substation, where TL 13820 terminates after Structure No. P29. TL 13825 will leave Chicarita Substation via Structure No. P30 and will be collocated on the new 230 kV structures from Chicarita Substation north until the end of Segment A at Carmel Valley Road.

<sup>6</sup> TL 13825 was recently renumbered to 13811 independent of the Proposed Project. All references to TL 13825 refer to TL 13811.



### 2.3.1.4 Segment D – Peñasquitos Junction to Peñasquitos Substation

Segment D of the Proposed Project includes four major components, as follows:

- Install approximately 3.34 miles of new 230 kV overhead transmission line on existing 230 kV steel lattice towers located within existing SDG&E ROW;
- Relocate two existing 69 kV power lines (TLs 675 and 6906) onto approximately 17 new, double circuit, dilled galvanized tubular steel poles that would replace 20 existing 69 kV wood structures;
- Replace two existing 69kV single circuit cable poles with single circuit tubular steel poles;
- Relocate one existing 138 kV power line (TL 13804) from north side of existing steel lattice towers to south side of existing steel lattice towers; and
- Replace existing shield wire with new OPGW on existing 230 kV steel lattice towers.

### 2.3.2 Associated Substation Work

Minor alterations, mainly in the form of alterations to substation and bay arrangements, will be required at two existing substations, as further described in the following subsections. The Proposed Project does not include the construction of any new substation facilities.

#### 2.3.2.1 Sycamore Canyon Substation

To connect the proposed new 230 kV transmission line to the Sycamore Canyon Substation, the following steps would be required:

- Five existing transmission lines (TL 23021, 23041, 23051, 23054, and 23055) would be transferred from existing bay positions to new bay positions to accommodate the new 230 kV transmission line;
- Approximately one new 230 kV pole<sup>7</sup> may be required within or immediately adjacent to the substation to accommodate the transferring of existing 230 kV transmission lines;
- One existing bay would require the addition of one circuit breaker and two disconnects; and
- One capacitor voltage transformer (CVT) would be installed to be used for synch potential.

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<sup>7</sup> Design of the Sycamore Canyon Substation getaways is preliminary, and final design may require additional work at the substation site to accommodate connection of the new 230 kV transmission line.

### 2.3.2.2 Peñasquitos Substation

To connect the proposed new 230 kV transmission line to the Peñasquitos Substation, the following steps would be required:

- The new 230 kV transmission line would terminate into a vacant position in the substation via a vacant position on an existing tubular monopole steel pole north of the substation fence line;
- The proposed new 230 kV transmission line would termination bay would require the addition of two circuit breakers and four disconnects; and
- One CVT would be installed to be used for synch potential.

### 2.3.2.3 Minor Substation Alterations

Minor alterations may be required at the existing Sycamore Canyon, Peñasquitos, San Luis Rey, Encina, Palomar Energy, and Mission Substations. Minor alterations may include some combination of the following:

- Adjust relays to project the stubs of any abandoned bus systems;
- Adjust relays in order to maintain protection systems; and
- Upgrade protection on remaining transmission lines to improve reliability.

## 2.3.3 Proposed Transmission and Power Line Facilities

The Proposed Project includes the construction of several types of transmission and power line facilities, including overhead structures and underground duct packages. Each facility being proposed for installation is briefly described in the following subsections.

### 2.3.3.1 Transmission and Power Line Poles

It is anticipated that all of the proposed new overhead transmission and power line structures within Segments A, B, and D will be tubular steel poles constructed using either placed concrete foundations or micropile foundations. Micropile foundations may be utilized based on geologic conditions and/or where access is limited, and the sufficient room for construction of placed concrete foundations is not available. All new poles will be fabricated with dulled galvanized steel.

### 2.3.3.2 Distribution Underbuild

Approximately five existing 138 kV wood H-frame structures, located on the northern end of Segment A, currently have distribution underbuild. The wood H-frame structures will be removed and replaced with new tubular steel double-circuit 230 kV structures. The distribution underbuild portion of the existing wood H-frame structures will remain in place; the existing wood H-frame structures will be cut-off above distribution circuits and the remaining portion of the wood H-frame structure will be removed. No new Proposed Project structures will have distribution underbuild.

### 2.3.3.3 Reconductoring

The Proposed Project includes the relocation and consolidation of numerous existing SDG&E power and transmission lines within existing SDG&E ROW. For each transmission or power line that will be re-

located as part of the Proposed Project, a new conductor will be installed that will match the existing conductor.

#### **2.3.3.4 Grounding Rods**

All of the steel poles, regardless of foundation type, will require the installation of a minimum of two grounding rods buried approximately 6 to 18 inches deep. The number of grounding rods could increase depending on soil conditions identified during construction. The grounding rods are approximately 8 feet in length and will be installed approximately 6 feet apart within the established work areas. Permanent impacts associated with the grounding rod installation will be negligible (e.g., less than 1 square foot per structure).

### **2.4. PROPOSED CONSTRUCTION AREAS**

This section includes an overview of the proposed construction areas, including permanent and temporary work areas; road crossings; helicopter usage during transmission line construction; site cleanup; and removed structures/poles, materials, and components.

#### **2.4.1 Permanent Work Areas**

The Proposed Project is located predominantly within existing utility corridors and franchise areas that currently feature permanent work pads and access roads. Construction, as well as operation and maintenance (O & M) of the Proposed Project would utilize these existing work areas and roads to the extent possible, as well as limited additional permanent work areas that will remain following completion of construction activities for O & M purposes.

In addition to the temporary construction work areas described below, new poles will require a permanent maintenance pad, which is typically approximately 50 by 75 feet in size. These areas are considered a permanent work space and will be kept relatively flat and un-vegetated. It is important to note some structures will require vegetation clearing around the base of the structure (typically 15 feet of clearance). This area and the required maintenance pads typically overlap.

#### **2.4.2 Temporary Work Areas**

Temporary work areas will be required for construction of new facilities, removal of existing facilities, and storage and staging of construction equipment and materials. Each of these temporary work areas is described below.

##### **2.4.2.1 Material Storage and Staging**

The Proposed Project includes approximately five temporary construction staging yards, resulting in a total area of approximately 25 acres. The staging areas may be used as refueling areas for vehicles and construction equipment by a mobile fueling truck, pole assemblage, open storage of material and equipment, construction trailers, portable restrooms, parking, and lighting and may include generator use for temporary power in construction trailers. Construction workers typically meet at the staging yard each morning and park their vehicles at the yard. In-ground fencing will be installed at the staging yards wherever it is not already installed.

SDG&E has attempted to identify a reasonable number of staging yards commensurate with the size, location, and scope of the Proposed Project. Past staging yards were identified, as well as large undeveloped areas near one or more portions of the Proposed Project that have been previously disturbed and/or graded. While SDG&E has exercised reasonable diligence in identifying potential construction staging yards, there is no guarantee that the identified staging yards will be available by the time the Proposed Project is set to begin construction. Other potential staging yards may be identified as part of the environmental review process.

#### **Staging Yard No. 1 (Stonebridge)**

The potential construction staging yard at Stonebridge Parkway is approximately 4 acres in size and is located approximately 800 feet northeast of the Sycamore Canyon Substation. The Stonebridge staging yard has been utilized on recent past projects by SDG&E and others, and the site has been previously disturbed and graded. SDG&E currently anticipates utilizing Staging Yard No. 1 again during construction of the Proposed Project.

#### **Staging Yard No. 2 (Stowe)**

The potential construction staging yard at Stowe Road is approximately 4 acres in size and is located approximately 1.6 miles north of the Sycamore Canyon Substation. Staging Yard No. 2 has been utilized recently by SDG&E as a construction staging yard and has been previously graded and fenced. SDG&E currently anticipates utilizing Staging Yard No. 2 again during construction of the Proposed Project.

#### **Staging Yard No. 3 (Torrey Santa Fe)**

The potential construction staging yard at Torrey Santa Fe Road consists of a total area of approximately 23 acres that have been identified for potential use for staging during construction. Staging Yard No. 3 is located approximately 0.7 mile east of Segment C of the Proposed Project. The entire site has been previously graded. SDG&E would utilize some portion of Staging Yard No. 3, as space is available at the time of construction. It is not currently anticipated that SDG&E would utilize the entire 23-acre site, but that SDG&E could utilize a portion of the 23 acre site. SDG&E is currently utilizing a portion of Staging Yard No. 3 for another project and anticipates utilizing some portion of the site during construction of the Proposed Project.

#### **Staging Yard No. 4 (Carmel Valley Road)**

The potential construction staging yard at the intersection of Carmel Valley Road and Camino Del Sur consists of a total area of approximately 26 acres that have been identified for potential use for staging during construction. Staging Yard No. 4 is located immediately adjacent to Segment B of the Proposed Project. The entire site has been previously graded. Staging Yard No. 4 is currently being utilized as a construction staging yard for the construction of another nearby project. SDG&E anticipates utilizing Staging Yard No. 4 if it is available during construction of the Proposed Project. It is not currently anticipated that SDG&E would utilize the entire 26-acre site, but that SDG&E could utilize a portion of the 26 acre site.

## Staging Yard No. 5 (Carmel Mountain Road)

The potential construction staging yard on Carmel Mountain Road consists of a total area of approximately 100 acres that have been identified for potential use for staging during construction. Staging Yard No. 5 is located immediately adjacent to Segment D of the Proposed Project. The entire site has been previously graded. SDG&E anticipates potentially utilizing a portion of Staging Yard No. 5 if it is available during construction of the Proposed Project. It is not currently anticipated that SDG&E would utilize the entire 100-acre site, but that SDG&E could utilize a portion of the 100 acre site.

## Incidental Landing Areas

Incidental landing areas (ILAs) are used for short-term helicopter operations, such as picking up conductor or other equipment. Helicopters would be staged out of local airports (such as McClellan Palomar, Montgomery, and Gillespie) and would utilize construction staging areas as ILAs. Helicopter staging activities, such as refueling and maintenance, would be conducted at the local airport.

### 2.4.2.2 Stringing Sites

Approximately 17 stringing sites may be required and are described below. It is important to note that areas included for stringing sites include area that could potentially be utilized during stringing activities, but that would not necessarily be directly impacted/disturbed (e.g. cleared of vegetation, if any, for active work). The area of direct impact/disturbance would in actuality be smaller than the listed area, but would occur within the identified boundary of each stringing site as described herein.

## Segment A - Sycamore Substation to Carmel Valley Road Cable Pole

Ten stringing sites are located within Segment A, including:

- Stringing Site No. 1 is located near Structure No. P3 as the new 230 kV line exits Sycamore Canyon Substation and traverses to the east. Stringing Site No. 1 is approximately 1 acre in size and would be accessed from the existing access road adjacent to the Sycamore Substation. This stringing site will also be utilized as a stringing site for the proposed OPGW.
- Stringing Site No. 2 is located between Structure Nos. P7 and P8. Stringing Site No. 2 is approximately 0.2 acre in size and would be accessed from existing SDG&E access roads that are accessible via Wild Meadow Place.
- Stringing Site No. 3 is located between, and includes the adjacent area around Structure Nos. P15 and P16. The conductor will need to be snubbed to the ground and spliced together within this span. Therefore, the area of this stringing site will be the entire length between Structure Nos. P15 and P16, including some overlap northwest of P16 and southwest of P15. Stringing Site No. 3 is approximately 3 acres in size and would be accessed from existing SDG&E access roads via the Scripps Poway Parkway. Additionally, Structure No. P16 will serve as a splice location for the OPGW.
- Stringing Site No. 4 is located near Structure No. P21. Stringing Site No. 4 is approximately 1.1 acres in size and would be accessed from existing SDG&E access roads via the access road in the parking lot off of Ivy Hill Drive.

- Stringing Site No. 5 is located near Structure No. P21. Stringing Site No. 5 is approximately 0.2 acre in size and would be accessed from existing SDG&E access roads via the access road in parking lot off of Ivy Hill Drive.
- Stringing Site No. 6 is located near Structure No. P24. Stringing Site No. 6 is approximately 1.2 acres and would be accessed from existing SDG&E access roads via the access road from Poway Road.
- Stringing Site No. 7 is located near Structure No. P26. Stringing Site No. 7 is approximately 0.75 acre in size and would be accessed from existing SDG&E access roads via the private parking lot off of Via Del Sud. Additionally, Structure No. P26 would also serve as a splice location for the OPGW.
- Stringing Site No. 8 is located near Structure No. P35. Stringing Site No. 8 is approximately 1.6 acres in size and would be accessed from existing SDG&E access roads via Sundevil Road.
- Stringing Site No. 9 is located near Structure No. P36. Stringing Site No. 9 is approximately 1.5 acres in size and would be accessed from existing SDG&E access roads via Laurentian Drive.
- Stringing Site No. 10 is located near Structure No. P41. Stringing Site No. 10 is for stringing associated with Structure No. P42 and is approximately 0.25 acre in size and would be accessed from existing SDG&E access roads via private drive from Carmel Valley Road.

### **Segment C - Carmel Valley Road to Peñasquitos Junction**

Four stringing sites are located within Segment C, including:

- Stringing Site No. 11 is located north of the proposed western cable pole (Structure No. P42) on the north side of Carmel Valley Road at the western termination of the underground alignment. Stringing Site No. 11 is approximately 0.95 acre in size and would be accessed from the access road through Evergreen Nursery via Carmel Valley Road.
- Stringing Site No. 12 is located at the proposed western cable pole south of Carmel Valley Road on the west side of the underground alignment (Structure No. P42). The area required will be the entire span length due to pulling conductor from both directions. Stringing Site No. 12 is approximately 0.78 acre in size and would be accessed from existing SDG&E access roads via Carmel Valley Road.
- Stringing Site No. 13 is located south of existing Structure No. E5. The area required will be the entire span length due to pulling conductor from both directions. Stringing Site No. 13 is approximately 1.1 acres in size and would be accessed from existing SDG&E access roads via Santa Fe Canyon.
- Stringing Site No. 14 is located at existing Structure No. E7. The area required will be used for pulling the OPGW and splicing. Stringing Site No. 14 is approximately 0.23 acre and would be accessed from existing SDG&E access roads via Santa Fe Canyon.

## Segment D - Peñasquitos Junction to Peñasquitos Substation

Six stringing sites are located within Segment D, including:

- Stringing Site No. 15 is located at the Peñasquitos Junction between existing Structures No. E13 and E14, and includes the area encompassing proposed Structure No. P43 and Structure No. P44. The area required will be used for pulling both the 230 kV conductor from the north and 69 kV conductor to the west. Stringing Site No. 15 is approximately 0.98 acre and would be accessed via access road from Park Village Road.
- Stringing Site 16 is located at existing Structure No. E19 and proposed Structure No. P51. The area required will be used for pulling the OPGW and splicing. Stringing Site No. 16 is approximately 0.28 acre in size and would be accessed from existing SDG&E access roads via Carmel Mountain Road.
- Stringing Site No. 17 is located at existing Structures No. E22 and proposed Structure No. P54. The area required will be used for installing full-tension sleeves for the conductor for all new conductor installations. Stringing Site No. 17 is approximately 1.21 acres and would be accessed from existing SDG&E access roads from Briarlakes Wood Drive.
- Stringing Site No. 18 is located between existing Structure Nos. E24 and E25, and between proposed Structure Nos. P56 and P57. Stringing Site No. 15 is approximately 1.14 acres and would be accessed from existing SDG&E access roads from East Ocean Air Drive.
- Stringing Site No. 19 is located on the west side of Structure No. P60 on the 69 kV lines, and between Structure Nos. E28 and E29 on the reconducted 138 kV and proposed 230 kV (230XX) lines. Stringing Site No. 19 is approximately 1.12 acres and would be accessed from existing SDG&E access roads at Peñasquitos Substation.
- Stringing Site No. 20 is located on the southwest side of existing Structure No. E29 and will be used to string in the new 230 kV and existing TL 13804 lines. Stringing Site No. 17 is approximately 0.44 acre and would be accessed from existing SDG&E access roads from Peñasquitos Substation.

Additional or other stringing sites may be identified during construction in order to safely and efficiently string wire.

### 2.4.2.3 Structure Work Areas

Installation of the new 69, 138, and 230 kV steel poles throughout the Proposed Project will typically require approximately 22,500 square foot work areas (this area may be smaller or larger at various locations). However, because most of the new poles will be located in the immediate vicinity of existing poles, the permanent impacts to existing vegetation communities would be minimized by utilizing existing maintenance pads and access roads during construction of new poles. These work spaces provide a safe working area for equipment, vehicles, and materials during pole installation and maintenance. A minimum of 15-foot radius of clearance (approximately 700 square feet) surrounding the pole will be maintained around certain new transmission poles for the purposes of O & M and inspection activities.

The temporary impact areas may vary because the positioning of construction vehicles, equipment, and materials cannot be accurately anticipated prior to construction. The locations of the construction vehicles, equipment, and materials are dependent upon the contractor safely performing the work. The impacts from construction vehicles, equipment, and materials staged outside of delineated temporary work areas will be evaluated by the on-site biological monitor prior to their placement. The monitor, as appropriate, will assist crews in placement of construction vehicles, equipment, and materials to avoid and minimize impacts to sensitive habitat types. In addition, in order to maintain a safe working space for crewmembers working directly under poles, construction vehicles, equipment, and materials may need to be staged off of existing access roads and/or outside of delineated temporary work areas. However, the on-site biological monitor will assist crews in locating appropriate staging areas for construction vehicles, equipment, and materials that avoids and minimizes impacts to sensitive habitat types. Any temporary impacts associated with placement of construction vehicles, equipment, and materials will be recorded by the biological monitor and will be included within the project Post Construction Report and will be mitigated as necessary, pursuant to the *SDG&E Subregional NCCP*.

#### **2.4.2.4 Guard Structures**

Bucket trucks are often utilized as guard structures during stringing activities. Where wooden poles are used as guard structures instead, installation requires the temporary use of up to approximately 1,500 square feet of area, depending upon guard structure configuration and location. The temporary work area is located in the immediate vicinity of the guard structure location. No permanent impacts would result from the utilization of guard structures. Guard structure installation utilizing wood poles will include excavation of holes approximately 3 feet in diameter and 10 feet in depth. Excavated soils will be temporarily stock piled and then replaced within the excavation following stringing activities. All guard structures will be completely removed and backfilled with excavated soil after stringing activities are complete.

#### **2.4.2.5 Temporary Right-of-Way**

Construction is anticipated to occur within and immediately adjacent to the existing SDG&E ROW, except for construction staging areas and along Segment B, which is within franchise position (city street). No temporary construction easements are anticipated to be required.

#### **2.4.2.6 Access**

Construction will primarily take place within the existing SDG&E ROW easements and access roads and public roadways. Most work areas are accessible by vehicle on unpaved SDG&E-maintained access roads or by overland travel<sup>8</sup>. To enable crews and equipment to access the associated poles, smoothing or refreshing of the existing access roads and/or vegetation clearing will be necessary to improve some

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<sup>8</sup> Overland travel refers to temporary vehicular access across un-improved areas. Overland travel areas are not graded or subjected to other earthwork improvement. Following construction these areas are returned to an approximate pre-construction state.



existing access roads and to re-establish unmaintained access roads. Pursuant to SDG&E's Subregional NCCP, SDG&E is not required to mitigate for impacts to vegetation resulting from road maintenance (i.e., re-establishing) of existing access roads. Based upon preliminary engineering and review, only one new spur road is anticipated to be required to access Structure Nos. P33 and P34. Cleared vegetation will be removed from the Proposed Project site and disposed of at an approved offsite facility. Vehicles will remain within existing access roads, previously disturbed areas, and designated temporary work areas where feasible. At designated drainage crossing locations along the access roads, the blade of smoothing equipment will be lifted 25 feet on either side of the drainage to avoid impacts to the drainage. Temporary bridging of drainage crossings may be utilized wherever necessary and feasible.

#### **2.4.2.7 Underground Transmission Line Construction**

The majority of the underground transmission line construction included as part of the Proposed Project will utilize the cut and cover construction method, which typically requires approximately 25 feet width of space for construction. At vault locations, approximately 50 feet width of space would be required for installation of the new underground splice vaults along Segment B.

#### **2.4.3 Road Crossings**

Typically, guard structures are used for larger road crossings and traffic control is utilized for locations where overhead lines cross smaller roads. However, special conditions exist for freeway crossings such as where the Proposed Project route crosses Highway (Hwy) 56 and Interstate 15 (I-15), which are under the jurisdictional authority of the California Department of Transportation (Caltrans). Crossing at these locations will be conducted pursuant to Caltrans approved methods, which could include traffic control, guard structures, netting, or any combination of these methods as will be outlined within the encroachment permit issued by Caltrans for all highway crossings.

#### **2.4.4 Helicopter Usage during Transmission Line Construction**

Helicopters will be utilized as a construction tool during stringing of overhead conductor associated with the Proposed Project. SDG&E anticipates that light- or medium-duty (e.g., K-Max and A-star) helicopters will be utilized. Helicopters will be utilized during daylight hours, and flight paths will generally be limited to the existing ROW except for ingress and egress from the helicopter landing/staging yards (local airports and ILAs).

#### **2.4.5 Site Cleanup**

SDG&E will restore all areas that are temporarily disturbed by the Proposed Project activities (including stringing sites, structure removal sites, and staging areas) to approximate pre-construction conditions following the completion of construction. Restoration could include reseeding, planting of replacement vegetation or replacement of structures (such as fences, curbs, or landscaping), as appropriate. In addition, all construction materials and debris will be removed from the Proposed Project area and recycled or properly disposed of off-site. SDG&E will conduct a final survey to ensure that cleanup activities are successfully completed as required.

#### **2.4.6 Removed Structures/Poles, Materials, and Components**

It is SDG&E's policy to re-use or recycle all old structures/poles, materials, and components following the retirement of substations, power lines, and structures/poles. Whatever cannot be re-used or recycled is disposed of at an appropriate facility pursuant to all relevant laws.

## SECTION 3.0 – REGULATORY SETTING

### 3.1. FEDERAL REGULATIONS

Several federal regulations apply to the Proposed Project, including:

- Federal Endangered Species Act of 1973 (16 United States Code [USC] 1531 et seq.)
- Clean Water Act of 1972 (33 USC 1251 et seq.)
- Coastal Zone Management Act of 1972 (16 USC 1451 through 1464, Chapter 33)
- Migratory Bird Treaty Act of 1918 (16 USC 703 through 711)
- Bald and Golden Eagle Protection Act (16 USC 668)

These federal regulations are described in detail in this section.

#### 3.1.1 Federal Endangered Species Act of 1973 (16 United States Code [USC] 1531 et seq.)

The Federal Endangered Species Act of 1973 (ESA) was designed to protect critically imperiled plant and wildlife species from extinction by eliminating or reducing the threats to these species and by aiding in the recovery and/or maintenance of the species populations. The ESA designates species that are endangered or threatened as well as species that are candidates for listing and protects these species from unauthorized “take”. For plants, “take” includes removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and/or removing, cutting, digging-up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 USC 1538). For wildlife, “take” is defined as to “harass, harm, pursue, hunt, shoot, wound, kill trap, capture, or collect, or to attempt to engage in any such conduct.” The ESA also designates critical habitat for federally listed species and protects these species from interference with vital breeding and behavioral activities and from critical habitat degradation.

The ESA is administered by the USFWS for freshwater fish and terrestrial wildlife and the National Oceanic and Atmospheric Administration (NOAA) for marine and anadromous species. A person, defined as an “individual, corporation, partnership, trust, association, or any other private entity; or any officer, employee, agent, department, or instrumentality of the Federal Government, of any State, municipality, or political subdivision of a State, or of any foreign government; any State, municipality, or political subdivision of a State; or any other entity subject to the jurisdiction of the United States”, is prohibited from taking a listed species until an appropriate permit pursuant to Section 7, 9, and/or 10 of the ESA has been obtained from USFWS and/or NOAA.

#### 3.1.2 Clean Water Act of 1972 (33 USC 1251 et seq.)

The U.S. Environmental Protection Agency (EPA) administers the Clean Water Act of 1972 (CWA), which regulates potential impacts to wetlands, Waters of the U.S., and Waters of the State resulting from discharge of dredged materials by implementing pollution control measures to maintain water quality in these waterways. Some sections of the CWA, including Sections 404 and 401, are administered by other agencies.

The USACE administers Section 404 of the CWA, which regulates the discharge of dredged or fill material into navigable waters, including both wetlands and other Waters of the U.S. The discharge of dredged

or fill material is typically associated with a variety of development projects, agricultural activities, and water resource projects. The USACE is responsible for issuing general and individual permits and for making jurisdictional determinations.

The State Water Resources Control Board (SWRCB), in conjunction with the nine California RWQCBs, administers Section 401 of the CWA, which requires a State Water Quality Certification or waiver for any activity requiring a Section 404 permit. The State Water Quality Certification ensures the activity will not violate any established State water quality standards. The SWRCB and/or RWQCB are responsible for issuing permits pursuant to the Section 401 Water Quality Certification Program.

### **3.1.3 Coastal Zone Management Act of 1972 (16 USC 1451 through 1464, Chapter 33)**

The Coastal Zone Management Act of 1972 (CZMA) is administered by NOAA's Office of Ocean and Resource Management (OCRM) and was established as a national policy to preserve, protect, develop, and – where possible – enhance or restore the coastal zone in the U.S. The federal consistency provision, Section 307 of the CZMA, encourages states to join the Coastal Zone Management Program (CZMP), which takes a comprehensive approach to coastal resource management by balancing the competing and/or conflicting demands of coastal resource use, economic development, and conservation and allows states to issue the applicable permits. California has a federally approved CZMP, and the CZMA is administered by the CCC. Therefore, the CZMP and permit requirements are discussed further in Section 3.2.5: California Coastal Act and Environmentally Sensitive Habitat Areas, and Section 3.2.6: Coastal Zone Management Program, below.

### **3.1.4 Migratory Bird Treaty Act of 1918 (16 USC 703 through 711)**

The Migratory Bird Treaty Act of 1918 (MBTA) implements various conventions and treaties between the U.S. and Canada, Mexico, Japan, and Russia for the protection of over 800 migratory bird species that spend all or a portion of their life cycle in the U.S. Under the MBTA, it is unlawful 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 whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird...or any part, nest, or egg of any such bird" (16 USC 703).

The MBTA is administered by USFWS and is intended to eliminate a commercial market for birds and/or their parts. Take permits for MBTA species are rarely issued, except for specific actions to aid recovery of a species; however, USFWS establishes hunting seasons for species for which there is a long tradition of hunting, as long as hunting will not adversely impact their population status or long-term conservation. While the MBTA includes approximately 170 species of game birds, hunting is typically authorized for fewer than 60 of these species each year.

### **3.1.5 Bald and Golden Eagle Protection Act (16 USC 668)**

The Bald and Golden Eagle Protection Act (BGEPA) provides protection for both the bald eagle (*Haliaeetus leucocephalus*) and the golden eagle (*Aquila chrysaetos*) by prohibiting the "take" of either of these species, including their parts, nests, or eggs. The BGEPA defines "take" as to "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb" any bald or golden eagle. The BGEPA is administered by the USFWS, and limited take authorizations are granted for qualifying

activities. Persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle [or any golden eagle], alive or dead, or any part, nest, or egg thereof" without prior approval are subject to criminal penalties.

### **3.2. STATE REGULATIONS**

Several state regulations apply to the Proposed Project, including:

- California Environmental Quality Act (Public Resources Code 21000 et seq)
- California Endangered Species Act (Fish and Game Code 2050 et seq.)
- California Fish and Game Code
- California Native Plant Protection Act
- California Coastal Act and Environmentally Sensitive Habitat Areas
- Coastal Zone Management Act
- California Porter-Cologne Water Quality Control Act
- California Natural Community Conservation Planning Program

These state regulations are described in detail in this section.

#### **3.2.1 California Environmental Quality Act (Public Resources Code 21000 et seq)**

The California Environmental Quality Act (CEQA) was passed in 1970 as the state counterpart to the National Environmental Policy Act (NEPA) to institute a statewide policy of environmental protection. CEQA applies to projects undertaken, funded, or requiring the issuance of a permit by a state or local public agency and requires the project proponent to identify significant environmental impacts as well as avoidance, minimization, and/or mitigation measures to reduce these impacts to below a level of significance.

The CDFW has jurisdiction over the conservation, protection, and management of native habitats, plant species, and wildlife species found within California and is responsible for maintaining sustainable populations of these habitats and species. The CDFW provides biological expertise to review and comment on CEQA documents, including the impacts resulting from Proposed Project activities and the proposed avoidance, minimization, and mitigation measures associated with these impacts. The CDFW may play various roles in the CEQA process; the CDFW is always a Trustee Agency and may also be a Lead Agency or a Responsible Agency.

The CDFW is one of four trustee agencies, which also include the State Lands Commission, the Department of Parks and Recreation, and the University of California. As a Trustee Agency, the CDFW has jurisdiction over certain resources held in trust for the people of California and is typically required to be notified of CEQA documents that are relevant to its jurisdiction, such as documents for projects involving fish and wildlife resources. As a Trustee Agency, the CDFW cannot approve or disapprove a project; however, the lead and responsible agencies must consult with the CDFW, and the CDFW reviews the CEQA document(s) and provides recommendations regarding the resources under their jurisdiction (Fish and Game Code Section 1802).

When the CDFW proposes to implement its own project, it is designated as the Lead Agency in the CEQA process and serves as the California government agency with principle responsibility for implementing or approving the Proposed Project. Such projects typically include projects in state wildlife areas and state fish hatcheries as well as habitat or stream restoration projects. Additionally, the CDFW is the Lead Agency when it is the only agency issuing a permit, as is sometimes the case with Streambed Alteration Agreements. As the Lead Agency for such projects, the CDFW is responsible for preparing the CEQA document and determines whether a Negative Declaration or an Environmental Impact Report is required by CEQA (CEQA Statutes, Sections 21080.3 and 21104.2; Guidelines, Sections 15050 and 15367).

The CDFW is also sometimes designated as a Responsible Agency, which is an agency, other than the Lead Agency, that has the legal responsibility for implementing and approving a Proposed Project. The CDFW is designated as the Responsible Agency when the Lead Agency requires a 1600 Streambed Alteration Agreement or a 2081(b) California Endangered Species Act Incidental Take Permit for a project. As a Responsible Agency, CDFW actively participates in the CEQA process by reviewing the Lead Agency's CEQA document and using that document to make decisions about the Proposed Project, to prepare and issue its own findings regarding the project (CEQA Guidelines, Sections 15096 and 15381), and to determine whether or not to issue an incidental take permit.

For the Proposed Project, the California Public Utilities Commission (CPUC) is the Lead Agency, and CDFW would serve as a Responsible Agency that would review the environmental documentation for the Proposed Project to assure its consistency with the *SDG&E Subregional NCCP*, which is discussed in detail in Section 3.3.1: SDG&E Natural Community Conservation Plan, below.

### **3.2.2 California Endangered Species Act (Fish and Game Code 2050 et seq)**

The California Endangered Species Act (CESA) parallels the ESA and protects and/or preserves native plant and wildlife species and their habitats, especially those that are threatened with extinction and those that are experiencing significant decline that may lead to a threatened or endangered designation, within the state of California. CESA designates special-status species that are protected from unauthorized "take", which is defined as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

CESA is administered by the CDFW. A state lead agency is required to consult with the CDFW to ensure that a Proposed Project is not likely to jeopardize the continued existence of a special-status species or result in the destruction or adverse modification of essential habitat for a species. CESA allows for the issuance of incidental take permits for lawful development projects and emphasizes the benefits of early consultation between the lead agency and CDFW to avoid potential impacts to special-status species and to develop appropriate mitigation measures to reduce impacts to and avoid loss of a special-status species.

### **3.2.3 California Fish and Game Code**

Several sections of the California Fish and Game Code, which is administered by the CDFW, may apply to the Proposed Project. These include Section 2081; Sections 1600 through 1616; Sections 1900, et seq.; Sections 2511, 4700, 5050, and 5515; Sections 3503, 3503.5, and 3513; and Title 14, California Code of Regulations, Section 670.2 and 670.6. Each of these sections is discussed in detail below.

## **Section 2081**

Section 2081 of the California Fish and Game Code allows for the issuance of an incidental take permit from CDFW for projects that have the potential to take a special-status species, including a state-listed species, as long as the impacts are minimized and fully mitigated and will not jeopardize the continued existence of a state-listed species. The measures required to minimize and fully mitigate impacts must be roughly proportional to the extent of the proposed impact to the species and must be capable of successful implementation while maintaining the applicant's objectives to the greatest extent feasible. The applicant must show that adequate funding is available to implement the required avoidance and mitigation measures and monitor the effectiveness of the mitigation measures.

## **Sections 2511, 4700, 5050, and 5515**

Sections 2511, 4700, 5050, and 5515 of the California Fish and Game Code provide guidelines to protect wildlife species that are designated as "fully protected" by the CDFW. Before the implementation of CESA and ESA, the State of California designated species as "fully protected" to provide protection for species that were rare or threatened with possible extinction/extirpation. Many of these "fully protected" species have since been listed under CESA as threatened or endangered species. While most "fully protected" species cannot be harmed, taken, or possessed at any time because the designation as "fully protected" provides the same level of protection as a listed species, CDFW may permit the incidental take of "fully protected" species pursuant to a NCCP plan approved by CDFW, as long as the plan's conservation and management guidelines adequately protected these species.

## **Sections 1600 through 1616**

CDFW is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, Fish and Game Code Sections 1600 through 1616 comprise the Lake and Streambed Alteration Program. Specifically, Section 1602 requires an entity, which is any person, state, or local governmental agency, or public utility to notify CDFW before beginning any activity that will substantially modify a river, stream, or lake. Notification is required for an activity that will: 1) substantially divert or obstruct the natural flow of; 2) substantially change or use any material from; or 3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement into the bed, channel, or bank of any river, stream, or lake. The notification requirement applies to any work undertaken within or adjacent to a lake, river, or stream that flows at least intermittently through a bank or channel, including watercourses with a subsurface flow (e.g., ephemeral streams, desert washes) and flood plains.

If a proposed activity requires CDFW notification, a completed notification form and corresponding fee is submitted to the regional CDFW office. If CDFW determines the proposed activity may substantially adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement will be prepared. The Agreement includes reasonable conditions necessary to protect resources and must comply with the CEQA.

## Other Sections

Additional sections of the California Fish and Game Code may apply to the Proposed Project, including, but not limited to:

- Sections 1900 through 1913 provide guidelines to preserve, protect, and enhance endangered or rare native plants within California.
- Sections 3503, 3503.5, and 3513 state that it is unlawful to take, possess, or destroy the nest or eggs of any bird species except otherwise allowed by the or any regulation made pursuant to the California Fish and Game Code.
- Section 3503.5 provides protection specifically in the orders Falconiformes (hawks, eagles, and flacons) and Strigiformes (owls), and Section 3513 provides protection specifically for migratory, non-game birds designated by the MBTA.
- Title 14, California Code of Regulations, Section 670.2 and 670.6 list wildlife species that are designated as California Species of Concern or are state-listed as threatened or endangered species.

### 3.2.4 California Native Plant Protection Act

The California Native Plant Protection Act (NPPA) was passed in 1977 and directs CDFW to preserve, protect, and enhance rare and endangered plant species within California. Under the NPPA, CDFW has the power to designate native plants as rare or endangered, and it has the power to require permits for collecting, transporting, or selling these plants. For plant species that are designated as rare, threatened, or endangered species or for plant species that are proposed for listing, CDFW requires a permit pursuant to Section 2081(a) of CESA for take of a listed or candidate plant species for scientific, educational, or management purposes, and/or an permit pursuant to Section 2081(b) of CESA for incidental take of a listed or candidate plant species for all activities that are not authorized by the NPPA.

### 3.2.5 California Coastal Act and Environmentally Sensitive Habitat Areas

The California Coastal Act of 1972 (CCA) is the primary legislation that provides the standards for balancing development and conservation of resources within the coastal zone, which includes approximately 1.5 million acres along the Pacific Coast of the U.S. The CCA is administered by the CCC to regulate the short- and long-term conservation and use of coastal resources through responsible development.

Section 30107.5 of the CCA defines an Environmentally Sensitive Area as “any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments”. Pursuant to Section 30240 of the CCA, Environmentally Sensitive Habitat Areas (ESHAs) “shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas”. In addition, development adjacent to ESHAs must be located and designed to prevent significant impacts to the functions and values of the ESHA.



### **3.2.6 Coastal Zone Management Program**

In addition, California has a federally approved CZMP (see Section 3.1.3: Coastal Zone Management Act of 1972, above), which is administered through a partnership between state and local governments. Within southern California, the two state coastal management agencies include the California Coastal Conservancy and the CCC. The California Coastal Conservancy is responsible for purchasing, protecting, restoring, and enhancing coastal resources, while the CCC manages the development within the coastal zone. The CCA encourages local governments to establish Local Coastal Programs (LCPs) to govern decisions on behalf of the CCC and to protect public access and coastal resources on a local level. After certification of an LCP, authority to issue Coastal Development Permits is delegated to the local government, but the CCC maintains permit jurisdiction over certain specified lands (e.g., tidelands, submerged islands, and public trust lands) and can appeal permits approved by local governments in specified geographic areas.

Development within the coastal zone may not occur until the CCC or a local government with a CCC-certified LCP has issued a Coastal Development Permit. When federal activities or federally licensed, permitted, or assisted activities are proposed that are likely to affect land use, water use, or natural resources within the coastal zone, a federal consistency review is pursuant to Section 307 of the CZMA, which gives the CCC or approved local government regulatory control over the proposed federal activities. The CCC uses this review authority to facilitate cooperation and coordination between the local, state, and/or federal agencies and to authorize Coastal Development Permits.

### **3.2.7 California Porter-Cologne Water Quality Control Act**

The California Porter-Cologne Water Quality Control Act, which is administered by either the SWRCB and/or the RWQCB, was enacted in 1969 and regulates activities that may impact the quantity and/or quality of both surface water and groundwater. This Act provides protection for both isolated wetlands and Waters of the State, which are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state.” If a Proposed Project involves alteration to any Waters of the State, the project proponent must file a Report of Waste Discharge with the appropriate RWQCB to obtain “Waste Discharge Requirements” (WDRs), which serve as the project discharge permit.

### **3.2.8 California Natural Community Conservation Planning Program**

The California NCCP program was initiated in 1991 and is administered by CDFW. It is a cooperative effort by the CDFW and numerous public and private partners that takes a broad scale, ecosystem approach to planning for the protection and perpetuation of biological diversity throughout California by protecting both habitats and the species within these habitats while also accommodating compatible land use.

A NCCP plan identifies and provides for the regional protection of plants, wildlife, and their habitats, while allowing compatible and appropriate economic activity in the region. By including key interests in the process and by working with landowners, environmental organizations, and other interested parties, a NCCP plan provides the framework for a local agency to oversee the numerous activities that compose the development of a conservation plan. The CDFW and USFWS provide the necessary support, direction, and guidance to NCCP participants during the NCCP plan development and implementation. Within California, there are currently 23 active NCCP plans covering more than 11 million acres, and several draft NCCP plans are pending approval.

SDG&E has a current, agency approved, NCCP plan called the *SDG&E Subregional NCCP*. This plan is discussed in detail under Section 3.3: Local Regulations, below.

### 3.3. LOCAL REGULATIONS

Several local regulations apply to the Proposed Project, including:

- SDG&E Subregional NCCP
- City of San Diego and City of Poway Multiple Species Conservation Plan Subarea Plan
- Marine Corps Air Station, Miramar Integrated Natural Resources Management Plan
- Local Coastal Program
- City of San Diego Urban Forestry Section (City Council Policy 200-5)
- City of Poway Urban Forestry Ordinance
- Other Preserves and Conserved Areas

These local regulations are described in detail in this section.

#### 3.3.1 SDG&E Subregional Natural Community Conservation Plan

In December 1995, the USFWS and the CDFW approved the *SDG&E Subregional NCCP*, which addresses potential impacts to species and habitat 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. As a part of the *SDG&E Subregional NCCP*, SDG&E has been issued an incidental take permit (Permit PRT-809637) by the USFWS and the CDFW 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 avoid, minimize, and mitigate any take to the maximum extent possible. The *SDG&E Subregional NCCP* includes mitigation measures and operational protocols that apply to construction and O & M activities. In approving the NCCP, USFWS and CDFW determined that the mitigation measures and operational protocols avoid potential impacts and provide appropriate mitigation where such impacts are unavoidable, and 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 the *SDG&E Subregional NCCP*, and the *SDG&E Subregional NCCP* will be applied to the Proposed Project. As such, the NCCP fully addresses all of the potential construction and O & M impacts of the Proposed Project on federal and state listed species and Covered Species. The *SDG&E Subregional NCCP* mitigation measures and operational protocols have been incorporated as part of the Proposed Project description.

SDG&E is a public utility regulated by the CPUC. As described in the *SDG&E Subregional NCCP Implementing Agreement*, local governments are precluded from regulating public utilities through their zoning laws, land use laws, ordinances and other police powers (including other NCCPs or Habitat Conservation Plans [HCPs]) by the exclusive jurisdiction of the CPUC. Therefore, as stated in the *SDG&E Subregional NCCP Implementing Agreement*, 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.”

### **3.3.2 City of San Diego and City of Poway Multiple Species Conservation Program Subarea Plans**

The City of San Diego and the City of Poway are two of several jurisdictions participating in the County of San Diego (County) Multiple Species Conservation Program (MSCP), which was developed to protect biodiversity and enhance the quality of life in the region through the preservation of a network of habitats and open space areas. The City of San Diego and City of Poway Subarea Plans were developed in conjunction with the wildlife agencies (e.g., USFWS and CDFW) and identify core biological resource areas that are targeted for conservation (Appendix A: Figures). The City of San Diego Subarea Plan also includes the City of San Diego Multi-Habitat Planning Area (MHPA), which delineates core biological resource areas and habitat corridors that are targeted for conservation and within which limited development may occur.

The City of San Diego and City of Poway Subarea Plans meet the requirements of the NCCP Act of 1992 and are consistent with the County MSCP, thus they serve as stand-alone documents for implementing the each city’s portion of the County’s MSCP. These Subarea Plans also form the basis for the implementing agreements between each city and the wildlife agencies, which ensure the implementation of the resource conservation plans and habitat preserves, thus allowing the cities to issue take permits at the local level.

The Proposed Project falls within the area in which SDG&E’s utility operations are governed by the *SDG&E Subregional NCCP* and, therefore, would fall under the *SDG&E Subregional NCCP*. As such, no conflicts are expected to occur within the City of San Diego or City of Poway Subarea Plans. Because the *SDG&E Subregional NCCP* is independent of other NCCP/HCPs, it is not dependent upon the implementation of such plans and is not superseded by them.

### **3.3.3 Marine Corps Air Station, Miramar Integrated Natural Resources Management Plan**

The MCAS Miramar Integrated Natural Resources Management Plan (INRMP) summarizes the baseline information for MCAS Miramar that ensures compliance with the regulatory and planning process required by NEPA, the ESA, and the CWA. It also fulfills other responsibilities pursuant to Department of Defense (DoD) and Marine Corps policies as well as other legal requirements. The INRMP integrates MCAS Miramar’s land use needs, in support of the military mission, with the management and conservation of natural resources on MCAS Miramar. The INRMP is a tool that provides MCAS Miramar’s guidelines and approach to natural resource management and conservation. While the INRMP does not dictate land use decisions, it does inform the planning process by providing important resource information to support land use decisions and natural resource management.

The Proposed Project falls within the area in which SDG&E’s utility operations are governed by the *SDG&E Subregional NCCP* and, therefore, would fall under the *SDG&E Subregional NCCP*. As such, no conflicts are expected to occur with the MCAS Miramar INRMP. Because the *SDG&E Subregional NCCP* is independent of other management plans, it is not dependent upon the implementation of such plans and is not superseded by them.

### **3.3.4 Local Coastal Program**

Local governments use the LCP in partnership with the CCC as a basic planning tool to guide responsible development and to protect natural resources within the coastal zone. Within the vicinity of the Proposed Project, the San Diego Coast Area LCP, which is administered by the City of San Diego, provides the requirements for future development and protection of coastal resources. Section 3.1.3: Coastal Zone Management Act, Section 3.2.5: California Coastal Act and Environmentally Sensitive Habitat Areas, and Section 3.2.6: Coastal Zone Management Program, above, provide a more detailed discussion of the basis for the LCP.

Development within the coastal zone may not occur until the CCC or a local government with a CCC-certified LCP (e.g., City of San Diego) has issued a Coastal Development Permit. When federal activities or federally licensed, permitted, or assisted activities are proposed that are likely to affect land use, water use, or natural resources within the coastal zone, a federal consistency review is pursuant to Section 307 of the CZMA, which gives the CCC or approved local government regulatory control over the proposed federal activities. The CCC uses this review authority to facilitate cooperation and coordination between the local, state, and/or federal agencies and to authorize Coastal Development Permits.

### **3.3.5 City of San Diego Urban Forestry Section (City Council Policy 200-5)**

The City of San Diego General Services Department, Urban Forestry Section, issues permits for tree trimming, removal, planting, or root pruning following inspection by City of San Diego staff pursuant to City Council Policy 200-5. The Proposed Project falls within the area in which SDG&E's utility operations are governed by the *SDG&E Subregional NCCP* and, therefore, would fall under the *SDG&E Subregional NCCP*. As such, no conflicts are expected to occur with the City of San Diego Urban Forestry Ordinance. Because the *SDG&E Subregional NCCP* is independent of other management plans, it is not dependent upon the implementation of such plans and is not superseded by them.

### **3.3.6 City of Poway Urban Forestry Ordinance**

The City of Poway has an Urban Forestry Ordinance (Poway Municipal Code, Chapter 12.32) the supports urban forestry practices for planting, trimming, and removing trees. A tree removal permit, issued by the Public Works Department, is required before removing a tree on public property or from Development Services before removing certain tree species located on private property. The Proposed Project falls within the area in which SDG&E's utility operations are governed by the *SDG&E Subregional NCCP* and, therefore, would fall under the *SDG&E Subregional NCCP*. As such, no conflicts are expected to occur with the City of Poway Urban Forestry Ordinance. Because the *SDG&E Subregional NCCP* is independent of other management plans, it is not dependent upon the implementation of such plans and is not superseded by them.

### **3.3.7 Other Preserves and Conserved Areas**

The Proposed Project crosses areas that are designated as mitigation/preserve areas as well as conserved lands that have adopted conservation plans (Appendix A: Figures). These areas have a variety of classifications, including (but not limited to) open space, preserve, park, mitigation land, wildlife refuge, home owners association land, and private land. Because the Proposed Project is anticipated to occur within the area in which SDG&E's utility operations are governed by the *SDG&E Subregional NCCP*,

it would fall under the *SDG&E Subregional NCCP*. Therefore, no conflicts are expected to occur with the established conservation plans for the mitigation/preserve areas. If potential conflicts occur with these mitigations or preserve areas, the *SDG&E Subregional NCCP* is independent of other NCCP/HCPs, and, as such, is not dependent upon the implementation of such plans and is not superseded by these plans (SDG&E 1995). SDG&E would 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*.

## SECTION 4.0 – METHODS

A variety of general and focused studies were performed for the BSA, which includes an approximately 500-foot survey corridor along the entire approximately 16.7-mile Proposed Project alignment as well as other associated work areas. A 500-foot survey corridor was surveyed to provide maximum flexibility during project design. The methods used for the various general and focused studies with the BSA are described in detail, below.

### 4.1. LITERATURE AND HISTORICAL DATA REVIEW

A review of existing literature and historical databases was conducted to determine the existing biological conditions and general occurrence of sensitive biological resources within 5 miles of the BSA. Background research to determine the existing biological conditions included a review of current federal, state, and local regulations, historical and current aerial photographs, U.S. Geological Survey (USGS) topographic maps, U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey maps, data from other projects occurring within the vicinity of the BSA, and other reputable online resources that provide data for the region.

Historical occurrence data for sensitive habitats as well as special-status plant and wildlife species that have been reported from within 5 miles of the BSA were evaluated. A review of data from the most recent version of the CDFW *California Natural Diversity Database* (CNDDDB; CDFW 2013a) was performed to identify known sensitive biological resources within a 5-mile buffer of the Proposed Project alignment. The CNDDDB provides an inventory of reported vegetation communities, plant species, and wildlife species that are considered sensitive by state and federal resource agencies, academic institutions, and other conservation groups. In addition to the CNDDDB, data obtained from the USFWS critical habitat inventory, CNPS *Electronic Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2013), surveys conducted for SDG&E projects, and other databases (e.g., SanGIS, San Diego Natural History Museum [SDNHM]), were also evaluated to better understand the biological conditions within and adjacent to the Proposed Project area.

### 4.2. VEGETATION MAPPING

Vegetation communities and land cover types within the BSA were delineated on color aerial imagery at approximately 1 inch equals 300-foot scale. Biologists mapped the vegetation by walking through the BSA, documenting the dominant plant species, and delineating the vegetation communities and land cover types by hand onto the aerial imagery. In areas that were not accessible because of steep terrain and/or dense vegetation, biologists used binoculars to assess dominant species and draw vegetation polygons from the adjacent slope or from another good vantage point. Digital photographs of representative areas were taken during the mapping survey for reference. After review of each map for consistency or errors, the vegetation community and land cover type boundaries were digitized in the office using Geographic Information Systems (GIS) software.

Vegetation communities were classified according to those described within the *SDG&E Subregional NCCP*. NCCP vegetation community classifications are consistent with, or similar to, the *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986). For the Proposed Project, vegetation communities within the BSA were identified according to the estimated percent cover of the combination of dominant plant species observed. Vegetation community classifications are based on a dominant species within the mapped unit relative to the list of dominant species for a given

Holland vegetation community. Mixed communities are identified where species comprising a second vegetation community are present and intermixed with the dominant vegetation community. When necessary, modifiers are added to certain vegetation classifications to describe a single species that dominates the vegetation class. For example, when a chaparral community is dominated by chamise (*Adenostoma fasciculatum*) rather than the mix of different shrubs, the community is identified as chamise chaparral rather than southern mixed chaparral.

Additionally, certain natural vegetation communities are given a modifier when they have evidence of disturbance such as clearing, agricultural use, off-road vehicle damage, or illegal trash disposal. These areas are generally characterized by a highly reduced and fragmented vegetative cover and may support a high percentage of nonnative grasses or ruderal species, particularly in the understory. This is notated on the vegetation maps as a “D” placed after the name or acronym of the habitat.

#### **4.3. FLORA**

During the vegetation mapping and focused special-status plant surveys (discussed below) conducted within the BSA, biologists noted all common and special-status plant species observed within the BSA. Plant names used follow Rebman and Simpson (2006), but updated names are included where applicable (Baldwin et al. 2012). Additional plant references used included *The Jepson manual: vascular plants of California, Second Edition* (Baldwin et al. 2012) and the Consortium of California Herbarium data. Methods used for the focused special-status plant species surveys are described in Section 4.5.2, Special-status Plant Surveys.

#### **4.4. WILDLIFE**

During the various field efforts conducted within the BSA, biologists noted all common and special-status wildlife species observed directly or detected indirectly through sign, including – but not limited to – scat, tracks, burrows, and vocalizations. Methods used for the focused, protocol-level coastal California gnatcatcher (*Polioptila californica californica*) surveys are described in Section 4.5.3, Coastal California Gnatcatcher Surveys. Additional focused wildlife surveys that are required for the Proposed Project but that have not yet been conducted are discussed in Section 7.1: Additional Avoidance and Minimization Efforts and Section 7.2: Additional Focused, Special-Status Surveys.

#### **4.5. SPECIAL-STATUS SPECIES**

Special-status species are species that have one or more of the special-status classifications presented in Table 1, below. These classifications are described in further detail in the Section 5: Results and Discussion, below.

**Table 1. Special-Status Abbreviations and Explanations**

STATUS ABBREVIATION		STATUS EXPLANATION
FEDERAL	FE	federally listed endangered species
	FT	federally listed threatened species
	FC	federal candidate species, proposed for listing
STATE	SE	state-listed endangered species
	ST	state-listed threatened species
	SR	state-listed rare species (plants only)
	SC	state candidate species, proposed for listing
	SSC	species of special concern (wildlife only)
	CFP	fully protected (wildlife only)
	WL	on the CDFW watch list (birds only)
CALIFORNIA NATIVE PLANT SOCIETY (PLANTS ONLY)	1A	presumed extirpated in California and rare or extinct elsewhere
	1B	rare, threatened, and endangered in California and elsewhere
	2A	presumed extirpated in California but more common elsewhere
	2B	rare, threatened, or endangered in California but more common elsewhere
	3	more information needed
	4	limited distribution
CALIFORNIA NATIVE PLANT SOCIETY THREAT RANKS	0.1	seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
	0.2	moderately threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat)
	0.3	not very threatened in California (<20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

For each special-status species, its potential for occurrence within the BSA was also assessed. Table 2, below, provides the terms used to explain the potential for each species to occur as well as the criteria used to make these probability determinations.



**Table 2. Criteria for Evaluating Special-status Species Potential for Occurrence**

POTENTIAL	CRITERIA
Not Expected	Historical records for this species do not exist within or adjacent to the BSA, and the species is restricted to habitats or environmental conditions that do not occur within the BSA.
Not Detected	Species for which suitable habitat is present and focused surveys were conducted, but the species was not detected within the BSA.
Low	Historical records for this species do not exist within or adjacent to the BSA, and habitats or environmental conditions needed to support the species are of marginal or poor quality.
Moderate	Historical records exist for the species within or adjacent to the BSA but only marginal to low quality habitat exists within and adjacent to the BSA, <u>OR</u> no historical records exist for the species within or adjacent to the BSA but the habitat requirements or environmental conditions associated with the species occur within or adjacent to the BSA.
High	Historical records exist for the species within or adjacent to the BSA, <u>AND</u> the habitat requirements and environmental conditions associated with the species occur within or adjacent to the BSA.
Present	Species was detected within the BSA during field surveys.

Prior to initiating field surveys, background research and results from the database searches were used to make an initial assessment of the special-status species that have a potential to occur within or adjacent to the BSA. Based on the historical data available for the region and the criteria presented in Tables 1 and 2, above, a list of special-status species that are known to occur or have a potential to occur within or adjacent to the BSA was compiled. In addition, special-status species that had no historical occurrences based on the databases searches but that are known from the region were also included in the special-status species list.

#### **4.5.1 Special-Status Species Habitat Assessment**

A focused habitat assessment was conducted to better refine the probabilities for special-status plant and wildlife species to occur within or adjacent to the BSA. Biologists performed an evaluation of the existing vegetation communities within and adjacent to the BSA to determine if the BSA provides potential habitat for the special-status species that are known to occur or have a potential to occur within the region. The data obtained from the habitat assessment was used to reevaluate the special-status species list and determine which species have a potential to occur within or adjacent to the BSA.

#### **4.5.2 Special-Status Plant Surveys**

Prior to the start of the focused surveys, a list of the special-status plant species that have a potential to occur within or adjacent to the BSA was developed from a query of the CDFW’s CNDDDB, the SanGIS

database, data provided by SDG&E from other projects, research using the SDNHM's plant distribution mapping and voucher specimen lists, and local knowledge of special-status plant species likely to occur in the area. The CNDDDB query included a review of special-status plant species reported within 1, 3, and 5 miles of the Proposed Project alignment.

Based on the results of the database search as well as the focused habitat assessment described in Section 4.5.1, above, special-status plant species were carefully considered for their potential to occur within or adjacent to the BSA, and a list of target species was developed for the Proposed Project. Species that were on the CNDDDB list but were recently "considered but rejected (CBR)" as a special-status species by CNPS because they are more common than previously thought or because their taxonomy has changed were not included because they do not meet the criteria to be classified as a special-status species (Table 2).

Surveys were conducted by walking meandering transects throughout the BSA. For each special-status plant observation, surveyors recorded the approximate location using a hand-held GPS device that recorded the plant's location and the elevation above mean sea level (amsl) and by hand onto a high resolution aerial image of the BSA. Where vegetation was very dense on steep slopes, such as in scrub oak chaparral, documentation of some species was accomplished through the use of binoculars and marking the species' location on a field map that was later digitized for incorporation into the GIS database. In addition to recording special-status plant species observed during this survey, biologists assessed the BSA to refine the probability for the other target special-status plant species that will be surveyed for during spring/summer 2014. Biologists also recorded incidental detections of special-status wildlife species during these focused special-status plant surveys.

#### **4.5.3 Coastal California Gnatcatcher Surveys**

Focused surveys for coastal California gnatcatcher were conducted by USFWS-permitted biologists in accordance with the current USFWS survey protocol for coastal California gnatcatcher surveys within NCCP areas, titled *Coastal California Gnatcatcher (Poliophtila californica californica) Presence/Absence Survey Guidelines* and dated February 28, 1997 (USFWS 1997a). Six surveys were conducted, with a USFWS-approved modification to space the surveys a minimum of 10 days apart to meet schedule constraints for the Proposed Project.

All surveys were conducted between approximately 6:00am and 12:00pm and avoided periods of adverse weather conditions (e.g., excessively hot or cold temperatures, high winds, steady rain, dense fog, and other inclement weather conditions) that would impede detection of the coastal California gnatcatcher. Surveyors slowly walked throughout the suitable habitat identified within the BSA during the habitat assessment and used visual and auditory cues to detect the coastal California gnatcatcher. Various routes were utilized to conduct an unbiased survey of the potentially suitable habitat within the BSA. Pre-recorded coastal California gnatcatcher vocalization playbacks were only used to elicit initial calls from coastal California gnatcatcher and were not used frequently or to elicit further behaviors. Pre-recorded vocalizations were played for a period of 5 to 15 seconds and were generally repeated approximately every 100 feet within the surveyed habitat. No more than approximately 80 acres of suitable habitat were surveyed per day per USFWS-permitted biologist.

For each coastal California gnatcatcher detection, surveyors recorded the approximate location using a hand-held GPS device and by hand onto a high resolution aerial image of the BSA. Surveyors also estimated the age, sex, and number of individuals detected and included notes about each observation.

In addition, surveyors recorded other wildlife species observed directly or detected indirectly by sign, including scat, tracks, calls, and other evidence.

#### **4.6. CRITICAL HABITAT**

Existing critical habitat data layers within a 5-mile buffer of the Proposed Project alignment were overlain onto an aerial and graphic of the BSA to determine if the Proposed Project has the potential to impact any areas designated as critical habitat. Critical habitat located adjacent to the BSA was assessed to assure that impacts to the habitat would be avoided. Similarly, critical habitat located within the BSA was assessed for its potential to support the species for which it was designated.

#### **4.7. ENVIRONMENTALLY SENSITIVE HABITAT AREAS**

ESHAs were identified by overlaying the boundaries of the coastal zone onto the BSA boundaries. Vegetation communities identified within the BSA during the vegetation mapping effort were used to identify areas that have special-status species, that could provide habitat for special-status species, and areas that could support habitats or species that could be disturbed by human activities. All areas within the BSA and the coastal zone that met the above definition were classified as ESHAs. The Proposed Project was designed to avoid or minimize impacts to ESHAs to the maximum extent possible.

#### **4.8. PRESERVE AREAS**

SDG&E provided the current SDG&E preserve data layers for the Proposed Project vicinity. These preserve layers were overlain onto an aerial and graphic of the BSA to determine if the Proposed Project has the potential to impact any area designated as an established preserve. The Proposed Project was designed to avoid or minimize impacts to preserve areas to the extent feasible, and unavoidable impacts were analyzed. Preserve areas located adjacent to the BSA were assessed to assure that impacts to the vegetation communities within these preserves would be avoided.

#### **4.9. JURISDICTIONAL DELINEATION SURVEY**

EI conducted a focused jurisdictional delineation for the Proposed Project. The methods used to perform the jurisdictional delineation are summarized below.

##### **4.9.1 Literature Review**

Prior to the field delineation, EI analyzed numerous available data sets to determine the locations of potential jurisdictional areas. These data included:

- A 1 inch equals 2,400 feet color aerial photograph of the Proposed Project alignment
- National Wetlands Inventory (NWI) data
- USDA NRCS soil mapping data
- Historic and recent aerial photographs
- USGS topographic maps

This information informed the field surveys, described below.

#### 4.9.2 Field Survey

The delineation field work involved walking the entire BSA, focusing on (but not limited to) potential jurisdictional areas identified during the literature search, and physically identifying any hydrologic, vegetative, and geomorphic characteristics to delineate potentially jurisdictional waters and wetlands. The field survey was conducted according to the technical guidelines provided in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0; USACE 2008) to identify and delineate wetlands that may be subject to regulatory jurisdiction under Section 404 and 401 of the CWA. “Waters of the State” were identified pursuant to criteria outlined in Section 1600 of the California Fish and Game Code, including the presence of a defined bed and bank and any associated riparian vegetation. For each feature, total stream length and the width of the “top of bank” were measured. For streams with riparian vegetation, this width was extended to the outer drip-line of this vegetation. Drainages that appeared to meet the criteria for “waters of the U.S.” or “waters of the State” were considered potentially jurisdictional; however, any determination is subject to verification by the regulatory agencies. For areas under the regulation of the CCC, wetlands were also be delineated using the one parameter definition, as defined in the California Code of Regulations Title 14.

Vernal pools are ephemeral basins that fill with rainwater in the winter and spring but are dry at other times of the year and often support endangered species, such as San Diego button-celery (*Eryngium aristulatum* var. *parishii*) and fairy shrimp. Under certain circumstances, vernal pools can be considered jurisdictional waters by Federal and State resource agencies. Surveys were not completed in the appropriate season to determine potential vernal pool ponding extent; however, potential vernal pools encountered were delineated at the watershed level based on evidence of ponding and/or depressional topography within soil types known to produce vernal pools.

#### 4.10. **IMPACT DETERMINATION**

Potential impacts associated with implementation of the Proposed Project were evaluated by considering all Proposed Project activities and their potential to impact biological resources within the BSA. Potential impacts were classified as either permanent or temporary and further classified as direct, indirect, and/or cumulative. Definitions for the different types of impacts are discussed in more detail later in this document, in Section 6.0: Impacts.

## SECTION 5.0 – RESULTS AND DISCUSSION

### 5.1. TOPOGRAPHY

Elevations with the BSA range from approximately 1,000 feet amsl at Sycamore Canyon Substation in the eastern portion of the BSA to approximately 120 feet amsl in an unnamed tributary to Peñasquitos Creek, which is located approximately 1 mile east of the Peñasquitos Substation in the western portion of the BSA (Appendix A: Figures). The BSA crosses through a network of roads and highways, mixed-use development, parks, and undeveloped open space. Topography along the BSA varies from relatively flat developed and undeveloped areas, to steep and rolling hills and ridges, to wide and narrow drainages and canyons. The BSA crosses several unnamed and named drainages and canyons, including Peñasquitos Canyon, McGonigle Canyon, and Deer Canyon.

### 5.2. VEGETATION COMMUNITIES AND LAND COVER TYPES

Biologists mapped vegetation communities and land cover types between September 25 and October 2, 2013. Within the BSA, biologists classified the vegetation communities and land cover types into 25 different categories (Appendix A: Figures). These categories are summarized in Table 3, below, and a detailed description of each is provided later in this section.

**Table 3. Vegetation Communities and Land Cover Types within the BSA**

NCCP Vegetation Community	Holland Vegetation Community/Land Cover Type	Approx. Acreage
Coastal Sage Scrub	Diegan Coastal Sage Scrub	179.86
	Diegan Coastal Sage Scrub – Disturbed	29.42
	Coastal Sage Scrub – Revegetated	59.26
Coastal Sage/Chaparral Mix	Coastal Sage – Chaparral Scrub	10.44
Chaparral	Chamise Chaparral	71.12
	Chamise Chaparral - Disturbed	5.61
	Southern Mixed Chaparral	93.44
	Southern Mixed Chaparral – Disturbed	4.02
	Scrub Oak Chaparral	78.51
Grassland	Native Grassland	11.01
	Nonnative Grassland	85.32

**Table 3 (cont.). Vegetation Communities and Land Cover Types within the BSA**

NCCP Vegetation Community	Holland Vegetation Community/Land Cover Type	Approx. Acreage
Alkali Marsh	Alkali Marsh – Revegetated	0.29
Freshwater Marsh	Freshwater Marsh	0.49
Inland Water	San Diego Mesa Vernal Pool	0.08
	Open Water*	0.92
Riparian Scrub	Southern Riparian Scrub	1.37
	Mulefat Scrub	1.40
	Southern Willow Scrub	3.41
	Tamarisk Scrub	0.40
Coast Live Oak Riparian Forest	Southern Coast Live Oak Riparian Forest	2.63
Eucalyptus Forest	Eucalyptus Woodland*	5.14
Disturbed Habitat	Disturbed Habitat*	18.36
N/A	Developed Lands*	262.22
	Ornamental*	85.93
	Bare Ground*	48.29
TOTAL		1,058.88**

\*This classification does not have a Holland Code. \*\*Total reflects actual total without rounding error.

The 25 vegetation communities and land cover types found within the BSA are described, below.

### 5.2.1 Coastal Sage Scrub

Three types of coastal sage scrub were mapped within the BSA, including Diegan coastal sage scrub, disturbed Diegan coastal sage scrub, and revegetated coastal sage scrub. These are described, below.

#### 5.2.1.1 **Diegan Coastal Sage Scrub (Holland Code 32510)**

Within the BSA, there are approximately 179.86 acres of Diegan coastal sage scrub. Diegan coastal sage scrub is a wide-spread vegetation community ranging from coastal Los Angeles County into northern

Baja California, Mexico. It consists mainly of low, soft-woody sub-shrubs (approximately 3 feet high) that are most actively growing in winter and early spring. Many taxa are facultatively drought-deciduous. Stem- and leaf-succulents are also often present, but are usually not conspicuously dominant species. 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. Dominant shrub species in this vegetation type may vary, depending on local site factors and levels of disturbance. Within the BSA, this vegetation community is characterized by a variable mix of California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum* var. *fasciculatum*), black sage (*Salvia mellifera*), laurel sumac (*Malosma laurina*), deerweed (*Acmispon glaber*), broom baccharis (*Baccharis sarothroides*), coyote brush (*Baccharis pilularis*), California sunflower (*Encelia californica*), and occasionally live-forevers (*Dudleya* spp.), coast barrel cactus (*Ferocactus viridescens*), and needlegrass (*Stipa* spp.).

#### **5.2.1.2 Diegan Coastal Sage Scrub – Disturbed (Similar to Holland Code 32510)**

Within the BSA, there are approximately 29.42 acres of disturbed Diegan coastal sage scrub. Disturbed Diegan coastal sage scrub is similar to Diegan coastal sage scrub, described above, but it was classified as disturbed where mechanical or natural disturbance has reduced the overall cover of the community resulting in large areas colonized by herbaceous weedy species and/or bare ground. Some disturbance types include clearing, off-road vehicle damage, or illegal trash disposal.

#### **5.2.1.3 Coastal Sage Scrub – Revegetated (Similar to Holland Code 32510)**

Within the BSA, there are approximately 59.26 acres of revegetated coastal sage scrub. Revegetated coastal sage scrub is a subtype of coastal sage scrub that represents a restored coastal sage scrub vegetation community. It is not specifically recognized by Holland (1986) because it is not a naturally occurring vegetation community. This community often results after an area was disturbed or recontoured to mitigate for impacts associated with the implementation of a project. Container plants and/or a seed mix are planted to restore the area to a natural condition based on the local topography. Evidence of restored or revegetated sites often includes irrigation distribution equipment, evenly spaced container plantings, straw wattles for interim erosion control, stakes, hydromulch, evenly graded or plowed soil substrate, among others. On occasion, species that are not necessarily native to the immediate area are also planted, including brittlebush (*Encelia farinosa*) and cultivars of sage (*Salvia* spp.).

#### **5.2.2 Coastal Sage/Chaparral Mix**

The coastal sage/chaparral mix within the BSA was classified as coastal sage-chaparral scrub, consistent with Holland Code 37G00. Within the BSA, there are approximately 10.44 acres of coastal sage-chaparral scrub. Coastal sage-chaparral scrub is a mixed community including both drought-deciduous sage scrub species and woody chaparral species. This vegetation community is apparently a post-fire successional community containing vegetative cover that includes roughly equal amounts of both sage scrub and chaparral species. Characteristic dominant species often include chamise, California sagebrush, lilacs (*Ceanothus* spp.), black sage, broom baccharis, laurel sumac, lemonadeberry (*Rhus integrifolia*), and poison oak (*Toxicodendron diversilobum*). Within the BSA, this vegetation community includes the following plant species: chamise, California sagebrush, California buckwheat, black sage, laurel sumac, lemonadeberry, and mission manzanita (*Xylococcus bicolor*). Coastal sage-chaparral scrub is generally considered sensitive and is regulated similar to coastal sage scrub as described above.

### 5.2.3 Chaparral

Five types of chaparral were mapped within the BSA, including chamise chaparral, disturbed chamise chaparral, southern mixed chaparral, disturbed southern mixed chaparral, and scrub oak chaparral. These are described, below.

#### 5.2.3.1 Chamise Chaparral (Holland Code 37200)

Within the BSA, there are approximately 71.12 acres of chamise chaparral. Chamise chaparral is widely distributed throughout California on dry slopes and ridges at low and medium elevations where it occupies thin, rocky, or heavy soils. It is typically composed of broad-leaved, sclerophyllous shrubs (e.g., bearing stiff, leathery leaves), although species composition varies considerably with location. The plants of this community have developed the ability to survive recurrent fires by producing seeds that require a fire-related cue to stimulate germination and/or by stump sprouting after being burned. Within the BSA, this vegetation community is characterized by nearly monotypic stands of chamise ranging from 3 to 9 feet in height. Occasionally, other shrub species, such as mission manzanita or coast spice bush (*Cneoridium dumosum*) are present, but contribute little to the overall cover.

#### 5.2.3.2 Chamise Chaparral – Disturbed (Similar to Holland Code 37200)

Within the BSA, there are approximately 5.61 acres of disturbed chamise chaparral. Disturbed chamise chaparral is similar to chamise chaparral, described above, but it was classified as disturbed where this community has been altered by mechanical disturbance or where it has poorly recovered from fire. These areas are generally characterized by a highly reduced and fragmented vegetative cover and may support a high percentage of nonnative grasses or ruderal species, particularly in the understory.

#### 5.2.3.3 Southern Mixed Chaparral (Holland Code 37120)

Within the BSA, there are approximately 93.44 acres of southern mixed chaparral. Southern mixed chaparral tends to occur on steeper, more mesic north-facing slopes than chamise chaparral. This vegetation community type is characterized by relatively high species diversity. Within the BSA, this vegetation community includes the following plant species: mission manzanita, coast spice bush, Nuttall's scrub oak (*Quercus dumosa*), Ramona-lilac (*Ceanothus tomentosus*), summer-holly (*Comarostaphylis diversifolia* ssp. *diversifolia*), lemonadeberry, and toyon (*Heteromeles arbutifolia*). The understory component is generally better-developed in this association than in chamise chaparral, and may include species such as mariposa-lily (*Calochortus* spp.), soap plant (*Chlorogalum* spp.), and bedstraw (*Galium* spp.), among others.

During the mapping, biologists considered the potential for southern maritime chaparral (Holland Code 37C30) to be present within the BSA because of the Proposed Project's proximity to the coast and the different microclimate it supports. Southern maritime chaparral is a low, relatively open chaparral characterized by such species as wart-stemmed ceanothus (*Ceanothus verrucosus*), Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*), summer-holly, Del Mar sand aster (*Corethrogyne filaginifolia* var. *linifolia*), and sea dahlia (*Coreopsis maritima*). Other species that commonly occur in this habitat are chamise, mission manzanita, and toyon. It was determined that southern maritime chaparral, which occurs at Torrey Pines State Reserve, Crest Canyon, and other nearby locations, is not present in the BSA. Species such as Del Mar manzanita, wart-stemmed ceanothus, summer-holly, and others tend to be more frequent and have increased dominance in southern maritime chaparral, while species such as



chamise, toyon, and mission manzanita typically dominate southern mixed chaparral. Some stands of chaparral that the surveying biologists encountered in the Del Mar Mesa Preserve support summer-holly, but the other constituents were not present, nor were the typical sandstone soil formations. Southern mixed chaparral is more wide ranging and occurs on a variety of soil types both along the coast and well inland. For these reasons, these diverse chaparral patches were mapped as southern mixed chaparral.

#### **5.2.3.4 Southern Mixed Chaparral – Disturbed (Similar to Holland Code 37120)**

Within the BSA, there are approximately 4.02 acres of disturbed southern mixed chaparral. Disturbed southern mixed chaparral is similar to southern mixed chaparral, described above, but it was classified as disturbed where this community has been altered by disturbance, such as clearing, off-road vehicle damage, or illegal trash disposal. These areas are generally characterized by a highly reduced and fragmented vegetative cover and may support a high percentage of nonnative grasses or ruderal species, particularly in the understory.

#### **5.2.3.5 Scrub Oak Chaparral (Holland Code 37900)**

Within the BSA, there are approximately 78.51 acres of scrub oak chaparral. Scrub oak chaparral is a dense, evergreen chaparral association that approaches 20 feet in height and is dominated by Nuttall's scrub oak and/or oak hybrids such as *Quercus xacutidens*. This habitat occurs on more mesic sites (such as east and north facing slopes and ravines) than the other chaparral associations and often at slightly higher elevations. These more favorable sites often allow scrub oak chaparral to recover from fire more quickly than other chaparral types. Additional shrub species found in scrub oak chaparral include chamise, mission manzanita, and coast spice bush.

#### **5.2.4 Grassland**

Two types of grassland were mapped within the BSA, including native grassland and nonnative grassland. These are described, below.

##### **5.2.4.1 Native Grassland (Holland Code 42110)**

Within the BSA, there are approximately 11.01 acres of native grassland. Native grassland is characterized by a relatively low (greater than 10 percent) to dense herbaceous cover of the perennial, tussock-forming needlegrass species and most closely corresponds to Holland's (1986) valley needlegrass grassland. Native and introduced annuals occur between the needlegrass, often actually exceeding the bunchgrass in cover (Holland 1986). This association generally occurs on fine-textured clay soils that are moist or wet in winter, but very dry in summer. Shrubs are infrequent, probably due to the unstable clay soils. The degree of habitat quality in native grasslands varies greatly, depending on the history of grazing, cultivation, or other disturbance factors. Within the BSA, this association generally occurs as small stands interspersed within scrub habitats. It is dominated by needlegrass species (*Stipa* spp.); other indicator species include blue-eyed grass (*Sisyrinchium bellum*), mariposa-lily, and clarkia (*Clarkia* spp.).

#### 5.2.4.2 Nonnative Grassland (Holland Code 42200)

Within the BSA, there are approximately 85.32 acres of nonnative grassland. Nonnative grassland generally occurs on fine-textured loam or clay soils that are moist or even waterlogged during the winter rainy season and very dry during the summer and fall. It is characterized by a dense to sparse cover of annual grasses, often with native and nonnative annual forbs (Holland 1986). This habitat is a disturbance-related community most often found in old agricultural fields or openings in native scrub habitats. This association has replaced native grassland and coastal sage scrub at many localities throughout southern California. Typical nonnative grasses found within the BSA include red brome (*Bromus rubens*), ripgut grass (*Bromus diandrus*), wild oat (*Avena barbata*), and soft chess (*Bromus hordeaceus*). Characteristic forbs include red-stem filaree (*Erodium cicutarium*), mustard (*Brassica* spp.), tar plant (*Deinandra* spp.), California goldfields (*Lasthenia* spp.), and purple owl's clover (*Castilleja exserta* ssp. *exserta*).

#### 5.2.5 Alkali Marsh (similar to Holland Code 52310)

The alkali marsh within the BSA was classified as revegetated alkali marsh, similar to Holland Code 52310. Within the BSA, there is approximately 0.29 acre of revegetated alkali marsh located in one small area within the BSA. This community occurs in an area that was disturbed or recontoured, likely to mitigate for impacts associated with the implementation of a project. Within the BSA, the revegetated alkali marsh consists of spiny rush (*Juncus acutus* ssp. *leopoldi*) and San Diego marsh-elder (*Iva hayesiana*) along an ephemeral drainage.

#### 5.2.6 Freshwater Marsh (Holland Code 52410)

Within the BSA, there is approximately 0.49 acre of freshwater marsh. Freshwater marsh is dominated by perennial, emergent monocots measuring about 4.3 to 6.6 feet in height. Freshwater marsh occurs in wetlands that are permanently flooded by standing fresh water (Holland 1986). Within the BSA, freshwater marsh is comprised of uniform stands of cattails (*Typha domingensis*).

#### 5.2.7 Inland Water

Two types of inland water were mapped within the BSA, including San Diego mesa vernal pools and open water. These are described, below.

##### 5.2.7.1 San Diego Mesa Vernal Pools (Holland Code 44321)

Within the BSA, there is approximately 0.08 acre of San Diego mesa vernal pools. San Diego mesa vernal pools are a highly specialized vegetation community occurring on undeveloped mesa tops. Vernal pools are depressions that fill with rainwater that does not drain off or percolate because of the mesa top topography and underlying soil conditions (i.e., a claypan or hardpan layer that prevents or impedes subsurface drainage). These pools support a unique plant community dominated by annual herbs and grasses. Many special-status plant and wildlife species have a potential to occur in these pools, including the endangered San Diego button-celery (*Eryngium aristulatum*) and San Diego fairy shrimp (*Branchinecta sandiegonensis*). San Diego button-celery and woolly marbles (*Psilocarphus brevissimus*) were observed in vernal pools within the BSA during the late summer/fall 2013 special-status plant species surveys.

### 5.2.7.2 Open Water (No Holland Code)

Within the BSA, there is approximately 0.92 acre of open water. Open water includes reservoirs, lakes, ponds, and relatively large sloughs, channels, and rivers or streambeds that contain water throughout the year. Within the BSA, open water habitat occurs in the form of a stock pond in the western portion of the BSA.

### 5.2.8 Riparian Scrub

Four types of riparian scrub were mapped within the BSA, including southern riparian scrub, mulefat scrub, southern willow scrub, and tamarisk scrub. These are described, below.

#### 5.2.8.1 Southern Riparian Scrub (Holland Code 63300)

Within the BSA, there are approximately 1.37 acres of southern riparian scrub. Southern riparian scrub represents a combination of both the southern willow scrub and mulefat scrub communities of Holland's (1986) classification system (see below). It varies from a dense, broad-leaved, winter-deciduous association dominated by several species of willow (*Salix* spp.) to an herbaceous scrub dominated by mulefat (*Baccharis salicifolia*). Understory vegetation is usually composed of nonnative, weedy species or is lacking altogether. This association may represent a successional stage leading to riparian woodland or forest, or it may be a stable vegetation community. Southern riparian scrub species observed within the BSA include black willow (*Salix gooddingii*), arroyo willow (*Salix lasiolepis*), and mulefat.

#### 5.2.8.2 Mulefat Scrub (Holland Code 63310)

Within the BSA, there are approximately 1.40 acres of mulefat scrub. Mulefat scrub is characterized as a depauperate, tall, herbaceous riparian scrub strongly dominated by mulefat. Within the BSA, this community was present in small patches along ephemeral stream channels with coarse substrate.

#### 5.2.8.3 Southern Willow Scrub (Holland Code 63320)

Within the BSA, there are approximately 3.41 acres of southern willow scrub. Southern willow scrub is found on loose, sandy, or fine gravelly alluvium deposited near stream channels during floods, and most stands are too dense to allow much understory to develop (Holland 1986). Within the BSA, this community was comprised of black willow and arroyo willow and was present along ephemeral stream channels with coarse substrate, often adjacent to mulefat scrub.

#### 5.2.8.4 Tamarisk Scrub (Holland Code 63810)

Within the BSA, there is approximately 0.40 acre of tamarisk scrub. Tamarisk scrub is a disturbed wetland community dominated by the nonnative, invasive Tamarisk (*Tamarix* spp.). This species can be a dominant along ephemeral and perennial drainages with alkaline soils where native riparian vegetation has been removed or disturbed. Within the BSA, tamarisk scrub is present along two disturbed drainages adjacent to native riparian vegetation, such as freshwater marsh and mulefat scrub.

### **5.2.9 Coast Live Oak Riparian Forest (Holland Code 61310)**

The coast live oak riparian forest within the BSA was classified as southern coast live oak riparian forest, consistent with Holland Code 61310. Within the BSA, there are approximately 2.63 acres of southern coast live oak riparian forest. Southern coast live oak riparian forest is characterized by an open to locally dense evergreen plant community dominated by coast live oak trees (*Quercus agrifolia*), which can reach from 30 feet to over 80 feet in height. This community typically has a poorly developed understory of shrubs, which can include toyon, Mexican elderberry (*Sambucus mexicana*), lemonadeberry, and poison oak, among others. The herb layer by contrast is well developed and relatively continuous. It often includes bedstraw, nettles (*Urtica* spp.), and various native and nonnative grasses. This habitat can be found on well-drained bottomlands and outer floodplains on fine-grained, rich alluvium (Holland 1986). Within the BSA, dominant species observed besides coast live oaks include toyon, poison oak, wild oats, and bedstraw.

### **5.2.10 Eucalyptus Forest (no Holland Code)**

The eucalyptus forest within the BSA was classified as eucalyptus woodland. Within the BSA, there are approximately 5.14 acres of eucalyptus woodland. Eucalyptus woodland is not a native plant community in California and is not described in Holland. It is typically characterized by dense stands of gum trees (*Eucalyptus* spp.). Plants in this genus, imported primarily from Australia, were originally planted in groves throughout many regions of coastal California as a potential source of lumber and building materials, for their use as windbreaks, and for their horticultural novelty. They have increased their cover through natural regeneration, particularly in moist areas sheltered from strong coastal winds. Gum trees naturalize readily in the state and, where they form dense, monotypic stands, tend to completely supplant native vegetation, greatly altering community structure and dynamics. Very few native plants are compatible with eucalyptus.

### **5.2.11 Disturbed Habitat (no Holland Code)**

Within the BSA, there are approximately 18.36 acres of disturbed habitat. Disturbed habitat refers to any land on which the native vegetation has been significantly altered by agriculture, construction, or other land-clearing activities, and the species composition and site conditions are not characteristic of the disturbed phase of a particular vegetation community (e.g., disturbed chaparral). Disturbed habitat is typically found in vacant lots, roadsides, construction staging areas, or abandoned fields, and is dominated by nonnative annual species and perennial broadleaf species. Within the BSA, disturbed habitat consisted of widely spaced Russian-thistle (*Salsola tragus*), horseweed (*Conyza* spp.), mustard (*Hirschfeldia incana*), and nonnative grasses.

### **5.2.12 Other Land Cover Types**

Three other land cover types, including developed lands, ornamental, and bare ground, were mapped within the BSA but do not correspond with a Holland Code. These are described below.

#### **5.2.12.1 Developed Lands**

Within the BSA, there are approximately 262.22 acres of developed lands. Developed lands are not recognized by Holland (1986) because they support no naturally occurring native vegetation and are characterized by the presence of human-made structures, such as buildings or roads. The level of soil

disturbance is such that only the most ruderal plant species would be expected. In many areas, ornamental plantings are included in developed lands where they are immediately adjacent and part of the residential and/or commercial development.

#### 5.2.12.2 Ornamental

Within the BSA, there are approximately 85.93 acres of ornamental vegetation. Ornamental vegetation is not recognized by Holland (1986) and typically consists of nonnative landscape and/or garden plantings that have been planted in association with buildings, roads, or other development. San Diego County supports more than 250 different types of ornamental trees and numerous other shrubs and herbs that decorate urban areas. Occasionally ornamental species such as rock rose (*Cistus* spp.) were found growing within the BSA away from urban areas, and may be naturalizing.

#### 5.2.12.3 Bare Ground

Within the BSA, there are approximately 48.29 acres of bare ground. Bare ground lacks vegetation, typically because of recent and/or continuous clearing of vegetation. Not recognized by Holland (1986), these areas differ from “developed” because they do not support buildings, paved roads, parking lots, or ornamental plantings and typically the soil is exposed. Within the BSA, bare ground includes dirt roads and recently graded areas.

### 5.3. FLORA

During the surveys conducted for the Proposed Project during late summer/fall 2013, 110 plant species were observed within the BSA, with 77 species (70 percent) encountered considered native and the remaining 33 species (30 percent) considered nonnative and/or naturalized into the area. Dominant plant species are discussed by vegetation community in Section 5.2: Vegetation Communities and Land Cover Types, above. A list of plant species detected within the BSA is included as Appendix B. This list is limited to the species observed during the late summer/fall surveys and is anticipated to increase during the additional surveys planned for spring and summer 2014.

### 5.4. FAUNA

During the surveys conducted for the Proposed Project, 75 wildlife species have been observed within the BSA. A list of wildlife species detected within the BSA is included as Appendix C: Wildlife Species Detected within BSA. Frequently detected common wildlife species include:

- Invertebrates: Behr’s metalmark (*Apodemia virgulti*) and painted lady (*Vanessa cardui*)
- Herpetofauna: western fence lizard (*Sceloporus occidentalis*) and common side-blotched lizard (*Uta stansburiana*)
- Birds: California quail (*Callipepla californica*), red-tailed hawk (*Buteo jamaicensis*), mourning dove (*Zenaida macroura*), Anna’s hummingbird (*Calypte anna*), Cassin’s kingbird (*Tyrannus vociferans*), western scrub-jay (*Aphelocoma californica*), common raven (*Corvus corax*), bushtit (*Psaltriparus minimus*), Bewick’s wren (*Thryomanes bewickii*), California thrasher (*Toxostoma redivivum*), and house finch (*Carpodacus mexicanus*)
- Mammals: desert cottontail (*Sylvilagus audubonii*), coyote (*Canis latrans*), and mule deer (*Odocoileus hemionus*)

## 5.5. SENSITIVE BIOLOGICAL RESOURCES

Sensitive biological resources include sensitive vegetation communities, special-status plant species, special-status wildlife species, wildlife movement corridors and nursery sites, and wetland resources. In general, the principal reason that a species, subspecies, or variety is considered sensitive is the documented or perceived decline or limitation of its population size or geographical extent and/or distribution resulting in most cases from habitat loss. Wildlife movement corridors or linkages also are considered sensitive by local, state, and federal resource and conservation agencies because these corridors allow wildlife to move between adjoining open space areas that are becoming increasingly isolated as open space becomes increasingly fragmented from urbanization, rugged terrain, or changes in vegetation (Beier and Loe 1992). In addition, wetland resources are considered sensitive because of their limited distribution and high wildlife value.

Many sensitive biological resources are known to occur or have the potential to occur within or adjacent to the BSA based on historical data for the region. The following section describes the sensitive biological resources that are known to occur or have a potential to occur within and/or adjacent to the BSA and provides definitions for each of these sensitive biological resources.

### 5.5.1 Sensitive Vegetation Communities

Sensitive vegetation communities are vegetation assemblages, associations, or subassociations that have cumulative losses throughout the region, have relatively limited distribution, support or potentially support sensitive plant or wildlife species, or have particular value to other wildlife. Typically, sensitive vegetation communities are considered sensitive whether or not they have been disturbed. Sensitive vegetation communities are regulated by various local, state, and federal resource agencies. The CNDDDB provides an inventory of vegetation communities that are considered sensitive by state and federal resource agencies, academic institutions, and conservation groups such as the California Native Plant Society (CNPS). Determination of the level of sensitivity is based on the CDFW's Vegetation Classification and Mapping Program that rank both species and plant communities on a global and statewide basis according to the number and size of remaining occurrences as well as recognized threats such as proposed development, habitat degradation, and invasion by nonnative species.

Within the BSA, 18 vegetation communities are considered sensitive habitat under the *SDG&E Subregional NCCP*, including:

- Diegan coastal sage scrub
- disturbed Diegan coastal sage scrub
- Revegetated coastal sage scrub
- coastal sage-chaparral scrub
- chamise chaparral
- disturbed chamise chaparral
- southern mixed chaparral
- disturbed southern mixed chaparral
- scrub oak chaparral
- native grassland
- nonnative grassland
- revegetated alkali marsh
- freshwater marsh
- San Diego mesa vernal pools
- southern riparian scrub
- mulefat scrub
- southern willow scrub
- southern coast live oak riparian forest

The sensitivity of these vegetation communities is discussed, below.

#### **5.5.1.1 Coastal Sage Scrub Communities**

Diegan coastal sage scrub, disturbed Diegan coastal sage scrub, revegetated coastal sage scrub, and coastal sage-chaparral scrub are considered sensitive vegetation communities by both federal and state resource agencies, local jurisdictions, and conservation organizations throughout southern California. USFWS has estimated that coastal sage scrub habitat has been reduced by 70 to 90 percent of its historical extent (USFWS 1991), primarily because of urban expansion along the coast. Additional evidence of the decline of this once common habitat is the declining number of plant and animal species associated with it. Very little coastal sage scrub lies in areas designated as permanent natural open space. These coastal sage scrub communities also provide habitat for a variety of federally and state-listed species, state species of special concern, and species considered sensitive by local jurisdictions.

#### **5.5.1.2 Chaparral Communities**

Chamise chaparral, disturbed chamise chaparral, southern mixed chaparral, disturbed southern mixed chaparral, and scrub oak chaparral are relatively widespread throughout the coastal foothills of San Diego County and northern Baja California, Mexico. However, due to increasing pressures from urban expansion in the northern portion of its range, and the potential for the presence of several sensitive plant species (e.g., wart-stemmed ceanothus, summer holly, Nuttall's scrub oak), these communities are regarded as sensitive by federal, state, and local jurisdictions, particularly where they support sensitive plant or animal species.

#### **5.5.1.3 Grassland Communities**

Native grassland is considered sensitive by federal, state, and local jurisdictions because of its limited distribution, potential for supporting special-status plant and wildlife species, and habitat loss from agricultural activities and urban and rural development. In addition, nonnative or annual grassland is considered sensitive where it occurs in large contiguous areas because it provides vital foraging habitat for raptors and often supports other sensitive wildlife species.

#### **5.5.1.4 Riparian and Wetland Communities**

All riparian communities in southern California are considered sensitive by federal, state, and/or local resource agencies, including freshwater marsh, San Diego mesa vernal pools, southern riparian scrub, mulefat scrub, southern willow scrub, coast live oak riparian forest, and revegetated alkali marsh. 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.

Freshwater marshes are among the most productive wildlife habitats. They provide food, cover, and water for numerous mammal, bird, reptile, and amphibian species. Many species rely on freshwater marsh for their entire life cycle. Many of the species listed as occurring in riparian habitats are likely to use freshwater marshes in some capacity for foraging, cover, or breeding. Freshwater marshes are a type of wetland habitat that is considered a sensitive and declining resource by several regulatory agencies.

San Diego mesa vernal pools were formerly extensive on the mesas and flat marine terraces north of San Diego, but have been largely extirpated by urban development. It has been estimated that more than 90 percent of the original vernal pool habitat within the San Diego region has been eliminated (Beauchamp 1979). Of the pool habitat remaining in 1979, an additional 23 percent had been lost by 1986 (Bauder 1986).

Southern riparian scrub, mulefat scrub, southern willow scrub, and revegetated alkali marsh are wetland habitat, and, as such, are regulated by the resource agencies. In addition, southern coast live oak riparian forest generally are considered sensitive by the resources agencies primarily because of its limited acreage, high wildlife value, and gradual decline as a result of development. Despite the level of disturbance in some areas, these vegetation communities provide habitat for many wildlife species that would not otherwise be found in the vicinity.

### 5.5.2 Special-Status Plant Species

For purposes of this report, special-status plant species include those that are (1) listed or proposed for listing by federal or state agencies as threatened or endangered; (2) California Rare Plant Ranks (CRPR) List 1 or List 2 (CNPS 2013); or (3) considered rare, endangered, or threatened by the CDFW (CDFW 2011a) or other local conservation organizations or specialists (see Table 1, above). Noteworthy plant species are considered to be those that are CRPR List 3 and List 4 (CNPS 2013). The CNPS is a statewide resource conservation organization that has developed an inventory of California's sensitive plant species. The CNPS listing is sanctioned by the CDFW and essentially serves as an early warning list of potential candidate species for threatened or endangered status.

According to USFWS, a federally endangered species is defined as a species facing extinction throughout all or a significant portion of its geographic range, and a federally threatened species is defined as a species that is likely to become endangered within the foreseeable future throughout all or a significant part of its range. CDFW defines an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy, a threatened species as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management, and a rare species as one present in such small numbers throughout its range that it may become endangered if its present environment worsens.

Species that are federally or state-listed threatened or endangered species and/or are designated as CRPR List 1A, 1B, 2A, and/or 2B (see Table 1, above) are typically afforded a degree of protection that entails a permitting process, including specific mitigation measures to compensate for impacts to the species. Species that are proposed to be listed by the USFWS are treated similarly those listed species by that agency. Recommendations of the USFWS, however, are advisory rather than mandatory in the case of proposed species. Although plant species that are classified as CRPR List 3 or 4 are not provided legal protection, this designation is used to identify declining plant species that are considered sensitive by the CNPS but not considered threatened or endangered. In addition, CNPS has also added threat ranks – 0.1, 0.2, 0.3 (see Table 1, above) – to these designations to further clarify a species' sensitivity status.

Based on the background research conducted for this Proposed Project, a total of 75 special-status plant species are known to occur or have a potential to occur within 5 miles of the BSA (Appendix A: Figures).



All 75 special-status plant species are summarized in Appendix D: Special-Status Plant Species with a Potential for Occurrence in Vicinity of BSA. Of these, 41 special-status species are not expected to occur within or adjacent to the BSA. Therefore, they are presented in Appendix D but are not discussed further in this document. The remaining 34 special-status plant species have a potential to occur within the BSA. These species are summarized in Appendix D and discussed in more detail later in this section. Of the 34 special-status plant species with a potential to occur within the BSA, 12 were observed during the late summer/fall 2013 special-status plant species surveys (Appendix E: Special-Status Plant Survey Memo). See Table 1, above, for an explanation of the abbreviated terms used within Section 5.5. In order of highest to lowest sensitivity, these species include:

- San Diego button-celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1, NCCP)
- Nuttall's scrub oak (*Quercus dumosa*; CRPR 1B.1)
- San Diego goldenstar (*Bloomeria clevelandii*; CRPR 1B.1, NCCP)
- summer-holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; 1B.2)
- Torrey pine (as planted individuals) (*Pinus torreyana*; CRPR 1B.2, NCCP)
- spineshrub (*Adolphia californica*; CRPR 2B.1)
- coast barrel cactus (*Ferocactus viridescens*; CRPR 2B.1, NCCP)
- San Diego marsh-elder (*Iva hayesiana*; CRPR 2B.2)
- graceful tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- spiny rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Palmer's sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego sunflower (*Bahiopsis [Viguiera] laciniata*; CRPR 4.2)

The 34 special-status plant species with a potential to occur within the BSA are discussed in detail, below.

#### 5.5.2.1 San Diego Thorn-Mint

San Diego thorn-mint (*Acanthomintha ilicifolia*) is a federally listed threatened species, a state-listed endangered species, a CRPR 1B.1 species (seriously threatened in California and elsewhere), and a NCCP-covered, narrow endemic species. It is an annual herb in the Lamiaceae family that typically blooms from April to June. This species is found on heavy clay soils in openings in chaparral, coastal sage scrub, grassland, and around vernal pools. San Diego thorn-mint is known from San Diego County and in Baja California, Mexico, at elevations between 30 and 3,150 feet amsl. This species is threatened by nonnative plant species, road construction and maintenance, vehicle impacts, foot traffic, erosion, and development (CNPS 2013).

San Diego thorn-mint has a moderate potential to occur within the BSA. This species is known to occur in Los Peñasquitos Canyon Preserve (SDNHM 2013b, CDFW 2013a); however, while suitable soils are present, suitable habitat within the BSA is limited. Within a 5-mile buffer of the Proposed Project alignment, USFWS critical habitat for this species occurs in two separate locations that are both

approximately 0.25 mile from the Proposed Project alignment as well as in a third location located approximately 3 miles east of the Proposed Project alignment.

#### 5.5.2.2 Spineshrub

Spineshrub (*Adolphia californica*) is a CRPR 2B.1 species (seriously threatened in California but more common elsewhere). It is a deciduous shrub in the Rhamnaceae family that typically blooms from December to May. This species is often found on dry slopes in chaparral, coastal sage scrub, and grassland. Spineshrub is known from San Diego County and Baja California, Mexico, at elevations between 145 and 2,430 feet amsl. This species is threatened by development, road construction, nonnative plant species, and grazing (CNPS 2013).

Spineshrub is present within the BSA. This species was observed in many parts of the BSA during the late summer/fall 2013 focused special-status plant surveys, and it was dominant in some of Diegan coastal sage scrub areas.

#### 5.5.2.3 San Diego Ambrosia

San Diego ambrosia (*Ambrosia pumila*) is a federally listed endangered species, a CRPR 1B.1 species (seriously threatened in California and elsewhere), and a NCCP-covered, narrow endemic species. It is a rhizomatous herb in the Asteraceae family that typically blooms from April to October. This species typically is found in disturbed areas along historic floodplains with sandy loam or clay soils, and sometimes in alkaline areas. This species is also reported from chaparral, coastal sage scrub, grassland, and around vernal pools. San Diego ambrosia is known from Riverside and San Diego counties as well as in Baja California, Mexico, at elevations between 65 and 1,365 feet amsl. This species is threatened by nonnative plant species, road maintenance, foot traffic, vehicle impacts, and development (CNPS 2013).

San Diego ambrosia has a very low potential to occur within the BSA. While this Proposed Project is within the known range of this species, (SDNHM 2013b, CDFW 2013a), suitable habitat was not observed during the late summer/fall 2013 focused special-status plant surveys.

#### 5.5.2.4 Del Mar Manzanita

Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*) is a federally listed endangered species, a CRPR 1B.1 species (seriously threatened in California and elsewhere), and a NCCP-covered species. It is an evergreen shrub in the Ericaceae family that typically blooms from December to June. This species is found in maritime chaparral on sandstone soil formations. Del Mar manzanita is known from San Diego County and in Baja California, Mexico, at elevations between 0 and 1,200 feet amsl. This species is threatened by development, agricultural practices, and fuel modification efforts (CNPS 2013).

Del Mar manzanita has a moderate potential to occur within the BSA. While this species is known from the Del Mar Mesa Preserve (SDNHM 2013b, CDFW 2013a) and from surveys conducted for previous SDG&E projects, suitable habitat within the BSA is limited, and this species was not observed during the late summer/fall 2013 focused special-status plant surveys.

#### 5.5.2.5 San Diego Sagewort

San Diego sagewort (*Artemisia palmeri*) is a CRPR 4.2 species (limited distribution and moderately threatened in California). It is a deciduous shrub in the Asteraceae family that typically blooms from May to September. This species is found in mesic, sandy soils along drainages in chaparral, coastal sage scrub, and riparian habitats. San Diego sagewort is known from San Diego County and in Baja California, Mexico, at elevations between 45 and 3,005 feet amsl. This species is threatened by development, flood control projects, and possibly by nonnative plant species (CNPS 2013).

San Diego sagewort is present within the BSA. This species was observed in small patches along several drainages during the late summer/fall 2013 focused special-status plant surveys.

#### 5.5.2.6 Encinitas Baccharis

Encinitas baccharis (*Baccharis vanessae*), a California endemic species, is a federally listed threatened species, a state-listed endangered species, a CRPR 1B.1 species (seriously threatened in California and elsewhere), and a NCCP-covered, narrow endemic species. It is a deciduous shrub in the Asteraceae family that typically blooms from August to November. This species is found on sandstone in maritime chaparral and in cismontane woodland. Encinitas baccharis is found only in San Diego County at elevations between 195 and 2,365 feet amsl. This species is threatened mainly by development, foot traffic, recreational activities, and possibly by nonnative plant species (CNPS 2013).

Encinitas baccharis has a low potential to occur within the BSA. While this species is known historically from within 5 miles of the BSA (SDNHM 2013b, CDFW 2013a) and there is suitable habitat within the BSA, it is extremely rare and was not observed during the late summer/fall 2013 focused special-status plant surveys.

#### 5.5.2.7 San Diego Sunflower

San Diego sunflower (*Bahiopsis [Viguiera] laciniata*) is a CRPR 4.2 species (limited distribution and fairly endangered in California). It is a shrub in the Asteraceae family that typically blooms from February to June. This species typically is observed on dry, south or west-facing slopes in chaparral and coastal sage scrub. San Diego sunflower is known from Orange and San Diego counties as well as from Baja California and Sonora, Mexico. It is found at elevations between 195 and 2,460 feet amsl. This species is threatened by development (CNPS 2013).

San Diego sunflower is present within the BSA. This species was observed in areas that have been revegetated recently, but it was not observed naturally occurring within the BSA.

#### 5.5.2.8 San Diego Goldenstar

San Diego goldenstar (*Bloomeria clevelandii*) is a CRPR 1B.1 species (seriously threatened in California and elsewhere) and a NCCP-covered species. It is a bulbiferous herb in the Themidaceae family that typically blooms from April to May. This species typically is found in clay soils in grassland, chaparral, coastal sage scrub, grassland, and around vernal pools. San Diego goldenstar is known from Riverside and San Diego counties as well as from Baja California, Mexico, at elevations between 160 and 1,525 feet amsl. This species is threatened by development, road construction and maintenance, vehicle traffic, nonnative plant species, and illegal dumping (CNPS 2013).

San Diego goldenstar is present within the BSA. This species was observed at one location in native grassland.

#### 5.5.2.9 Orcutt's Brodiaea

Orcutt's brodiaea (*Brodiaea orcuttii*) is a CRPR 1B.1 species (seriously threatened in California and elsewhere) and a NCCP-covered species. It is a bulbiferous herb in the Themidaceae family that typically blooms from April to July. This species typically is found in mesic, clay soils and sometimes in serpentinite soils, in vernal pools associated with chaparral, cismontane woodland, closed-cone coniferous forest, meadows and seeps, and grassland. Orcutt's brodiaea is known from Riverside and San Diego counties as well as from Baja California, Mexico, at elevations between 30 and 1,692 feet amsl. This species is seriously threatened by development, grazing, road construction and maintenance, foot and vehicle traffic, nonnative plant species, illegal dumping, and military activities (CNPS 2013).

Orcutt's brodiaea has a moderate potential to occur within the BSA. While it is known historically from within 5 miles of the BSA (SDNHM 2013b, CDFW 2013a), suitable habitat within the BSA is limited.

#### 5.5.2.10 Brewer's Calandrinia

Brewer's calandrinia (*Calandrinia breweri*) is a CRPR 4.2 species (limited distribution and moderately threatened in California). It is an annual herb in the Montiaceae family that typically blooms from March to June. This species typically is found in sandy or loamy soils in chaparral and coastal sage scrub, often in areas that are disturbed or have been burned. Brewer's calandrinia is widely distributed throughout California and into Baja California, Mexico, but is uncommon in all areas where it is known to occur. It is found at elevations between 30 and 4,005 feet amsl. This species likely is threatened by fire suppression and road maintenance (CNPS 2013).

Brewer's calandrinia has a high potential to occur within the BSA. This species is known to occur within Los Peñasquitos Canyon Preserve (SDNHM 2013b, CDFW 2013a), and suitable habitat is present within the BSA.

#### 5.5.2.11 Wart-Stemmed Ceanothus

Wart-stemmed ceanothus (*Ceanothus verrucosus*) is a CRPR 2B.2 species (moderately threatened in California but more common elsewhere) and a NCCP-covered species. It is an evergreen shrub in the Rhamnaceae family that typically blooms from December to May. This species is found in chaparral and coastal sage scrub near typically near the coast. Wart-stemmed ceanothus is known from Riverside and San Diego counties as well as from Baja California, Mexico, at elevations between 3 and 1,250 feet amsl. This species is threatened primarily by development (CNPS 2013).

Wart-stemmed ceanothus has a moderate potential to occur within the BSA. While this species is known historically from within 5 miles of the BSA (SDNHM 2013b, CDFW 2013a), suitable habitat within the BSA is limited, and it was not observed during the late summer/fall 2013 focused special-status plant surveys.

#### 5.5.2.12 Southern Tarplant

Southern tarplant (*Centromadia parryi* ssp. *australis*) is a CRPR 1B.1 species (seriously threatened in California and elsewhere). It is an annual herb in the Asteraceae family that typically blooms from May to November. This species typically is found in clay soils near vernal pools, along the margins of marshes and swamps, and in vernal mesic areas within grassland. Southern tarplant is known from southern California in Los Angeles, Orange, Santa Barbara, San Diego, and Ventura counties as well as from Baja California, Mexico, at elevations between 0 and 1,395 feet amsl. This species is threatened by population fragmentation along with development, grazing, foot and vehicle traffic, nonnative plant species, and habitat disturbance (CNPS 2013).

Southern tarplant has a moderate potential to occur within the BSA. While this species is known historically from within 5 miles of the BSA (SDNHM 2013b, CDFW 2013a), suitable habitat within the BSA is limited, and it was not observed during the late summer/fall 2013 focused special-status plant surveys.

#### 5.5.2.13 Long-Spined Spineflower

Long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*) is a CRPR 1B.2 species (moderately threatened in California and elsewhere). It is an annual herb in the Polygonaceae family that typically blooms from April to July. This species is found in clay soils often on vernal pool mesas with chaparral, coastal sage scrub, meadows and seeps, and grassland. Long-spined spineflower is known from Orange, Riverside, Santa Barbara, and San Diego counties as well as from Baja California, Mexico, at elevations between 95 and 5,020 feet amsl. This species is threatened by development, invasion of nonnative grasses, recreation activities, and possibly by vehicle activity and grazing (CNPS 2013).

Long-spined spineflower has a high potential to occur within the BSA. This species is known historically from within 5 miles of the BSA (SDNHM 2013b, CDFW 2013a), and suitable habitat is present within the BSA.

#### 5.5.2.14 Summer-Holly

Summer-holly (*Comarostaphylis diversifolia* ssp. *diversifolia*) is a CRPR 1B.2 species (moderately threatened in California and elsewhere). It is an evergreen shrub in the Ericaceae family that typically blooms from April to June. This species is found in chaparral and cismontane woodland. Summer-holly is known from Orange, Riverside, Santa Barbara, and San Diego counties as well as from Baja California, Mexico, at elevations between 95 and 2,595 feet amsl. This species is threatened by development and gravel mining (CNPS 2013).

Summer-holly is present within the BSA. This species was observed in chaparral, primarily in the Del Mar Mesa Preserve and adjacent areas during the late summer/fall 2013 focused special-status plant surveys.

#### 5.5.2.15 Del Mar Mesa Sand Aster

Del Mar Mesa sand aster (*Corethrogyne filaginifolia* var. *linifolia*), a California endemic species, is a CRPR 1B.1 species (seriously threatened in California and elsewhere) and a NCCP-covered species. It is a perennial herb in the Asteraceae family that typically blooms from May to September. This species

typically is found in sandy soils associated with coastal bluff scrub, openings in maritime chaparral, and coastal sage scrub. Del Mar Mesa sand aster is known only from San Diego County, at elevations between 45 and 495 feet amsl. This species is threatened by development, nonnative plant species, trampling by foot traffic, and road maintenance (CNPS 2013).

Del Mar Mesa sand aster has a low potential to occur within the BSA. This species is known to occur west and northwest of the BSA (SDNHM 2013b, CDFW 2013a); however, suitable habitat was not observed and this species was not observed during the late summer/fall 2013 focused special-status plant surveys.

#### **5.5.2.16 Short-Leaved Dudleya**

Short-leaved dudleya (*Dudleya brevifolia*), a California endemic species, is a state-listed endangered species, a CRPR 1B.1 species (seriously threatened in California and elsewhere), and a NCCP-covered, narrow endemic species. It is a perennial herb in the Crassulaceae family that typically blooms from April to May. This species typically is found in sandstone associated with openings in maritime chaparral and coastal sage scrub. Short-leaved dudleya is known from fewer than five occurrences in the La Jolla and Del Mar areas of San Diego County, at elevations between 95 and 820 feet amsl. This species is threatened by development, vehicle activity, trampling by foot traffic, and fire break construction (CNPS 2013).

Short-leaved dudleya has a very low potential to occur within the BSA. This species is very rare, and its known locations are very well documented. It is known to occur to the west in Carmel Mountain Preserve (SDNHM 2013b, CDFW 2013a), but it has not been documented within or adjacent to the BSA.

#### **5.5.2.17 Variegated Dudleya**

Variegated dudleya (*Dudleya variegata*) is a CRPR 1B.2 species (moderately threatened in California and elsewhere) and a NCCP-covered species. It is a perennial herb in the Crassulaceae family that typically blooms from April to June. This species typically is found in clay soils associated with vernal pools in chaparral, cismontane woodland, coastal sage scrub, and grassland. Variegated dudleya is known from San Diego County and from Baja California, Mexico, at elevations between 10 and 1,905 feet amsl. This species is threatened by development and grazing (CNPS 2013).

Variegated dudleya has a low potential to occur within the BSA. While this species is known historically from within 5 miles of the BSA (SDNHM 2013b, CDFW 2013a), it is very rare and suitable habitat within the BSA is limited. In addition, the BSA is outside of the species' core distribution area.

#### **5.5.2.18 Sticky Dudleya**

Sticky Dudleya (*Dudleya viscida*) is a CRPR 1B.2 species (moderately threatened in California and elsewhere) and a NCCP-covered species. It is a perennial herb in the Crassulaceae family that typically blooms from May to June. This species is found in rocky areas in coastal bluff scrub, chaparral, coastal sage scrub, and cismontane woodland. Sticky dudleya is known from Orange and San Diego counties as well as from Baja California, Mexico. It occurs at elevations between 30 and 1,805 feet amsl. This species is threatened by development and road construction (CNPS 2013).

Sticky dudleya has a very low potential to occur within the BSA. While it is known to occur north of the BSA (SDNHM 2013b, CDFW 2013a), suitable habitat within the BSA is very limited.

#### 5.5.2.19 San Diego Button-Celery

San Diego button-celery (*Eryngium aristulatum* var. *parishii*) is a federally listed endangered species, a state-listed endangered species, a CRPR 1B.1 species (seriously threatened in California and elsewhere), and a NCCP-covered species. It is an annual/perennial herb in the Apiaceae family that typically blooms from April to June. This species is found in mesic soils within and around vernal pools in coastal sage scrub and grassland. San Diego button-celery is known from Riverside and San Diego counties as well as from Baja California, Mexico, at elevations between 65 and 2,035 feet amsl. This species is threatened by development, nonnative plant species, trampling by foot traffic, road maintenance, agricultural practices, grazing, vehicle activity, and illegal dumping (CNPS 2013).

San Diego button-celery is present within the BSA. This species was observed in vernal pools near the Peñasquitos Substation and the Del Mar Mesa Preserve.

#### 5.5.2.20 Coast Barrel Cactus

Coast barrel cactus (*Ferocactus viridescens*) is a CRPR 2B.1 species (seriously threatened in California but more common elsewhere) and a NCCP-covered species. It is a stem succulent in the Cactaceae family that typically blooms from May to June. This species typically is found on dry, west and south facing slopes in chaparral, coastal sage scrub, grassland, and adjacent to vernal pools. Coast barrel cactus is known from Riverside and San Diego counties as well as from Baja California, Mexico, at elevations between 10 and 1,480 feet amsl. This species is threatened by development, nonnative plant species, trampling by foot traffic, road maintenance, agricultural practices, grazing, vehicle activity, and illegal dumping (CNPS 2013).

Coast barrel cactus is present within the BSA. This species was observed on dry, west- or south-facing slopes in several locations within the BSA, often co-occurring with spineshrub.

#### 5.5.2.21 Palmer's Grapplinghook

Palmer's grapplinghook (*Harpagonella palmeri*) is a CRPR 4.2 species (limited distribution and moderately threatened in California) and a NCCP-covered species. It is an annual herb in the Boraginaceae family that typically blooms from March to May. This species typically is found in clay soils (occasionally granitic) in chaparral, coastal sage scrub, and grassland. Palmer's grapplinghook is known from southern California in Los Angeles, Orange, Riverside, and San Diego counties as well as from Santa Catalina Island, and it is also known from both Baja California and mainland Mexico. It occurs at elevations between 65 and 3,135 feet amsl. This species is threatened mainly by development, nonnative plant species, and agricultural practices (CNPS 2013).

Palmer's grapplinghook has a high potential to occur within the BSA. It is known historically from within 5 miles of the BSA (SDNHM 2013b, CDFW 2013a) and suitable habitat is present within the BSA.

#### 5.5.2.22 Graceful Tarplant

Graceful tarplant (*Holocarpha virgata* ssp. *elongata*), a California endemic species, is a CRPR 4.2 species (limited distribution and moderately threatened in California). It is an annual herb in the Asteraceae family that typically blooms from May to November. This species typically is found in clay soils in chaparral, cismontane woodland, coastal sage scrub, grassland, and disturbed areas. Graceful tarplant is known from southern California in Orange, Riverside, and San Diego counties, at elevations between 195 and 3,610 feet amsl. This species is threatened mainly by development (CNPS 2013).

Graceful tarplant is present within the BSA. This species was observed in disturbed areas near grassland and existing SDG&E towers.

#### 5.5.2.23 Decumbent Goldenbush

Decumbent goldenbush (*Isocoma menziesii* var. *decumbens*) is a CRPR 1B.2 species (moderately threatened in California and elsewhere). It is a shrub in the Asteraceae family that typically blooms from April to November. This species typically is found in sandy, and often disturbed, areas in chaparral and coastal sage scrub. Decumbent goldenbush is known from southern California in Los Angeles, Orange, and San Diego counties as well as from San Clemente Island and Santa Catalina Island, and it is also known from Baja California, Mexico. It occurs at elevations between 30 and 445 feet amsl. This species is threatened by development (CNPS 2013).

Decumbent goldenbush has a moderate potential to occur within the BSA. This species has been documented within 5 miles of the BSA (SDNHM 2013b, CDFW 2013a) and suitable habitat occurs within the BSA, but this species was not observed during the late summer/fall 2013 focused special-status plant surveys. During the spring/summer 2014 surveys, varieties of *Isocoma menziesii* will again be closely reviewed in the field because the varieties are known to intergrade in California and population-level studies are needed to more clearly identify and sort them.

#### 5.5.2.24 San Diego Marsh-Elder

San Diego marsh-elder (*Iva hayesiana*) is a CRPR 2B.2 species (moderately threatened in California but more common elsewhere). It is a perennial herb in the Asteraceae family that typically blooms from April to October. This species is found along ephemeral drainages, alkali marshes, and playas. San Diego marsh-elder is known from San Diego County and from Baja California, Mexico, at elevations between 30 and 1,640 feet amsl. This species is threatened by waterway channelization, coastal development, nonnative plant species, and vehicle activity (CNPS 2013).

San Diego marsh-elder is present within the BSA. This species was observed along drainages and in revegetated areas.

#### 5.5.2.25 Spiny Rush

Spiny rush (*Juncus acutus* ssp. *leopoldii*) is a CRPR 4.2 species (limited distribution and moderately threatened in California). It is a rhizomatous herb in the Juncaceae family that blooms from May to June. This species typically is found along ephemeral drainages, alkaline marshes and seeps, mesic areas of coastal dunes, and coastal salt marsh. Spiny rush is known from southern California in Imperial, Los Angeles, Orange, Santa Barbara, San Diego, San Luis Obispo, and Ventura counties; from Nevada,



Arizona, and Georgia; and from Baja California, Mexico, as well as into South America. It is found at elevations between 10 and 2,955 feet amsl. This species is threatened by development and flood control activities (CNPS 2013).

Spiny rush is present within the BSA. This species was observed along drainages and in revegetated areas.

#### **5.5.2.26 Robinson's Pepper-Grass**

Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*) is a CRPR 4.3 species (limited distribution but not very threatened in California). It is an annual herb in the Brassicaceae family that typically blooms from January to July. This species typically is found in chaparral and coastal sage scrub. Robinson's pepper-grass is known from Los Angeles, Orange, Riverside, Santa Barbara, San Bernardino, San Diego, and Ventura counties as well as from Santa Cruz Island and from Baja California, Mexico. It is found at elevations between 3 and 2,905 feet amsl. This species is threatened by development and possibly by nonnative plant species (CNPS 2013).

Robinson's pepper-grass has a moderate potential to occur within the BSA. While this species is known from the Del Mar Mesa Preserve (SDNHM 2013b, CDFW 2013a), suitable habitat within the BSA is limited.

#### **5.5.2.27 Willowy Monardella**

Willow monardella (*Monardella viminea*) – a California endemic species – is a federally listed endangered species, a state-listed endangered species, a CRPR 1B.1 (seriously threatened in California and elsewhere), and a NCCP-covered, narrow endemic species. It is a perennial herb in the Lamiaceae family that typically blooms from June to August. This species is found in alluvial, ephemeral washes in chaparral, coastal sage scrub, and riparian habitats. Willow monardella is known only from San Diego County, at elevations between 160 and 730 feet amsl. This species is seriously threatened by development, hydrological alterations, road construction and maintenance, vehicle activity, and nonnative plant species and possibly also threatened by erosion and alteration of fire regimes (CNPS 2013).

Willow monardella has a very low potential to occur within the BSA. While this species is known historically from within 5 miles of the BSA (SDNHM 2013b, CDFW 2013a), only marginally suitable habitat occurs in the BSA, and this species was not observed during the late summer/fall 2013 focused special-status plant surveys.

#### **5.5.2.28 Little Mousetail**

Little mousetail (*Myosurus minimus* ssp. *apus*) is a CRPR 3.1 species (species-related information is limited but it is considered seriously threatened in California) and a NCCP-covered species. It is an annual herb in the Ranunculaceae family that typically blooms from March to June. This species is found in alkaline soils in vernal pools as well as grassland. Little mousetail is distributed throughout California and also occurs in Oregon as well Baja California, Mexico, at elevations between 65 and 2,100 feet amsl. This species is threatened by vehicle activity, grazing, development, and agricultural practices (CNPS 2013).

Little mouselink has a very low potential to occur within the BSA. While suitable vernal pool habitat is present, the BSA is outside the known range of this species (SDNHM 2013b).

#### 5.5.2.29 California Orcutt Grass

California Orcutt grass (*Orcuttia californica*) is a federally listed endangered species, a state-listed endangered species, a CRPR 1B.1 species (seriously threatened in California and elsewhere), and a NCCP-covered species. It is an annual herb in the Poaceae family that typically blooms from April to August. This species typically is found in vernal pools. California Orcutt grass is known from southern California in Los Angeles, Riverside, San Diego, and Ventura counties as well as from Baja California, Mexico, at elevations between 45 and 2,165 feet amsl. This species is threatened by development, vehicle activity, nonnative plant species, agricultural practices, and grazing (CNPS 2013).

California Orcutt grass has a very low potential to occur within the BSA. While suitable vernal pool habitat is present, the BSA is outside the known range of this species (SDNHM 2013b).

#### 5.5.2.30 Torrey Pine

Torrey pine (*Pinus torreyana* ssp. *torreyana*) is a CRPR 1B.2 species (moderately threatened in California and elsewhere) and a NCCP-covered species. It is an evergreen tree in the Pinaceae family. This species typically is found in sandstone in chaparral and closed-cone coniferous forest. Torrey pine is known from San Diego and Santa Barbara counties at elevations between 245 and 525 feet amsl. This species is threatened by development; it was threatened by the five-spined ips bark beetle at Torrey Pines State Reserve, but biological control has contained the infestation (CNPS 2013).

Torrey pine is present within the BSA. This species was observed as planted individuals at the Peñasquitos substation; however, this species was not observed naturally occurring within the BSA.

#### 5.5.2.31 San Diego Mesa Mint

San Diego mesa mint (*Pogogyne abramsii*) – a California endemic – is a federally listed endangered species, a state-listed endangered species, a CRPR 1B.1 species (seriously threatened in California and elsewhere), and a NCCP-covered species. It is an annual herb in the Lamiaceae family that typically blooms from March to July. This species typically is found in vernal pools. San Diego mesa mint is known only from San Diego County, at elevations between 295 and 660 feet amsl. This species is threatened by development on San Diego's mesas, vehicle activity, dumping, road construction and maintenance, and possibly by nonnative plant species (CNPS 2013).

San Diego mesa mint has a high potential to occur within the BSA. This species is known to occur within the vernal pools in the Del Mar Mesa Preserve (SDNHM 2013b, CDFW 2013a), and suitable habitat is present within the BSA.

#### 5.5.2.32 Nuttall's Scrub Oak

Nuttall's scrub oak (*Quercus dumosa*) is a CRPR 1B.1 species (seriously threatened in California and elsewhere). It is an evergreen shrub in the Fagaceae family that typically blooms from February to April. This species is found in sandy or clay loam soils in chaparral, coastal sage scrub, and closed-cone coniferous forest. Nuttall's scrub oak is known from southern California from Orange, Santa Barbara,

San Diego, and Ventura counties as well as from Baja California, Mexico, at elevations between 45 and 1,315 feet amsl. This species is threatened by development, fire suppression, and vegetation/fuels management (CNPS 2013).

Nuttall's scrub oak is present within the BSA. This species occurs both as a dominant in Scrub Oak Chaparral and as a scattered individuals within the BSA.

#### **5.5.2.33 Chaparral Ragwort**

Chaparral ragwort (*Senecio aphanactis*) is a CRPR 2B.2 species (moderately threatened in California but more common elsewhere). It is an annual herb in the Asteraceae family that typically blooms from January to April. This species typically is found in dry, rocky openings in chaparral, coastal sage scrub, cismontane woodland, and alkaline flats. Chaparral ragwort occurs throughout California, including many islands, as well as in Baja California, Mexico, at elevations between 45 and 2,625 feet amsl. This species is threatened by trampling by foot traffic and nonnative plant species.

Chaparral ragwort has a moderate potential to occur within the BSA. While this species is rare, there is limited suitable habitat within the BSA and it is known to occur within the Del Mar Mesa Preserve (SDNHM 2013b, CDFW 2013a).

#### **5.5.2.34 Purple Stemodia**

Purple stemodia (*Stemodia durantifolia*) is a CRPR 2B.1 species (seriously threatened in California but more common elsewhere). It is a perennial herb in the Plantaginaceae family that has a highly variable blooming period, but most often blooms from April to June. This species can be found growing out of rock crevices in mesic, sandy areas along drainages and within Sonoran desert scrub. In southern California, purple stemodia is known from Riverside and San Diego counties, and it is also known from Arizona, Texas, Mexico, Puerto Rico, and South America. It occurs at elevations between 590 and 985 feet amsl. This species is threatened by development (CNPS 2013).

Purple stemodia has a very low potential to occur within the BSA. While this species is known from rocky drainages in nearby MCAS Miramar and Mission Trails Regional Park (SDNHM 2013b, CDFW 2013a), suitable habitat within the BSA is limited.

### **5.5.3 Special-Status Wildlife Species**

For purposes of this report, special-status wildlife species include those that are (1) listed or proposed for listing as threatened or endangered by the USFWS or the CDFW (CDFW 2011b); (2) designated as "fully protected" by the CDFW, (3) considered "species of special concern" by CDFW, and/or (4) considered "taxa to watch" by CDFW. Each of these classifications is described below. In addition, species included on the NCCP covered species list are also included as special-status species. Species that are covered by the federal MBTA were also considered; however, the list of species covered under the MBTA is extensive. Therefore, these species are not included in the special-status wildlife species table; however, they are addressed further in Section 6.0: Impacts, below.

According to the USFWS, a federally listed endangered species is defined as a species facing extinction throughout all or a significant portion of its geographic range, and a federally listed threatened species is defined as a species that is likely to become endangered within the foreseeable future throughout all or

a significant part of its range. The CDFW defines a state-listed endangered species as one whose prospects of survival and reproduction are in immediate jeopardy and a state-listed threatened species as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management.

The federal MBTA, which restricts the killing, taking, collecting, selling, or purchasing of native bird species or their parts, nests, or eggs, also provides legal protection for almost all breeding bird species occurring in the U.S. Noteworthy wildlife species are those given the informal designation of California Species of Concern by the CDFW. This designation applies to animals not listed under the ESA or CESA but which nonetheless (1) are declining at a rate that could result in listing, or (2) historically occurred in low numbers and known threats to their persistence currently exist. In addition, raptors (birds of prey) and active raptor nests are protected by the California Fish and Game Code 3503.5, which states that it is “unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird” unless authorized (CDFW 1991).

CDFW also includes additional sensitivity classifications for wildlife species, including fully protected species, species of special concern, and taxa to watch. Fully protected species are species that are rare or face possible extinction but have not been listed under the federal and/or state ESAs. Species of special concern are species that are declining in numbers, have limited ranges, and/or are vulnerable to extinction because of continued threats to the population. Some bird species of special concern are also assigned a “season of concern” because the distribution and abundance of some species varies greatly seasonally. These species are considered to be special-status species during the “season of concern” but not outside of that designation. Taxa to watch (i.e., “Watch List species”) are (1) species that were previously classified as species of special concern but are not currently on the list and have not been listed under CESA, (2) species that were previously federally and/or state-listed but are not currently on either list, or (3) species that are classified as “fully protected”.

Species that are federally or state-listed threatened or endangered are afforded a degree of protection that entails a permitting process, including specific mitigation measures to compensate for impacts to the species. Species that are proposed to be listed by the USFWS are treated similarly to listed species by that agency. Recommendations of the USFWS, however, are advisory rather than mandatory in the case of proposed species. As regulated by the CDFW, fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock. Wildlife species classified as species of special concern or watch list species are not typically provided legal protection; however, there are exceptions for some locally and/or regionally important species.

Based on the background research conducted for this Proposed Project, a total of 98 special-status wildlife species have the potential to occur within 5 miles of the BSA (Appendix A: Figures). All 98 special-status wildlife species are summarized in Appendix F: Special-Status Wildlife Species with a Potential for Occurrence in Vicinity of BSA. Of these, 48 special-status species are not expected to occur within or adjacent to the BSA either because there is no suitable habitat present or because they are in the vicinity outside of their “season of concern” (e.g., migrant bird species). Therefore, they are presented in Appendix F but are not discussed further in this document. The remaining 50 special-status wildlife species have a potential to occur within the BSA. These species are summarized in Appendix F and discussed in more detail later in this section. Of the 50 special-status wildlife species with a

potential to occur within the BSA, nine were detected during the surveys conducted in the fall 2013 for the Proposed Project (Appendix G: Coastal California Gnatcatcher Survey Summary Report), including:

- Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*; SSC, NCCP)
- Cooper's hawk (*Accipiter cooperii*; WL, NCCP)
- Vaux's swift (*Chaetura vauxi*; SSC)
- loggerhead shrike (*Lanius ludovicianus*; SSC)
- California horned lark (*Eremophila alpestris actia*; SSC)
- coastal California gnatcatcher (*Polioptila californica californica*; FT, SSC, NCCP)
- southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*; WL, NCCP)
- western bluebird (*Sialia mexicana*; NCCP)
- southern mule deer (*Odocoileus hemionus*; NCCP)

The 50 special-status wildlife species with a potential to occur within the BSA are discussed in detail, below.

#### 5.5.3.1 San Diego Fairy Shrimp

The San Diego fairy shrimp (*Branchinecta sandiegonensis*) is a federally listed endangered species and a NCCP-covered species. This fairy shrimp occurs in limited populations in Santa Barbara and Orange counties, as well as, in San Diego County from San Marcos and Ramona south to Otay Mesa and into northwestern Baja California, Mexico, at Valle de Las Palmas (USFWS 1997b). The majority of San Diego fairy shrimp populations are located in San Diego County. San Diego fairy shrimp are primarily restricted to vernal pools and prefer cool water temperatures but can also be found in swales, ditches, and road ruts. Fairy shrimp remain dormant in cysts until pools fill during the rainy season. The first larval stage (nauplii) emerge from cysts and develop into adults sometime between mid-December and early May (Eriksen and Belk 1999). Development takes between 10 to 20 days and is dependent on water temperature. Primary threats to this species are habitat destruction and fragmentation, alterations of wetland hydrology, off-road vehicle activity, and grazing (USFWS 1997b).

San Diego fairy shrimp has a high potential to occur within the BSA. This species is known to occur and suitable habitat exists within designated critical habitat Subunit 4A/B (Del Mar Mesa), within and adjacent to the BSA (CDFW 2013a). Subunit 4A/B (Del Mar Mesa) consists of approximately 252 acres of habitat on land owned by the City of San Diego, County of San Diego, State of California, USFWS, and private land owners. Management measures in this critical habitat subunit may require special management considerations or protection to address threats from development, off-road vehicles, altered hydrology, and nonnative species that may negatively impact the San Diego fairy shrimp and its habitat. The City and the County's subarea plans have measures to conserve the San Diego fairy shrimp and its habitat by protecting vernal pool basins and the associated vernal pool watershed necessary for the vernal pool ecosystem to function and connections between vernal pool habitat and other open-space preserve areas.

USFWS published a Final Rule on December 12, 2007 that became effective on January 11, 2008, revising the previously designated critical habitat for the San Diego fairy shrimp to include

approximately 3,082 acres of habitat in 5 units with a total of 29 subunits throughout Orange and San Diego counties, California.

### 5.5.3.2 Riverside Fairy Shrimp

The Riverside fairy shrimp (*Streptocephalus woottoni*) is a federally listed endangered species and a NCCP-covered species. This species occurs in vernal pools, pool-like ephemeral ponds, swales, ditches, road ruts, and human-modified depressions from Orange, San Diego, and western Riverside counties, south into Baja California, Mexico. It has the most restricted range of any fairy shrimp found in California (USFWS 1993; Eng et al. 1990). Riverside fairy shrimp are typically found in pools that are greater than 15 inches deep, and usually require over 21 days of inundation to emerge. The species hatches in seven to twelve days; developing to the adult stage in 48 to 56 days, depending on water temperature. The main threat to Riverside fairy shrimp is habitat destruction due to urbanization and infrastructure development (USFWS 1998a).

The Riverside fairy shrimp has a moderate potential to occur within the BSA. The nearest known occurrence is within 3 miles of the BSA on MCAS Miramar, southeast of the junction of I-15 and Pomerado Road (CDFW 2013a); however, only marginally suitable habitat for this species exists within the BSA since it requires basins that are deep and remain inundated for long periods.

USFWS published a Final Rule on December 4, 2012 that became effective on January 3, 2013, revising the previously designated critical habitat for the Riverside fairy shrimp to include approximately 1,724 acres of habitat in 3 units containing 13 subunits in Ventura, Orange, and San Diego Counties, California. The BSA does not occur within or adjacent to any critical habitat for Riverside fairy shrimp but the BSA is within the known range of the species.

### 5.5.3.3 Quino Checkerspot Butterfly

The Quino checkerspot butterfly (QCB) (*Euphydryas editha quino*) is a federally listed endangered species and is covered under the *SDG&E Low-Effect Habitat Conservation Plan for the Quino Checkerspot Butterfly* (SDG&E QCB HCP) (USFWS 2007a). This subspecies' historic range includes the coastal plain and inland valleys of southern California from the Santa Monica Mountains, south to northern Baja California, Mexico. Currently, the Quino checkerspot butterfly is known from southern San Diego and southwestern Riverside counties. Quino checkerspot butterflies occur at several locations in Otay Mesa and Jacumba in San Diego, as well as, near Murrieta and Temecula, eastward to Hemet and Anza in Riverside (USFWS 1997c). The distribution of Quino checkerspot butterfly is primarily defined by the distribution of its principal host plant, dot-seed plantain (*Plantago erecta*). Female Quino checkerspot butterflies have also been observed depositing eggs on woolly plantain (*Plantago patagonia*), white snapdragon (*Antirrhinum coulterianum*), and thread-leaved bird's beak (*Cordylanthus rigidus*) (USFWS 2002a). It is possible that members of the figwort family (Scrophulariaceae), including purple owl's clover (*Castilleja exserta*), are also used (Mattoni et al. 1997). In April 2002, the USFWS designated critical habitat for this subspecies in portions of San Diego and Riverside counties. Threats to Quino checkerspot butterfly include habitat loss, fragmentation, and habitat type conversion (USFWS 2002a and USFWS 2002b).

The QCB has a moderate potential to occur within the BSA. Hosts plants and suitable habitat is present within the BSA and known localities exist just outside of the BSA; however, the Proposed Project is located outside of the SDG&E Quino Mapped Area.

#### 5.5.3.4 Western Spadefoot

The western spadefoot (*Spea hammondi*) is a CDFW species of special concern and a NCCP-covered species. The range of the western spadefoot extends from the Central Valley and bordering foothills in California and from the coastal ranges south of San Francisco Bay, California southwards to northwestern Baja California, Mexico (NatureServe Explorer 2013). This species can be found from near sea level to elevations up to approximately 4,460 feet amsl (Zeiner et al. 1998; Jennings and Hayes 1994). This species can be found in a variety of lowland, foothill, and mountain habitats including washes, river floodplains, alluvial fans, playas, alkali flats, temporary ponds, vernal pools, mixed woodlands, grasslands, coastal sage scrub, and chaparral. Although western spadefoot are typically found in open areas with sandy or gravelly soils (CAHerps 2013, NatureServe 2013; Stebbins 2003), this species has been observed in vernal pools containing clay soils on Otay Mesa. Surface activity can occur from October through April depending on rainfall (CDFW 2000), and oviposition occurs between late February and May in temporal pools and slow-moving sections of streams (Jennings and Hayes 1994). Threats to western spadefoot are primarily due to habitat loss caused by development and possibly by the introduction of mosquito fish (CAHerps 2013).

The western spadefoot has a high potential to occur within the BSA. The species is known to occur in 5 miles of the BSA (CDFW 2013a) and suitable upland and breeding habitat for the species is present within the BSA.

#### 5.5.3.5 Western Pond Turtle

The western pond turtle (*Actinemys marmorata*) is a CDFW species of special concern and a NCCP-covered species. This species ranges from British Columbia, south to Baja California, Mexico, near the coast at elevations from sea level to over 5,900 feet amsl (Stebbins 2003; CAHerps 2013). Western pond turtle is found in a variety of aquatic habitats including ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation, and either rocky or muddy bottoms, in woodland, forest, and grassland habitats. While in stream habitat, this species prefers pools to shallower areas. Logs, rocks, cattail mats, and exposed banks are required for basking. The western pond turtle may enter brackish water and even seawater (CAHerps 2013; Stebbins 2003). Mating occurs April-May, and egg laying occurs through August, depending on the locality (CAHerps 2013; NatureServe Explorer 2013). Pond turtles are diurnal and are most active from February to November, typically hibernating during the winter months (Bury and Germano 2008; NatureServe Explorer 2013); however, if water temperatures remain warm, this species may be active year-long (Bury and Germano 2008). A primary cause of the decline in western pond turtle populations of California was the exploitation for the turtle as a source of food in the 19<sup>th</sup> and 20<sup>th</sup> centuries. Habitat degradation caused by cattle grazing and off-road vehicle activity, introduction of invasive species, disease, and lack of genetic viability may also pose significant threats (Stebbins 2003; CAHerps 2013).

The western pond turtle has a moderate potential to occur within the BSA. The BSA is within the known range of this species and suitable habitat for the species is present within the BSA.

#### 5.5.3.6 California Legless Lizard

The California legless lizard (*Anniella pulchra*) is a CDFW species of special concern. This species ranges from near Antioch, California, south in the Coast Ranges, Transverse Mountains, and Peninsular Ranges, and along the coast of southern California, to Arroyo Pabellon, northwestern and inland Baja California, Mexico, to at least La Rumarosa north of the Sierra Juarez (NatureServe Explorer 2013). The range for the southern California subspecies, silvery legless lizard, *Anniella pulchra pulchra*, extends from the San Joaquin River, south into northwestern Baja California, Mexico, at elevations from sea level to 5,100 feet amsl (Stebbins 2003). Silvery legless lizard is found in leaf litter and loose soil on beaches and in coastal scrub, chaparral, and open riparian habitats. Sandy washes and beach dunes are used for burrowing, while logs and leaf litter are used for cover and feeding. This nocturnal lizard is susceptible to drying and must be in or near moist soil for thermal regulation. Soil moisture may limit these lizards within the extent of their range (Bury and Balgooyen 1976; Miller 1944). Breeding occurs between early spring and July, with young born between September and November (CAHerps 2013). Threats to silvery legless lizard include agriculture, introduction of nonnative vegetation, residential development, mining for sand, golf courses, off-road vehicle activity, and trampling (Stebbins 2003).

The California legless lizard has a high potential to occur within the BSA. The BSA is within the known range of this species and suitable habitat for the species is present within the BSA.

#### 5.5.3.7 San Diego Banded Gecko

The San Diego banded gecko (*Coleonyx variegatus abbotti*) is a NCCP-covered species. The species ranges along the coastal slope of southern California from Los Angeles County south through the northern half of Baja California, Mexico (Jones and Lovich 2009). This secretive subspecies prefers rocky areas in coastal sage scrub and chaparral habitats. It is most often found in the foothills above 500 feet amsl in elevation, though it ranges all the way to the coast (Lemm 2006). A nocturnal species, it is active from late March through late September or early October. It feeds on small arthropods, primarily insects and spiders, and it has a habitat of swaying its tail back and forth during ambush (Lemm 2006). Breeding occurs from late spring to early summer and the female lays one to two eggs per clutch with up to three clutches per year. Hatchlings emerge in one to two months. Threats include habitat loss, collecting, habitat type conversion due to fires, and predation by pets and introduced species (Lemm 2006).

The San Diego banded gecko has a moderate potential to occur within the BSA. The BSA is within the range of the species and suitable habitat for the species is present within the BSA, but the species is more commonly found at higher elevations outside of the range of the BSA.

#### 5.5.3.8 Coast Horned Lizard

The coast horned lizard (*Phrynosoma blainvillii*) is a CDFW species of special concern and a NCCP-covered species. Coast horned lizard occurs from the upper Sacramento Valley southward along the Coast Ranges, southern Sierra foothills, and coastal slope of the Peninsular Ranges of southern California to Baja California, Mexico. Coast horned lizard is found in a variety of habitats including scrubland, grassland, coniferous forest, and broadleaf woodland with areas for basking and loose soils at elevations ranging from sea level to approximately 7,900 feet amsl (Stebbins 2003). Adults are active from March to October with hatchlings emerging in July and August (Jones and Lovich 2009). Individuals bury themselves only approximately 2 to 4 inches under soil and leaf litter during hot periods of the day, at



night, and when overwintering. Native harvester ants (*Pogonomyrmex* sp.) make up most of their diet. However, this lizard will feed upon termites, beetles, wasps, flies, and grasshoppers (Stebbins 2003). Threats to Coast horned lizard are due to human activity including development, converting native habitat to agriculture, urbanization, and the introduction of Argentine ants (*Linepithema humilis*), which displace native ants (Jones and Lovich 2009).

The coast horned lizard has a high potential to occur within the BSA. The species is known to occur within 5 miles of the BSA (CDFW 2013a) and suitable habitat for the species is present throughout the BSA.

#### 5.5.3.9 Coronado Skink

The Coronado skink (*Plestiodon skiltonianus interparietalis*) is a CDFW species of special concern and a NCCP-covered species. This subspecies ranges from central Riverside County south to Baja California, Mexico (Jennings and Hayes 1994). In San Diego County, the species is found in a variety of habitats including grassland, open woodland, forest, and broken chaparral habitats, often associated with mesic areas. Coronado skinks are secretive and are seldom found on the surface of the ground. They typically hide under rocks, woody debris, leaves, or thick vegetation. They are adept burrowers, and in May or June they lay 2 to 5 eggs in pear-shaped excavations under embedded rocks (Jones and Lovich 2009). Coronado skinks feed upon small invertebrates found in leaf litter, including insects, spiders, and sowbugs (Stebbins 2003). The taxonomy of Pacific coast skinks needs revision, with data is lacking on this subspecies (Lemm 2006). Threats to the Coronado skink include habitat loss to citrus and avocado orchards, pesticide use in agricultural fields and orchards, and human use of surface and ground water causing mesic areas to become drier (CAHerps 2013).

The Coronado skink has a high potential to occur within the BSA. The species is known to occur within 5 miles of the BSA (CDFW 2013a) and suitable habitat for the species is present throughout the BSA.

#### 5.5.3.10 Belding's Orange-Throated Whiptail

The Belding's orange-throated whiptail (*Aspidoscelis hyperythrus beldingi*) is a CDFW species of special concern and a NCCP-covered species. This subspecies ranges from southwestern San Bernardino County, south into Baja California at elevations from sea level to 2,000 feet amsl. Belding's orange-throated whiptail is found in areas of pristine open coastal sage scrub, chaparral, and streamside growth with loose sandy soils (Stebbins 2003). It appears to prefer sage scrub that covers approximately 50 percent of the ground without dense grasses in between, but it also inhabits dense to extremely open stands of sage as well as chamise chaparral. It can also often be found in upland revegetation sites since these areas provide the open habitat it prefers. This lizard typically hibernates during winter, emerging in February or March, but can be active year-round when temperatures are warm (Jennings and Hayes 1994). Breeding occurs from May through July. Their diet consists primarily of termites, but they also take spiders, centipedes, and scorpions, as well as small lizards. Threats to Belding's orange-throated whiptail are attributed to habitat loss and fragmentation caused by development (CAHerps 2008).

The Belding's orange-throated whiptail is present within the BSA (Appendix A: Figures), as it was observed during biological surveys performed for the Proposed Project. This species is known to occur

within 5 miles of the BSA (CDFW 2013a), and suitable habitat for the species is present throughout the BSA.

#### 5.5.3.11 Rosy Boa

The rosy boa (*Lichanura trivirgata*) is a NCCP-covered species. This species occurs from the foothills of the San Gabriel and San Bernardino Mountains, south through San Diego County, and into the Sierra de San Pedro Mártir, Baja California, Mexico. It can be found from sea level to 6,800 feet amsl. Distribution is spotty throughout its range. The rosy boa is associated with rocky coastal sage, inland sage, and chaparral-covered hillsides and canyons from the coast to the desert transition zone. It often occurs in rocky areas, but can also be found in scrub and chaparral habitats with few rocks, where it is associated with rodent burrows (Lemm 2006). It also is an excellent climber that willingly moves through vegetation and branches in search of prey. It preys upon small mammals, reptiles, amphibians, and birds and kills through constriction (Stebbins 2003). Associated vegetation types include coastal sage scrub dominated by California sagebrush and buckwheat, chamise chaparral, and ceanothus/manzanita chaparral. It often is attracted to oases, intermittent streams, and other sources of water but does not require it (Stebbins 2003). It is chiefly nocturnal but also is regularly seen during the day. The rosy boa is believed to be declining due to loss of habitat and over-collecting, particularly in coastal areas where it was once common (Fisher and Case 2011).

The rosy boa has a high potential to occur within the BSA. The species is known to occur within 5 miles of the BSA (CDFW 2013a) and suitable habitat for the species is present throughout the BSA.

#### 5.5.3.12 Coast Patch-Nosed Snake

The coast patch-nosed snake (*Salvadora hexalepis virgulata*) is a CDFW species of special concern and a NCCP-covered species. This subspecies ranges along the California coastal regions from San Luis Obispo County, south into northwestern Baja California, Mexico at elevations from sea level to approximately 6,900 feet amsl (Jennings and Hayes 1994). Coast patch-nosed snake is found in chaparral and semi-arid areas with brushy or shrubby vegetation in canyons, plains and rocky hillsides. This snake is diurnal and active from March to October (Klauber 1939), although juveniles can be active on warm winter days (Jennings and Hayes 1994). It seeks refuge and potentially overwinters in woodrat middens and small mammal burrows, so these may be necessary for this species to occur (Jennings and Hayes 1994). Their diet predominantly consists of whiptail lizards (*Cnemidophorus* spp.), but it also feeds on small mammals, amphibians, bird nestlings, and, possibly, small snakes. Threats to coast patch-nosed snake are habitat loss due to heavy grazing and development, habitat type conversion due to fires, and predation by pets and introduced species (Lemm 2006).

The coast patch-nosed snake has a high potential to occur within the BSA. The BSA is within the known range of this species and suitable habitat for the species is present throughout the BSA.

#### 5.5.3.13 Red Diamond Rattlesnake

The red diamond rattlesnake (*Crotalus ruber*) is a CDFW species of special concern and a NCCP-covered species. This species occurs on both sides of the Peninsular Ranges of southwestern California from San Bernardino County south to Baja California, Mexico. Red diamond rattlesnake is found in a variety of habitats including coastal sage scrub, desert scrub, open chaparral, woodland, grassland, and cultivated areas at elevations from sea level to approximately 4,900 feet amsl, but typically below 3,900 feet amsl (Stebbins 2003). They are active year-round with peak activity occurring in April and May (Jennings and

Hayes 1994). Breeding occurs from February through September. Their diet consists of ground squirrels, rabbits, and lizards. They tend to be docile and less aggressive compared to other rattlesnake species; they are less apt to stand their ground (Stebbins 2003). Threats to red diamond rattlesnake are due to habitat loss, particularly within the coastal regions of its range (CAHerps 2013).

The red diamond rattlesnake has a high potential to occur within the BSA. The species is known to occur within 5 miles of the BSA (CDFW 2013a) and suitable habitat for the species is present throughout the BSA.

#### **5.5.3.14 San Diego Ringneck Snake**

The San Diego ringneck snake (*Diadophis punctatus similis*) is a NCCP-covered species. This subspecies ranges from San Diego County south to coastal northern Baja California, Mexico. It is confined to mountains and watercourses and is associated with moist woodlands, grassland, chaparral, mixed conifer forest, and riparian areas. This species is diurnal but seldom is seen in the open. It usually is found during the day under cover objects, such as rotting logs, bark fragments, boards, and rocks (Stebbins 2003). Prey items include earthworms, salamanders, small frogs, amphibian larvae, slugs, and other mesic-associated organisms. It is active at dusk and at night during warmer periods and, due to its secretive nature, is often difficult to detect. Ringneck snakes may aggregate at dens for winter hibernation. The San Diego ringneck snake is believed to be declining due to loss of habitat.

The San Diego ringneck snake has a high potential to occur within the BSA. The species is known to occur within 5 miles of the BSA (CDFW 2013a) and suitable habitat for the species is present throughout the BSA.

#### **5.5.3.15 Two-Striped Garter Snake**

The two-striped garter snake (*Thamnophis hammondi*) is a CDFW species of special concern and a NCCP-covered species. This species ranges from San Luis Obispo County south to El Rosario in Baja California, Mexico, from sea level to 8,000 feet amsl (Jennings and Hayes 1994). They are normally found in or near permanent fresh water, inhabiting streams, ponds, and lakes throughout their range (Stebbins 1985) and can even be found in temporary bodies of water such as vernal pools. The two-striped garter snake inhabits riparian areas during summer months and occupies adjacent coastal sage scrub and grasslands during the winter (Jennings and Hayes 1994). The two-striped garter begins breeding in April and continues throughout the summer months. Adults feed on tadpoles, toads, insect larvae, fish, fish eggs, and earthworms. Population declines in the two-striped garter snake are generally attributable to impacts related to the loss of natural wetlands and increased development near and in suitable habitat.

The two-striped garter snake has a high potential to occur within the BSA. The species is known to occur within 5 miles of the BSA (CDFW 2013a) and suitable habitat for the species is present throughout the BSA.

#### **5.5.3.16 Cooper's Hawk**

The Cooper's hawk (*Accipiter cooperii*) is a CDFW taxa to watch and a NCCP-covered species. The Cooper's hawk is wholly endemic to North America, but widespread, with both migratory and resident populations ranging from southern Canada to southern Mexico. In California, the species is a resident,

but migrants from its northern range substantially increase the population during the winter months (Curtis et al. 2006; Unitt 2004). Although this species was previously associated only with semi-dense woodlands, Cooper's hawks have adapted to urban landscapes, as they are often at least as numerous in urban habitats as in natural ones (Unitt 2004). The Cooper's hawk was listed in 1978 as a species of concern by CDFW because the population was in decline as a result of hunting, destruction of riparian woodland, and pesticide contamination (Remsen 1978). However, recent studies suggest that populations have recovered in many areas, as it has adapted to breeding in urban areas (Curtis et al. 2006; Unitt 2004). However, with the colonization of urban habits also comes an increased incidence of collision with windows and disease (Curtis et al. 2006; Unitt 2004).

The Cooper's hawk has a high potential to nest within the BSA. Suitable nesting habitat for the species is present throughout the BSA and the species is known to occur within 5 miles of the BSA (CDFW 2013a). The species was observed during biological surveys in fall during the non-breeding season.

#### 5.5.3.17 Ferruginous Hawk

The ferruginous hawk (*Buteo regalis*) is a CDFW taxa to watch and a NCCP-covered species. The ferruginous hawk is endemic to western North America. Both migratory and sedentary populations of this species range from southwestern Canada to northern Mexico. The northernmost populations of this species are completely migratory, spending winters in the southern U.S. from California to Texas and parts of northern Mexico and Baja California, Mexico (Bechard and Schmutz 1995). In California, the Ferruginous Hawk is rare to uncommon in coastal areas of the state but is a fairly common winter visitor to grasslands and agricultural regions of the interior between mid-September and early April (Garrett and Dunn 1981). This species favors lowlands, valleys, grasslands, and agricultural lands where it preys primarily upon small mammals such as rabbits and ground squirrels. Ferruginous hawks build bulky stick nests usually situated in a lone tree or cliff face. The ferruginous hawk has declined throughout much of its range, which centers around the Great Basin, though reasons for decline are unknown (Bechard and Schmutz 1995; Patten et al. 2003). Threats to this species include habitat loss, fragmentation, or degradation resulting from human activities such as agriculture, urbanization, improper grazing practices, and the conversion of shrubland to grassland (Collins and Reynolds 2005).

The ferruginous hawk has a low potential to winter within the BSA. There is limited foraging habitat within BSA and its vicinity; therefore, the species has a low potential to be observed in flight and foraging within the BSA during migration and winter.

#### 5.5.3.18 Northern Harrier

The northern harrier (*Circus cyaneus*) is a CDFW species of special concern and a NCCP-covered species. This widespread species is distributed in suitable habitat throughout North America, Europe and Asia. In California it is found locally year-round throughout much of the states lowlands, but is even more frequent and widespread in winter with the influx of wintering birds breeding farther north. This species breeds locally in scattered areas of coastal southern California but densities vary in response to local changes in prey availability (Garrett and Dunn 1981). This species can be found in a variety of lowland habitats including wetlands, marshy meadows, boglands, pasturelands, wet grasslands, old fields, tundra, open riparian woodlands, and freshwater and brackish marshes. It also occurs on dry uplands, including upland prairies, mesic grasslands, drained marshlands, croplands, and cold desert shrub-steppe, especially where these occur next to water bodies. It nests on the ground in shrubby

vegetation, often at the edge of a marsh (Call 1978). Additionally, the most frequent issue confronting nesting harriers is human disturbance, dogs allowed to run free, and off-road vehicles (Unitt 2004). The northern harrier has a moderate potential to nest within the BSA. The BSA is within the known range of this species and patches of suitable nesting habitat occur throughout the BSA and its vicinity. The species has a high potential to be observed foraging within the BSA year-round.

#### 5.5.3.19 White-Tailed Kite

The white-tailed kite (*Elanus leucurus*) is a CDFW fully protected species. Though previously threatened with extinction in the early part of the 20<sup>th</sup> century, this species now ranges from the west coast of the U.S., south Texas, and to the south in scattered areas across Mexico and South America. In California, most of the population occurs west of the Sierra Nevada in lowlands, coastal areas, and inland valleys (Small 1994). This species inhabits open country where grasslands, agricultural fields, marshes and even roadsides provide sufficient populations of their primary prey the California vole (*Microtus californicus*) (Unitt 2004). A notable aspect of their non-breeding biology is its communal roosting where some winter roosts may contain over 100 birds (Garrett and Dunn 1981; Unitt 2004). Previous population declines have been attributed to shooting, habitat loss, and poisoning of small rodents (Dunk 1995; Unitt 2004). In the past three decades this species has dramatically expanded in numbers and range in the western U.S. (Dunk 1995; Patten et al. 2003).

The white-tailed kite has a moderate potential to nest within the BSA. The BSA is within the known range of this species, patches of suitable nesting habitat occur throughout the BSA and its vicinity, and the species is known to occur within 5 miles of the BSA (CDFW 2013a). The species has a moderate potential to be observed foraging within the BSA year-round.

#### 5.5.3.20 Merlin

The merlin (*Falco columbarius*) is a CDFW taxa to watch. Distributed worldwide in the Northern Hemisphere, this species breeds in North America across the northern portion of the continent and winters in the western U.S. and along the Gulf-Atlantic coast, Mexico and northern South America (Sodhi et al. 2005). In California, it is recorded annually as an uncommon fall transient and rare winter visitor (Small 1994; Unitt 2004). In winter this species frequents seacoasts, tidal estuaries, grassland edges, weedy agricultural fields and other semi open habitats where they hunt low over the ground, capturing small, fleeing birds in flight (Sodhi et al. 2005). In the 1960s the species suffered widespread population declines from pesticide contamination but have since recovered after the banning of DDT in the early 1970's; populations now appear to be stable to increasing in most areas (Sodhi et al. 2005). Numbers in Southern California, have not recovered as significantly as they have in the eastern portion of their range, however since the 1990's sharper increases have been documented (Unitt 2004).

The merlin has a moderate potential to winter within the BSA. The BSA is within the known wintering range of this species and moderately suitable foraging habitat present within BSA; therefore, the species has a moderate potential to be observed foraging within the BSA during the winter.

#### 5.5.3.21 Burrowing Owl

The burrowing owl (*Athene cunicularia*) is a CDFW species of special concern and a NCCP-covered, narrow endemic species. Endemic to the Americas, the bulk of the population resides in western North America but it can be found in suitable habitat south to Tierra del Fuego and coastal islands off of

Florida and Baja California, Mexico (Haug et al. 1993). In California, although this species is declining in much of the state as well in the West, it remains fairly common in Imperial Valley, which is home to nearly 70 percent of the entire California population (Unitt 2004). The northern most populations of this species are almost completely migratory and wintering birds can be found south to southern Mexico. Southern California birds are only partially migratory as evidenced by reduced population sizes in winter, with some birds remaining on territories throughout the year. This small brown owl is named for its unusual lifestyle of nesting and roosting in underground burrows. This species typically inhabits open, well-drained grasslands, deserts, prairies and agricultural lands and though they may appear diurnal, they are actually active both day and night, preying on both insects and small rodents. Population declines have been attributed to loss of suitable habitat through urban expansion, pesticide use, vehicle collisions, and reduction of the mammals that supply the owl with burrows (Haug et al. 1993; Remsen 1978; Unitt 2004). Further, its propensity for nesting and foraging near roadsides and agricultural drains make it particularly vulnerable to roadside shooting, collisions with vehicles, road maintenance and general harassment (Patten et al. 2003; Remsen 1978; Unitt 2004).

The burrowing owl has a moderate potential to nest and winter within the BSA. The BSA is within the known range of this species but there is limited suitable habitat present. The CNDDDB lists one occurrence within 5 miles of the BSA (CDFW 2013). This record is less than one mile west of the BSA south of Carmel Valley Road and north of State Route 56, approximately 1 mile north-northwest of Deer Canyon Dam. An occupied burrow was detected at this site in 1990 and an adult individual was detected at the same site in 1999. No other burrowing owls have been recorded at this site since 1999 or within 5 miles of the BSA.

#### 5.5.3.22 Long-Eared Owl

The long-eared owl (*Asio otus*) is a CDFW species of special concern. This species is strictly nocturnal and typically inhabits open forest and riparian woodland adjacent to grass or shrub-lands from near sea-level to over 6,565 feet amsl and preys on small mammals. Long-eared owls are at least partly migratory with some birds remaining near nest sites year-round while others wander widely. This widespread species is distributed throughout much of North America, Europe and Asia. In California it is also fairly widespread, breeding in appropriate habitats throughout much of the state. In California its population has experienced a steep decline since the beginning of the 21<sup>st</sup> century, usually attributed to loss of riparian forest in which it breeds and nearby grasslands used for foraging (Remsen 1978; Unitt 2004). Broad range retractions have been noted in the central valley and locally in coastal southern California (Shuford and Gardali 2008). Individual numbers in southern California increase moderately in winter with the influx of post breeding migrants from the north (Unitt 2004). Recent studies suggest that 50-200 pairs currently breed in San Diego County (Unitt 2004).

The long-eared owl has a low potential to nest within the BSA. The BSA is within known range of species but there is limited suitable habitat present and there are no documented nesting occurrences within BSA or vicinity.

#### 5.5.3.23 Loggerhead Shrike

The loggerhead shrike (*Lanius ludovicianus*) is a CDFW species of special concern. This species is distributed throughout the central U.S. and Mexico year-round with some breeding population migrating north into Canada in summer (Yosef 1996). A breeding resident in California, it is found

throughout much of the state, excluding heavily forested high mountains, higher portions of the desert ranges, the Sierra Nevada and the far northwest (Shuford and Gardali 2008; Small 1994). It is found in open country with short vegetation such as pastures with fence rows, agricultural fields and open woodlands, where it hunts from perches to capture a variety of prey from insects to small mammals and birds which it then impales sharp objects such as thorns and barbed-wire fences in order to hold them during consumption. Threats to this species include changes in human land-use practices, the spraying of pesticides, and competition with species that are more tolerant of anthropogenic habitats (Yosef 1996; Unitt 2003). Perhaps surprisingly, the Salton Sea and the Central Valley support the highest densities of this species in California; in these regions it is considered a fairly common breeding resident, becoming more numerous in winter with the dispersal of birds breeding to the north (Patten et al. 2003).

The loggerhead shrike has a high potential to nest within the BSA. The BSA is within the known range of species and suitable nesting and foraging habitat is present throughout the BSA.

#### 5.5.3.24 Least Bell's Vireo

The least Bell's vireo (*Vireo bellii pusillus*) is a federally and state-listed endangered species and a NCCP-covered species. Endemic to California and Baja California, Mexico, this highly migratory species arrives in California in mid-March and departs by late September when they fly south to wintering grounds near the tip of Baja California, Mexico. This species formally bred in lowland riparian habitat ranging from coastal southern California through the Sacramento and San Joaquin Valleys as far north as Redbluff, and other scattered locations east of the Sierra Nevada (USFWS 1998b; Grinnell and Miller 1944). This species is dependent upon riparian habitat during the breeding season and prefers willow-dominated woodland or scrub that typically exists along streams and rivers. Other habitat types also used include *Baccharis* scrub, mixed oak/willow woodland, mesquite woodland, and elderberry scrub. Habitat characteristics that appear to be essential for vireo occupation include dense cover from 3 to 6 feet in height for nesting and foraging, and a stratified canopy providing both foraging habitat and song perches for territorial advertisement. By the time the species was listed in by CDFW in 1984 it had been extirpated from much of its former range and was restricted to eight counties south from Santa Barbara with just 300 pairs statewide (Unitt 2004). Declines were caused by wide spread clearing of riparian habitat combined with brood parasitism by brown-headed cowbirds (*Molothrus ater*) whose increase in California was as dramatic as the vireo's decline. Currently, with restriction of habitat destruction, extensive cowbird trapping and protection from the endangered species act, populations have recovered in some areas of cismontane southern California and populations are expanding into former ranges; the northernmost sighting being from Santa Clara County (Brown 1993, Kus 2002). San Diego County holds the largest breeding population of least Bell's vireo in the state; here it is a fairly common breeder in appropriate habits, primarily in the coastal lowlands (Unitt 2004).

The least Bell's vireo has a moderate potential to nest within the BSA. The BSA is within known range of species, marginal to moderately suitable nesting habitat is present within the BSA and vicinity, and the species is known to occur within 5 miles of the BSA (CDFW 2013a). The CNDDDB lists 5 records of least Bell's vireo within 5 miles of the BSA. The three nearest records are from along Peñasquitos Creek just under and over 1 mile of the BSA.

### 5.5.3.25 California Horned Lark

The California horned lark (*Eremophila alpestris actia*) is a CDFW taxa to watch. One of eight subspecies of Horned Lark in California, *E. a. actia* is a resident of the main portion of the San Joaquin Valley as well as cismontane California, primarily from Sonoma County south to northern Baja California, Mexico (Beason 1995; Grinnell and Miller 1944). This species is a year-round resident of flat arid grasslands, grazed pastures, sandy desert floors and coastal strands throughout its range. Breeding birds nest in open areas on the ground in shallow burrows or depressions, which they select or dig. They also prefer open habitats for short grass or plowed fields for foraging can be among the most abundant of any species in heavily grazed pastures (Bock and Webb 1984). However, breeding birds require open undisturbed native habitats or fallow fields (Patten et al. 2003). Due to its preference of habitat this species is at risk of habitat fragmentation through urban development and agriculture (Unitt 2004).

The California horned lark has a high potential to nest and winter within the BSA. The BSA is within the known range of species, suitable nesting habitat is present within BSA and vicinity, and the species is known to occur within 5 miles of the BSA (CDFW 2013a).

### 5.5.3.26 Coastal Cactus Wren

The coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*) is a CDFW species of special concern and a NCCP-covered, narrow endemic species. Endemic to the southwest U.S., Baja California and northern Mexico, the coastal cactus wren inhabits a diverse set of habitats ranging from saguaro desert to coastal pacific slopes. The coastal form in southern California *C. b. sandiegensis* is restricted in distribution from southern Orange County through San Diego County and extreme northwest Baja California, Mexico (Solek and Szijj 2004). Here this species is highly dependent on the stands of cholla and prickly pear cactus in which they nest almost exclusively. The nest is a hollow football sized structure placed on cactus at least 2 feet in height (Rea and Weaver 1990); breeding generally occurs mid-March through July. Cactus wrens are resident throughout their range, remaining on territories maintaining nests for roosting year-round. In San Diego, the coastal race is concentrated in four regions: southern Camp Pendleton/Fallbrook Naval Weapons Station, Lake Hodges/San Pasqual, Lake Jennings, and Sweetwater/Otay; other scattered sites exist in suitable habitat within coastal lowlands (Unitt 2004). Also, and probably more appropriately known as the San Diego cactus wren it is one of the county's greatest challenges in bird conservation (Unitt 2004). Primary concerns include development and fires which threaten its already much reduced and fragmented habitat (Unitt 2004).

The coastal cactus wren has a moderate potential to nest within the BSA. The BSA is within the known range of the species and the species is known to occur within 5 miles of the BSA (CDFW 2013a) but limited suitable habitat exists within the BSA and vicinity. The CNDDDB lists 11 records of coastal cactus wren between approximately 1 and 5 miles north and east of the BSA. The nearest record is from 1998, approximately 1 mile north of the eastern portion of the BSA, north of Scripps Poway Parkway.

### 5.5.3.27 Coastal California Gnatcatcher

The coastal California gnatcatcher (*Poliioptila californica californica*) is a federally listed threatened species, a CDFW species of special concern, and a NCCP-covered species. The California gnatcatcher has one of the most limited distributions of any bird species in North America, limited to specific vegetation communities from coastal southern California to the southern tip of Baja California, Mexico. One of three subspecies, *californica*, occurs from southern California south to Ensenada in Baja California,



Mexico. Once considered conspecific with black-tailed gnatcatcher this species was elevated to full species status in 1988 (Atwood et al. 2001). Fewer than 5,000 pairs of California gnatcatchers are estimated to persist in coastal southern California, where their distribution is mostly restricted to the coastal sage scrub plant community below 1,640 feet amsl (Atwood et al. 2001; Mock 2004). Highest densities occur in Orange and San Diego counties with lower densities in western Riverside County and southwestern San Bernardino County; also isolated populations exist in Los Angeles and Ventura counties (Mock 2004). A year-round resident, this species typically breeds from March through July and nests predominantly in California sagebrush (*Artemisia californica*) and other coastal sage scrub community species in proportion to their availability (Unitt 2004). This species was listed as federally threatened in 1993 based on the high proportion of its habitat that had been lost to agriculture and urban development and the pressure to develop what remains (Unitt 2004).

The coastal California gnatcatcher and suitable nesting habitat is present throughout the BSA (Appendix A: Figures and Appendix G: Coastal California Gnatcatcher Survey Summary Report). Several pairs and individuals were detected throughout BSA during focused, protocol-level coastal California gnatcatcher surveys conducted within the BSA in fall 2013 during non-breeding season, and the species is known to occur within 5 miles of the BSA (CDFW 2013a).

#### 5.5.3.28 Yellow Warbler

The yellow warbler (*Dendroica petechia brewsteri*) is a CDFW species of special concern. Overall, the subspecies group of yellow warbler to which the California race belongs has a broad distribution in the Americas where it breeds throughout the northern U.S., Canada, parts of Mexico and California and winters from southern Mexico south to eastern Brazil (Lowther et al. 1999). In California, it currently breeds throughout much of the state, inhabiting coastal areas along the length of the state and inland in northern California and east and west slopes of the Sierra Nevada. The yellow warbler is a small, bright-yellow migratory songbird and is listed by the CDFW as a species of special concern. This species inhabits a variety of riparian habitats varying by biogeographic region but usually in close proximity to water along streams and in wet meadows (Grinnell and Miller 1944, Lowther et al. 1999), and feeds on a variety of small arthropods. Breeding occurs April through July. Like many other riparian songbirds the Yellow Warbler population collapsed in the 20<sup>th</sup> century due to destruction of riparian habitat in which they breed and by the additional pressure of cowbird parasitism (Remsen 1978; Rosenberg et al. 1991; Unitt 2004). However, despite local declines this species currently occupies much of their former breeding range, except in the Central Valley, where they are close to extirpation (Shufford and Gardali 2008). Yellow warblers are known throughout their range as the most frequent host of the brown-headed cowbird (Lowther et al. 1999). Following widespread trapping of cowbirds after the least Bell's vireo was federally listed as endangered in 1986, the yellow warbler populations surged and this species has now reoccupied apparently all of its former range in San Diego County (Unitt 2004).

The yellow warbler has a high potential to nest within the BSA. The BSA is within the known range of the species and suitable nesting habitat exists within the BSA and vicinity.

#### 5.5.3.29 Yellow-Breasted Chat

The yellow-breasted chat (*Icteria virens*) is a CDFW species of special concern. This species is widely distributed across the U.S. where it breeds in summer after migrating from its wintering grounds in southern Mexico and Central America. In California, though formerly more widespread is now primarily

in coastal California and foothills of the Sierra Nevada and east of the Cascades in n. California, from sea level to 6,500 feet amsl. It is also found in desert riparian habitats in eastern California including the Imperial Valley and along the Colorado River. In California, chats require dense riparian habitats with well-developed shrub-layer and an open canopy; nesting habitat is usually restricted to the narrow border of streams, sloughs, and rivers (Shuford and Gardali 2008). In California, though historically fairly common, this species suffered population declines in the middle 20<sup>th</sup> century along with other riparian species due presumably to habitat loss and the invasion of the brown-headed cowbird (Rosenberg et al. 1991; Unitt 2004). Since that time however, its population has made a comeback likely owing to focused cowbird removal programs as well as its subsequent adaptation to breeding in alternative habitats such as tamarisk and mesquite woodlands (Patten et al. 2003; Rosenberg et al. 1991; Unitt 2004).

The yellow-breasted chat has a high potential to nest within the BSA. The BSA is within the known range of the species, suitable nesting habitat exists within the BSA and vicinity, and the species is known to occur within 5 miles of the BSA (CDFW 2013a).

#### **5.5.3.30 Southern California Rufous-Crowned Sparrow**

The southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) is a CDFW taxa to watch and a NCCP-covered species. One of four subspecies of rufous-crowned sparrows in California, *A. r. canescens* is a fairly common year-round resident of southwestern California. Its range is restricted to coastal slopes of the Transverse and Peninsular Ranges from northwest Los Angeles County south into northwestern Baja California, Mexico (Collins 1999; Thorngate and Parsons 2005). They prefer fairly steep grassy hillsides with moderate shrub cover, rock outcrops and canyons ranging from elevations of 200 to 4,600 feet amsl (Collins 1999). They can also be found breeding in coastal bluff scrub, low-growing serpentine chaparral, and sage scrub on gentle rolling hillsides (Thorngate and Parsons 2005). Rufous-crowned sparrows thrive in areas that have recently been burned, and will stay in such open, disturbed habitats for years (Thorngate and Parsons 2005; Unitt 2004). Several studies have indicated that this species is highly susceptible to habitat fragmentation, an indication that they require large expanses of unbroken native habitat to sustain viable populations (Unitt 2004). In San Diego this species is fairly common over wide areas suitable habitat (Unitt 2004).

The southern California rufous-crowned sparrow and suitable nesting habitat is present throughout the BSA (Appendix A: Figures). Several pairs and individuals were detected throughout BSA during focused, protocol-level coastal California gnatcatcher conducted within the BSA in the fall during non-breeding season and the species is known to occur within 5 miles of the Proposed Project (CDFW 2013a).

#### **5.5.3.31 Grasshopper Sparrow**

The grasshopper sparrow (*Ammodramus savannarum*) is a CDFW species of special concern and a NCCP-covered species. This species breeds from Oregon south along the California coast and the east side of the Sierras into the lowlands into Baja California, Mexico. This species also ranges from southern Canada south through the central U.S. and east to the east coast and winters in the central and southern U.S. (Dunn and Alderfer 2008). The grasshopper sparrow inhabits prairie grasslands, pastures, old weedy fields, palmetto scrub, grain fields, and hayfields. This species generally does not use habitats with dense shrub cover or sites that have been over-grazed. Populations of this species are declining due to habitat loss, fragmentation, and degradation.

The grasshopper sparrow has a high potential to nest within the BSA. The BSA is within the known range of the species, suitable nesting habitat exists within the BSA and vicinity, and the species is known to occur within 5 miles of the BSA (CDFW 2013a).

#### 5.5.3.32 Bell's Sage Sparrow

The Bell's sage sparrow (*Amphispiza belli belli*) is a CDFW taxa to watch and a NCCP-covered species. One of five subspecies, all endemic to western North America, this race is a year-round resident ranging from Marin County (coastally) and Trinity County (inland) south through western California to northern Baja California, Mexico. In San Diego County, *A. b. belli* is uncommon to locally fairly common in dry chaparral and coastal sage scrub communities along coastal lowlands, inland valleys, and in lower foothills of local mountains (Martin and Carlson 1998; Unitt 2004). This species spends a significant portion of its time running and foraging on the ground and so prefers habitat that is not too dense or cluttered with leaf litter; partially recovered burned areas offer suitable habitat for this species (Martin and Carlson 1998; Unitt 2004). Nesting in southern California typically takes place mid-March through June. The paler, migratory *A. b. nevadensis*, which breeds further north, is a winter visitor to the county where it found on the valley floors of the Anza-Borrego Desert. Although the Bell's sage sparrow persists in broad areas of its habitat in south-central San Diego County it has been eliminated from most coastal areas, emphasizing its vulnerability to habitat fragmentation (Unitt 2004).

The Bell's sage sparrow has a high potential to occur within the BSA. The BSA is within the known range of the species, suitable nesting habitat exists within the BSA and vicinity, and the species is known to occur within 5 miles of the BSA (CDFW 2013a).

#### 5.5.3.33 Tricolored Blackbird

The tricolored blackbird (*Agelaius tricolor*) is a CDFW species of special concern and a NCCP-covered species. This unique species is almost wholly endemic to California, which is home to more than 99 percent of the population (Beedy and Hamilton 1997). Their range is restricted to the Central Valley and surrounding foothills, throughout coastal and some inland localities in southern California, and scattered sites in Oregon, western Nevada, central Washington, and western coastal Baja California, Mexico. Habitat requirements include cattail and bulrush marshes, which are used for breeding and roosting, that are located near suitable foraging areas of pasture and croplands where they feed on insects, seeds, and grain. The status of the tricolored blackbird is of concern because its population is in decline and its colonial nesting behavior makes it vulnerable to nesting failures, affecting thousands of nests at large colonies (Beedy and Hamilton 1999). Studies in the 1970s reported that the overall population was greatly reduced from that observed during the 1930s. A decline of 37 percent between 1994 and 1997 was identified by intensive population surveys (Beedy and Hamilton 1997). In the San Luis River Valley in San Diego a 95 percent drop between 1990 and 1991 was never reversed (Unitt 2004). Historically, this species was killed to control damage to rice and grain crops, and have recently experienced large annual losses of reproductive effort to crop-harvesting activities and suffered habitat losses to land conversions from rangeland to vineyards, orchards, and urban development.

The tricolored blackbird has a low potential to nest within the BSA. The BSA is outside the typical known breeding range of species, there is limited suitable nesting habitat present, and there has been no documented nesting occurrences within the BSA or vicinity.

#### 5.5.3.34 Western Bluebird

The western bluebird (*Sialia mexicana*) is a NCCP-covered species. This species breeds in western North America from southern British Columbia and southwestern Alberta south to northern Baja California, Mexico and the Central Volcanic Belt of Mexico, but is largely absent from the Great Basin. In California, the breeding range extends from the Oregon border south in California (except Warner Mountain region) to about Mono, Kern, and Santa Barbara Counties, and from Ventura, Los Angeles, and San Bernardino Counties south through the Transverse and Peninsular ranges of southwestern California to southern San Diego County (Garrett and Dunn 1981; Small 1994). This species inhabits pen coniferous and deciduous woodlands; wooded riparian areas; grasslands; farmlands; and burned, moderately logged, and edge areas with scattered trees, snags, or other suitable nest and perch sites. Unlike eastern (*S. sialis*) and mountain (*S. currucoides*) bluebirds, western bluebirds do not favor large, open meadows. Clear-cutting, snag removal, fire suppression, and any changes in land use that cause open forest and edge habitat to be diminished adversely affect western bluebird populations (Guinan et al. 2008).

The western bluebird has a high potential to occur within the BSA. The BSA is within the known range of the species and suitable nesting habitat exists within the BSA and vicinity.

#### 5.5.3.35 Mexican Long-Tongued Bat

The Mexican long-tongued bat (*Choeronycteris mexicana*) is a CDFW species of special concern. This species ranges from the southern U.S., through Mexico and Central Mexico, to northern South America (Harvey et al. 1999). The only records for San Diego County are from fall and winter, suggesting seasonal movement, perhaps from inland sites to warmer coastal areas (Pierson and Rainey 1998). The Mexican long-tongued bat is found in woodland and roosts in caves, buildings, bridges, and other shelters (Frey 1995). They also are known to occupy desert and montane riparian, desert succulent scrub, desert scrub, and pinyon-juniper habitats (Zeiner et al. 1990). This bat is a colonial breeder from May to August. Their diet consists mainly of nectar and pollen from cactus and agave plants, but this species also is known to occasionally use hummingbird feeders (Batcon 2013). Threats to the Mexican long-tongued bat are associated with mine activity including closing, reclamation, and development. These activities can disturb roost sites, and this species is very sensitive to roost disturbance (Howell and Schropfer Roth 1981).

The Mexican long-tongued bat has a moderate potential to occur within the BSA. The BSA is within the known migratory range of species and the species is known to occur within 5 miles of the BSA (CDFW 2013a).

#### 5.5.3.36 Pallid Bat

The pallid bat (*Antrozous pallidus*) is a CDFW species of concern. This species ranges from Mexico, throughout the southwestern U.S., and north to western Canada (Batcon 2013). It is a locally common yearlong resident of low elevations throughout most of California. This bat occupies a variety of habitats including grasslands, shrublands, woodlands, and forests at elevations ranging from sea level up through mixed conifer forests. Pallid bat occurs most commonly in open, dry habitats and prefers rocky areas for roosting (Zeiner et al. 1990). They are social, commonly roosting in multispecies groups of 20 or more. The day roosts, such as caves, crevices, and mines, must protect the bats from high

temperatures. Maternity colonies form in April, and pups are born from May to July. These bats forage low over open ground, and consume large, hard-shelled prey items such as beetles, grasshoppers, cicadas, spiders, scorpions, and Jerusalem crickets. Pallid bats are very sensitive to roost disturbance, as these roosts are crucial for metabolic economy and juvenile development. Threats to pallid bat are generally attributable to loss of roost sites resulting from human intrusion and physical alteration (Zeiner et al. 1990).

The pallid bat has a moderate potential to occur within the BSA. The BSA is within the known range of species and moderately suitable habitat is present within the BSA and vicinity.

#### **5.5.3.37 Townsend's Big-Eared Bat**

The Townsend's big-eared bat (*Corynorhinus townsendii*) is a CDFW species of special concern. This species ranges from Mexico, within the western U.S., and into southern Canada. There are also two disjunct populations within the Ozark and central Appalachian areas (Batcon 2013). Townsend's big-eared bat is found in a variety of communities including coastal conifer and broadleaf woodlands, grasslands, deserts, and meadows. Throughout most of its geographic range, it is most common in mesic sites (Kunz and Martin 1982; Williams 1986). Townsend's big-eared bat roosts in caves, mines, tunnels, buildings, or other human-made structures and may use different locations as day roosts, night roosts, maternity roosts, and hibernacula. Pups are born in May and June in maternity colonies located within caves, tunnels, mines, and buildings (Zeiner et al. 1990). Their diet consists mainly of small moths, but also will prey upon beetles and soft-bodied insects (Harris 1983). Threats to Townsend's big-eared bat are attributed to roost abandonment brought on by human activities (Zeiner et al. 1990).

The Townsend's big-eared bat has a moderate potential to occur within the BSA. The BSA is within the known range of the species and moderately suitable habitat is present within the BSA and vicinity.

#### **5.5.3.38 Spotted Bat**

The spotted bat (*Euderma maculatum*) is a CDFW species of special concern. This species ranges from British Columbia to northern Mexico (Batcon 2013). In the southwestern U.S., spotted bat is commonly found in arid desert, scrub, and open forest habitats with vertical cliffs or canyons near water (Blood 1993). This species is solitary, roosting and feeding alone; utilizing cliff or canyon crevices for roosting and nursery sites. Breeding occurs in spring with births in June or July. Their diet predominantly consists of moths. Spotted bat echolocation has a low frequency and is audible to the human ear, up to 820 feet away (Blood 1993). Little is known about the biology of spotted bat, but potential threats include lack of suitable day roosts and foraging terrain caused by development and pesticides.

The spotted bat has a moderate potential to occur within the BSA. The BSA is within the known range of species, moderately suitable habitat is present within the BSA and vicinity, and the species is known to occur within 5 miles of the BSA (CDFW 2013a).

#### **5.5.3.39 Western Red Bat**

The western red bat (*Lasiurus blossevillii*) is a CDFW species of special concern. Western red bats have a broad range, extending from southern British Columbia; throughout much of the western U.S., Mexico, and Central America; and as far south as Argentina and Chile (Pierson and Rainey 1998). Within California, this species is found in coastal areas near San Francisco Bay south to the Central Valley and

into eastern portions of Riverside County and central San Diego County of southern California (Pierson and Rainey 1998). It roosts in small colonies in the foliage of trees and shrubs in edge areas adjacent to streams and open fields, preferring foraging areas that are distant from human habitation (Pierson and Rainey 1998). Breeding occurs in late summer or early fall; females become pregnant in spring and give birth to 1 to 5 pups after an 80- to 90-day gestation period. This species is insectivorous and migratory. Threats to the western red bat include predation, agricultural conversion of riparian habitat, storage reservoirs that submerge riparian habitat, pesticides from agriculture, and fire (Pierson and Rainey 1998; Batcon 2013).

The western red bat has a moderate potential to occur within the BSA. The BSA is within the known range of species, moderately suitable habitat is present within the BSA and vicinity, and the species is known to occur within 5 miles of the BSA (CDFW 2013a).

#### 5.5.3.40 Western Mastiff Bat

The western mastiff bat (*Eumops perotis*) is a CDFW species of special concern. This species ranges from central California southward into central Mexico. It is found in a variety of habitats including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban areas (Zeiner et al. 1990). In California, it has been recorded from Butte County southward in the western lowlands, throughout the southern California coastal basins, and in the western portions of the southeastern desert region (Williams 1986). They are found in rugged, rocky areas where suitable crevices are available for day roosts and will roost with other bat species. It also frequently roosts in buildings (Williams 1986). Nursery roosts are in tight rock crevices. Their diet consists of flying insects over large spans of open water. Threats to western mastiff bat include disturbance of roosting sites, especially those in established buildings, loss of open waterways, loss of cliff roost sites due to human activity, and pesticides (Merriam 1890, Sanborn 1932).

The western mastiff bat has a moderate potential to occur within the BSA. The BSA is within the known range of species, moderately suitable habitat is present within the BSA and vicinity, and the species is known to occur within 5 miles of the BSA (CDFW 2013a).

#### 5.5.3.41 Big Free-Tailed Bat

The big free-tailed bat (*Nyctinomops macrotis*) is a CDFW species of special concern. This species ranges from South America to the Caribbean Islands to the western U.S. It is rarely found in California. Few records exist for its occurrence in the state, and no roosts for this species have been identified to date. It is a colonial roosting species that prefers rugged cliff faces, slopes, and outcrops; up to 150 individuals have been observed in roost sites. Roosts are rarely found in human structures. Pups are typically born in June and July. Although this bat feeds upon a variety of insects, moths are its primary food item (Zeiner et al. 1990). Threats to big free-tailed bat are generally attributable to loss of roost sites resulting from human intrusion and physical alteration.

The big free-tailed bat has a moderate potential to occur within the BSA. The BSA is within the known range of species, moderately suitable habitat is present within the BSA and vicinity, and the species is known to occur within 5 miles of the BSA (CDFW 2013a).

#### 5.5.3.42 San Diego Black-Tailed Jackrabbit

The San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) is a CDFW species of special concern and a NCCP-covered species. This subspecies ranges from near Mt. Pinos (at the Kern-Ventura County line), southward and west of the Peninsular Range into Baja California, Mexico (Hall 1981). They can be found throughout southern California, with the exception of the high-altitude mountains. San Diego black-tailed jackrabbit occupy open or semi-open habitats, such as coastal sage scrub and open chaparral areas. Forested and thick chaparral regions are not suitable (Bond 1977). This species does not typically burrow but sits in depressions called forms at the base of shrubs by day. The San Diego black-tailed jackrabbit breeds throughout the year, with the greatest number of births occurring from April through May. This jackrabbit is strictly herbivorous, preferring habitat with ample forage such as grasses and forbs. Reasons for decline include habitat loss, fragmentation, and disease outbreaks.

The San Diego black-tailed jackrabbit has a high potential to occur within the BSA. The BSA is within the known range of species, suitable habitat is present within the BSA and vicinity, and the species is known to occur within 5 miles of the BSA (CDFW 2013a).

#### 5.5.3.43 Dulzura Pocket Mouse

The Dulzura pocket mouse (*Chaetodipus californicus femoralis*) is a CDFW species of special concern and a NCCP-covered species. This subspecies ranges throughout most of San Diego County into northern Baja California, Mexico. It is generally found on chaparral-covered slopes. Breeding occurs from March to July, giving birth between two and seven young with an average of four (Zeiner et al. 1990). Their diet consists of seeds, insects, and sometimes green leaves. Dulzura pocket mouse is threatened by habitat loss due to urbanization and agricultural land uses.

The Dulzura pocket mouse has a high potential to occur within the BSA. The BSA is within the known range of species, suitable habitat is present within the BSA and vicinity, and the species is known to occur within 5 miles of the BSA (CDFW 2013a).

#### 5.5.3.44 Northwestern San Diego Pocket Mouse

The northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) is a CDFW species of special concern and a NCCP-covered species. This subspecies ranges from Los Angeles County and extreme southern San Bernardino County, southward into west-central Baja California, Mexico (Hall 1981). In San Diego County, northwestern San Diego pocket mouse is known from Del Mar, Dulzura, Jacumba, Lake Hodges, Pala, San Diego, and San Marcos (Bond 1977). Habitat for this subspecies is most often sparse or disturbed coastal sage scrub or grasslands with sandy soils. Breeding occurs from March to May; giving birth to a litter averaging four young (Zeiner et al. 1990). Their diet consists of seeds from forbs, shrubs, and grasses (Brylski 1983). Threats to northwestern San Diego pocket mouse are most likely due to development, resulting in loss of habitat.

The northwestern San Diego pocket mouse has a high potential to occur within the BSA. The BSA is within the known range of species, suitable habitat is present within the BSA and vicinity, and the species is known to occur within 5 miles of the BSA (CDFW 2013a).

#### 5.5.3.45 San Diego Desert Woodrat

The San Diego desert woodrat (*Neotoma lepida intermedia*) is a CDFW species of special concern and a NCCP-covered species. This subspecies range extends through coastal areas from San Luis Obispo into Baja California, Mexico, inland to the San Bernardino Mountains and Julian (Hall 1981). San Diego desert woodrat occurs west of the mountains in San Diego County within chaparral areas, preferring rock outcrops (Bond 1977). The middens (nests) of this subspecies can be occupied by multiple generations and have been documented to be as old as 200 to 400 years. Breeding occurs from October to May with a litter ranging from one to five young, averaging approximately three (Zeiner et al. 1990). Their diet consists of a variety of plant species and plant parts including buds, fruits, seeds, bark, leaves, and young shoots (Brylski 1983). Threats to San Diego desert woodrat are most likely due to development, resulting in loss of habitat.

The San Diego desert woodrat has a high potential to occur within the BSA. The BSA is within the known range of species, suitable habitat is present within the BSA and vicinity, and the species is known to occur within 5 miles of the BSA (CDFW 2013a).

#### 5.5.3.46 Southern Grasshopper Mouse

The southern grasshopper mouse (*Onychomys torridus ramona*) is a CDFW species of special concern and a NCCP-covered species. This subspecies ranges from the coastal slopes of northern Los Angeles County, south into extreme northwestern Baja California, Mexico (Harris 1983). Southern grasshopper mouse occurs in a wide variety of arid habitats, including various types of brushlands, such as alkali desert scrub, coastal sage scrub, sagebrush, and bitterbrush (Zeiner et al. 1990). There is some evidence that southern grasshopper mouse may be associated with clumps of cactus or yucca species (Harris 1983). Unlike most other mice, this species is primarily carnivorous, consuming a diet of arthropods such as grasshoppers, beetles, and scorpions. It will also feed on frogs, salamanders, lizards, small mammals, and, occasionally, seeds. It has been known to kill species larger than itself, such as kangaroo rats. Prey items are stalked, rushed, seized, and typically killed with a bite in the head. Curiously, it emits a call note or howl on occasion, perhaps in defense of its territory. Consistent with its carnivorous nature, population densities are normally low. Breeding occurs from March to July with as many as six litters ranging from two to six young with an average of four young. However, under ideal conditions, breeding can begin in January or continue year-round (Zeiner et al. 1990). These mice are not frequently caught in small-mammal trapping studies, which typically use vegetable or grass material as bait. As a result, little is currently known about the population or natural history status of the southern grasshopper mouse in San Diego County (Harris 1983).

The southern grasshopper mouse has a high potential to occur within the BSA. The BSA is within the known range of species and suitable habitat is present within the BSA and vicinity.

#### 5.5.3.47 Ringtail

The ringtail (*Bassariscus astutus*) is a CDFW fully protected species. The range of this species is widespread from the western U.S. to Louisiana and south into Mexico and Baja. This nocturnal species is seldom observed but is normally associated with steep rocky slopes adjacent to streams. Ringtails prefer woodland, riparian, and arid scrubland habitats with rocky terrain (Kays and Wilson 2002, Zeiner et al. 1990). It is also associated with caves and abandoned mines. Ringtails shelter and raise young in rock recesses, tree hollows, logs, snags, abandoned burrows, or woodrat nests (Zeiner et al. 1990).



Young are typically born between May and June. There is one litter per year with one to five young, averaging three. Their diet consists mostly of woodrats, mice, and rabbits, but they will eat birds, eggs, reptiles, invertebrates, fruits, nuts, and carrion (Zeiner et al. 1990). Threats to ringtail are automobiles and trapping practices (Glatston 1994).

The ringtail has a low potential to occur within the BSA. The BSA is within the known range of the species but only marginally suitable habitat exists within the BSA and vicinity.

#### **5.5.3.48 American Badger**

The American badger (*Taxidea taxus*) is a CDFW species of special concern and a NCCP-covered species. American badgers are widespread, ranging from the Great Lakes to the Pacific Coast, and from the Canadian Prairie Provinces to the Mexican Plateau. This species can be found in a variety of habitats, which include shrub steppes, agricultural fields, open woodland forests, and large grass and sagebrush meadows and valleys (Streubel 2000). In California, the badger may occupy a variety of habitats, especially grasslands, savannas, montane meadows, sparse scrublands, and deserts. It prefers friable soils for burrowing and relatively open, uncultivated ground. Prey items include gophers, ground squirrels, marmots, kangaroo rats, other rodents, and the occasional reptile or amphibian. Their breeding season occurs from mid- to late summer, which implantation is delayed until between December and February. A litter of two to five young are born between March and early April (Streubel 2000). Threats to American badger are due to human activity caused by habitat destruction, trapping, hunting, vehicular deaths, and poisoning.

The American badger has a low potential to occur within the BSA. The BSA is within the known range of the species but only marginally suitable habitat exists within the BSA and vicinity.

#### **5.5.3.49 Mountain Lion**

The mountain lion (*Puma concolor*) is a NCCP-covered species. Mountain lions typically occur in remote, hilly or mountainous areas, but they can occasionally be found in the urban/wild land interface. They require open water sources such as streams or rock pools, large foraging areas and rocky shelters or caves for denning. Mountain lions are chiefly nocturnal, but may also be about during the day if undisturbed. This cat is active year-round and may travel up to 25 miles per night in search of food. Prey primarily includes mule deer, but rabbit, rodents, coyotes, snakes, and occasionally livestock are taken (Wilson and Ruff 1999). Because of its large home range size, this species is susceptible to increased human pressures.

The mountain lion has a moderate potential to occur within the BSA. The BSA is within the known range of species and moderately suitable habitat is present within the BSA and vicinity.

#### **5.5.3.50 Southern Mule Deer**

The southern mule deer (*Odocoileus hemionus*) is a NCCP-covered species. Southern mule deer are presently widespread throughout undeveloped portions of San Diego County, ranging from Camp Pendleton to the Laguna Mountains, Sweetwater River, and Otay Lakes at elevations of 400 to 3,600 feet amsl (Bleich and Holl 1982). Resident and migratory populations are present throughout California. This species requires relatively large, undisturbed tracts of chaparral, coastal sage scrub, and mixed grassland/shrub habitats. Breeding usually occurs between November and February, with the

fawning period between June and August. The diet of the southern mule deer consists of forbs, grasses, and nuts. Although the species is not threatened with extinction within its range, urbanization and habitat fragmentation could result in local extirpation without appropriate conservation measures.

The southern mule deer is present within the BSA (Appendix A: Figures). Several individuals of this species were observed throughout BSA during fall biological surveys and there is suitable habitat present throughout the BSA and vicinity.

## **5.6. CRITICAL HABITAT**

Under the ESA, USFWS designates certain areas as “critical habitat” if they determine that these geographic areas are essential for the conservation and/or recovery of a federally listed threatened or endangered species, whether or not the species currently occupies the area. Critical habitat areas often require special management and protection to assure they will remain suitable for the federally listed species for which they have been designated. While federally listed species are protected by the ESA whether or not they are in an area that is designated as critical habitat, projects proposed within or adjacent to “critical habitat” must demonstrate that implementation of the project would not destroy or significantly impact the functions and values of the critical habitat.

USFWS critical habitat that occurs within a 5-mile buffer of the Proposed Project alignment was considered (Appendix A: Figures). Within this 5-mile buffer, critical habitat has been designated for three special-status plant species and four special-status wildlife species. This critical habitat is summarized in Table 4, below. Critical habitat for the San Diego fairy shrimp is the only critical habitat that occurs within the BSA (USFWS 2007b; Appendix A: Figures).

**Table 4. Critical Habitat in Vicinity of BSA**

Species	Location of Critical Habitat
San Diego thornmint ( <i>Acanthomintha ilicifolia</i> )	2 areas within about .25 mile of alignment, another one about 3 miles east of alignment (USFWS 2008)
Willow monardella ( <i>Monardella viminea</i> )	about 2.5 miles southeast of alignment (USFWS 2012)
Spreading navarretia ( <i>Navarretia fossalis</i> )	about 5 miles south of alignment (USFWS 2010)
San Diego fairy shrimp ( <i>Branchinecta sandiegonensis</i> )	many designations within buffer, alignment crosses (USFWS 2007b)
Western snowy plover ( <i>Charadrius alexandrinus nivosus</i> )	closest about 2 miles west of alignment (USFWS 2006)
Least Bell's vireo ( <i>Vireo bellii pusillus</i> )	4.5 miles south of alignment (USFWS 1994)
Coastal California gnatcatcher ( <i>Polioptila californica californica</i> )	closest about 2.5 miles southeast of alignment (USFWS 2007c)

#### 5.7. PRESERVE AREAS

Preserve areas refer to established Preserve Areas of HCPs; federal, state, or local preserve areas, including public and private lands; or other areas set aside for the protection of biological resources. Preserve areas that occur within and immediately adjacent to the BSA were considered, and a total of approximately 557.67 acres of preserve areas occur within the BSA (Appendix A: Figures). Table 5, below, summarizes the vegetation communities that occur within the preserve areas.

**Table 5. Vegetation Communities and Land Cover Types within Preserve Areas**

Vegetation Community	Approx. Acres
Diegan Coastal Sage Scrub	132.52
Diegan Coastal Sage Scrub - Disturbed	3.67
Coastal Sage Scrub – Revegetated	20.98
Coastal Sage - Chaparral Scrub	7.00
Chamise Chaparral	68.63
Chamise Chaparral - Disturbed	2.24
Southern Mixed Chaparral	54.80
Southern Mixed Chaparral - Disturbed	4.02
Scrub Oak Chaparral	77.88
Native Grassland	9.95
Nonnative Grassland	62.70
Alkali Marsh – Revegetated	0.29
Freshwater Marsh	0.25
Open Water	0.92

**Table 5 (cont.). Vegetation Communities and Land Cover Types within Preserve Areas**

<b>Vegetation Community</b>	<b>Approx. Acres</b>
Open Water	0.92
Southern Riparian Scrub	1.37
Mulefat Scrub	1.40
Southern Willow Scrub	2.50
Tamarisk Scrub	0.40
Southern Coast Live Oak Riparian Forest	2.63
Eucalyptus Woodland	2.97
Disturbed Habitat	4.83
Developed Lands	39.95
Ornamental	25.14
Bare Ground	30.61
<b>TOTAL PRESERVE ACREAGE</b>	<b>557.67*</b>

\*Total reflects actual total without rounding error.

**5.8. ENVIRONMENTALLY SENSITIVE HABITAT AREAS**

As discussed in Section 3.2.5: California Coastal Act and Environmentally Sensitive Habitat Areas, above, ESHAs are defined as “any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments”. Proposed development within and adjacent to an ESHA must be located and designed to prevent significant impacts to the functions and values of the ESHA. ESHAs that occur within and immediately adjacent to the BSA were considered, and a total of approximately 110.85 acres of ESHA occur within the BSA (Appendix A: Figures). Table 6, below, summarizes the vegetation communities that occur within the ESHAs. It is important to note that all ESHAs are also included in the designated preserve areas discussed above.

**Table 6. Vegetation Communities and Land Cover Types within ESHAs**

<b>Vegetation Community</b>	<b>Approx. Acres</b>
Diegan Coastal Sage Scrub	66.51
Diegan Coastal Sage Scrub - Disturbed	0.65
Coastal Sage Scrub – Revegetated	1.47
Coastal Sage - Chaparral Scrub	2.38
Chamise Chaparral	7.23
Southern Mixed Chaparral	13.14
Scrub Oak Chaparral	3.83
Native Grassland	1.83
Nonnative Grassland	6.13
Southern Willow Scrub	0.19
Bare Ground	5.32
<b>TOTAL ESHA ACREAGE</b>	<b>110.85*</b>

\*Total reflects actual total without rounding error.

## 5.9. WILDLIFE MOVEMENT CORRIDORS

Wildlife corridors are essential to maintain populations of healthy and genetically diverse plant and wildlife species. At a minimum, wildlife corridors promote colonization of habitat and genetic variability for both plant and wildlife species by connecting fragments of habitat that are separated by otherwise foreign or inhospitable habitats. Because the isolation of plant and wildlife populations can have many harmful effects on local and regional species' populations and may contribute significantly to local species extinctions, wildlife corridors are important to sustain individual species distributions within these habitat fragments.

Wildlife corridors are considered sensitive by local, state, and federal resource and conservation agencies because these corridors allow wildlife to move between adjoining open space areas that are becoming increasingly isolated as open space becomes fragmented from urbanization, rugged terrain, and/or changes in vegetation (Beier and Loe 1992). In southern California, habitat fragmentation is one of the main concerns for the maintenance of healthy wildlife populations because natural areas are often scarce and maintaining connectivity between these habitats is perhaps one of the best feasible options for preventing localized extinctions and enhancing biodiversity (Penrod et al. 2001).

Wildlife corridors can be classified as either regional corridors or local corridors. Regional corridors are defined as those linking two or more large areas of natural open space and local corridors are defined as those allowing resident animals to access critical resources (e.g., food, cover, water) in a smaller area that might otherwise be isolated by some form of urban development (e.g., roads, housing tracts). Both regional and local wildlife corridors reduce the effects of habitat fragmentation by (1) allowing wildlife to move between remaining habitat fragments, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk of catastrophic events (such as fire or disease) on a population that may cause local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other life cycle requirements (Noss 1983; Farhig and Merriam 1985; Simberloff and Cox 1987; Harris and Gallagher 1989).

Within these wildlife corridors, wildlife movement activities typically fall into one of three movement categories: (1) dispersal (i.e., juvenile animals from natal areas or individuals extending range distributions), (2) seasonal migration, and (3) movement related to home range activities (e.g., foraging for food or water, defending territories, searching for mates). In addition, wildlife corridors have been shown to prevent extinctions and increase species diversity (Farhig and Merriam 1985, Crooks 2002, Crooks and Soulé 1999, Soulé et al. 1988). Wildlife corridors also play a very important role in linking reserves and reducing the negative effects of fragmentation. While corridors are not reserves themselves, they can be viewed as a means to effectively increase reserve size. To some wide-ranging animals, such as bobcat (*Felis rufus*), coyote, and mountain lion, even a relatively large isolated reserve may not be capable of sustaining populations. However, by allowing these and other species to disperse to and move between reserves via wildlife corridors, these animals have more space to utilize and are more likely to maintain stable populations.

Within and adjacent to the BSA, both public and private preserves and conservation lands have been established to protect the ecological values of these areas and the species that rely on them. These preserved and conserved lands have become important refuges for many native plant and wildlife

species; however, the long-term conservation of these areas will require maintaining connectivity and/or reconnecting habitat patches across and between the habitats that occur between the coastal and mountain ecosystems while crossing extensive developed and urbanized areas.

**5.10. JURISDICTIONAL RESOURCES**

The Proposed Project crosses three named blue-line drainages as depicted on the USGS topographic maps (Appendix H: Exhibit 1). These drainages include Deer Canyon Creek, McGonigle Canyon Creek, and Los Peñasquitos Creek. 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 chaparral, 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.

Wetland and riparian resources are considered sensitive biological resources and are regulated by the USACE, CDFW, RWQCB, and/or CCC pursuant to several federal and state regulations. Table 7: Summary of Jurisdictional Resources, below, summarizes the jurisdictional features within the BSA by regulatory agency.

**Table 7. Summary of Jurisdictional Features by Regulatory Agency**

Regulatory Agency	Number of Named Features	Total Area of Jurisdiction (Approx. Acres)	Total Length of Jurisdiction (Approx. Linear Feet)
USACE	35	9.21	43,952
RWQCB*	38	9.34	47,430
CDFW	31	14.92	43,953
CCC	8	1.66	9,396

\*Excludes approximately 1.79 acres (approximately 29,589 linear feet) of exempt V-ditches.

Table 8: Summary of Vegetation Communities by Jurisdiction, below, summarizes the vegetation communities that make up the acreage within the total area of jurisdiction by each of the regulatory agencies.

**Table 8. Summary of Vegetation Communities by Jurisdiction**

DOMINANT VEGETATION TYPE	JURISDICTIONAL AGENCY			
	USACE	RWQCB	CDFW	CCC
Wetland/Riparian				
Open Water	0.91	0.91	0.92	--
Alkali Marsh	0.17	0.17	0.17	0.04
Freshwater Marsh	0.26	0.26	0.28	--
Mulefat Scrub	0.16	0.16	0.96	--
Southern Coast Live Oak Riparian Forest	1.71	1.71	2.31	--
San Diego Mesa Vernal Pool	0.03	0.03	--	--
Southern Riparian Scrub	0.16	0.16	1.16	--
Southern Willow Scrub	1.10	1.10	2.09	0.02
Upland				
Native Upland Habitat <sup>1</sup>	3.81	3.82	5.32	1.57
Non-native Upland Habitat <sup>2</sup>	0.61	0.61	1.53	0.02
Other <sup>3</sup>	0.30	0.41	0.20	--
<b>TOTAL</b>	<b>9.21</b>	<b>9.34</b>	<b>14.92</b>	<b>1.66</b>

<sup>1</sup> Includes Chamise Chaparral, Coastal Sage Scrub – Revegetated, Diegan Coastal Sage Scrub, Diegan Coastal Sage Scrub – Disturbed, Native Grassland, So. Mixed Chaparral, and Scrub Oak Chaparral

<sup>2</sup> Includes Eucalyptus Woodland, Nonnative Grassland, and Tamarisk Scrub

<sup>3</sup> Includes Bare Ground, Developed Lands, Disturbed Habitat, and Ornamental

<sup>4</sup> Excludes 1.79 acres (29,589 linear feet) of exempt, MS4 V-ditches

A brief summary of the wetland delineation results is provided below, and a detailed description of each agency’s jurisdiction and of the wetland delineation results are provided in Appendix H: Jurisdictional Delineation of San Diego Gas & Electric’s Sycamore to Peñasquitos 230 Kilovolt Transmission Line Improvements Project, Section 2.0: Regulatory Framework and Section 4.0: Results, respectively.

### 5.10.1 USACE Jurisdiction

A total of 31 USACE jurisdictional drainage systems have been identified within the BSA. Of those, two have perennial features, eight have intermittent features, and 21 are ephemeral. Additionally, three vernal pool complexes and eight road ruts were considered under the jurisdiction of the USACE. Within the BSA, USACE jurisdiction totals approximately 9.21 acres, of which approximately 5.03 acres are wetland Waters of the U.S., and approximately 4.18 acres are non-wetland Waters of the U.S. These acreages along with the dominant vegetation communities are summarized in Tables 7 and 8, above.

### 5.10.2 RWQCB Jurisdiction

A total of 38 RWQCB jurisdictional features have been identified within the BSA. The areas under RWQCB jurisdiction include all areas under USACE jurisdiction, described above, as well as erosion

control V-ditches, vernal pool complexes, and other isolated waters. RWQCB jurisdiction totals approximately 9.34 acres, of which approximately 5.15 acres are wetland Waters of the State and approximately 4.19 acres are non-wetland Waters of the State. In addition, approximately 1.79 acres classified as exempt, MS4 V-ditches and erosional features are present within the BSA. These acreages along with the dominant vegetation communities are summarized in Tables 7 and 8, above.

#### **5.10.3 CDFW Jurisdiction**

A total of 31 CDFW jurisdictional features have been identified within the BSA. CDFW jurisdiction extends to the top of the bank of unvegetated streambeds and to the outer drip line of any associated riparian vegetation (CDFW 2013c). CDFW jurisdiction totals approximately 14.92 acres, of which approximately 2.88 acres are unvegetated streambed, and approximately 12.04 acres are riparian vegetation. These acreages along with the dominant vegetation communities are summarized in Tables 7 and 8, above.

#### **5.10.4 CCC Jurisdiction**

A total of eight CCC jurisdictional features have been identified within the BSA. The areas under CCC jurisdiction include all wetlands (isolated or non-isolated) in the coastal zone and areas designated as ESHAs, as described above in Section 5.8: Environmentally Sensitive Habitat Areas. The CCC defines a wetland as land “which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.” The absence of hydrophytic vegetation or hydric soils is not enough to exclude an area from jurisdiction. CCC wetland jurisdiction totaled approximately 1.66 acres of wetland habitat along with approximately 110.85 acres of ESHA, as described in Section 5.8: Environmentally Sensitive Habitat Areas, above. These acreages along with the dominant vegetation communities are summarized in Tables 7 and 8, above.



## SECTION 6.0 – IMPACTS

During construction of the Proposed Project, SDG&E would operate in compliance with all state and federal laws, regulations, and permit conditions. This includes compliance with the federal, state, and local regulations, as described in Section 3: Regulatory Setting, above. In addition, SDG&E would operate under the *SDG&E Subregional NCCP*, which was developed consistent with the ESA, CESA, and the NCCP Act. This would include compliance with *SDG&E Subregional NCCP* Section 7.1: Operational Protocols and Section 7.2: Habitat Enhancement Measures. Section 7.1: Operational Protocols was designed to avoid and/or minimize impacts to all sensitive resources, whether or not the resources is covered by the *SDG&E Subregional NCCP*. SDG&E would also implement the *SDG&E QCB HCP*, which was developed to protect the Quino checkerspot butterfly and its habitat through implementation of both general and Quino checkerspot butterfly-specific operational protocols that were designed to avoid or minimize take of the species.

In addition, Applicant Proposed Measure (APM) BIO-1, has been included to ensure impacts remain less than significant. Under APM BIO-1, all impacts to special-status plant species will be adequately assessed prior to project construction and avoided, minimized, or appropriately mitigated.

### 6.1. IMPACT DEFINITIONS

Biological resources may be either permanently or temporarily impacted by a project. Permanent and temporary impacts may furthermore be direct or indirect in nature. These impacts are defined, below.

- **Permanent Impacts:** A permanent impact is an impact that results in the irreversible removal or displacement of biological resources. Examples include installing a power pole, constructing a permanent work pad or permanent road in an area containing biological resources.
- **Temporary Impacts:** A temporary impact is an impact that is considered to have reversible effects on biological resources. Examples include nighttime lighting, increased human activity, the generation of fugitive dust during construction, or the removal of vegetation for construction activities and subsequently allowing the natural vegetation to recolonize the impact area.
- **Direct Impacts:** A direct impact is any alteration, disturbance, or destruction of biological resources that may result from project-related activities such as clearing, grubbing, and grading. Examples include clearing vegetation, encroaching into wetlands, diverting surface water flows, fragmenting wildlife habitat, and the loss of individual species and/or their associated plant communities.
- **Indirect Impacts:** An indirect impact is an effect on biological resources that results from project-related activities but occurs in a different time or place. Examples include elevated noise levels, decreased water quality, the introduction of invasive wildlife (i.e., domestic cats and dogs) and plants, disruptions in local movement patterns for wildlife, and elevated fugitive dust levels that reduces plant photosynthesis, growth, and reproduction.

The permanent and temporary impacts that could potentially result from implementation of the Proposed Project are summarized in Table 9, below, and are described in more detail later in this section.

**Table 9. Summary of Anticipated Impacts**

Type of Impact	Anticipated Resource Impact	Approx. Acres	Approx. Square Feet
Permanent	Anticipated Impacts to Sensitive Vegetation Communities (not including bare ground, developed lands, disturbed habitat, or ornamental)	4.38	1,90972
	Anticipated Impacts to Non-Sensitive Vegetation Communities (bare ground, developed lands, disturbed habitat, and ornamental)	3.18	138,696
	<b>Total Anticipated Permanent impacts</b>	7.56*	329,668*
Temporary	Anticipated Impacts to Sensitive Vegetation Communities (not including bare ground, developed lands, disturbed habitat, ornamental, or eucalyptus woodland)	35.04	1,526,285
	Anticipated Impacts to Non-Sensitive Vegetation Communities (bare ground, developed lands, disturbed habitat, ornamental, and eucalyptus woodland)	40.00	1,741,841
	<b>Total Anticipated Temporary Impacts</b>	75.03*	3,268,126*

\*Total reflects actual total without rounding error.

Construction will primarily take place within the existing SDG&E ROW easements and access roads as well as on public roadways. Most work areas are accessible by vehicle on unpaved SDG&E-maintained access roads or by overland travel. To enable crews and equipment to access the associated poles, smoothing or refreshing of the existing access roads and/or vegetation clearing will be necessary to improve some existing access roads and to re-establish unmaintained access roads. Pursuant to *SDG&E's Subregional NCCP*, SDG&E is not required to mitigate for impacts to vegetation resulting from road maintenance (i.e., re-establishing) of existing access roads. Cleared vegetation will be removed from the Proposed Project site and disposed of at an approved offsite facility. Vehicles will remain within existing access roads, previously disturbed areas, and designated temporary work areas, where feasible. At designated drainage crossing locations along the access roads, the blade of smoothing equipment will be lifted 25 feet on either side of the drainage to avoid impacts to the drainage. Temporary bridging of drainage crossings may be utilized wherever feasible.

In addition, helicopter operations would be staged out of local airports (such as McClellan Palomar, Montgomery, and Gillespie), and all refueling, maintenance, and other associated activities would be conducted at these local airports. Helicopter operations would also utilize ILAs for short term incidental helicopter actions, such as picking up conductors or other equipment. These ILAs would be located in construction staging areas. Therefore, no permanent or temporary impacts would result from ILAs.

**6.1.1 Proposed Project-Specific Permanent Impacts**

The Proposed Project would result in approximately 7.758 acres (approximately 337,938 square feet) of permanent impacts. Permanent impacts associated with the implementation of the Proposed Project

include the installation of new transmission and power line structures and associated permanent maintenance work pads and the creation of new spur roads. The permanent impacts would include impacts resulting from the installation of approximately 62 new structure operational work pads and approximately one new permanent spur road as well as the installation of approximately 10 splice vaults.

### **6.1.2 Proposed Project-Specific Temporary Impacts**

The Proposed Project would result in approximately 75.03 acres (approximately 3,268,126 square feet) of temporary impacts. Temporary impacts associated with the implementation of the Proposed Project include material storage and staging yards, stringing sites, structure work areas, guard structures, underground construction, construction vehicle staging and parking and turn around areas. Temporary work areas will be required for construction of new facilities, removal of existing facilities, and storage and staging of construction equipment and materials. Each of these temporary work areas is described, below. During construction, alteration to the temporary work spaces may be required to accommodate construction activities. Any necessary changes will be evaluated per *SDG&E's Subregional NCCP*, the Proposed Project StormWater Pollution Prevention Plan (SWPPP), aquatic resources, and for cultural resources in order to avoid impacts to sensitive resources and to identify any necessary changes to the SWPPP.

#### **6.1.2.1 Material Storage and Staging Yards**

The Proposed Project includes approximately five temporary construction staging yards, which would result in temporary impacts to approximately 25 acres. SDG&E has attempted to identify a reasonable number of staging yards commensurate with the size, location, and scope of the Proposed Project. To reduce potential temporary impacts to biological resources, past staging yards as well as large undeveloped areas near that have been previously disturbed and/or graded were identified and will be used during construction of the Proposed Project. While SDG&E has exercised reasonable diligence in identifying potential construction staging yards, there is no guarantee that the identified staging yards will be available by the time the Proposed Project is set to begin construction. Other potential staging yards may be identified as part of the environmental review process.

#### **6.1.2.2 Stringing Sites**

The Proposed Project includes approximately 20 temporary stringing sites, which would result in temporary impacts to approximately 16.5 acres, not counting space also designated for structure construction. To the extent possible, SDG&E reduced the area required for these stringing sites to avoid and/or minimize temporary impacts to biological resources. Adjustments to these stringing sites and/or additional stringing sites may be identified during construction to safely and efficiently string wire.

#### **6.1.2.3 Structure Work Areas**

The Proposed Project includes approximately 62 temporary structure work areas, which would result in temporary impacts to approximately 27.1 acres. Each temporary structure work area typically requires an approximately 22,500 square foot work area. However, because most of the new poles will be located in the immediate vicinity of existing poles, impacts to existing vegetation communities would be minimized by using existing maintenance pads and access roads during construction of new poles.

The temporary impact areas may vary because the positioning of construction vehicles, equipment, and materials cannot be accurately anticipated prior to construction. The locations of the construction vehicles, equipment, and materials are dependent upon the contractor safely performing the work. The impacts from construction vehicles, equipment, and materials staged outside of delineated temporary work areas will be evaluated by the on-site biological monitor prior to their placement. The monitor, as appropriate, will assist crews in placement of construction vehicles, equipment, and materials to avoid and minimize impacts to sensitive habitat types. In addition, in order to maintain a safe working space for crewmembers working directly under poles, construction vehicles, equipment, and materials may need to be staged off of existing access roads and/or outside of delineated temporary work areas. However, the on-site biological monitor will assist crews in locating appropriate staging areas for construction vehicles, equipment, and materials that avoids and minimizes impacts to sensitive habitat types. Any temporary impacts associated with placement of construction vehicles, equipment, and materials will be recorded by the biological monitor and will be included within the project Post Construction Report and will be mitigated as necessary, pursuant to the *SDG&E Subregional NCCP*.

#### **6.1.2.4 Guard Structures**

The Proposed Project includes approximately 48 temporary guard structure locations, which would result in temporary impacts to approximately 1.7 acres. Bucket trucks are often utilized as guard structures during stringing activities. Where wooden poles are used as guard structures instead, installation requires the temporary use of up to approximately 1,500 square feet of area, depending upon guard structure configuration and location. The temporary work area is located in the immediate vicinity of the guard structure location. Guard structure installation utilizing wood poles will include excavation of holes approximately 3 feet in diameter and 10 feet in depth. Excavated soils will be temporarily stock piled and then replaced within the excavation following stringing activities.

#### **6.1.2.5 Underground Construction**

The Proposed Project includes approximately 2.84 miles of underground construction, which would result in temporary impacts to approximately 8.7 acres. The majority of the underground transmission line construction included as part of the Proposed Project will utilize the cut and cover construction method, which typically requires approximately 25 feet width of space for construction. At vault locations, approximately 50 feet width of space would be required for installation of the new underground splice vaults along Segment B.

### **6.2. SIGNIFICANCE CRITERIA**

The criteria for determining if an project will have a significant impact on biological resources were developed in accordance with Section 15065(a) of the CEQA Guidelines, which states that a project may have a significant effect on the environment if the project has the potential to (1) substantially degrade the quality of the environment, (2) substantially reduce the habitat of a fish or wildlife species, (3) cause a fish or wildlife population to drop below a self-sustaining level, (4) threaten to eliminate a plant or animal community, and/or (5) reduce the number or restrict the range of an endangered, rare, or threatened species.

An evaluation of whether an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a local or regional context. A substantial impact is an impact that diminishes, or results in the loss of, a sensitive biological resource or that significantly

conflicts with local, state, or federal resource conservation plans, goals, and/or regulations. Sometimes impacts can be locally adverse, but not significant. In such a case, the impacts may result in an adverse alteration of a local biological resource, but they may not substantially diminish or result in the permanent loss of an important resource on a population- or region-wide basis.

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. Implementation of the proposed project may have potentially significant adverse impacts on biological resources if it would result in 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 CDFW or the USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFW or the USFWS.
- Have a substantial adverse effect on state or federally protected wetlands as defined by USACE, CDFW, RWQCB, or CCC, including but not limited to marsh, coastal, 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.
- Conflict with the provisions of any adopted HCP, NCCP, or other approved local, regional, or state HCP.

### **6.3. PROPOSED PROJECT-SPECIFIC IMPACTS**

Implementation of the Proposed Project would result in permanent loss of and/or temporary disturbance to sensitive vegetation communities, special-status plant species, special-status wildlife species, ESHAs, and preserve areas; however, SDG&E would avoid and minimize impacts according to the *SDG&E Subregional NCCP* Section 7.1: Operational Protocols and all conditions outlined in the permits obtained for the Proposed Project.

#### **6.3.1 Sensitive Vegetation Community Impacts**

The *SDG&E Subregional NCCP* allows for impacts to sensitive vegetation communities 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* is intended to avoid or minimize impacts to sensitive natural resources. Vegetation mapping for the Proposed Project was conducted during the late summer/fall 2013 based on Holland (1986). Potential impacts that may result from construction of the Proposed Project were calculated and analyzed by using this vegetation map as well as additional information in the *SDG&E Subregional NCCP* Section 3.1: Data Base References.

Consistent with the *SDG&E Subregional NCCP*, the Proposed Project has been designed to avoid sensitive vegetation communities when possible by placing poles outside of drainage areas, using existing access roads to the greatest extent possible, and placing any new facilities, staging areas, or

access roads outside native vegetation communities, when feasible. Where avoidance of sensitive vegetation communities is not possible or where sensitive habitat areas exist adjacent to Proposed Project work areas, implementation of the measures in *SDG&E Subregional NCCP* Section 7.1: Operational Protocols and Section 7.2: Habitat Enhancement Measures will reduce these impacts to less than significant. Figures showing both temporary and permanent construction impacts are provided in Appendix A. These impacts are also summarized in Table 10: Potential Vegetation Community Impacts.

**Table 10. Potential Vegetation Community Impacts**

NCCP Vegetation Community	Holland Vegetation Community/Land Cover Type	Permanent		Temporary	
		Approx. Acres	Approx. Square Feet	Approx. Acres	Approx. Square Feet
Coastal Sage Scrub	Diegan Coastal Sage Scrub	1.03	44,639	10.26	446,940
	Diegan Coastal Sage Scrub – Disturbed	1.02	44,445	10.65	464,082
	Coastal Sage Scrub – Revegetated	0.29	12,396	2.50	109,020
Coastal Sage/Chaparral Mix	Coastal Sage – Chaparral Scrub	0.09	3,805	0.62	26,822
Chaparral	Chamise Chaparral	0.75	32,597	3.31	144,060
	Chamise Chaparral - Disturbed	0.13	5,421	0.42	18,431
	Southern Mixed Chaparral	0.46	20,195	2.47	107,766
	Southern Mixed Chaparral – Disturbed	--	--	<0.01	150
	Scrub Oak Chaparral	0.24	10,262	1.28	55,596
Grassland	Native Grassland	0.17	7,256	0.79	34,584
	Nonnative Grassland	0.23	9,954	2.46	107,023
Alkali Marsh	Alkali Marsh – Revegetated	--	--	--	--
Freshwater Marsh	Freshwater Marsh	--	--	<0.01	132
Inland Water	San Diego Mesa Vernal Pool	--	--	--	--
	Open Water*	--	--	--	--
Riparian Scrub	Southern Riparian Scrub	--	--	--	--

**Table 10 (cont.). Potential Vegetation Community Impacts**

NCCP Vegetation Community	Holland Vegetation Community/Land Cover Type	Permanent		Temporary	
		Approx. Acres	Approx. Square Feet	Approx. Acres	Approx. Square Feet
Riparian Scrub	Mulefat Scrub	--	--	--	--
	Southern Willow Scrub	--	--	0.26	11,218
	Tamarisk Scrub	--	--	--	--
Coast Live Oak Riparian Forest	Southern Coast Live Oak Riparian Forest	--	--	0.01	463
Eucalyptus Forest	Eucalyptus Woodland*	--	--	0.03	1,075
Disturbed Habitat	Disturbed Habitat*	0.19	8,256	4.79	208,785
N/A	Developed Lands*	<0.01	111	20.10	875,311
	Ornamental*	0.24	10,524	5.70	247,939
	Bare Ground*	2.75	119,805	9.39	408,732
<b>TOTAL</b>		<b>7.56**</b>	<b>329,668**</b>	<b>75.03**</b>	<b>3,268,126**</b>

\*This classification does not have a Holland Code. \*\*Total reflects actual total without rounding error.

The potential permanent and temporary vegetation impacts are discussed further, below.

**6.3.1.1 Permanent Sensitive Vegetation Community Impacts**

The Proposed Project would permanently impact approximately 4.38 acres of sensitive upland vegetation communities, including approximately 1.03 acres of Diegan coastal sage scrub, 1.02 acres of disturbed Diegan coastal sage scrub, 0.29 acre of revegetated coastal sage scrub, 0.09 acre of coastal sage – chaparral scrub, 0.75 acre of chamise chaparral, 0.13 acres of disturbed chamise chaparral, 0.46 acre of southern mixed chaparral, 0.24 acre of scrub oak chaparral, 0.17 acre of native grassland, and 0.23 acre of nonnative grassland (Appendix A: Figures). No permanent impacts would occur to riparian vegetation communities or to disturbed southern mixed chaparral, revegetated alkali marsh, freshwater marsh, San Diego mesa vernal pool, open water, southern riparian scrub, mulefat scrub, southern willow scrub, tamarisk scrub, southern coast live oak riparian forest, eucalyptus woodland, or developed land.

**6.3.1.2 Temporary Sensitive Vegetation Community Impacts**

The Proposed Project would temporarily impact approximately 35.04 acres of sensitive vegetation communities, including approximately 10.26 acres of Diegan coastal sage scrub, 10.65 acres of disturbed Diegan coastal sage scrub, 2.42 acres of revegetated coastal sage scrub, 0.62 acre of coastal sage – chaparral scrub, 3.31 acres of chamise chaparral, 0.43 acre of disturbed chamise chaparral, 2.31 acres of southern mixed chaparral, less than 0.01 acre (approximately 150 square feet) of disturbed southern mixed chaparral, 1.28 acres of scrub oak chaparral, 0.79 acre of native grassland, 2.46 acres of nonnative

grassland, less than 0.01 acre (approximately 132 square feet) of freshwater marsh, 0.26 acre of southern willow scrub, and 0.01 acre of southern coast live oak riparian forest (Appendix A: Figures). No temporary impacts would occur to revegetated alkali marsh, San Diego mesa vernal pool, open water, southern riparian scrub, mulefat scrub, or tamarisk scrub. While very small impacts to riparian vegetation communities are currently shown in the impact tables, these impacts would be avoided with guidance from the Environmental Surveyor and/or the lead biological resources monitor during implementation of the Proposed Project. If unavoidable impacts to these riparian vegetation communities (or other jurisdictional resources) are identified during future planning efforts for the Proposed Project, SDG&E would obtain the requisite permit(s) from the applicable regulatory agency and fully comply with all conditions outlined in the permit(s). This would assure that impacts to jurisdictional resources remain less than significant.

**6.3.1.3 Summary of Anticipated SDG&E Mitigation**

Permanent impacts to sensitive vegetation communities resulting from installation of new facilities will be mitigated at a 2:1 ratio for impacts inside preserve areas and at a 1:1 ratio for impacts outside preserve areas, according to the guidelines in the *SDG&E Subregional NCCP* Section 7.4: Mitigation Credits, Table 7.4. Approximately 2.44 acres (106,513 square feet) of permanent impacts are expected within designated preserve areas. These preserve impacts are discussed in detail in Sections 6.3.5: Preserve Area Impacts and 6.3.6: ESHA Impacts, below, and are summarized in Table 11: Summary of Anticipated SDG&E Mitigation, below.

**Table 11. Summary of Anticipated SDG&E Mitigation**

Type of Mitigation	Type of Impact	Location	Mitigation Ratio	Area Impacted (Approx. Acres/Square Feet)	Anticipated Mitigation (Approx. Acres/Square Feet)
Credit Withdrawal	Permanent	Inside a Preserve	2:1	2.44/106,513	4.88/213,025
	Permanent	Outside a Preserve	1:1	1.94/84,460	1.94/84,460
<b>Total Anticipated Credit Withdrawal for Permanent Impacts</b>				--	6.82/297,485*
Active Enhancement	Temporary	Inside a Preserve	1:1	16.28/709,239	16.28/709,239
Monitoring	Temporary	Inside a Preserve	1:1	1.41/61,507	1.41/61,507
<b>Total Anticipated Enhancement &amp; Monitoring for Temporary Impacts</b>				--	17.69/770,745*

\*Total reflects actual total without rounding error.



Approximately 1.94 acres (84,460 square feet) of permanent impacts to sensitive vegetation communities are expected outside of designated preserve areas, including impacts to approximately 0.23 acre (9,793 square feet) of Diegan coastal sage scrub, 0.94 acres (40,875 square feet) of disturbed Diegan coastal sage scrub, 0.20 acre (8,554 square feet) of revegetated coastal sage scrub, 0.03 acre (1,392 square feet) of chamise chaparral, 0.08 acre (3,423 square feet) of disturbed chamise chaparral, 0.26 acre (11,138 square feet) of southern mixed chaparral, and 0.21 acre (9,285 square feet) of nonnative grassland.

Temporary impacts to sensitive vegetation communities resulting from installation of new facilities will be mitigated at a 1:1 ratio for impacts inside preserve areas. These preserve impacts are discussed in detail in Sections 6.3.5: Preserve Area Impacts and 6.3.6: ESHA Impacts, below, and are summarized in Table 11: Summary of Anticipated SDG&E Mitigation, above. Vegetation restoration methods and success criteria are presented in the *SDG&E Subregional NCCP* Section 7.2: Habitat Enhancement Measures. For individual temporary impact areas entered into the SDG&E Enhancement and Monitoring Program that are greater than approximately 500 square feet per site, any areas not meeting the established 3-year success criteria will require a deduction of SDG&E mitigation credits at a 1:1 ratio. Individual temporary impact areas that are less than approximately 500 square feet per site do not require mitigation based on the guidelines provided in the *SDG&E Subregional NCCP* Section 7.2: Habitat Enhancement Measures.

Based on the information provided in the *SDG&E Subregional NCCP* Section 7.4: Mitigation Credits, Table 7.4, temporary impacts outside of Preserve areas are addressed as follows:

*Temporary impacts are mitigated through basic site remediation, which includes native hydroseed for erosion control. However, if roots are not grubbed during temporary impacts, the hydroseeding may not be necessary. This applies to areas greater than 500 square feet, and only where grubbing occurred. For all temporary impacts greater than 500 square feet, acreage not meeting success criteria shall be deducted from SDG&E mitigation credits at a 1:1 ratio.*

For the temporary impacts outside a preserve area that are associated with the Proposed Project, no root disturbance is anticipated because no grubbing and/or grading are planned within temporary work areas. However, if grubbing and/or grading are required, all impacts will be mitigated per the *SDG&E Subregional NCCP* Section 7.4: Mitigation Credits, Table 7.4. The final impacts will be captured in the project post-construction report (PCR).

### **6.3.2 Special-Status Plant Impacts**

The *SDG&E Subregional NCCP* allows for the take of NCCP-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 NCCP-covered species whenever possible and to implement measures to minimize and mitigate any take to the maximum extent possible. Take of NCCP-covered narrow endemic species is to be avoided except for emergencies and unavoidable impacts from repairs to existing facilities. Therefore, impacts to special-status plant species resulting from the Proposed Project will be avoided to the maximum extent feasible. For any unavoidable impacts, SDG&E will determine appropriate minimization and/or mitigation measures through discussions with the applicable resource agencies.

Thirty-four special-status plant species are known to occur or have a potential to occur within the BSA (Appendix D: Special-Status Plant Species with a Potential for Occurrence in Vicinity of BSA). Implementation of the Proposed Project could potentially result in permanent and temporary impacts to these special-status plant species. Based on the results of the late summer/fall 2013 special-status plant species surveys, 12 special-status plant species are known to occur within the BSA (Appendix A: Figures). Of these, 4 species – Palmer’s sagewort, San Diego button-celery, San Diego sunflower, and San Diego goldenstar – occur outside of all proposed permanent and temporary impact areas; therefore, impacts to these species are not anticipated. An additional species – the Torrey pine – occurs only as ornamental individuals planted for landscaping around the Peñasquitos Substation. As such, impacts to this species would not require any avoidance or minimization measures, and would be less than significant.

The Proposed Project has the potential to result in permanent and/or temporary impacts the remaining seven species (Appendix A: Figures). The NCCP covers one of these species, the coast barrel cactus (CRPR 2B.1); however, the NCCP does not cover the other six species, including graceful tarplant (CRPR 4.2), Nuttall’s scrub oak (CRPR 1B.1), San Diego marsh-elder (CRPR 2B.2), spineshrub (CRPR 2B.1), summer-holly (CRPR 1B.2), and spiny rush (CRPR 4.2). In addition, potential permanent and temporary impacts to the other 22 special-status plant species that have a potential for occurrence cannot yet be assessed, because only one round of special-status plant species has been conducted for the Proposed Project. Additional special-status plant species surveys are planned for spring and summer 2014 and will provide the data necessary to analyze potential permanent and temporary impacts that may result to these species from implementation of the Proposed Project.

SDG&E will implement all applicable measures outlined in the *SDG&E Subregional NCCP* Section 7.1: Operational Protocols to avoid or minimize potential impacts to special-status plant species. For unavoidable impacts, implementation of the measures outlined in the *SDG&E Subregional NCCP* Section 7.2: Habitat Enhancement Measures will further reduce impacts to vegetation communities that support special-status plant species. By following the measures outlined in the *SDG&E Subregional NCCP*, SDG&E anticipates that all potential impacts to NCCP-covered special-status plant species will be avoided or minimized. For all potential impacts to special-status plant species that are not covered by the NCCP, SDG&E anticipates that implementing measures consistent with the *SDG&E Subregional NCCP* will also avoid or minimize impacts to those special-status plant species that are not covered by the NCCP. However, if impacts to highly sensitive special-status plant species are unavoidable, SDG&E would develop appropriate minimization and/or mitigation measures through discussions with the applicable resource agencies. Through implementation of the above measures, impacts to special-status plant species are anticipated to be less than significant.

### **6.3.3 Special-Status Wildlife Impacts**

The *SDG&E Subregional NCCP* allows for the take of species covered by the NCCP 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 these NCCP-covered species whenever possible and to implement measures to minimize and mitigate any take to the maximum extent possible. Take of NCCP-covered, narrow endemic species is to be avoided except for emergencies and unavoidable impacts from repairs to existing facilities. Therefore, impacts to special-status wildlife species resulting from the Proposed Project will be avoided to the maximum extent feasible. For any unavoidable impacts, SDG&E will determine appropriate minimization and/or mitigation measures through discussions with the applicable resource agencies.

Potential permanent and temporary impacts to special-status wildlife species are discussed in detail, below.

### **6.3.3.1 Special-Status Invertebrate Impacts**

Five special-status invertebrate species are known to occur or have a potential to occur within 5 miles of the BSA (Appendix A: Figures and Appendix F: Special-Status Wildlife Species with a Potential for Occurrence in Vicinity of BSA). Of these five species, two – Thorne’s hairstreak and wandering skipper – are not expected to occur. Of the remaining three, one – San Diego fairy shrimp – has a high potential for occurrence, and two – Riverside fairy shrimp and Quino checkerspot butterfly – have a moderate potential for occurrence.

The NCCP covers the San Diego fairy shrimp and Riverside fairy shrimp, but the NCCP does not permit impacts to vernal pools or their watersheds that may result from construction of new facilities, including both structures and access roads. The Proposed Project has been designed to avoid impacts to fairy shrimp and their habitat, vernal pools, and designated critical habitat. As such, no impacts to San Diego fairy shrimp, Riverside fairy shrimp, San Diego fairy shrimp critical habitat, or vernal pools are expected to result from implementation of the Proposed Project.

The Quino checkerspot butterfly is covered under the *SDG&E QCB HCP* (USFWS 2007a). The *SDG&E QCB HCP* designates suitable Quino checkerspot butterfly habitat that requires focused surveys or assumed occupancy if timing precludes focused surveys from being performed. The BSA is outside the SDG&E Mapped Areas for the Quino checkerspot butterfly; therefore, no focused surveys for the Quino checkerspot butterfly are required for the Proposed Project. All impacts to the Quino checkerspot butterfly would be permitted under the *SDG&E QCB HCP*, and no additional avoidance or minimization measures are required. As such, impacts to the Quino checkerspot butterfly are anticipated to be less than significant.

### **6.3.3.2 Special-Status Fish Species**

Two special-status fish species – southern steelhead and tidewater goby – are known to occur or have a potential to occur within the region (Appendix A: Figures and Appendix F: Special-Status Wildlife Species with a Potential for Occurrence in Vicinity of BSA); however, neither of these species is expected to occur within the BSA because no suitable habitat is present; and there are no historical records for this species within a 5-mile buffer of the Proposed Project alignment. Therefore, no impacts to special-status fish species are expected to occur from implementation of the Proposed Project.

### **6.3.3.3 Special-Status Amphibian Species Impacts**

Six special-status amphibian species are known to occur or have a potential to occur within 5 miles of the BSA (Appendix A: Figures and Appendix F: Special-Status Wildlife Species with a Potential for Occurrence in Vicinity of BSA). Of these six species, five are not expected to occur, including arroyo toad, California red-legged frog, southern mountain yellow-legged frog, large-blotched ensatina, and coast range newt.

One species – western spadefoot – has a high potential to occur and is covered by the NCCP. This species is associated with vernal pools and other temporary water areas, similar to the habitats used by the San Diego fairy shrimp, discussed above. Because the Proposed Project was designed to avoid impacts to vernal pools and other fairy shrimp habitat and because there are additional mitigation

measures in place for unavoidable impacts to other temporary water areas, impacts to western spadefoot would be less than significant.

SDG&E will implement all applicable measures outlined in the *SDG&E Subregional NCCP* Section 7.1: Operational Protocols to prevent potential impacts to special-status amphibian species. These measures include, but are not limited to, restricting vehicle access to existing roads to the extent feasible, avoiding vehicle collisions with wildlife species to the extent practicable, conducting pre-construction surveys in suitable habitat, restricting the handling of all wildlife to expert handlers, and having a biological monitor onsite to avoid and minimize impacts to biological resources, such as vegetation communities that have the potential to support these species. In addition, implementation of the measures outlined in the *SDG&E Subregional NCCP* Section 7.2: Habitat Enhancement Measures, as discussed in Section 6.3.1: Sensitive Vegetation Community Impacts, will further reduce impacts to habitat for special-status amphibian species. Through implementation of these measures, impacts to special-status amphibian species are anticipated to be less than significant.

#### **6.3.3.4 Special-Status Reptile Impacts**

Twelve special-status reptile species are known to occur or have a potential to occur within 5 miles of the BSA (Appendix A: Figures and Appendix F: Special-Status Wildlife Species with a Potential for Occurrence in Vicinity of BSA). Of these, one – California red-sided gartersnake – is not expected to occur. Of the remaining 11 species, 2 have a moderate potential for occurrence, 9 have a high potential for occurrence, and 1 – orange-throated whiptail – was observed during the fall surveys conducted for the Proposed Project.

The Proposed Project could result in both permanent and temporary impacts to these special-status reptile species. Permanent impacts to these special-status reptile species would include the loss of suitable foraging and breeding habitat resulting from removal of vegetation communities that have the potential to support these species. Temporary impacts to these special-status reptile species would include short-term disturbances to their foraging and breeding behaviors that result from implementation of the Proposed Project. No substantial decrease or increase in perching opportunities for avian species is expected from implementation of the Proposed Project; therefore, potential for predation on both common and special-status reptile species is not expected to change.

Of the 11 special-status reptile species that are known to occur or have a potential to occur within the BSA, one – the California legless lizard – is not covered by the *SDG&E Subregional NCCP*. Because this species is often found in riparian areas, and because the Proposed Project was designed to avoid impacts to riparian areas, to the extent feasible, no impacts are expected to the California legless lizard.

The NCCP covers the remaining 10 special-status reptile species that are known to occur or have a potential to occur within the BSA. All of these species have relatively low sensitivity (e.g., species of special concern and/or NCCP-covered), and impacts would be avoided or minimized to the greatest extent feasible.

SDG&E will implement all applicable measures outlined in the *SDG&E Subregional NCCP* Section 7.1: Operational Protocols to prevent potential impacts to special-status reptile species. These measures include, but are not limited to, avoiding vehicle collisions with wildlife species to the extent practicable, having a biological monitor onsite to avoid and minimize impacts to biological resources, such as vegetation communities that have the potential to support these species. In addition, implementation

of the measures outlined in the *SDG&E Subregional NCCP* Section 7.2: Habitat Enhancement Measures, as discussed in Section 6.3.1: Sensitive Vegetation Community Impacts, will further reduce impacts to habitat for special-status reptile species. Through implementation of these measures, impacts to special-status reptile species are anticipated to be less than significant.

### 6.3.3.5 Special-Status Avian and Nesting Bird Impacts

Fifty-five special-status avian species are known to occur or have a potential to occur within 5 miles of the BSA (Appendix A: Figures and Appendix F: Special-Status Wildlife Species with a Potential for Occurrence in Vicinity of BSA). Of these, 36 species are not expected to occur or occur outside of their season of sensitivity. Of the remaining 19 species, 3 have a low potential for occurrence, 6 have a moderate potential for occurrence, 8 have a high potential for occurrence, and 2 were observed during the fall surveys conducted for the Proposed Project.

The Proposed Project could result in both permanent and temporary impacts to foraging and/or nesting habitat for the 19 special-status avian species that are known to occur or have a potential to occur within the BSA. Permanent impacts may result from the loss of nesting and foraging habitat, including the removal of wood poles that could be used by cavity nesters, as well as the permanent removal of vegetation for installation of new maintenance work pads and new access roads. Temporary impacts may result from increased ambient noise resulting from construction activities as well as temporary loss of vegetation for stringing sites, staging areas, guard structures, and other temporary work areas.

Of the 19 special-status avian species that are known to occur or have a potential to occur within the Proposed Project Survey Area, six are not covered by the *SDG&E Subregional NCCP*. Three of these species – the white-tailed kite, long-eared owl, and yellow warbler – are typically associated with riparian areas. Because the Proposed Project has been designed to avoid impacts to riparian areas to the extent practicable, no impacts to these species are anticipated. If unavoidable impacts are identified, implementation of appropriate operational protocols (e.g., restricting vegetation removal during the breeding season, conducting pre-construction surveys as needed, having a biological monitor onsite to avoid and minimize impacts to vegetation communities that have the potential to support these species) will further protect these species and reduce unavoidable impacts to less than significant.

The other three species not covered by the NCCP – the merlin (moderate potential), loggerhead shrike (high potential), and California horned lark (high potential) – are associated with a variety of habitats, including grasslands and agricultural areas. While both permanent and temporary impacts are expected to foraging habitat for these species, these impacts will be reduced to less than significant with the implementation of the measures outlined in the *SDG&E Subregional NCCP* Section 7.1: Operational Protocols and Section 7.2: Habitat Enhancement Measures, as discussed in Section 6.3.1: Sensitive Vegetation Community Impacts, above.

The NCCP covers the remaining 13 special-status avian species with a potential for occurrence within the BSA. Nine of these species have relatively low sensitivity (e.g., species of special concern, watch list, and/or NCCP-covered), and impacts would be avoided or minimized to the greatest extent feasible. Specific permanent and temporary impacts to the four remaining species – least Bell's vireo (federally listed endangered and state-listed endangered), coastal California gnatcatcher (federally listed threatened and species of special concern), burrowing owl (species of special concern and NCCP-covered, narrow endemic species), and coastal cactus wren (species of special concern and NCCP-covered, narrow endemic species) – were evaluated separately because of their high sensitivity.

Potential permanent and temporary impacts to the least Bell's vireo may result from implementation of the Proposed Project. While focused surveys for the least Bell's vireo have not been conducted, the Proposed Project was designed to avoid impacts, to the extent feasible, to the least Bell's vireo and riparian vegetation communities that have a potential to support the species. If potential unavoidable impacts are identified within 500 feet of suitable least Bell's vireo habitat, focused protocol-level surveys for this species will be conducted to obtain the data necessary to analyze potential permanent and temporary impacts that may result to this species from implementation of the Proposed Project. For any unavoidable impacts to this NCCP-covered species, the measures outlined in the *SDG&E Subregional NCCP* Section 7.1: Operational Protocols (specifically Section 7.1.7: Construction and Maintenance of Access Roads Through Streambeds) would be implemented to avoid or minimize impacts to the least Bell's vireo. By following these measures, impacts to the least Bell's vireo will remain less than significant.

Potential permanent and temporary impacts to the coastal California gnatcatcher may result from implementation of the Proposed Project. The coastal California gnatcatcher is known to occur within the BSA based on results of the focused, protocol-level, non-breeding season surveys conducted in fall 2013. The Proposed Project was designed to avoid impacts, to the extent feasible, to the coastal California gnatcatcher and vegetation communities that may support the species. For unavoidable impacts to this NCCP-covered species, the measures outlined in the *SDG&E Subregional NCCP* Section 7.1: Operational Protocols and Section 7.2: Habitat Enhancement Measures, as discussed above in Section 6.3.1: Sensitive Vegetation Community Impacts, would be implemented to avoid or minimize impacts to the coastal California gnatcatcher. By following these measures, impacts to the coastal California gnatcatcher will remain less than significant.

Potential permanent and temporary impacts to the burrowing owl would be avoided based on the mitigation requirements for NCCP-covered, narrow endemic species provided in the *SDG&E Subregional NCCP*. The burrowing owl (an NCCP-covered species) has a moderate potential to occur within the BSA; however, there is limited suitable habitat for this species, and it is not expected to nest within the BSA based on historical data for the region. Where suitable burrowing owl habitat occurs within the BSA, the soils are compact and little rodent (e.g., ground squirrel, rabbit) activity was observed during surveys conducted for the Proposed Project. Therefore, no impacts are expected to occur to the burrowing owl as a result of implementation of the Proposed Project.

Potential permanent and temporary impacts to the coastal cactus wren would be avoided based on the mitigation requirements for NCCP-covered, narrow endemic species provided in the *SDG&E Subregional NCCP*. The coastal cactus wren (an NCCP-covered species) has a moderate potential to occur within the BSA; however, the suitable habitat for this species is localized, and the Proposed Project was designed to avoid impacts to habitat for this species. Therefore, no impacts are expected to occur to the coastal cactus wren as a result of implementation of the Proposed Project.

SDG&E will implement all applicable measures outlined in the *SDG&E Subregional NCCP* Section 7.1: Operational Protocols to avoid and/or minimize potential impacts to special-status avian species. These measures include, but are not limited to, restricting vegetation removal during the breeding season, conducting pre-construction surveys in suitable avian habitat during the bird breeding season to avoid impacts to nesting birds, and having a biological monitor onsite to avoid and minimize impacts to biological resources, such as vegetation communities that have the potential to support these species. SDG&E would also remain in compliance with the MBTA for the species discussed above as well as other migratory birds covered by the MBTA that may occur within the BSA during the MBTA breeding season

(January 1 through July 31 for raptors and February 15 through August 31 for other nesting bird species). In addition, implementation of the measures outlined in the *SDG&E Subregional NCCP* Section 7.2: Habitat Enhancement Measures, as discussed in Section 6.3.1: Sensitive Vegetation Community Impacts, will further reduce impacts to habitat for special-status avian species. Through implementation of these measures, impacts to special-status avian species are anticipated to be less than significant.

Permanent impacts to avian species covered under the MBTA could occur from potential electrocution from the new transmission line. Electrocution of avian species, especially raptor species with large body sizes and wing spans, can result when an avian species that is perching, landing, or taking flight from a utility pole completes the electrical circuit with wing contact between two conductors. Electrocution of avian species also can result through simultaneous contact with energized phase conductors and other equipment, or simultaneous contact with an energized wire and a grounded wire. In addition to SDG&E's current construction standard, which includes increased phase spacing and cover-ups to reduce avian mortality from electrocution, the Proposed Project would remain in compliance with the Avian Power Line Interaction Committee's (APLIC) Suggested Practices for Avian Protection on Power Lines to reduce the potential for electrocution to both avian and other wildlife species.

Through implementation of the measures discussed in this section, impacts to special-status avian species are anticipated to be less than significant.

#### **6.3.3.6 Special-Status Mammal Impacts**

Eighteen special-status mammal species are known to occur or have a potential to occur within 5 miles of the BSA (Appendix A: Figures and Appendix F: Special-Status Wildlife Species with a Potential for Occurrence in Vicinity of BSA). Of these, two – Stephens' kangaroo rat and Pacific pocket mouse – are not expected to occur because the BSA is outside of the known range of these species. Of the remaining 16 species, 2 have a low potential for occurrence, 8 have a moderate potential for occurrence, 5 have a high potential for occurrence, and 1 – southern mule deer – was detected during the fall surveys conducted for the Proposed Project.

The Proposed Project could result in both permanent and temporary impacts to these special-status mammal species. Permanent impacts to these special-status mammal species may include the loss of suitable foraging habitat resulting from removal of vegetation communities that have the potential to support these species. Temporary impacts to these special-status mammal species may result from construction noise, lighting, ground vibration, and other short-term disturbances associated with construction-related activities that could result in temporary disruptions to their typical daily foraging activities. No substantial decrease or increase in perching opportunities for avian species is expected from implementation of the Proposed Project; therefore, potential for predation on both common and special-status mammal species is not expected to change.

Of the 16 special-status mammal species that are known to occur or have a potential to occur within the BSA, eight are not covered by the *SDG&E Subregional NCCP*. Seven of these species are bat species that are considered species of special concern and all have a moderate potential to forage within the BSA but no impacts to roosting habitat are expected to occur as a result of implementation of the Proposed Project. The remaining species – the ringtail – is a California fully protected species; it has a very low potential to occur within the BSA because marginal habitat is present; and, the species is not known to occur within 5 miles of the BSA based on historical records. Therefore, no impacts to ringtail are expected to occur as a result of implementation of the Proposed Project.

The NCCP covers the remaining eight special-status mammal species. SDG&E will implement all applicable measures outlined in the *SDG&E Subregional NCCP* Section 7.1: Operational Protocols to prevent potential impacts to special-status mammal species. These measures include, but are not limited to, restricting vehicle access to existing roads to the extent feasible, avoiding vehicle collisions with wildlife species to the extent practicable, conducting pre-construction surveys in suitable habitat, restricting the handling of all wildlife to expert handlers, and having a biological monitor onsite to avoid and minimize impacts to biological resources, such as vegetation communities that have the potential to support these species. In addition, implementation of the measures outlined in the *SDG&E Subregional NCCP* Section 7.2: Habitat Enhancement Measures, as discussed in Section 6.3.1: Sensitive Vegetation Community Impacts, will further reduce impacts to habitat for special-status mammal species. Through implementation of these measures, impacts to special-status mammal species are anticipated to be less than significant.

**6.3.4 Critical Habitat Impacts**

The only critical habitat that occurs within the BSA is critical habitat designated for the San Diego fairy shrimp (Appendix A: Figures). No impacts to critical habitat for the San Diego fairy shrimp are expected to occur as a result of implementation of the Proposed Project.

**6.3.5 Preserve Area Impacts**

Approximately 557.67 acres of the BSA is within designated preserve areas (Appendix A: Figures). Consistent with the *SDG&E Subregional NCCP*, the Proposed Project has been designed to avoid impacts within preserve areas when possible. However, the Proposed Project would result in both permanent and temporary impacts to preserve areas. Figures showing both permanent and temporary impacts to preserve areas that would result from implementation of the Proposed Project are provided in Appendix A. These impacts are summarized in Table 12: Summary of Impacts within Preserves.

**Table 12. Summary of Impacts within Preserves**

NCCP Vegetation Community	Holland Vegetation Community/Land Cover Type	Permanent		Temporary	
		Approx. Acres	Approx. Square Feet	Approx. Acres	Approx. Square Feet
Coastal Sage Scrub	Diegan Coastal Sage Scrub	0.80	34,846	8.13	354,413
	Diegan Coastal Sage Scrub – Disturbed	0.08	3,571	0.27	11,679
	Coastal Sage Scrub – Revegetated	0.09	3,842	1.23	53,732
Coastal Sage/Chaparral Mix	Coastal Sage – Chaparral Scrub	0.09	3,805	0.54	23,564
Chaparral	Chamise Chaparral	0.71	31,205	2.95	128,652
	Chamise Chaparral - Disturbed	0.05	1,999	0.09	4,108



**Table 12 (cont.). Summary of Impacts within Preserves**

NCCP Vegetation Community	Holland Vegetation Community/Land Cover Type	Permanent		Temporary	
		Approx. Acres	Approx. Square Feet	Approx. Acres	Approx. Square Feet
Chaparral	Southern Mixed Chaparral	0.21	9,057	0.95	41,460
	Southern Mixed Chaparral – Disturbed	--	--	<0.01	150
	Scrub Oak Chaparral	0.24	10,262	1.28	55,586
Grassland	Native Grassland	0.17	7,256	0.79	34,584
	Nonnative Grassland	0.02	669	1.41	61,507
Riparian Scrub	Southern Willow Scrub	--	--	0.02	847
Coast Live Oak Riparian Forest	Southern Coast Live Oak Riparian Forest	--	--	0.01	463
Disturbed Habitat	Disturbed Habitat*	0.16	6,814	0.63	27,218
N/A	Developed Lands*	--	--	5.50	239,501
	Ornamental*	0.19	8,161	2.09	91,098
	Bare Ground*	1.98	86,251	5.26	229,130
<b>TOTAL</b>		<b>4.76**</b>	<b>207,739**</b>	<b>31.17**</b>	<b>1,357,692**</b>

\*This classification does not have a Holland Code. \*\*Total reflects actual total without rounding error.

Where impacts within preserve areas are unavoidable, implementation of the measures in *SDG&E Subregional NCCP* Section 7.1: Operational Protocols, Section 7.2: Habitat Enhancement Measures, and/or Section 7.4: Mitigation Credits will reduce these impacts to less than significant.

### 6.3.5.1 Permanent Preserve Area Impacts

The Proposed Project will result in approximately 2.44 acres (106,513 square feet) of permanent impacts to sensitive vegetation communities located within designated preserve areas (Appendix A: Figures). SDG&E proposes to withdraw credit from the SDG&E mitigation bank at a ratio of 2:1 for permanent impacts within a preserve for a total of approximately 4.88 acres (213,025 square feet). Thus, these permanent preserve area impacts are anticipated to be less than significant.

### 6.3.5.2 Temporary Preserve Area Impacts

The Proposed Project will result in approximately 17.69 acres (770,745 square feet) of temporary impacts to sensitive vegetation communities located within designated preserve areas (Appendix A: Figures). SDG&E proposes to include these temporary impacts in the SDG&E Enhancement and Monitoring Program. The Enhancement and Monitoring Program consists of two components (1) the active enhancement of temporary impact areas that support sensitive vegetation communities and are

located within a designated preserve, and (2) the monitoring of temporary impact areas that support sensitive vegetation communities and are located within a designated preserve that are expected to recover on their own. Sensitive vegetation communities that are expected to recover on their own typically include areas dominated by nonnative vegetation, such as nonnative grassland and eucalyptus woodland. Because SDG&E does not actively enhance nonnative vegetation and because this habitat type is generally considered resilient enough to completely regenerate to pre-activity levels without active enhancement measures, these areas are usually monitored to determine whether or not they meet the established success criteria. Other vegetation communities may also recover on their own, depending on the vegetation community impacted as well as the type and extent of the impact.

SDG&E proposes to use the SDG&E Enhancement and Monitoring Program to mitigate for approximately 16.28 acres (709,239 square feet) of temporary impacts through active site enhancement and approximately 1.41 acres (61,507 square feet) of temporary impacts through monitoring. If success criteria for both enhancement and monitoring areas are not met after 3 years, SDG&E proposes to withdraw the appropriate number of mitigation credits from the SDG&E mitigation bank at a 1:1 ratio to cover the remaining impacts.

The Proposed Project will follow all appropriate *SDG&E NCCP Operational Protocols* to avoid and minimize impacts to biological resources that may result from implementation of the Proposed Project. Impacts associated with the operations and maintenance of existing facilities are pre-mitigated for the term of the *SDG&E Subregional NCCP* by SDG&E's agreement to restrict development other than SDG&E's activities on fee-owned ROWs which contain habitat, connect fragmented habitat areas, or contribute to the carrying capacities of the designated preserve areas in the region. Because SDG&E limits its use of such ROWs to utility activities, mitigation for O & M of existing facilities located outside of preserve areas is not required.

Through implementation of the measures discussed above, these temporary preserve area impacts are anticipated to be less than significant.

#### **6.3.6 ESHA Impacts**

Approximately 110.85 acres of the designated preserve areas within the BSA are also designated as ESHAs (Appendix A: Figures). The Proposed Project has been designed to avoid impacts within ESHAs when possible. However, the Proposed Project would result in both permanent and temporary impacts to ESHAs. Figures showing both permanent and temporary impacts to ESHAs that would result from implementation of the Proposed Project are provided in Appendix A. In many instances, these impacts overlap with impacts to designated preserve areas, which are discussed in Section 6.3.5: Preserve Area Impacts, above. These impacts are summarized in Table 13: Summary of Impacts within ESHAs.

**Table 13. Summary of Impacts within ESHAs**

NCCP Vegetation Community	Holland Vegetation Community/Land Cover Type	Permanent		Temporary	
		Approx. Acres	Approx. Square Feet	Approx. Acres	Approx. Square Feet
Coastal Sage Scrub	Diegan Coastal Sage Scrub	0.54	23,675	3.19	139,038
	Diegan Coastal Sage Scrub – Disturbed	<0.01	333	--	--
Coastal Sage/Chaparral Mix	Coastal Sage – Chaparral Scrub	0.03	1,397	0.29	12,793
Chaparral	Chamise Chaparral	0.12	5,160	0.37	16,195
	Southern Mixed Chaparral	0.09	3,977	0.49	21,313
	Scrub Oak Chaparral	--	--	<0.01	331
Grassland	Native Grassland	0.02	889	0.10	4,222
	Nonnative Grassland	0.02	669	0.06	2,733
TOTAL		1.41*	61,449*	5.54*	241,090*

\* Total reflects actual total without rounding error.

Permanent and temporary vegetation community impacts within ESHAs would be mitigated through the measures described in Section 6.3.6: Preserve Area Impacts, which would comply with all applicable measures in the *SDG&E Subregional NCCP* Section 7.1: Operational Protocols and Section 7.2: Habitat Enhancement Measures. As such, no additional avoidance, minimization, or mitigation measures would be required; however, a Coastal Development Permit from the City of San Diego (on behalf of the CCC) may be required. Impacts to ESHAs are anticipated to be less than significant.

**6.3.7 Wildlife Movement Corridor Impacts**

The Proposed Project will not result in significant permanent or temporary impacts to local or regional wildlife movement corridors, including migratory bird routes. The Proposed Project will be located within an existing SDG&E ROW where there are existing transmission lines. Pole and tower structure placement for the Proposed Project will occur in the vicinity of existing structures within the ROW, and – because of their small footprint – would result in minimal loss of protective cover (vegetation), roosts, forage habitat, or movement corridors by maintaining wide natural areas that allow the continued movement of wildlife species. The Proposed Project will also avoid or span existing drainages that often serve as wildlife movement corridors. While local wildlife movement may be temporarily disrupted during construction, no lasting effects are expected that would preclude wildlife from returning once construction is completed. Therefore, impacts to wildlife movement corridors are anticipated to be less than significant.

### **6.3.8 Jurisdictional Resources Impacts**

The Proposed Project will not result in significant permanent or temporary impacts to jurisdictional resources. The Proposed Project has been designed to avoid impacts to wetlands and nonwetland waters that are regulated by USACE, CDFW, RWQCB, and/or CCC pursuant to the applicable federal and state regulations. While permanent impacts to these resources have been avoided through project design, the remaining very small temporary impacts to wetlands and non-wetland waters occur adjacent to temporary work areas and will be avoided with guidance from the Environmental Surveyor and the lead biological resources monitor during implementation of the Proposed Project. If unavoidable impacts to these jurisdictional resources are identified during future planning efforts for the Proposed Project, SDG&E would obtain the requisite permit(s) from the applicable regulatory agency with jurisdiction to the unavoidable wetland or non-wetland water resource. Through implementation of the *SDG&E Subregional NCCP* Section 7.1: Operational Protocols, Section 7.2: Habitat Enhancement Measures, and Section 7.4: Mitigation Credits as well as through compliance with all conditions outlined in the permits obtained for the Proposed Project, impacts to jurisdictional resources are anticipated to be less than significant.

## SECTION 7.0 – AVOIDANCE AND MINIMIZATION OF IMPACTS TO BIOLOGICAL RESOURCES

SDG&E has a long history of implementing the *SDG&E Subregional NCCP*. The measures provided in the *SDG&E Subregional NCCP* Section 7.1 Operational Protocols provide an environmentally sensitive approach to traditional utility construction, maintenance, and repair activities, recognizing that slight adjustments in construction techniques can yield major benefits for the environment.

Following the guidelines within the *SDG&E Subregional NCCP*, the Proposed Project has been designed to avoid impacts, to the extent feasible, to sensitive vegetation communities and other habitats that may support special-status species and sensitive biological resources. These design features include not placing poles in drainage areas; using existing access roads to the greatest extent possible; and placing staging areas, stringing sites, guard structures, and other temporary work areas outside of these sensitive habitats, when feasible.

In addition, the *SDG&E QCB HCP* and APM BIO-1 – have been included to ensure impacts remain less than significant. SDG&E would implement the *SDG&E QCB HCP*, which was developed to protect the Quino checkerspot butterfly and its habitat through implementation of both general and Quino checkerspot butterfly-specific operational protocols that were designed to avoid or minimize take of the species. Under APM BIO-1, all impacts to special-status plant species will be adequately assessed prior to project construction and avoided, minimized, or appropriately mitigated.

Where avoidance of impacts to sensitive vegetation communities, special-status plant species, and/or special-status wildlife is not possible, or where sensitive habitat areas exist adjacent to Proposed Project work areas, SDG&E would implement all applicable measures outlined in the *SDG&E Subregional NCCP* Section 7.1: Operational Protocols as well as other NCCP guidelines to ensure these impacts remain less than significant. Additionally, required pre-activity surveys, pursuant to the *SDG&E Subregional NCCP*, would also be performed. If any special-status plant or wildlife species that are not covered by the NCCP are identified during the pre-activity surveys, compliance with the *SDG&E Subregional NCCP* Section 7.1: Operational Protocols and Section 7.2: Habitat Enhancement Measures would provide measures to avoid and/or minimize impacts to special-status species. Impacts to species not covered by the NCCP would be avoided through compliance measures in the *SDG&E Subregional NCCP*, as discussed in detail in Section 6, above.

### 7.1. ADDITIONAL AVOIDANCE AND MINIMIZATION EFFORTS

Prior to implementation of the Proposed Project, additional efforts are planned to identify avoidance and minimization measures required to ensure that impacts resulting from implementation of the Proposed Project remain less than significant. These efforts include, but are not limited to, a pre-activity survey report (PSR) for all impacts occurring in natural areas, an environmental awareness training program for contractors, biological monitoring of all activities occurring in natural areas, flagging of sensitive habitat for avoidance by the biological monitor, and the review and approval by the biological monitor of all activities occurring in sensitive areas where disturbance to habitat may be unavoidable.

## 7.2. ADDITIONAL FOCUSED, SPECIAL-STATUS SPECIES SURVEYS

Additional focused special-status species surveys are planned for the spring and summer 2014 to supplement the information obtained during the initial surveys conducted for the Proposed Project during the last summer/fall 2013.

### 7.2.1 Special-Status Plant Species

Prior to implementation of the Proposed Project, additional efforts are planned to identify avoidance and minimization measures required to ensure that impacts resulting from implementation of the Proposed Project remain less than significant. These efforts include, but are not limited to, a PSR for all impacts occurring in natural areas, biological monitoring of all activities occurring in natural areas, flagging of sensitive habitat for avoidance by the biological monitor, and the review and approval by the biological monitor of all activities occurring in sensitive areas where disturbance to habitat may be unavoidable.

### 7.2.2 Special-Status Wildlife Species

Focused, protocol-level, non-breeding season coastal California gnatcatcher surveys were performed during late summer/fall 2013. Because no impacts to burrowing owl and coastal cactus wren are anticipated as a result of implementation of the Proposed Project, focused surveys for these species would not be required. Focused, protocol-level surveys may be required for least Bell's vireo if the Proposed Project could result in impacts to riparian habitats or to areas within a 500-foot buffer of suitable least Bell's vireo habitat. SDG&E intends to design the Proposed Project to avoid impacts to riparian habitat and habitat within a 500-foot buffer of these areas; however, if impacts are unavoidable, focused, protocol-level least Bell's vireo surveys will be conducted during the spring/summer 2014.

## 7.3. POST-CONSTRUCTION REPORT

In addition, per the *SDG&E NCCP Implementing Agreement*, SDG&E is required to prepare and submit an annual report to USFWS and CDFW documenting the amount and type of habitats impacted as well as the activities causing these impacts. To meet this requirement, SDG&E's biological consultant will prepare a PCR detailing the actual impacts caused by the Proposed Project. This report will be used to determine the appropriate habitat enhancement requirements and credit drawdown from the SDG&E mitigation bank after the Proposed Project construction has been completed.

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**APPENDIX A**  
**Figures**



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## Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Location

Figure 1

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— Proposed Project

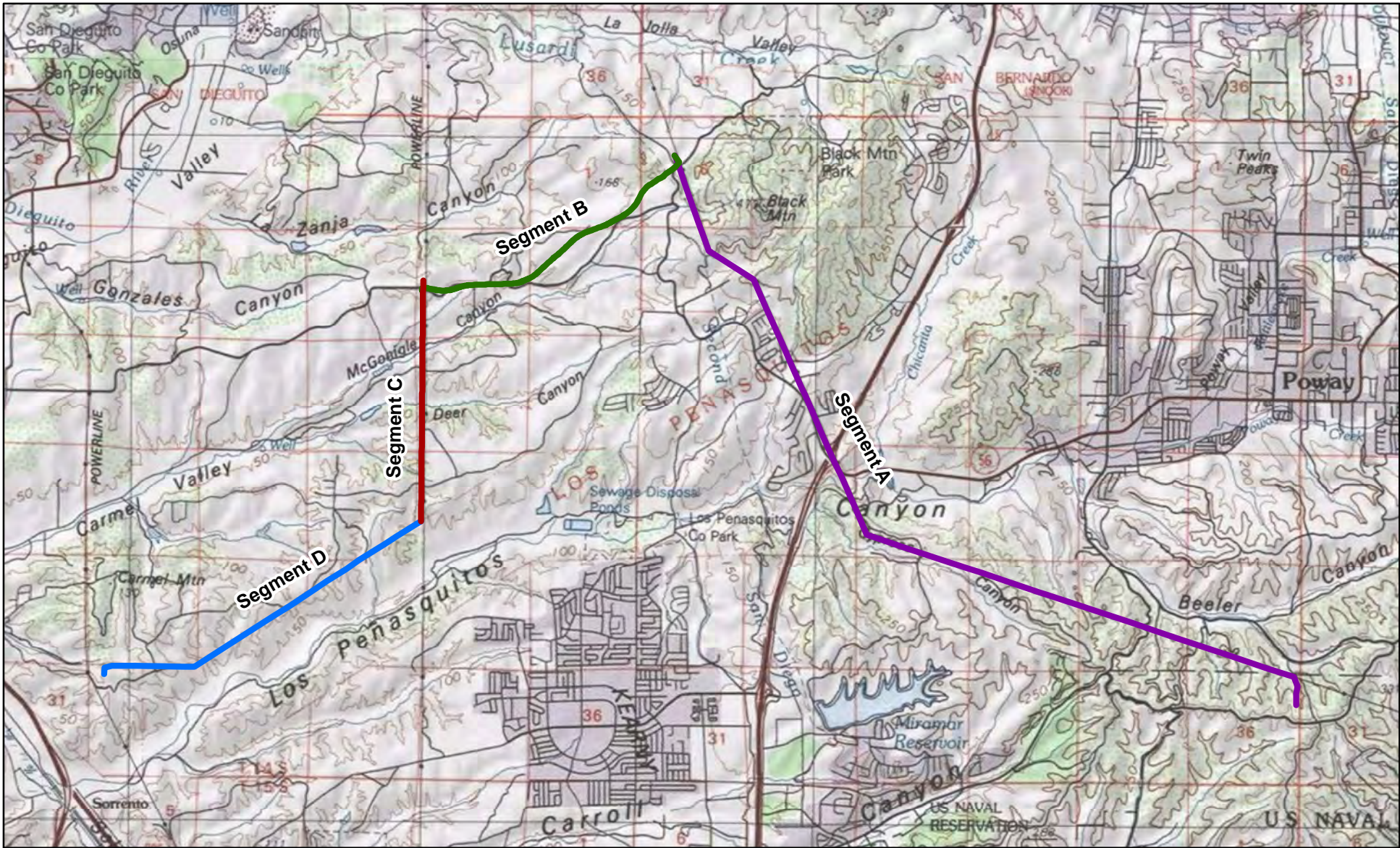


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A Sempra Energy utility

Sources: SDG&E; National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, IPC



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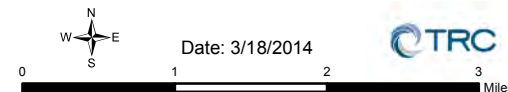
**Sycamore to Peñasquitos 230 kV Transmission Line Project**

Proposed Project Vicinity

**Figure 2**

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- Segment A
- Segment B
- Segment C
- Segment D



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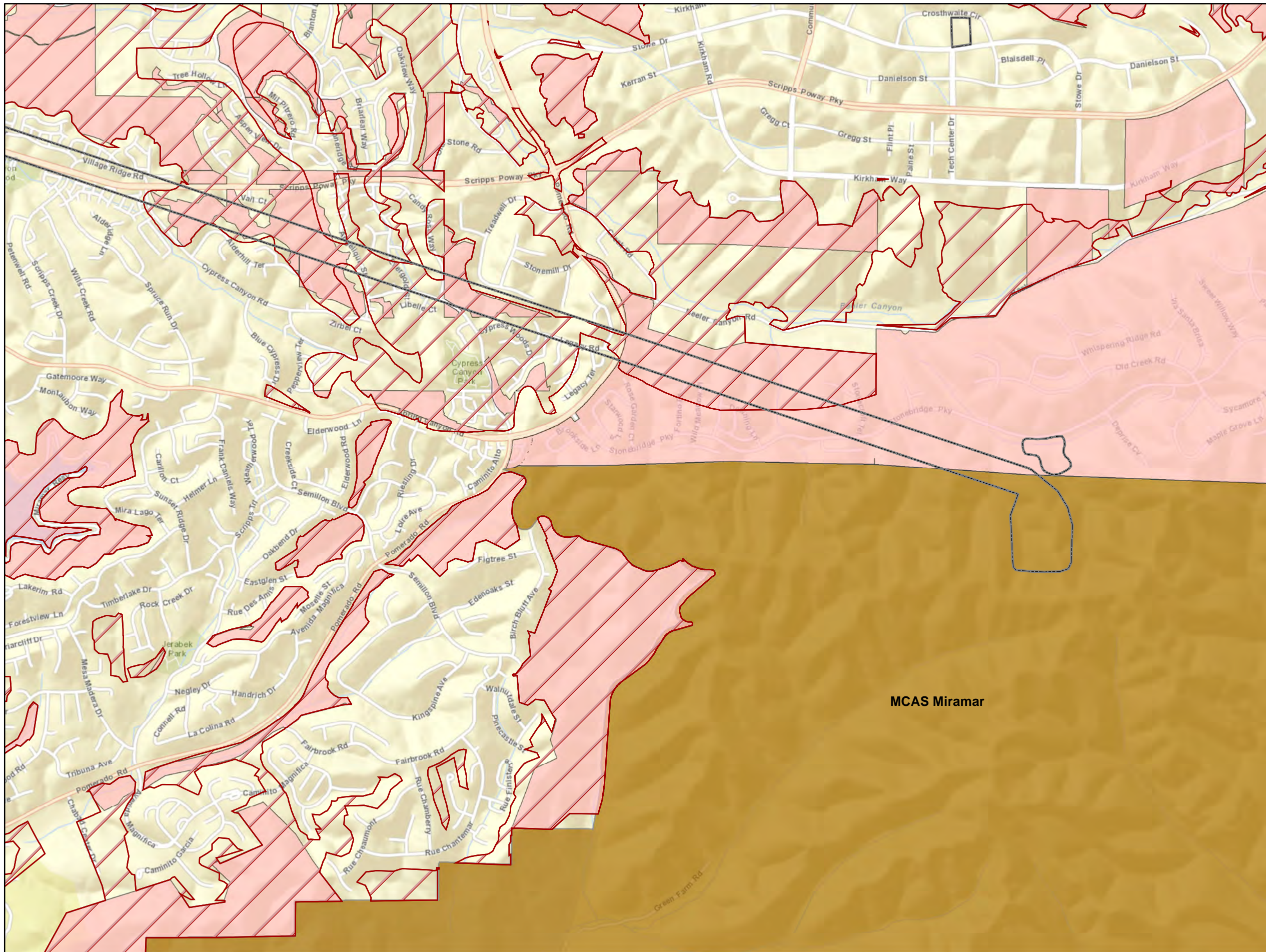


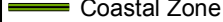




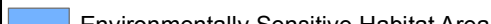


**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

Proposed Project  
MSCP, ESHA, INRMP,  
Preserve Boundaries

**Figure 3**

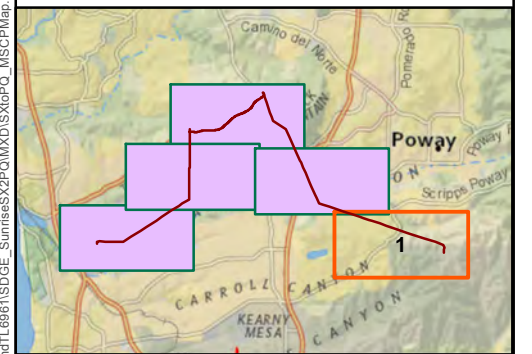


-  Coastal Zone
-  Biological Survey Area
-  Preserves
-  City of San Diego MSCP
-  INRMP
-  Environmentally Sensitive Habitat Area (ESHA)

3/18/2014

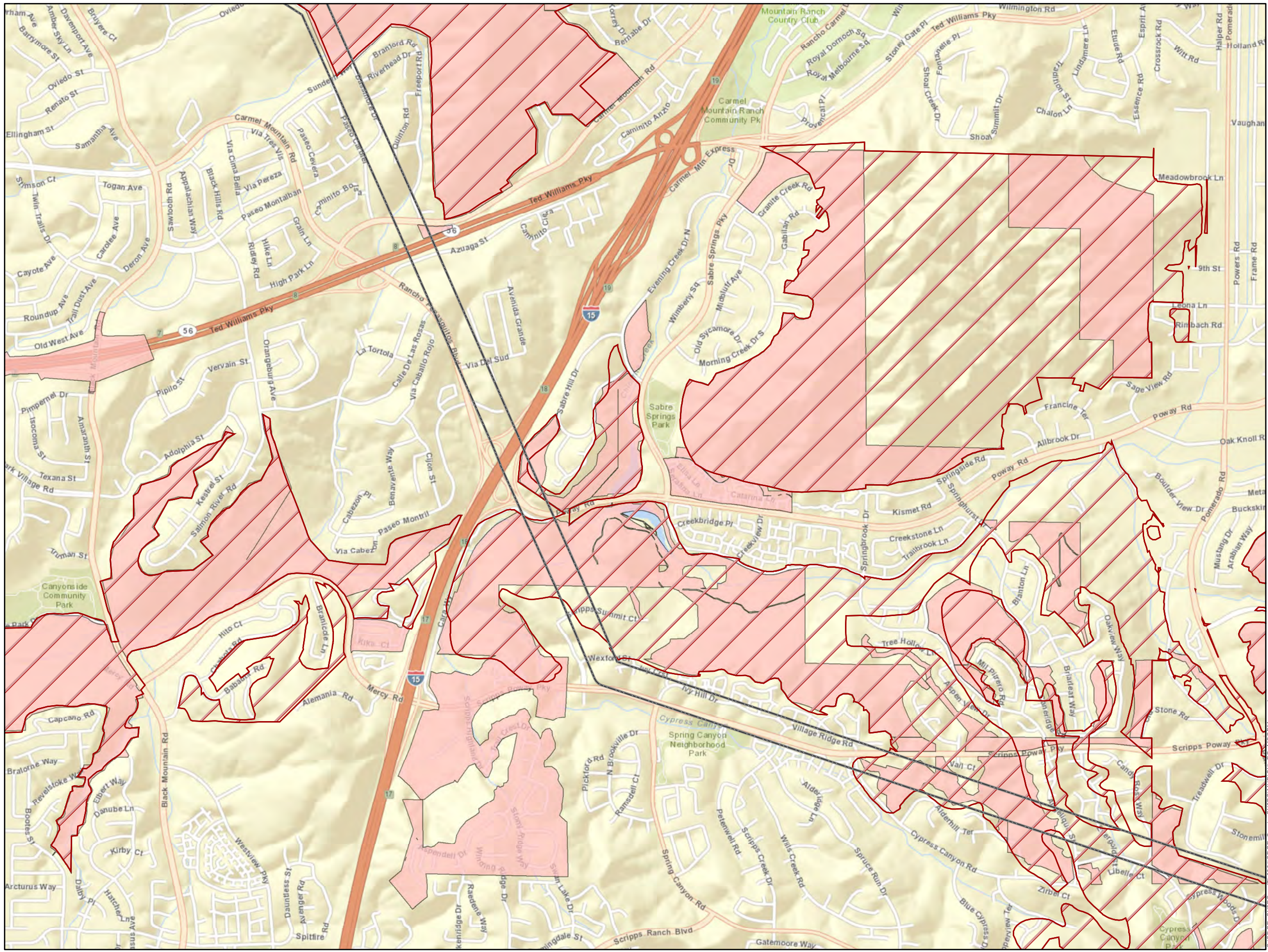
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**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

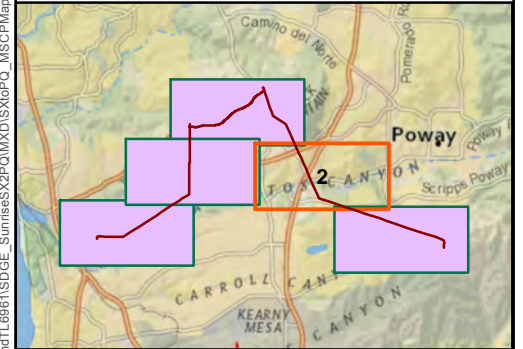
Proposed Project  
MSCP, ESHA, INRMP,  
Preserve Boundaries

**Figure 3**

- Coastal Zone
- Biological Survey Area
- Preserves
- City of San Diego MSCP
- INRMP
- Environmentally Sensitive Habitat Area (ESHA)

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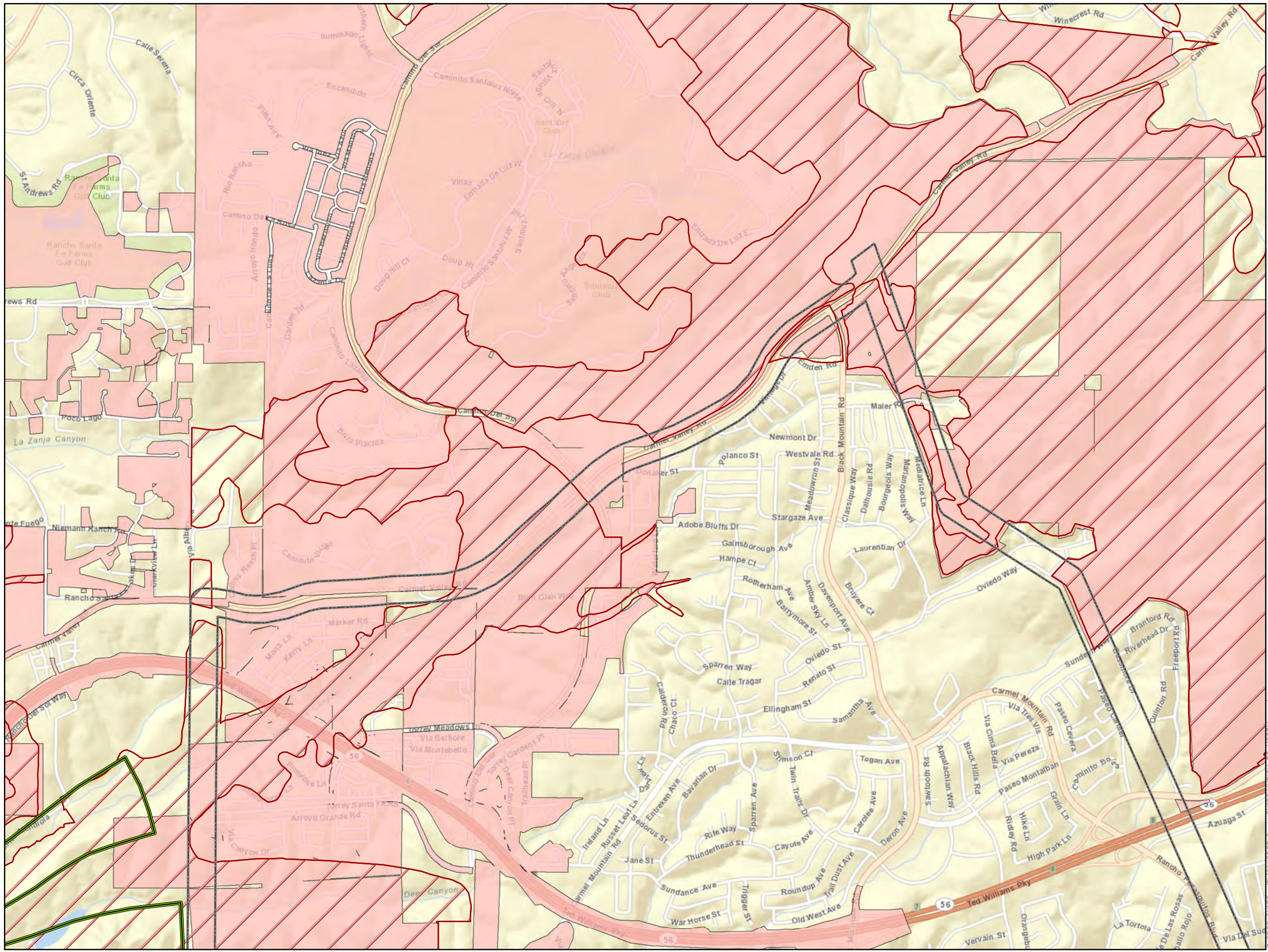


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**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

Proposed Project  
MSCP, ESHA, INRMP,  
Preserve Boundaries

**Figure 3**

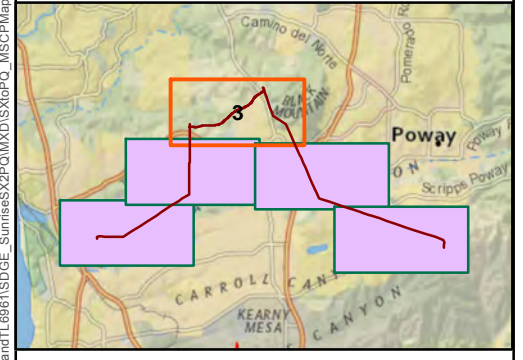


- Coastal Zone
- Biological Survey Area
- Preserves
- City of San Diego MSCP
- INRMP
- Environmentally Sensitive Habitat Area (ESHA)

3/18/2014

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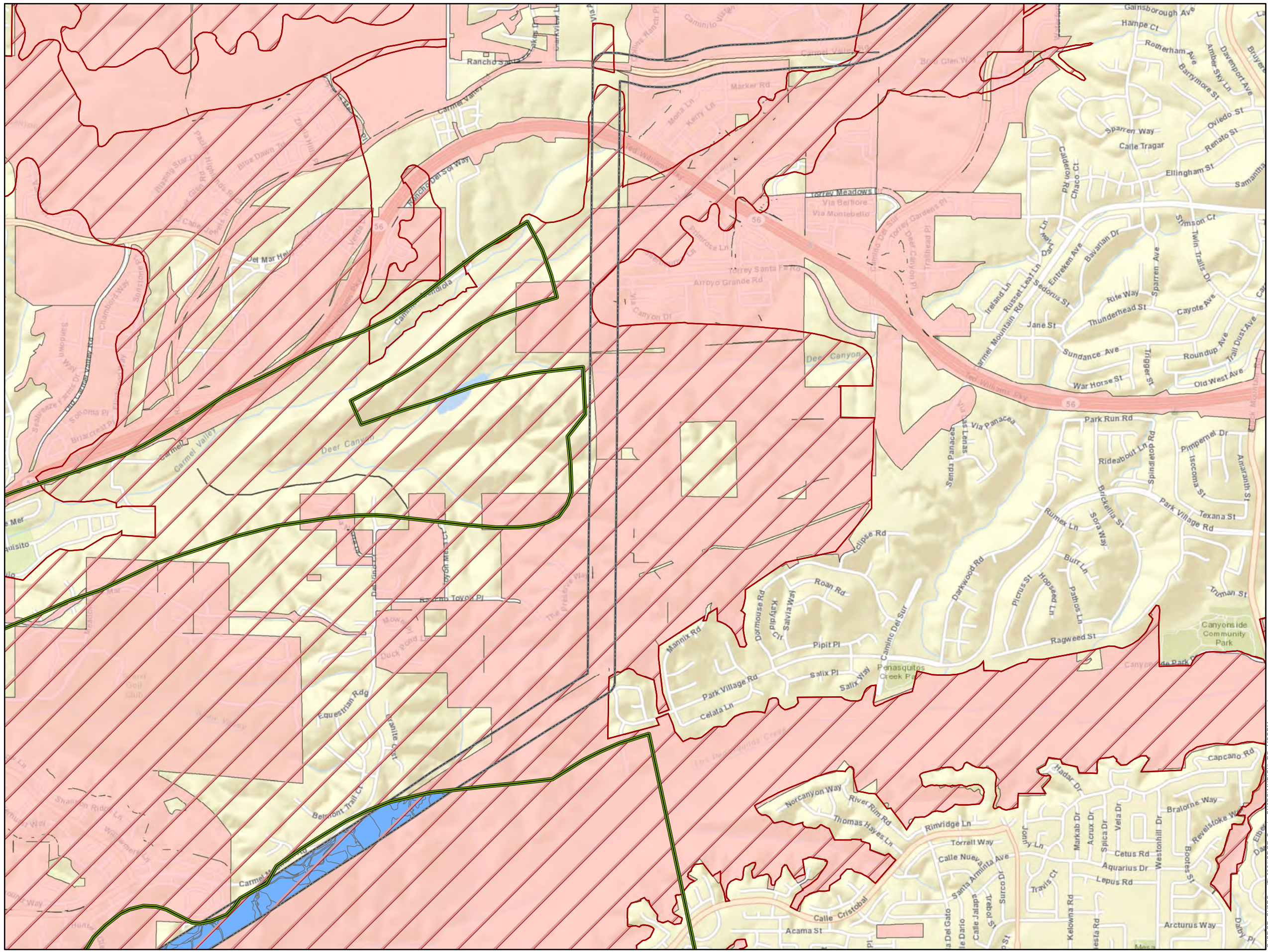








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**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

Proposed Project  
MSCP, ESHA, INRMP,  
Preserve Boundaries

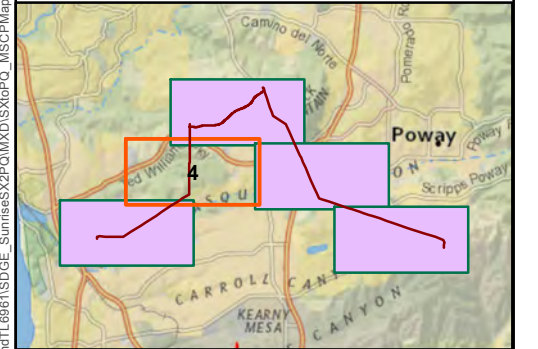
**Figure 3**



-  Coastal Zone
-  Biological Survey Area
-  Preserves
-  City of San Diego MSCP
-  INRMP
-  Environmentally Sensitive Habitat Area (ESHA)

3/18/2014

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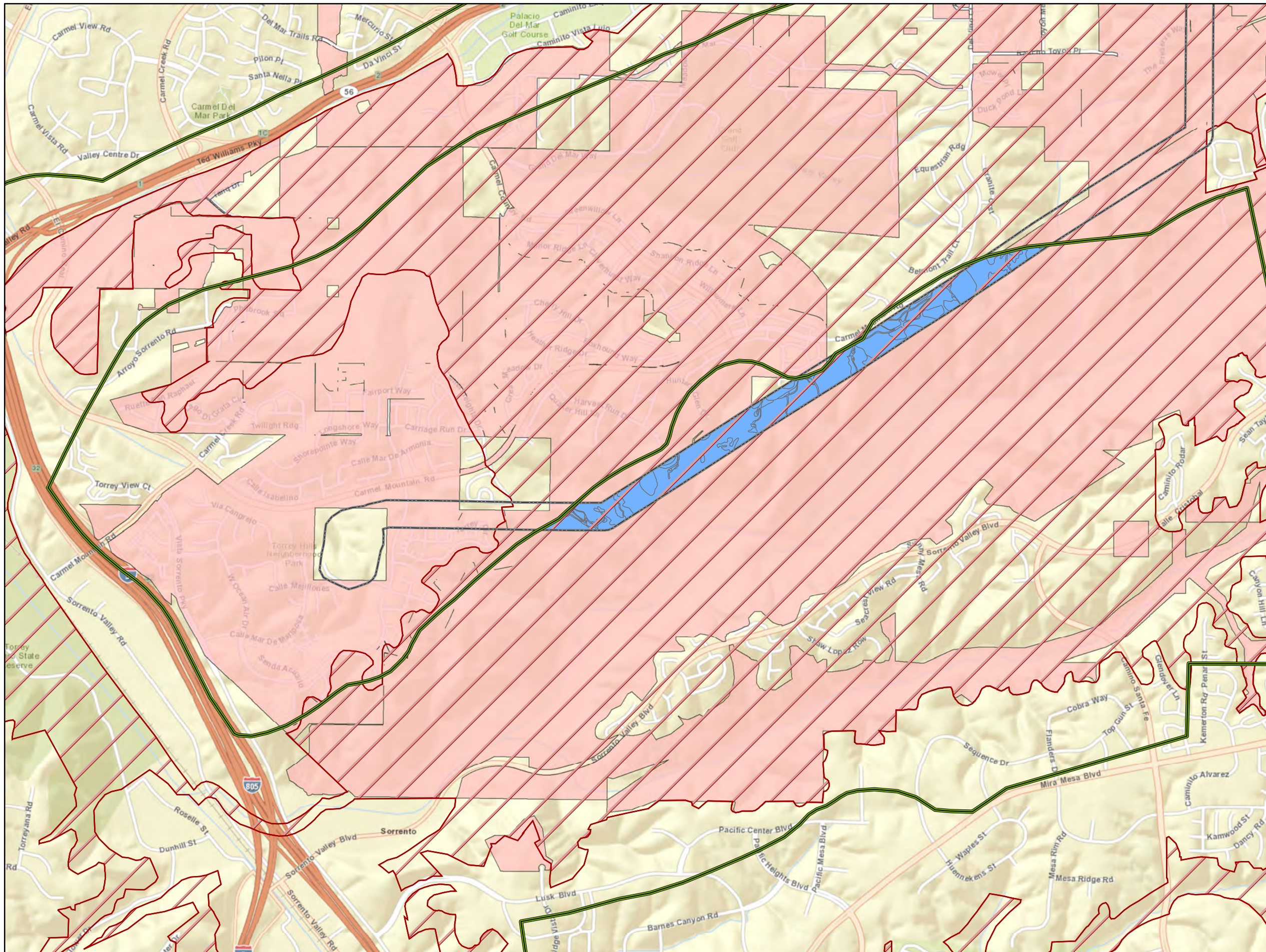








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**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

Proposed Project  
MSCP, ESHA, INRMP,  
Preserve Boundaries

**Figure 3**

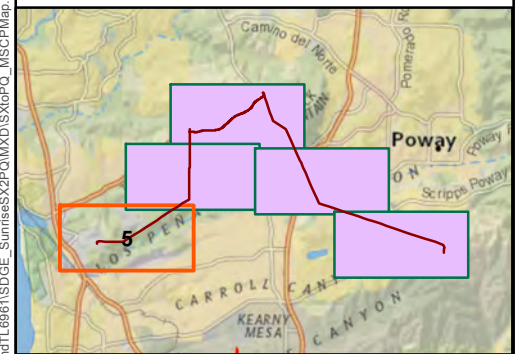


-  Coastal Zone
-  Biological Survey Area
-  Preserves
-  City of San Diego MSCP
-  INRMP
-  Environmentally Sensitive Habitat Area (ESHA)

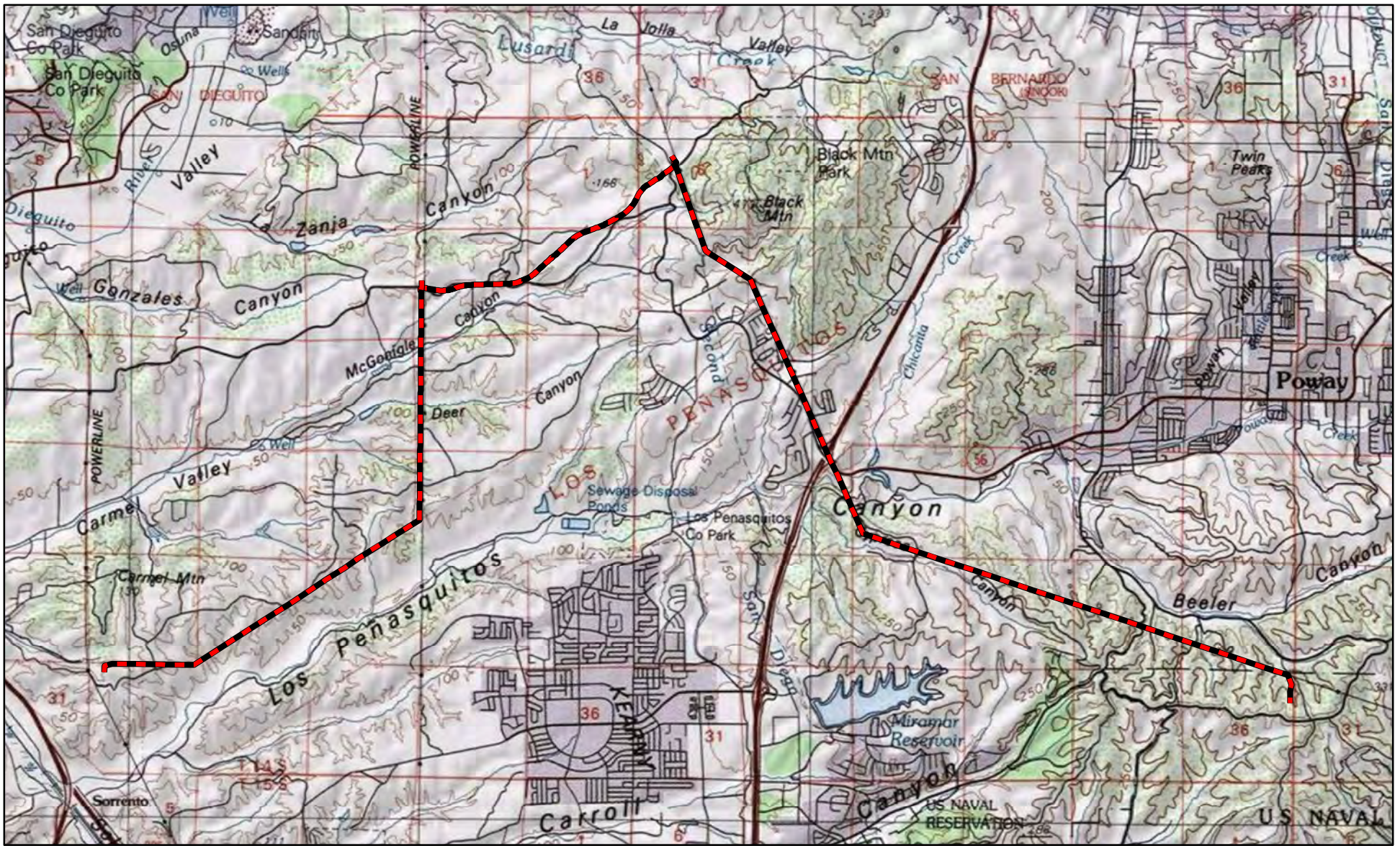
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## Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Topographic

Figure 4

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 Proposed Project



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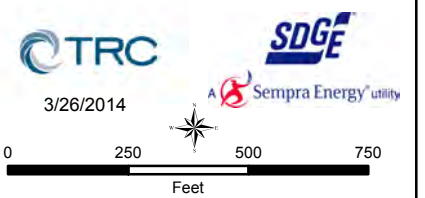
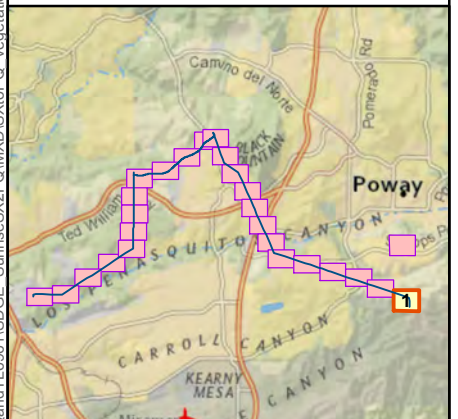
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**


























Proposed Project  
Vegetation Communities

**Figure 5**

 Biological Survey Area

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 1-Diegan Coastal Sage Scrub	 6-So. Mixed Chaparral - Disturbed	 11-Alkali Marsh - Revegetated	 16-Mulefat Scrub	 21-Native Grassland
 2-Diegan Coastal Sage Scrub - Disturbed	 7-Scrub Oak Chaparral	 12-Freshwater Marsh	 17-So. Coast Live Oak Riparian Forest	 0-Bare Ground
 3-Coastal Sage Scrub - Revegetated	 8-Chamise Chaparral	 13-SD Mesa Vernal Pool	 18-Eucalyptus Woodland	 22-Developed Lands
 4-Coastal Sage - Chaparral Scrub	 9-Chamise Chaparral - Disturbed	 14-Southern Willow Scrub	 19-Tamarisk Scrub	 23-Ornamental
 5-Southern Mixed Chaparral	 10-Open Water	 15-Southern Riparian Scrub	 20-Nonnative Grassland	 24-Disturbed Habitat

Sources: SDG&E, 2013; TRC and Busby Biological, 2013; Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; National Geographic, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, NOAA



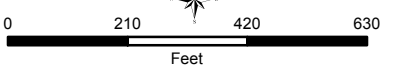
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

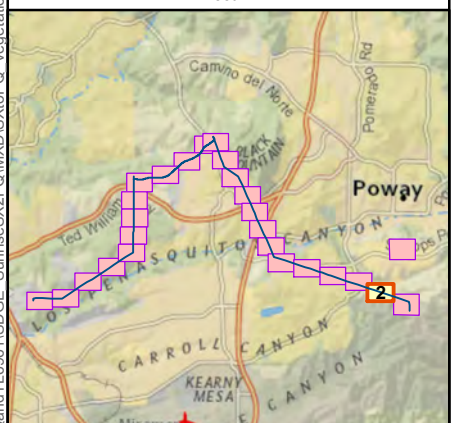
Proposed Project  
Vegetation Communities


























**Figure 5**

 Biological Survey Area

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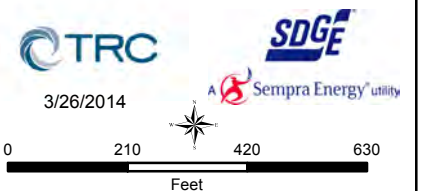
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**


























Proposed Project  
Vegetation Communities

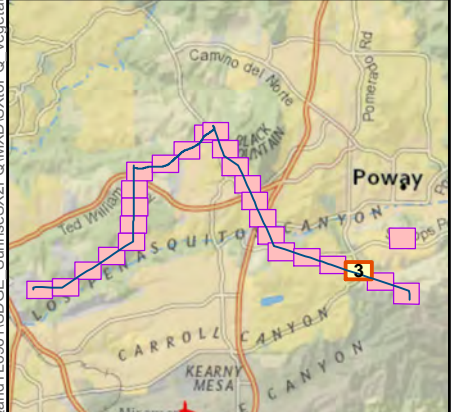
**Figure 5**

 Biological Survey Area

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**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

Proposed Project  
Vegetation Communities

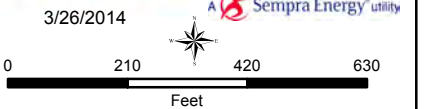
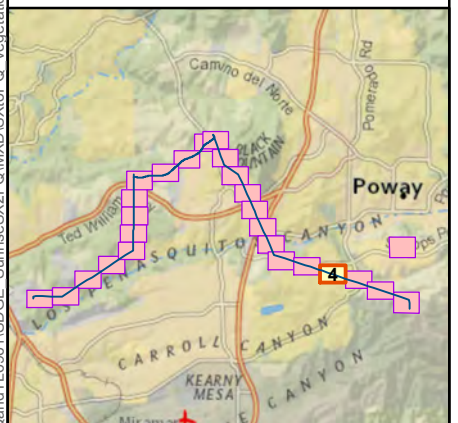
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






















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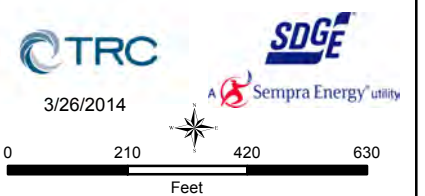
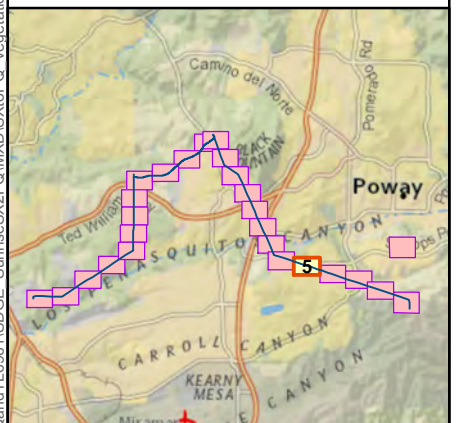
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**


























Proposed Project  
Vegetation Communities

**Figure 5**

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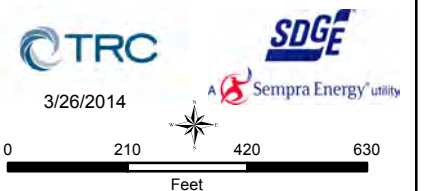
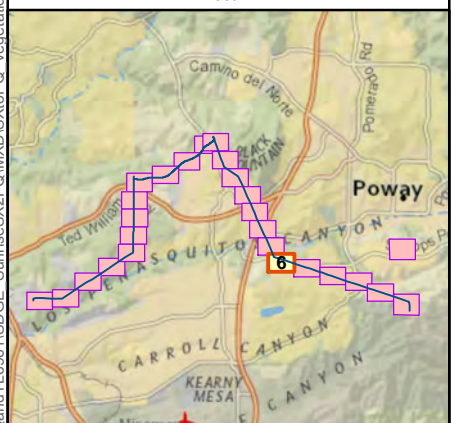
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**


























Proposed Project  
Vegetation Communities

**Figure 5**

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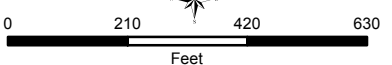
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

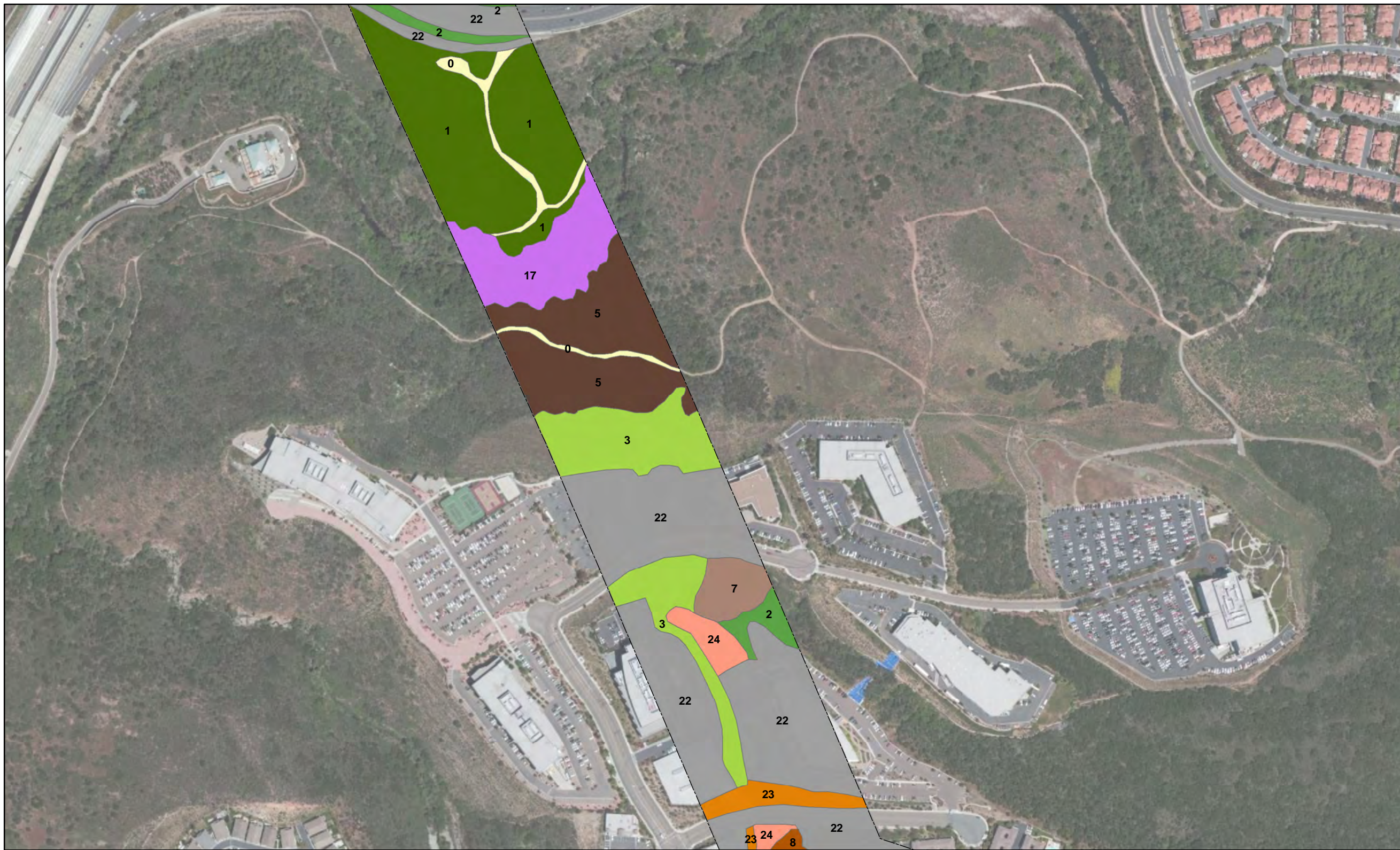
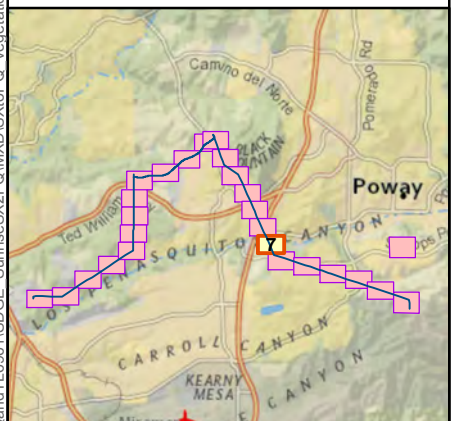
Proposed Project  
Vegetation Communities


























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
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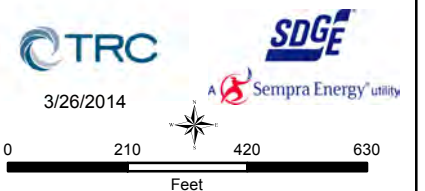
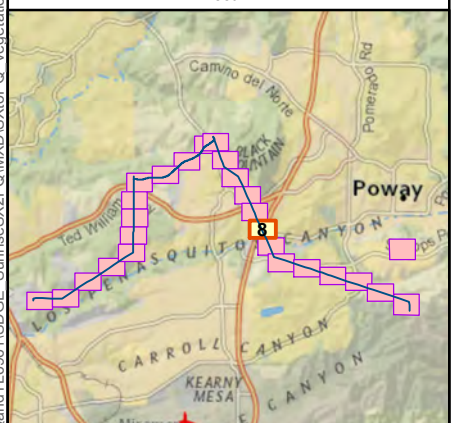
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230 kV Transmission  
Line Project**


























Proposed Project  
Vegetation Communities

**Figure 5**

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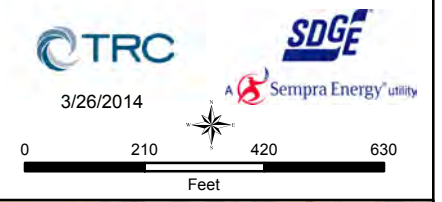
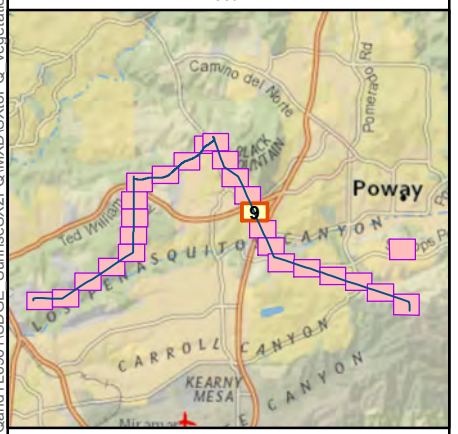
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**


























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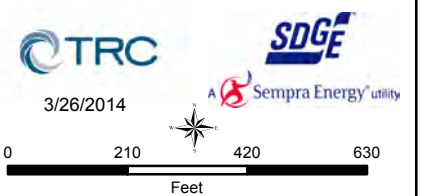
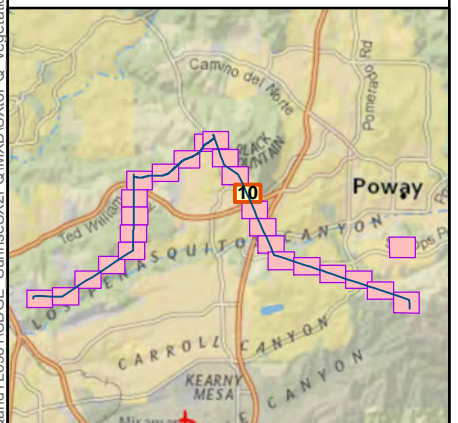
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






















Proposed Project  
Vegetation Communities

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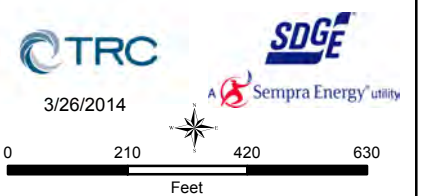
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
























Proposed Project  
Vegetation Communities

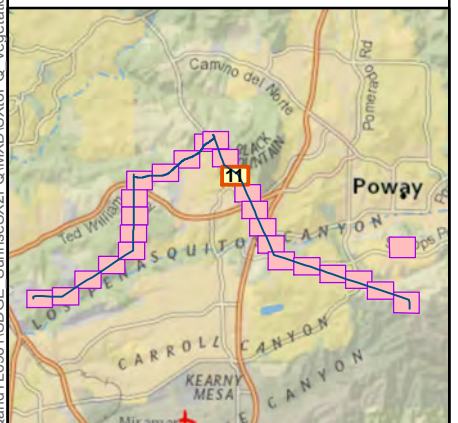
**Figure 5**

 Biological Survey Area

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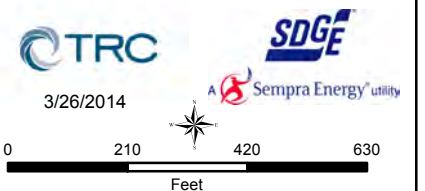
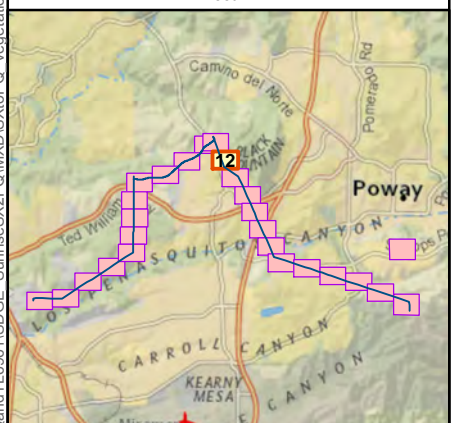
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**


























Proposed Project  
Vegetation Communities

**Figure 5**

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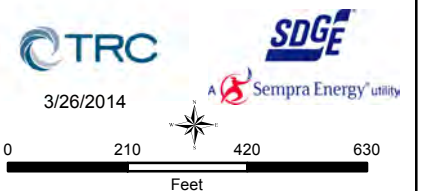
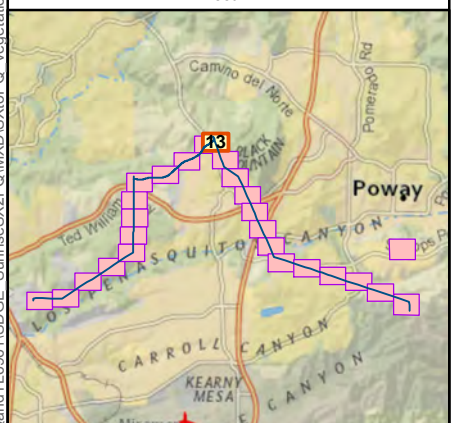
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**


























Proposed Project  
Vegetation Communities

**Figure 5**

 Biological Survey Area

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**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

Proposed Project  
Vegetation Communities

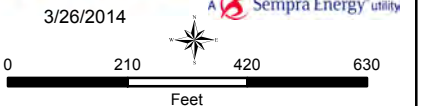
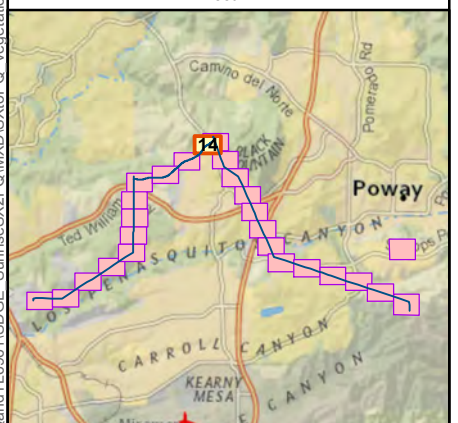
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
























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3/26/2014

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**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

Proposed Project  
Vegetation Communities

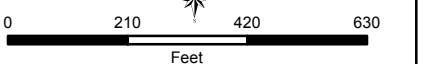
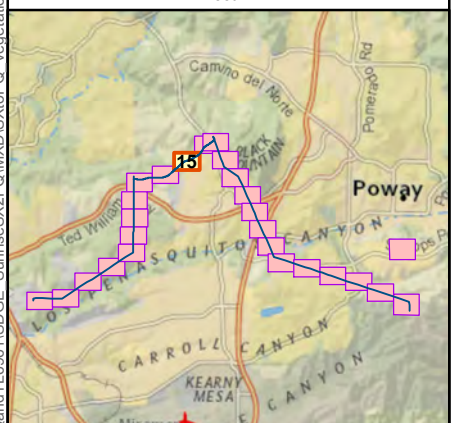
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






















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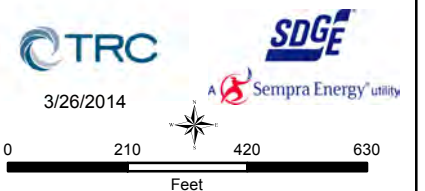
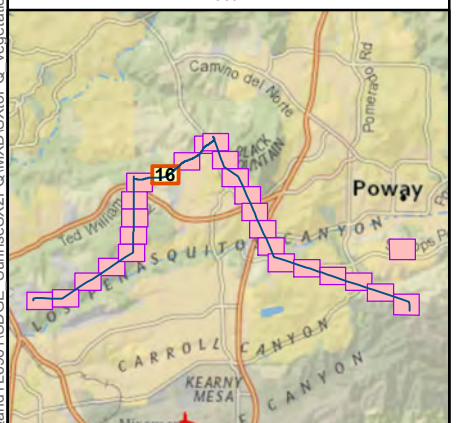
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230 kV Transmission  
Line Project**


























Proposed Project  
Vegetation Communities

**Figure 5**

 Biological Survey Area

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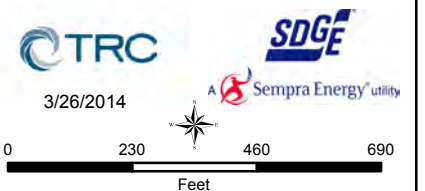
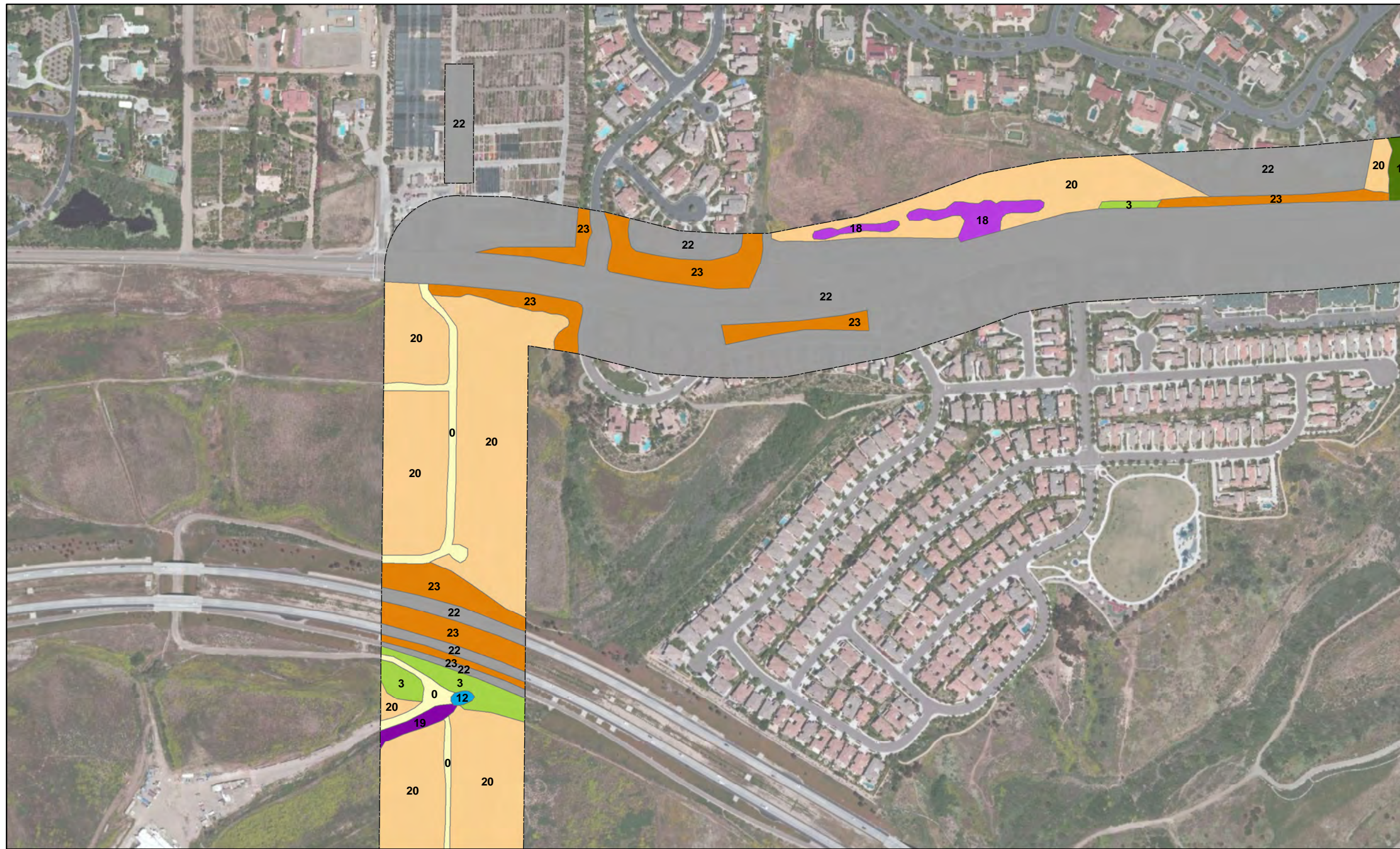
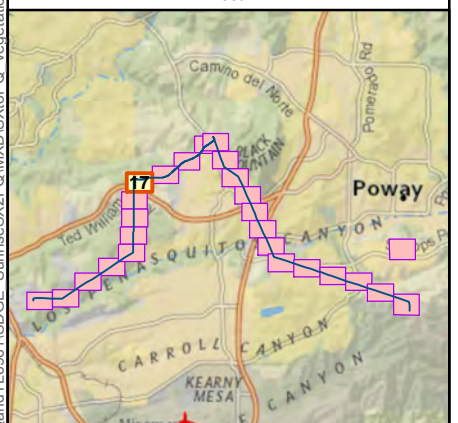
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230 kV Transmission  
Line Project**


























Proposed Project  
Vegetation Communities

**Figure 5**

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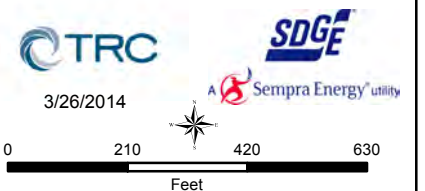
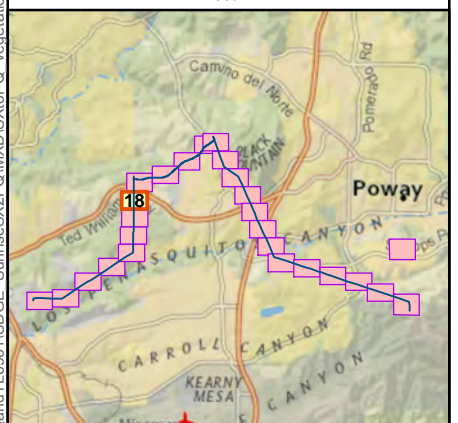
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**


























Proposed Project  
Vegetation Communities

**Figure 5**

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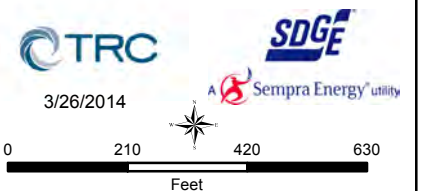
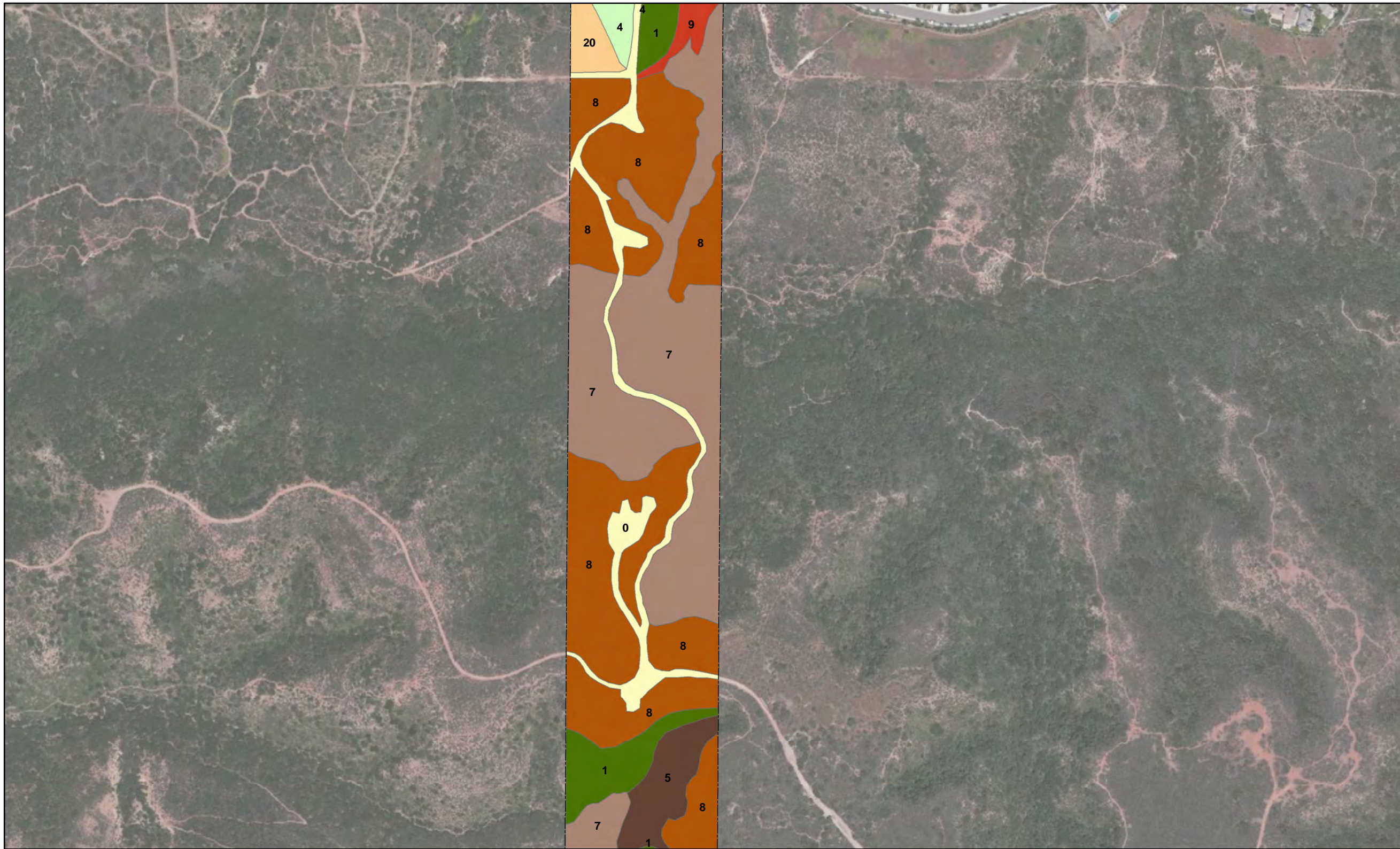
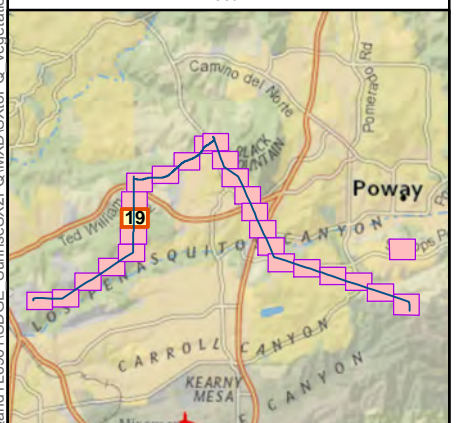
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**


























Proposed Project  
Vegetation Communities

**Figure 5**

 Biological Survey Area

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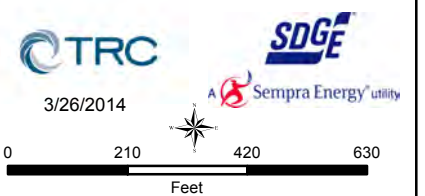
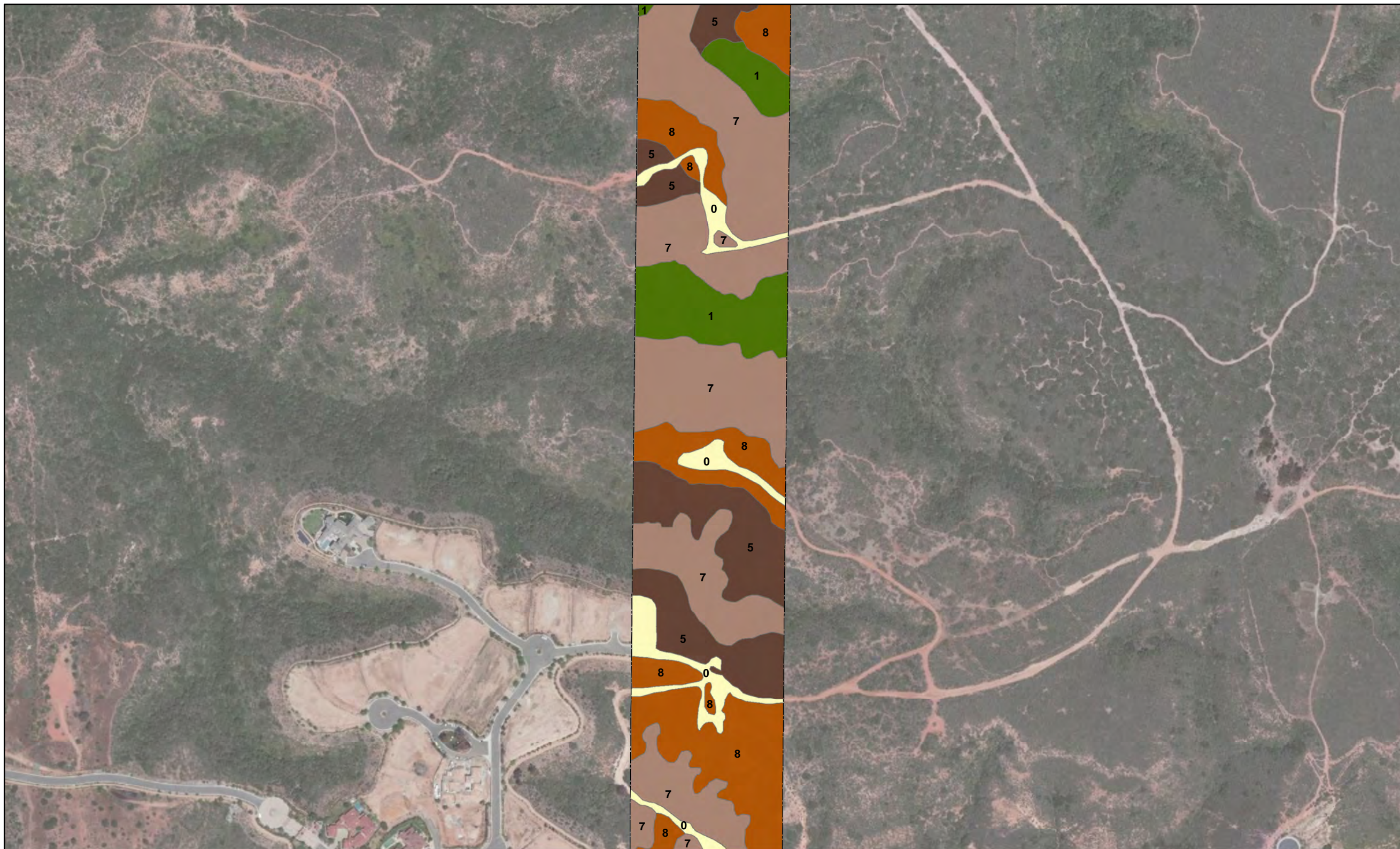
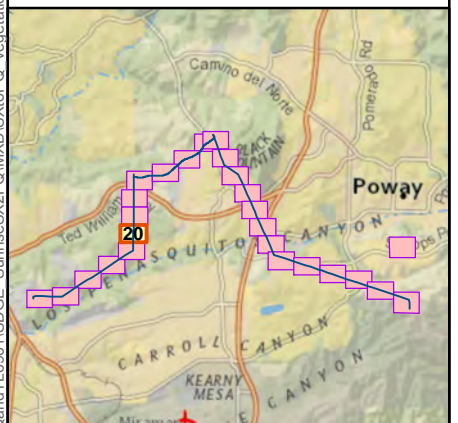
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**


























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Vegetation Communities

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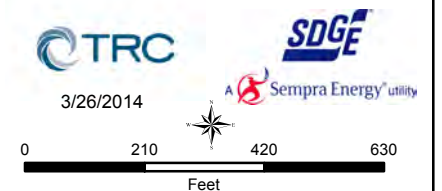
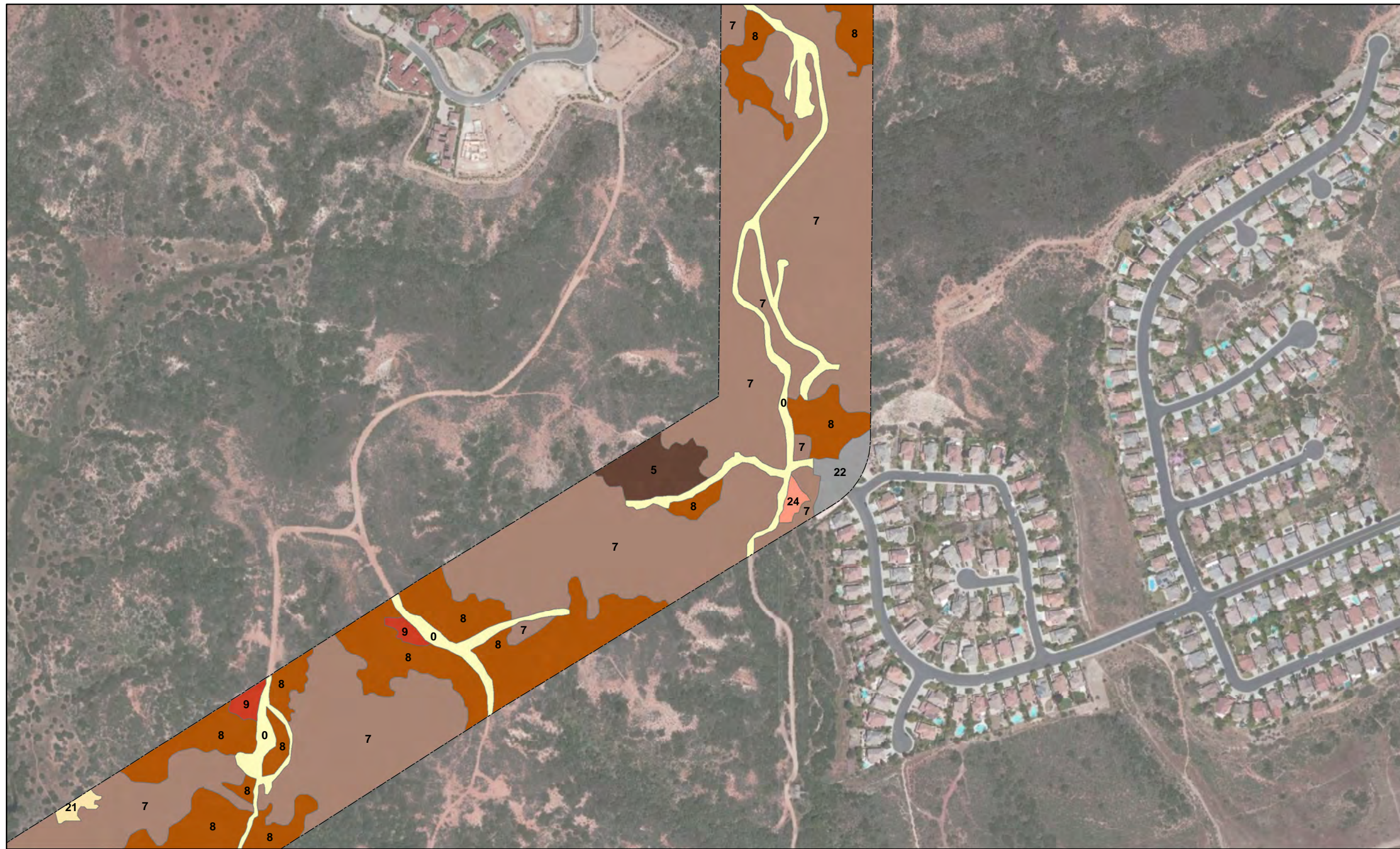
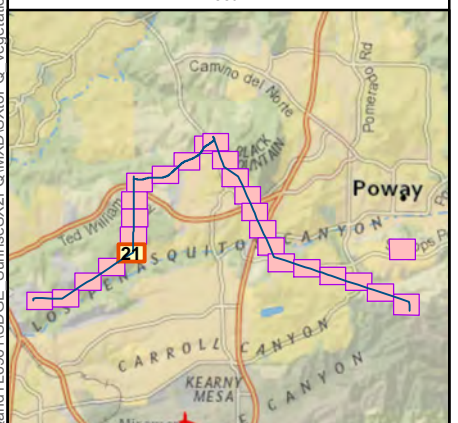
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**


























Proposed Project  
Vegetation Communities

**Figure 5**

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**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

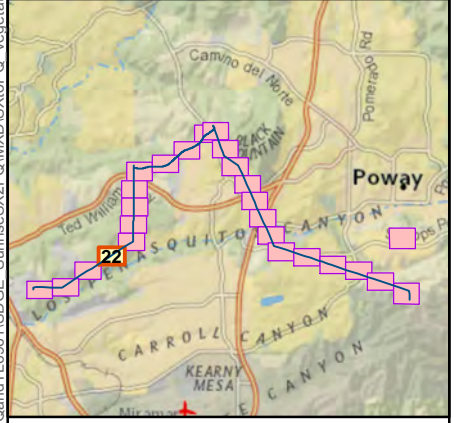
Proposed Project  
Vegetation Communities

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 Feet




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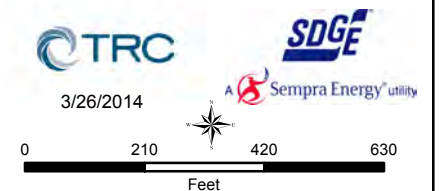
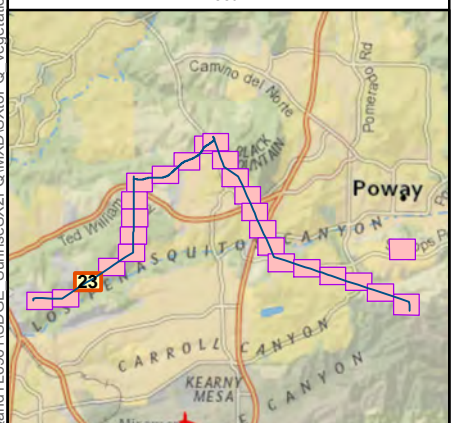
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**


























Proposed Project  
Vegetation Communities

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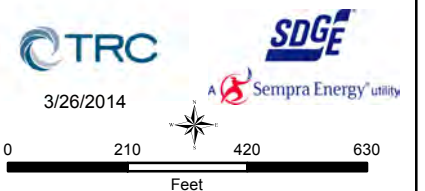
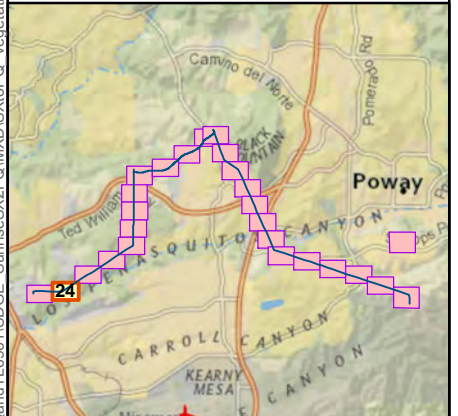
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**


























Proposed Project  
Vegetation Communities

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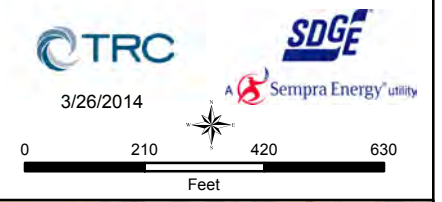
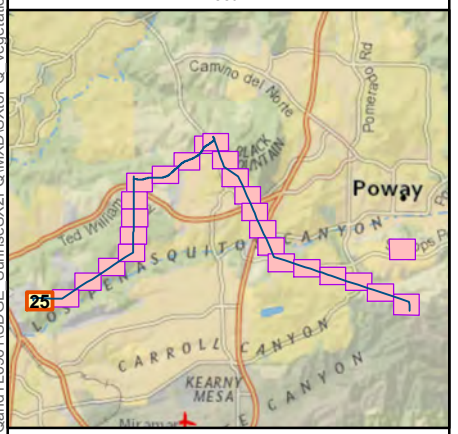
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**


























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Vegetation Communities

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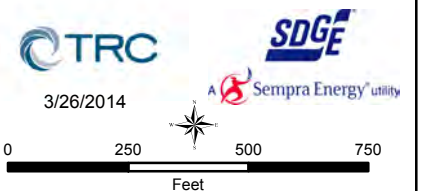
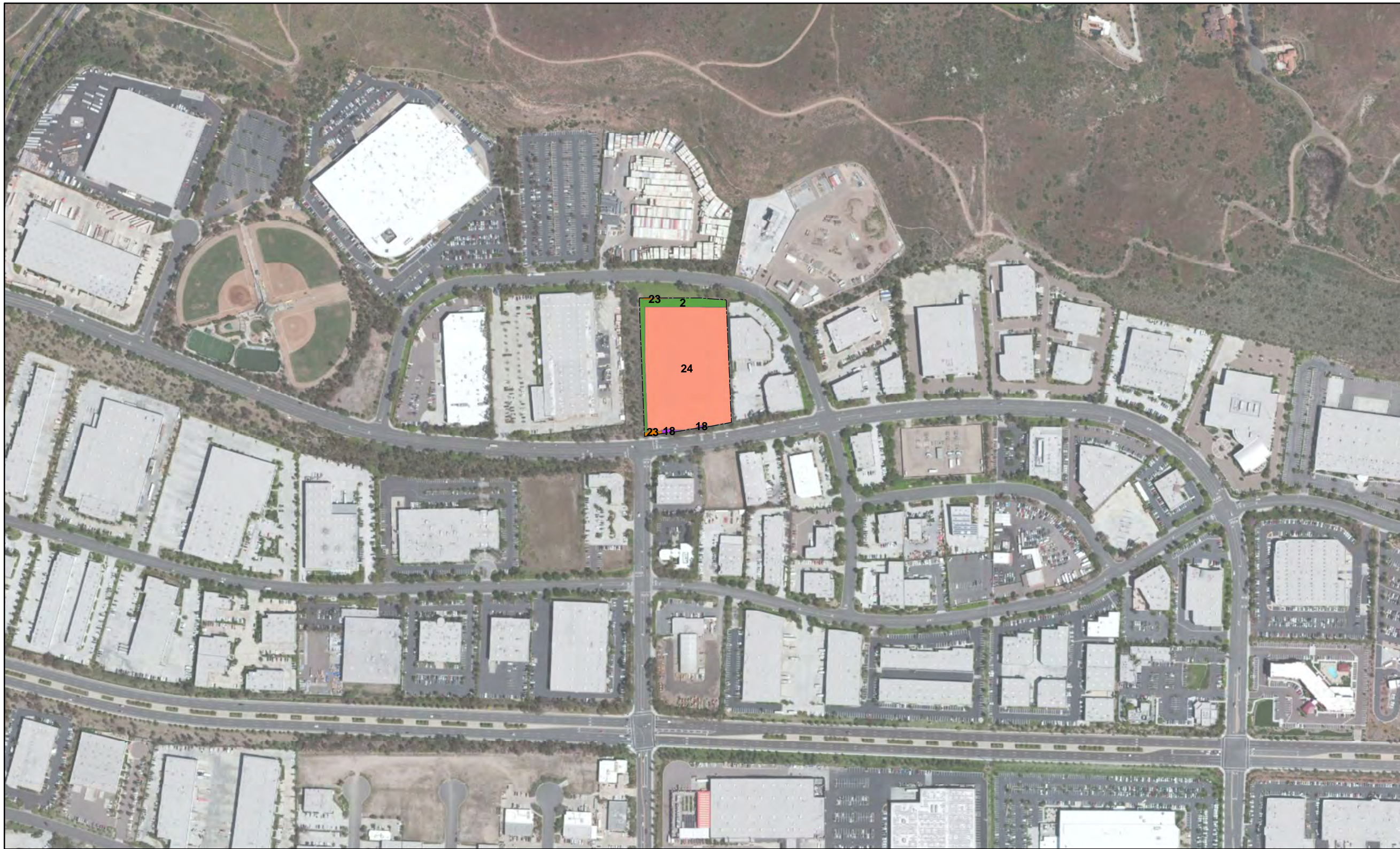
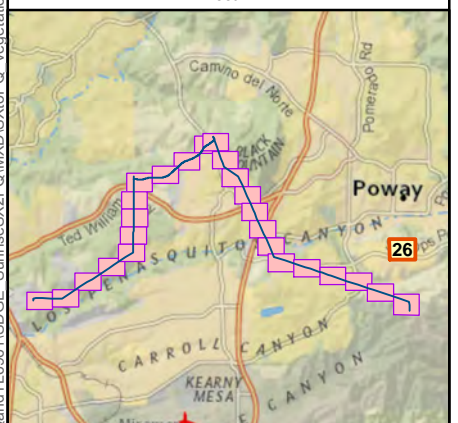
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**


























Proposed Project  
Vegetation Communities

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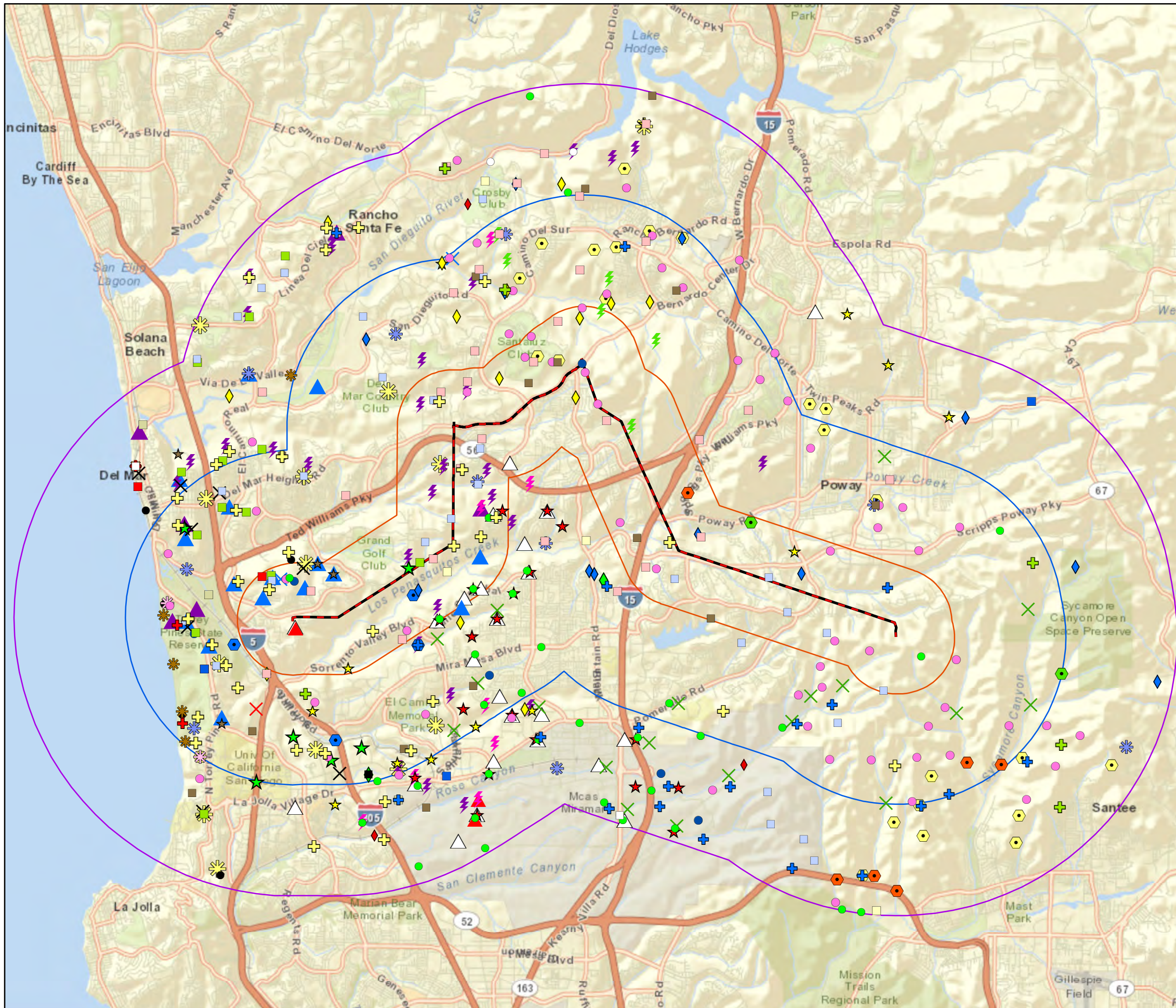


# Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

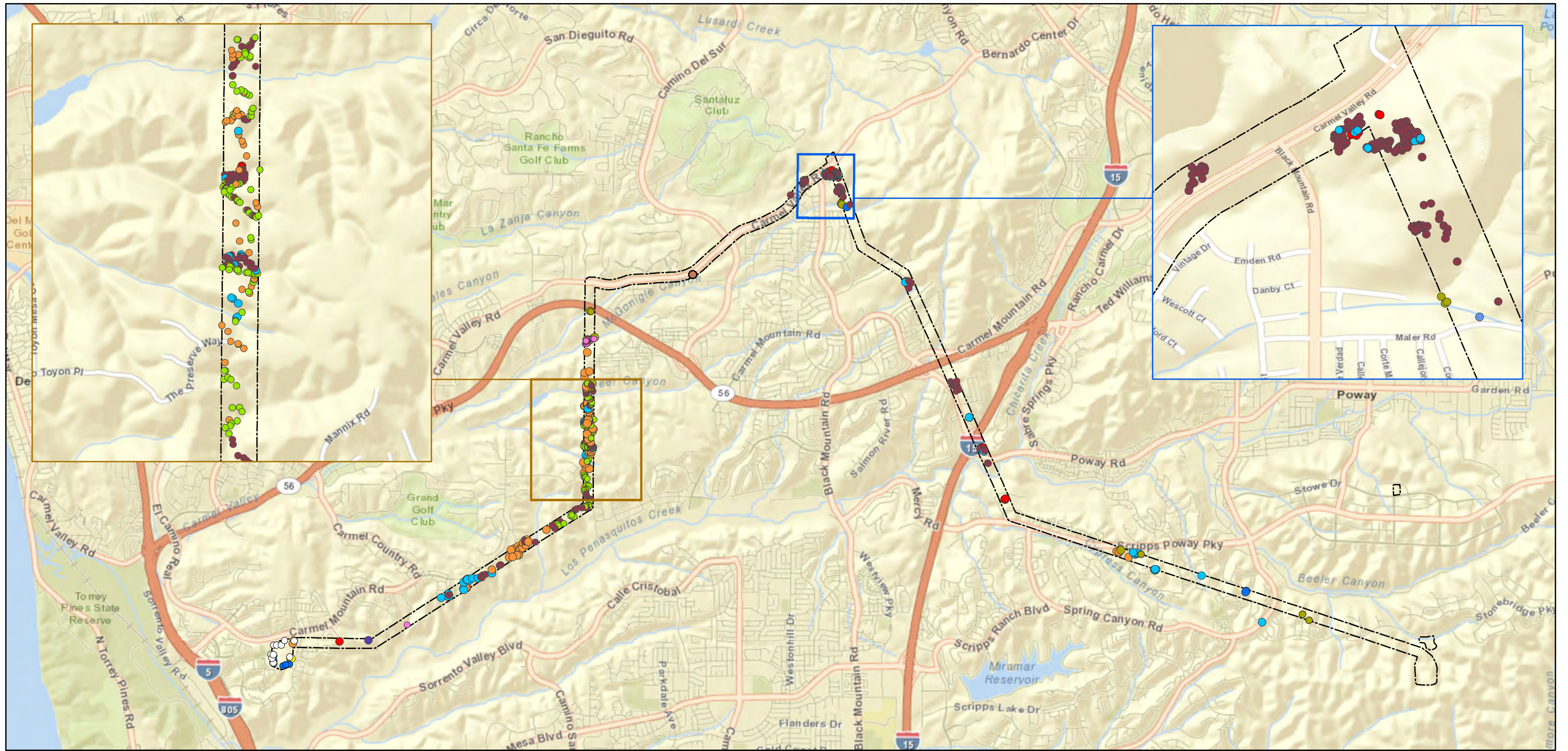
CNDDDB Results - Flora

Figure 6



- |                       |                       |
|-----------------------|-----------------------|
| Proposed Project      | 3-mile Project Buffer |
| 1-mile Project Buffer | 5-mile Project Buffer |
- 
- |                         |                                   |
|-------------------------|-----------------------------------|
| SD Mesa Hardpan VP      | Orcutt's brodiaea                 |
| Orcutt's spineflower    | little mouse-tail                 |
| California Orcutt grass | long-spined spineflower           |
| SD button-celery        | purple stemodia                   |
| Del Mar Mesa sand aster | sea dahlia                        |
| California adolphia     | San Diego mesa mint               |
| Coulter's goldfields    | San Diego sagewort                |
| Del Mar manzanita       | San Diego sand aster              |
| Lakeside ceanothus      | woven-spored lichen               |
| Orcutt's pincushion     | S. Coast Live Oak Riparian Forest |
| San Diego ambrosia      | Southern Riparian Forest          |
| Robinson's pepper-grass | S. Sycamore Alder Riparian Wldnd  |
| S. Maritime Chaparral   | variegated dudleya                |
| bottle liverwort        | cliff spurge                      |
| chaparral ragwort       | decumbent goldenbush              |
| San Diego marsh-elder   | golden-spined cereus              |
| Campbell's liverwort    | wart-stemmed ceanothus            |
| San Diego thorn-mint    | short-leaved dudleya              |
| Southern Riparian Scrub | snake cholla                      |
| Nuttall's scrub oak     | south coast saltscale             |
| Palmer's grapplinghook  | willowy monardella                |
| SD goldenstar           | spreading navarretia              |
| aphanisma               | summer holly                      |
| SD barrel cactus        | thread-leaved brodiaea            |

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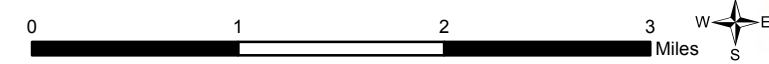
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Biological Survey Area

- *Adolphia californica* Spineshrub 2B.1
- *Artemisia palmeri* Palmer's Sagewort 4.2
- *Bahiopsis laciniata* San Diego Sunflower 4.2
- *Bloomeria clevelandii* San Diego Goldenstar 1B.1
- *Comarostaphylis diversifolia* ssp. *diversifolia* Summer-Holly 1B.2
- *Eryngium aristulatum* Jepson var. *parishii* San Diego Button-Celery 1B.1, FE, CE
- *Juncus acutus* ssp. *leopoldii* Spiny Rush 4.2
- *Holocarpha virgata* ssp. *elongata* Graceful Tarplant 4.2
- *Iva hayesiana* San Diego Marsh-Elder 2B.2
- *Pinus torreyana* Torrey Pine 1B.2
- *Quercus dumosa* Nuttall's Scrub Oak 1B.1
- *Ferocactus viridescens* var. *viridescens* Coast Barrel Cactus 2B.1

**Sycamore to Peñasquitos 230 kV Transmission Line Project**

Proposed Project  
 Fall 2013 Special-Status Plant Survey Results  
**Figure 7**



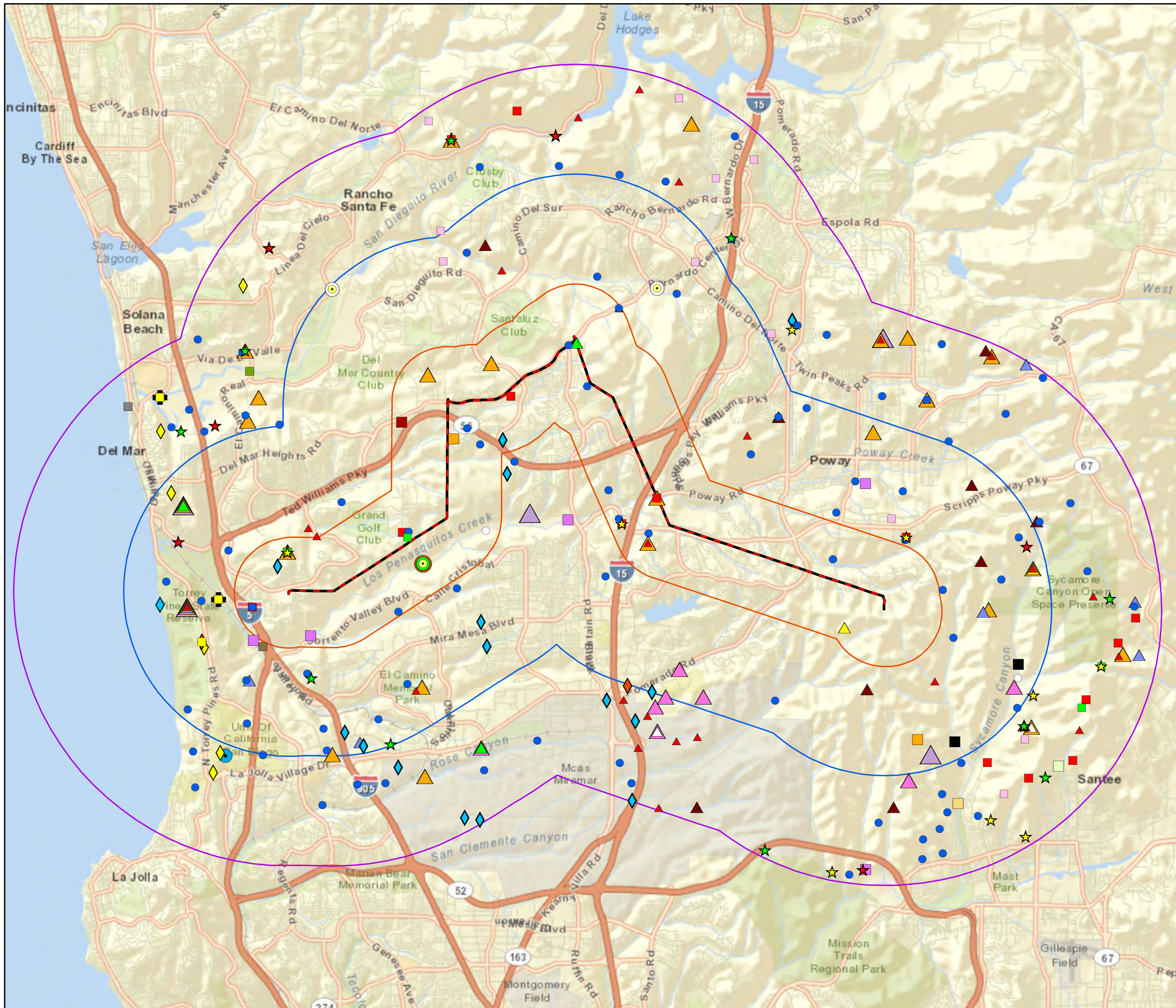
Sources: Busby Biological, SDG&E; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom

# Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

CNDDDB Results - Fauna

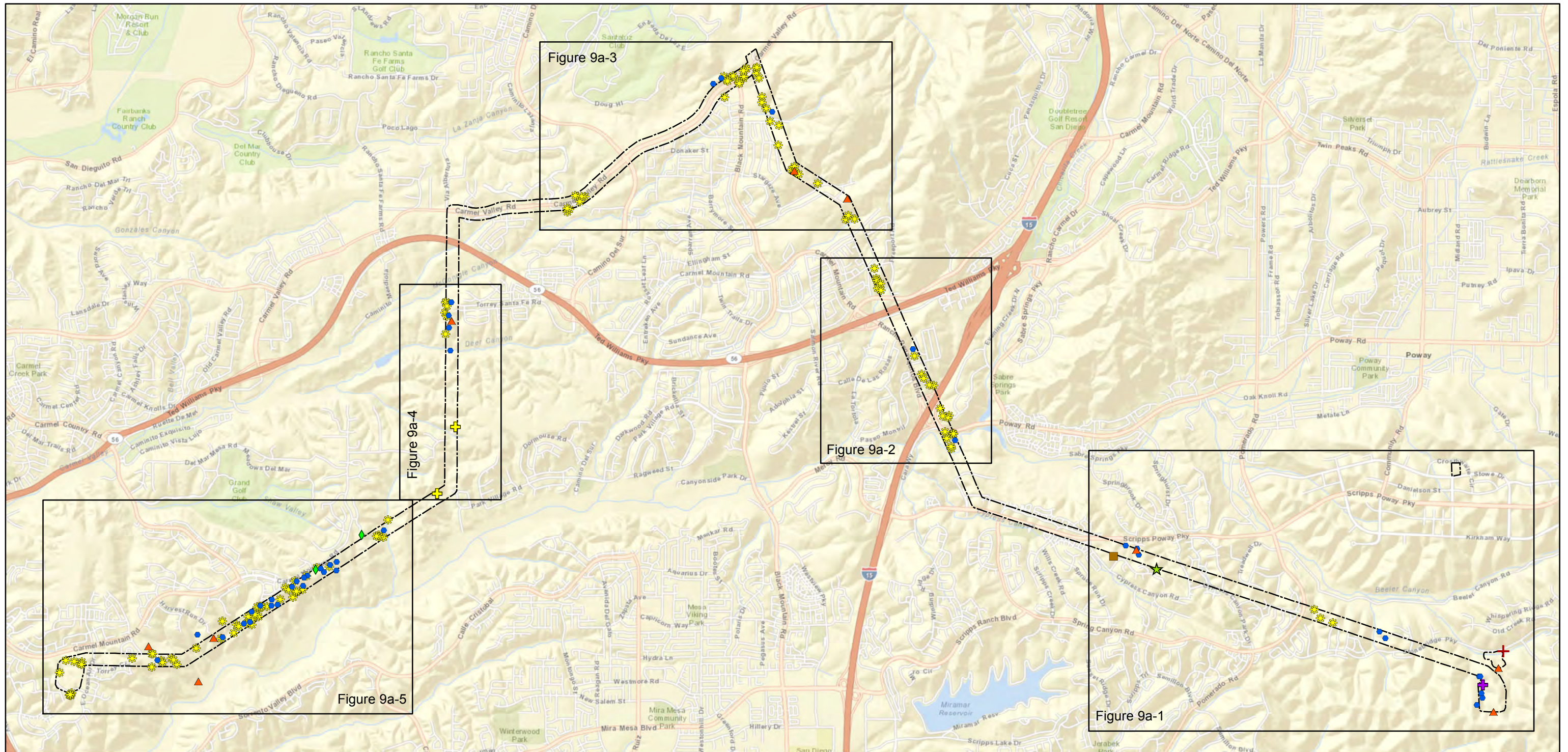
Figure 8



- |                       |                       |
|-----------------------|-----------------------|
| Proposed Project      | 3-mile Project Buffer |
| 1-mile Project Buffer | 5-mile Project Buffer |
- 
- |                                |                                   |
|--------------------------------|-----------------------------------|
| Belding's savannah sparrow     | monarch butterfly                 |
| Bell's sage sparrow            | Coronado Island skink             |
| California black rail          | San Diego ringneck snake          |
| California horned lark         | western spadefoot                 |
| California least tern          | coast horned lizard               |
| Cooper's hawk                  | coastal whiptail                  |
| burrowing owl                  | orangethroat whiptail             |
| coastal cactus wren            | red-diamond rattlesnake           |
| grasshopper sparrow            | rosy boa                          |
| least Bell's vireo             | two-striped garter snake          |
| least bittern                  | California brackishwater snail    |
| light-footed clapper rail      | San Diego desert woodrat          |
| S. CA rufous-crowned sparrow   | San Diego black-tailed jackrabbit |
| western snowy plover           | NW San Diego pocket mouse         |
| white-tailed kite              | Yuma myotis                       |
| coastal California gnatcatcher | hoary bat                         |
| California mellitid bee        | spotted bat                       |
| Riverside fairy shrimp         | western mastiff bat               |
| San Diego fairy shrimp         | western red bat                   |
| globose dune beetle            |                                   |

Sources: CA Fish and Wildlife (CNDDDB), SDG&E; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom

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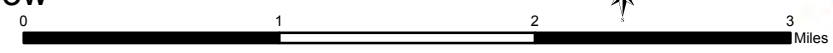
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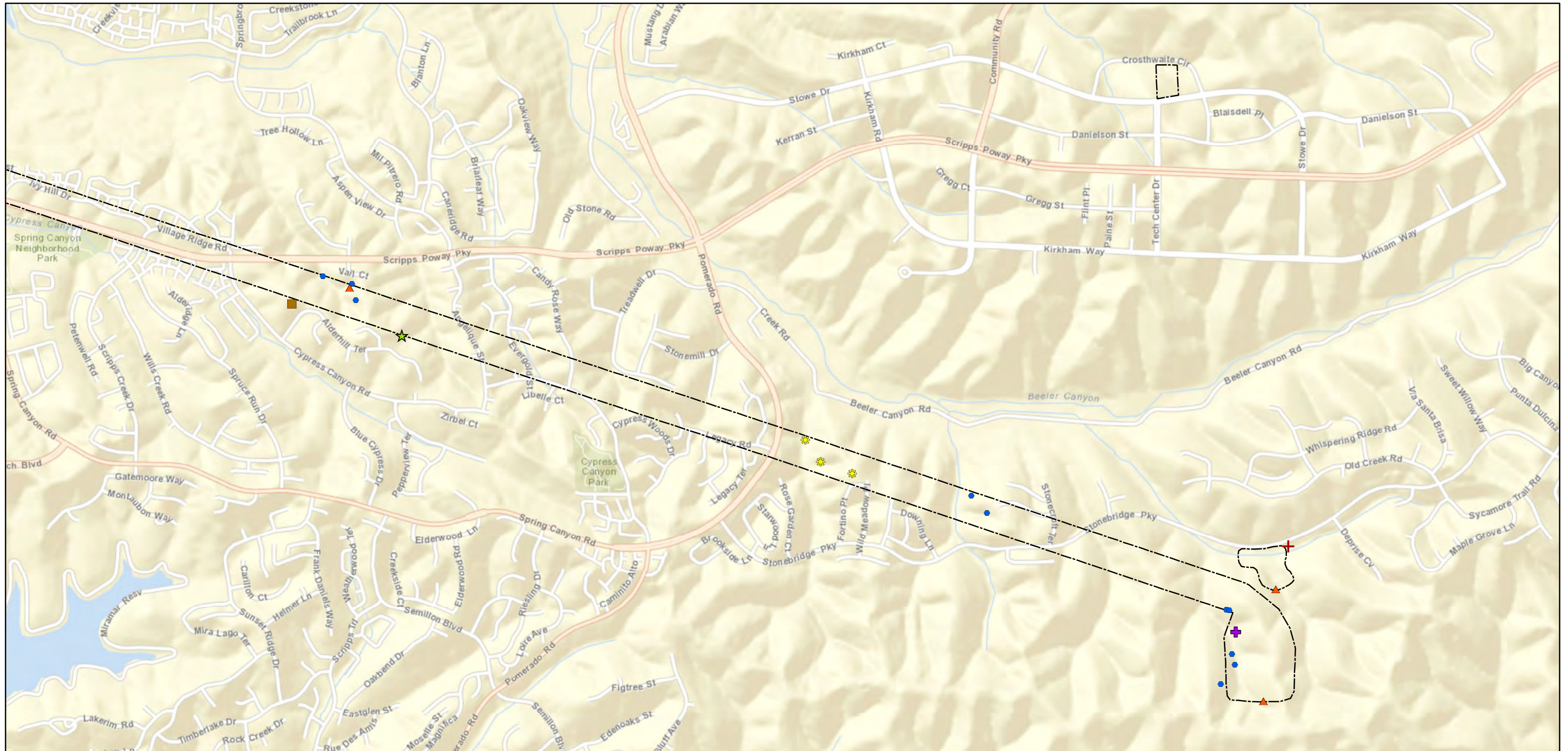
- ▲ *Accipiter cooperii* Cooper's Hawk
- ✚ *Chaetura vauxi* Vaux's Swift
- *Sialia mexicana* Western Bluebird
- ✚ *Lanius ludovicianus* Loggerhead Shrike
- ★ *Aspidoscelis hyperythra beldingi* Belding's Orange-Throated Whiptail
- *Aimophila ruficeps canescens* Southern California Rufous-Crowned Sparrow
- +
- ◆ *Eremophila alpestris actia* California Horned Lark
- ✚ *Poliptila californica californica* Coastal California Gnatcatcher
- Biological Survey Area

**Sycamore to Peñasquitos 230 kV Transmission Line Project**

Proposed Project  
Special-Status Wildlife Detected  
**Figure 9**



Sources: Busby Biological, SDG&E; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom



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**Sycamore to Peñasquitos 230 kV Transmission Line Project**

Proposed Project

Special-Status Wildlife Detected

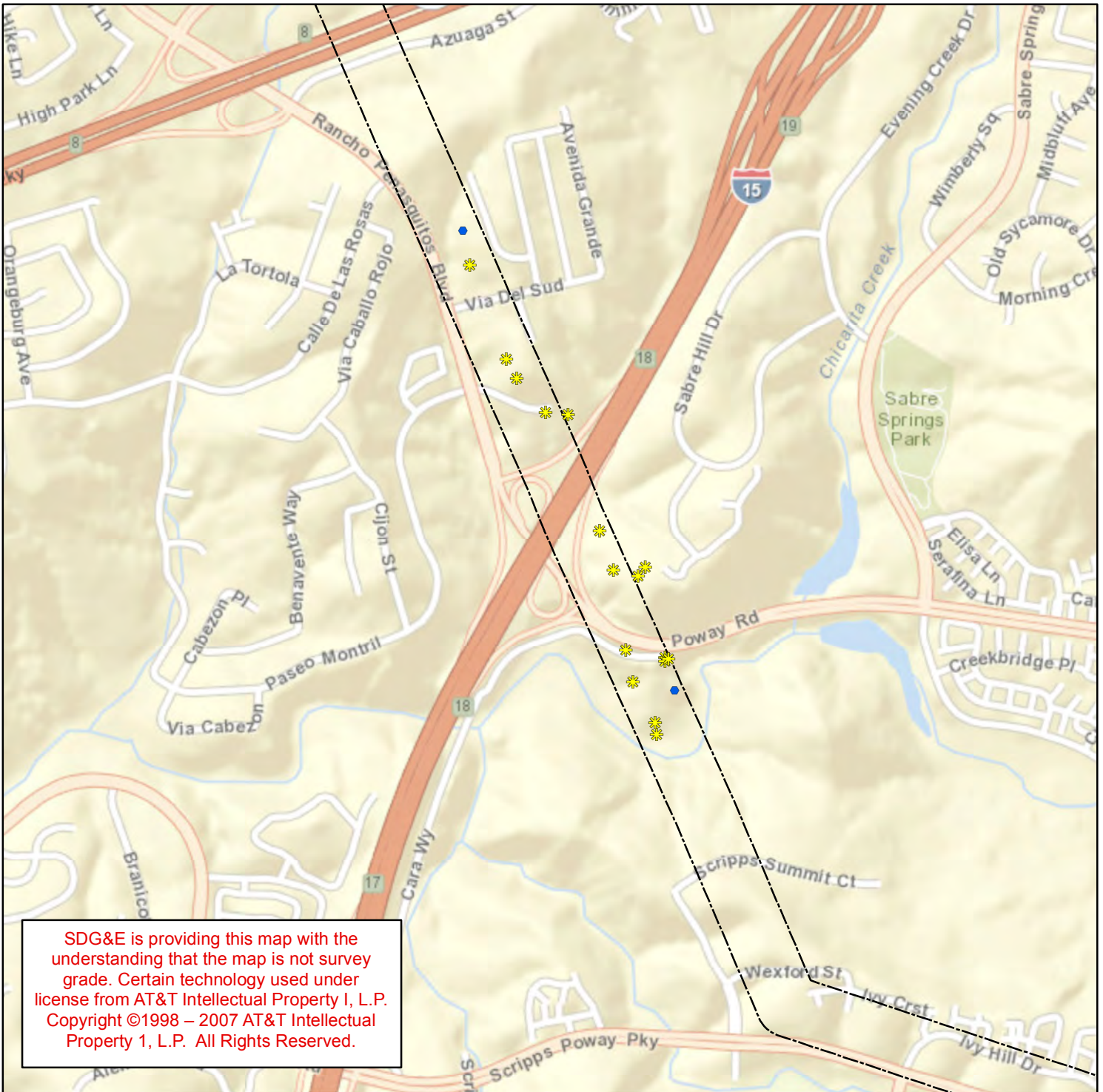
**Figure 9a-1**

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- ▲ *Accipiter cooperii* Cooper's Hawk
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- *Sialia mexicana* Western Bluebird
- ✚ *Lanius ludovicianus* Loggerhead Shrike
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- +
- ◆ *Eremophila alpestris actia* California Horned Lark
- ✪ *Polioptila californica californica* Coastal California Gnatcatcher
- Biological Survey Area



Sources: Busby Biological, SDG&E; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom



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### Sycamore to Peñasquitos 230 kV Transmission Line Project

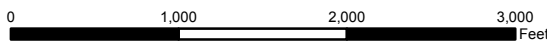
Proposed Project

Special-Status Wildlife Detected

**Figure 9a-2**

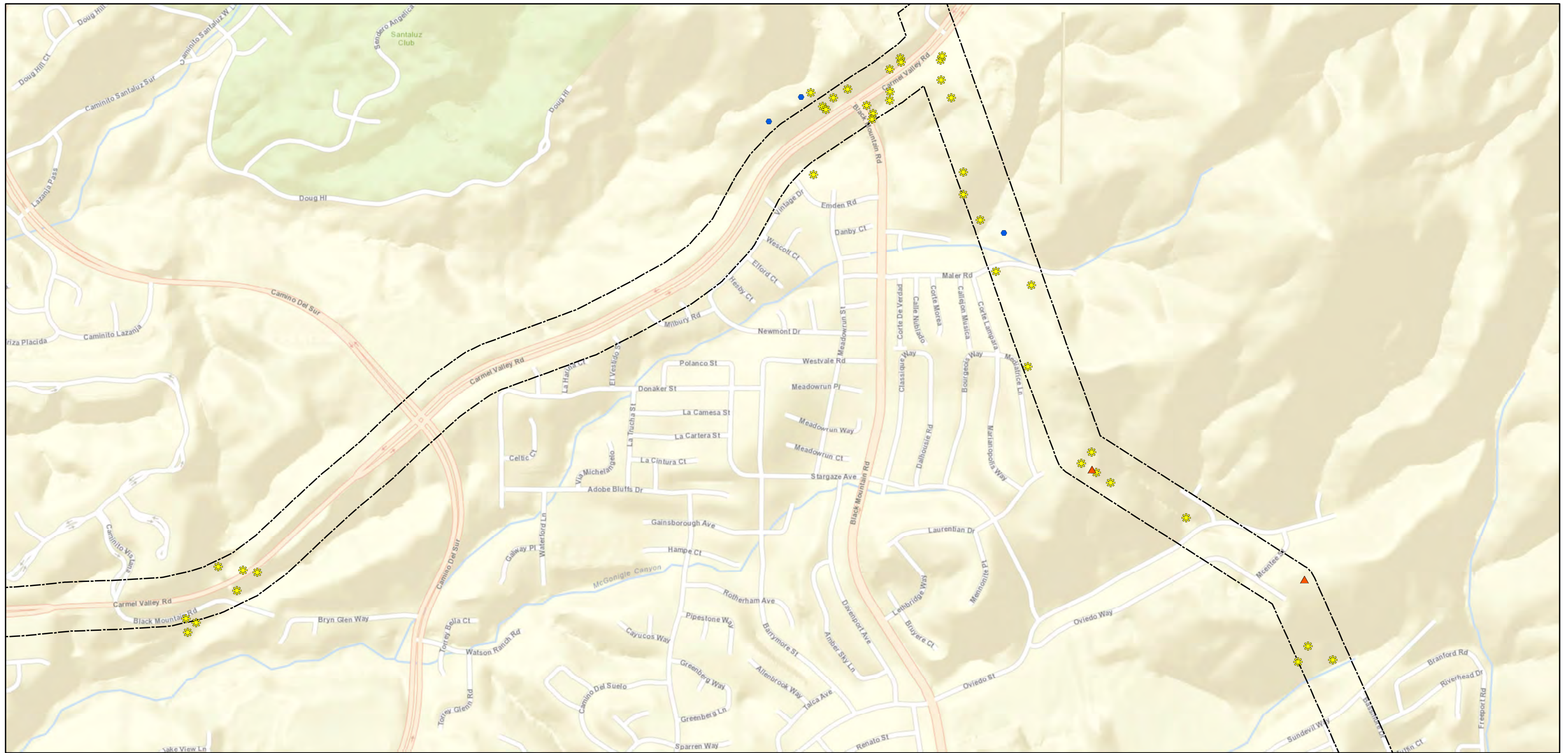
- ▲ *Accipiter cooperii* Cooper's Hawk
- ✚ *Chaetura vauxi* Vaux's Swift
- *Sialia mexicana* Western Bluebird
- ✚ *Lanius ludovicianus* Loggerhead Shrike
- ✚ *Odocoileus hemionus* Southern Mule Deer
- ◆ *Eremophila alpestris actia* California Horned Lark
- ✚ *Poliophtila californica californica* Coastal California Gnatcatcher
- *Aimophila ruficeps canescens* Southern California Rufous-Crowned Sparrow

Biological Survey Area



3/18/2014





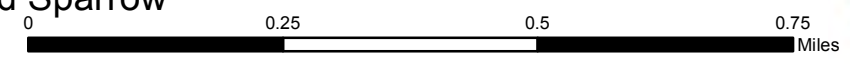
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- ▲ *Accipiter cooperii* Cooper's Hawk
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- *Sialia mexicana* Western Bluebird
- ✚ *Lanius ludovicianus* Loggerhead Shrike
- *Aimophila ruficeps canescens* Southern California Rufous-Crowned Sparrow
- ⊞ Biological Survey Area
- ✚ *Odocoileus hemionus* Southern Mule Deer
- ◆ *Eremophila alpestris actia* California Horned Lark
- ✚ *Polioptila californica californica* Coastal California Gnatcatcher

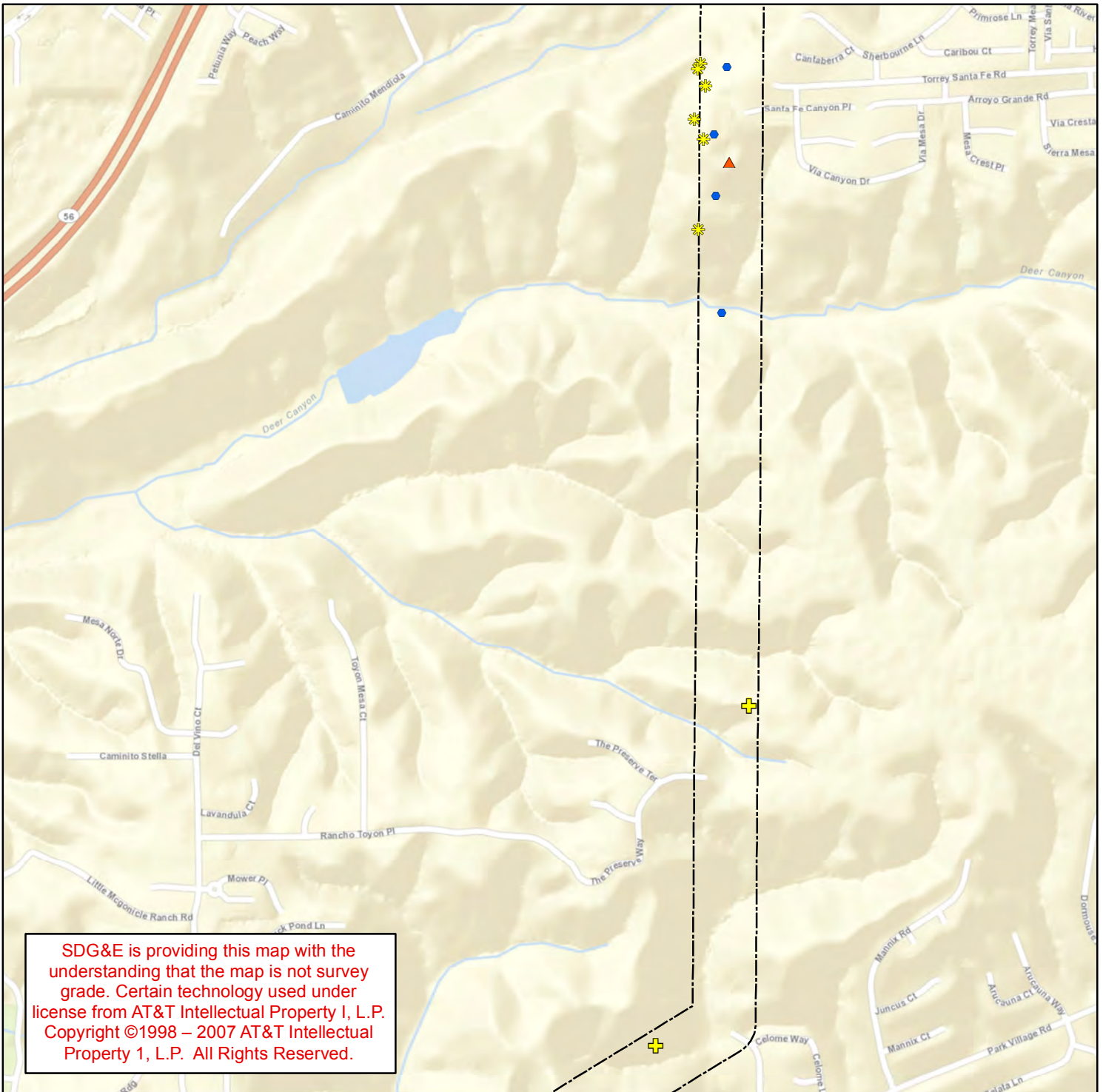
**Sycamore to Peñasquitos 230 kV Transmission Line Project**

Proposed Project  
 Special-Status Wildlife Detected  
**Figure 9a-3**



Sources: Busby biological; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom





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### Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Special-Status Wildlife Detected

**Figure 9a-4**

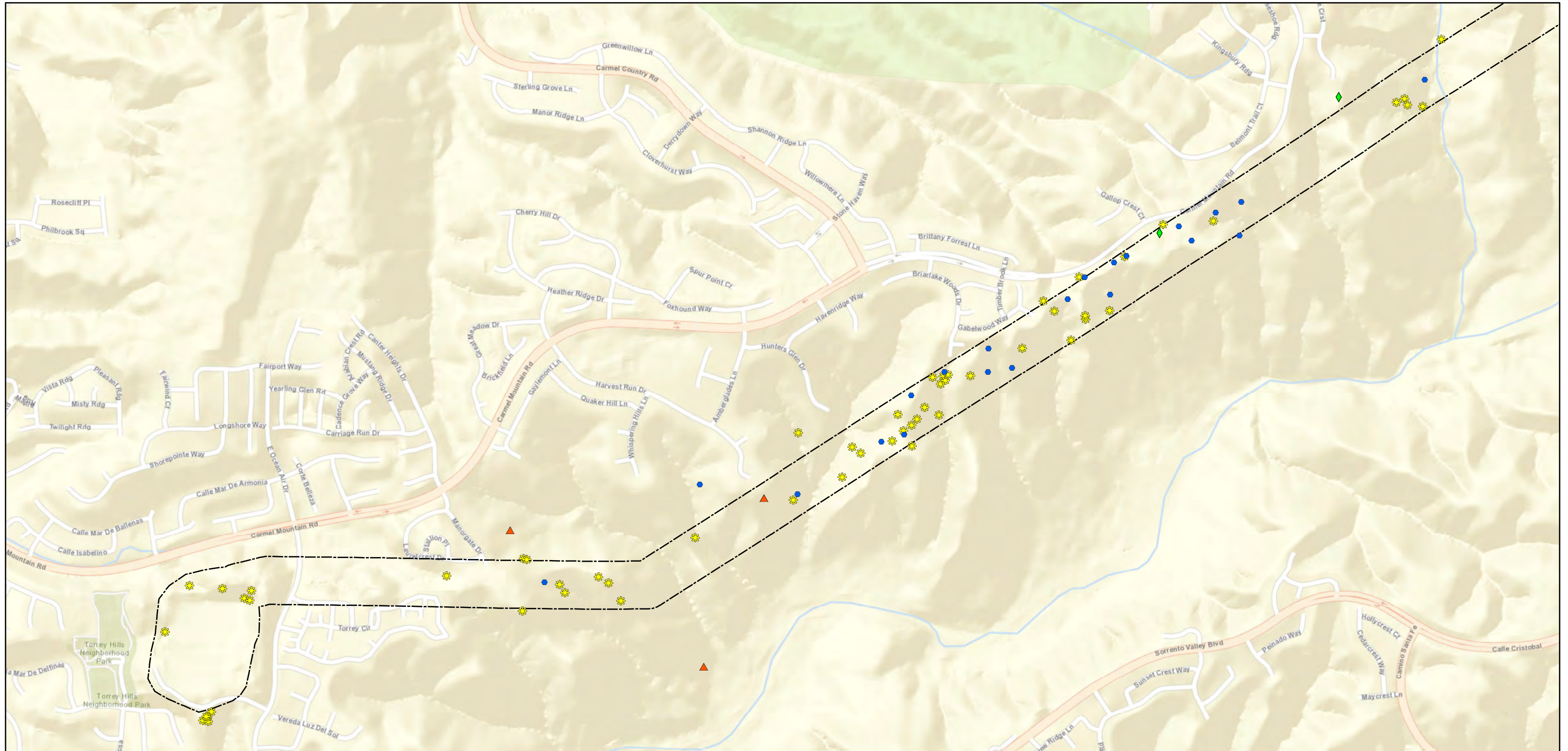
- ▲ *Accipiter cooperii* Cooper's Hawk
- ⊕ *Chaetura vauxi* Vaux's Swift
- *Sialia mexicana* Western Bluebird
- ⊕ *Lanius ludovicianus* Loggerhead Shrike
- ⊕ *Odocoileus hemionus* Southern Mule Deer
- ◆ *Eremophila alpestris actia* California Horned Lark
- ★ *Poliophtila californica californica* Coastal California Gnatcatcher
- *Aimophila ruficeps canescens* Southern California Rufous-Crowned Sparrow

Biological Survey Area



3/18/2014





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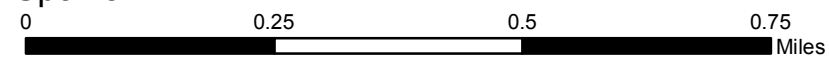
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- ▲ *Accipiter cooperii* Cooper's Hawk
- *Sialia mexicana* Western Bluebird
- ✚ *Lanius ludovicianus* Loggerhead Shrike
- *Aimophila ruficeps canescens* Southern California Rufous-Crowned Sparrow
- ⊕ *Chaetura vauxi* Vaux's Swift
- ⊕ *Polioptila californica californica* Coastal California Gnatcatcher
- ⊕ *Odocoileus hemionus* Southern Mule Deer
- ◆ *Eremophila alpestris actia* California Horned Lark
- Biological Survey Area

**Sycamore to Peñasquitos 230 kV Transmission Line Project**

Proposed Project  
Special-Status Wildlife Detected

**Figure 9a-5**





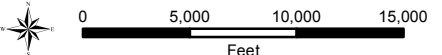
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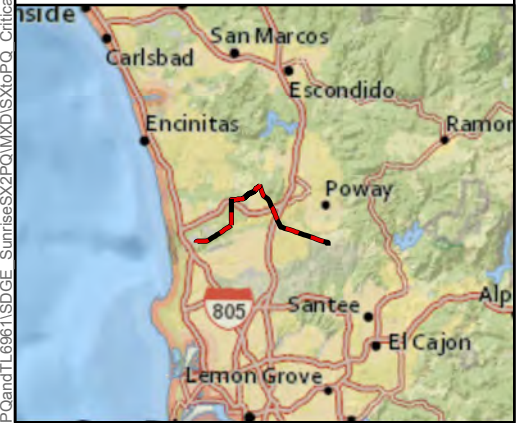
**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
**Proposed Project**  
**Critical Habitat**

**Figure 10**

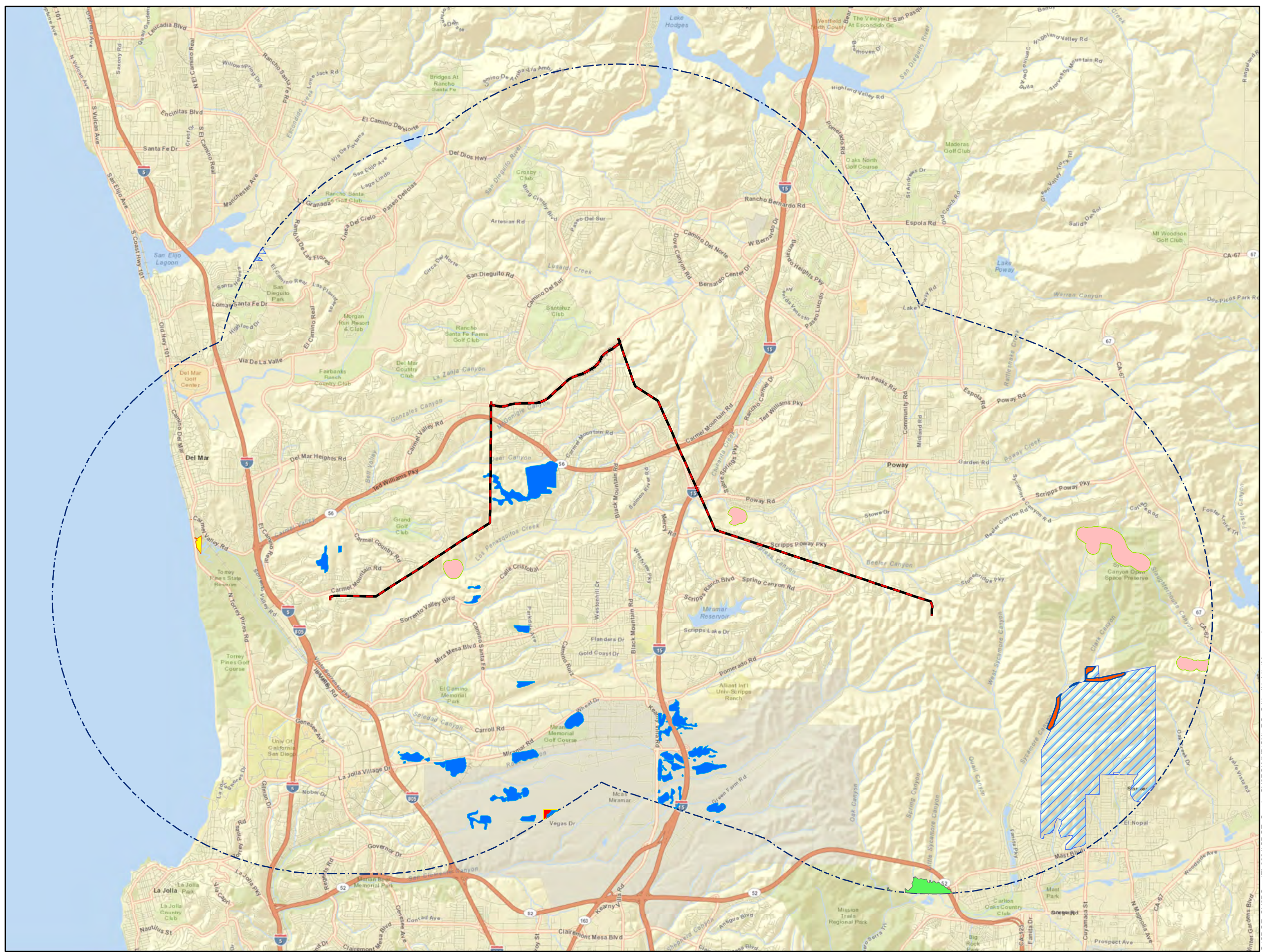
-  Proposed Project
-  5-mile Project Buffer
- Critical Habitat**
-  Coastal California gnatcatcher
-  Least Bell's vireo
-  San Diego fairy shrimp
-  San Diego thornmint
-  Spreading navarretia
-  Western snowy plover
-  Willoway monardella

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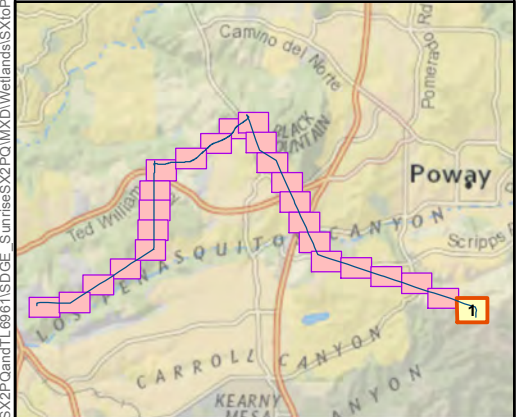


**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**

-  Biological Survey Area
-  USACE Waters of the U.S.
-  USACE Wetland Waters of the U.S.
-  RWQCB Wetland Waters of the State
-  RWQCB Waters of the State
-  RWQCB NPDES
-  CDFW Riparian
-  CDFW Unvegetated Streambed

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**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**


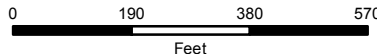


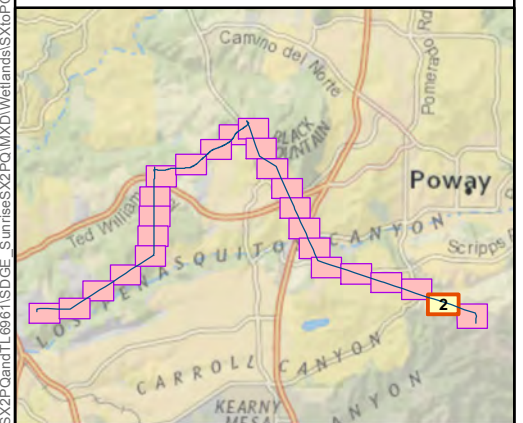
- Biological Survey Area
- USACE Waters of the U.S.
- USACE Wetland Waters of the U.S.
- RWQCB Wetland Waters of the State
- RWQCB Waters of the State
- RWQCB NPDES
- CDFW Riparian
- CDFW Unvegetated Streambed

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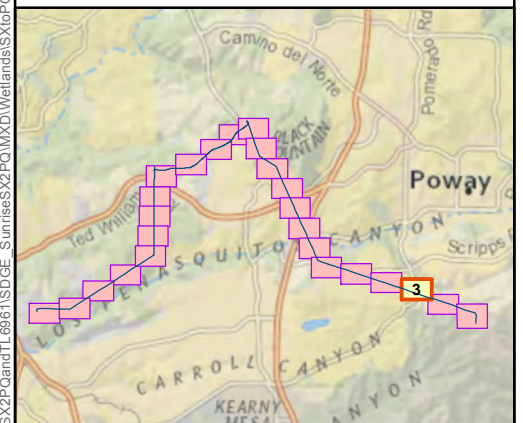
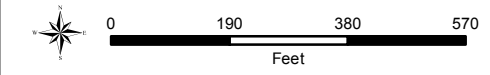
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**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**

-  Biological Survey Area
-  USACE Waters of the U.S.
-  USACE Wetland Waters of the U.S.
-  RWQCB Wetland Waters of the State
-  RWQCB Waters of the State
-  RWQCB NPDES
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-  CDFW Unvegetated Streambed

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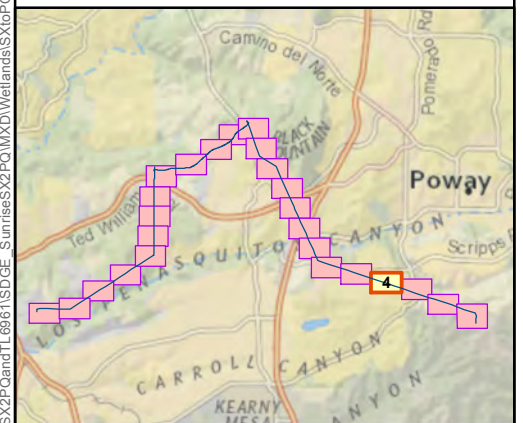
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**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**

-  Biological Survey Area
-  USACE Waters of the U.S.
-  USACE Wetland Waters of the U.S.
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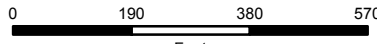


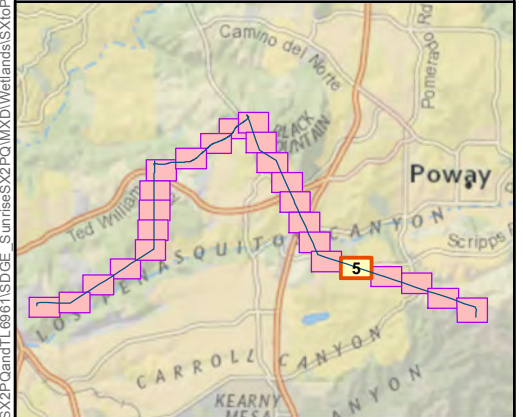
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**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**

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-  USACE Wetland Waters of the U.S.
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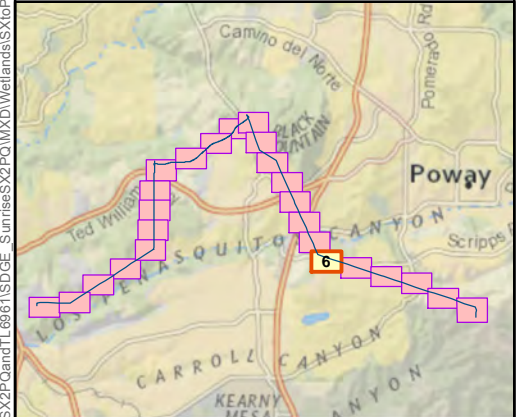
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**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**

-  Biological Survey Area
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-  USACE Wetland Waters of the U.S.
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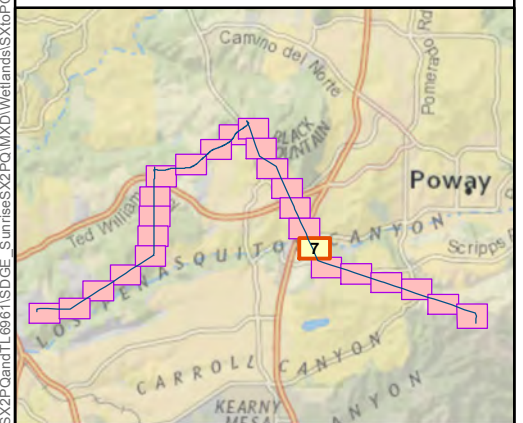


**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**

-  Biological Survey Area
-  USACE Waters of the U.S.
-  USACE Wetland Waters of the U.S.
-  RWQCB Wetland Waters of the State
-  RWQCB Waters of the State
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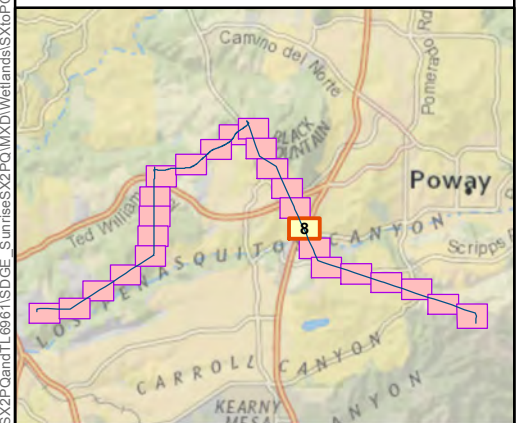
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**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**

-  Biological Survey Area
-  USACE Waters of the U.S.
-  USACE Wetland Waters of the U.S.
-  RWQCB Wetland Waters of the State
-  RWQCB Waters of the State
-  RWQCB NPDES
-  CDFW Riparian
-  CDFW Unvegetated Streambed

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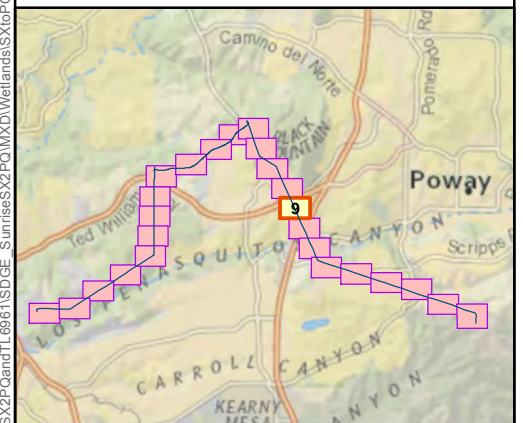
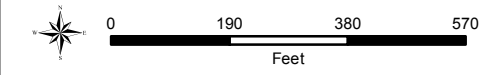
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**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**

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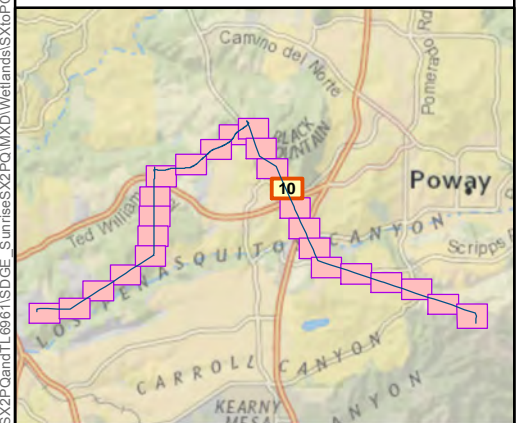
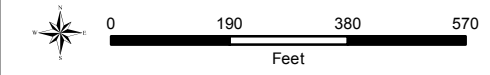
**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
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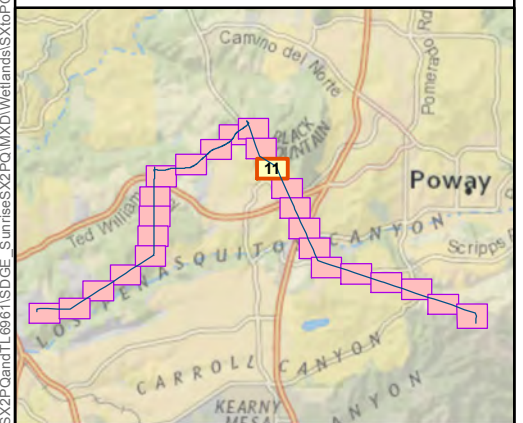
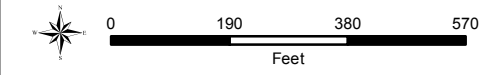
**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**

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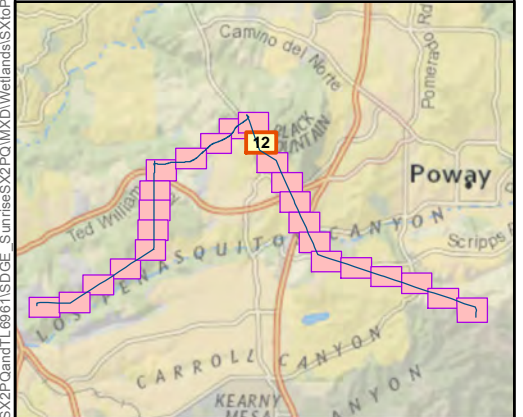
**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**



-  Biological Survey Area
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**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**

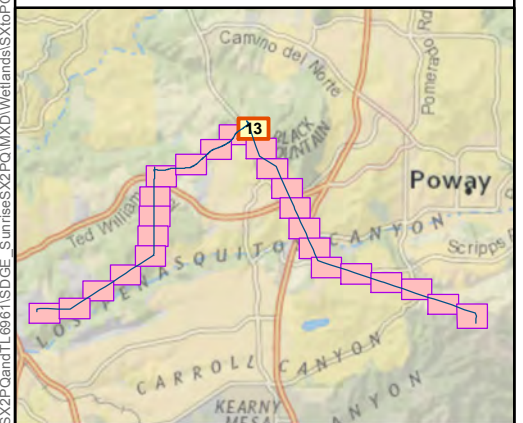
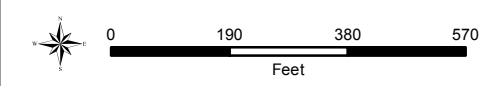


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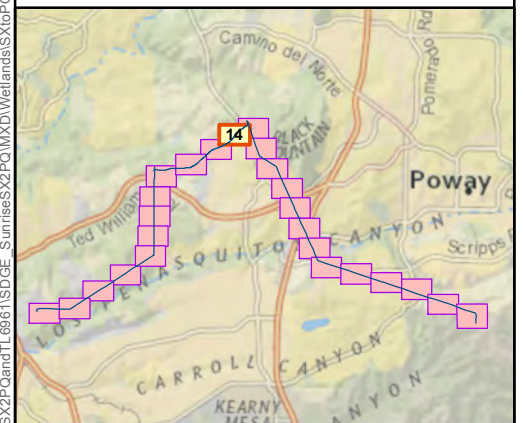
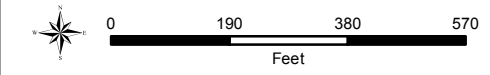
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**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**

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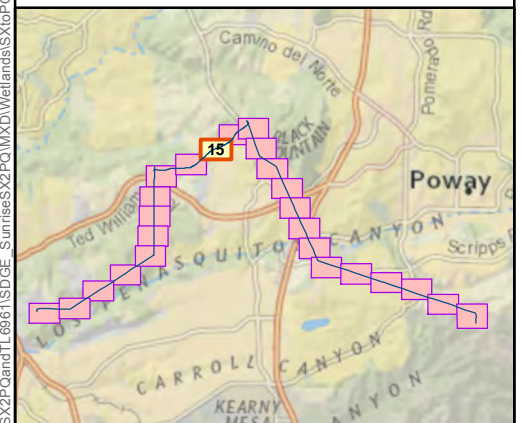


**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**

-  Biological Survey Area
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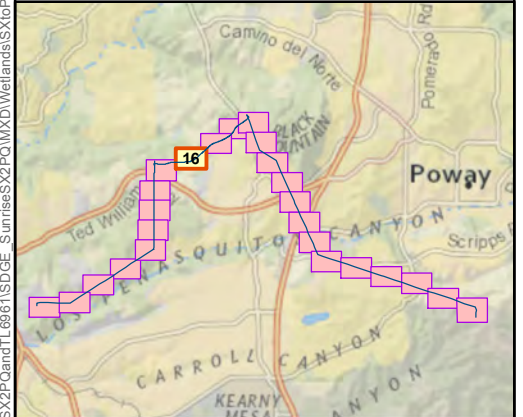
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**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**

-  Biological Survey Area
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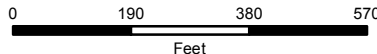
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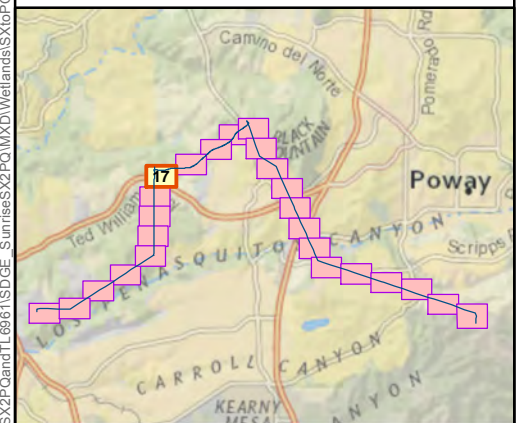
**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**



- Biological Survey Area
- USACE Waters of the U.S.
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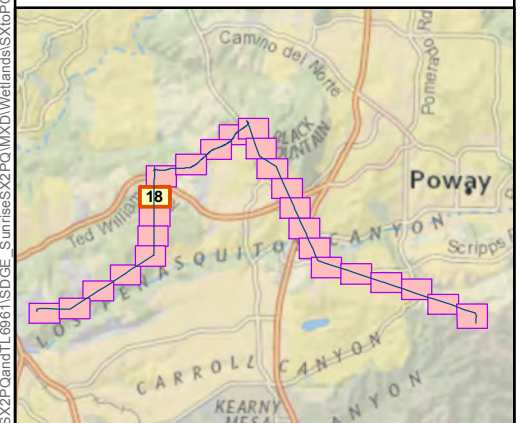
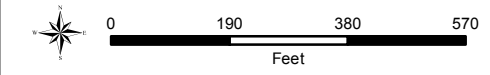
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**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**

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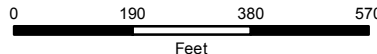


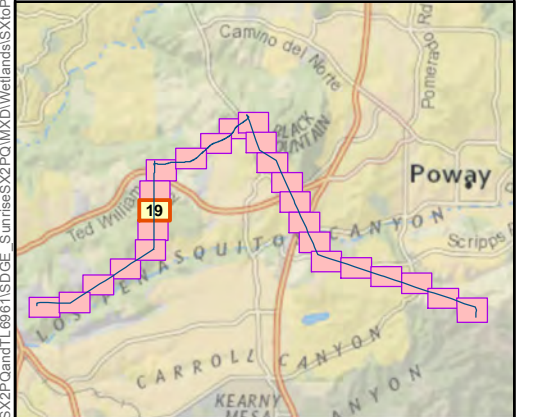
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**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**

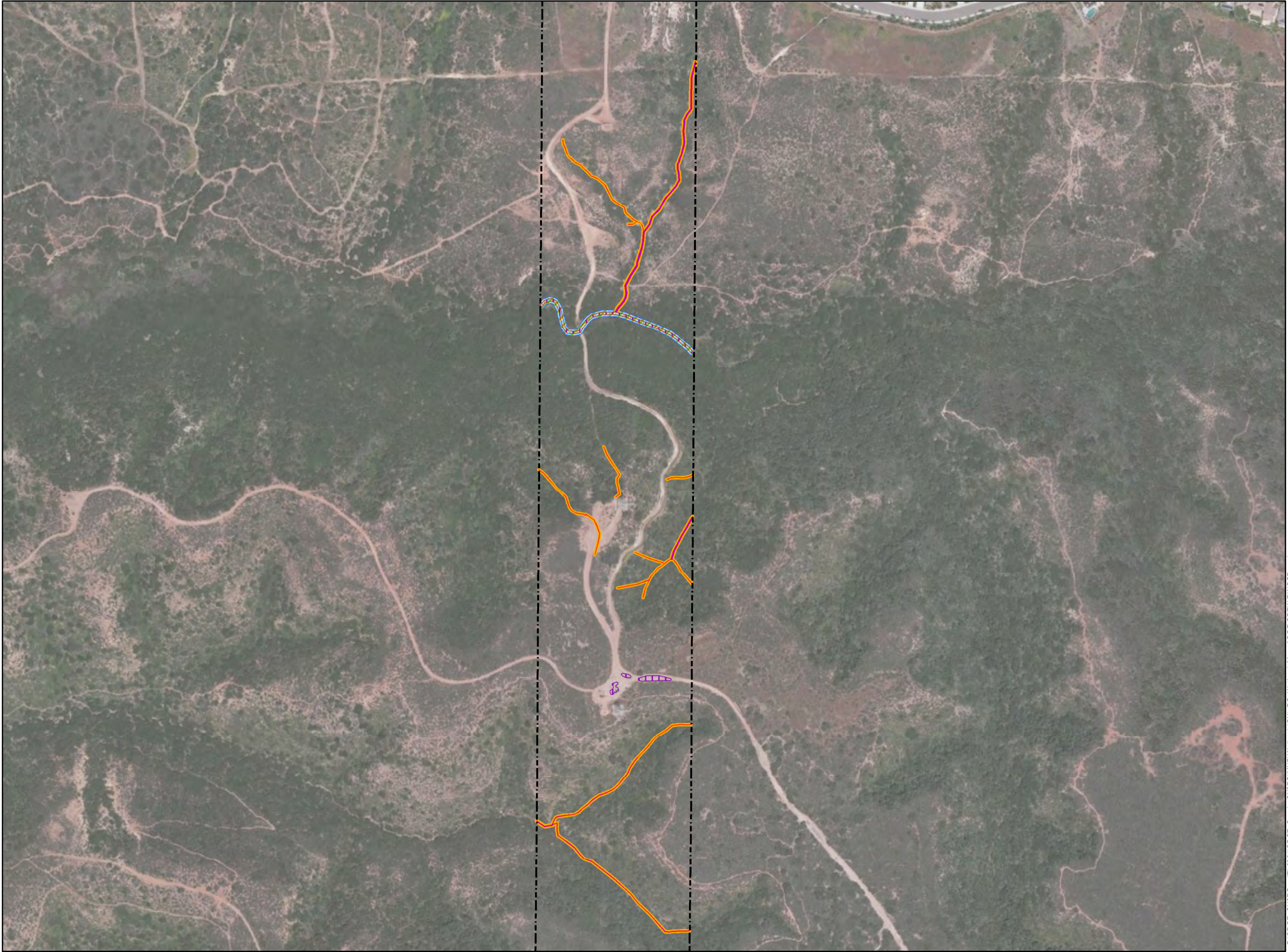
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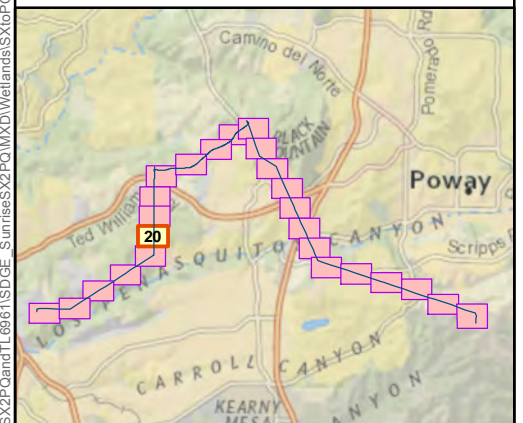
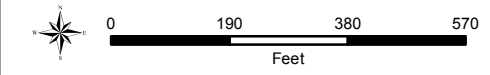
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**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**

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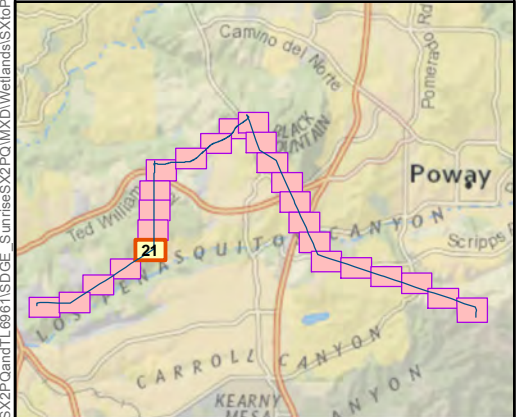
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**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**

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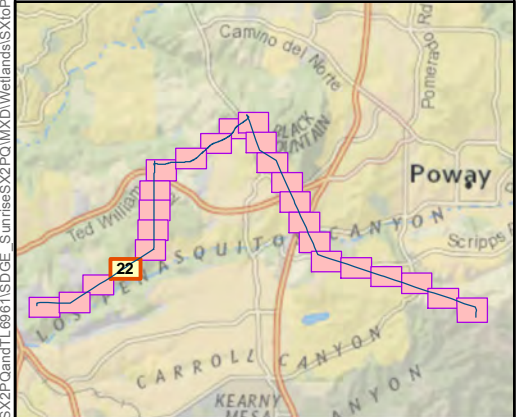
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**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**

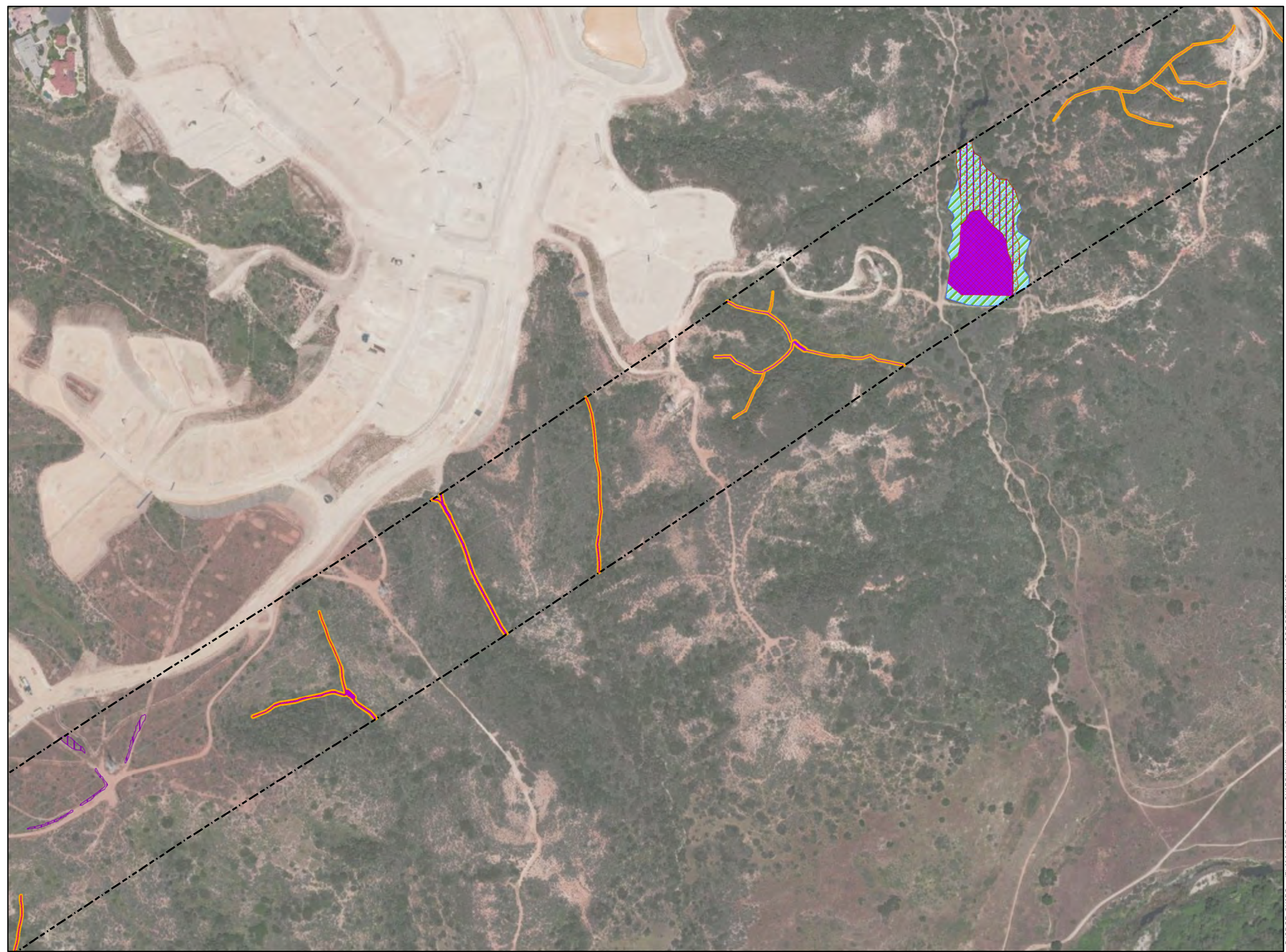
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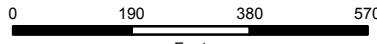
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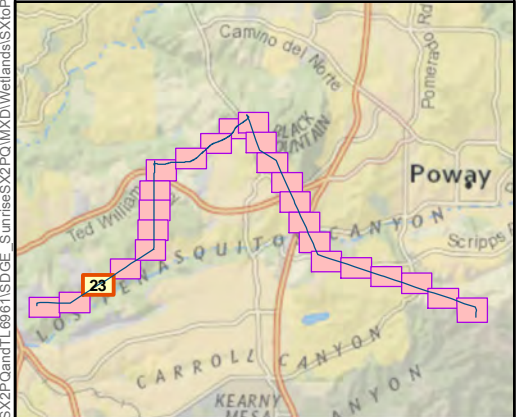


**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**

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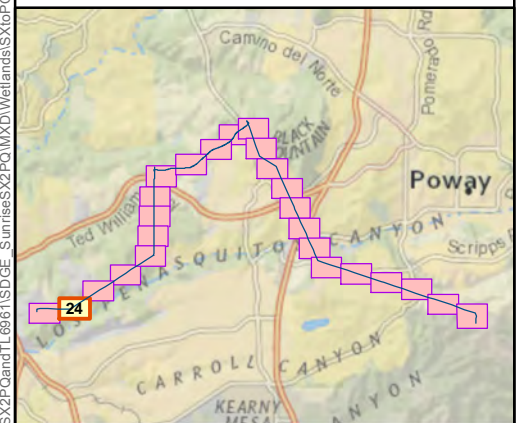
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**Sycamore to Peñasquitos  
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Proposed Project  
Wetlands  
**Figure 11a**

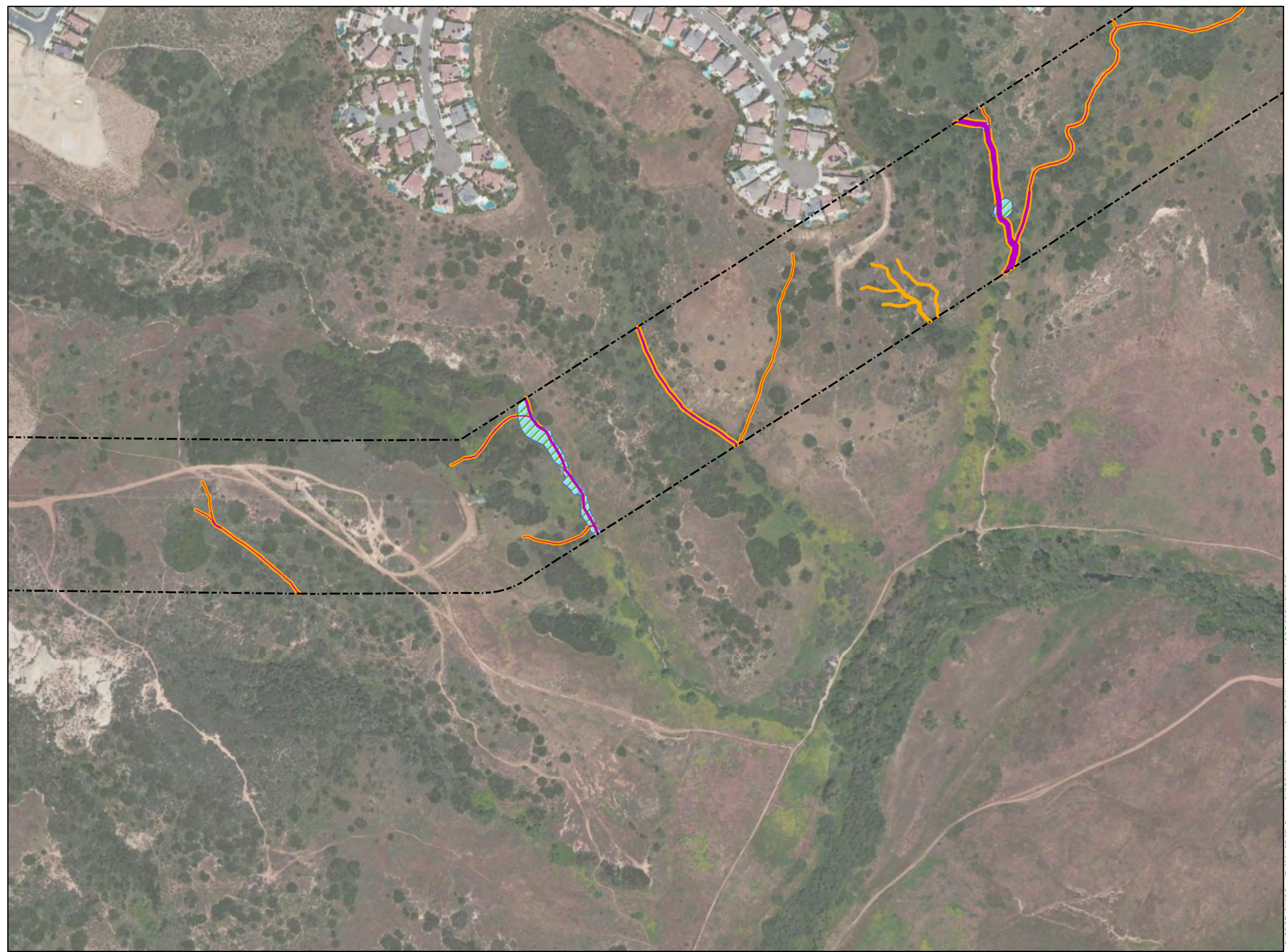
-  Biological Survey Area
-  USACE Waters of the U.S.
-  USACE Wetland Waters of the U.S.
-  RWQCB Wetland Waters of the State
-  RWQCB Waters of the State
-  RWQCB NPDES
-  CDFW Riparian
-  CDFW Unvegetated Streambed

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Sources: EI, 2013; TRC, 2013; National Geographic, ESRI, Digital Globe, DeLorme, NAVTEQ, UNEP/WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, IPC, swisstopo GIS User Community



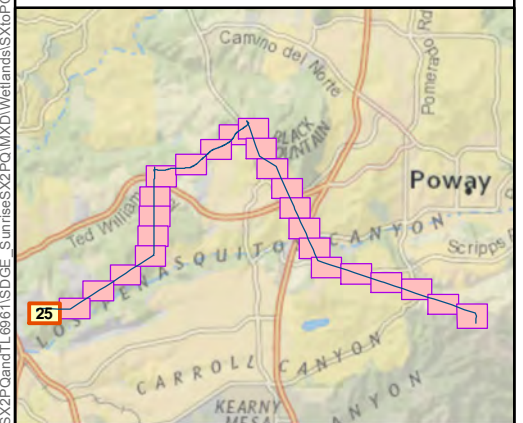
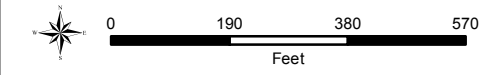
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**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
**Figure 11a**

-  Biological Survey Area
-  USACE Waters of the U.S.
-  USACE Wetland Waters of the U.S.
-  RWQCB Wetland Waters of the State
-  RWQCB Waters of the State
-  RWQCB NPDES
-  CDFW Riparian
-  CDFW Unvegetated Streambed

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Sources: EI,2013;TRC2013, National Geographic,ESRI, Digital Globe DeLorme, NAVTEQ,UNEP/WCMC, USGS, NASA, ESA, METI NRCAN, GEBCO, NOAA, IPCswisstopo GIS User Community






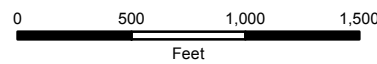
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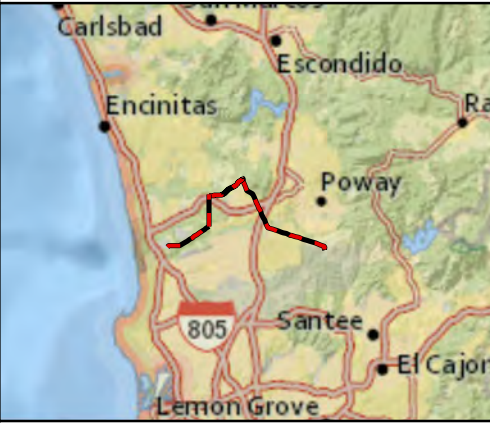
**Sycamore to Peñasquitos  
230 kV Transmission Line Project**  
Proposed Project  
Wetlands  
(Coastal California Commission)

**Figure 11b**

- █ CCC Tributary
- █ CCC Riparian
- █ CCC Swale
- █ CCC Vernal Pool
- Biological Survey Area

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 3/27/2014 A Sempra Energy utility  





Sources: E1.2013;TRC2013, National Geographic, ESRI, Digital Globe DeLorme, NAVTEQ, UNEP/WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, IPC/swisstopo GIS User Community



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**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**





Proposed Project  
Vegetation Community  
Impacts

**Figure 12**

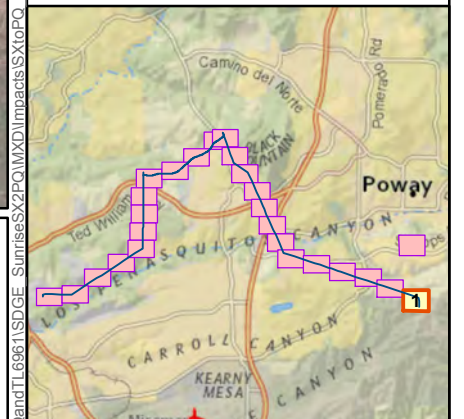


- Biological Survey Area
- Permanent Impact
- Temporary Impact

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


<span style="display: inline-block; width: 15px; height: 15px; background-color: #006400; border: 1px solid black;"></span> 1-Diegan Coastal Sage Scrub	<span style="display: inline-block; width: 15px; height: 15px; background-color: #8B4513; border: 1px solid black;"></span> 6-So. Mixed Chaparral - Disturbed	<span style="display: inline-block; width: 15px; height: 15px; background-color: #0000FF; border: 1px solid black;"></span> 11-Alkali Marsh - Revegetated	<span style="display: inline-block; width: 15px; height: 15px; background-color: #DDA0DD; border: 1px solid black;"></span> 16-Mulefat Scrub	<span style="display: inline-block; width: 15px; height: 15px; background-color: #FFD700; border: 1px solid black;"></span> 21-Native Grassland
<span style="display: inline-block; width: 15px; height: 15px; background-color: #3CB371; border: 1px solid black;"></span> 2-Diegan Coastal Sage Scrub - Disturbed	<span style="display: inline-block; width: 15px; height: 15px; background-color: #A0522D; border: 1px solid black;"></span> 7-Scrub Oak Chaparral	<span style="display: inline-block; width: 15px; height: 15px; background-color: #00CED1; border: 1px solid black;"></span> 12-Freshwater Marsh	<span style="display: inline-block; width: 15px; height: 15px; background-color: #9932CC; border: 1px solid black;"></span> 17-So. Coast Live Oak Riparian Forest	<span style="display: inline-block; width: 15px; height: 15px; background-color: #FFFF00; border: 1px solid black;"></span> 0-Bare Ground
<span style="display: inline-block; width: 15px; height: 15px; background-color: #9ACD32; border: 1px solid black;"></span> 3-Coastal Sage Scrub - Revegetated	<span style="display: inline-block; width: 15px; height: 15px; background-color: #8B0000; border: 1px solid black;"></span> 8-Chamise Chaparral	<span style="display: inline-block; width: 15px; height: 15px; background-color: #ADD8E6; border: 1px solid black;"></span> 13-SD Mesa Vernal Pool	<span style="display: inline-block; width: 15px; height: 15px; background-color: #800080; border: 1px solid black;"></span> 18-Eucalyptus Woodland	<span style="display: inline-block; width: 15px; height: 15px; background-color: #808080; border: 1px solid black;"></span> 22-Developed Lands
<span style="display: inline-block; width: 15px; height: 15px; background-color: #90EE90; border: 1px solid black;"></span> 4-Coastal Sage - Chaparral Scrub	<span style="display: inline-block; width: 15px; height: 15px; background-color: #FF0000; border: 1px solid black;"></span> 9-Chamise Chaparral - Disturbed	<span style="display: inline-block; width: 15px; height: 15px; background-color: #00FFFF; border: 1px solid black;"></span> 14-Southern Willow Scrub	<span style="display: inline-block; width: 15px; height: 15px; background-color: #800000; border: 1px solid black;"></span> 19-Tamarisk Scrub	<span style="display: inline-block; width: 15px; height: 15px; background-color: #FF8C00; border: 1px solid black;"></span> 23-Ornamental
<span style="display: inline-block; width: 15px; height: 15px; background-color: #654321; border: 1px solid black;"></span> 5-Southern Mixed Chaparral	<span style="display: inline-block; width: 15px; height: 15px; background-color: #00008B; border: 1px solid black;"></span> 10-Open Water	<span style="display: inline-block; width: 15px; height: 15px; background-color: #8A2BE2; border: 1px solid black;"></span> 15-Southern Riparian Scrub	<span style="display: inline-block; width: 15px; height: 15px; background-color: #FFA500; border: 1px solid black;"></span> 20-Nonnative Grassland	<span style="display: inline-block; width: 15px; height: 15px; background-color: #FF4500; border: 1px solid black;"></span> 24-Disturbed Habitat

Sources: SDG&E, 2013; TRC and Busby Biological, 2013; Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; National Geographic, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, NOAA




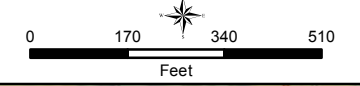
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

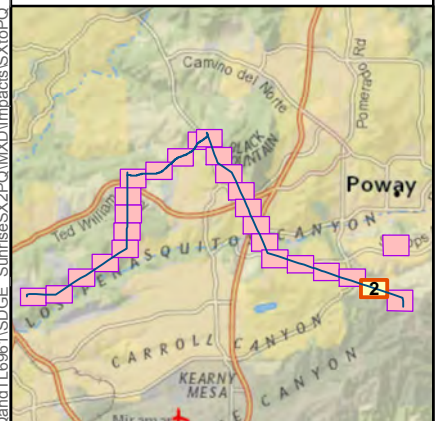
Proposed Project  
Vegetation Community  
Impacts

**Figure 12**

-  Biological Survey Area
-  Permanent Impact
-  Temporary Impact


























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




 1-Diegan Coastal Sage Scrub	 6-So. Mixed Chaparral - Disturbed	 11-Alkali Marsh - Revegetated	 16-Mulefat Scrub	 21-Native Grassland
 2-Diegan Coastal Sage Scrub - Disturbed	 7-Scrub Oak Chaparral	 12-Freshwater Marsh	 17-So. Coast Live Oak Riparian Forest	 0-Bare Ground
 3-Coastal Sage Scrub - Revegetated	 8-Chamise Chaparral	 13-SD Mesa Vernal Pool	 18-Eucalyptus Woodland	 22-Developed Lands
 4-Coastal Sage - Chaparral Scrub	 9-Chamise Chaparral - Disturbed	 14-Southern Willow Scrub	 19-Tamarisk Scrub	 23-Ornamental
 5-Southern Mixed Chaparral	 10-Open Water	 15-Southern Riparian Scrub	 20-Nonnative Grassland	 24-Disturbed Habitat





**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

Proposed Project  
Vegetation Community  
Impacts


























**Figure 12**

-  Biological Survey Area
-  Permanent Impact
-  Temporary Impact

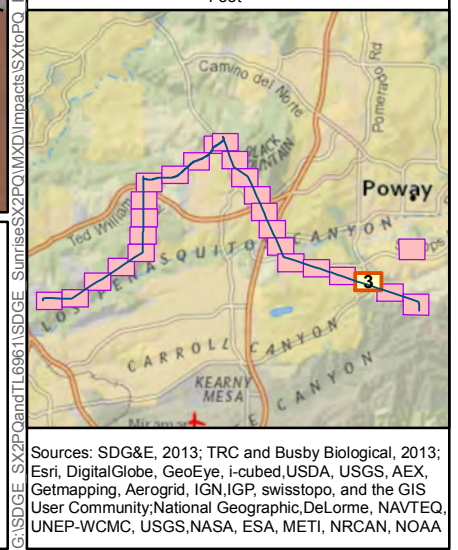
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 1-Diegan Coastal Sage Scrub	 6-So. Mixed Chaparral - Disturbed	 11-Alkali Marsh - Revegetated	 16-Mulefat Scrub	 21-Native Grassland
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 5-Southern Mixed Chaparral	 10-Open Water	 15-Southern Riparian Scrub	 20-Nonnative Grassland	 24-Disturbed Habitat

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Sources: SDG&E, 2013; TRC and Busby Biological, 2013; Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; National Geographic, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, NOAA

**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**




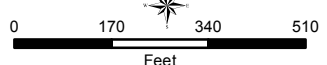
Proposed Project  
Vegetation Community  
Impacts

**Figure 12**

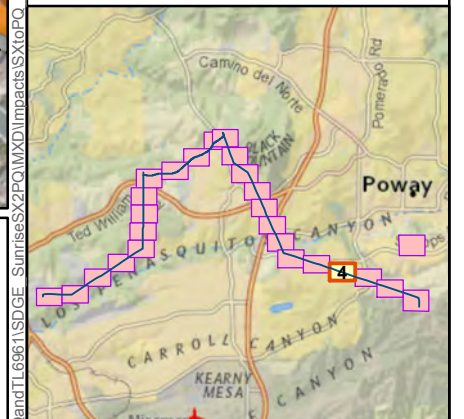


- Biological Survey Area
- Permanent Impact
- Temporary Impact

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<span style="display: inline-block; width: 15px; height: 10px; background-color: #006400; border: 1px solid black; margin-right: 5px;"></span> 1-Diegan Coastal Sage Scrub	<span style="display: inline-block; width: 15px; height: 10px; background-color: #8B4513; border: 1px solid black; margin-right: 5px;"></span> 6-So. Mixed Chaparral - Disturbed	<span style="display: inline-block; width: 15px; height: 10px; background-color: #0000FF; border: 1px solid black; margin-right: 5px;"></span> 11-Alkali Marsh - Revegetated	<span style="display: inline-block; width: 15px; height: 10px; background-color: #DDA0DD; border: 1px solid black; margin-right: 5px;"></span> 16-Mulefat Scrub	<span style="display: inline-block; width: 15px; height: 10px; background-color: #FFD700; border: 1px solid black; margin-right: 5px;"></span> 21-Native Grassland
<span style="display: inline-block; width: 15px; height: 10px; background-color: #3CB371; border: 1px solid black; margin-right: 5px;"></span> 2-Diegan Coastal Sage Scrub - Disturbed	<span style="display: inline-block; width: 15px; height: 10px; background-color: #A0522D; border: 1px solid black; margin-right: 5px;"></span> 7-Scrub Oak Chaparral	<span style="display: inline-block; width: 15px; height: 10px; background-color: #00CED1; border: 1px solid black; margin-right: 5px;"></span> 12-Freshwater Marsh	<span style="display: inline-block; width: 15px; height: 10px; background-color: #9932CC; border: 1px solid black; margin-right: 5px;"></span> 17-So. Coast Live Oak Riparian Forest	<span style="display: inline-block; width: 15px; height: 10px; background-color: #FFFF00; border: 1px solid black; margin-right: 5px;"></span> 0-Bare Ground
<span style="display: inline-block; width: 15px; height: 10px; background-color: #9ACD32; border: 1px solid black; margin-right: 5px;"></span> 3-Coastal Sage Scrub - Revegetated	<span style="display: inline-block; width: 15px; height: 10px; background-color: #8B0000; border: 1px solid black; margin-right: 5px;"></span> 8-Chamise Chaparral	<span style="display: inline-block; width: 15px; height: 10px; background-color: #ADD8E6; border: 1px solid black; margin-right: 5px;"></span> 13-SD Mesa Vernal Pool	<span style="display: inline-block; width: 15px; height: 10px; background-color: #800080; border: 1px solid black; margin-right: 5px;"></span> 18-Eucalyptus Woodland	<span style="display: inline-block; width: 15px; height: 10px; background-color: #808080; border: 1px solid black; margin-right: 5px;"></span> 22-Developed Lands
<span style="display: inline-block; width: 15px; height: 10px; background-color: #90EE90; border: 1px solid black; margin-right: 5px;"></span> 4-Coastal Sage - Chaparral Scrub	<span style="display: inline-block; width: 15px; height: 10px; background-color: #DC143C; border: 1px solid black; margin-right: 5px;"></span> 9-Chamise Chaparral - Disturbed	<span style="display: inline-block; width: 15px; height: 10px; background-color: #00CED1; border: 1px solid black; margin-right: 5px;"></span> 14-Southern Willow Scrub	<span style="display: inline-block; width: 15px; height: 10px; background-color: #800080; border: 1px solid black; margin-right: 5px;"></span> 19-Tamarisk Scrub	<span style="display: inline-block; width: 15px; height: 10px; background-color: #FF8C00; border: 1px solid black; margin-right: 5px;"></span> 23-Ornamental
<span style="display: inline-block; width: 15px; height: 10px; background-color: #8B4513; border: 1px solid black; margin-right: 5px;"></span> 5-Southern Mixed Chaparral	<span style="display: inline-block; width: 15px; height: 10px; background-color: #00008B; border: 1px solid black; margin-right: 5px;"></span> 10-Open Water	<span style="display: inline-block; width: 15px; height: 10px; background-color: #9370DB; border: 1px solid black; margin-right: 5px;"></span> 15-Southern Riparian Scrub	<span style="display: inline-block; width: 15px; height: 10px; background-color: #FFA500; border: 1px solid black; margin-right: 5px;"></span> 20-Nonnative Grassland	<span style="display: inline-block; width: 15px; height: 10px; background-color: #FF6347; border: 1px solid black; margin-right: 5px;"></span> 24-Disturbed Habitat

Sources: SDG&E, 2013; TRC and Busby Biological, 2013; Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; National Geographic, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, NOAA



**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

Proposed Project  
Vegetation Community  
Impacts

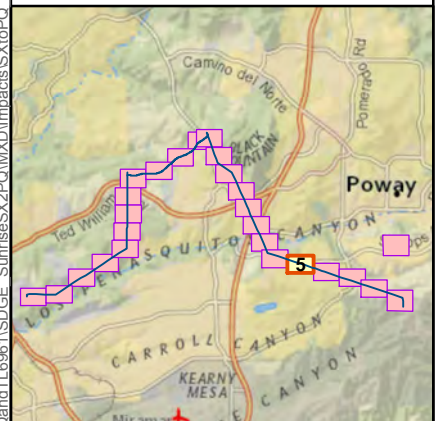
**Figure 12**



- Biological Survey Area
- Permanent Impact
- Temporary Impact

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1-Diegan Coastal Sage Scrub	6-So. Mixed Chaparral - Disturbed	11-Alkali Marsh - Revegetated	16-Mulefat Scrub	21-Native Grassland
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**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**




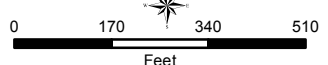
Proposed Project  
Vegetation Community  
Impacts

**Figure 12**

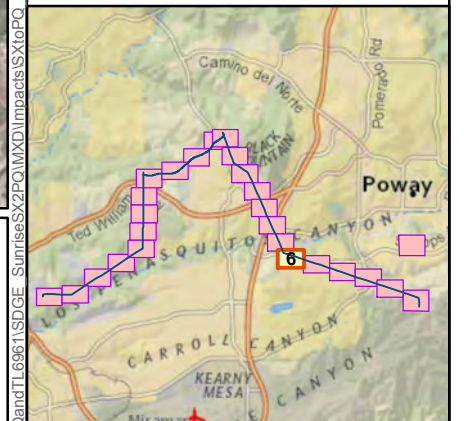


- Biological Survey Area
- Permanent Impact
- Temporary Impact

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


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<span style="display: inline-block; width: 15px; height: 15px; background-color: #3CB371; border: 1px solid black;"></span> 2-Diegan Coastal Sage Scrub - Disturbed	<span style="display: inline-block; width: 15px; height: 15px; background-color: #A0522D; border: 1px solid black;"></span> 7-Scrub Oak Chaparral	<span style="display: inline-block; width: 15px; height: 15px; background-color: #00CED1; border: 1px solid black;"></span> 12-Freshwater Marsh	<span style="display: inline-block; width: 15px; height: 15px; background-color: #8A2BE2; border: 1px solid black;"></span> 17-So. Coast Live Oak Riparian Forest	<span style="display: inline-block; width: 15px; height: 15px; background-color: #FFFF00; border: 1px solid black;"></span> 0-Bare Ground
<span style="display: inline-block; width: 15px; height: 15px; background-color: #9ACD32; border: 1px solid black;"></span> 3-Coastal Sage Scrub - Revegetated	<span style="display: inline-block; width: 15px; height: 15px; background-color: #8B4513; border: 1px solid black;"></span> 8-Chamise Chaparral	<span style="display: inline-block; width: 15px; height: 15px; background-color: #ADD8E6; border: 1px solid black;"></span> 13-SD Mesa Vernal Pool	<span style="display: inline-block; width: 15px; height: 15px; background-color: #800080; border: 1px solid black;"></span> 18-Eucalyptus Woodland	<span style="display: inline-block; width: 15px; height: 15px; background-color: #808080; border: 1px solid black;"></span> 22-Developed Lands
<span style="display: inline-block; width: 15px; height: 15px; background-color: #90EE90; border: 1px solid black;"></span> 4-Coastal Sage - Chaparral Scrub	<span style="display: inline-block; width: 15px; height: 15px; background-color: #D2691E; border: 1px solid black;"></span> 9-Chamise Chaparral - Disturbed	<span style="display: inline-block; width: 15px; height: 15px; background-color: #00CED1; border: 1px solid black;"></span> 14-Southern Willow Scrub	<span style="display: inline-block; width: 15px; height: 15px; background-color: #800000; border: 1px solid black;"></span> 19-Tamarisk Scrub	<span style="display: inline-block; width: 15px; height: 15px; background-color: #FF8C00; border: 1px solid black;"></span> 23-Ornamental
<span style="display: inline-block; width: 15px; height: 15px; background-color: #8B4513; border: 1px solid black;"></span> 5-Southern Mixed Chaparral	<span style="display: inline-block; width: 15px; height: 15px; background-color: #00008B; border: 1px solid black;"></span> 10-Open Water	<span style="display: inline-block; width: 15px; height: 15px; background-color: #8A2BE2; border: 1px solid black;"></span> 15-Southern Riparian Scrub	<span style="display: inline-block; width: 15px; height: 15px; background-color: #FFA500; border: 1px solid black;"></span> 20-Nonnative Grassland	<span style="display: inline-block; width: 15px; height: 15px; background-color: #FF6347; border: 1px solid black;"></span> 24-Disturbed Habitat

Sources: SDG&E, 2013; TRC and Busby Biological, 2013; Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; National Geographic, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, NOAA


**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

Proposed Project  
Vegetation Community  
Impacts

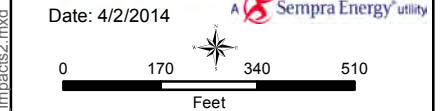
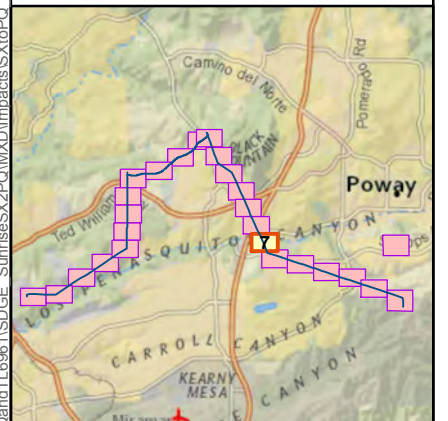
**Figure 12**

-  Biological Survey Area
-  Permanent Impact
-  Temporary Impact

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






















Date: 4/2/2014

Sources: SDG&E, 2013; TRC and Busby Biological, 2013; Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; National Geographic, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, NOAA



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**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

Proposed Project  
Vegetation Community  
Impacts

**Figure 12**

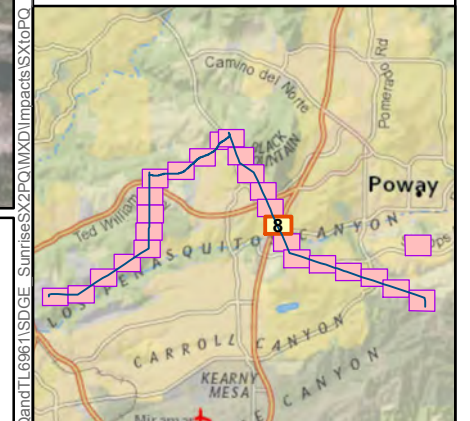


- Biological Survey Area
- Permanent Impact
- Temporary Impact

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


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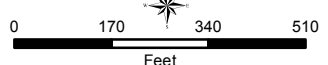
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

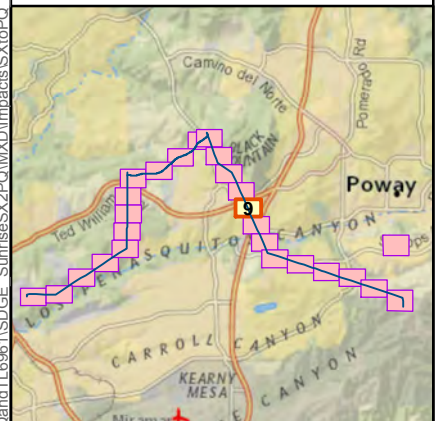
Proposed Project  
Vegetation Community  
Impacts


























**Figure 12**

-  Biological Survey Area
-  Permanent Impact
-  Temporary Impact

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


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 Sources: SDG&E, 2013; TRC and Busby Biological, 2013; Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; National Geographic, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, NOAA




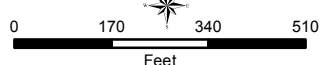
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

Proposed Project  
Vegetation Community  
Impacts

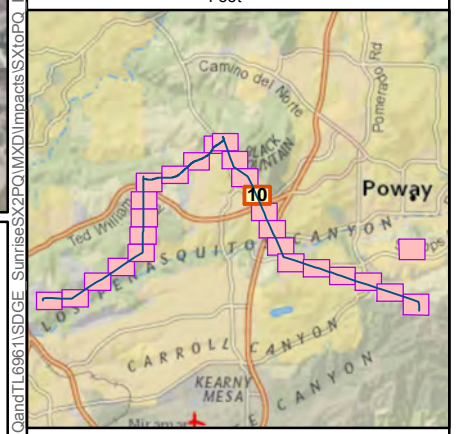
**Figure 12**


























-  Biological Survey Area
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-  Temporary Impact

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 1-Diegan Coastal Sage Scrub	 6-So. Mixed Chaparral - Disturbed	 11-Alkali Marsh - Revegetated	 16-Mulefat Scrub	 21-Native Grassland
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**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**




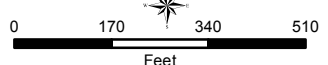
Proposed Project  
Vegetation Community  
Impacts

**Figure 12**

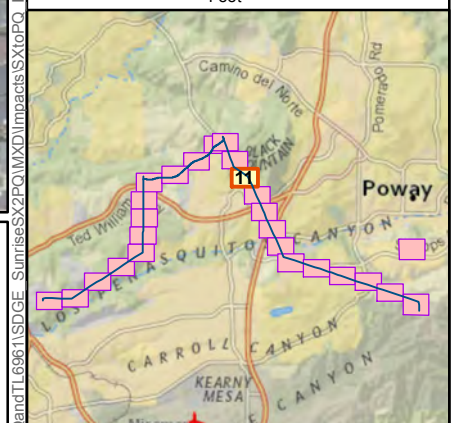


- Biological Survey Area
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


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**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

Proposed Project  
Vegetation Community  
Impacts

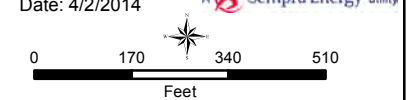
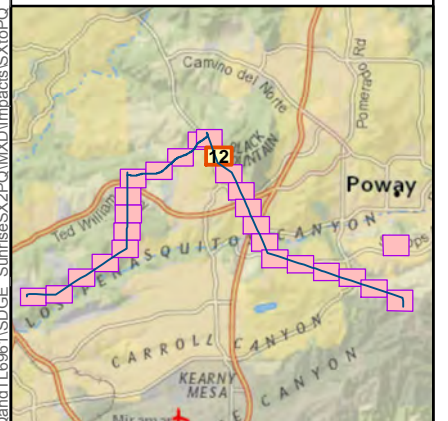
**Figure 12**






















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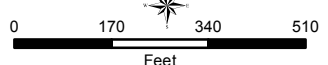
Proposed Project  
Vegetation Community  
Impacts

**Figure 12**

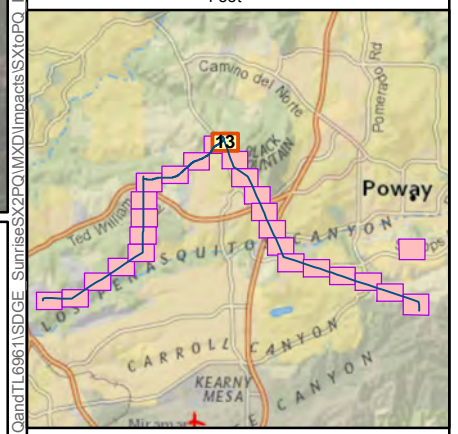


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- Permanent Impact
- Temporary Impact

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


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<span style="display: inline-block; width: 20px; height: 10px; background-color: #3CB371; border: 1px solid black; margin-right: 5px;"></span> 2-Diegan Coastal Sage Scrub - Disturbed	<span style="display: inline-block; width: 20px; height: 10px; background-color: #A0522D; border: 1px solid black; margin-right: 5px;"></span> 7-Scrub Oak Chaparral	<span style="display: inline-block; width: 20px; height: 10px; background-color: #00CED1; border: 1px solid black; margin-right: 5px;"></span> 12-Freshwater Marsh	<span style="display: inline-block; width: 20px; height: 10px; background-color: #8A2BE2; border: 1px solid black; margin-right: 5px;"></span> 17-So. Coast Live Oak Riparian Forest	<span style="display: inline-block; width: 20px; height: 10px; background-color: #FFFF00; border: 1px solid black; margin-right: 5px;"></span> 0-Bare Ground
<span style="display: inline-block; width: 20px; height: 10px; background-color: #9ACD32; border: 1px solid black; margin-right: 5px;"></span> 3-Coastal Sage Scrub - Revegetated	<span style="display: inline-block; width: 20px; height: 10px; background-color: #8B4513; border: 1px solid black; margin-right: 5px;"></span> 8-Chamise Chaparral	<span style="display: inline-block; width: 20px; height: 10px; background-color: #ADD8E6; border: 1px solid black; margin-right: 5px;"></span> 13-SD Mesa Vernal Pool	<span style="display: inline-block; width: 20px; height: 10px; background-color: #800080; border: 1px solid black; margin-right: 5px;"></span> 18-Eucalyptus Woodland	<span style="display: inline-block; width: 20px; height: 10px; background-color: #808080; border: 1px solid black; margin-right: 5px;"></span> 22-Developed Lands
<span style="display: inline-block; width: 20px; height: 10px; background-color: #90EE90; border: 1px solid black; margin-right: 5px;"></span> 4-Coastal Sage - Chaparral Scrub	<span style="display: inline-block; width: 20px; height: 10px; background-color: #D2691E; border: 1px solid black; margin-right: 5px;"></span> 9-Chamise Chaparral - Disturbed	<span style="display: inline-block; width: 20px; height: 10px; background-color: #00CED1; border: 1px solid black; margin-right: 5px;"></span> 14-Southern Willow Scrub	<span style="display: inline-block; width: 20px; height: 10px; background-color: #800080; border: 1px solid black; margin-right: 5px;"></span> 19-Tamarisk Scrub	<span style="display: inline-block; width: 20px; height: 10px; background-color: #FF8C00; border: 1px solid black; margin-right: 5px;"></span> 23-Ornamental
<span style="display: inline-block; width: 20px; height: 10px; background-color: #8B4513; border: 1px solid black; margin-right: 5px;"></span> 5-Southern Mixed Chaparral	<span style="display: inline-block; width: 20px; height: 10px; background-color: #00008B; border: 1px solid black; margin-right: 5px;"></span> 10-Open Water	<span style="display: inline-block; width: 20px; height: 10px; background-color: #9370DB; border: 1px solid black; margin-right: 5px;"></span> 15-Southern Riparian Scrub	<span style="display: inline-block; width: 20px; height: 10px; background-color: #FFA07A; border: 1px solid black; margin-right: 5px;"></span> 20-Nonnative Grassland	<span style="display: inline-block; width: 20px; height: 10px; background-color: #FF6347; border: 1px solid black; margin-right: 5px;"></span> 24-Disturbed Habitat

Sources: SDG&E, 2013; TRC and Busby Biological, 2013; Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; National Geographic, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, NOAA




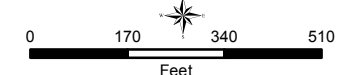
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

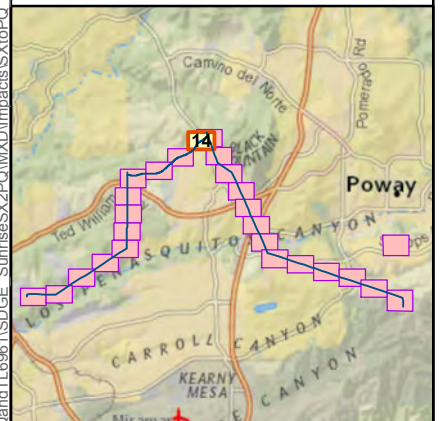
Proposed Project  
Vegetation Community  
Impacts

**Figure 12**

-  Biological Survey Area
-  Permanent Impact
-  Temporary Impact


























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 1-Diegan Coastal Sage Scrub	 6-So. Mixed Chaparral - Disturbed	 11-Alkali Marsh - Revegetated	 16-Mulefat Scrub	 21-Native Grassland
 2-Diegan Coastal Sage Scrub - Disturbed	 7-Scrub Oak Chaparral	 12-Freshwater Marsh	 17-So. Coast Live Oak Riparian Forest	 0-Bare Ground
 3-Coastal Sage Scrub - Revegetated	 8-Chamise Chaparral	 13-SD Mesa Vernal Pool	 18-Eucalyptus Woodland	 22-Developed Lands
 4-Coastal Sage - Chaparral Scrub	 9-Chamise Chaparral - Disturbed	 14-Southern Willow Scrub	 19-Tamarisk Scrub	 23-Ornamental
 5-Southern Mixed Chaparral	 10-Open Water	 15-Southern Riparian Scrub	 20-Nonnative Grassland	 24-Disturbed Habitat

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**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**




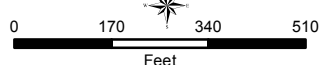
Proposed Project  
Vegetation Community  
Impacts

**Figure 12**

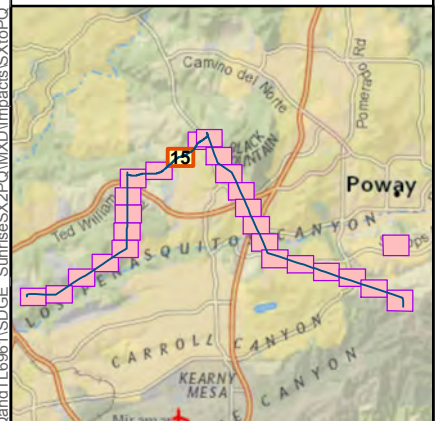


- Biological Survey Area
- Permanent Impact
- Temporary Impact

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<span style="display: inline-block; width: 15px; height: 10px; background-color: #006400; border: 1px solid black; margin-right: 5px;"></span> 1-Diegan Coastal Sage Scrub	<span style="display: inline-block; width: 15px; height: 10px; background-color: #8B4513; border: 1px solid black; margin-right: 5px;"></span> 6-So. Mixed Chaparral - Disturbed	<span style="display: inline-block; width: 15px; height: 10px; background-color: #0000FF; border: 1px solid black; margin-right: 5px;"></span> 11-Alkali Marsh - Revegetated	<span style="display: inline-block; width: 15px; height: 10px; background-color: #DDA0DD; border: 1px solid black; margin-right: 5px;"></span> 16-Mulefat Scrub	<span style="display: inline-block; width: 15px; height: 10px; background-color: #FFD700; border: 1px solid black; margin-right: 5px;"></span> 21-Native Grassland
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<span style="display: inline-block; width: 15px; height: 10px; background-color: #9ACD32; border: 1px solid black; margin-right: 5px;"></span> 3-Coastal Sage Scrub - Revegetated	<span style="display: inline-block; width: 15px; height: 10px; background-color: #8B4513; border: 1px solid black; margin-right: 5px;"></span> 8-Chamise Chaparral	<span style="display: inline-block; width: 15px; height: 10px; background-color: #ADD8E6; border: 1px solid black; margin-right: 5px;"></span> 13-SD Mesa Vernal Pool	<span style="display: inline-block; width: 15px; height: 10px; background-color: #800080; border: 1px solid black; margin-right: 5px;"></span> 18-Eucalyptus Woodland	<span style="display: inline-block; width: 15px; height: 10px; background-color: #808080; border: 1px solid black; margin-right: 5px;"></span> 22-Developed Lands
<span style="display: inline-block; width: 15px; height: 10px; background-color: #90EE90; border: 1px solid black; margin-right: 5px;"></span> 4-Coastal Sage - Chaparral Scrub	<span style="display: inline-block; width: 15px; height: 10px; background-color: #DC143C; border: 1px solid black; margin-right: 5px;"></span> 9-Chamise Chaparral - Disturbed	<span style="display: inline-block; width: 15px; height: 10px; background-color: #87CEEB; border: 1px solid black; margin-right: 5px;"></span> 14-Southern Willow Scrub	<span style="display: inline-block; width: 15px; height: 10px; background-color: #4B0082; border: 1px solid black; margin-right: 5px;"></span> 19-Tamarisk Scrub	<span style="display: inline-block; width: 15px; height: 10px; background-color: #FF8C00; border: 1px solid black; margin-right: 5px;"></span> 23-Ornamental
<span style="display: inline-block; width: 15px; height: 10px; background-color: #8B4513; border: 1px solid black; margin-right: 5px;"></span> 5-Southern Mixed Chaparral	<span style="display: inline-block; width: 15px; height: 10px; background-color: #00008B; border: 1px solid black; margin-right: 5px;"></span> 10-Open Water	<span style="display: inline-block; width: 15px; height: 10px; background-color: #9370DB; border: 1px solid black; margin-right: 5px;"></span> 15-Southern Riparian Scrub	<span style="display: inline-block; width: 15px; height: 10px; background-color: #FFA07A; border: 1px solid black; margin-right: 5px;"></span> 24-Disturbed Habitat	

Sources: SDG&E, 2013; TRC and Busby Biological, 2013; Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; National Geographic, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, NOAA

**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

Proposed Project  
Vegetation Community  
Impacts

**Figure 12**



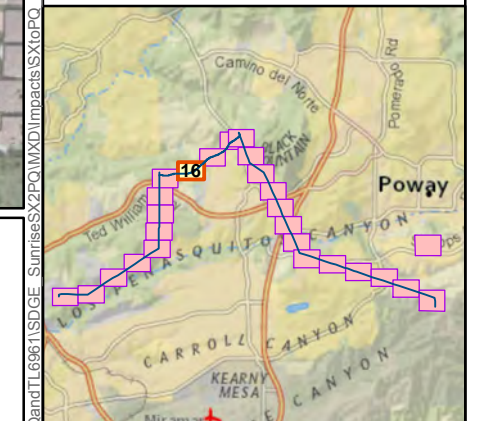
- Biological Survey Area
- Permanent Impact
- Temporary Impact

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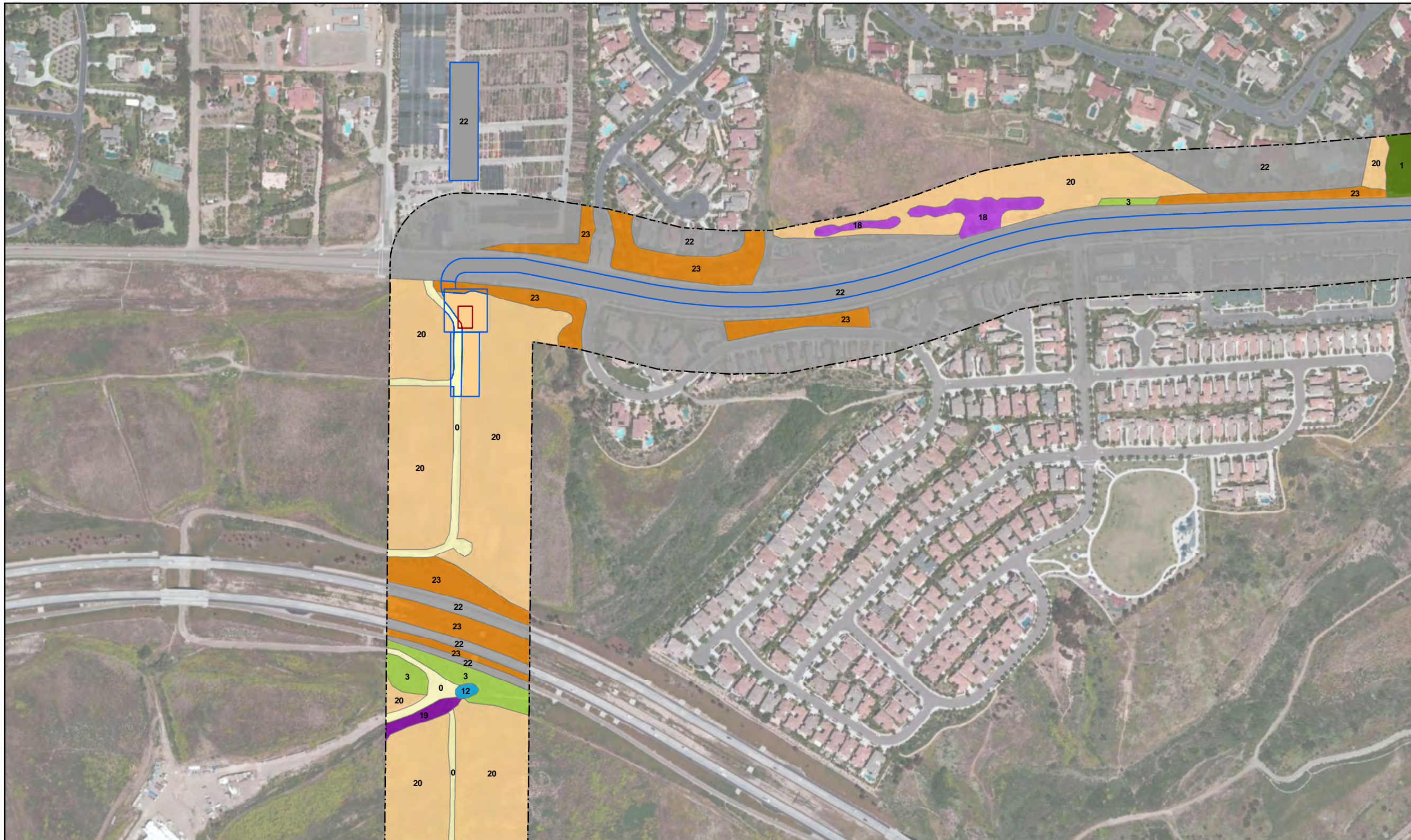
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**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**




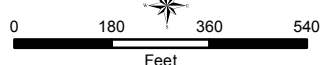
Proposed Project  
Vegetation Community  
Impacts

**Figure 12**

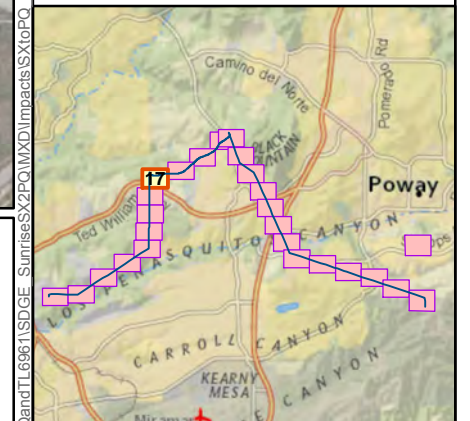



























- Biological Survey Area
- Permanent Impact
- Temporary Impact

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


 1-Diegan Coastal Sage Scrub	 6-So. Mixed Chaparral - Disturbed	 11-Alkali Marsh - Revegetated	 16-Mulefat Scrub	 21-Native Grassland
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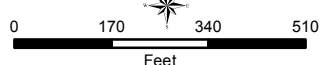
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

Proposed Project  
Vegetation Community  
Impacts

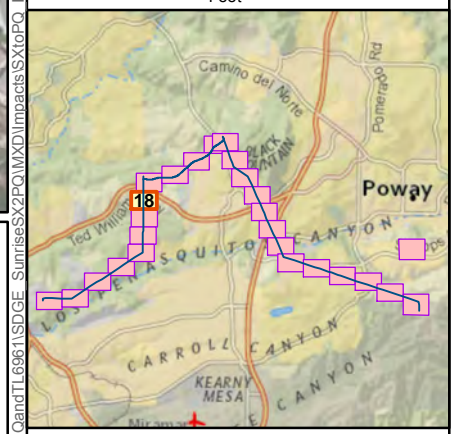
**Figure 12**

-  Biological Survey Area
-  Permanent Impact
-  Temporary Impact

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
















  
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Sources: SDG&E, 2013; TRC and Busby Biological, 2013; Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; National Geographic, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, NOAA






 1-Diegan Coastal Sage Scrub	 6-So. Mixed Chaparral - Disturbed	 11-Alkali Marsh - Revegetated	 16-Mulefat Scrub	 21-Native Grassland
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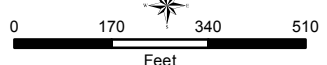
**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

Proposed Project  
Vegetation Community  
Impacts

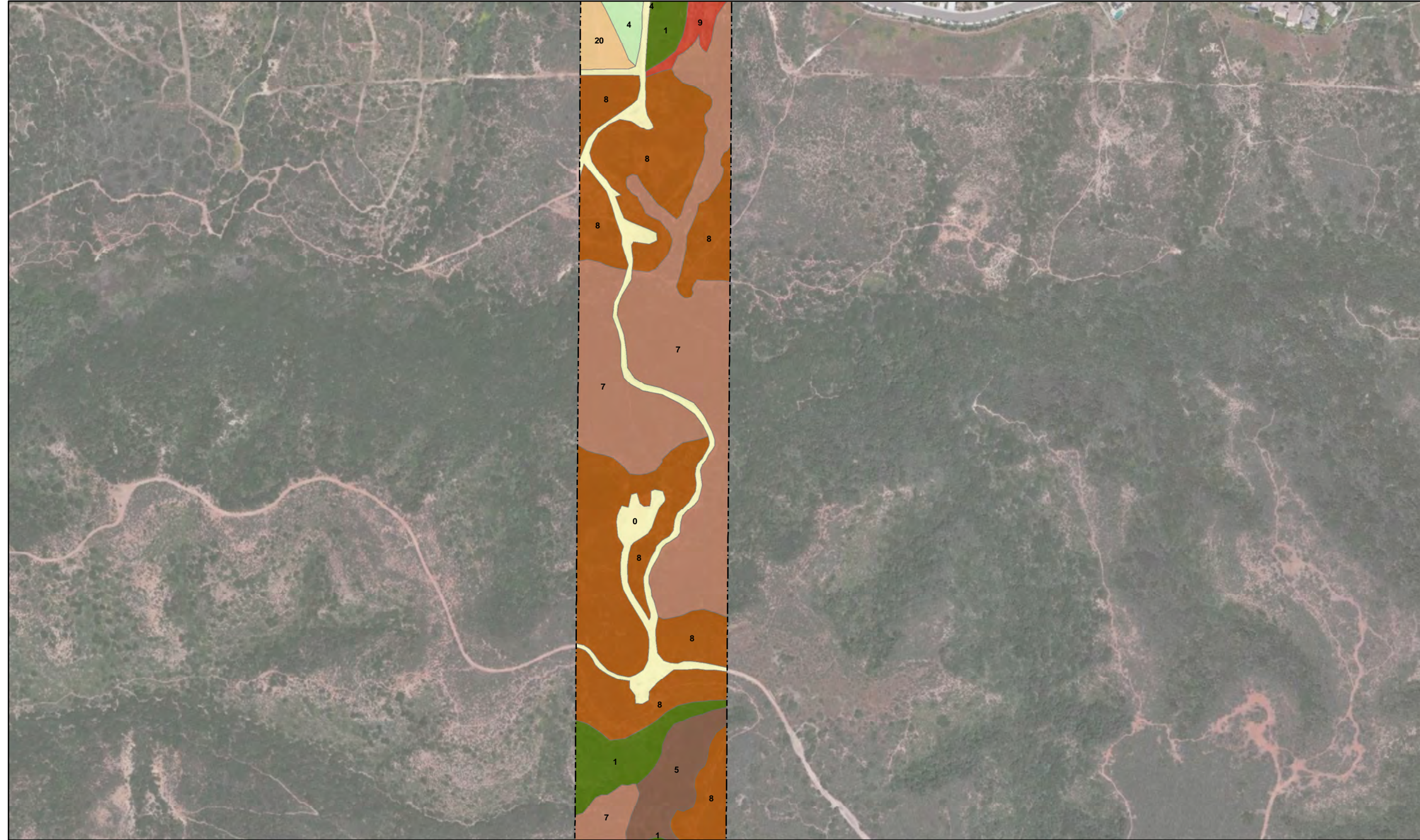
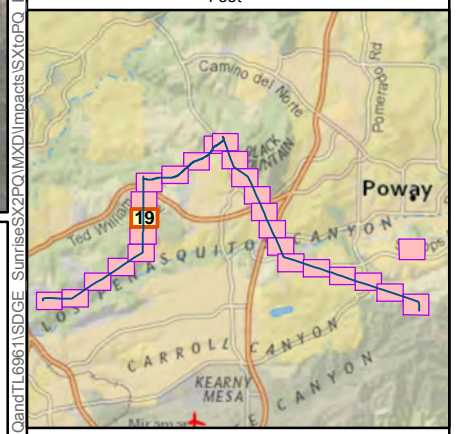
**Figure 12**


























-  Biological Survey Area
-  Permanent Impact
-  Temporary Impact

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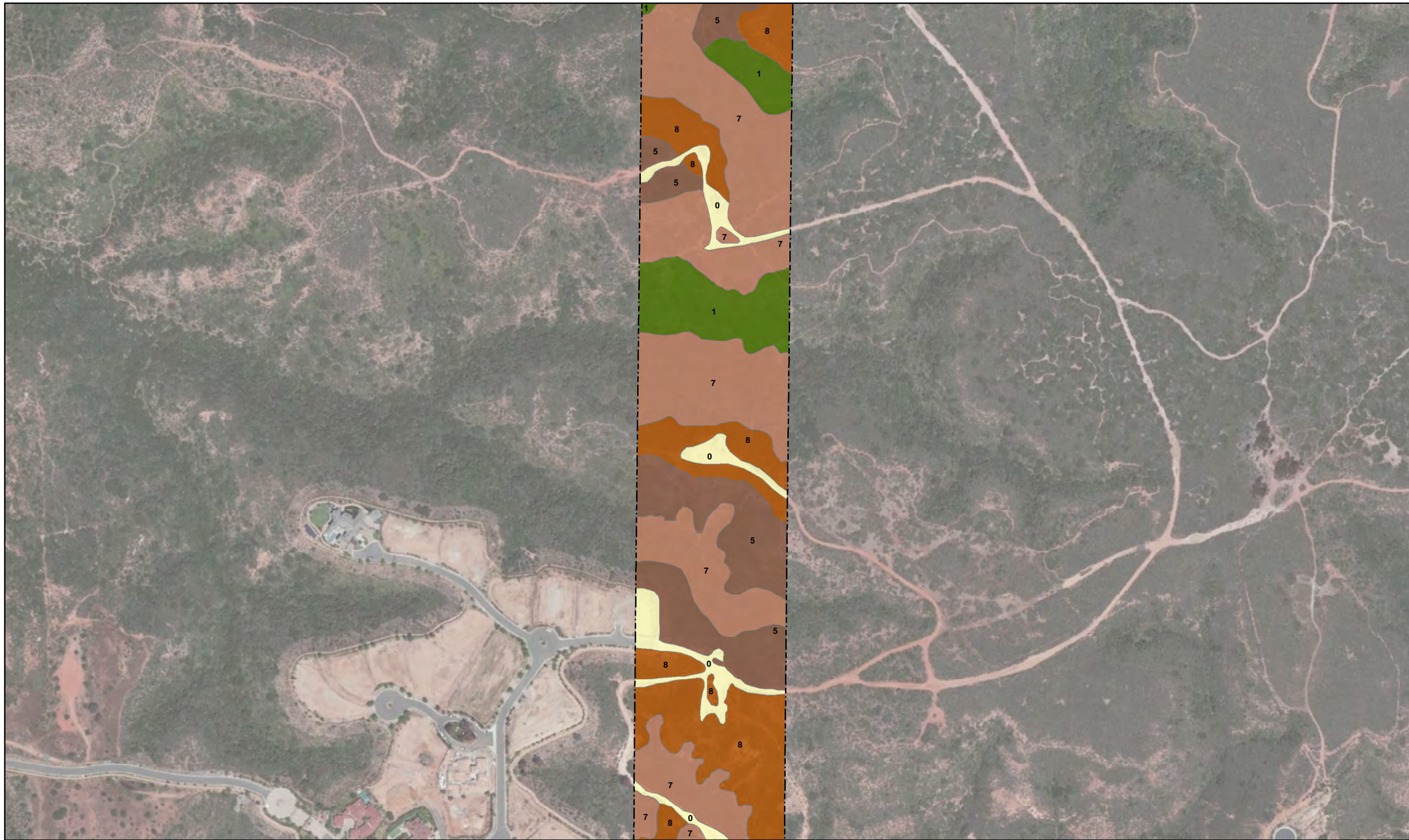
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 2-Diegan Coastal Sage Scrub - Disturbed	 7-Scrub Oak Chaparral	 12-Freshwater Marsh	 17-So. Coast Live Oak Riparian Forest	 0-Bare Ground
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 5-Southern Mixed Chaparral	 10-Open Water	 15-Southern Riparian Scrub	 20-Nonnative Grassland	 24-Disturbed Habitat

Sources: SDG&E, 2013; TRC and Busby Biological, 2013; Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; National Geographic, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, NOAA

**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**





Proposed Project  
Vegetation Community  
Impacts

**Figure 12**

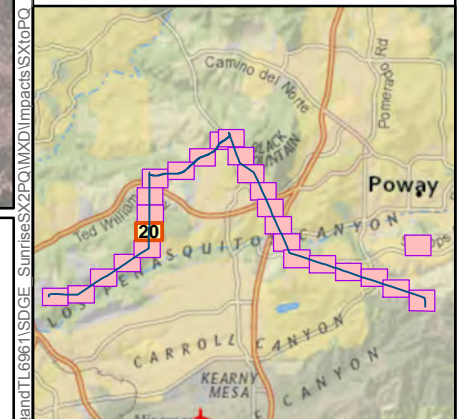



























- Biological Survey Area
- Permanent Impact
- Temporary Impact

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 1-Diegan Coastal Sage Scrub	 6-So. Mixed Chaparral - Disturbed	 11-Alkali Marsh - Revegetated	 16-Mulefat Scrub	 21-Native Grassland
 2-Diegan Coastal Sage Scrub - Disturbed	 7-Scrub Oak Chaparral	 12-Freshwater Marsh	 17-So. Coast Live Oak Riparian Forest	 0-Bare Ground
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 5-Southern Mixed Chaparral	 10-Open Water	 15-Southern Riparian Scrub	 20-Nonnative Grassland	 24-Disturbed Habitat




Sources: SDG&E, 2013; TRC and Busby Biological, 2013; Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; National Geographic, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, NOAA




**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

Proposed Project  
Vegetation Community  
Impacts

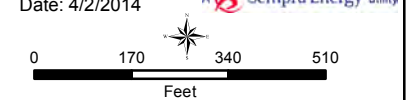
**Figure 12**

-  Biological Survey Area
-  Permanent Impact
-  Temporary Impact

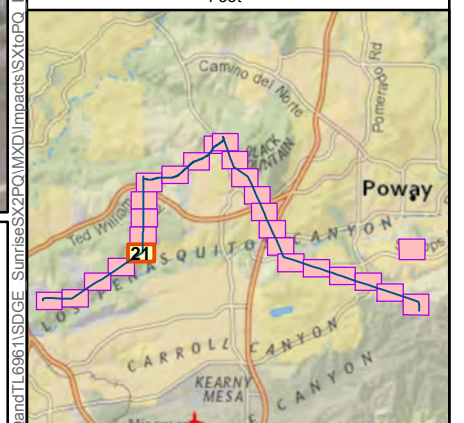
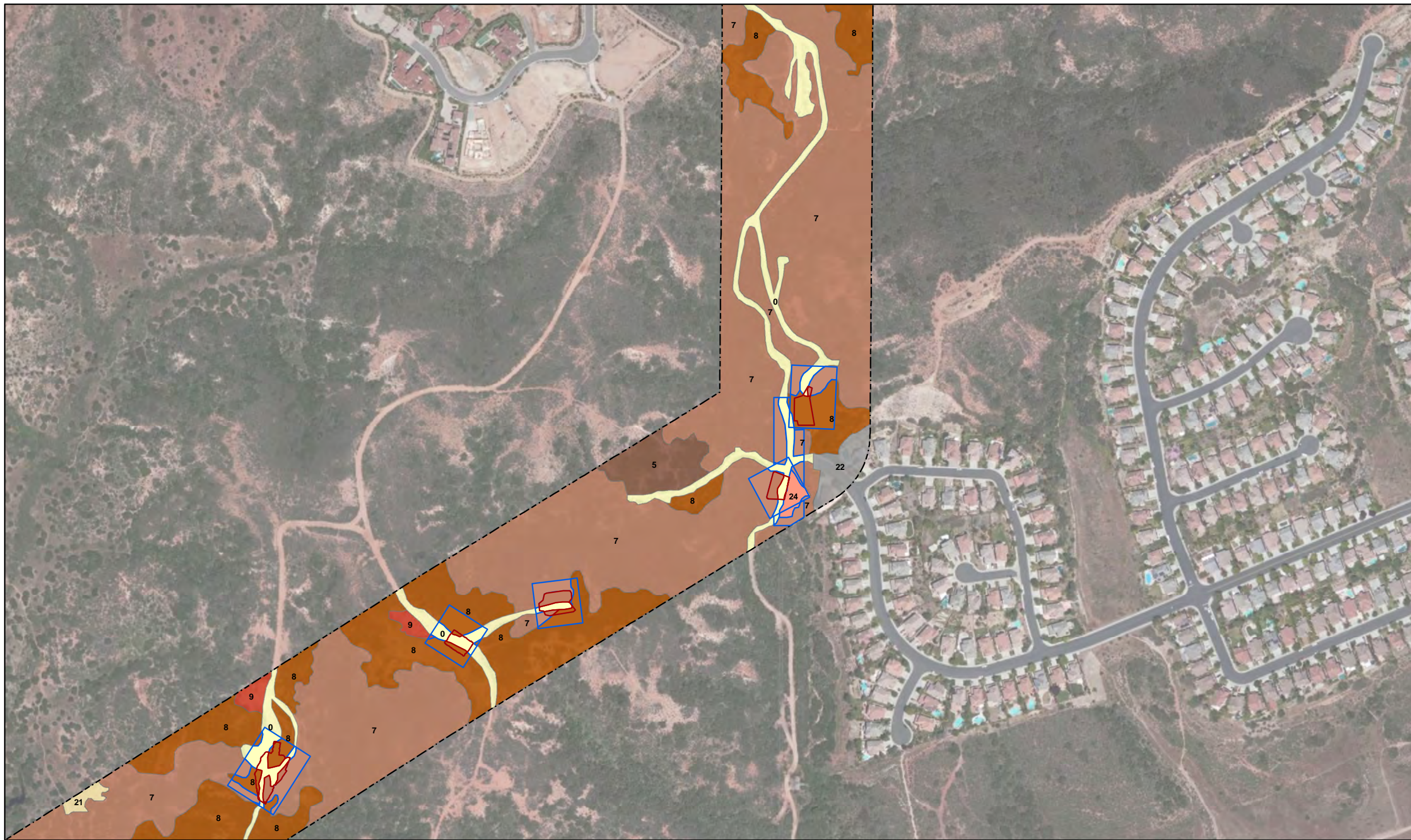
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

















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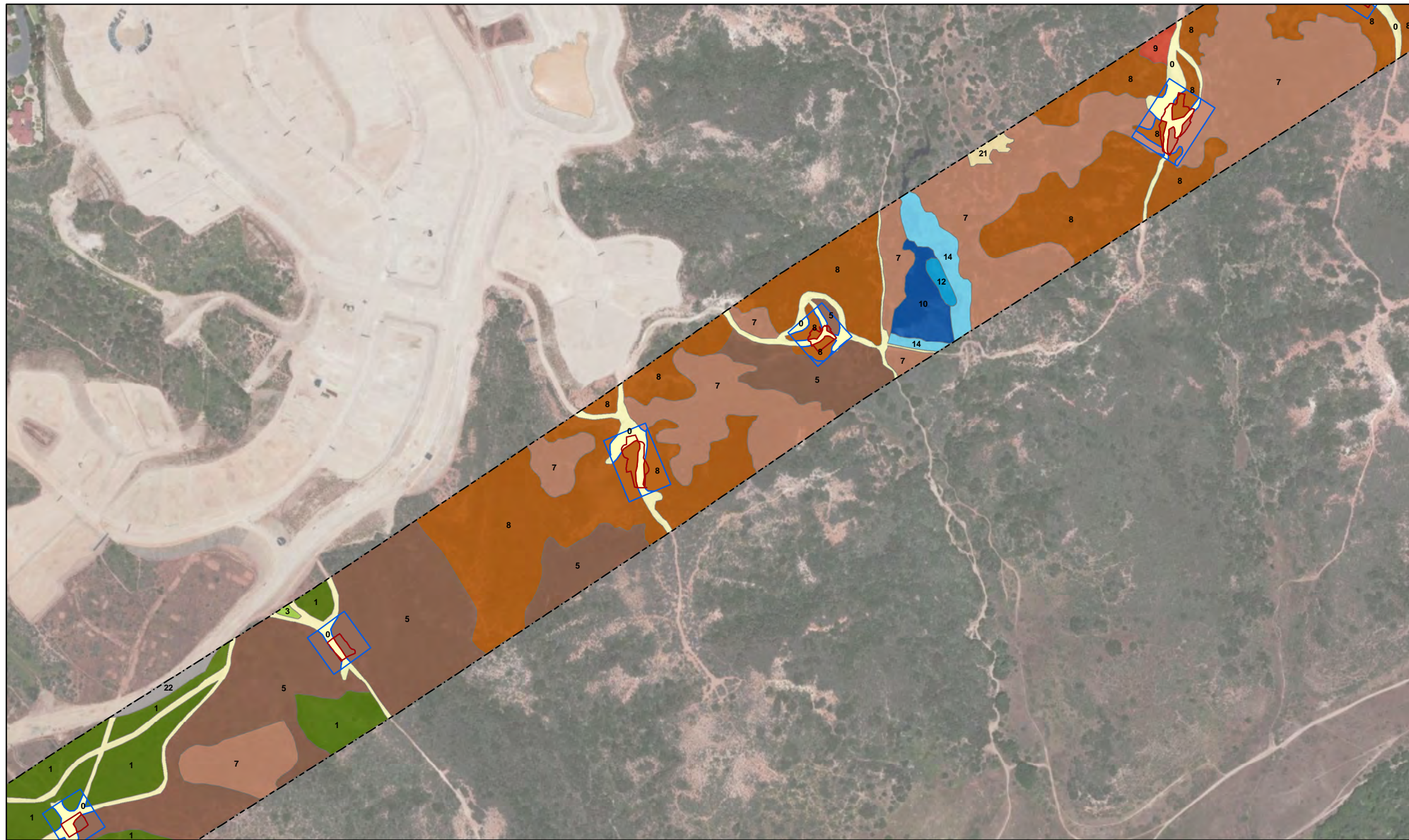
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Sources: SDG&E, 2013; TRC and Busby Biological, 2013; Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; National Geographic, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, NOAA

**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**




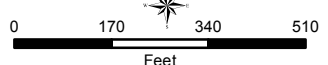
Proposed Project  
Vegetation Community  
Impacts

**Figure 12**

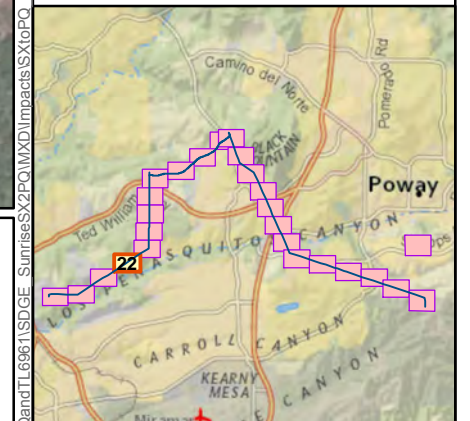



























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 1-Diegan Coastal Sage Scrub	 6-So. Mixed Chaparral - Disturbed	 11-Alkali Marsh - Revegetated	 16-Mulefat Scrub	 21-Native Grassland
 2-Diegan Coastal Sage Scrub - Disturbed	 7-Scrub Oak Chaparral	 12-Freshwater Marsh	 17-So. Coast Live Oak Riparian Forest	 0-Bare Ground
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Sources: SDG&E, 2013; TRC and Busby Biological, 2013; Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; National Geographic, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, NOAA

**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**

Proposed Project  
Vegetation Community  
Impacts

**Figure 12**



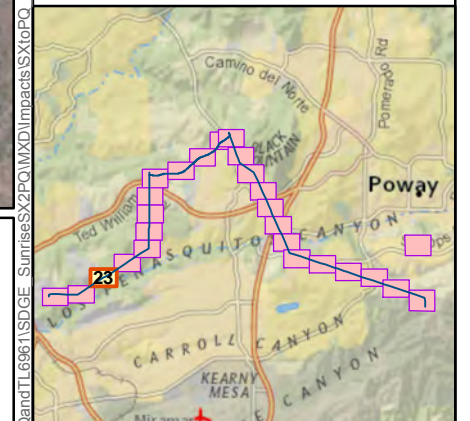
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1-Diegan Coastal Sage Scrub	6-So. Mixed Chaparral - Disturbed	11-Alkali Marsh - Revegetated	16-Mulefat Scrub	21-Native Grassland
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**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**




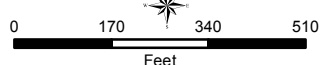
Proposed Project  
Vegetation Community  
Impacts

**Figure 12**

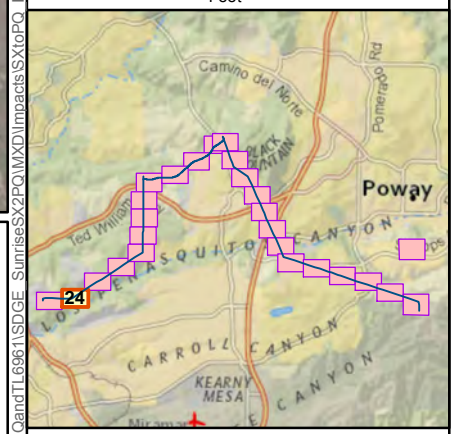


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<span style="display: inline-block; width: 15px; height: 10px; background-color: #90EE90; border: 1px solid black; margin-right: 5px;"></span> 3-Coastal Sage Scrub - Revegetated	<span style="display: inline-block; width: 15px; height: 10px; background-color: #8B0000; border: 1px solid black; margin-right: 5px;"></span> 8-Chamise Chaparral	<span style="display: inline-block; width: 15px; height: 10px; background-color: #ADD8E6; border: 1px solid black; margin-right: 5px;"></span> 13-SD Mesa Vernal Pool	<span style="display: inline-block; width: 15px; height: 10px; background-color: #800080; border: 1px solid black; margin-right: 5px;"></span> 18-Eucalyptus Woodland	<span style="display: inline-block; width: 15px; height: 10px; background-color: #808080; border: 1px solid black; margin-right: 5px;"></span> 22-Developed Lands
<span style="display: inline-block; width: 15px; height: 10px; background-color: #90EE90; border: 1px solid black; margin-right: 5px;"></span> 4-Coastal Sage - Chaparral Scrub	<span style="display: inline-block; width: 15px; height: 10px; background-color: #FF0000; border: 1px solid black; margin-right: 5px;"></span> 9-Chamise Chaparral - Disturbed	<span style="display: inline-block; width: 15px; height: 10px; background-color: #00FFFF; border: 1px solid black; margin-right: 5px;"></span> 14-Southern Willow Scrub	<span style="display: inline-block; width: 15px; height: 10px; background-color: #800000; border: 1px solid black; margin-right: 5px;"></span> 19-Tamarisk Scrub	<span style="display: inline-block; width: 15px; height: 10px; background-color: #FF8C00; border: 1px solid black; margin-right: 5px;"></span> 23-Ornamental
<span style="display: inline-block; width: 15px; height: 10px; background-color: #8B4513; border: 1px solid black; margin-right: 5px;"></span> 5-Southern Mixed Chaparral	<span style="display: inline-block; width: 15px; height: 10px; background-color: #00008B; border: 1px solid black; margin-right: 5px;"></span> 10-Open Water	<span style="display: inline-block; width: 15px; height: 10px; background-color: #9370DB; border: 1px solid black; margin-right: 5px;"></span> 15-Southern Riparian Scrub	<span style="display: inline-block; width: 15px; height: 10px; background-color: #FFA500; border: 1px solid black; margin-right: 5px;"></span> 20-Nonnative Grassland	<span style="display: inline-block; width: 15px; height: 10px; background-color: #FF6347; border: 1px solid black; margin-right: 5px;"></span> 24-Disturbed Habitat

Sources: SDG&E, 2013; TRC and Busby Biological, 2013; Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; National Geographic, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, NOAA

**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**




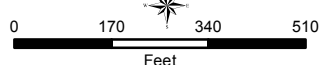
Proposed Project  
Vegetation Community  
Impacts

**Figure 12**

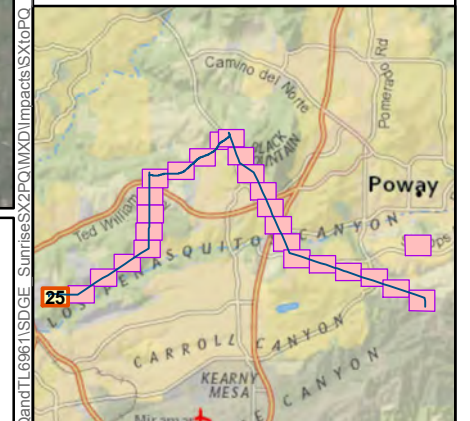



























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 1-Diegan Coastal Sage Scrub	 6-So. Mixed Chaparral - Disturbed	 11-Alkali Marsh - Revegetated	 16-Mulefat Scrub	 21-Native Grassland
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Sources: SDG&E, 2013; TRC and Busby Biological, 2013; Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; National Geographic, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, NOAA

**Sycamore to Peñasquitos  
230 kV Transmission  
Line Project**





Proposed Project  
Vegetation Community  
Impacts

**Figure 12**

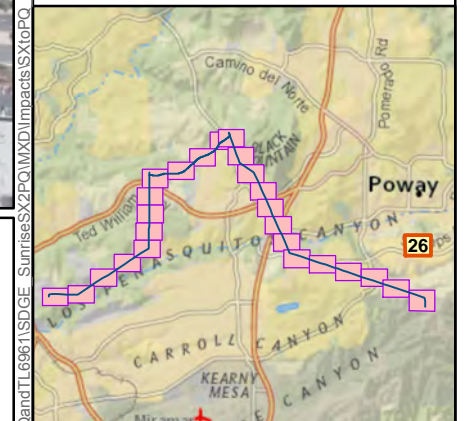


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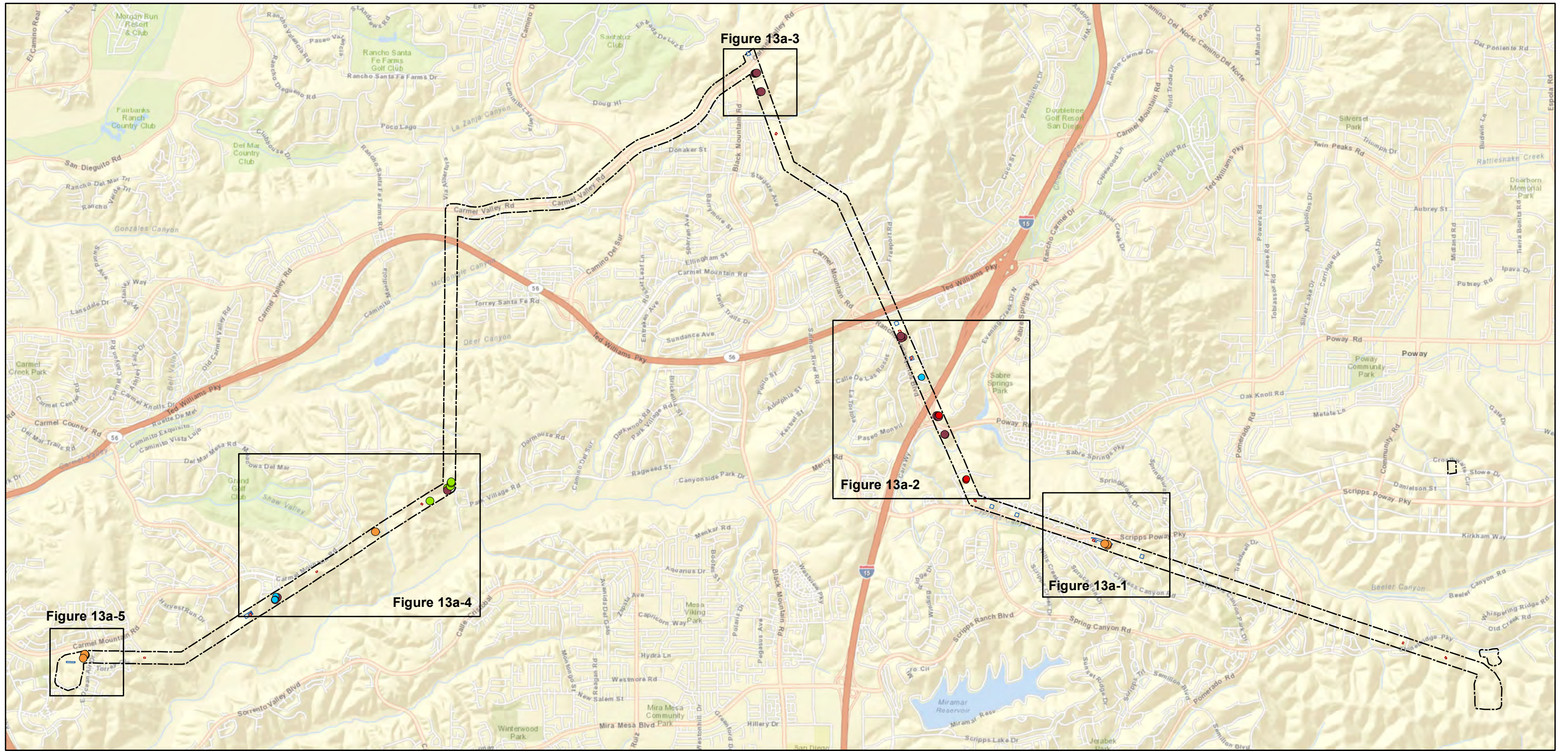

  
 Date: 4/2/2014   


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<span style="display: inline-block; width: 15px; height: 15px; background-color: #006400; border: 1px solid black;"></span> 1-Diegan Coastal Sage Scrub	<span style="display: inline-block; width: 15px; height: 15px; background-color: #8B4513; border: 1px solid black;"></span> 6-So. Mixed Chaparral - Disturbed	<span style="display: inline-block; width: 15px; height: 15px; background-color: #0000FF; border: 1px solid black;"></span> 11-Alkali Marsh - Revegetated	<span style="display: inline-block; width: 15px; height: 15px; background-color: #DDA0DD; border: 1px solid black;"></span> 16-Mulefat Scrub	<span style="display: inline-block; width: 15px; height: 15px; background-color: #FFD700; border: 1px solid black;"></span> 21-Native Grassland
<span style="display: inline-block; width: 15px; height: 15px; background-color: #3CB371; border: 1px solid black;"></span> 2-Diegan Coastal Sage Scrub - Disturbed	<span style="display: inline-block; width: 15px; height: 15px; background-color: #A0522D; border: 1px solid black;"></span> 7-Scrub Oak Chaparral	<span style="display: inline-block; width: 15px; height: 15px; background-color: #00CED1; border: 1px solid black;"></span> 12-Freshwater Marsh	<span style="display: inline-block; width: 15px; height: 15px; background-color: #9932CC; border: 1px solid black;"></span> 17-So. Coast Live Oak Riparian Forest	<span style="display: inline-block; width: 15px; height: 15px; background-color: #FFFF00; border: 1px solid black;"></span> 0-Bare Ground
<span style="display: inline-block; width: 15px; height: 15px; background-color: #9ACD32; border: 1px solid black;"></span> 3-Coastal Sage Scrub - Revegetated	<span style="display: inline-block; width: 15px; height: 15px; background-color: #8B4513; border: 1px solid black;"></span> 8-Chamise Chaparral	<span style="display: inline-block; width: 15px; height: 15px; background-color: #ADD8E6; border: 1px solid black;"></span> 13-SD Mesa Vernal Pool	<span style="display: inline-block; width: 15px; height: 15px; background-color: #800080; border: 1px solid black;"></span> 18-Eucalyptus Woodland	<span style="display: inline-block; width: 15px; height: 15px; background-color: #808080; border: 1px solid black;"></span> 22-Developed Lands
<span style="display: inline-block; width: 15px; height: 15px; background-color: #90EE90; border: 1px solid black;"></span> 4-Coastal Sage - Chaparral Scrub	<span style="display: inline-block; width: 15px; height: 15px; background-color: #D2691E; border: 1px solid black;"></span> 9-Chamise Chaparral - Disturbed	<span style="display: inline-block; width: 15px; height: 15px; background-color: #00CED1; border: 1px solid black;"></span> 14-Southern Willow Scrub	<span style="display: inline-block; width: 15px; height: 15px; background-color: #800080; border: 1px solid black;"></span> 19-Tamarisk Scrub	<span style="display: inline-block; width: 15px; height: 15px; background-color: #FF8C00; border: 1px solid black;"></span> 23-Ornamental
<span style="display: inline-block; width: 15px; height: 15px; background-color: #8B4513; border: 1px solid black;"></span> 5-Southern Mixed Chaparral	<span style="display: inline-block; width: 15px; height: 15px; background-color: #00008B; border: 1px solid black;"></span> 10-Open Water	<span style="display: inline-block; width: 15px; height: 15px; background-color: #8A2BE2; border: 1px solid black;"></span> 15-Southern Riparian Scrub	<span style="display: inline-block; width: 15px; height: 15px; background-color: #FFA500; border: 1px solid black;"></span> 20-Nonnative Grassland	<span style="display: inline-block; width: 15px; height: 15px; background-color: #FF4500; border: 1px solid black;"></span> 24-Disturbed Habitat

Sources: SDG&E, 2013; TRC and Busby Biological, 2013; Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; National Geographic, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, NOAA



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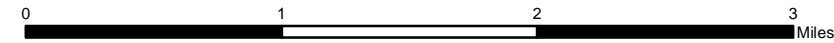
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- *Quercus dumosa* Nuttall's Scrub Oak 1B.1
- *Adolphia californica* Spineshrub 2B.1
- *Ferocactus viridescens* var. *viridescens* Coast Barrel Cactus 2B.1
- *Comarostaphylis diversifolia* ssp. *diversifolia* Summer-Holly 1B.2

- ▭ Permanent Impact Area
- ▭ Temporary Impact Area
- ▭ Biological Survey Area

**Sycamore to Peñasquitos 230 kV Transmission Line Project**

Proposed Project  
Special-Status Plant Impacts

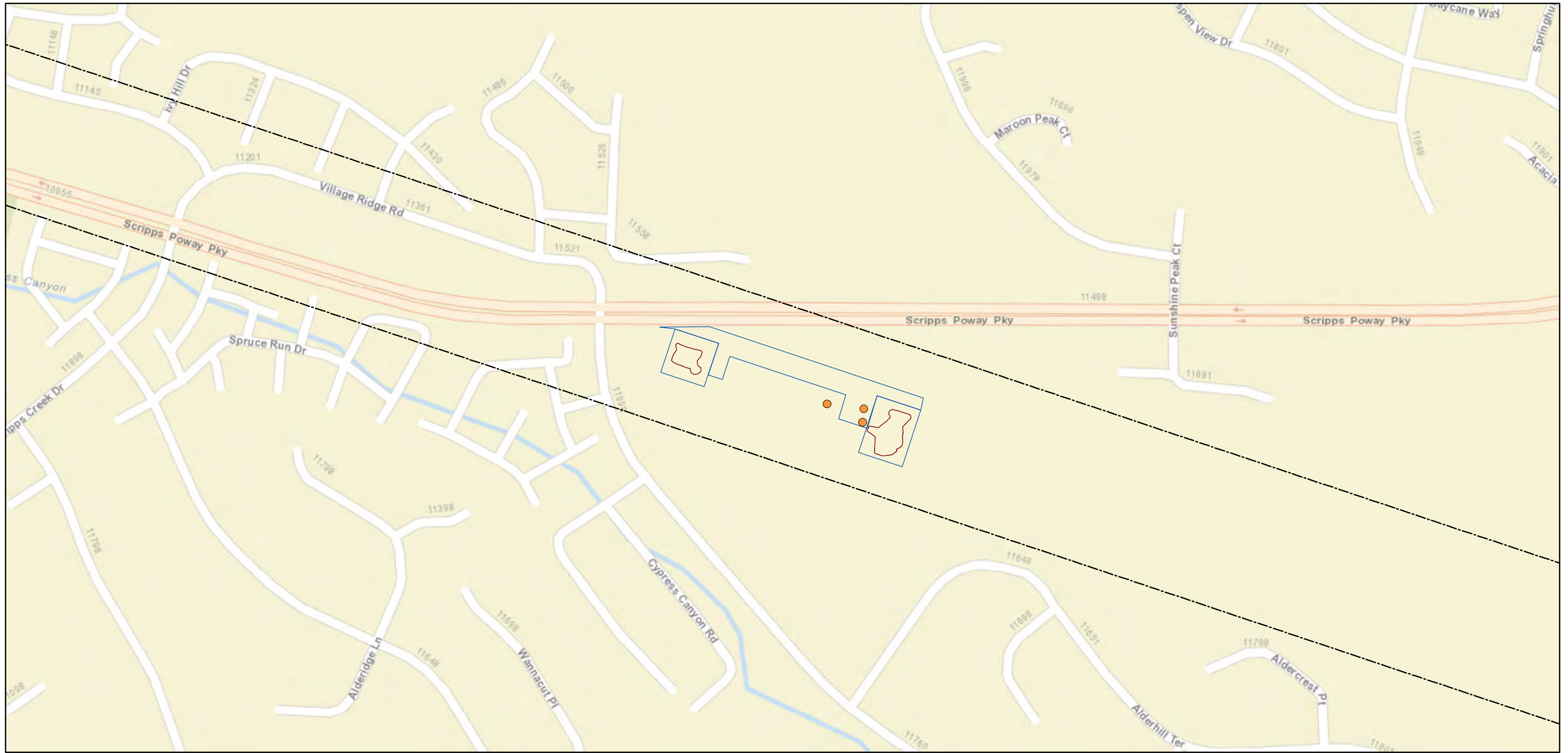
**Figure 13**



3/18/2014



Sources: Busby biological 2013;SDG&E,2013;Esri,DigitalGlobe, GeoEye, i-cubed, USDA, USGS, EX,Getmapping,Aerogrid, IGN, IGP, swisstopo, and the GIS User Community;



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**Sycamore to Peñasquitos 230 kV Transmission Line Project**

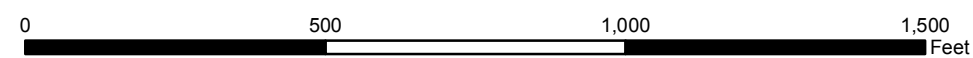
Proposed Project  
Special-Status Plant Impacts

**Figure 13a-1**

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- *Holocarpha virgata* ssp. *elongata* Graceful Tarplant 4.2
- *Quercus dumosa* Nuttall's Scrub Oak 1B.1
- *Adolphia californica* Spineshrub 2B.1
- *Ferocactus viridescens* var. *viridescens* Coast Barrel Cactus 2B.1
- *Comarostaphylis diversifolia* ssp. *diversifolia* Summer-Holly 1B.2

- ▭ Permanent Impact Area
- ▭ Temporary Impact Area
- ▭ Biological Survey Area

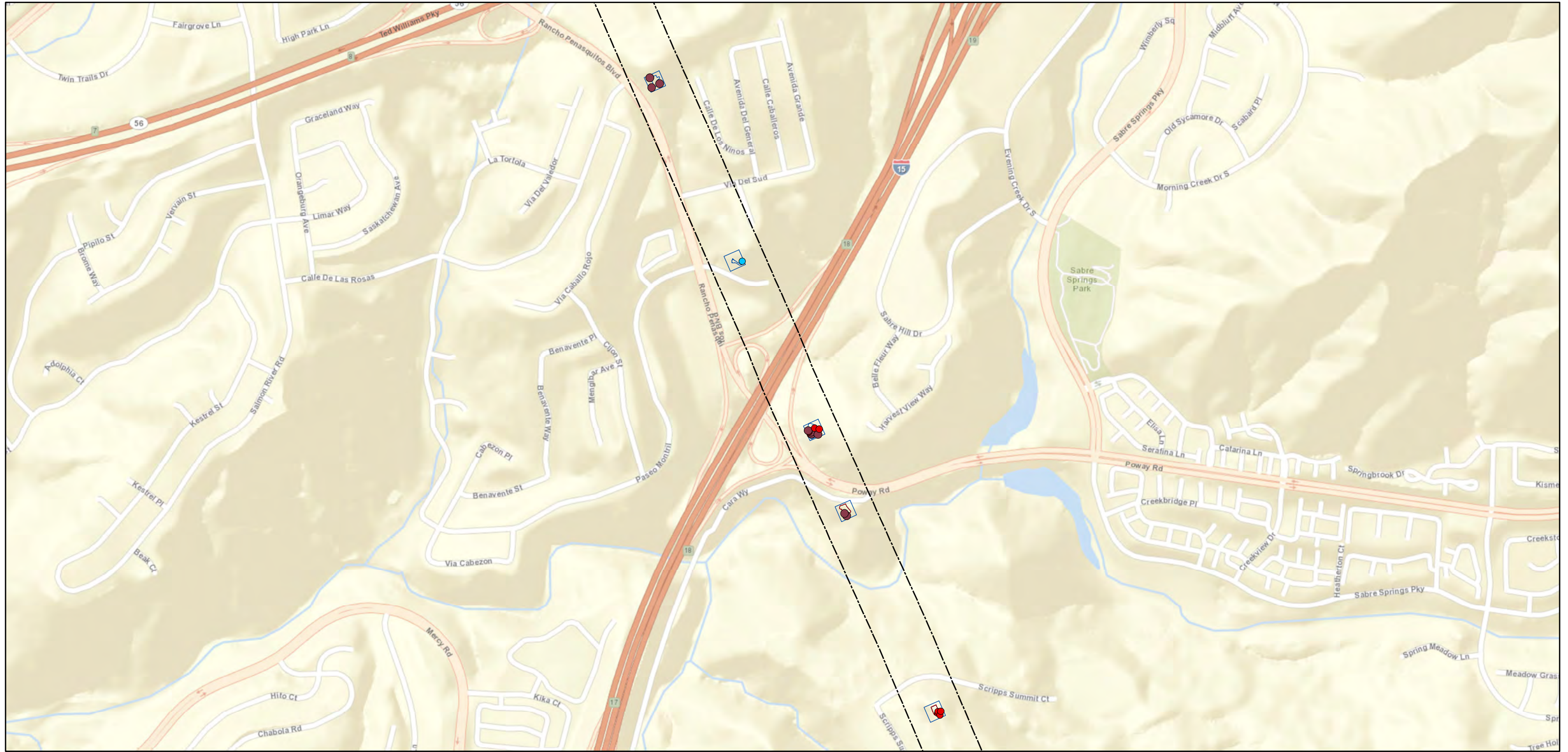


Date: 3/18/2014



Sources: Busby Biological 2013;SDG&E,2013;Esri,DigitalGlobe, GeoEye, i-cubed, USDA, USGS, EX,Getmapping,Aerogrid, IGN, IGP, swisstopo, and the GIS User Community;





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**Sycamore to Peñasquitos 230 kV Transmission Line Project**

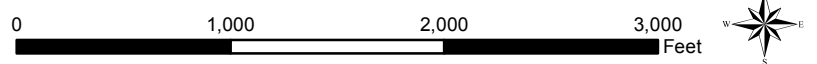
Proposed Project  
Special-Status Plant Impacts

**Figure 13a-2**

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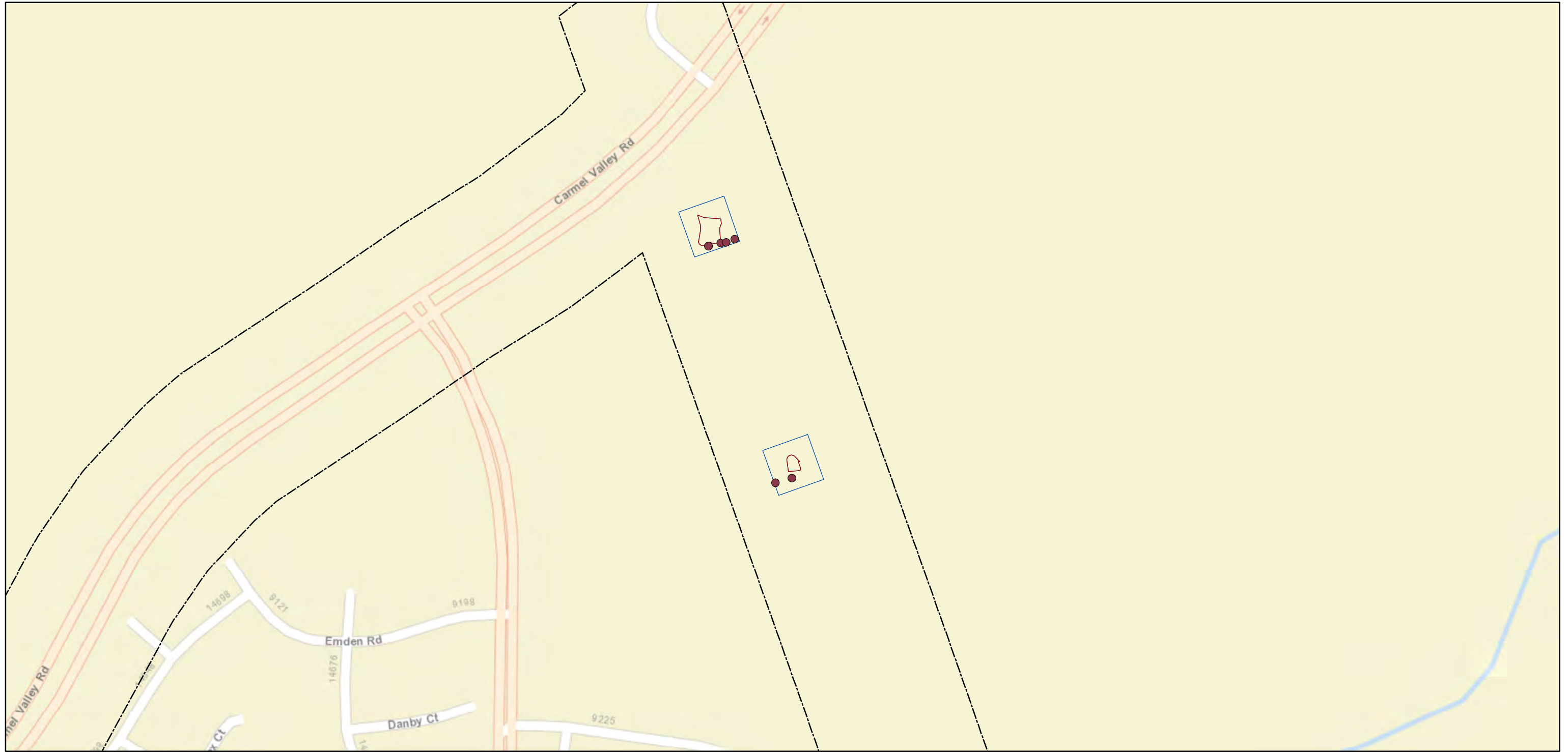
- *Pinus torreyana* Torrey Pine 1B.2
- *Holocarpha virgata* ssp. *elongata* Graceful Tarplant 4.2
- *Quercus dumosa* Nuttall's Scrub Oak 1B.1
- *Adolphia californica* Spineshrub 2B.1
- *Ferocactus viridescens* var. *viridescens* Coast Barrel Cactus 2B.1
- *Comarostaphylis diversifolia* ssp. *diversifolia* Summer-Holly 1B.2

- ▭ Permanent Impact Area
- ▭ Temporary Impact Area
- ▭ Biological Survey Area




  
 Date: 3/18/2014

Sources: Busby Biological 2013;SDG&E,2013;Esri,DigitalGlobe, GeoEye, I-cubed, USDA, USGS, EX,Getmapping,Aerogrid, IGN, IGP, swisstopo, and the GIS User Community;



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**Sycamore to Peñasquitos 230 kV Transmission Line Project**

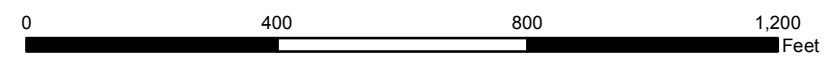
Proposed Project  
Special-Status Plant Impacts

**Figure 13a-3**

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- *Quercus dumosa* Nuttall's Scrub Oak 1B.1
- *Adolphia californica* Spineshrub 2B.1
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- *Comarostaphylis diversifolia* ssp. *diversifolia* Summer-Holly 1B.2

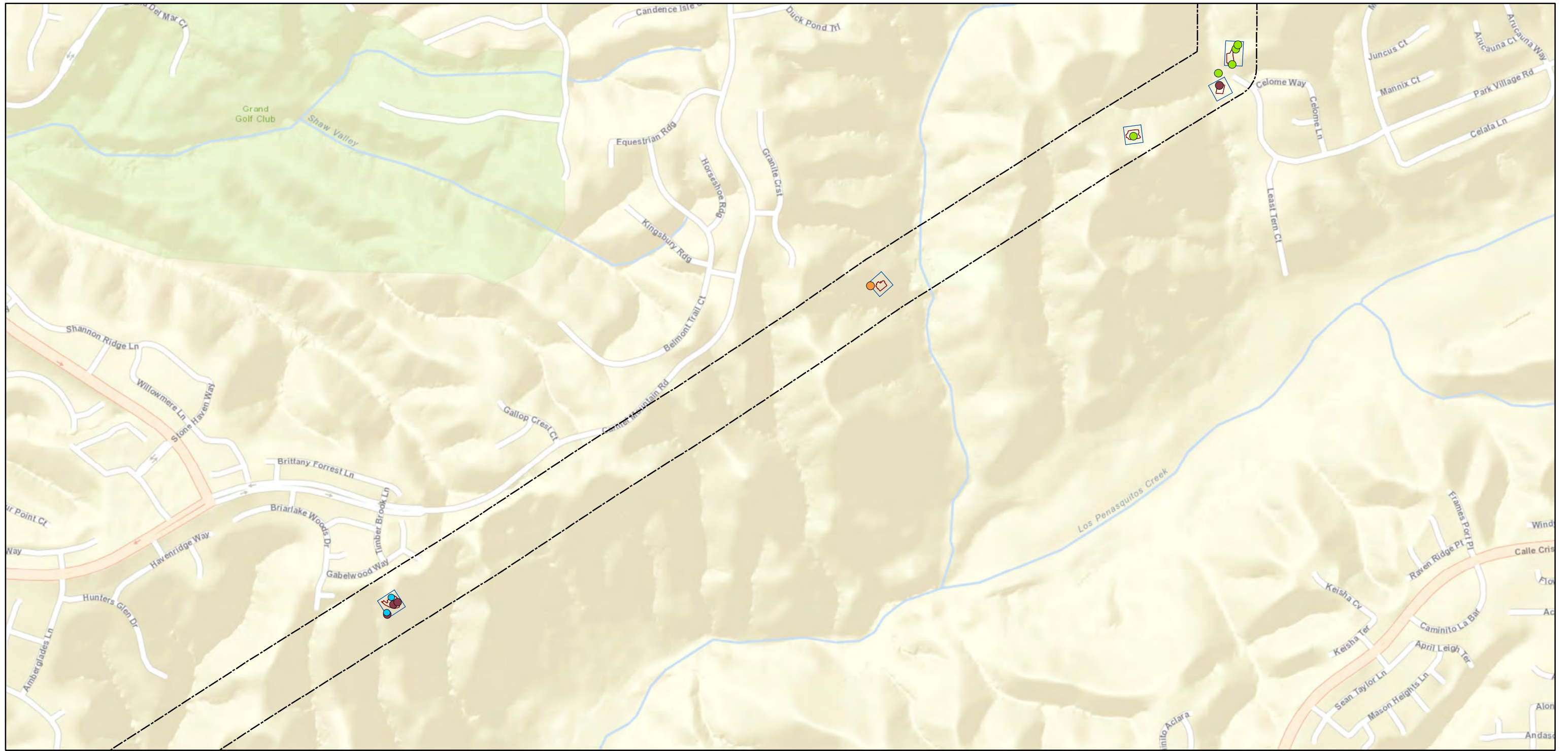
- Permanent Impact Area
- Temporary Impact Area
- Biological Survey Area



Date: 3/18/2014



Sources: Busby Biological 2013;SDG&E,2013;Esri,DigitalGlobe, GeoEye, i-cubed, USDA, USGS, EX,Getmapping,Aerogrid, IGN, IGP, swisstopo, and the GIS User Community;



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**Sycamore to Peñasquitos 230 kV Transmission Line Project**

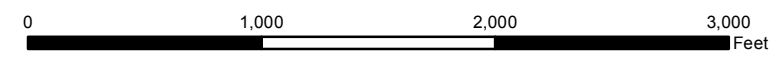
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Special-Status Plant Impacts

**Figure 13a-4**

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- *Holocarpha virgata ssp. elongata* Graceful Tarplant 4.2
- *Quercus dumosa* Nuttall's Scrub Oak 1B.1
- *Adolphia californica* Spineshrub 2B.1
- *Ferocactus viridescens var. viridescens* Coast Barrel Cactus 2B.1
- *Comarostaphylis diversifolia ssp. diversifolia* Summer-Holly 1B.2

- Permanent Impact Area
- Temporary Impact Area
- Biological Survey Area



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Sources: Busby Biological 2013;SDG&E,2013;Esri,DigitalGlobe, GeoEye, i-cubed, USDA, USGS, EX,Getmapping,Aerogrid, IGN, IGP, swisstopo, and the GIS User Community;



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**Sycamore to Peñasquitos 230 kV Transmission Line Project**

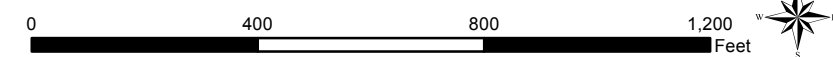
Proposed Project  
Special-Status Plant Impacts

**Figure 13a-5**

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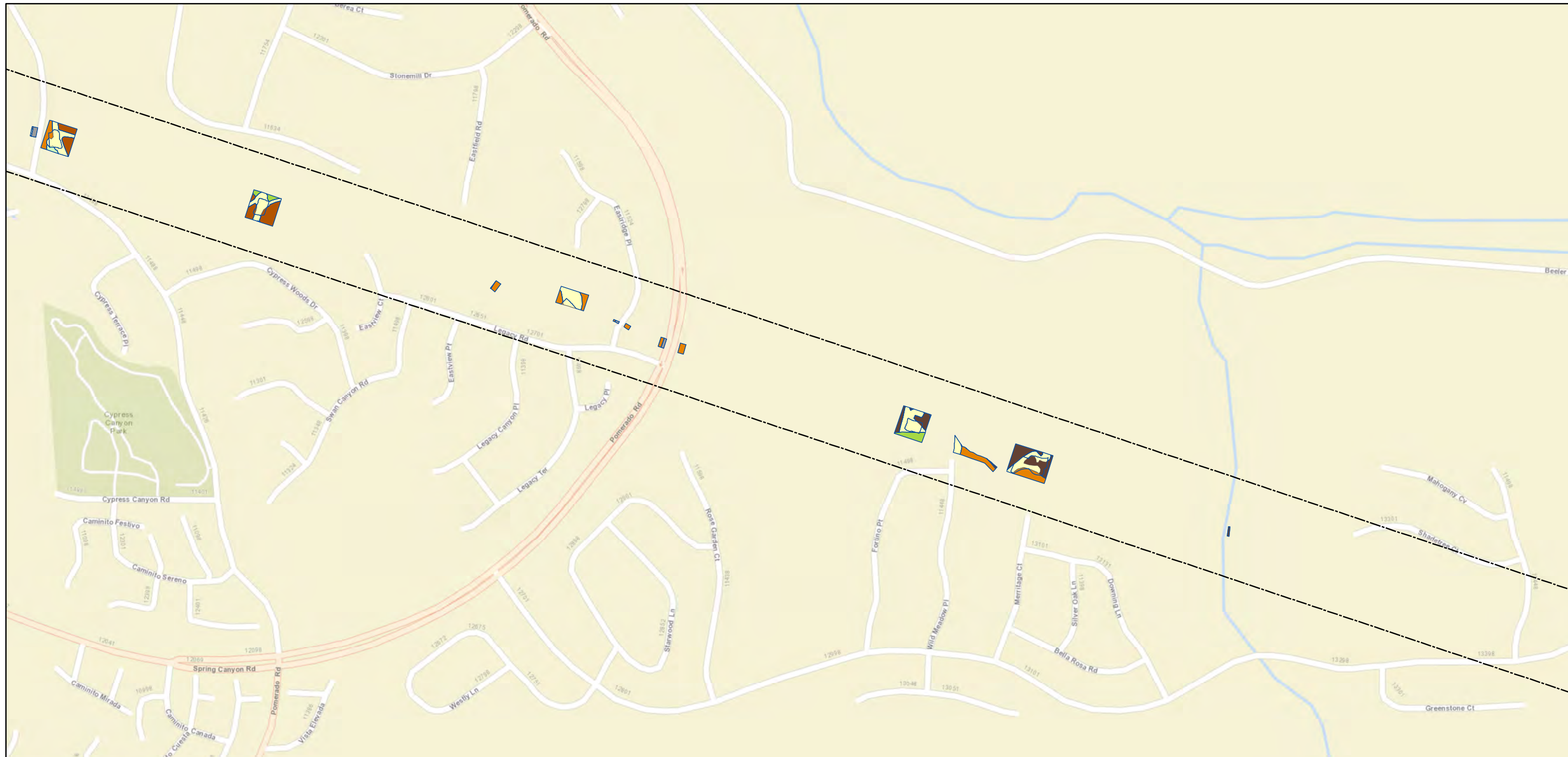
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- *Quercus dumosa* Nuttall's Scrub Oak 1B.1
- *Adolphia californica* Spineshrub 2B.1
- *Ferocactus viridescens var. viridescens* Coast Barrel Cactus 2B.1
- *Comarostaphylis diversifolia ssp. diversifolia* Summer-Holly 1B.2

- ▭ Permanent Impact Area
- ▭ Temporary Impact Area
- ▭ Biological Survey Area

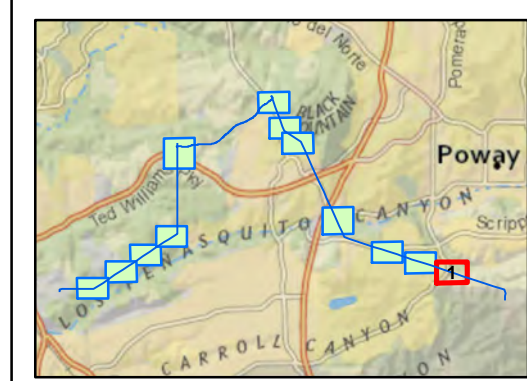


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Sycamore to Peñasquitos 230 kV Transmission Line Project							Proposed Project	
							Preserve/ESHA Impacts	
1-Diegan Coastal Sage Scrub	6-So. Mixed Chaparral - Disturbed	17-So. Coast Live Oak Riparian Forest	23-Ornamental	24-Disturbed Habitat	California Coastal Zone	Biological Survey Area	Figure 14	Page 1 of 12
2-Diegan Coastal Sage Scrub - Disturbed	7-Scrub Oak Chaparral	20-Nonnative Grassland	24-Disturbed Habitat	California Coastal Zone	Biological Survey Area			
3-Coastal Sage Scrub - Revegetated	8-Chamise Chaparral	21-Native Grassland	Permanent Impacts	California Coastal Zone	Biological Survey Area			
4-Coastal Sage - Chaparral Scrub	9-Chamise Chaparral - Disturbed	0-Bare Ground	Temporary Impacts	California Coastal Zone	Biological Survey Area			
5-Southern Mixed Chaparral	14-Southern Willow Scrub	22-Developed Lands		California Coastal Zone	Biological Survey Area			

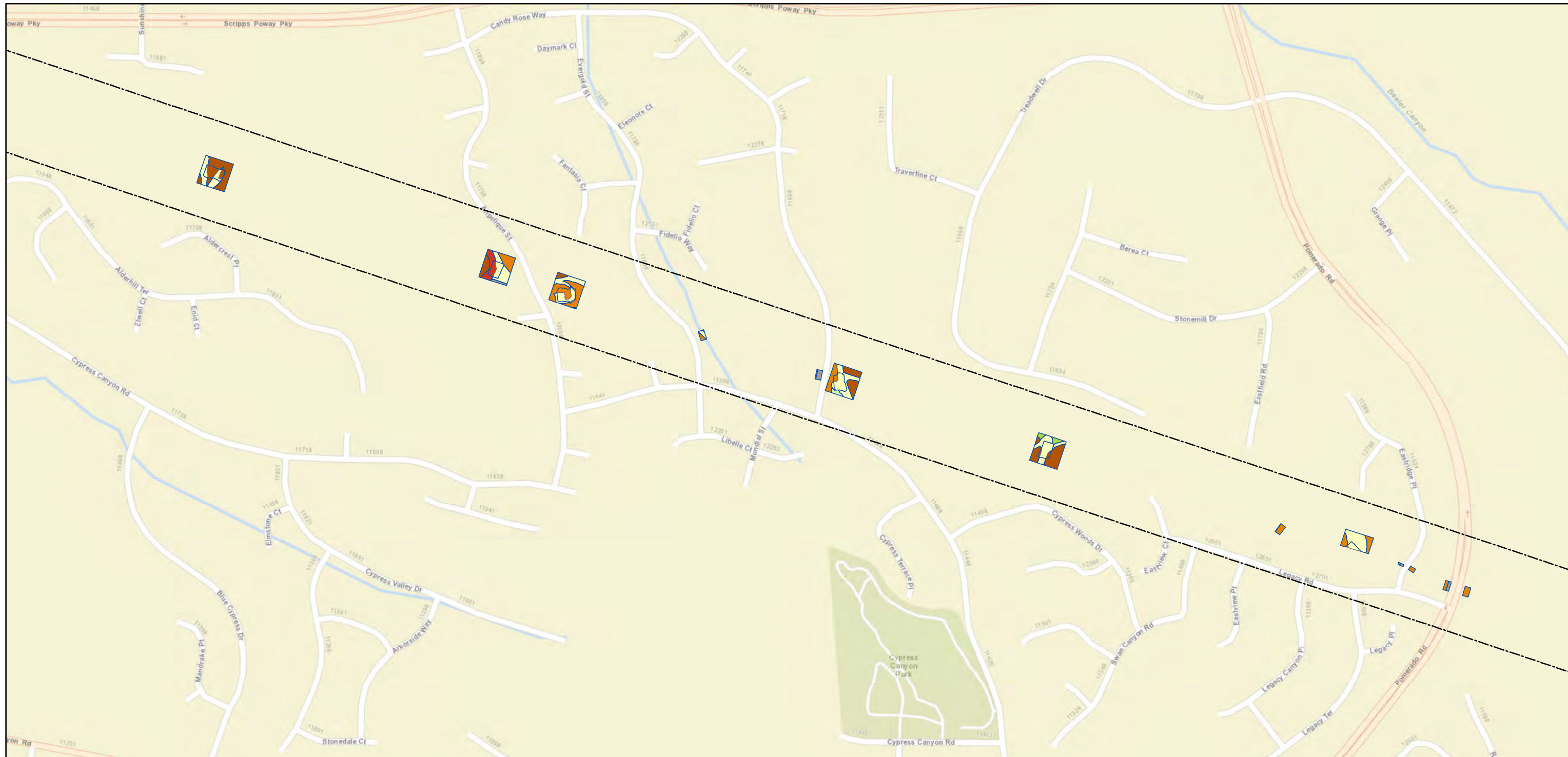
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0 500 1,000 1,500 Feet

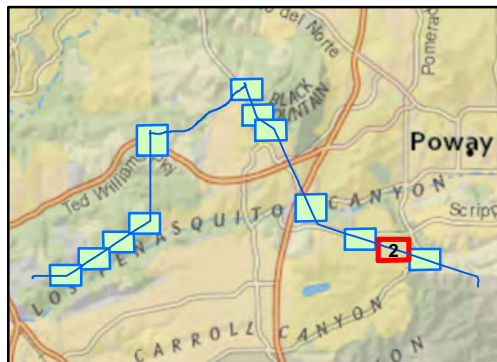
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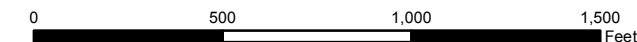


- |   |                                   |                                       |
|---|-----------------------------------|---------------------------------------|
| 1-Diegan Coastal Sage Scrub             | 6-So. Mixed Chaparral - Disturbed | 17-So. Coast Live Oak Riparian Forest |
| 2-Diegan Coastal Sage Scrub - Disturbed | 7-Scrub Oak Chaparral             | 20-Nonnative Grassland                |
| 3-Coastal Sage Scrub - Revegetated      | 8-Chamise Chaparral               | 21-Native Grassland                   |
| 4-Coastal Sage - Chaparral Scrub        | 9-Chamise Chaparral - Disturbed   | 0-Bare Ground                         |
| 5-Southern Mixed Chaparral              | 14-Southern Willow Scrub          | 22-Developed Lands                    |
|   |                                   | 23-Ornamental                         |
|   |                                   | 24-Disturbed Habitat                  |
|   |                                   | Permanent Impacts                     |
|   |                                   | Temporary Impacts                     |

**Sycamore to Peñasquitos 230 kV Transmission Line Project**  
 Proposed Project  
 Preserve/ESHA Impacts

**Figure 14**

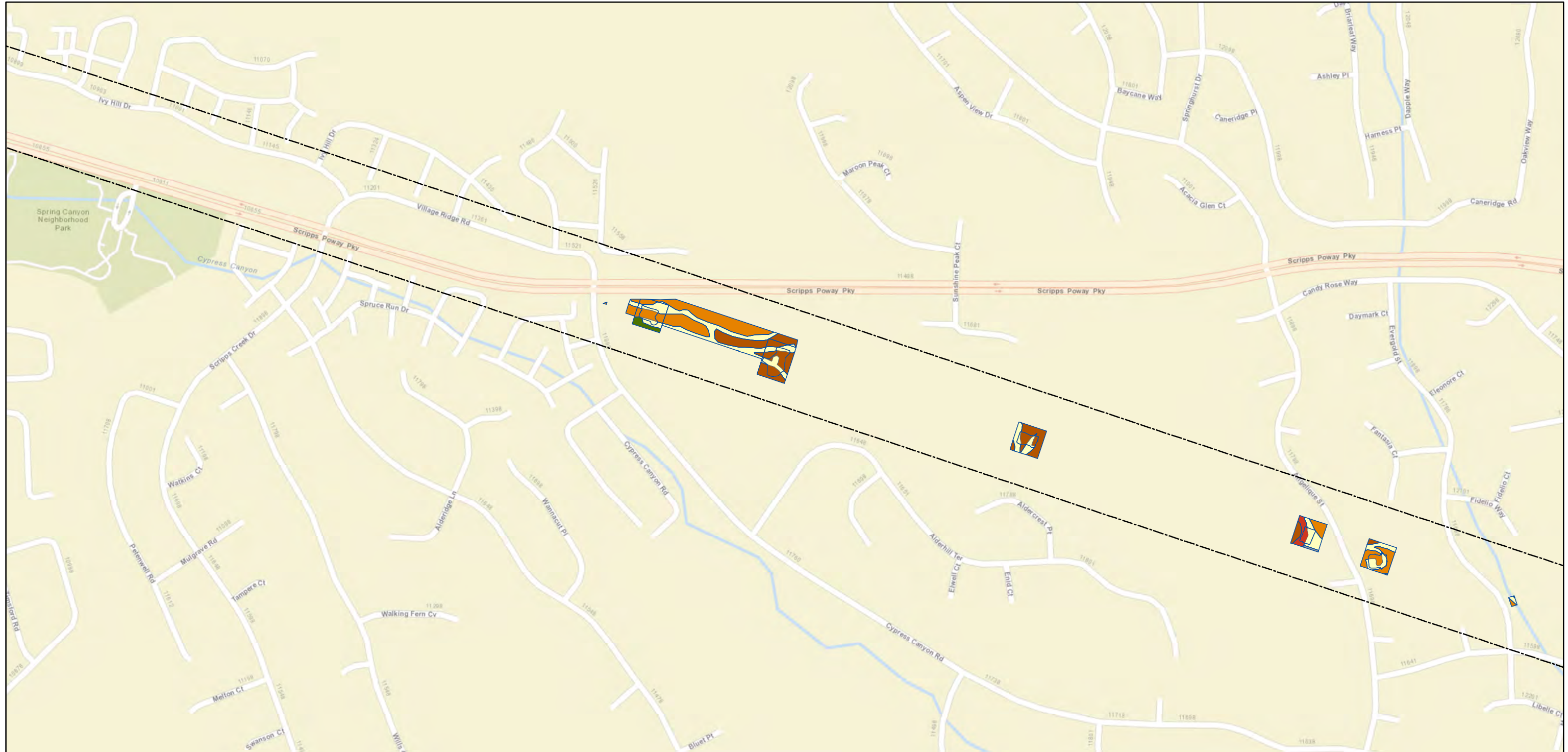
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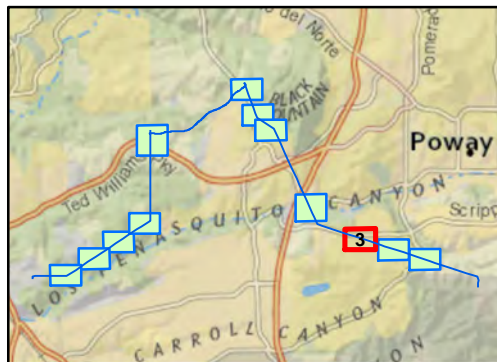
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Sources: Busby Biological 2013;SDG&E,2013;Esri,DigitalGlobe, GeoEye, I-cubed, USDA, USGS, EX,Getmapping,Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



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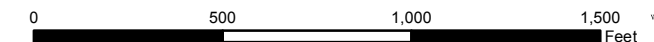
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|---|-----------------------------------|---------------------------------------|
| 1-Diegan Coastal Sage Scrub             | 6-So. Mixed Chaparral - Disturbed | 17-So. Coast Live Oak Riparian Forest |
| 2-Diegan Coastal Sage Scrub - Disturbed | 7-Scrub Oak Chaparral             | 20-Nonnative Grassland                |
| 3-Coastal Sage Scrub - Revegetated      | 8-Chamise Chaparral               | 21-Native Grassland                   |
| 4-Coastal Sage - Chaparral Scrub        | 9-Chamise Chaparral - Disturbed   | 0-Bare Ground                         |
| 5-Southern Mixed Chaparral              | 14-Southern Willow Scrub          | 22-Developed Lands                    |

**Sycamore to Peñasquitos 230 kV Transmission Line Project**  
**Proposed Project**  
**Preserve/ESHA Impacts**

- |                      |                         |
|----------------------|-------------------------|
| 23-Ornamental        | California Coastal Zone |
| 24-Disturbed Habitat | Biological Survey Area  |
| Permanent Impacts    |                         |
| Temporary Impacts    |                         |

**Figure 14**

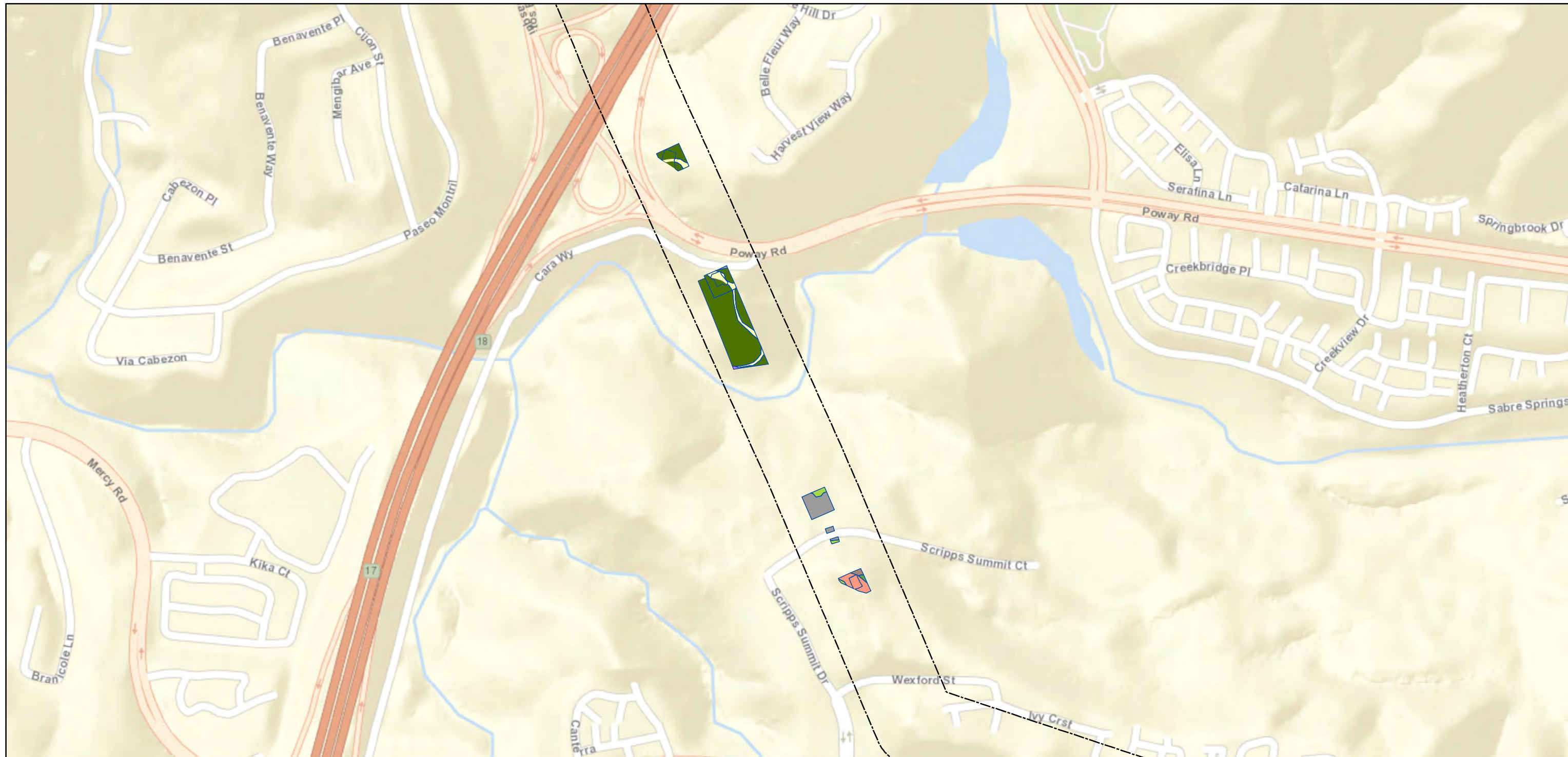
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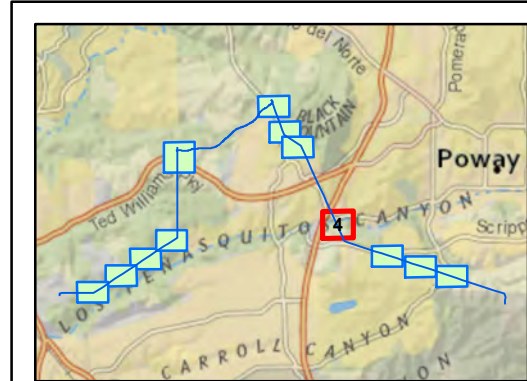
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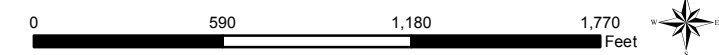


**Sycamore to Peñasquitos 230 kV Transmission Line Project**  
Proposed Project  
Preserve/ESHA Impacts  
**Figure 14**  
Page 4 of 12

1-Diegan Coastal Sage Scrub	6-So. Mixed Chaparral - Disturbed	17-So. Coast Live Oak Riparian Forest	23-Ornamental	California Coastal Zone
2-Diegan Coastal Sage Scrub - Disturbed	7-Scrub Oak Chaparral	20-Nonnative Grassland	24-Disturbed Habitat	Biological Survey Area
3-Coastal Sage Scrub - Revegetated	8-Chamise Chaparral	21-Native Grassland	Permanent Impacts	
4-Coastal Sage - Chaparral Scrub	9-Chamise Chaparral - Disturbed	0-Bare Ground	Temporary Impacts	
5-Southern Mixed Chaparral	14-Southern Willow Scrub	22-Developed Lands		

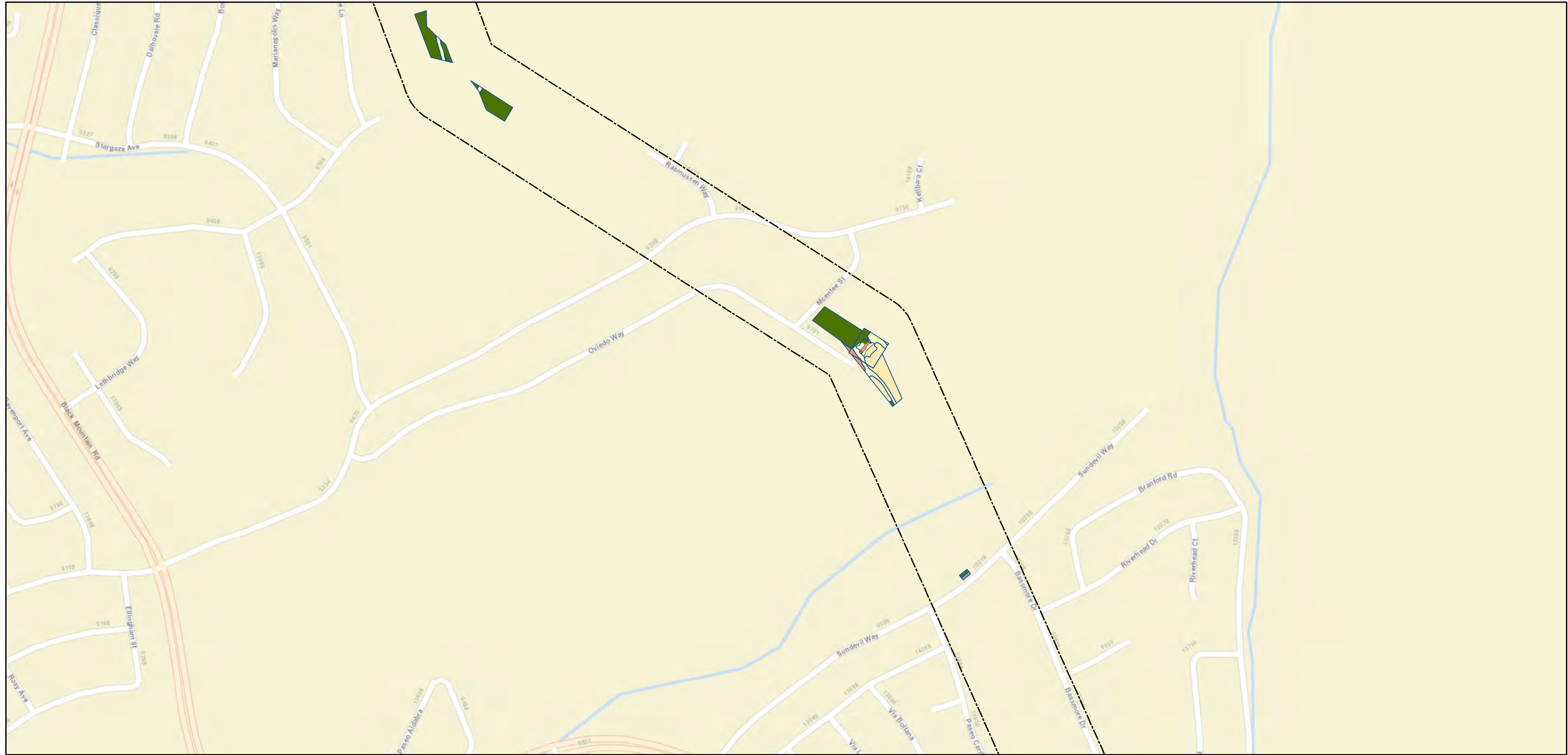
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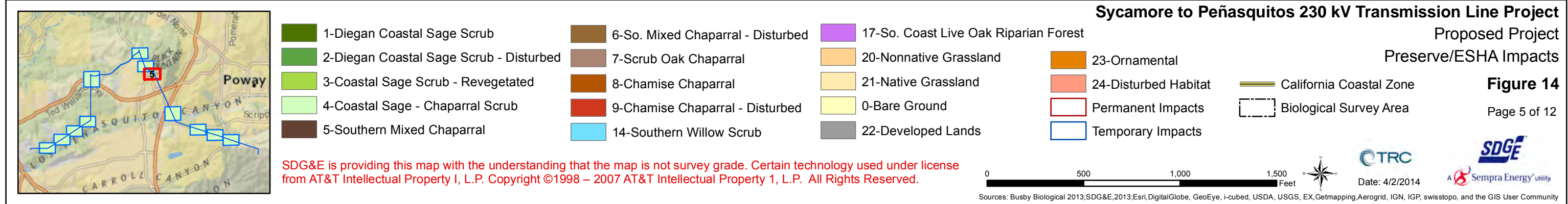


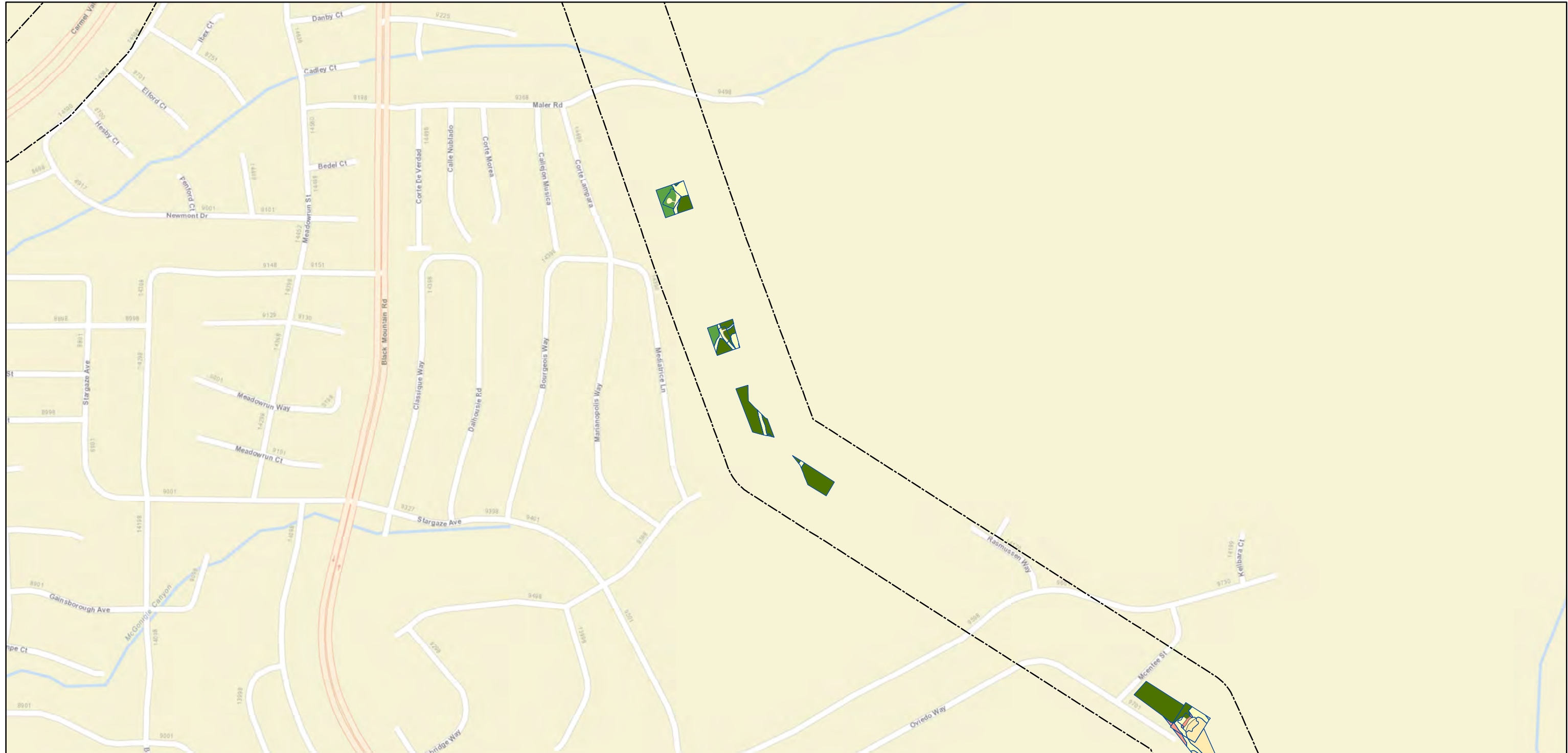
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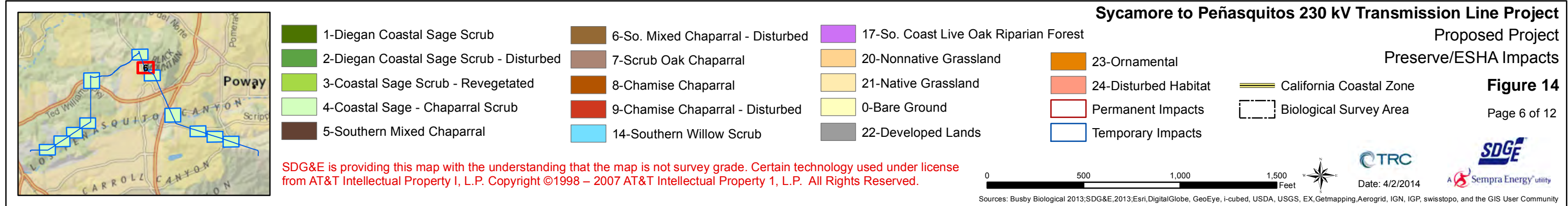
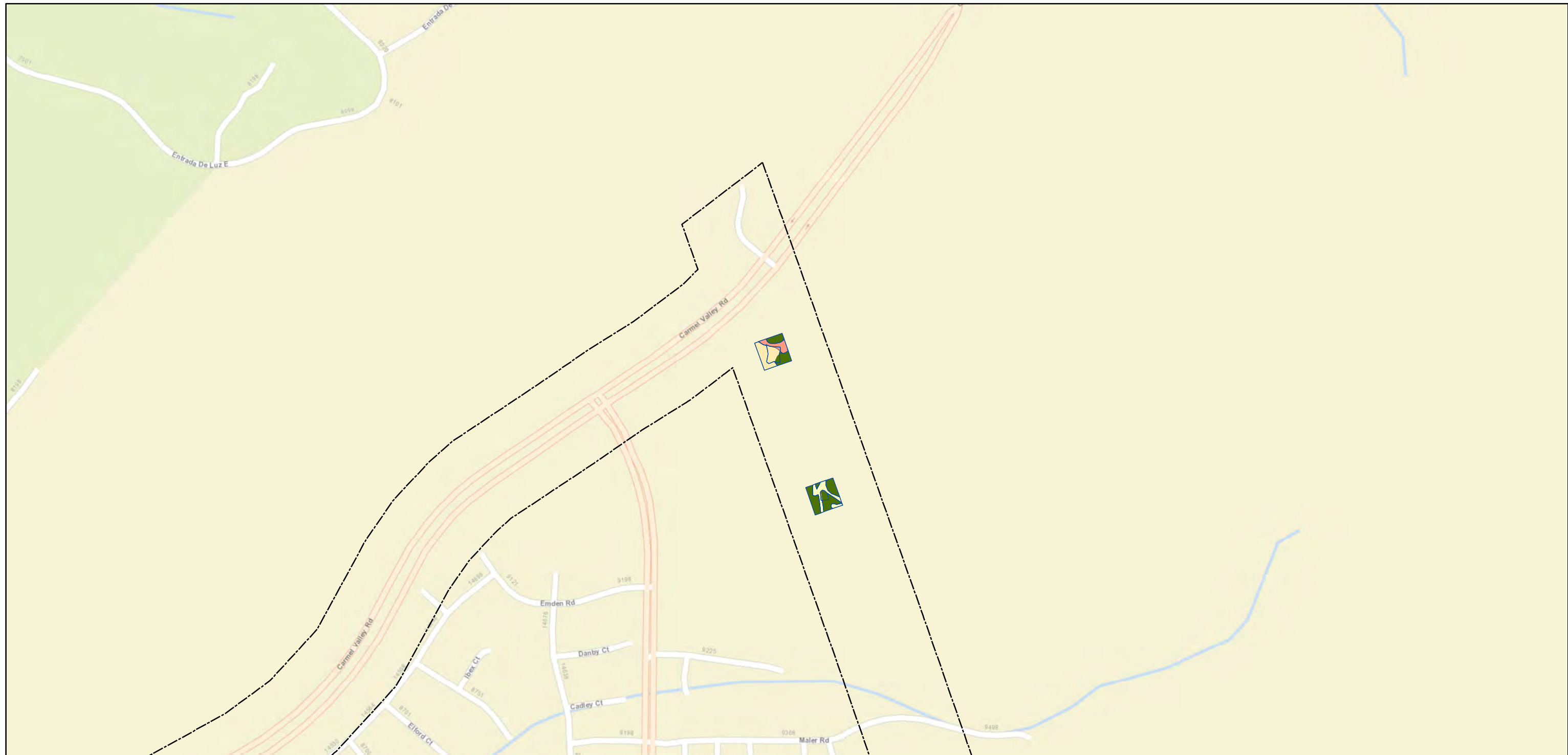


Figure 14

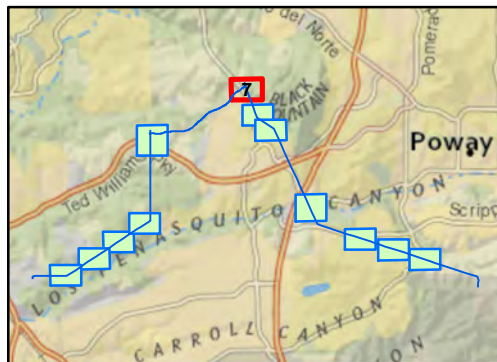


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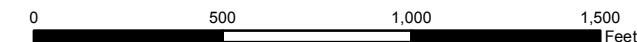
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|---|-----------------------------------|---------------------------------------|
| 1-Diegan Coastal Sage Scrub             | 6-So. Mixed Chaparral - Disturbed | 17-So. Coast Live Oak Riparian Forest |
| 2-Diegan Coastal Sage Scrub - Disturbed | 7-Scrub Oak Chaparral             | 20-Nonnative Grassland                |
| 3-Coastal Sage Scrub - Revegetated      | 8-Chamise Chaparral               | 21-Native Grassland                   |
| 4-Coastal Sage - Chaparral Scrub        | 9-Chamise Chaparral - Disturbed   | 0-Bare Ground                         |
| 5-Southern Mixed Chaparral              | 14-Southern Willow Scrub          | 22-Developed Lands                    |

**Sycamore to Peñasquitos 230 kV Transmission Line Project**  
 Proposed Project  
 Preserve/ESHA Impacts

**Figure 14**

- |                      |                         |
|----------------------|-------------------------|
| 23-Ornamental        | California Coastal Zone |
| 24-Disturbed Habitat | Biological Survey Area  |
| Permanent Impacts    |                         |
| Temporary Impacts    |                         |

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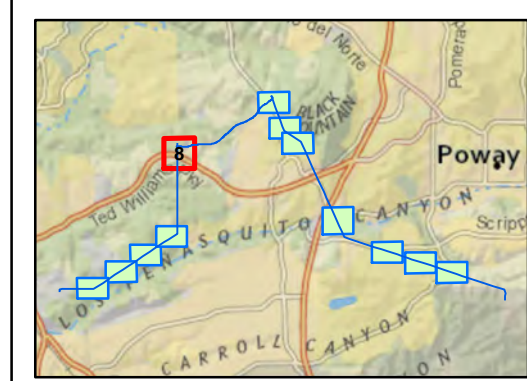
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Sycamore to Peñasquitos 230 kV Transmission Line Project						
Proposed Project Preserve/ESHA Impacts						
1-Diegan Coastal Sage Scrub	6-So. Mixed Chaparral - Disturbed	17-So. Coast Live Oak Riparian Forest	23-Ornamental	California Coastal Zone	Biological Survey Area	Figure 14
2-Diegan Coastal Sage Scrub - Disturbed	7-Scrub Oak Chaparral	20-Nonnative Grassland	24-Disturbed Habitat	Permanent Impacts		
3-Coastal Sage Scrub - Revegetated	8-Chamise Chaparral	21-Native Grassland	0-Bare Ground	Temporary Impacts	Page 8 of 12	
4-Coastal Sage - Chaparral Scrub	9-Chamise Chaparral - Disturbed	22-Developed Lands				
5-Southern Mixed Chaparral	14-Southern Willow Scrub					

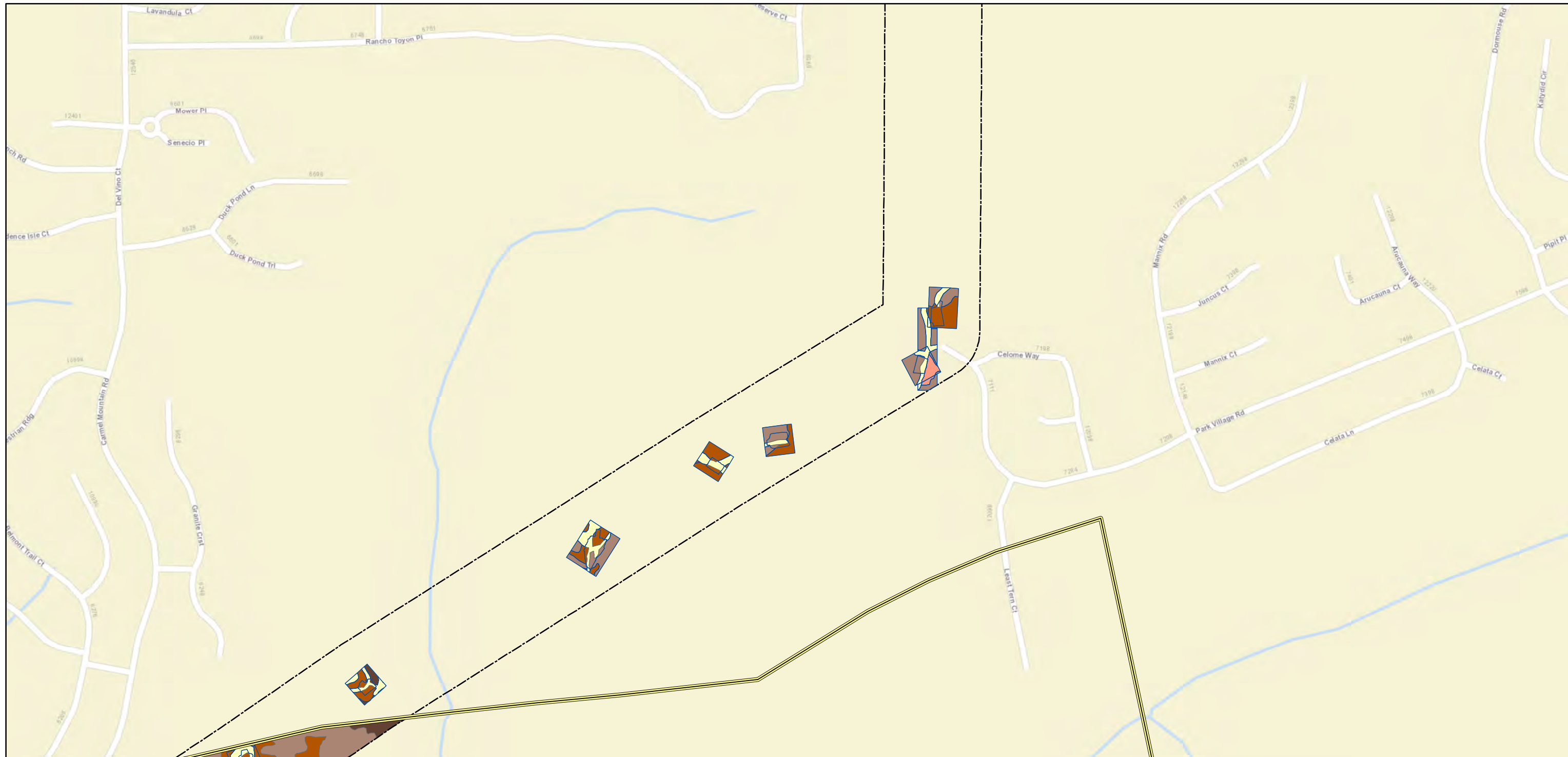
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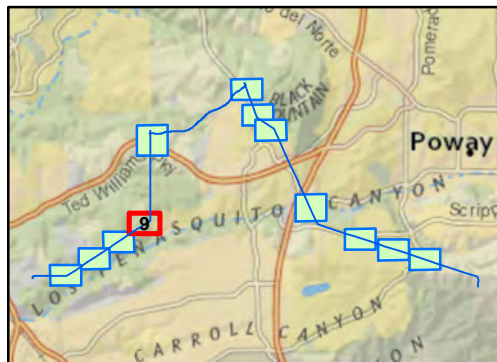
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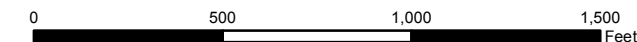
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|   |                                   | 23-Ornamental                         |
|   |                                   | 24-Disturbed Habitat                  |

**Sycamore to Peñasquitos 230 kV Transmission Line Project**  
**Proposed Project**  
**Preserve/ESHA Impacts**

**Figure 14**

- |                   |                   |                         |
|-------------------|-------------------|-------------------------|
| Permanent Impacts | Temporary Impacts | California Coastal Zone |
|                   |                   | Biological Survey Area  |

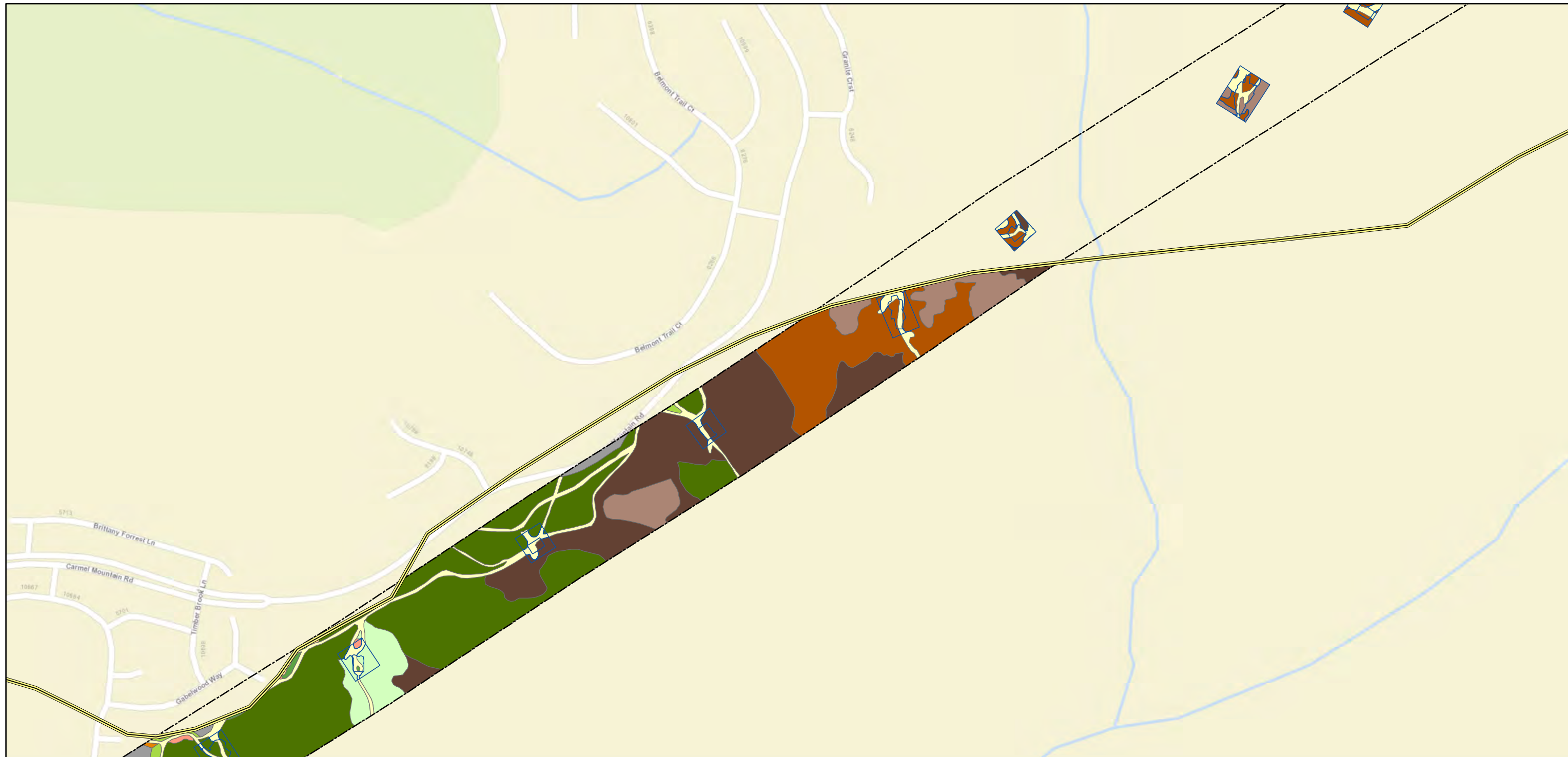
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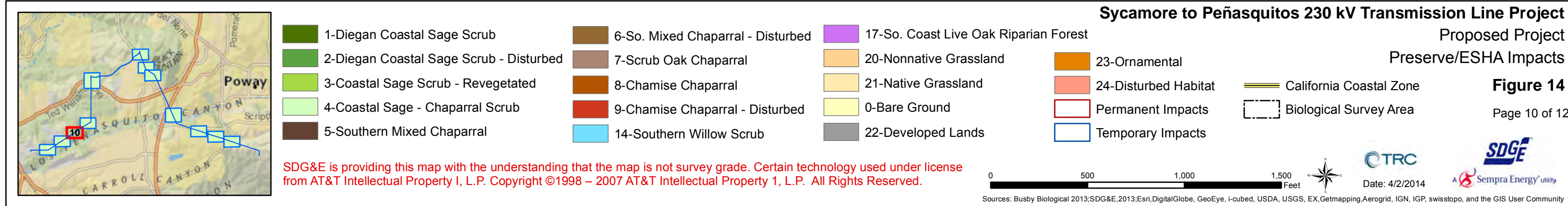
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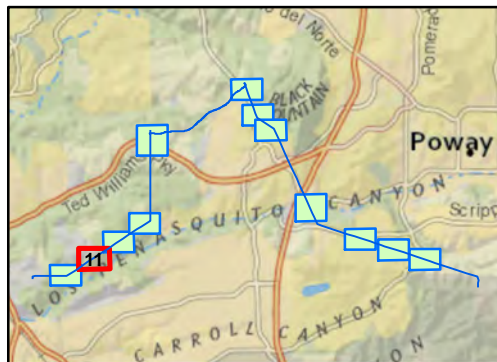


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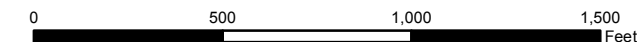
**Sycamore to Peñasquitos 230 kV Transmission Line Project**

Proposed Project  
Preserve/ESHA Impacts

**Figure 14**

- |                      |                         |
|----------------------|-------------------------|
| 23-Ornamental        | California Coastal Zone |
| 24-Disturbed Habitat | Biological Survey Area  |
| Permanent Impacts    | Temporary Impacts       |

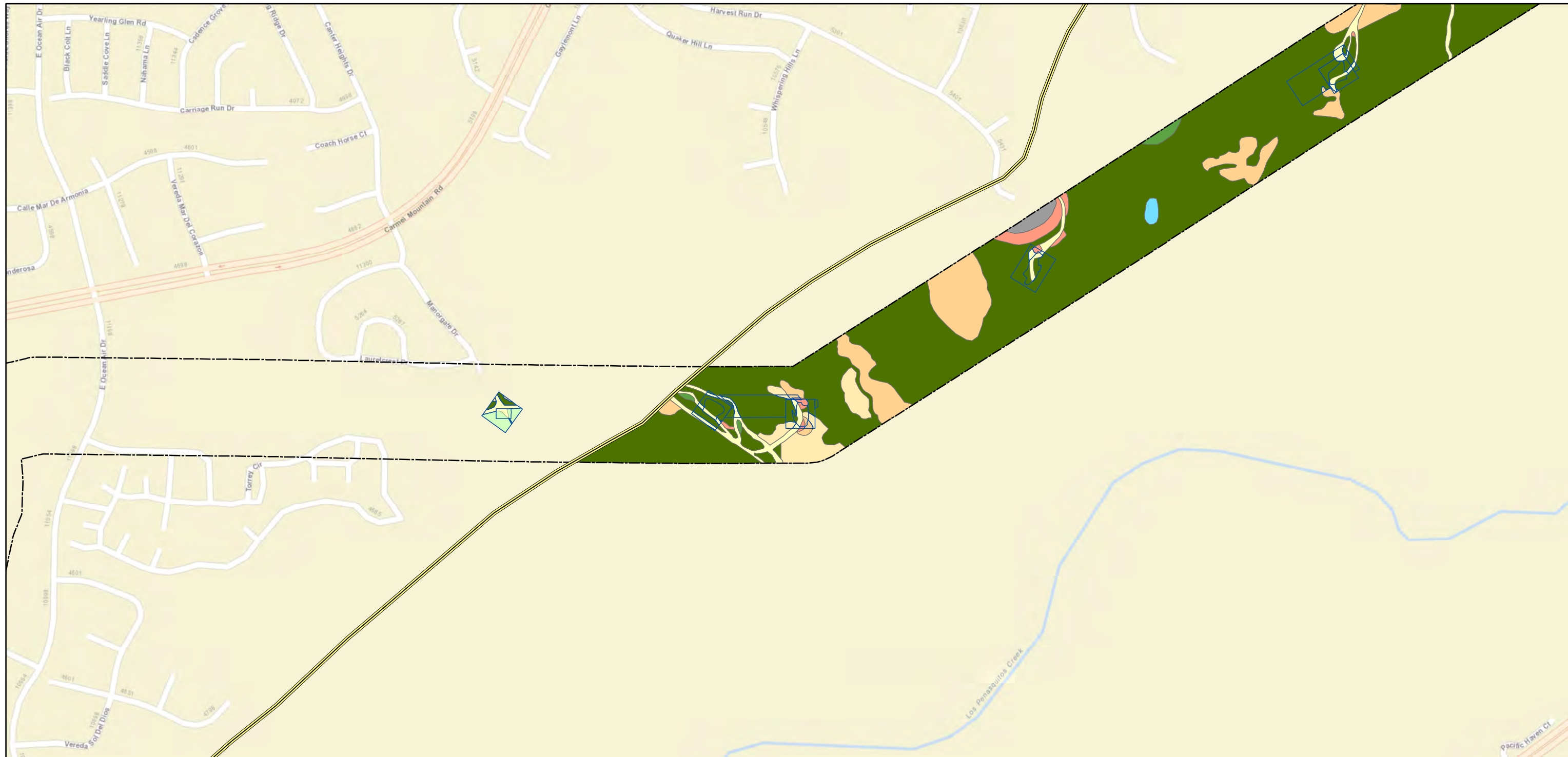
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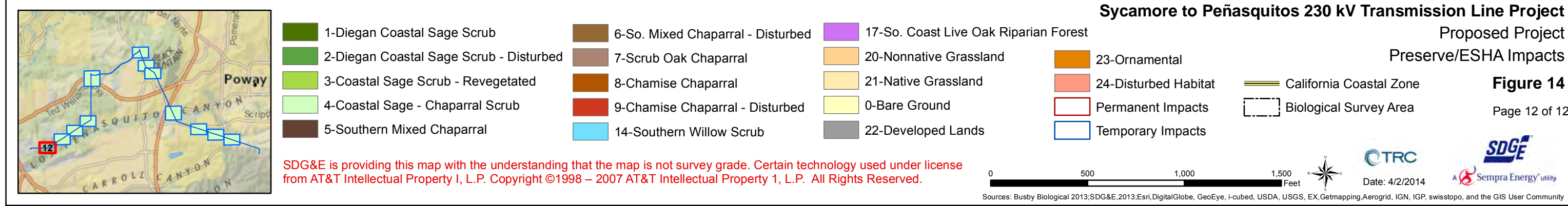
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## **APPENDIX B**

### **Plant Species Observed within BSA**

**Appendix B: Plant Species Observed Within BSA**

<b>Taxonomic Group</b>	<b>Common Name</b>	<b>Scientific Name</b>
<b>Lycophytes</b>		
<b>Selaginellaceae – Spike-Moss Family</b>		
	mesa spike-moss	<i>Selaginella cinerascens</i>
<b>Leptosporangiate</b>		
<b>Pteridaceae – Brake Family</b>		
	California lace fern	<i>Aspidotis californica</i>
	coffee fern	<i>Pellaea andromedifolia</i>
<b>Dicotyledones</b>		
<b>Aizoaceae – Fig-Marigold Family</b>		
	crystalline iceplant*	<i>Mesembryanthemum crystallinum</i>
<b>Amaranthaceae – Amaranth Family</b>		
	Mexican fireweed*	<i>Kochia scoparia</i> ssp. <i>s</i>
<b>Anacardiaceae - Sumac Family</b>		
	laurel sumac	<i>Malosma laurina</i>
	lemonadeberry	<i>Rhus integrifolia</i>
	western poison oak	<i>Toxicodendron diversilobum</i>
<b>Apiaceae - Carrot Family</b>		
	poison hemlock*	<i>Conium maculatum</i>
FE, SE, CRPR 1B.1	San Diego button-celery	<i>Eryngium aristulatum</i> ssp. <i>parishii</i>
	fennel*	<i>Foeniculum vulgare</i>
<b>Asteraceae - Sunflower Family</b>		
	western ragweed	<i>Ambrosia psilostachya</i>
	California sagebrush	<i>Artemisia californica</i>
	mugwort	<i>Artemisia douglasiana</i>
CRPR 4.2	Palmer's sagewort	<i>Artemisia palmeri</i>
	broom brush	<i>Baccharis pilularis</i>
	mule fat	<i>Baccharis salicifolia</i>
CRPR 4.2	San Diego sunflower	<i>Bahiopsis laciniata</i>
	tochalote*	<i>Centaurea melitensis</i>
	Italian thistle*	<i>Carduus pycnocephalus</i>
	common sand-aster	<i>Corethrogyne filaginifolia</i> (=Lessingia f. var. f.)
	artichoke thistle*	<i>Cynara cardunculus</i>
	fascicled tarplant	<i>Deinandra fasciculata</i>
	California encelia	<i>Encelia californica</i>
	brittlebush, incienso	<i>Encelia farinosa</i>
	golden yarrow	<i>Eriophyllum confertiflorum</i>
	crown daisy*	<i>Glebionis coronarium</i>
	southern sawtooth goldenbush	<i>Hazardia squarrosos</i> var. <i>grindelioides</i>
	telegraph weed	<i>Heterotheca grandiflora</i>
CRPR 4.2	graceful tarplant	<i>Holocarpha virgata</i> ssp. <i>elongata</i>
	smooth cat's-ear*	<i>Hypochaeris glabra</i>
	spreading goldenbush	<i>Isocoma menziesii</i> var. <i>m</i>
CRPR 2B.2	San Diego marsh-elder	<i>Iva hayesiana</i>
	prickly lettuce*	<i>Lactuca serriola</i>
	osmadenia	<i>Osmadenia tenella</i>
	woolly-heads	<i>Psilocarphus brevissimus</i> var. <i>b</i>
	slender woolly-heads	<i>Psilocarphus tenellus</i> var. <i>t</i>
	Spanish false-fleabane*	<i>Pulicaria paludosa</i>
	cocklebur	<i>Xanthium strumarium</i>

Appendix B: Plant Species Observed Within BSA (Continued)

Taxonomic Group	Common Name	Scientific Name
<b>Berberidaceae – Berberis Family</b>		
	shiny-leaf barberry	<i>Berberis pinnata</i> ssp. <i>p</i>
<b>Boraginaceae - Borage Family</b>		
	common forget-me-not	<i>Cryptantha intermedia</i>
	pride-of-madeira*	<i>Echium candicans</i>
<b>Brassicaceae - Mustard Family</b>		
	black mustard*	<i>Brassica nigra</i>
	perennial mustard *	<i>Hirschfeldia incana</i>
	radish*	<i>Raphanus sativus</i>
<b>Cactaceae - Cactus Family</b>		
	coast cholla	<i>Cylindropuntia prolifera</i>
CRPR 2B.1	coast barrel cactus	<i>Ferocactus viridescens</i>
	coast prickly pear	<i>Opuntia littoralis</i>
<b>Caryophyllaceae - Pink Family</b>		
	tread lightly	<i>Cardionema ramosissima</i>
<b>Caprifoliaceae - Honeysuckle Family</b>		
	honeysuckle	<i>Lonicera subspicata</i> var. <i>denudata</i>
	blue elderberry	<i>Sambucus mexicana</i>
<b>Capparaceae – Caper Family</b>		
	bladderpod	<i>Isomeris arborea</i>
<b>Chenopodiaceae - Goosefoot Family</b>		
	quailbush	<i>Atriplex lentiformis</i>
	Australian saltbush*	<i>Atriplex semibaccata</i>
	Russian-thistle* tumbleweed	<i>Salsola tragus</i>
<b>Cistaceae - Rock-Rose Family</b>		
	rock rose*	<i>Cistus ladanifer</i>
<b>Convolvulaceae- Morning-Glory Family</b>		
	morning glory	<i>Calystegia macrostegia</i>
<b>Crassulaceae -Stone-Crop Family</b>		
	chalk live-forever	<i>Dudleya pulverulenta</i>
<b>Curcubitaceae - Gourd Family</b>		
	wild cucumber	<i>Marah macrocarpus</i>
<b>Ericaceae - Heath Family</b>		
	manzanita	<i>Arctostaphylos glandulosa</i> ssp. <i>g</i>
CRPR 1B.2	summer-holly	<i>Comarostaphylis diversifolia</i> ssp. <i>d</i>
	mission Manzanita	<i>Xylococcus bicolor</i>
<b>Euphorbiaceae -Spurge Family</b>		
	turkey mullein, dove weed	<i>Croton setigerus</i>
<b>Fabaceae - Pea Family</b>		
	cyclops acacia*	<i>Acacia cyclops</i>
	desert carpet*	<i>Acacia redolens</i>
	coast locoweed	<i>Astragalus trichopodus</i> var. <i>lonchus</i>
	brittlebush, incienso	<i>Encelia farinosa</i>
<b>Fagaceae - Oak Family</b>		
	coast live oak, Encina	<i>Quercus agrifolia</i> var. <i>agrifolia</i>
CRPR 1B.1	Nuttall's scrub oak	<i>Quercus dumosa</i>
<b>Grossulariaceae – Gooseberry Family</b>		
	fuchsia-flower gooseberry	<i>Ribes speciosum</i>
<b>Lamiaceae - Mint Family</b>		
	horehound*	<i>Marrubium vulgare</i>
	white sage	<i>Salvia apiana</i>
	black sage	<i>Salvia mellifera</i>

Appendix B: Plant Species Observed Within BSA (Continued)

Taxonomic Group	Common Name	Scientific Name
<b>Myrtaceae – Myrtle Family</b>		
	eucalyptus*	<i>Eucalyptus</i> spp.
<b>Plantaginaceae - Plantain Family</b>		
	California plantain	<i>Plantago erecta</i>
<b>Polygonaceae - Buckwheat Family</b>		
	California buckwheat	<i>Eriogonum fasciculatum</i> ssp. <i>f</i>
<b>Phrymaceae - Lopseed family</b>		
	coast monkey-flower	<i>Mimulus aurantiacus</i> var. <i>puniceus</i>
<b>Pinaceae – Pine Family</b>		
CRPR 1B.2	Torrey pine	<i>Pinus torreyana</i>
<b>Plumbaginaceae – Leadwort Family</b>		
	Perez’s marsh-rosemary*	<i>Limonium perezii</i>
<b>Primulaceae – Primrose Family</b>		
	padre’s shooting star	<i>Dodecatheon clevelandii</i> ssp. <i>c</i>
<b>Rhamnaceae - Buckthorn Family</b>		
CRPR 2B.1	spineshrub	<i>Adolphia californica</i>
	Ramona-lilac	<i>Ceanothus tomentosus</i>
	spiny redberry	<i>Rhamnus crocea</i>
<b>Rosaceae - Rose Family</b>		
	chamise	<i>Adenostoma fasciculatum</i>
	christmas berry, toyon	<i>Heteromeles arbutifolia</i>
	holly-leaf cherry	<i>Prunus illicifolia</i>
<b>Rutaceae – Citrus Family</b>		
	coast spice bush	<i>Cneoridium dumosum</i>
<b>Salicaceae - Willow Family</b>		
	Goodding's black willow	<i>Salix gooddingii</i>
	red willow	<i>Salix laevigata</i>
	arroyo willow	<i>Salix lasiolepis</i>
<b>Scrophulariaceae - Figwort Family</b>		
	ngaio*	<i>Myoporum laetum</i>
<b>Solanaceae - Nightshade Family</b>		
	jimson weed	<i>Datura wrightii</i>
	tree tobacco*	<i>Nicotiana glauca</i>
<b>Tamaricaceae – Tamarisk Family</b>		
	tamarisk, salt cedar*	<i>Tamarix ramosissima</i>
<b>Monocotyledoneae</b>		
<b>Agavaceae - Agave Family</b>		
	Mohave yucca	<i>Yucca schidigera</i>
<b>Iridaceae – Iris Family</b>		
	blue-eyed grass	<i>Sisyrinchium bellum</i>
<b>Juncaceae - Rush Family</b>		
CRPR 4.2	southwestern spiny rush	<i>Juncus acutus</i> ssp. <i>leopoldii</i>
<b>Poaceae - Grass Family</b>		
	slender wild oat*	<i>Avena barbata</i>
	purple falsebrome*	<i>Brachypodium distachyon</i>
	ripgut grass*	<i>Bromus diandrus</i>
	soft chess*	<i>Bromus hordeaceus</i>
	foxtail chess*	<i>Bromus madritensis</i> ssp. <i>rubens</i>
	panic veldt grass*	<i>Ehrharta erecta</i>
	nit grass*	<i>Gastridium phleoides</i> (=G. <i>ventricosum</i> )
	nodding needlegrass	<i>Stipa cernua</i>
	foothill needlegrass	<i>Stipa lepida</i>

**Appendix B: Plant Species Observed Within BSA (Continued)**

<b>Taxonomic Group</b>	<b>Common Name</b>	<b>Scientific Name</b>
	purple needlegrass	<i>Stipa pulchra</i>
<b>Themidaceae - Brodiaea Family</b>		
CRPR 1B.1	San Diego goldenstar	<i>Bloomeria clevelandii</i>
<b>Typhaceae - Cattail Family</b>		
	southern cattail	<i>Typha domingensis</i>

FE = Federally Endangered

SE = State Endangered

CRPR = California Rare Plant Rank

\* = nonnative species

## **APPENDIX C**

### **Wildlife Species Detected within BSA**

**Appendix C: Wildlife Species Detected Within BSA**

Scientific Name	Common Name
<b>Invertebrates</b>	
<i>Danaus plexippus</i>	monarch butterfly
<i>Vanessa cardui</i>	painted lady
<i>Apodemia virgulti</i>	Behr's metalmark
<b>Amphibians</b>	
<i>Hyla cadaverina</i>	California treefrog
<b>Reptiles</b>	
<i>Sceloporus occidentalis</i>	western fence lizard
<i>Uta stansburiana</i>	side-blotched lizard
<i>Aspidoscelis hyperythra beldingi</i>	Belding's orange-throated whiptail
<b>Birds</b>	
<i>Anas strepera</i>	gadwall
<i>Anas americana</i>	American wigeon
<i>Anas platyrhynchos</i>	mallard
<i>Callipepla californica</i>	California quail
<i>Ardea alba</i>	great egret
<i>Cathartes aura</i>	turkey vulture
<i>Accipiter cooperii</i>	Cooper's hawk
<i>Buteo lineatus</i>	red-shouldered hawk
<i>Buteo jamaicensis</i>	red-tailed Hawk
<i>Falco sparverius</i>	American kestrel
<i>Fulica americana</i>	American coot
<i>Charadrius vociferus</i>	killdeer
<i>Larus occidentalis</i>	western gull
<i>Zenaida macroura</i>	mourning dove
<i>Geococcyx californianus</i>	greater roadrunner
<i>Bubo virginianus</i>	great horned owl
<i>Phalaenoptilus nuttallii</i>	common poorwill
<i>Chaetura vauxi</i>	Vaux's swift
<i>Aeronautes saxatalis</i>	white-throated swift
<i>Calypte anna</i>	Anna's hummingbird
<i>Selasphorus sasin</i>	Allen's hummingbird
<i>Melanerpes formicivorus</i>	acorn woodpecker
<i>Sphyrapicus sp.</i>	sapsucker sp.
<i>Picoides nuttallii</i>	Nuttall's woodpecker
<i>Colaptes auratus</i>	northern flicker
<i>Empidonax difficilis</i>	Pacific-slope flycatcher
<i>Sayornis nigricans</i>	black phoebe
<i>Sayornis saya</i>	Say's phoebe
<i>Tyrannus vociferans</i>	Cassin's kingbird
<i>Tyrannus verticalis</i>	western kingbird
<i>Lanius ludovicianus</i>	loggerhead shrike
<i>Aphelocoma californica</i>	western scrub-Jay
<i>Corvus brachyrhynchos</i>	American crow

Appendix C: Wildlife Species Detected Within BSA (Continued)

Scientific Name	Common Name
<i>Corvus corax</i>	common raven
<i>Eremophila alpestris actia</i>	California horned lark
<i>Psaltriparus minimus</i>	bushtit
<i>Thryomanes bewickii</i>	Bewick's wren
<i>Troglodytes aedon</i>	house wren
<i>Regulus calendula</i>	ruby-crowned kinglet
<i>Poliophtila caerulea</i>	blue-gray gnatcatcher
<i>Poliophtila californica</i>	coastal California gnatcatcher
<i>Sialia mexicana</i>	western bluebird
<i>Catharus guttatus</i>	hermit thrush
<i>Chamaea fasciata</i>	wrentit
<i>Mimus polyglottos</i>	northern mockingbird
<i>Toxostoma redivivum</i>	California thrasher
<i>Sturnus vulgaris</i>	European starling
<i>Vermivora celata</i>	orange-crowned warbler
<i>Dendroica coronata</i>	yellow-rumped warbler
<i>Dendroica nigrescens</i>	black-throated gray warbler
<i>Geothlypis trichas</i>	common yellowthroat
<i>Pipilo maculatus</i>	spotted towhee
<i>Pipilo crissalis</i>	California towhee
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow
<i>Melospiza melodia</i>	song sparrow
<i>Zonotrichia leucophrys</i>	white-crowned sparrow
<i>Zonotrichia atricapilla</i>	golden-crowned sparrow
<i>Sturnella neglecta</i>	western meadowlark
<i>Carduelis psaltria</i>	lesser goldfinch
<b>Mammals</b>	
<i>Sylvilagus audubonii</i>	desert cottontail
<i>Spermophilus beecheyi</i>	California ground squirrel
<i>Neotoma lepida</i>	desert woodrat
<i>Canis familiaris</i>	domestic dog
<i>Canis latrans</i>	coyote
<i>Procyon lotor</i>	raccoon
<i>Felis rufus</i>	bobcat
<i>Equus caballus</i>	domestic horse
<i>Odocoileus hemionus</i>	southern mule deer



## **APPENDIX D**

### **Special-Status Plant Species with a Potential for Occurrence in Vicinity of BSA**

**Appendix D: Special-Status Plant Species With a Potential for Occurrence in Vicinity of BSA**

Species Name	Status	Habitat Description*	Potential for Occurrence
San Diego thornmint ( <i>Acanthomintha ilicifolia</i> )	FT SE CRPR 1B.1 NCCP-NE	Annual herb. Blooms Apr-Jun. Clay soils associated with vernal pools in chaparral, coastal sage scrub, grassland. Elev 30-3,150 ft.	Moderate. Known from Los Peñasquitos Canyon Preserve and suitable soils present but suitable habitat limited. Critical Habitat occurs within 0.25 miles of the alignment.
Nuttall's acmispon ( <i>Acmispon [Lotus nuttallianus] prostrata</i> )	CRPR 1B.1 NCCP	Annual herb. Blooms Mar-Jun. Coastal dunes, coastal sage scrub. Elev 0-35 ft.	Not Expected. Species restricted to immediate coast. BSA outside of elevation range for species.
spineshrub ( <i>Adolphia californica</i> )	CRPR 2B.1	Deciduous shrub. Blooms Dec-May. Clay soils in chaparral, coastal sage scrub, grassland. Elev 145-2,430 ft.	Present. Observed in many areas of the survey area; dominant in some Diegan coastal sage scrub areas.
Shaw's agave ( <i>Agave shawii</i> var. <i>shawii</i> )	CRPR 2B.1 NCCP-NE	Leaf succulent. Blooms Sep-May. Coastal bluff scrub, coastal sage scrub. Elev 35-395 ft.	Not Expected. Species restricted to immediate coast.
San Diego ambrosia ( <i>Ambrosia pumila</i> )	FE CRPR 1B.1 NCCP-NE	Rhizomatous herb. Blooms Apr-Oct. Often in disturbed areas with sandy loam or clay soils, sometimes alkaline areas, in chaparral, coastal sage scrub, grassland, vernal pools. Elev 65-1,365 ft.	Very low. Known historically from vicinity but suitable habitat not observed during fall 2013 surveys.
aphanisma ( <i>Aphanisma blitoides</i> )	CRPR 1B.2 NCCP-NE	Annual herb. Blooms Mar-Jun. Coastal bluff scrub, coastal dunes, coastal sage scrub. Elev 3-1,000 ft.	Not Expected. Species restricted to immediate coast.
Del Mar manzanita ( <i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i> )	FE CRPR 1B.1 NCCP	Evergreen shrub. Blooms Dec-Jun. Sandy soils in maritime chaparral. Elev 0-1,200 ft.	Moderate. Known from the Del Mar Mesa Preserve and from surveys for previous SDG&E projects, but suitable habitat limited and species not observed during fall 2013 surveys.
Otay manzanita ( <i>Arctostaphylos otayensis</i> )	CRPR 1B.2 NCCP	Evergreen shrub. Blooms Jan-Apr. Chaparral, cismontane woodland. Elev 900-5,580 ft.	Not Expected. Species restricted to Otay Mtn. area in southern San Diego County.
Palmer's sagewort ( <i>Artemisia palmeri</i> )	CRPR 4.2	Deciduous shrub. Blooms May-Sep. Sandy, mesic areas in chaparral, coastal sage scrub, riparian habitats. Elev 45-3,005 ft.	Present. Observed in small patches along several drainages.
coastal dunes milk-vetch ( <i>Astragalus tener</i> var. <i>titi</i> )	FE SE CRPR 1B.1 NCCP-NE	Annual herb. Blooms Mar-May. Vernal mesic areas in coastal dunes, coastal bluff scrub, coastal prairie. Elev 3-165 ft.	Not Expected. Species restricted to immediate coast.
Coulter's saltbush ( <i>Atriplex coulteri</i> )	CRPR 1B.2	Perennial herb. Blooms Mar-Oct. Alkaline or clay soils in coastal dunes, coastal bluff scrub, coastal sage scrub, grassland. Elev 10-1,510 ft.	Not Expected. Suitable habitat not present.
South Coast saltscale ( <i>Atriplex pacifica</i> )	CRPR 1B.2	Annual herb. Blooms Mar-Oct. Playas, coastal dunes, coastal bluff scrub, coastal sage scrub. Elev 0-460 ft.	Not Expected. Suitable habitat not present.
Encinitas baccharis ( <i>Baccharis vanessae</i> )	FT SE	Deciduous shrub. Blooms Aug-Nov. Maritime chaparral, cismontane	Low. Known historically from vicinity and suitable habitat present, but

Species Name	Status	Habitat Description*	Potential for Occurrence
	CRPR 1B.1 NCCP-NE	woodland. Elev 195-2,365 ft.	species extremely rare and not observed during fall 2013 surveys.
San Diego sunflower ( <i>Bahiopsis [Viguiera] laciniata</i> )	CRPR 4.2	Perennial shrub. Blooms Feb-Aug. Dry slopes in coastal sage scrub and chaparral. Elev 195-2,460 ft.	Present. Observed in areas recently revegetated. Not observed naturally occurring.
Nevin's barberry ( <i>Berberis nevini</i> )	FE SE CRPR 1B.1 NCCP-NE	Evergreen shrub. Blooms Mar-Jun. Sandy or gravelly soils in chaparral, coastal sage scrub, cismontane woodland, riparian scrub. Elev 895-2,710 ft.	Not Expected. Suitable habitat not present.
golden-spined cereus ( <i>Bergerocactus emoryi</i> )	CRPR 2B.2	Stem succulent. Blooms May-Jun. Sandy soils in chaparral, coastal sage scrub, closed-cone coniferous forest. Elev 10-1,295 ft.	Not Expected. Suitable habitat not present.
San Diego goldenstar ( <i>Bloomeria clevelandii</i> )	CRPR 1B.1 NCCP	Bulbiferous herb. Blooms Apr-May. Typically clay soils in vernal pools associated with chaparral, coastal sage scrub, grassland. Elev 160-1,525 ft.	Present. Observed in native grassland in one location.
thread-leaved brodiaea ( <i>Brodiaea filifolia</i> )	FT SE CRPR 1B.1 NCCP	Bulbiferous herb. Blooms Mar-Jun. Typically clay soils in vernal pools associated with playas, chaparral, coastal sage scrub, cismontane woodland, grassland. Elev 80-3,675 ft.	Not Expected. Outside of known range for this species and specific habitat requirements not present in BSA.
Orcutt's brodiaea ( <i>Brodiaea orcuttii</i> )	CRPR 1B.1 NCCP	Bulbiferous herb. Blooms Apr-Jul. Typically mesic, clay soils (sometimes serpentinite) in vernal pools associated with chaparral, cismontane woodland, closed-cone coniferous forest, meadows & seeps, grassland. Elev 30-1,692 ft.	Moderate. Known historically from vicinity but limited suitable habitat present.
Brewer's calandrinia ( <i>Calandrinia breweri</i> )	CRPR 4.2	Annual herb. Blooms Mar – Jun. Sandy/loamy soils typically after fire or other disturbance. Elev 30-4,005 ft.	High. Known from Los Peñasquitos Canyon Preserve and suitable habitat present.
Dunn's mariposa lily ( <i>Calochortus dunnii</i> )	SR CRPR 1B.2 NCCP	Bulbiferous herb. Blooms Apr-Jun. Rocky, gabbroic or metavolcanic areas in chaparral, closed-cone coniferous forest, grassland. Elev 605-6,005 ft.	Not Expected. Suitable habitat not present.
Payson's jewelflower ( <i>Caulanthus simulans</i> )	CRPR 4.2 NCCP	Annual herb. Blooms Mar-May. Sandy, granitic areas in chaparral, coastal sage scrub. Elev 295-7,220 ft.	Not Expected. Outside known range of species.
Lakeside ceanothus ( <i>Ceanothus cyaneus</i> )	CRPR 1B.2 NCCP	Evergreen shrub. Blooms Apr-Jun. Chaparral, closed-coned coniferous forest. Elev 770-2,480 ft.	Not Expected. Outside known range of species.
wart-stemmed ceanothus ( <i>Ceanothus verrucosus</i> )	CRPR 2B.2 NCCP	Evergreen shrub. Blooms Dec-May. Chaparral. Elev 3-1,250 ft.	Moderate. Known historically from vicinity but limited suitable habitat present and not observed during fall 2013 surveys.
southern tarplant ( <i>Centromadia parryi</i> ssp. <i>australis</i> )	CRPR 1B.1	Annual herb. Blooms May-Nov. Vernal pools, along the margins of marshes, in vernal mesic areas within grassland. Elev 0-1,395 ft.	Moderate. Known historically from vicinity but limited suitable habitat present and not observed during fall 2013 surveys.
Orcutt's pincushion ( <i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i> )	CRPR 1B.1	Annual herb. Blooms Jan-Aug. Sandy soils in coastal dunes, coastal bluff scrub. Elev 0-330 ft.	Not Expected. Species restricted to immediate coast.
salt marsh bird's-beak	FE	Hemiparasitic annual herb. Blooms Mar-	Not Expected. Species restricted to

**Appendix D: Special-Status Plant Species With a Potential for Occurrence in Vicinity of BSA  
(Continued)**

Species Name	Status	Habitat Description*	Potential for Occurrence
<i>(Chloropyron maritimum</i> <i>ssp. maritimum)</i>	SE CRPR 1B.2 NCCP-NE	Oct. Coastal dunes, coastal salt marsh. Elev 0-100 ft.	immediate coast. BSA outside of elevation range for species.
Orcutt's spineflower <i>(Chorizanthe orcuttiana)</i>	FE SE CRPR 1B.1 NCCP-NE	Annual herb. Blooms Mar-May. Sandy openings in chaparral, coastal sage scrub, closed-cone coniferous forest. Elev 10-410 ft.	Not Expected. Species restricted to immediate coast.
long-spined spineflower <i>(Chorizanthe polygonoides</i> <i>var. longispina)</i>	CRPR 1B.2	Annual herb. Blooms Apr-Jul. Clay soils, vernal pools in chaparral, coastal sage scrub, meadows & seeps, grassland. Elev 95-5,020 ft.	High. Known historically from vicinity and suitable habitat present.
San Miguel savory <i>(Clinopodium chandleri)</i>	CRPR 1B.2 NCCP	Shrub. Blooms Mar-Jul. Rocky, gabbroic or metavolcanic areas in chaparral, coastal sage scrub, cismontane woodland, riparian woodland, grassland. Elev 390- 3,530 ft.	Not Expected. Outside known range of species.
summer-holly <i>(Comarostaphylis diversifolia</i> <i>ssp. diversifolia)</i>	CRPR 1B.2	Evergreen shrub. Blooms Apr-Jun. Chaparral, cismontane woodland. Elev 95-2,595 ft.	Present. Observed in chaparral, primarily in the Del Mar Mesa Preserve and adjacent areas.
San Diego sand aster <i>(Corethrogyne filaginifolia</i> <i>var. incana)</i>	CRPR 1B.1	Perennial herb. Blooms Jun-Sep. Coastal bluff scrub, chaparral, coastal sage scrub. Elev 10-380 ft.	Not Expected. Species restricted to immediate coast.
Del Mar Mesa sand aster <i>(Corethrogyne filaginifolia</i> <i>var. linifolia)</i>	CRPR 1B.1 NCCP	Perennial herb. Blooms May-Sep. Coastal bluff scrub, maritime chaparral, coastal sage scrub. Elev 45-495 ft.	Low. Known WNW of the survey area but suitable habitat not observed. Not observed during fall 2013 surveys.
snake cholla <i>(Cylindropuntia californica</i> <i>var. californica)</i>	CRPR 1B.1 NCCP-NE	Stem succulent. Blooms Apr-May. Chaparral, coastal sage scrub. Elev 95-495 ft.	Not Expected. Outside known range of species.
Otay tarplant <i>(Deinandra conjugens)</i>	FT SE CRPR 1B.1 NCCP	Annual herb. Blooms May-Jun. Clay soils in coastal sage scrub, grassland. Elev 80- 985 ft.	Not Expected. Outside known range of species.
Orcutt's bird's-beak <i>(Dicranostegia orcuttiana)</i>	CRPR 2B.1 NCCP	Hemiparasitic annual herb. Blooms Apr- Jun. Coastal sage scrub. Elev 30-1,150 ft.	Not Expected. Outside known range of species.
short-leaved dudleya <i>(Dudleya brevifolia)</i>	SE CRPR 1B.1 NCCP-NE	Perennial herb. Blooms Apr-May. Sandstone, openings in maritime chaparral, coastal sage scrub. Elev 95-820 ft.	Very low. Species very rare and well documented. Known to occur to the west in Carmel Mountain Preserve but not within the survey area.
many-stemmed dudleya <i>(Dudleya multicaulis)</i>	CRPR 1B.2 NCCP	Perennial herb. Blooms Apr-Jul. Often clay soils in chaparral, coastal sage scrub, grassland. Elev 45-2,595 ft.	Not Expected. Outside known range of species.
variegated dudleya <i>(Dudleya variegata)</i>	CRPR 1B.2 NCCP	Perennial herb. Blooms Apr-May. Clay soils associated with vernal pools in chaparral, cismontane woodland, coastal sage scrub, grassland. Elev 10-1,905 ft.	Low. Known historically from vicinity but species very rare and limited suitable habitat present. Survey area also outside of species' core distribution.
sticky dudleya <i>(Dudleya viscida)</i>	CRPR 1B.2 NCCP	Perennial herb. Blooms May-Jun. Rocky areas in coastal bluff scrub, chaparral, coastal scrub, cismontane woodland. Elev	Very low. Known from populations to the north but very limited suitable habitat present.

Species Name	Status	Habitat Description*	Potential for Occurrence
		30-1,805 ft.	
Palmer's goldenbush ( <i>Ericameria palmeri</i> ssp. <i>palmeri</i> )	CRPR 1B.1 NCCP-NE	Evergreen shrub. Blooms Sep-Nov. Mesic areas in chaparral, coastal sage scrub. Elev 95-1,970 ft.	Not Expected. Suitable habitat not present.
San Diego button-celery ( <i>Eryngium aristulatum</i> var. <i>parishii</i> )	FE SE CRPR 1B.1 NCCP	Annual/perennial herb. Blooms Apr-Jun. Vernal pools in coastal sage scrub, grassland. Elev 65-2,035 ft.	Present. Observed in vernal pools near the Los Peñasquitos Substation and present in the Del Mar Mesa Preserve.
coast wallflower ( <i>Erysimum ammophilum</i> )	CRPR 1B.2 NCCP-NE	Perennial herb. Blooms Feb-Jun. Sandy openings in coastal dunes, chaparral, coastal sage scrub. Elev 0-200 ft.	Not Expected. Species restricted to immediate coast.
cliff spurge ( <i>Euphorbia misera</i> )	CRPR 2B.2	Shrub. Blooms Dec-Aug. Rocky areas in coastal bluff scrub, coastal sage scrub, Mojavean desert scrub. Elev 30-1,640 ft.	Not Expected. Species restricted to immediate coast.
coast barrel cactus ( <i>Ferocactus viridescens</i> )	CRPR 2B.1 NCCP	Stem succulent. Blooms May-Jun. Chaparral, coastal sage scrub, grassland, vernal pools. Elev 10-1,480 ft.	Present. Observed in several areas on dry, west- or south- facing slopes, often with spineshrub.
Palmer's grapplinghook ( <i>Harpagonella palmeri</i> )	CRPR 4.2 NCCP	Annual herb. Blooms Mar-May. Clay soils in chaparral, coastal sage scrub, grassland, disturbed areas. Elev 65-3,135 ft.	High. Known historically from the vicinity and suitable habitat present.
Tecate cypress ( <i>Hesperocyparis [Cupressus] forbesii</i> )	CRPR 1B.1 NCCP	Perennial evergreen tree. Chaparral in southern San Diego County. Elev 260-4,925 ft.	Not Expected. Outside known range of species.
beach goldenaster ( <i>Heterotheca sessiliflora</i> ssp. <i>sessiliflora</i> )	CRPR 1B.1	Perennial herb. Blooms Mar-Dec. Coastal dunes, chaparral, coastal sage scrub. Elev 0-4,020 ft.	Not Expected. Species restricted to immediate coast.
graceful tarplant ( <i>Holocarpha virgata</i> ssp. <i>elongata</i> )	CRPR 4.2	Annual herb. Blooms May-Nov. Chaparral, cismontane woodland, coastal sage scrub, grassland. Elev 195-3,610 ft.	Present. Observed in disturbed areas near towers and grasslands.
decumbent goldenbush ( <i>Isocoma menziesii</i> var. <i>decumbens</i> )	CRPR 1B.2	Shrub. Blooms Apr-Nov. sandy, often disturbed, areas in chaparral, coastal sage scrub. Elev 30-445 ft.	Moderate. Known historically from vicinity based on historical voucher specimens, many of which need further verification because this highly variable species is easily misidentified. Suitable habitat present but not observed during fall 2013 surveys.
San Diego marsh-elder ( <i>Iva hayesiana</i> )	CRPR 2B.2	Perennial herb. Blooms Apr-Oct. Drainages, marshes Playas. Elev 30-1,640 ft.	Present. Observed along drainages and in revegetated areas.
spiny rush ( <i>Juncus acutus</i> ssp. <i>leopoldii</i> )	CRPR 4.2	Perennial, rhizomatous herb. Blooms Mar-Jun. along drainages, alkali marsh, seeps. Elev 10-2,955 ft.	Present. Observed along drainages and in revegetated areas.
Coulter's goldfields ( <i>Lasthenia glabrata</i> ssp. <i>coulteri</i> )	CRPR 1B.1	Annual herb. Blooms Feb-Jun. Coastal salt marsh, playas, vernal pools. Elev 3-4,005 ft.	Not Expected. Suitable habitat not present.
heart-leaved pitcher sage ( <i>Lepechinia cardiophylla</i> )	CRPR 1B.2 NCCP	Shrub. Blooms Apr-Jun. Chaparral, cismontane woodland, closed-cone coniferous forest. Elev 1,705-4,495 ft.	Not Expected. Suitable habitat not present. BSA outside of elevation range for species.
Gander's pitcher sage ( <i>Lepechinia gander</i> )	CRPR 1B.3 NCCP	Shrub. Blooms Jun-Jul. Gabbroic or metavolcanic areas in chaparral, coastal sage scrub, grassland, closed-cone coniferous forest. Elev 1,000-3,300 ft.	Not Expected. Outside known range of species.

**Appendix D: Special-Status Plant Species With a Potential for Occurrence in Vicinity of BSA  
 (Continued)**

Species Name	Status	Habitat Description*	Potential for Occurrence
Robinson's pepper-grass ( <i>Lepidium virginicum</i> var. <i>robinsonii</i> )	CRPR 4.3	Annual herb. Blooms Jan-Jul. Chaparral, coastal sage scrub. Elev 3-2,905 ft.	Moderate. Known from the Del Mar Mesa Preserve but only limited suitable habitat present.
sea dahlia ( <i>Leptosyne maritima</i> )	CRPR 2B.2	Perennial herb. Blooms Mar-May. Coastal bluff scrub, coastal sage scrub. Elev 15-495 ft.	Not Expected. Suitable habitat not present.
felt-leaved monardella ( <i>Monardella hypoleuca</i> ssp. <i>lanata</i> )	CRPR 1B.2 NCCP	Rhizomatous herb. Blooms Jun-Aug. chaparral, cismontane woodland. Elev 980-5,170 ft.	Not Expected. Outside known range of species.
willowy monardella ( <i>Monardella viminea</i> )	FE SE CRPR 1B.1 NCCP-NE	Perennial herb. Blooms Jun-Aug. Alluvial, ephemeral washes in chaparral, coastal sage scrub, riparian habitats. Elev 160-740 ft. Critical habitat located approx 2.5 miles southeast.	Very low. Known historically from vicinity but only marginally suitable habitat occurs and not observed during fall 2013 surveys.
little mousetail ( <i>Myosurus minimus</i> ssp. <i>apus</i> )	CRPR 3.1 NCCP	Annual herb. Blooms Mar-Jun. Alkaline soils in vernal pools, grassland. Elev 65-2,100 ft.	Very low. Vernal pool habitat present but survey area outside the known range of this species in San Diego County.
spreading navarretia ( <i>Navarretia fossalis</i> )	FT CRPR 1B.1 NCCP	Annual herb. Blooms Apr-Jun. Shallow freshwater associated with marshes, playas, vernal pools, chenopod scrub. Elev 95-2,150 ft. Critical habitat located approx. 5 miles south.	Not Expected. Vernal pools present but outside known range of species.
coast woolly-heads ( <i>Nemacaulis denudata</i> var. <i>denudata</i> )	CRPR 1B.2	Annual herb. Blooms Apr-Sep. Coastal dunes. Elev 0-330 ft.	Not Expected. Species restricted to immediate coast.
Dehesa beargrass ( <i>Nolina interrata</i> )	SE CRPR 1B.1 NCCP	Perennial herb. Blooms Jun-Jul. Gabbroic, metavolcanic, or serpentinite areas in chaparral. Elev 605-2,805 ft.	Not Expected. Outside known range of species and suitable soils not present.
California Orcutt grass ( <i>Orcuttia californica</i> )	FE SE CRPR 1B.1 NCCP	Annual herb. Blooms Apr-Aug. Vernal pools. Elev 45-2,165 ft.	Very low. Vernal pool habitat present but outside the known range of this species in San Diego County.
short-lobed broomrape ( <i>Orobanche parishii</i> ssp. <i>brachyloba</i> )	CRPR 4.2	Parasitic, perennial herb. Blooms Apr-Oct. Sandy soils associated with coastal bluff scrub, coastal dunes, coastal sage scrub. Elev 10-1,000 ft.	Not Expected. Suitable habitat not present.
Gander's ragwort ( <i>Packera ganderi</i> )	SR CRPR 1B.2 NCCP	Perennial herb. Blooms Apr-Jun. Gabbroic outcrops & burned areas in chaparral. Elev 1,310-3,940 ft.	Not Expected. Outside known range of species and suitable soils not present. BSA is outside of elevation range for species.
Torrey pine ( <i>Pinus torreyana</i> ssp. <i>torreyana</i> )	CRPR 1B.2 NCCP	Evergreen tree. Sandstone areas in chaparral, closed-cone coniferous forest. Elev 245-525 ft.	Present (as planted individuals at Los Peñasquitos substation). Not observed naturally occurring.
San Diego mesa mint ( <i>Pogogyne abramsii</i> )	FE SE CRPR 1B.1 NCCP	Annual herb. Blooms Mar-Jul. Vernal pools. Elev 295-660 ft.	High. Known from vernal pools within the Del Mar Mesa Preserve and suitable habitat present.
Otay Mesa mint ( <i>Pogogyne nudiuscula</i> )	FE SE	Annual herb. Blooms May-Jul. Vernal pools. Elev 295-820 ft.	Not Expected. Vernal pools present but outside known range of species.

Species Name	Status	Habitat Description*	Potential for Occurrence
	CRPR 1B.1 NCCP-NE		
Nuttall's scrub oak ( <i>Quercus dumosa</i> )	CRPR 1B.1	Evergreen shrub. Blooms Feb-Apr. Sandy or clay loam soils associated with chaparral, coastal sage scrub, closed-cone coniferous forest. Elev 45-1,315 ft.	Present. Dominant in Scrub Oak Chaparral and also occurs as scattered individuals.
small-leaved rose ( <i>Rosa minutifolia</i> )	SE CRPR 2B.1 NCCP	Deciduous shrub. Blooms Jan-Jun. Chaparral, coastal sage scrub. Elev 490-525 ft.	Not Expected. Outside known range of species.
chaparral ragwort ( <i>Senecio aphanactis</i> )	CRPR 2B.2	Annual herb. Blooms Jan-Apr. Chaparral, coastal sage scrub, cismontane woodland. Elev 45-2,625 ft.	Moderate. Species rare but limited suitable habitat within BSA and known from the Del Mar Mesa Preserve.
purple stemodia ( <i>Stemodia durantifolia</i> )	CRPR 2B.1	Perennial herb. Blooms Jan-Dec. Rocky, seasonally dry drainages in San Diego County. Elev 90-985 ft.	Very Low. Known from rocky drainages on MCAS Miramar and Mission Trails Regional Park but very limited suitable habitat present.
estuary seablite ( <i>Suaeda esteroa</i> )	CRPR 1B.2	Perennial herb. Blooms May-Oct. Coastal salt marsh. Elev 0-20 ft.	Not Expected. Species restricted to immediate coast. BSA is outside of elevation range for species.
Parry's tetraococcus ( <i>Tetraococcus dioicus</i> )	CRPR 1B.2 NCCP	Deciduous shrub. Blooms Apr-May. Chaparral, coastal sage scrub. Elev 540-3,280 ft.	Not Expected. Suitable habitat, including soils, not present.

See Table 1 for status abbreviation explanations. NCCP=NCCP-covered species; NCCP-NE=SDG&E Narrow Endemic; \* = This information is from online CNPS Rare Plant Inventory and observation of species in specific habitats in San Diego County

**APPENDIX E**

**Special-Status Plant Survey Memo**



October 22, 2013

Mr. Joshua D. Taylor  
Lead Planner  
TRC Solutions, Inc.  
123 Technology Drive  
Irvine, CA 92618

**RE: LATE SUMMER/FALL 2013 SPECIAL-STATUS PLANT SPECIES SURVEY SUMMARY MEMO FOR THE PROPOSED SAN DIEGO GAS & ELECTRIC COMPANY SYCAMORE (SX) TO PENASQUITOS (PQ) 230 kV TRANSMISSION LINE PROJECT, SAN DIEGO COUNTY, CALIFORNIA**

Mr. Taylor:

Busby Biological Services, Inc. (BBS) and Rocks Biological Consulting, Inc. (RBC) are pleased to provide TRC Solutions, Inc. (TRC) with this special-status plant species survey summary memo for focused special-status plant surveys that were conducted in late summer/fall 2013 for the proposed San Diego Gas & Electric Company (SDG&E) Sycamore Canyon (SX) to Penasquitos (PQ) Substation 230 kilovolt (kV) transmission line project (Proposed Project) located in the City of San Diego, San Diego County, California (Attachment A: Figures 1 and 2).

In an effort to increase the efficiency and supply of renewable generated power to the California Independent System Operator (CAISO) grid, CAISO has identified a policy-driven need for a new 230 kV transmission line to connect the existing SDG&E Sycamore Canyon and Peñasquitos Substations. In response to the CAISO Request for Proposal (RFP) for this new 230 kV transmission line, SDG&E proposes to construct and operate a new, approximately 16.5-mile 230 kV transmission line between the existing SDG&E Sycamore Canyon Substation in the City of San Diego on the Marine Corps Air Station (MCAS) Miramar base and the existing Penasquitos Substation in the Torrey Hills community of the City of San Diego (Attachment A: Figures 1 and 2). The Proposed Project would also include the consolidation of two existing 69 kV power lines onto new double-circuit, steel structures that would replace existing, predominantly wood structures. All new transmission line facilities would be located within existing SDG&E ROW or within franchise position within existing public roadways.

Focused surveys for plant species considered rare, threatened, or endangered by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), California Native Plant Society (CNPS), and/or on SDG&E's Narrow Endemic Plant list were conducted for the Proposed Project. The survey area included the entire Biological Survey Area (BSA), which includes a 500-foot-wide survey corridor along the approximately 16.5-mile alignment, the Sycamore Canyon and Penasquitos Substations, and the proposed Sycamore and Stowe construction yards.

This memo summarizes the methods used to conduct the surveys and the results of the late summer/fall 2013 surveys. In addition, a brief discussion of the focused special-status plant species planned for spring/summer 2014 is also provided.

**METHODS**

Prior to the start of the focused surveys, a list of the special-status plant species that have a potential to occur within or adjacent to the BSA was developed from a query of the CDFW’s California Natural Diversity Database (CNDDDB), the SanGIS database, data provided by SDG&E from other projects, research using the San Diego Natural History Museum’s (SDNHM) plant distribution mapping and voucher specimen lists, and local knowledge of special-status plant species likely to occur in the area. The CNDDDB query included a review of special-status plant species reported within 1, 3, and 5 miles of the Proposed Project alignment.

A plant species was classified as a special-status plant species if it had one or more of the sensitivities summarized in Table 1, below.

**Table 1: Status Abbreviations and Explanations**

STATUS ABBREVIATION		STATUS EXPLANATION
FEDERAL	FE	federally listed endangered species
	FT	federally listed threatened species
	FC	federal candidate species, proposed for listing
STATE	SE	state-listed endangered species
	ST	state-listed threatened species
	SR	state-listed rare species (plants only)
CALIFORNIA RARE PLANT RANK (CRPR)	1A	presumed extirpated in California and rare or extinct elsewhere
	1B	rare, threatened, and endangered in California and elsewhere
	2A	presumed extirpated in California but more common elsewhere
	2B	rare, threatened, or endangered in California but more common elsewhere
	3	more information needed
	4	limited distribution
CRPR THREAT RANKS	0.1	Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
	0.2	Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
	0.3	Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Species that were on the CNDDDB list, but were recently “considered but rejected (CBR)” as a special-status species by CNPS because they are more common than previously thought or because their taxonomy has changed, were not included because they do not meet the criteria to be classified as a special-status species.

Prior to conducting the surveys, species on the CNDDDB list were carefully considered for their potential to occur within or adjacent to the BSA and a list of target species was developed for the Proposed Project. The target special-status plant species for the surveys summarized in this memo included those species that were observable in the field during the late summer/fall, such as evergreen shrubs and other perennial species.

Surveys were conducted by walking meandering transects throughout the 500-foot-wide survey corridor. When a special-status plant species was observed, a waypoint was taken with a handheld

Global Positioning System (GPS) that recorded the plant's location and the elevation above mean sea level (amsl). Where vegetation was very dense on steep slopes, such as in Scrub Oak Chaparral, documentation of some species was accomplished through the use of binoculars and marking of the species' location on a field map that was later digitized for incorporation into the Geographic Information System (GIS) database. In addition to recording special-status plant species observed during this survey, biologists assessed the BSA to refine the probability for the other target special-status plant species that will be surveyed for during spring/summer 2014. Biologists also recorded incidental detections of special-status wildlife species during these focused special-status plant surveys.

Plant names used herein follow Rebman and Simpson (2006). Additional plant references used included *The Jepson manual: vascular plants of California, Second Edition* (Baldwin, et. al. 2012) and the Consortium of California Herbarium data.

## RESULTS

The late summer/fall 2013 surveys were conducted between September 25 and October 2, 2013, by Jim Rocks (RBC), Lee Ripma (RBC), Margie Mulligan (Mulligan Biological Consulting), Warren Schmidtman (SDNHM), and Brian Lohstroh (Lohstroh Biological Consulting). Twelve special-status plant species, including one federally and state-listed endangered plant, San Diego button-celery (*Eryngium aristulatum* ssp. *parishii*), were observed during the late summer/fall 2013 surveys (Attachment A: Figure 3). The special-status plant survey data was compiled in GIS, and the special-status plant species location maps are attached as Attachment A: Figure 3. In order of highest to lowest sensitivity, the special-status plant species observed to date include:

- San Diego button-celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Nuttall's scrub oak (*Quercus dumosa*; CRPR 1B.1)
- San Diego goldenstar (*Bloomeria clevelandii*; CRPR 1B.1)
- summer-holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; 1B.2)
- Torrey pine (as planted individuals) (*Pinus torreyana*; CRPR 1B.2)
- spineshrub (*Adolphia californica*; CRPR 2B.1)
- coast barrel cactus (*Ferocactus viridescens*; CRPR 2B.1)
- San Diego marsh-elder (*Iva hayesiana*; CRPR 2B.2)
- graceful tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- spiny rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Palmer's sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego sunflower (*Bahiopsis [Viguiera] laciniata*; CRPR 4.2)

In addition to the twelve species listed above, Table 2, below, summarizes each target species' potential to occur within the BSA, sensitivity status, and typical habitat(s). In addition, the appropriate survey period for each species is noted. The survey period is defined here as the time of year the plant species can be observed and the population size fully documented. Some species, such as evergreen shrubs, can be documented year-round, while others have a short period during spring in which they can be observed.

**Table 2. Special-status Plant Species with Potential to Occur within the BSA**

Species Name	Potential to Occur	Status	Habitat Description*	Survey Period	
				Spring/ Summer	Late Summer/ Fall
San Diego thornmint ( <i>Acanthomintha ilicifolia</i> )	Moderate. Known from Los Penasquitos Canyon Preserve and suitable soils present but suitable habitat limited. Critical Habitat occurs within 0.25 miles of the alignment.	FT SE CRPR 1B.1 NCCP-NE	Annual herb. Blooms Apr-Jun. Clay soils associated with vernal pools in chaparral, coastal sage scrub, grassland. Elev 30-3,150ft.	X	
spineshrub ( <i>Adolphia californica</i> )	Present. Observed in many areas of the BSA; dominant in some Diegan coastal sage scrub areas.	CRPR 2B.1	Deciduous shrub. Blooms Dec-May. Clay soils in chaparral, coastal sage scrub, grassland. Elev 145-2,430ft.	X	X
San Diego ambrosia ( <i>Ambrosia pumila</i> )	Very low. Known historically from vicinity but suitable habitat not observed during fall 2013 surveys.	FE CRPR 1B.1 NCCP-NE	Rhizomatous herb. Blooms Apr-Oct. Often in disturbed areas with sandy loam or clay soils, sometimes alkaline areas, in chaparral, coastal sage scrub, grassland, vernal pools. Elev 65-1,365ft.	X	X
Del Mar manzanita ( <i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i> )	Moderate. Known from the Del Mar Mesa Preserve and from previous SDGE project surveys but suitable habitat limited and species not observed during fall 2013 surveys.	FE CRPR 1B.1 NCCP	Evergreen shrub. Blooms Dec-Jun. Sandy soils in maritime chaparral. Elev 0-1,200ft.	X	X
Palmer's sagewort ( <i>Artemisia palmeri</i> )	Present. Observed in small patches along several drainages.	CRPR 4.2	Deciduous shrub. Blooms May-Sep. Sandy, mesic areas in chaparral, coastal sage scrub, riparian habitats. Elev 45-3,005ft.	X	X
Encinitas baccharis ( <i>Baccharis vanessae</i> )	Low. Known historically from vicinity and suitable habitat present, but species extremely rare and not observed during fall 2013 surveys.	FT SE CRPR 1B.1 NCCP-NE	Deciduous shrub. Blooms Aug-Nov. Maritime chaparral, cismontane woodland. Elev 195-2,365ft.	X	X
San Diego sunflower ( <i>Bahiopsis [Viguiera] laciniata</i> )	Present. Observed in areas recently revegetated. Not observed naturally occurring.	CRPR 4.2	Perennial shrub. Blooms Feb-Aug. Dry slopes in coastal sage scrub and chaparral. Elev 195-2,460ft.	X	X
San Diego goldenstar ( <i>Bloomeria clevelandii</i> )	Present. Observed in native grassland in one location.	CRPR 1B.1 NCCP	Bulbiferous herb. Blooms Apr-May. Typically clay soils in vernal pools associated with chaparral, coastal sage scrub, grassland. Elev 160-1,525ft.	X	

**Table 2 (cont.): Special-status Plant Species with Potential to Occur within the BSA**

Species Name	Potential to Occur	Status	Habitat Description*	Survey Period	
				Spring/ Summer	Late Summer/ Fall
Orcutt's brodiaea ( <i>Brodiaea orcuttii</i> )	Moderate. Known historically from vicinity but limited suitable habitat present.	CRPR 1B.1 NCCP	Bulbiferous herb. Blooms Apr-Jul. Typically mesic, clay soils (sometimes serpentinite) in vernal pools associated with chaparral, cismontane woodland, closed-cone coniferous forest, meadows & seeps, grassland. Elev 30-1,692ft.	X	
Brewer's calandrinia ( <i>Calandrinia breweri</i> )	High. Known from Los Penasquitos Canyon Preserve and suitable habitat present.	CRPR 4.2	Annual herb. Blooms Mar – Jun. Sandy/loamy soils typically after fire or other disturbance. Elev 30-4,005ft.	X	
wart-stemmed ceanothus ( <i>Ceanothus verrucosus</i> )	Moderate. Known historically from vicinity but limited suitable habitat present and not observed during fall 2013 surveys.	CRPR 2B.2 NCCP	Evergreen shrub. Blooms Dec-May. Chaparral. Elev 3-1,250ft.	X	X
southern tarplant ( <i>Centromadia parryi</i> ssp. <i>australis</i> )	Moderate. Known historically from vicinity but limited suitable habitat present and not observed during fall 2013 surveys.	CRPR 1B.1	Annual herb. Blooms May-Nov. Vernal pools, along the margins of marshes, in vernal mesic areas within grassland. Elev 0-1,395ft.	X	X
long-spined spineflower ( <i>Chorizanthe polygonoides</i> var. <i>longispina</i> )	High. Known historically from vicinity and suitable habitat present.	CRPR 1B.2	Annual herb. Blooms Apr-Jul. Clay soils, vernal pools in chaparral, coastal sage scrub, meadows & seeps, grassland. Elev 95-5,020ft.	X	
summer-holly ( <i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i> )	Present. Observed in chaparral, primarily in the Del Mar Mesa Preserve and adjacent areas.	CRPR 1B.2	Evergreen shrub. Blooms Apr-Jun. Chaparral, cismontane woodland. Elev 95-2,595ft.	X	X
Del Mar Mesa sand aster ( <i>Corethrogyne filaginifolia</i> var. <i>linifolia</i> )	Low. Known WNW of the BSA but suitable habitat not observed. Not observed during fall 2013 surveys.	CRPR 1B.1 NCCP	Perennial herb. Blooms May-Sep. Coastal bluff scrub, maritime chaparral, coastal sage scrub. Elev 45-495ft.	X	X
short-leaved dudleya ( <i>Dudleya brevifolia</i> )	Very low. Species very rare and well documented. Known to occur to the west in Carmel Mountain Preserve but not within the BSA.	SE CRPR 1B.1 NCCP-NE	Perennial herb. Blooms Apr-May. Sandstone, openings in maritime chaparral, coastal sage scrub. Elev 95-820ft.	X	
variegated dudleya ( <i>Dudleya variegata</i> )	Moderate. Known historically from vicinity but species very rare and limited suitable habitat present. BSA also outside of species' core distribution.	CRPR 1B.2 NCCP	Perennial herb. Blooms Apr-May. Clay soils associated with vernal pools in chaparral, cismontane woodland, coastal sage scrub, grassland. Elev 10-1,905ft.	X	

**Table 2 (cont.): Special-status Plant Species with Potential to Occur within the BSA**

Species Name	Potential to Occur	Status	Habitat Description*	Survey Period	
				Spring/ Summer	Late Summer/ Fall
sticky dudleya ( <i>Dudleya viscida</i> )	Very low. Known from populations to the north but very limited suitable habitat present.	CRPR 1B.2 NCCP	Perennial herb. Blooms May-Jun. Rocky areas in coastal bluff scrub, chaparral, coastal scrub, cismontane woodland. Elev 30-1,805ft.	X	
San Diego button-celery ( <i>Eryngium aristulatum</i> var. <i>parishii</i> )	Present. Observed in vernal pools near the Los Penasquitos Substation and present in the Del Mar Mesa Preserve.	FE SE CRPR 1B.1 NCCP	Annual/perennial herb. Blooms Apr-Jun. Vernal pools in coastal sage scrub, grassland. Elev 65-2,035ft.	X	
San Diego barrel cactus ( <i>Ferocactus viridescens</i> )	Present. Observed in several areas on dry, west- or south- facing slopes, often with spineshrub.	CRPR 2B.1 NCCP	Stem succulent. Blooms May-Jun. Chaparral, coastal sage scrub, grassland, vernal pools. Elev 10-1,480ft.	X	X
Palmer's grapplinghook ( <i>Harpagonella palmeri</i> )	High. Known historically from the vicinity and suitable habitat present.	CRPR 4.2 NCCP	Annual herb. Blooms Mar-May. Clay soils in chaparral, coastal sage scrub, grassland, disturbed areas. Elev 65-3,135ft.	X	
graceful tarplant ( <i>Holocarpha virgata</i> ssp. <i>elongata</i> )	Present. Observed in disturbed areas near towers and grasslands.	CRPR 4.2	Annual herb. Blooms May-Nov. Chaparral, cismontane woodland, coastal sage scrub, grassland. Elev 195-3,610ft.	X	X
decumbent goldenbush ( <i>Isocoma menziesii</i> var. <i>decumbens</i> )	Moderate. Known historically from vicinity based on historical voucher specimens, many of which need further verification because this highly variable species is easily misidentified. Suitable habitat present but not observed during fall 2013 surveys.	CRPR 1B.2	Shrub. Blooms Apr-Nov. sandy, often disturbed, areas in chaparral, coastal sage scrub. Elev 30-445ft.	X	X
San Diego marsh-elder ( <i>Iva hayesiana</i> )	Present. Observed along drainages and in revegetated areas.	CRPR 2B.2	Perennial herb. Blooms Apr-Oct. Drainages, marshes Playas. Elev 30-1,640ft.	X	X
spiny rush ( <i>Juncus acutus</i> ssp. <i>leopoldii</i> )	Present. Observed along drainages and in revegetated areas.	CRPR 4.2	Perennial, rhizomatous herb. Blooms Mar-Jun. along drainages, alkali marsh, seeps. Elev 10-2,955ft.	X	X
Robinson's pepper-grass ( <i>Lepidium virginicum</i> var. <i>robinsonii</i> )	Moderate. Known from the Del Mar Mesa Preserve but only limited suitable habitat present.	CRPR 4.3	Annual herb. Blooms Jan-Jul. Chaparral, coastal sage scrub. Elev 3-2,905ft.	X	

**Table 2 (cont.): Special-status Plant Species with Potential to Occur within the BSA**

Species Name	Potential to Occur	Status	Habitat Description*	Survey Period	
				Spring/ Summer	Late Summer/ Fall
willow monardella ( <i>Monardella viminea</i> )	Very low. Known historically from vicinity but only marginally suitable habitat occurs and not observed during fall 2013 surveys.	FE SE CRPR 1B.1 NCCP-NE	Perennial herb. Blooms Jun-Aug. Alluvial, ephemeral washes in chaparral, coastal sage scrub, riparian habitats. Elev 160-740ft.	X	X
little mousetail ( <i>Myosurus minimus</i> ssp. <i>apus</i> )	Very low. Vernal pool habitat present but BSA outside the known range of this species in San Diego County.	CRPR 3.1 NCCP	Annual herb. Blooms Mar-Jun. Alkaline soils in vernal pools, grassland. Elev 65-2,100ft.	X	
California Orcutt grass ( <i>Orcuttia californica</i> )	Very low. Vernal pool habitat present but outside the known range of this species in San Diego County.	FE SE CRPR 1B.1 NCCP	Annual herb. Blooms Apr-Aug. Vernal pools. Elev 45-2,165ft.	X	
Torrey pine ( <i>Pinus torreyana</i> ssp. <i>torreyana</i> )	Present (as planted individuals at Los Penasquitos substation). Not observed naturally occurring.	CRPR 1B.2 NCCP	Evergreen tree. Sandstone areas in chaparral, closed-cone coniferous forest. Elev 245-525ft.	X	X
San Diego mesa mint ( <i>Pogogyne abramsii</i> )	High. Known from vernal pools within the Del Mar Mesa Preserve and suitable habitat present.	FE SE CRPR 1B.1 NCCP	Annual herb. Blooms Mar-Jul. Vernal pools. Elev 295-660ft.	X	
Nuttall's scrub oak ( <i>Quercus dumosa</i> )	Present. Dominant in Scrub Oak Chaparral and also occurs as scattered individuals.	CRPR 1B.1	Evergreen shrub. Blooms Feb-Apr. Sandy or clay loam soils associated with chaparral, coastal sage scrub, closed-cone coniferous forest. Elev 45-1,315ft.	X	X
chaparral ragwort ( <i>Senecio aphanactis</i> )	Moderate. Known from the Del Mar Mesa Preserve but species very rare and limited suitable habitat present.	CRPR 2B.2	Annual herb. Blooms Jan-Apr. Chaparral, coastal sage scrub, cismontane woodland. Elev 45-2,625ft.	X	
purple stemodia ( <i>Stemodia durantifolia</i> )	Very Low. Known from rocky drainages on MCAS Miramar and Mission Trails Regional Park but very limited suitable habitat present.	CRPR 2B.1	Perennial herb. Blooms Jan-Dec. Rocky, seasonally dry drainages in San Diego County. Elev 90-985ft.	X	

See Table 1 for status abbreviation explanations. NCCP=NCCP-covered species; NCCP-NE=SDG&E Narrow Endemic.  
 \* = This information is from online CNPS Rare Plant Inventory and observation of species in specific habitats in San Diego County.

Table 3 summarizes the special-status plant species that were included in the CNDDDB results, which included the alignment and a 5-mile buffer, but that do not have potential to occur within the BSA and describes why they were excluded from the target species list.

**Table 3. Special-status Plant Species with No Potential to Occur within the BSA**

Species Name	Potential to Occur	Status	Habitat Description
Nuttall's acmispon ( <i>Acmispon</i> [ <i>Lotus nuttallianus</i> ] <i>prostrata</i> )	None. Species restricted to immediate coast. BSA outside of elevation range for species.	CRPR 1B.1 NCCP	Annual herb. Blooms Mar-Jun. Coastal dunes, coastal sage scrub. Elev 0-35ft.
Shaw's agave ( <i>Agave shawii</i> var. <i>shawii</i> )	None. Species restricted to immediate coast.	CRPR 2B.1 NCCP-NE	Leaf succulent. Blooms Sep-May. Coastal bluff scrub, coastal sage scrub. Elev 35-395ft.
aphanisma ( <i>Aphanisma blitoides</i> )	None. Species restricted to immediate coast.	CRPR 1B.2 NCCP-NE	Annual herb. Blooms Mar-Jun. Coastal bluff scrub, coastal dunes, coastal sage scrub. Elev 3-1,000ft.
Otay manzanita ( <i>Arctostaphylos otayensis</i> )	None. Species restricted to Otay Mtn. area in southern San Diego County.	CRPR 1B.2 NCCP	Evergreen shrub. Blooms Jan-Apr. Chaparral, cismontane woodland. Elev 900-5,580ft.
coastal dunes milk-vetch ( <i>Astragalus tener</i> var. <i>titi</i> )	None. Species restricted to immediate coast.	FE SE CRPR 1B.1 NCCP-NE	Annual herb. Blooms Mar-May. Vernal mesic areas in coastal dunes, coastal bluff scrub, coastal prairie. Elev 3-165ft.
Coulter's saltbush ( <i>Atriplex coulteri</i> )	None. Suitable habitat not present.	CRPR 1B.2	Perennial herb. Blooms Mar-Oct. Alkaline or clay soils in coastal dunes, coastal bluff scrub, coastal sage scrub, grassland. Elev 10-1,510ft.
South Coast saltscale ( <i>Atriplex pacifica</i> )	None. Suitable habitat not present.	CRPR 1B.2	Annual herb. Blooms Mar-Oct. Playas, coastal dunes, coastal bluff scrub, coastal sage scrub. Elev 0-460ft.
Nevin's barberry ( <i>Berberis nevinii</i> )	None. Suitable habitat not present.	FE SE CRPR 1B.1 NCCP-NE	Evergreen shrub. Blooms Mar-Jun. Sandy or gravelly soils in chaparral, coastal sage scrub, cismontane woodland, riparian scrub. Elev 895-2,710ft.
golden-spined cereus ( <i>Bergerocactus emoryi</i> )	None. Suitable habitat not present.	CRPR 2B.2	Stem succulent. Blooms May-Jun. Sandy soils in chaparral, coastal sage scrub, closed-cone coniferous forest. Elev 10-1,295ft.
thread-leaved brodiaea ( <i>Brodiaea filifolia</i> )	None. Outside known range of species and specific habitat requirements were not observed in BSA.	FT SE CRPR 1B.1 NCCP	Bulbiferous herb. Blooms Mar-Jun. Typically clay soils in vernal pools associated with playas, chaparral, coastal sage scrub, cismontane woodland, grassland. Elev 80-3,675ft.
Dunn's mariposa lily ( <i>Calochortus dunnii</i> )	None. Suitable habitat not present.	SR CRPR 1B.2 NCCP	Bulbiferous herb. Blooms Apr-Jun. Rocky, gabbroic or metavolcanic areas in chaparral, closed-cone coniferous forest, grassland. Elev 605-6,005ft.
Payson's jewelflower ( <i>Caulanthus simulans</i> )	None. Outside known range of species.	CRPR 4.2 NCCP	Annual herb. Blooms Mar-May. Sandy, granitic areas in chaparral, coastal sage scrub. Elev 295-7,220ft.
Lakeside ceanothus ( <i>Ceanothus cyaneus</i> )	None. Outside known range of species.	CRPR 1B.2 NCCP	Evergreen shrub. Blooms Apr-Jun. Chaparral, closed-coned coniferous forest. Elev 770-2,480ft.
Orcutt's pincushion ( <i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i> )	None. Species restricted to immediate coast.	CRPR 1B.1	Annual herb. Blooms Jan-Aug. Sandy soils in coastal dunes, coastal bluff scrub. Elev 0-330ft.
salt marsh bird's-beak ( <i>Chloropyron maritimum</i> ssp. <i>maritimum</i> )	None. Species restricted to immediate coast. BSA outside of elevation range for species.	FE SE CRPR 1B.2 NCCP-NE	Hemiparasitic annual herb. Blooms Mar-Oct. Coastal dunes, coastal salt marsh. Elev 0-100ft.



**Table 3 (cont.): Special-status Plant Species with No Potential to Occur within the BSA**

Species Name	Potential to Occur	Status	Habitat Description*
Orcutt's spineflower ( <i>Chorizanthe orcuttiana</i> )	None. Species restricted to immediate coast.	FE SE CRPR 1B.1 NCCP-NE	Annual herb. Blooms Mar-May. Sandy openings in chaparral, coastal sage scrub, closed-cone coniferous forest. Elev 10-410ft.
San Miguel savory ( <i>Clinopodium chandleri</i> )	None. Outside known range of species.	CRPR 1B.2 NCCP	Shrub. Blooms Mar-Jul. Rocky, gabbroic or metavolcanic areas in chaparral, coastal sage scrub, cismontane woodland, riparian woodland, grassland. Elev 390-3,530ft.
San Diego sand aster ( <i>Corethrogyne filaginifolia</i> var. <i>incana</i> )	None. Species restricted to immediate coast.	CRPR 1B.1	Perennial herb. Blooms Jun-Sep. Coastal bluff scrub, chaparral, coastal sage scrub. Elev 10-380ft.
snake cholla ( <i>Cylindropuntia californica</i> var. <i>californica</i> )	None. Outside known range of species.	CRPR 1B.1 NCCP-NE	Stem succulent. Blooms Apr-May. Chaparral, coastal sage scrub. Elev 95-495ft.
Otay tarplant ( <i>Deinandra conjugens</i> )	None. Outside known range of species.	FT SE CRPR 1B.1 NCCP	Annual herb. Blooms May-Jun. Clay soils in coastal sage scrub, grassland. Elev 80-985ft.
Orcutt's bird's-beak ( <i>Dicranostegia orcuttiana</i> )	None. Outside known range of species.	CRPR 2B.1 NCCP	Hemiparasitic annual herb. Blooms Apr-Jun. Coastal sage scrub. Elev 30-1,150ft.
many-stemmed dudleya ( <i>Dudleya multicaulis</i> )	None. Outside known range of species.	CRPR 1B.2 NCCP	Perennial herb. Blooms Apr-Jul. Often clay soils in chaparral, coastal sage scrub, grassland. Elev 45-2,595ft.
Palmer's goldenbush ( <i>Ericameria palmeri</i> ssp. <i>palmeri</i> )	None. Suitable habitat not present.	CRPR 1B.1 NCCP-NE	Evergreen shrub. Blooms Sep-Nov. Mesic areas in chaparral, coastal sage scrub. Elev 95-1,970ft.
coast wallflower ( <i>Erysimum ammophilum</i> )	None. Species restricted to immediate coast.	CRPR 1B.2 NCCP-NE	Perennial herb. Blooms Feb-Jun. Sandy openings in coastal dunes, chaparral, coastal sage scrub. Elev 0-200ft.
cliff spurge ( <i>Euphorbia misera</i> )	None. Species restricted to immediate coast.	CRPR 2B.2	Shrub. Blooms Dec-Aug. Rocky areas in coastal bluff scrub, coastal sage scrub, Mojavean desert scrub. Elev 30-1,640ft.
Tecate cypress ( <i>Hesperocyparis [Cupressus] forbesii</i> )	None. Outside known range of species.	CRPR 1B.1 NCCP	Perennial evergreen tree. Chaparral in southern San Diego County. Elev 260-4,925ft.
beach goldenaster ( <i>Heterotheca sessiliflora</i> ssp. <i>sessiliflora</i> )	None. Species restricted to immediate coast.	CRPR 1B.1	Perennial herb. Blooms Mar-Dec. Coastal dunes, chaparral, coastal sage scrub. Elev 0-4,020ft.
Coulter's goldfields ( <i>Lasthenia glabrata</i> ssp. <i>coulteri</i> )	None. Suitable habitat not present.	CRPR 1B.1	Annual herb. Blooms Feb-Jun. Coastal salt marsh, playas, vernal pools. Elev 3-4,005ft.
heart-leaved pitcher sage ( <i>Lepechinia cardiophylla</i> )	None. Suitable habitat not present. BSA outside of elevation range for species.	CRPR 1B.2 NCCP	Shrub. Blooms Apr-Jun. Chaparral, cismontane woodland, closed-cone coniferous forest. Elev 1,705-4,495ft.
Gander's pitcher sage ( <i>Lepechinia gander</i> )	None. Outside known range of species.	CRPR 1B.3 NCCP	Shrub. Blooms Jun-Jul. Gabbroic or metavolcanic areas in chaparral, coastal sage scrub, grassland, closed-cone coniferous forest. Elev 1,000-3,300ft.
sea dahlia ( <i>Leptosyne maritima</i> )	None. Suitable habitat not present.	CRPR 2B.2	Perennial herb. Blooms Mar-May. Coastal bluff scrub, coastal sage scrub. Elev 15-495ft.

**Table 3 (cont.): Special-status Plant Species with No Potential to Occur within the BSA**

Species Name	Potential to Occur	Status	Habitat Description*
felt-leaved monardella ( <i>Monardella hypoleuca</i> ssp. <i>lanata</i> )	None. Outside known range of species.	CRPR 1B.2 NCCP	Rhizomatous herb. Blooms Jun-Aug. chaparral, cismontane woodland. Elev 980-5,170ft.
spreading navarretia ( <i>Navarretia fossalis</i> )	None. Vernal pools present but outside known range of species.	FT CRPR 1B.1 NCCP	Annual herb. Blooms Apr-Jun. Shallow freshwater associated with marshes, playas, vernal pools, chenopod scrub. Elev 95-2,150ft.
coast woolly-heads ( <i>Nemacaulis denudata</i> var. <i>denudata</i> )	None. Species restricted to immediate coast.	CRPR 1B.2	Annual herb. Blooms Apr-Sep. Coastal dunes. Elev 0-330ft.
Dehesa beargrass ( <i>Nolina interrata</i> )	None. Outside known range of species and suitable soils not present.	SE CRPR 1B.1 NCCP	Perennial herb. Blooms Jun-Jul. Gabbroic, metavolcanic, or serpentinite areas in chaparral. Elev 605-2,805ft.
short-lobed broomrape ( <i>Orobanche parishii</i> ssp. <i>brachyloba</i> )	None. Suitable habitat not present.	CRPR 4.2	Parasitic, perennial herb. Blooms Apr-Oct. Sandy soils associated with coastal bluff scrub, coastal dunes, coastal sage scrub. Elev 10-1,000ft.
Gander's ragwort ( <i>Packera ganderi</i> )	None. Outside known range of species and suitable soils not present. BSA is outside of elevation range for species.	SR CRPR 1B.2 NCCP	Perennial herb. Blooms Apr-Jun. Gabbroic outcrops & burned areas in chaparral. Elev 1,310-3,940ft.
Otay Mesa mint ( <i>Pogogyne nudiuscula</i> )	None. Vernal pools present but outside known range of species.	FE SE CRPR 1B.1 NCCP-NE	Annual herb. Blooms May-Jul. Vernal pools. Elev 295-820ft.
small-leaved rose ( <i>Rosa minutifolia</i> )	None. Outside known range of species.	SE CRPR 2B.1 NCCP	Deciduous shrub. Blooms Jan-Jun. Chaparral, coastal sage scrub. Elev 490-525ft.
estuary seablite ( <i>Suaeda esteroa</i> )	None. Species restricted to immediate coast. BSA is outside of elevation range for species.	CRPR 1B.2	Perennial herb. Blooms May-Oct. Coastal salt marsh. Elev 0-20ft.
Parry's tetraococcus ( <i>Tetradococcus dioicus</i> )	None. Suitable habitat, including soils, not present.	CRPR 1B.2 NCCP	Deciduous shrub. Blooms Apr-May. Chaparral, coastal sage scrub. Elev 540-3,280ft.

See Table 1 for status abbreviation explanations. NCCP=NCCP-covered species; NCCP-NE=SDG&E Narrow Endemic.

\* = This information is from online CNPS Rare Plant Inventory and observation of species in specific habitats in San Diego County.

## SUMMARY & DISCUSSION

Twelve special-status plant species were documented within the BSA during the late summer/fall surveys. All twelve species are considered to be special-status plant species based on their federal, state, and/or CRPR listing.

Many of the special-status plant species listed in Table 2 as having potential to occur are spring annuals, bulbs, or otherwise not observable during the late summer/fall survey period. Therefore, two additional surveys will be conducted within the BSA in spring/summer 2014 to document the presence/absence of target special-status plant species that were not observable during the late summer/fall surveys.

The results of all three focused special-status plant species surveys will be combined and evaluated to fully assess potential impacts to the special-status plant species within the Proposed Project area. It is mandatory that federally listed, state-listed, and CRPR List 1 and 2 species be fully

considered during the California Environmental Quality Act (CEQA) analysis, and it is strongly recommended that CRPR List 3 and 4 species be evaluated during the CEQA analysis because many of these species are important on a local level.

Please do not hesitate to contact me at [melissa@busbybiological.com](mailto:melissa@busbybiological.com) or 858.334.9507 if you have any questions.

Sincerely,



Melissa Busby  
Owner/Principal Biologist  
Busby Biological Services, Inc.



Jim Rocks  
Owner/Principal Biologist  
Rocks Biological Consulting, Inc.

cc: Elisha Back, TRC Solutions, Inc.  
Rob Fletcher, SDG&E

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### Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Location

Figure 1

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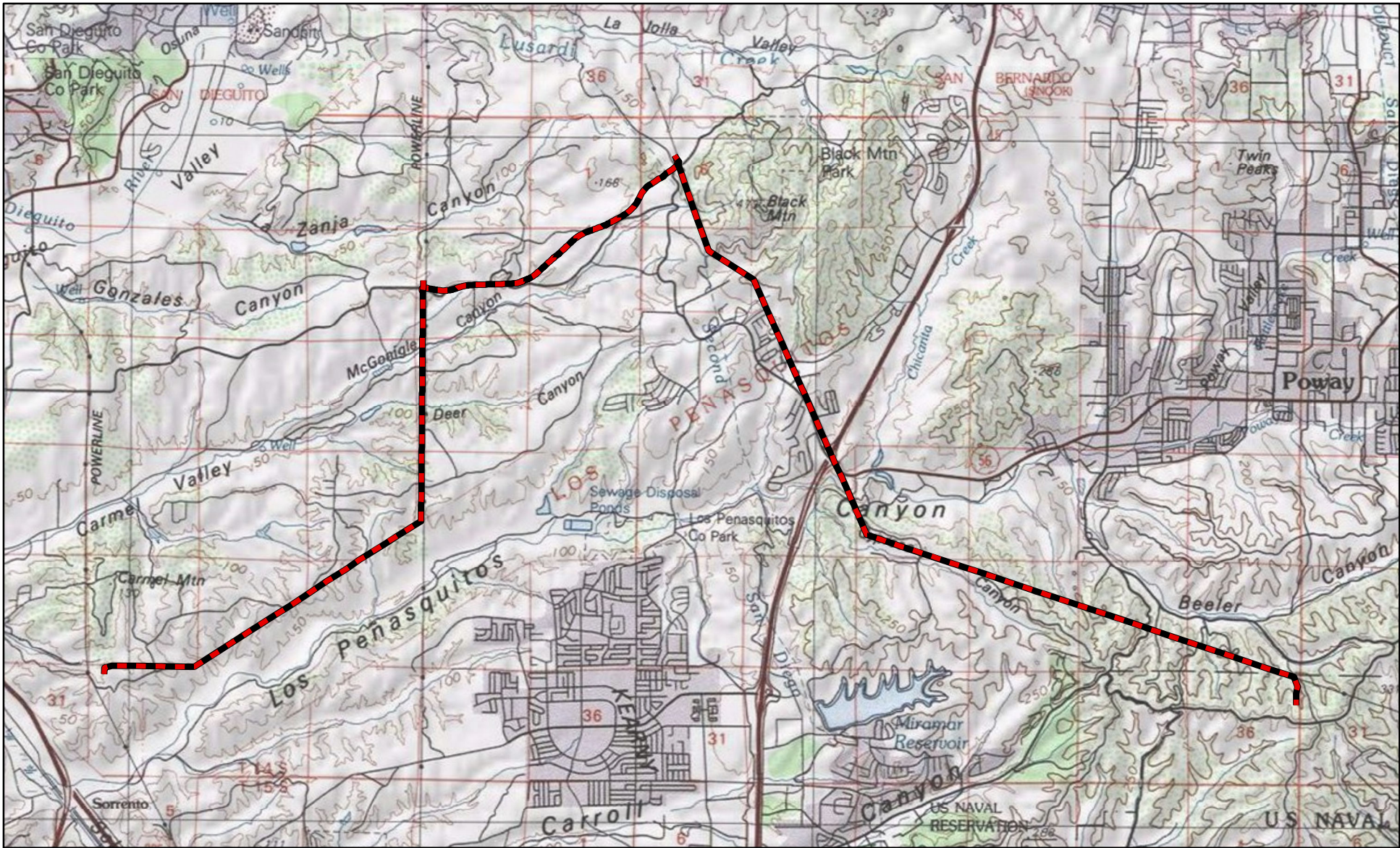
— Proposed Project



3/18/2014



Sources: SDG&E; National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, IPC



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 Proposed Project

### Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Vicinity

Figure 2

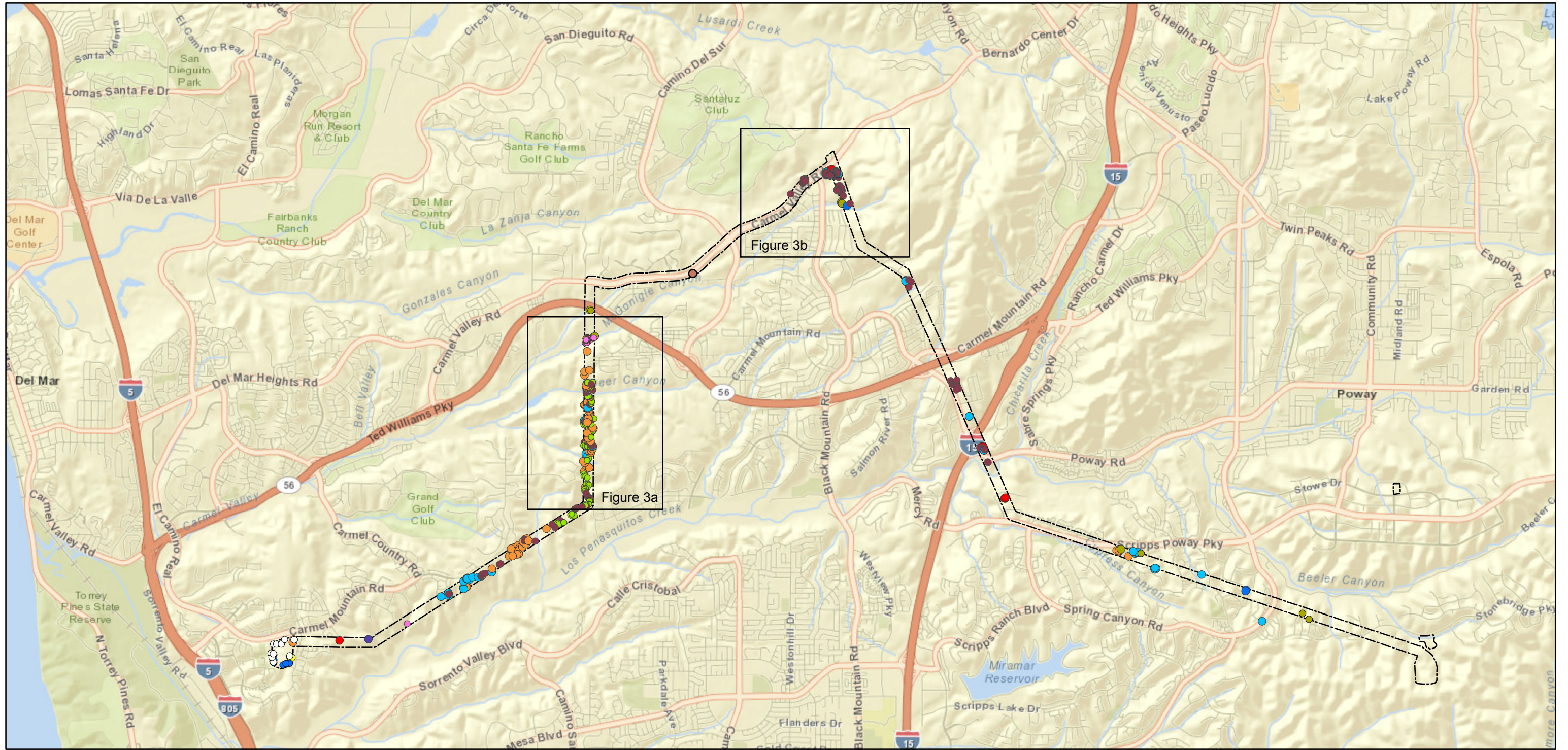


Date: 3/27/2014



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**Sycamore to Peñasquitos 230 kV Transmission Line Project**  
Proposed Project  
Fall 2013 Special-Status Plant Survey Results  
**Figure 3**

<ul style="list-style-type: none"> <li>● <i>Adolphia californica</i> Spineshrub 2B.1</li> <li>● <i>Artemisia palmeri</i> Palmer's Sagewort 4.2</li> <li>● <i>Bahiopsis laciniata</i> San Diego Sunflower 4.2</li> <li>● <i>Bloomeria clevelandii</i> San Diego Goldenstar 1B.1</li> <li>● <i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i> Summer-Holly 1B.2</li> <li>● <i>Eryngium aristulatum</i> Jepson var. <i>parishii</i> San Diego Button-Celery 1B.1, FE, CE</li> </ul>	<ul style="list-style-type: none"> <li>● <i>Juncus acutus</i> ssp. <i>leopoldii</i> Spiny Rush 4.2</li> <li>● <i>Holocarpha virgata</i> ssp. <i>elongata</i> Graceful Tarplant 4.2</li> <li>● <i>Iva hayesiana</i> San Diego Marsh-Elder 2B.2</li> <li>○ <i>Pinus torreyana</i> Torrey Pine 1B.2</li> <li>● <i>Quercus dumosa</i> Nuttall's Scrub Oak 1B.1</li> <li>● <i>Ferocactus viridescens</i> var. <i>viridescens</i> Coast Barrel Cactus 2B.1</li> </ul>
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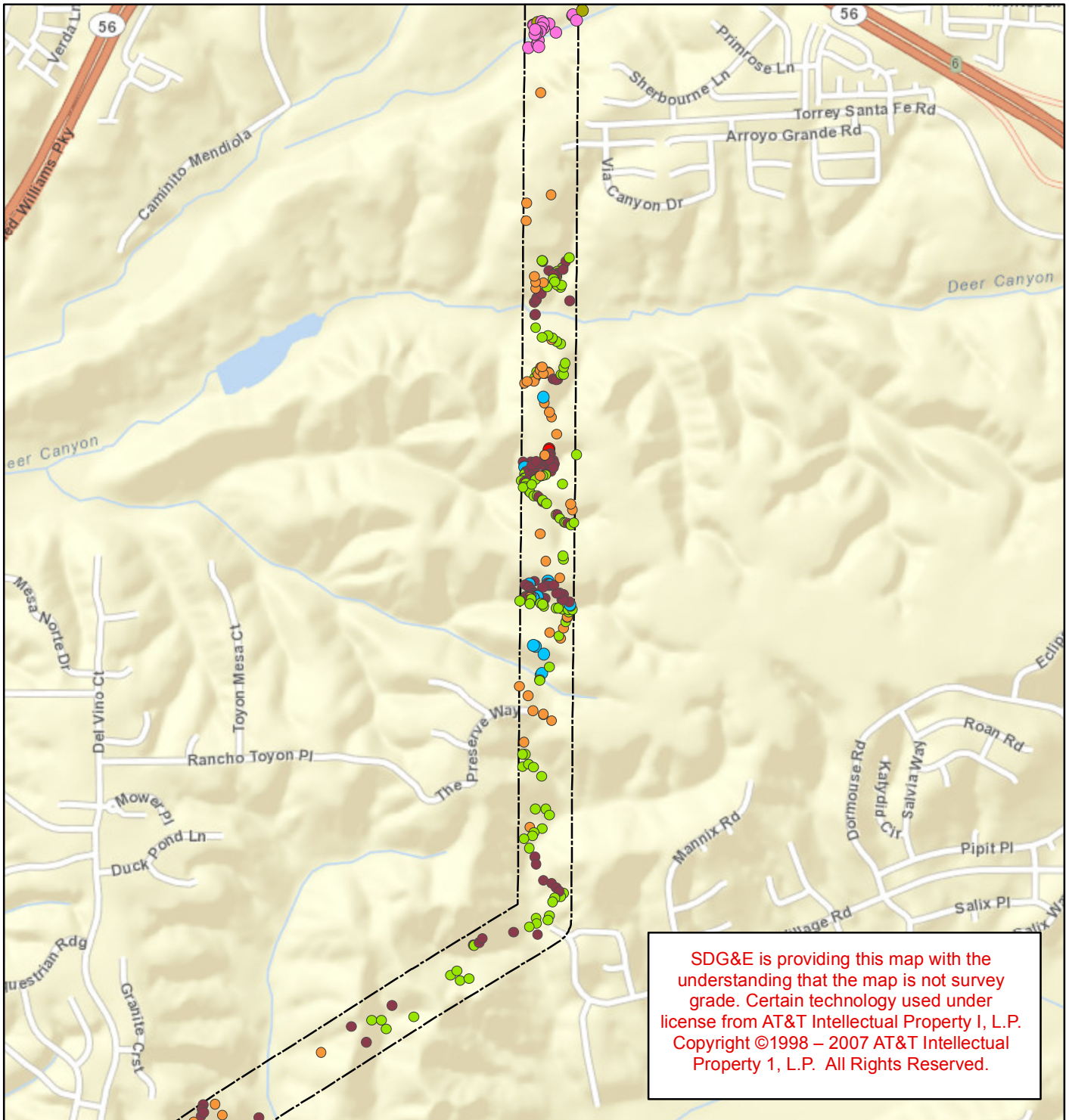
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Sources: Busby Biological, SDG&E; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom

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Date: 3/27/2014

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## Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Fall 2013

Special-Status Plant Survey Results

Figure 3a

- *Pinus torreyana* Torrey Pine 1B.2
- *Adolphia californica* Spineshrub 2B.1
- *Artemisia palmeri* Palmer's Sagewort 4.2
- *Quercus dumosa* Nuttall's Scrub Oak 1B.1
- *Iva hayesiana* San Diego Marsh-Elder 2B.2
- *Juncus acutus ssp. leopoldii* Spiny Rush 4.2
- *Bahioopsis laciniata* San Diego Sunflower 4.2
- *Bloomeria clevelandii* San Diego Goldenstar 1B.1
- *Holocarpha virgata ssp. elongata* Graceful Tarplant 4.2
- *Ferocactus viridescens var. viridescens* Coast Barrel Cactus 2B.1
- *Comarostaphylis diversifolia ssp. diversifolia* Summer-Holly 1B.2
- *Eryngium aristulatum* Jepson var. *parishii* San Diego Button-Celery 1B.1, FE, CE

Biological Survey Area

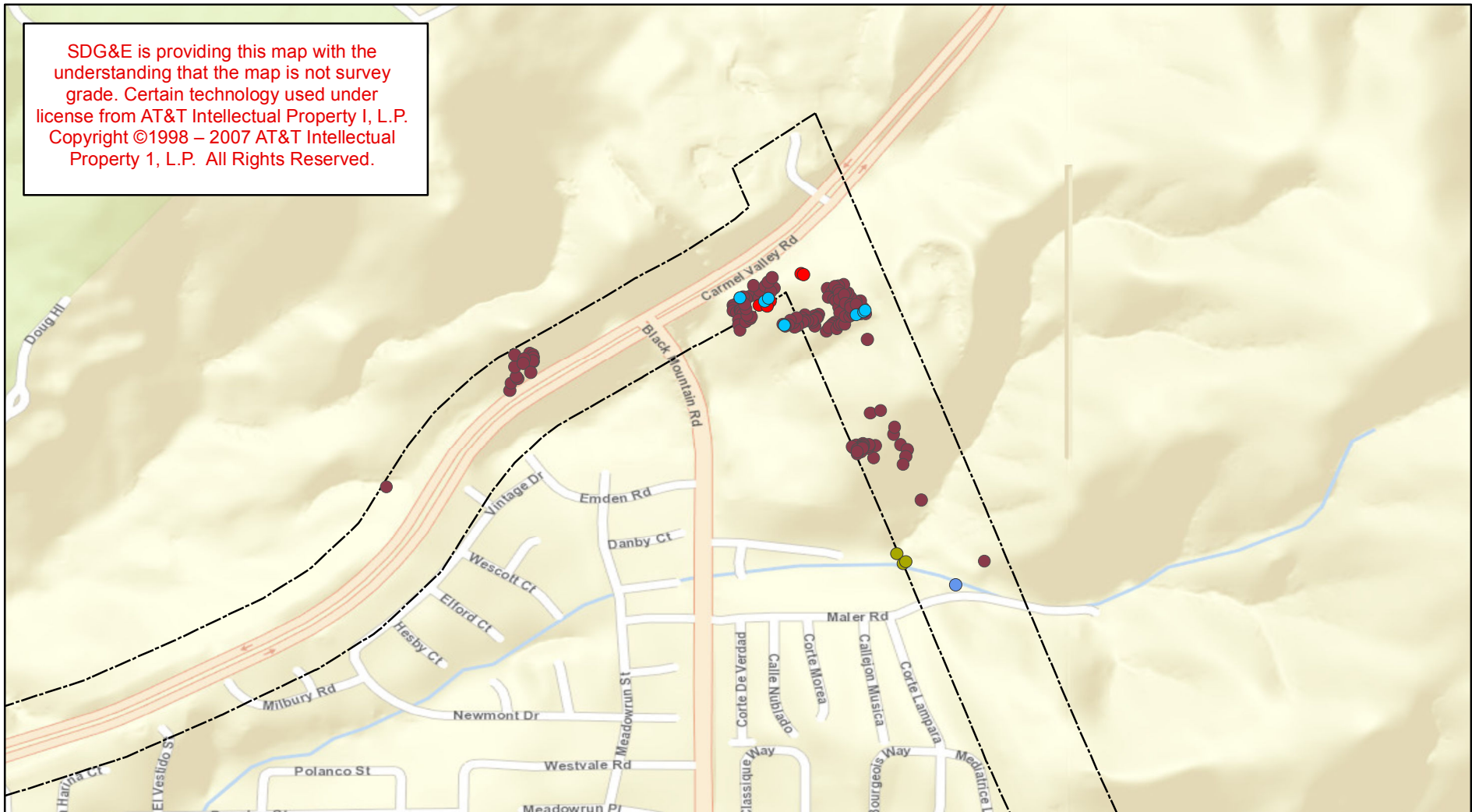


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Sources: Busby Biological, SDG&E; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom

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### Sycamore to Peñasquitos 230 kV Transmission Line Project

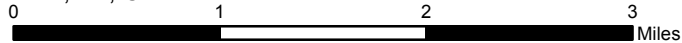
Proposed Project Fall 2013

Special-Status Plant Survey Results

Figure 3b

Biological Survey Area

- Iva hayesiana* San Diego Marsh-Elder 2B.2
- Juncus acutus ssp. leopoldii* Spiny Rush 4.2
- Bloomeria clevelandii* San Diego Goldenstar 1B.1
- Holocarpha virgata ssp. elongata* Graceful Tarplant 4.2
- Comarostaphylis diversifolia ssp. diversifolia* Summer-Holly 1B.2
- Ferocactus viridescens var. viridescens* Coast Barrel Cactus 2B.1
- Eryngium aristulatum Jepson var. parishii* San Diego Button-Celery 1B.1, FE, CE
- Pinus torreyana* Torrey Pine 1B.2
- Adolphia californica* Spineshrub 2B.1
- Artemisia palmeri* Palmer's Sagewort 4.2
- Bahiopsis laciniata* San Diego Sunflower 4.2
- Quercus dumosa* Nuttall's Scrub Oak 1B.1



3/27/2014





## **APPENDIX F**

### **Special-Status Wildlife Species with a Potential for Occurrence in Vicinity of BSA**

**Appendix F: Special-Status Wildlife Species with a Potential for Occurrence in Vicinity of BSA**

Species Name	Status	Habitat Description*	Potential for Occurrence
<b>Invertebrates</b> (Nomenclature from McLaughlin, P.A., et. al 2005; Opler and Warren 2005)			
San Diego fairy shrimp ( <i>Branchinecta sandiegonensis</i> )	FE NCCP	Vernal pools, swales, ditches, road ruts. Adult emerge typically mid-December to early May.	High. BSA within the known range of this species, suitable habitat present within BSA, CNDDDB records from BSA vicinity. Portion of BSA within designated critical habitat Subunit 4A/B (Del Mar Mesa).
Riverside fairy shrimp ( <i>Streptocephalus woottoni</i> )	FE NCCP	Vernal pools, swales, ditches, road ruts that are long-lasting (i.e., several months).	Moderate. BSA within the known range of the species and CNDDDB records from BSA vicinity, but only marginally suitable habitat for this species exists within BSA.
Thorne's hairstreak butterfly ( <i>Mitoura thornei</i> )	NCCP	Southern interior cypress forest where larval host plant Tecate cypress occurs. Adult emergence late February to March and June. Species is only known from Otay Mountain Tecate cypress stands.	Not expected. BSA outside known range of species.
Quino checkerspot butterfly ( <i>Euphydryas editha quino</i> )	FE	Open, dry areas in foothills, mesas, lake margins where principal larval host plants dot-seed plantain, and secondary host plants woolly plantain, white snapdragon, thread-leaved bird's beak, and purple owl's clover occurs. Adult emergence mid-January to April.	Moderate. Host plant and suitable habitat present onsite, known localities exist just outside of BSA.
wandering (=saltmarsh) skipper ( <i>Panoquina errans</i> )	NCCP-NE	Coastal salt marshes along river mouths and brackish waters where larval host plant salt grass occurs. Adult emergence July to September	Not expected. Species restricted to coastal salt march. No suitable habitat present within BSA or vicinity, no CNDDDB records or other known occurrences within the vicinity of BSA.
<b>Fishes</b> (Nomenclature from Nelson, J.S., et. al 2004)			
southern steelhead ( <i>Oncorhynchus mykiss irideus</i> ) (southern California DPS)	FE SSC	Marine waters; seasonally accessible rivers and streams with sufficient flows for spawning. Typically migrate to marine waters after spending two years in fresh water. Enter river systems to spawn between early November and June.	Not expected. No suitable habitat present within BSA or vicinity, no CNDDDB records or other known occurrences within the vicinity of the BSA area.

Species Name	Status	Habitat Description*	Potential for Occurrence
tidewater goby ( <i>Eucyclogobius newberryi</i> )	FE SSC	Restricted to slow-moving, coastal brackish waters, such as lagoons and upper reaches of bays at mouth of freshwater streams. In San Diego, known only from Agua Helionda Lagoon.	Not expected. No suitable habitat present within BSA or vicinity, no CNDDDB records or other known occurrences within the vicinity of BSA.
<b>Amphibians</b> (Nomenclature from Collins, J.T., et. al 2009; Crother, B. I. 2012)			
arroyo toad ( <i>Anaxyrus californicus</i> )	FE SSC NCCP	Breeds in shallow pools along stream edges with sand/gravel flats between March and June. Adults use sage scrub, mixed chaparral, oak woodland habitats up to within one mile of breeding sites.	Not expected. No CNDDDB records or other known occurrences within the vicinity of BSA, no suitable breeding habitat present within BSA or vicinity.
California red-legged frog ( <i>Rana draytonii</i> )	FT SSC NCCP-NE	Slow-moving streams and ponds with dense vegetation cover providing shade over water surface. Non-breeding estivation sites in small mammal burrows and beneath leaf litter up to 2 miles from the stream. Breed November through April. Likely extirpated from San Diego County.	Not expected. No recent records for this species in the region, species likely extirpated from County.
southern mountain yellow-legged frog ( <i>Rana muscosa</i> )	FE SSC SC-SE	Breeds in high mountain lakes, ponds, and streams. San Diego County's only known population (in 1985) was at Mt. Palomar.	Not expected. BSA outside known range of species.
western spadefoot ( <i>Spea hammondi</i> )	SSC NCCP	Washes, river floodplains, alluvial fans, playas, alkali flats, temporary ponds, vernal pools in mixed woodlands, grasslands, coastal sage scrub, and chaparral. Surface activity October to April. Oviposition late February to May in temporal pools and slow-moving sections of streams.	High. Species known to occur in the vicinity of BSA, suitable upland and breeding habitat present within BSA.
large-blotched ensatina ( <i>Ensatina eschscholtzii klauberi</i> )	SSC	Deciduous forest, evergreen forest, and chaparral with rotting logs, rocks, and bark up to 10,000 ft amsl. Breeds when surface moisture is sufficient and does not require return to water by the parent.	Not expected. BSA outside known range of species.

**Appendix F: Special-Status Wildlife Species with a Potential for Occurrence in Vicinity of BSA  
 (Continued)**

Species Name	Status	Habitat Description*	Potential for Occurrence
coast range newt ( <i>Taricha torosa torosa</i> )	SSC	Valley-foothill hardwood and hardwood-conifer forests, coastal scrub, mixed chaparral, nonnative grassland, and mixed conifer habitat at elevations from sea level to 5,900 ft amsl. Breeding occurs from December to May in ponds and streams.	Not expected. BSA outside known range of species.
<b>Reptiles</b> (Nomenclature from Collins and Taggart 2009; Crother, B. I. 2012)			
western pond turtle ( <i>Actinemys marmorata</i> )	SSC NCCP	Ponds, small lakes, marshes, slow-moving, sometimes brackish water with abundant vegetation, rocky or muddy bottoms, basking areas, in woodland, forest, and grassland. Breeds on land April-May, hibernates during the winter.	Moderate. BSA within the known range of this species, suitable habitat present within BSA.
California legless lizard ( <i>Anniella pulchra</i> )	SSC	Found in leaf litter and loose soil on beaches and in coastal scrub, chaparral, and open riparian habitats. Sandy washes and beach dunes are used for burrowing, while logs and leaf litter are used for cover and feeding.	High. BSA within the known range of this species, suitable habitat present within BSA.
San Diego banded gecko ( <i>Coleonyx variegatus abbotti</i> )	NCCP	Coastal slope of southern California, where it prefers rocky areas in coastal sage scrub and chaparral habitats. Most often observed above 500 ft amsl in elevation.	Moderate. BSA is within the range of the species, but is more commonly found at higher elevations outside of BSA.
coast [Blainville's ] horned lizard ( <i>Phrynosoma blainvillii</i> )	SSC NCCP	Open chaparral, coastal sage scrub with sandy, loose soil. Partially dependent on harvester ants for forage.	High. BSA within the known range of this species, suitable habitat present within BSA.
Coronado skink ( <i>Plestiodon skiltonianus interparietalis</i> )	SSC NCCP	Associated with mesic areas: grasslands, open woodlands and forest, broken chaparral, rocky habitats near streams.	High. BSA within the known range of this species, suitable habitat present within BSA.

Species Name	Status	Habitat Description*	Potential for Occurrence
[Belding's] orange-throated whiptail ( <i>Aspidoscelis hyperythra beldingi</i> )	SSC NCCP	Pristine open coastal sage scrub, chaparral, and streamside growth with loose sandy soils, revegetation sites.	Present. Species observed during biological surveys. Suitable habitat present throughout BSA and vicinity.
rosy boa ( <i>Charina trivirgata</i> )	NCCP	Coastal sage scrub and chaparral habitats, rocky areas.	High. BSA within the known range of this species, suitable habitat present within BSA.
coast patch-nosed snake ( <i>Salvadora hexalepis virgultea</i> )	SSC NCCP	Chaparral and semi-arid areas with brushy or shrubby vegetation in canyons, plains and rocky hillsides.	High. BSA within the known range of this species, suitable habitat present within BSA.
red diamond rattlesnake ( <i>Crotalus ruber</i> )	SSC NCCP	Coastal sage scrub, open chaparral, woodland, grassland, and cultivated areas.	High. BSA within the known range of this species, suitable habitat present within BSA.
San Diego ringneck snake ( <i>Diadophis punctatus similis</i> )	NCCP	Moist woodlands, grassland, chaparral, mixed conifer forest, and riparian areas.	High. BSA within the known range of this species, suitable habitat present within BSA.
two-striped garter snake ( <i>Thamnophis hammondi</i> )	SSC NCCP	Permanent fresh water, inhabiting streams, ponds, vernal pools. Occupies adjacent coastal sage scrub and grasslands during the winter.	High. BSA within the known range of this species, suitable habitat present within BSA.
California red-sided gartersnake ( <i>Thamnophis sirtalis infernalis</i> )	SSC	Marsh and upland habitats near permanent water, northern coastal San Diego County.	Not expected. BSA outside known range of species.
<b>Birds</b> (Nomenclature from American Ornithologists' Union 1998; Chesser, R.T., et. al 2010)			
brant ( <i>Branta bernicla</i> ) (Wintering & staging)	SSC	Winters primarily in well-protected, shallow marine bays and estuaries with eel grass beds. Can use inland lakes and freshwater marshes as staging areas during spring and fall migration	Not expected to winter or stage. No suitable habitat present within BSA or vicinity, no CNDDDB records or other known occurrences from BSA vicinity. Potential to be observed in flight during migration and winter.
cackling (=Aleutian Canada) goose ( <i>Branta hutchinsii leucopareia</i> ) (Wintering)	Federally Delisted NCCP	Large lakes or bodies of fresh water. Localized winter visitor. Rare vagrant in southern California.	Not expected to winter. No suitable habitat present within BSA or vicinity, no CNDDDB records or other known occurrences from BSA vicinity. Potential to be observed in flight during migration and winter.
American white pelican ( <i>Pelecanus erythrorhynchos</i> ) (Nesting colony)	SSC	Lagoons, bays, estuaries, freshwater ponds; inland lakes during spring migration. Migrant and winter visitor in San Diego.	Not expected to nest. Does not nest within BSA region. Potential to be observed in flight during migration and winter.

**Appendix F: Special-Status Wildlife Species with a Potential for Occurrence in Vicinity of BSA  
 (Continued)**

Species Name	Status	Habitat Description*	Potential for Occurrence
California brown pelican ( <i>Pelecanus occidentalis californicus</i> ) (Nesting colony & communal roosts)	Federally and State Delisted CFP NCCP	Coastal salt water, open ocean; rare vagrant inland. Non-breeding year-round visitor.	Not expected to nest or roost. Does not nest within BSA region. No suitable roosting habitat present within BSA or vicinity, no CNDDDB records or other known occurrences from BSA vicinity. Potential to be observed in flight.
double-crested cormorant ( <i>Phalacrocorax auritus</i> ) (Nesting colony)	WL	Bays, lagoons, estuaries. Non-breeding year-round visitor.	Not expected to nest. No suitable habitat present within BSA or vicinity, no CNDDDB records or other known occurrences from BSA vicinity. Potential to be observed in flight.
reddish egret ( <i>Egretta rufescens</i> )	NCCP	Shallow water within mud tidal flats, salt ponds, lagoons, and occasionally within coastal beaches, sparsely-vegetated freshwater marshes, and the shores of lake and reservoirs	Not expected. No suitable habitat present within BSA or vicinity, no CNDDDB records or other known occurrences from BSA vicinity. Potential to be observed during migration and winter.
least bittern ( <i>Ixobrychus exilis</i> ) (Nesting)	SSC	Brackish and freshwater marshes in the coastal lowland. Rare summer resident, rare in winter.	Not expected to nest. Very limited, marginal breeding habitat present within BSA. CNDDDB records from BSA vicinity. Potential to be observed in flight.
white-faced ibis ( <i>Plegadis chihi</i> ) (Nesting colony)	WL NCCP	Freshwater ponds, irrigated fields, brackish lagoons. Migrant and winter visitor, rare in summer. Very localized breeding.	Not expected to nest. No suitable habitat present within BSA or vicinity, no CNDDDB records or other known occurrences from BSA vicinity. Potential to be observed in flight.
Cooper's hawk ( <i>Accipiter cooperii</i> ) (Nesting)	WL NCCP	Mature forest, open woodlands, wood edges, river groves. Parks and residential areas.	High potential to nest. Suitable nesting habitat present throughout BSA, CNDDDB records from BSA vicinity. Species observed during biological surveys in fall during non-breeding season.
sharp-shinned hawk ( <i>Accipiter striatus</i> ) (Nesting)	WL	Open deciduous woodlands, forests, edges, parks, residential areas. Migrant and winter visitor.	Not expected to nest. Does not nest within BSA region, migrant and winter visitor only. Potential to be observed during migration and winter.

Species Name	Status	Habitat Description*	Potential for Occurrence
golden eagle ( <i>Aquila chrysaetos</i> ) (Nesting and Wintering)	CFP WL BGEPA NCCP	Require vast foraging areas in grassland, broken chaparral, or sage scrub. Nest in cliffs and boulders. In the county, wintering range does not differ greatly from breeding distribution. Uncommon resident.	Not expected to nest or winter. No suitable habitat present within BSA or vicinity, no CNDDDB records from BSA vicinity.
ferruginous hawk ( <i>Buteo regalis</i> ) (Wintering)	WL NCCP	Require large foraging areas. Grasslands, agricultural fields. Uncommon winter visitor.	Low potential to winter. Limited foraging habitat within BSA or vicinity. No CNDDDB records from BSA vicinity. Potential to be observed in flight during migration and winter.
Swainson's hawk ( <i>Buteo swainsoni</i> ) (Nesting)	ST NCCP	Plains, range, open hills, sparse trees. Rare spring migrant. Local breeding population now extirpated.	Not expected to nest. Does not nest within BSA region, migrant only. Potential to be observed in flight during migration.
northern harrier ( <i>Circus cyaneus</i> ) (Nesting)	SSC NCCP	Coastal lowland, marshes, grassland, agricultural fields. Migrant and winter resident, rare summer resident.	Moderate potential to nest. BSA within the known range of this species, patches of suitable nesting habitat within BSA. No CNDDDB records from BSA vicinity.
white-tailed kite ( <i>Elanus leucurus</i> ) (Nesting)	CFP	Nest in riparian woodland, oaks, sycamores. Forage in open, grassy areas. Year-round resident.	Moderate potential to nest. BSA within the known range of this species, patches of suitable nesting habitat present within BSA, CNDDDB records from BSA vicinity.
bald eagle ( <i>Haliaeetus leucocephalus</i> ) (Nesting and Wintering)	Federally Delisted SE BGEPA CFP NCCP	Rivers, lakes. Rare winter visitor, rare fall migrant. Feed mainly on fish.	Not expected to nest or winter. No suitable habitat present within BSA or vicinity, no CNDDDB records or other known occurrences BSA vicinity.
osprey ( <i>Pandion haliaetus</i> ) (Nesting)	WL	Coast, lowland lakes, rarely foothills and mountain lakes. Uncommon fall/winter resident, rare in spring and summer. Fish are the primary prey item.	Not expected to nest. No suitable nesting habitat present within BSA or vicinity, no CNDDDB records or other known occurrences from BSA vicinity. Potential to be observed in flight year-round.
merlin ( <i>Falco columbarius</i> ) (Wintering)	WL	Rare winter visitor. Grasslands, agricultural fields, occasionally mud flats.	Moderate potential to winter. Moderately suitable foraging habitat present within BSA. No CNDDDB records from BSA vicinity.

**Appendix F: Special-Status Wildlife Species with a Potential for Occurrence in Vicinity of BSA  
 (Continued)**

Species Name	Status	Habitat Description*	Potential for Occurrence
prairie falcon ( <i>Falco mexicanus</i> ) (Nesting)	WL	Nests inland on ledges, cliff faces, caves, earthen bluffs in badlands. Forages in Grassland, agricultural fields, desert scrub. Uncommon winter resident. Rare breeding resident.	Not expected to nest. No suitable nesting habitat present within BSA or vicinity, no CNDDDB records or other known occurrences from BSA vicinity. Known breeding sites are over 20 miles from the coast. Potential to be observed in flight during migration and winter.
American peregrine falcon ( <i>Falco peregrinus anatum</i> ) (Nesting)	Federally and State Delisted CFP NCCP	Nests on cliff ledges, old raptor or raven nests, and man-made structures. Forages in open coastal areas, mud flats. Rare inland. Rare fall and winter resident, casual in late spring and early summer.	Not expected to nest. No suitable nesting habitat present within BSA or vicinity, no CNDDDB records or other known occurrences from BSA vicinity. Potential to be observed in flight during migration and winter.
California black rail ( <i>Laterallus jamaicensis coturniculus</i> )	ST CFP	Tidal marshes, grassy marshes. Resident populations extirpated.	Not expected to nest. Species extirpated from region. CNDDDB record from vicinity is from 1952.
light-footed clapper rail ( <i>Rallus longirostris levipes</i> )	FE SE CFP NCCP	Salt marshes primarily dominated marshes by cordgrass. Localized resident.	Not expected to nest. No suitable nesting habitat present within BSA or vicinity, no known occurrences within the vicinity of BSA area. Nearest CNDDDB records are from immediate coast.
mountain plover ( <i>Charadrius montanus</i> ) (Wintering)	PFT SSC NCCP	Grasslands, fields, valleys. Localized winter resident. Extirpated as a wintering bird in San Diego since 1991.	Not expected to winter. Species extirpated from region.
western snowy plover ( <i>Charadrius alexandrinus nivosus</i> ) (Nesting)	FT SSC NCCP	Sandy beaches, lagoon margins, tidal mud flats. Migrant and winter resident. Localized breeding.	Not expected to nest. No suitable habitat present within BSA or vicinity, no known occurrences within the vicinity of BSA area. Nearest CNDDDB records are from immediate coast.
long-billed curlew ( <i>Numenius americanus</i> ) (Nesting)	WL NCCP	Tidal mud flats, salt marshes, bays. Breeds in grasslands. Fall and spring migrant, winter resident, rare in summer.	Not expected to nest. Species does not nest within BSA region. Potential to be observed in flight during migration and winter.
black tern ( <i>Chlidonias niger</i> ) (Nesting colony)	SSC	Nests on lakeshores and in marshes. In California, breeds in scattered areas in the Central Valley and northeastern portion of the state.	Not expected to nest. Species does not nest within BSA region. Potential to be observed in flight during migration and winter.



Species Name	Status	Habitat Description*	Potential for Occurrence
gull-billed tern ( <i>Gelochelidon nilotica</i> ) (Nesting colony)	SSC	Nests in salt marshes and on beaches. Breeds on dikes of the salt works in southern San Diego Bay.	Not expected to nest. No suitable nesting habitat present within BSA or vicinity, no CNDDDB records or other known nesting occurrences from BSA vicinity. Potential to be observed in flight during migration and winter.
California gull ( <i>Larus californicus</i> ) (Nesting colony)	WL	Common in San Diego County as a winter species, coastal waters, lakes, ponds, garbage dumps.	Not expected to nest. Species does not nest within BSA region. Potential to be observed in flight during migration and winter.
black skimmer ( <i>Rynchops niger</i> ) (Nesting colony)	SSC	Mud flats, dikes. Resident. Common in south San Diego Bay. Localized breeding.	Not expected to nest. No suitable nesting habitat present within BSA or vicinity, no CNDDDB records or other known nesting occurrences from BSA vicinity. Potential to be observed in flight during migration and winter.
California least tern ( <i>Sternula antillarum browni</i> ) (Nesting colony)	FE SE CFP NCCP	Bays, estuaries, lagoons, shoreline. Resident. Localized breeding.	Not expected to nest. No suitable nesting habitat present and no known nesting occurrences within BSA or vicinity. Potential to be observed in flight during migration and winter. Nearest CNDDDB records are from immediate coast.
elegant tern ( <i>Thalasseus elegans</i> ) (Nesting colony)	WL NCCP	Mud flats, sandbars, dunes, bays, lagoons. Summer resident. Localized breeding. Breeds at the salt works in southern San Diego Bay.	Not expected to nest. No suitable nesting habitat present within BSA or vicinity, no CNDDDB records or other known nesting occurrences from BSA vicinity. Potential to be observed in flight during migration and winter.
western yellow-billed cuckoo ( <i>Coccyzus americanus occidentalis</i> ) (Nesting)	FC SE	Extensive riparian woodlands. Summer resident. Very localized breeding.	Not expected to nest. No suitable nesting habitat present within BSA or vicinity, no CNDDDB records or other known occurrences from BSA vicinity.
burrowing owl ( <i>Athene cunicularia</i> ) (Burrow sites and some wintering sites)	SSC NCCP-NE	Grassland, agricultural land, coastal dunes. Declining resident.	Moderate potential to nest and winter. Limited suitable habitat present and no known nesting occurrences within BSA. CNDDDB records from BSA vicinity, BSA within the known range of this species.
long-eared owl ( <i>Asio otus</i> ) (Nesting)	SSC	Riparian woodland, oak woodland, tamarisk woodland. Rare resident and winter visitor. Localized breeding.	Low potential to nest. Limited suitable habitat present within BSA and vicinity, no CNDDDB records from BSA vicinity. BSA within known range of species.

**Appendix F: Special-Status Wildlife Species with a Potential for Occurrence in Vicinity of BSA  
 (Continued)**

Species Name	Status	Habitat Description*	Potential for Occurrence
California spotted owl ( <i>Strix occidentalis occidentalis</i> )	SSC	Dense oak and/or coniferous woodland. Localized resident. Known from elevations above 2,500 ft amsl.	Not expected. No suitable habitat present within BSA or vicinity, no CNDDDB records or other known occurrences from BSA vicinity. BSA outside known range of species.
Vaux's swift ( <i>Chaetura vauxi</i> ) (Nesting)	SSC	Primarily the coastal lowland of San Diego County during migration. Nest in old growth forests of the Pacific Northwest.	Not expected to nest. Species does not nest within BSA region. Species observed during biological surveys during fall migration.
black swift ( <i>Cypseloides niger</i> ) (Nesting)	SSC	Nests around waterfalls and sea cliffs, migrant only in San Diego County	Not expected to nest. Species does not nest within BSA region. Potential to be observed in flight during migration.
southwestern willow flycatcher ( <i>Empidonax traillii extimus</i> ) (Nesting)	FE SE NCCP	Nests in extensive willow-dominated riparian forests and woodlands, occasionally oak woodlands. Rare spring and fall migrant, rare summer resident.	Not expected to nest. No suitable nesting habitat present within BSA or vicinity, no CNDDDB records or other known nesting occurrences from BSA vicinity. Potential to be observed during migration.
vermillion flycatcher ( <i>Pyrocephalus rubinus</i> ) (Nesting)	SSC	Agricultural areas, parks, ponds, rivers, ranchlands, open riparian areas, savannahs and arid scrub, often associated with surface water. Rare fall and spring migrant, winter visitor, summer resident. Breeding rare, typically inland sites within San Diego County.	Not expected to nest. Very limited, marginal suitable breeding habitat present. No CNDDDB records from BSA vicinity. BSA outside known breeding range of species.
loggerhead shrike ( <i>Lanius ludovicianus</i> ) (Nesting)	SSC	Open country with short vegetation such as pastures with fence rows, agricultural fields and open woodlands.	High potential to nest. BSA within known range of species, suitable nesting and foraging habitat present within BSA. No CNDDDB records from BSA vicinity.
least Bell's vireo ( <i>Vireo bellii pusillus</i> ) (Nesting)	FE SE NCCP	Willow-dominated successional woodland or scrub, Baccharis scrub, mixed oak/willow woodland, and elderberry scrub in riparian habitat with dense, stratified canopy.	Moderate potential to nest. BSA within known range of species, marginal to moderately suitable nesting habitat present within BSA and vicinity, CNDDDB records from BSA vicinity.

Species Name	Status	Habitat Description*	Potential for Occurrence
California horned lark ( <i>Eremophila alpestris actia</i> )	WL	Sandy shores, mesas, disturbed areas, grasslands, agricultural lands, sparse scrub communities.	High potential to nest and winter. BSA within known range of species, suitable nesting habitat present within BSA and vicinity, CNDDDB records from BSA vicinity.
purple martin ( <i>Progne subis</i> ) (Nesting)	SSC	Breeds in montane coniferous woodland.	Not expected to nest. No suitable nesting habitat present within BSA or vicinity, no CNDDDB records or other known occurrences from BSA vicinity. BSA outside known breeding range of species.
bank swallow ( <i>Riparia riparia</i> ) (Nesting)	ST	Steep riverbanks, gravel pits. Nesting colonies extirpated from San Diego County, rare migrant.	Not expected to nest. Species does not nest within BSA region. Potential to be observed in flight during migration.
coastal cactus wren ( <i>Campylorhynchus brunneicapillus sandiegensis</i> )	SSC NCCP-NE	Maritime succulent scrub, coastal sage scrub with <i>Opuntia</i> thickets. Rare localized resident.	Moderate potential to nest. Limited suitable habitat present, CNDDDB records from BSA vicinity, BSA within known range of species.
coastal California gnatcatcher ( <i>Polioptila californica californica</i> )	FT SSC NCCP	Coastal sage scrub, maritime succulent scrub. Resident.	Present. Several pairs and individuals observed throughout BSA during biological surveys in fall during non-breeding season. Suitable nesting habitat present throughout BSA. CNDDDB records from BSA vicinity.
yellow warbler ( <i>Dendroica petechia brewsteri</i> ) (Nesting)	SSC	Well-developed riparian habitats, often with mature willows	High potential to nest. BSA within known range of species, suitable nesting habitat present within BSA and vicinity. No CNDDDB records from BSA vicinity.
yellow-breasted chat ( <i>Icteria virens</i> ) (Nesting)	SSC NCCP	Dense riparian woodland. Localized summer resident.	High potential to nest. BSA within known range of species, suitable nesting habitat present within BSA and vicinity, CNDDDB records from BSA vicinity.
southern California rufous-crowned sparrow ( <i>Aimophila ruficeps canescens</i> )	WL NCCP	Coastal sage scrub, chaparral, grassland. Resident.	Present. Several pairs and individuals observed throughout BSA during biological surveys in fall during non-breeding season. Suitable nesting habitat present throughout BSA, CNDDDB records from BSA vicinity.

**Appendix F: Special-Status Wildlife Species with a Potential for Occurrence in Vicinity of BSA  
 (Continued)**

Species Name	Status	Habitat Description*	Potential for Occurrence
grasshopper sparrow ( <i>Ammodramus savannarum</i> ) (Nesting)	SSC NCCP	Tall grass areas. Localized summer resident, rare in winter.	High potential to nest. BSA within known range of species, suitable nesting habitat present within BSA and vicinity, CNDDDB records from BSA vicinity.
Bell's sage sparrow ( <i>Amphispiza belli belli</i> )	WL NCCP	Chaparral, coastal sage scrub. Localized resident.	High. BSA within known range of species, suitable nesting and foraging habitat present within BSA and vicinity, CNDDDB records from BSA vicinity.
Belding's savannah sparrow ( <i>Passerculus sandwichensis beldingi</i> )	SE NCCP	Salt marshes, lagoons dominated by <i>Salicornia</i> . Resident.	Not expected. No suitable nesting or foraging habitat present and no known nesting occurrences within BSA or vicinity. CNDDDB records are from immediate coast.
large-billed savannah sparrow ( <i>Passerculus sandwichensis rostratus</i> ) (Wintering)	SSC NCCP	Winters in coastal areas and marshes where it is seldom seen far from the intermediate shoreline, Marshes. Very rare in San Diego County, typically south of Mission Bay.	Not expected to winter. No suitable nesting habitat present within BSA or vicinity, no CNDDDB records or other known occurrences from BSA vicinity.
tricolored blackbird ( <i>Agelaius tricolor</i> ) (Nesting colony)	SSC NCCP	Freshwater marshes agricultural areas, lakeshores, parks. Localized resident. Breeding colonies well documented, inland San Diego County	Low potential to nest. Limited suitable nesting habitat present and no known nesting occurrences within BSA or vicinity. BSA outside typical known breeding range of species.
western bluebird ( <i>Sialia mexicana</i> )	NCCP	Open woodlands, parks, farmlands, orchards.	High. BSA within known range of species, suitable nesting and foraging habitat present within BSA and vicinity. No CNDDDB records from BSA vicinity.
<b>Mammals</b> (Nomenclature from Baker, R. J., et. Al 2003)			
Mexican long-tongued bat ( <i>Choeronycteris mexicana</i> )	SSC	Desert and montane riparian and woodlands, desert succulent scrub, desert scrub, and pinyon-juniper habitats. Roosts in caves, buildings, bridges, etc. Sightings in San Diego County very rare. Migratory.	Moderate. BSA within known range of species and moderately suitable habitat present within BSA and vicinity. CNDDDB records from BSA vicinity.
pallid bat ( <i>Antrozous pallidus</i> )	SSC	Open scrub, grasslands, shrub lands, woodlands, and forests. Roosts in rock crevices, caves, mines, tree hollows, and buildings. Occurs near water, colonial. Audible echolocation signal.	Moderate. BSA within known range of species and moderately suitable habitat present within BSA and vicinity. No CNDDDB records from BSA vicinity.

Species Name	Status	Habitat Description*	Potential for Occurrence
Townsend's big-eared bat ( <i>Corynorhinus townsendii</i> )	SSC	Caves, mines, buildings. Found in a variety of habitats, arid and mesic. Individual or colonial. Extremely sensitive to disturbance.	Moderate. BSA within known range of species and moderately suitable habitat present within BSA and vicinity. No CNDDDB records from BSA vicinity.
spotted bat ( <i>Euderma maculatum</i> )	SSC	Wide variety of habitats. Caves, crevices, trees. Audible echolocation signal.	Moderate. BSA within known range of species and moderately suitable habitat present within BSA and vicinity. CNDDDB records from BSA vicinity.
western red bat ( <i>Lasiurus blossevillii</i> )	SSC	Roosts in small colonies in the foliage of trees and shrubs in edge areas adjacent to streams and open fields, preferring foraging areas that are distant from human habitation	Moderate. BSA within known range of species and moderately suitable habitat present within BSA and vicinity. CNDDDB records from BSA vicinity.
western mastiff bat ( <i>Eumops perotis californicus</i> )	SSC	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc.; roosts in crevices in vertical cliff faces, high buildings, trees, and tunnels, and travels widely when foraging.	Moderate. BSA within known range of species and moderately suitable habitat present within BSA and vicinity. CNDDDB records from BSA vicinity.
big free-tailed bat ( <i>Nyctinomops macrotis</i> )	SSC	Rugged, rocky terrain. Roost in crevices, buildings, caves, tree holes. Very rare in San Diego County. Colonial, Migratory.	Moderate. BSA within known range of species and moderately suitable habitat present within BSA and vicinity. CNDDDB records from BSA vicinity.
San Diego black-tailed jackrabbit ( <i>Lepus californicus bennettii</i> )	SSC NCCP	Open areas of scrub, grasslands, agricultural fields.	High. BSA within known range of species and suitable habitat present within BSA and vicinity. CNDDDB records from BSA vicinity.
Dulzura pocket mouse ( <i>Chaetodipus californicus femoralis</i> )	SSC NCCP	Dense chamise-redshank & montane chaparral, coastal sage scrub, sagebrush, annual grassland, probably most attracted to interface of grassland and brush.	High. BSA within known range of species and suitable habitat present within BSA and vicinity. CNDDDB records from BSA vicinity.
northwestern San Diego pocket mouse ( <i>Chaetodipus fallax fallax</i> )	SSC NCCP	San Diego County west of mountains in sparse, disturbed coastal sage scrub or grasslands with sandy soils.	High. BSA within known range of species and suitable habitat present within BSA and vicinity. CNDDDB records from BSA vicinity.

**Appendix F: Special-Status Wildlife Species with a Potential for Occurrence in Vicinity of BSA  
 (Continued)**

Species Name	Status	Habitat Description*	Potential for Occurrence
Stephens' kangaroo rat ( <i>Dipodomys stephensi</i> )	FE ST NCCP	Grassland, open areas.	Not expected. BSA outside known range of species. No CNDDDB records from BSA vicinity.
Pacific pocket mouse ( <i>Perognathus longimembris pacificus</i> )	FE SSC NCCP-NE	Open coastal sage scrub; fine, alluvial sands near ocean. Currently known from San Onofre area, Santa Margarita River estuary, and lower Tijuana River valley.	Not expected. BSA outside known range of species. Not found more than two miles inland from coast. Westernmost extent of BSA is approximately 2.2 miles from coast. CNDDDB record from BSA vicinity are from vicinity of coast and believed to be misidentified.
San Diego desert woodrat ( <i>Neotoma lepida intermedia</i> )	SSC NCCP	Coastal sage scrub and chaparral	High. BSA within known range of species and suitable habitat present within BSA and vicinity. CNDDDB records from BSA vicinity.
southern grasshopper mouse ( <i>Onychomys torridus ramona</i> )	SSC NCCP	Coastal sage scrub, mixed chaparral, sagebrush, low sage, and bitterbrush. Low to moderate shrub cover preferred.	High. BSA within known range of species and suitable habitat present within BSA and vicinity. No CNDDDB records from BSA vicinity.
ringtail ( <i>Bassariscus astutus</i> )	CFP	Cliffs, rocky ravines, chaparral communities, near water	Low. BSA within known range of species and marginal habitat present within BSA and vicinity. Species rare and distribution not well known. No CNDDDB records from BSA vicinity.
American badger ( <i>Taxidea taxus</i> )	SSC NCCP	Grasslands, savannas, meadows, sparse scrublands	Low. BSA within known range of species and marginal habitat present within BSA and vicinity. No CNDDDB records from BSA vicinity.
mountain lion ( <i>Puma concolor</i> )	NCCP	Typically in remote, hilly or mountainous areas, but they can occasionally be found in the urban/wild land interface	Moderate. BSA within known range of species and moderate habitat present within BSA and vicinity. No CNDDDB records from BSA vicinity.
southern mule deer ( <i>Odocoileus hemionus</i> )	NCCP	Widespread throughout undeveloped portions of San Diego County,	Present. Suitable habitat present throughout BSA and vicinity. Several individuals observed throughout BSA during fall biological surveys. No CNDDDB records from BSA vicinity.

## **APPENDIX G**

### **Coastal California Gnatcatcher Survey Summary Report**

January 14, 2014

Ms. Susie Tharratt  
Recovery Permits Coordinator  
Carlsbad Fish and Wildlife Office  
2177 Salk Avenue, Suite 250  
Carlsbad, California 92008

**RE: COASTAL CALIFORNIA GNATCATCHER SURVEY SUMMARY REPORT FOR THE PROPOSED  
SAN DIEGO GAS & ELECTRIC COMPANY SYCAMORE TO PEÑASQUITOS 230 kV  
TRANSMISSION LINE PROJECT, SAN DIEGO COUNTY, CALIFORNIA**

Ms. Tharratt:

This letter report summarizes the results of the focused, protocol-level, presence/absence surveys for the federally listed threatened coastal California gnatcatcher (*Polioptila californica californica*) for the proposed Sycamore to Peñasquitos 230 Kilovolt (kV) Transmission Line Project (Proposed Project). Busby Biological Services, Inc. (BBS) was contracted by TRC Solutions, Inc. (TRC) to conduct these surveys on behalf of San Diego Gas & Electric Company (SDG&E) to evaluate the preferred alternative for the Proposed Project.

#### **BACKGROUND INFORMATION**

A brief summary of the Proposed Project and coastal California gnatcatcher are provided in this section.

#### **Proposed Project Location and Description**

The Proposed Project is located within the City of San Diego and the City of Poway, San Diego County, California, and the extreme northern portion of Marine Corps Air Station (MCAS) Miramar (Appendix A: Figures 1 and 2). The approximately 16.5-mile Proposed Project begins at Sycamore Canyon Substation in the east, which is located on MCAS Miramar, and terminates at Peñasquitos Substation in the west. The Proposed Project route traverses both developed residential and commercial areas as well as densely vegetated undeveloped areas.

SDG&E is a regulated public utility that provides electric service to three million customers within a 4,100 square mile service area, covering parts of two counties and 25 cities in the San Diego area. In an effort to increase the efficiency and supply of renewably generated power to the California Independent System Operator (CAISO) grid, CAISO has identified a policy-driven need for a new 230 kV transmission line to connect the existing SDG&E Sycamore Canyon and Peñasquitos Substations. In response to the CAISO Request for Proposal (RFP) for this new 230 kV transmission line, SDG&E proposes to construct and operate a new, approximately 16.5-mile 230 kV transmission line between the existing SDG&E Sycamore Canyon and Peñasquitos Substations. The Proposed Project would also include the consolidation of two existing 69 kV power lines onto new double-circuit, steel structures that would replace existing, predominantly wood structures. All new transmission



line facilities would be located within existing SDG&E Right-of-Way (ROW) or within franchise position within existing public roadways.

The Proposed Project would include the following primary components:

- Construction of approximately 39 new double-circuit steel tubular 230 kV transmission line poles and two new single-circuit 138 kV power line poles between the existing Sycamore Canyon Substation and Carmel Valley Road (approximately 8.23 miles) all within existing SDG&E ROW;
- Installation of a new, approximately 2.83-mile 230 kV underground transmission line in Carmel Valley Road utilizing existing franchise position for almost the entire segment<sup>2</sup>;
- Installation of two new 230 kV cables pole structures<sup>1</sup> at each corridor end of the Carmel Valley Road underground segment, all within existing SDG&E ROW. The new 230 kV cable pole located on the west end of the Carmel Valley Road underground segment would replace an existing 230 kV steel lattice tower;
- Installation of a new 230 kV conductor on vacated position of the existing 230 kV steel structures (double-circuit 230 kV steel lattice towers currently supporting TL 23001 and TL 23004) between Carmel Valley Road and Peñasquitos Junction all within existing SDG&E ROW;
- Installation of a new 230 kV conductor on vacated position of the existing steel 230 kV structures double circuit 230 kV steel lattice towers currently supporting TL 13804 and TL 6906<sup>2</sup>) between Peñasquitos Junction and Peñasquitos Substation all within existing SDG&E ROW;
- Consolidation, relocation, and reconductoring of existing 230 kV transmission lines and 138 and 69 kV power lines within existing SDG&E ROW;
- Topping<sup>3</sup> and partial removal of approximately five 138 kV H-frame structures that currently have distribution underbuild so that only a single pole and the distribution line remains; and
- Modifying the Sycamore Canyon and Peñasquitos Substations to allow for connection of the new 230 kV transmission line.

### **Coastal California Gnatcatcher Species Information**

The coastal California gnatcatcher is a small, blue-gray, non-migratory songbird that is a federally listed threatened species and a California Department of Fish and Wildlife (CDFW) species of special concern. One of three subspecies of the California gnatcatcher (*Polioptila californica*), the coastal California gnatcatcher has one of the most limited distributions of any bird species in North America (Atwood 1991). The coastal California gnatcatcher occurs on coastal slopes in southern California, from the coast and foothills of southern Ventura County, south through Los Angeles County, Orange County, southwestern San Bernardino County, western Riverside County, and San Diego County, and south into northwestern Baja California, Mexico (Atwood 1991).

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<sup>1</sup> The new 230 kV cable pole structure on the east end of the new underground segment would consist of three separate structures (horizontal arrangement), each supporting one phase each of the new 230 kV transmission line.

<sup>2</sup> These structures were previously permitted by the CPUC to support 230 kV

<sup>3</sup> Pole “topping” refers to the practice of removing only the top section of a pole that typically supports a power or transmission line and leaving a lower voltage (typically a distribution line) remaining on a now shortened structure.

The coastal California gnatcatcher typically occurs from sea level to approximately 2,500 feet in elevation in or near coastal sage scrub habitat, which is patchily distributed throughout the species' range. The species occurs most frequently within coastal sage scrub stands on mesas, gently sloping areas, and along the lower slopes of the coast ranges that are dominated by California sagebrush (*Artemisia californica*) (Atwood 1990). Other plant species important for the nesting and foraging of this species include California buckwheat (*Eriogonum fasciculatum*), white sage (*Salvia apiana*), black sage (*Salvia mellifera*), coyote brush (*Baccharis pilularis*), and broom baccharis (*Baccharis sarothroides*). Chamise (*Adenostoma fasciculatum*) habitats may also support breeding pairs, especially where coastal sage scrub may occur nearby or form a component of the habitat (Bontrager 1991).

The coastal California gnatcatcher typically occurs in high frequencies and densities in coastal sage scrub with a slope gradient of less than 40 percent and with an open or broken canopy with a shrub cover of 20 to 60 percent and a shrub height of 3 to 4 feet. The coastal California gnatcatcher occurs in low frequencies and densities or is absent in coastal sage scrub with a very short or tall shrub height and with a dense or closed canopy (Weaver 1998); this species is usually absent from coastal sage scrub dominated by tall shrubs. Territory size is highly variable as vegetation density decreases with distance from the coast, probably as a result of food resource availability, ranging from less than 1 hectare along the coast to over 9 hectares inland (Braden 1997, Preston et al. 1998, Atwood et al. 1998). Nonbreeding season home range size is about 80 percent larger than breeding season home range (Preston et al. 1998, Bontrager 1991).

While predominantly dependent on coastal sage scrub, the coastal California gnatcatcher also uses other habitats and shows seasonal and daily patterns in such use of these habitats. In particular, the coastal California gnatcatcher has been documented using chaparral, grassland, and riparian habitats where these habitats occur adjacent to coastal sage scrub and especially when these habitats are mesic and not summer-deciduous. The use of these habitats appears to be most frequent during late summer, autumn, and winter for dispersal and during periods of drought for dispersal and foraging opportunities; however, breeding territories have also been documented outside of coastal sage scrub habitat (Campbell *et al.* 1998). Factors contributing to the gnatcatcher's use of alternative habitats may include improved food source availability, higher survival rates during juvenile dispersal, fire avoidance, cooler microclimate during heat stress, and lower predation rates for juveniles (Campbell *et al.* 1998).

The coastal California gnatcatcher becomes highly territorial each year by late February or early March, and males generally become more vocal during this period (Mock *et al.* 1990). In southwestern San Diego County, where the Proposed Project is located, the mean breeding season territory size ranges from 12 to 27 acres per pair, and nonbreeding season territory size ranges from 12 to 42 acres per pair (Preston *et al.* 1998). During the nonbreeding season, the coastal California gnatcatcher has been observed to wander in adjacent territories and unoccupied habitat, increasing its home range size to approximately 78 percent larger than its breeding territory (Preston *et al.* 1998).

The coastal California gnatcatcher breeding season extends from mid-February through the end of August, with peak nesting activity occurring from mid-March through mid-May. Nest building begins in mid-March, with the earliest recorded egg date of March 20 (Mock *et al.* 1990). The nest of the coastal California gnatcatcher is a small, cup-shaped basket usually found 1 to 3 feet above

the ground in a small shrub. Clutch size ranges between three and five eggs. Juvenile birds associate with their parents for several weeks (sometimes months) after fledging (Atwood 1990). Post breeding dispersal of fledglings occurs between late May and late November. The coastal California gnatcatcher is a persistent nest builder and often attempts multiple broods, which suggests high reproductive potential. However, this is typically offset by high rates of nest predation and brood parasitism (Atwood 1990; Grishaver *et al.* 1998).

The principal reasons for the federally threatened status of the coastal California gnatcatcher is the loss, fragmentation, and adverse modification of habitat from urban and agricultural development, wildfire, invasive nonnative plants, grazing, nest predation, and brood parasitism by brown-headed cowbirds (*Molothrus ater*) (Mock *et al.* 1990,). It is estimated that up to 90 percent of coastal sage scrub vegetation has been lost as a result of development and land conversion, and coastal sage scrub is considered to be one of the most depleted habitat types in the United States (Kirkpatrick and Hutchinson 1977; O'Leary 1990; Westman 1981a-b; Barbour and Major 1977; Bontrager 1991; USFWS 2007, USFWS 2010).

## **METHODS**

A habitat assessment and focused, protocol-level, nonbreeding coastal California gnatcatcher surveys were performed within suitable habitat located within the approximately 1,059-acre Biological Study Area (BSA), which includes an approximately 500-foot survey corridor along the entire approximately 16.5-mile Proposed Project alignment as well as associated work areas (i.e., construction yards located outside the 500-foot survey corridor). The methods used for the habitat assessment and focused, protocol-level surveys are presented in this section.

### **Habitat Assessment Methods**

Prior to initiating the focused, protocol-level, nonbreeding coastal California gnatcatcher surveys for the Proposed Project, a large-scale habitat assessment was conducted by U.S. Fish and Wildlife Service (USFWS) permitted biologists to identify locations of suitable habitat for the species within the BSA. The habitat assessment was composed of several steps, including office components and field components described in the following paragraphs.

Initially, historical occurrence data for coastal California gnatcatcher that have been reported from within 5 miles of the BSA were evaluated prior to conducting the habitat assessment field survey for coastal California gnatcatcher. A Geographic Information Systems (GIS) specialist generated a map from the most recent version of the CDFW *California Natural Diversity Database* (CNDDDB; CDFW 2013) and other databases identifying reported coastal California gnatcatcher detections within a 5-mile buffer of the Proposed Project to allow USFWS-permitted biologists to view the historic distribution of coastal California gnatcatcher within the vicinity of the BSA.

Next, USFWS-permitted biologists conducted a field habitat assessment within the entire BSA for potential coastal California gnatcatcher habitat. The field habitat assessment was conducted by driving to strategic vantage points within the BSA and assessing the vegetation communities first through use of binoculars when access was prohibited or limited because of private property or fencing or when views of potentially suitable habitat were unobstructed. Biologists assessed potential habitat on foot when these areas could not be viewed through binoculars because of

obstructions or to gain a closer look at the plant species composition within the potentially suitable habitat.

Polygons of suitable habitat were hand-drawn onto high-resolution aerial field maps. The polygons on these field maps were later screen-digitized in the office by a GIS specialist using ArcGIS software. Finally, survey boundaries were adjusted and potentially suitable coastal California gnatcatcher habitat was either added or eliminated from the BSA through closer investigation on foot during this first round of focused, protocol-level, nonbreeding coastal California gnatcatcher surveys.

### **Focused Coastal California Gnatcatcher Survey Methods**

Focused surveys for coastal California gnatcatcher were conducted by USFWS-permitted biologists in accordance with the current USFWS survey protocol for coastal California gnatcatcher surveys within NCCP areas, titled *Coastal California Gnatcatcher (Polioptila californica californica) Presence/Absence Survey Guidelines* and dated February 28, 1997. Six surveys were conducted with a USFWS-approved modification to space the surveys a minimum of 10 days apart to meet schedule constraints for the Proposed Project.

All surveys were conducted between approximately 6:00am and 12:00pm and avoided periods of adverse weather conditions (e.g., excessively hot or cold temperatures, high winds, steady rain, dense fog, other inclement weather conditions) that would impede detection of the coastal California gnatcatcher. Surveyors slowly walked throughout the suitable habitat identified within the BSA during the habitat assessment and used visual and auditory cues to detect the coastal California gnatcatcher. Various routes were utilized to conduct an unbiased survey of the potentially suitable habitat within the BSA. Pre-recorded coastal California gnatcatcher vocalization playbacks were only used to elicit initial calls from coastal California gnatcatcher and were not used frequently or to elicit further behaviors. Pre-recorded vocalizations were played for a period of 5 to 15 seconds and were generally repeated approximately every 100 feet within the surveyed habitat. No more than approximately 80 acres of suitable habitat were surveyed per day per USFWS-permitted biologist.

For each coastal California gnatcatcher detection, surveyors recorded the approximate location electronically using a hand-held Global Positioning Systems (GPS) device and by hand onto a high resolution aerial image of the survey areas. Surveyors also estimated the age, sex, and number of individuals detected and included notes about each detection. In addition, surveyors recorded other wildlife species observed directly or detected indirectly by sign, including scat, tracks, calls, and other evidence.

### **RESULTS**

The results of the habitat assessment and focused, protocol-level coastal California gnatcatcher surveys are presented in this section.

## **Habitat Assessment Results**

BBS biologists, Darin Busby and Melissa Busby, conducted a field habitat assessment for coastal California gnatcatcher within the entire BSA on September 12 and 13, 2013. The initial assessment of potentially suitable coastal California gnatcatcher habitat within the BSA was further refined by BBS biologists, Laurie Gorman and Charles Vettes, through closer investigation on foot during the first round of focused, protocol-level coastal California gnatcatcher surveys between September 16 and 20, 2013. A total of 343.78 acres of potentially suitable coastal California gnatcatcher habitat was identified within the BSA (Appendix A: Figure 3).

As mapped and evaluated during the field habitat assessment, potentially suitable habitat for the coastal California gnatcatcher that required surveys included Diegan coastal sage scrub and its various sub-associations, including Diegan coastal sage scrub-disturbed and coastal sage scrub-revegetated. Additionally, the following vegetation communities within the BSA were considered potentially suitable for the coastal California gnatcatcher where Diegan coastal sage scrub or its sub-associations occurred nearby or formed a component of the habitat: coastal sage-chaparral scrub, chamise chaparral, chamise chaparral-disturbed, southern mixed chaparral, southern mixed chaparral-disturbed, and ornamental. The potentially suitable habitat that was identified within these vegetation communities listed above typically has an open or broken canopy with a shrub cover of 20 to 60 percent, a shrub height of 3 to 4 feet, and contains the following species that either dominate or form a component of the vegetation communities: California sagebrush, California buckwheat, white sage, black sage, coyote brush, and broom baccharis.

Vegetation communities excluded from the focused, protocol-level coastal California gnatcatcher surveys because they were determined through field reconnaissance not to contain suitable habitat for the species consist primarily of chaparral and scrub communities with vegetation that is too short, too tall, or too sparse; fire-recovering communities dominated or sub-dominated by deerweed (*Acmispon glaber*); and communities where Diegan coastal sage scrub and/or its components are minimal or lacking. These vegetation communities should not necessarily be excluded from future coastal California gnatcatcher habitat assessments and/or surveys as they will continue to change over time and may eventually provide adequate coastal California gnatcatcher habitat. As such, suitable habitat that was identified for these surveys should also be reevaluated because, over time, these areas may become too dense, may burn, or may otherwise become unsuitable for the species.

The following paragraphs provide a description of the vegetation communities that were considered suitable or potentially suitable coastal California gnatcatcher habitat.

### **Diegan Coastal Sage Scrub**

Diegan coastal sage scrub is a wide-spread vegetation community ranging from coastal Los Angeles County into northern Baja California. It consists mainly of low, soft-woody sub-shrubs (approximately 3 feet high) that are most actively growing in winter and early spring and are facultatively drought-deciduous. Within the BSA, this vegetation community is dominated by a variable mix of California sagebrush, California buckwheat, black sage, laurel sumac (*Malosma laurina*), deerweed, broom baccharis, coyote brush, California sunflower (*Encelia californica*), and occasionally live-forevers (*Dudleya* spp.) and coast barrel cactus (*Ferocactus viridescens*).

Variations of this vegetation community within the BSA include Diegan coastal sage scrub-disturbed and coastal sage scrub-revegetated. Diegan coastal sage scrub-disturbed contains many of the same species that are found in undisturbed Diegan coastal sage scrub but may contain various types of disturbance, ranging from a predominance of invasive or ornamental species, physical disturbance from grading or fire management activities, or a recent history of fire. Coastal sage scrub-revegetation is a subtype of coastal sage scrub that represents a restored coastal sage scrub vegetation community planted with container plants and/or a seed mix typically after an area was disturbed or recontoured as the result of a development or related project.

Coastal California gnatcatcher surveys were conducted in the majority of the Diegan coastal sage scrub and its variations, discussed above, within the BSA that were determined to contain suitable habitat for the species. However, for reasons discussed in the introduction to this section, some areas within these communities were not surveyed for coastal California gnatcatcher because they were determined through field reconnaissance not to contain suitable habitat for the species.

### **Coastal Sage-Chaparral Scrub**

Coastal sage-chaparral scrub is a mixed community including both drought-deciduous sage scrub species and woody chaparral species. This vegetation community is a post-fire successional community containing vegetative cover that includes roughly equal amounts of both sage scrub and chaparral species. Characteristic dominant species often include chamise, California sagebrush, lilacs (*Ceanothus* spp.), black sage, broom baccharis, laurel sumac, lemonadeberry (*Rhus integrifolia*), and poison oak (*Toxicodendron diversilobum*). Plant species detected within the BSA included chamise, California sagebrush, California buckwheat, black sage, laurel sumac, lemonadeberry, and mission manzanita (*Xylococcus bicolor*).

Coastal California gnatcatcher surveys were conducted in the majority of the coastal sage-chaparral scrub within the BSA determined to contain moderately suitable habitat for the species. However, for reasons discussed in the introduction to this section, some areas within these communities were not surveyed for coastal California gnatcatcher because they were determined through field reconnaissance not to contain suitable habitat for the species.

### **Chamise Chaparral**

Chamise chaparral is widely distributed throughout California on dry slopes and ridges at low and medium elevations where it occupies thin, rocky, or heavy soils. It is typically composed of broad-leaved, sclerophyllous shrubs (e.g., bearing stiff, leathery leaves), although species composition varies considerably with location. Within the BSA, chamise chaparral is characterized by nearly monotypic stands of chamise ranging from 3 to 9 feet in height. Additional shrub species, such as mission manzanita, may be present, but contribute little to the overall cover.

Variations of this vegetation community within the BSA include chamise chaparral-disturbed that contains many of the same species that are found in undisturbed chamise chaparral but contain various types of disturbance, ranging from a predominance of invasive or ornamental species, physical disturbance from grading or fire management activities, to a recent history of fire.

The majority of the chamise chaparral and chamise chaparral-disturbed within the BSA is characterized by nearly monotypic stands of chamise and does not provide suitable habitat for coastal California gnatcatcher. However, small scattered patches of coastal sage scrub associated species, such as black sage, broom baccharis, and California buckwheat, were identified in portions of the BSA and were determined through field reconnaissance to provide marginally suitable habitat for coastal California gnatcatcher; therefore, these small patches of chamise chaparral and chamise chaparral-disturbed were surveyed for coastal California gnatcatcher.

### **Southern Mixed Chaparral**

Southern mixed chaparral tends to occur on steeper, more mesic north-facing slopes than chamise chaparral. This vegetation community type is characterized by relatively high species diversity. Within the BSA, species include chamise, mission manzanita, coast spice bush (*Cneoridium dumosum*), Nuttall's scrub oak (*Quercus dumosa*), Ramona-lilac (*Ceanothus tomentosus*), summer-holly (*Comarostaphylis diversifolia*), lemonadeberry, holly-leaf red berry (*Rhanmus ilicifolia*), and toyon (*Heteromeles arbutifolia*).

Variations of this vegetation community within the BSA include southern mixed chaparral-disturbed that contains many of the same species that are found in undisturbed southern mixed chaparral but may contain various types of disturbance, ranging from a predominance of invasive or ornamental species, physical disturbance from grading or fire management activities, to a recent history of fire.

The majority of the southern mixed chaparral and southern mixed chaparral-disturbed within the BSA is dominated by tall, dense, and/or woody shrubs that do not provide suitable habitat for coastal California gnatcatcher. However, small scattered patches of coastal sage scrub associated species, such as black sage, broom baccharis, and California buckwheat, were identified in portions of the BSA and were determined through field reconnaissance to provide marginally suitable habitat for coastal California gnatcatcher; therefore, these small patches of southern mixed chaparral and southern mixed chaparral-disturbed were surveyed for coastal California gnatcatcher.

### **Ornamental**

Ornamental vegetation typically consists of nonnative landscaping and/or garden plantings that have been planted in association with buildings, roads, or other development. Occasionally, ornamental species such as rock rose (*Cistus* sp.) were found growing within the BSA away from urban areas and may be naturalizing.

The majority of the ornamental areas within the BSA are dominated by nonnative vegetation that does not provide suitable habitat for coastal California gnatcatcher. However, small scattered patches of coastal sage scrub associated species, such as California sagebrush, California buckwheat, black sage, broom baccharis, and California sunflower, were identified in portions of landscaped areas within the BSA and were determined through field reconnaissance to provide marginally suitable habitat for coastal California gnatcatcher; therefore, these small patches of ornamental vegetation were surveyed for coastal California gnatcatcher.

### **Focused Coastal California Gnatcatcher Survey Results**

A total of six, protocol-level, nonbreeding focused coastal California gnatcatcher survey rounds were conducted within approximately 344 acres of potentially suitable habitat between September 16 and November 13, 2013 (Appendix A: Figures 3 and 4a). Each survey round took 5 days to complete because of the small, patchy distribution of suitable habitat in portions of the BSA. All surveys were conducted during appropriate weather conditions by USFWS-permitted biologists, including Darin Busby (TE-115373-2), Laurie Gorman (TE-233367-1), and Travis Cooper (TE-170389-2). In addition, Charles Vettes (ESA permit pending) assisted the USFWS-permitted biologists during these surveys. Appendix B provides a summary of survey conditions, including survey times, weather conditions, approximate acreage of habitat surveyed each day, and surveyors.

During the coastal California gnatcatcher surveys, the number of coastal California gnatcatcher detections ranged from 21 individuals during survey round 1 to 40 individuals during survey round 4 (Table 1; Appendix A: Figure 4). After reviewing the location of all detections during all the surveys throughout the BSA, the total number of individual coastal California gnatcatcher within the BSA is estimated to be between approximately 42 and 46 individuals. The estimated total number of individual coastal California gnatcatcher through the BSA is greater than the total number of individuals detected during any of the survey rounds because not all individuals were detected within the BSA during each survey round. In addition, a range of detected individuals within the BSA is provided based on our interpretation of whether each detected individual was newly detected or a previously detected.

Coastal California gnatcatcher detections during these surveys ranged from adults pairs, to solitary adult male and female individuals, to dispersing juvenile male and female individuals. Table 1, below, provides a summary of the number of individuals and pairs observed during each survey round. Appendix C provides a more detailed breakdown of each detection, including the number of individuals, GPS coordinates, and brief notes about the detection.

**Table 1. Summary of Individuals Detected per Survey Round**

Survey Round	Number of Individuals
Round 1	21
Round 2	33
Round 3	31
Round 4	40
Round 5	31
Round 6	34

The majority of coastal California gnatcatcher detections were within Diegan coastal sage scrub; however, coastal California gnatcatcher were also detected within Diegan coastal sage scrub-disturbed, coastal sage scrub-revegetated, coastal sage-chaparral scrub, and southern mixed chaparral. During the fall, it is common for coastal California gnatcatcher to be detected in a variety of habitats not typically considered suitable during the breeding season because adult nonbreeding season home range size compared to breeding season home range size increases by approximately 80 percent (Preston et al. 1998, Bontrager 1991), juveniles are dispersing through submarginal habitats, and adjacent habitats provide diverse foraging opportunities for individuals. Likewise,



during the breeding season, it is typical for coastal California gnatcatcher territory size to decrease and individuals to be detected predominantly within higher quality habitats.

In addition to the coastal California gnatcatcher, 74 other wildlife species were detected during the focused coastal California gnatcatcher surveys, including seven additional special-status wildlife species. The seven other special-status wildlife species detected include Cooper's hawk (*Accipiter cooperii*), Vaux's swift (*Chaetura vauxi*), loggerhead shrike (*Lanius ludovicianus*), California horned lark (*Eremophila alpestris actia*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), western bluebird (*Sialia mexicana*), and southern mule deer (*Odocoileus hemionus*). Appendix D provides a complete list of all wildlife species detected during the focused coastal California gnatcatcher surveys.

## SUMMARY

Approximately 42 to 46 individual coastal California gnatcatchers are estimated within the BSA based on the results of the late summer/fall 2013 focused, protocol-level, nonbreeding season coastal California gnatcatcher surveys. Coastal California gnatcatchers were detected within a variety of vegetation communities within the BSA, including Diegan coastal sage scrub, Diegan coastal sage scrub-disturbed, coastal sage scrub-revegetated, coastal sage-chaparral scrub, and southern mixed chaparral.


Please do not hesitate to contact Melissa Busby at [melissa@busbybiological.com](mailto:melissa@busbybiological.com) or 858.334.9507 or Darin Busby at [darin@busbybiological.com](mailto:darin@busbybiological.com) or 858.334.9508 if you have any questions.

Sincerely,



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Melissa Busby  
Owner/Principal Biologist  
Busby Biological Services, Inc.



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Darin Busby  
Owner/Principal Biologist  
Busby Biological Services, Inc.

cc: Joshua Taylor, TRC  
Elisha Back, TRC  
Robert Fletcher, SDG&E

**PROJECT BIOLOGIST SIGNATURE PAGE**

All biologists performing focused, protocol-level, coastal California gnatcatcher (*Polioptila californica californica*) surveys for the proposed Sycamore to Peñasquitos Substation 230 kilovolt transmission line project (Proposed Project) were permitted to survey for this species under Section 10(a)(1)(A) of the Endangered Species Act (ESA). The undersigned project biologists certify this report to be a complete and accurate account of the findings and conclusions of surveys for coastal California gnatcatcher conducted for the Proposed Project during late summer/fall 2013.



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Darin Busby  
Principal Biologist/Owner  
Busby Biological Services, Inc.  
ESA Permit Number TE-115373-2



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Laurie Gorman  
Senior Biologist/Project Manager  
Busby Biological Services, Inc.  
ESA Permit Number TE-233367-1



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Travis Cooper  
Principal Biologist  
Cooper Biological Services  
ESA Permit Number TE-170389-2

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## **APPENDIX A – Figures**

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## Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Location

Figure 1

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— Proposed Project

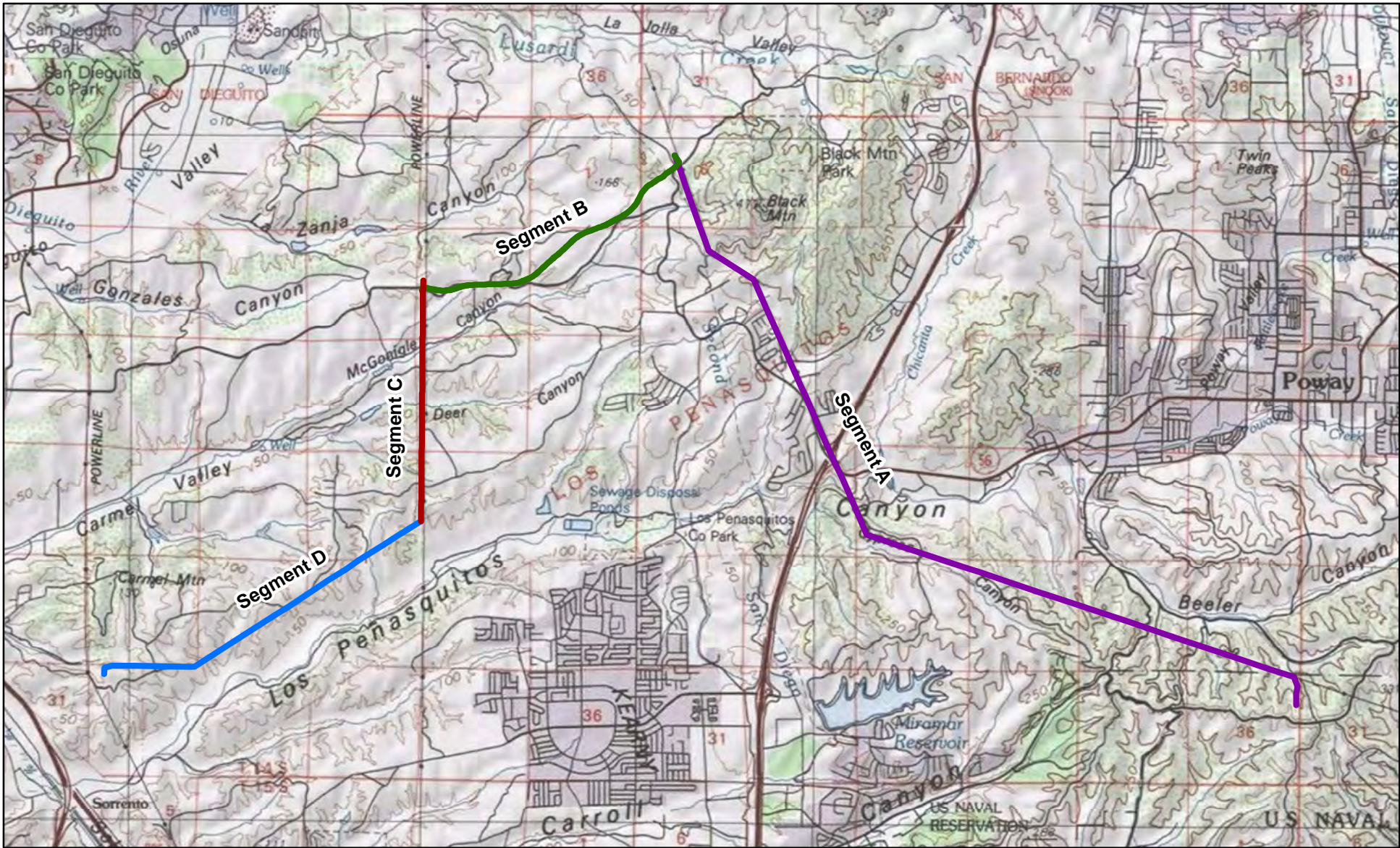


3/18/2014



A Sempra Energy utility

Sources: SDG&E; National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, IPC



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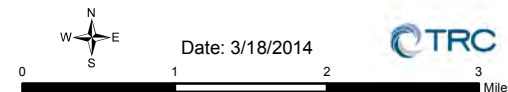
**Sycamore to Peñasquitos 230 kV Transmission Line Project**

Proposed Project Vicinity

**Figure 2**

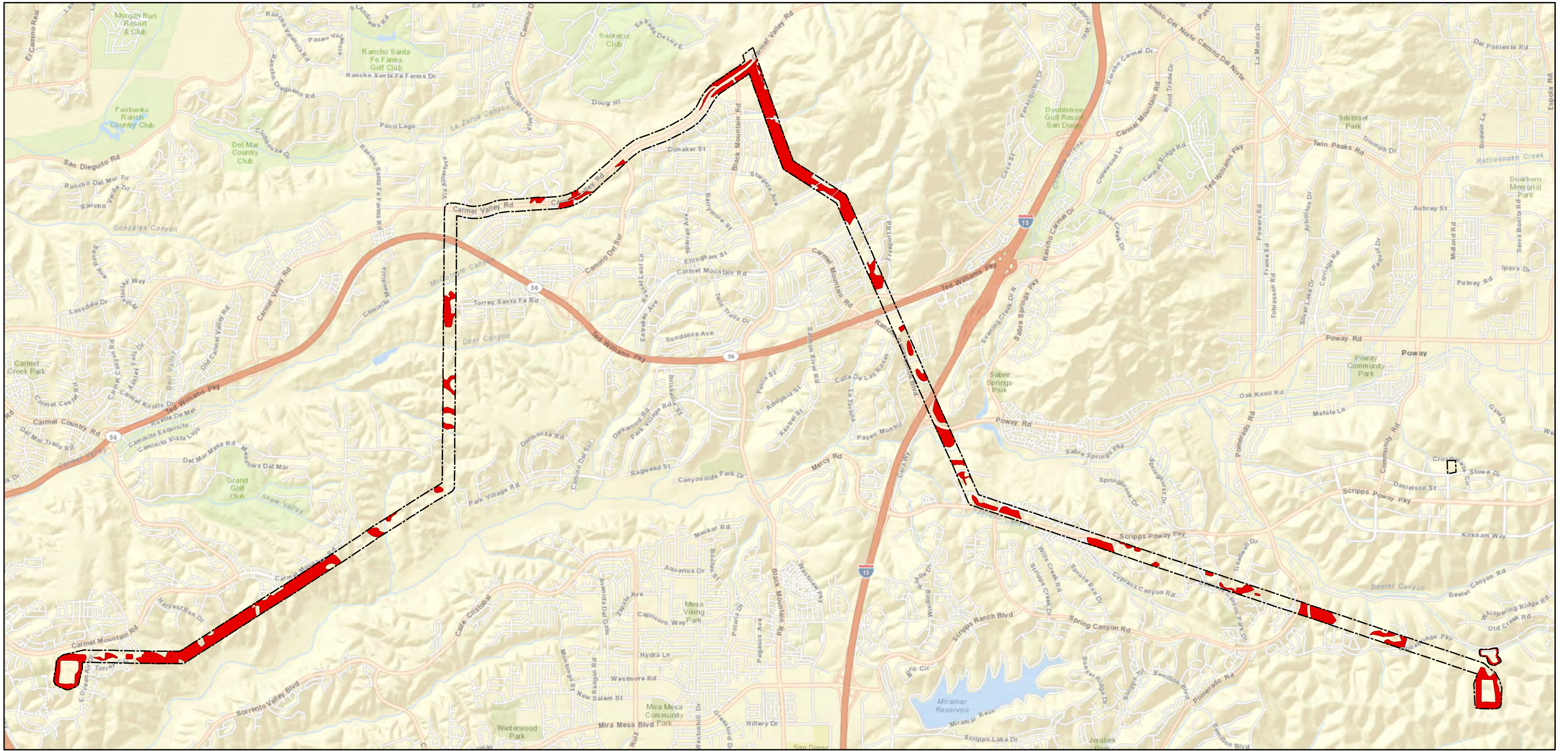
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- Segment A
- Segment B
- Segment C
- Segment D



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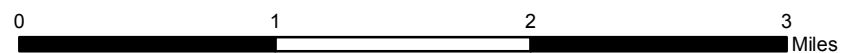
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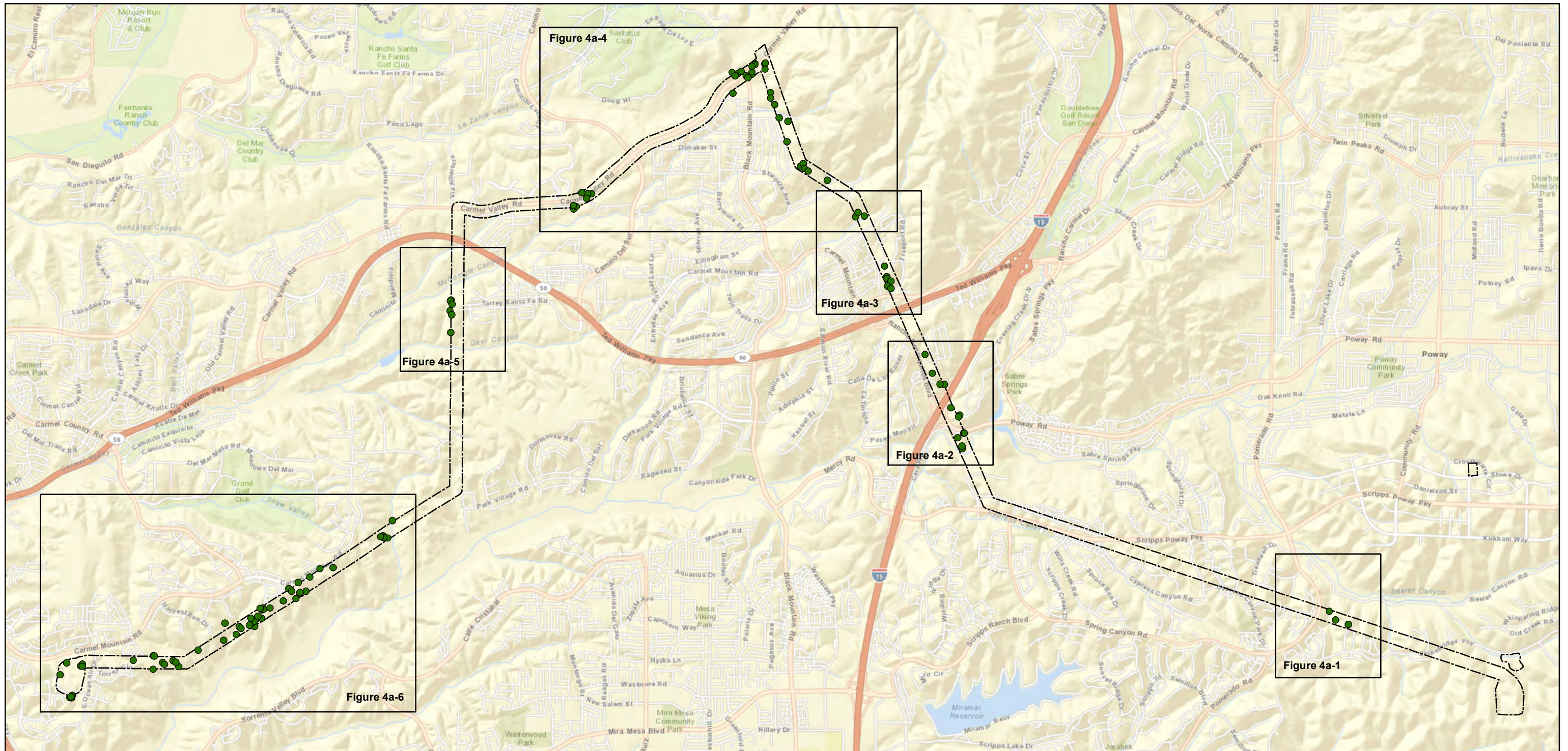
-  Biological Survey Area
-  Coastal California Gnatcatcher Suitable Habitat & Survey Area

**Sycamore to Peñasquitos 230 kV Transmission Line Project**  
 Coastal California Gnatcatcher Suitable Habitat Map  
 Proposed Project  
**Figure 3**



Date: 4/2/2014





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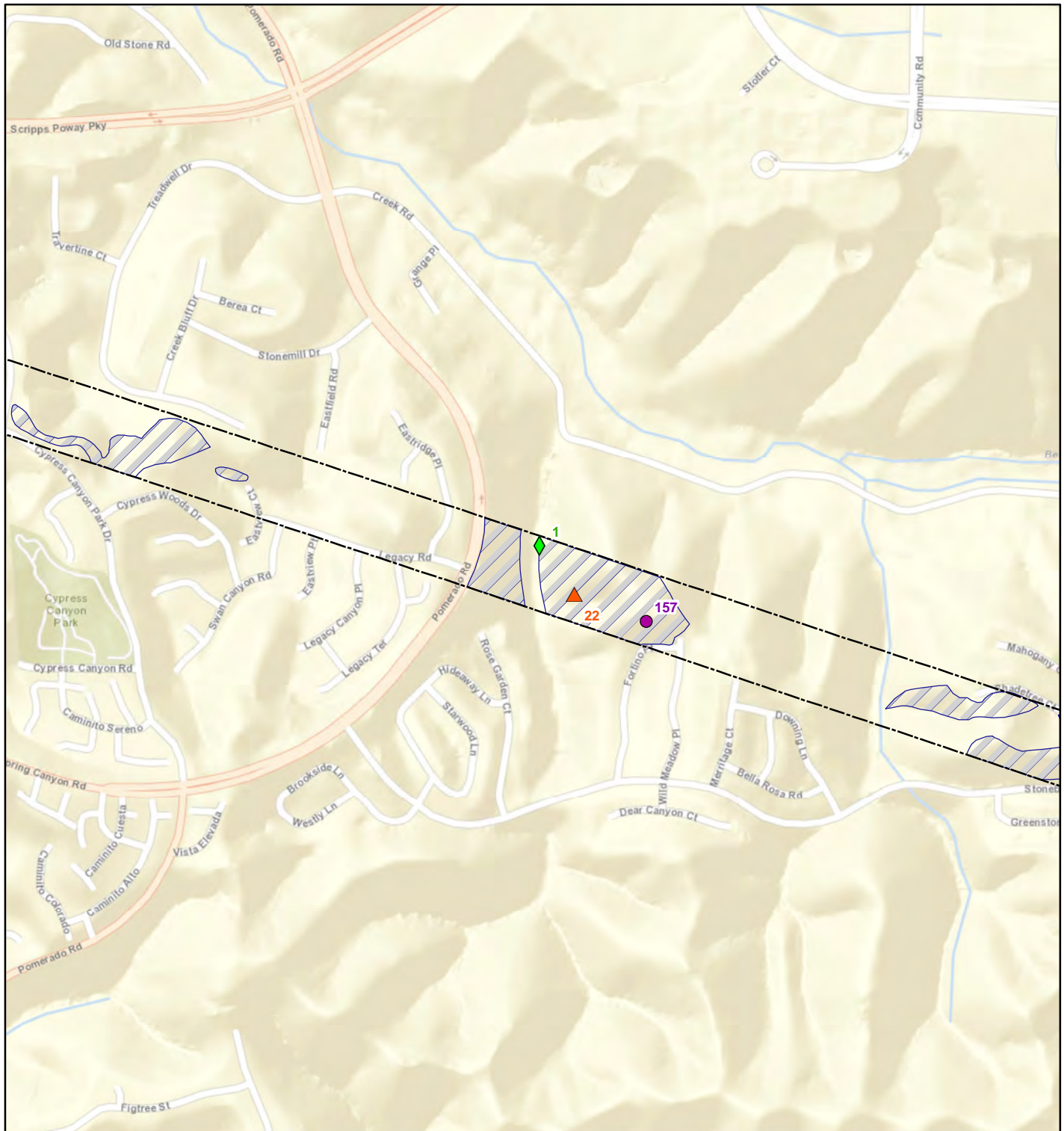
- Coastal California Gnatcatcher Detections
- ▭ Biological Survey Area

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**Sycamore to Peñasquitos 230 kV Transmission Line Project**  
 Coastal California Gnatcatcher Detections (Overview)  
 Proposed Project  
**Figure 4**



Date: 4/2/2014



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### Sycamore to Peñasquitos 230 kV Transmission Line Project Coastal California Gnatcatcher Detections

Proposed Project

**Figure 4a-1**

- ◆ Survey 1 Detections
  - ▲ Survey 2 Detections
  - + Survey 3 Detections
  - ★ Survey 4 Detections
  - Survey 5 Detections
  - Survey 6 Detections
- Biological Survey Area
  - Coastal California Gnatcatcher Suitable Habitat & Survey Area

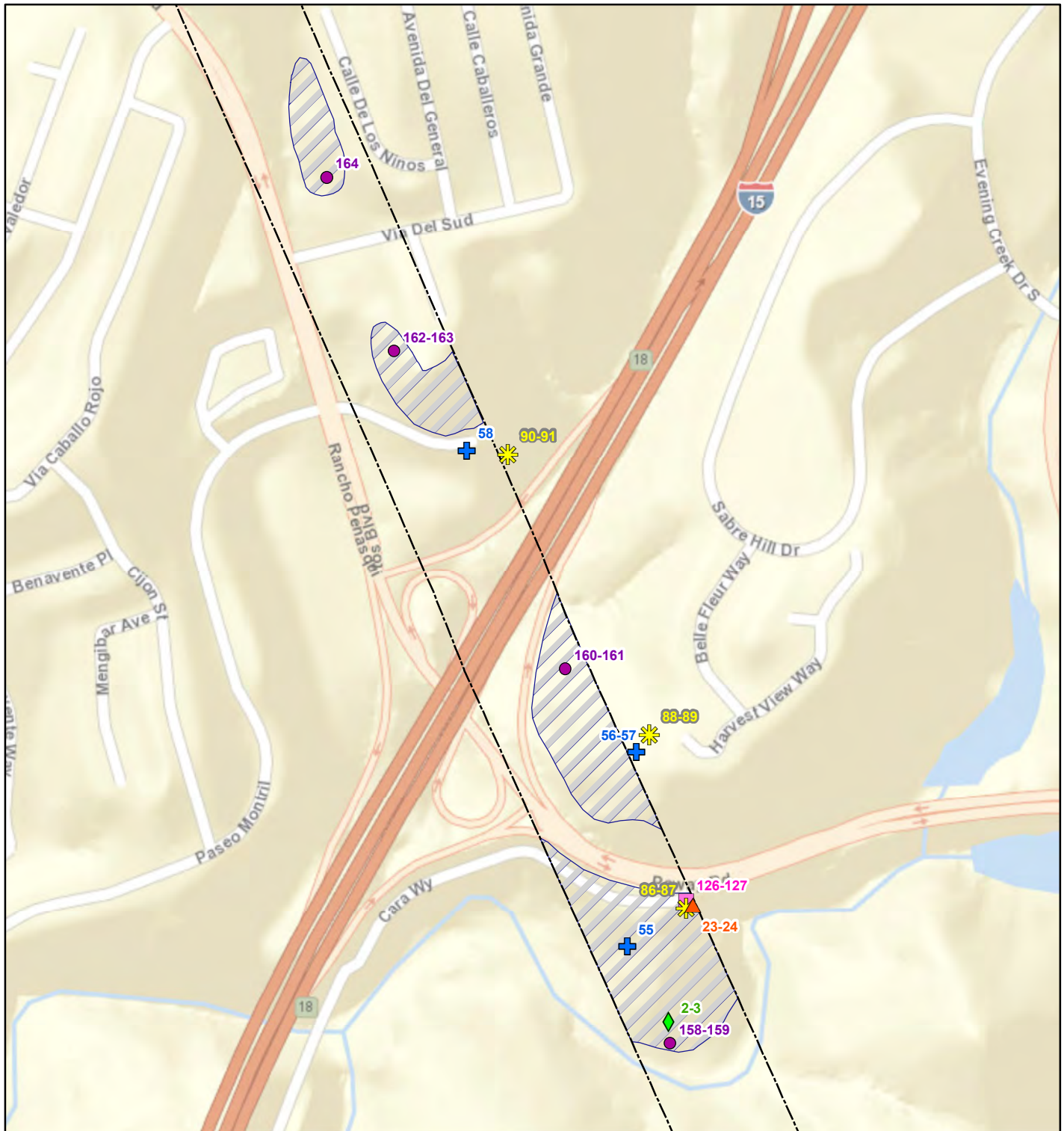


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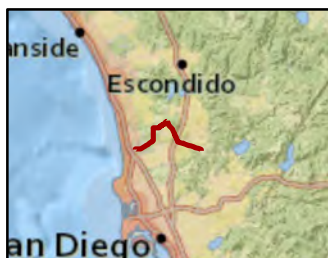
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### Sycamore to Peñasquitos 230 kV Transmission Line Project

Coastal California Gnatcatcher Detections

Proposed Project

**Figure 4a-2**



- ◆ Survey 1 Detections
- ▲ Survey 2 Detections
- ⊕ Survey 3 Detections
- ✱ Survey 4 Detections
- Survey 5 Detections
- Survey 6 Detections

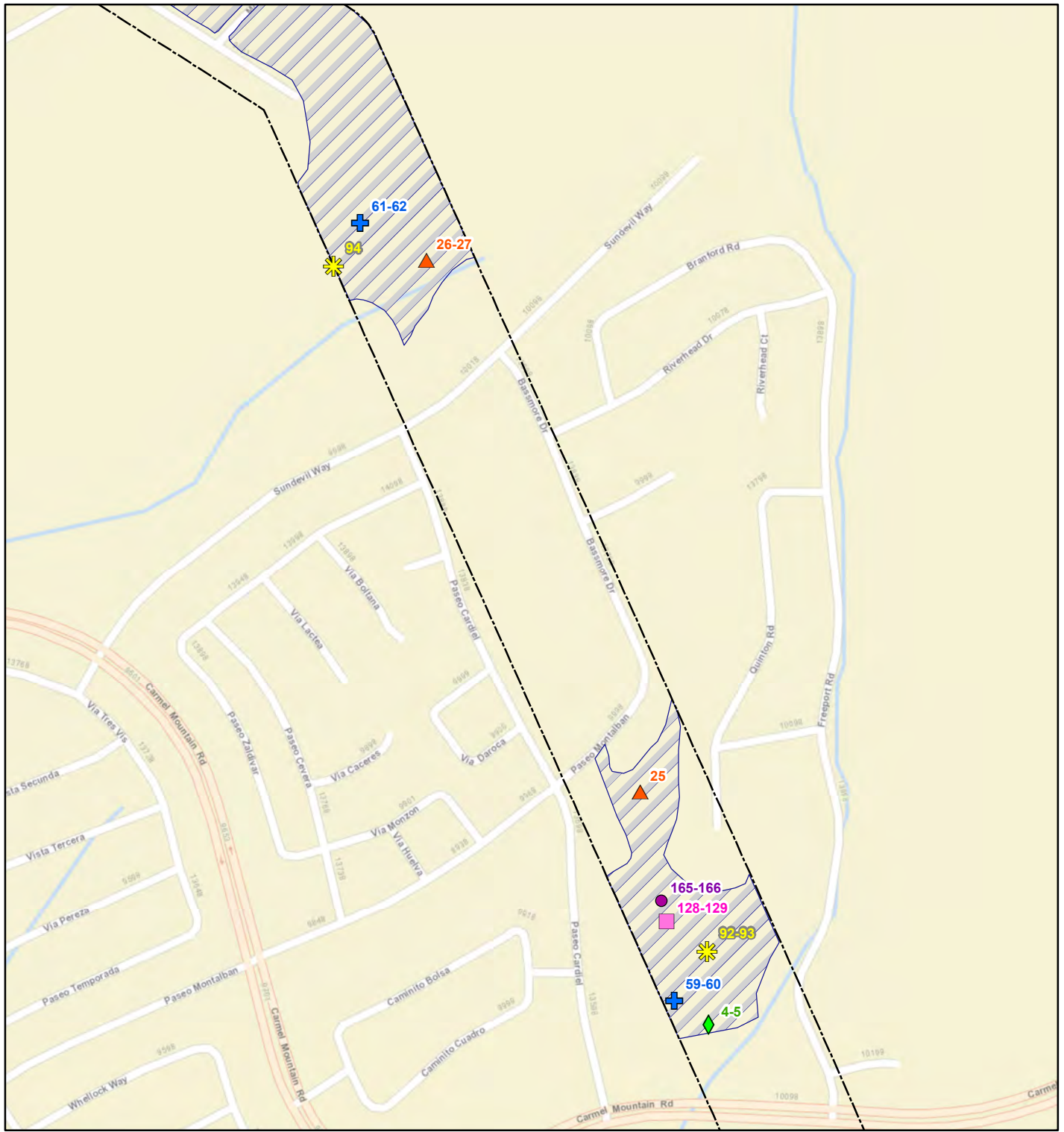
- Biological Survey Area
- ▨ Coastal California Gnatcatcher Suitable Habitat & Survey Area

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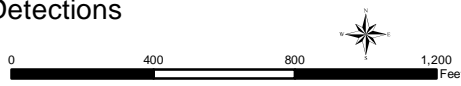
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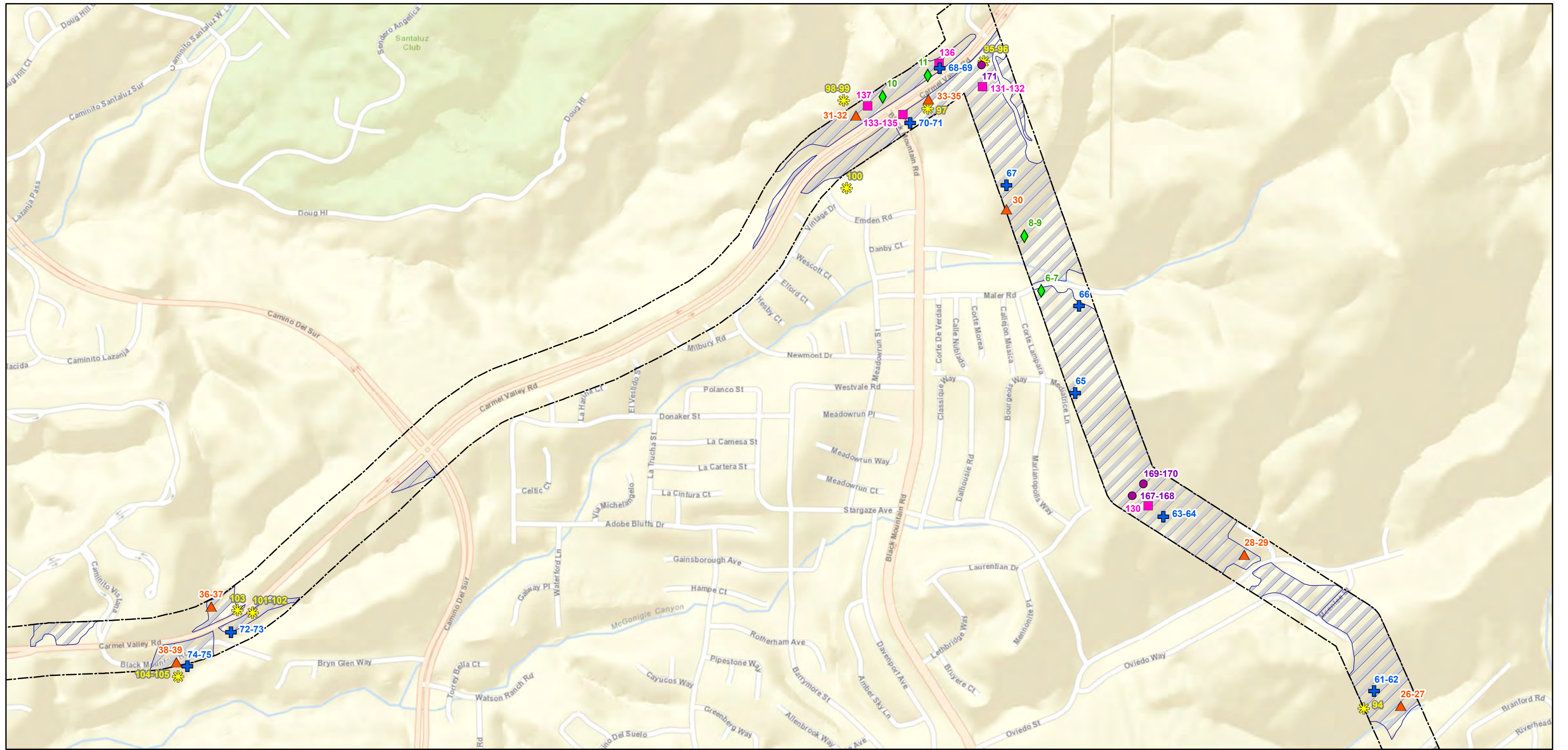
Proposed Project  
**Figure 4a-3**



- ◆ Survey 1 Detections
- ▲ Survey 2 Detections
- ⊕ Survey 3 Detections
- ✱ Survey 4 Detections
- Survey 5 Detections
- Survey 6 Detections
- ▭ Biological Survey Area
- ▨ Coastal California Gnatcatcher Suitable Habitat & Survey Area

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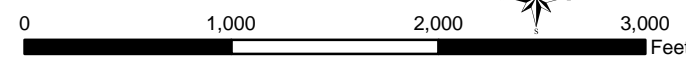


- ◆ Survey 1 Detections
- ✿ Survey 4 Detections
- ▲ Survey 2 Detections
- Survey 5 Detections
- + Survey 3 Detections
- Survey 6 Detections

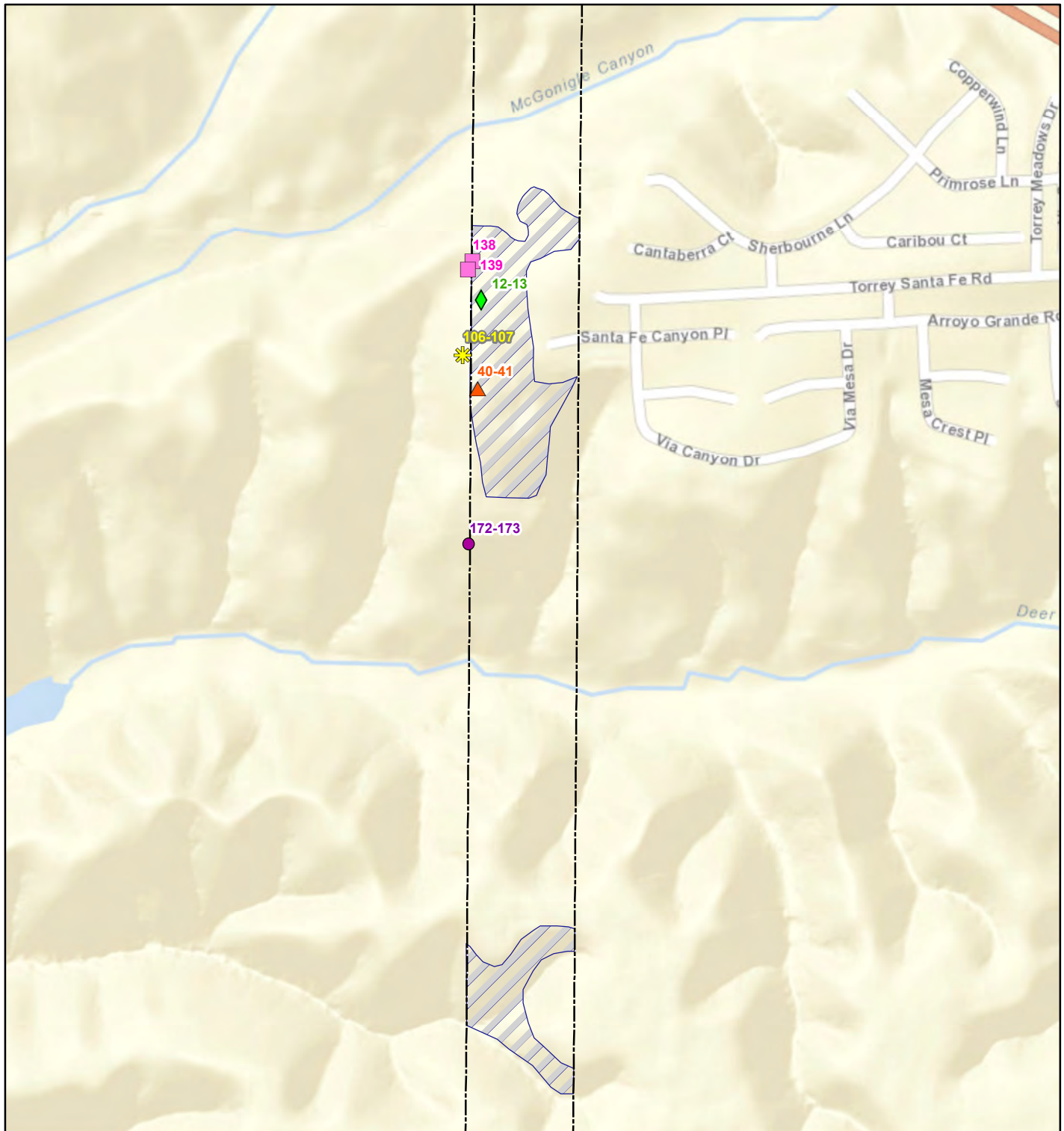
- ▭ Biological Survey Area
- ▨ Coastal California Gnatcatcher Suitable Habitat & Survey Area

**Sycamore to Peñasquitos 230 kV Transmission Line Project**  
 Coastal California Gnatcatcher Detections  
 Proposed Project  
**Figure 4a-4**

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### Sycamore to Peñasquitos 230 kV Transmission Line Project

Coastal California Gnatcatcher Detections

Proposed Project

**Figure 4a-5**



- ◆ Survey 1 Detections
- ▲ Survey 2 Detections
- ⊕ Survey 3 Detections
- ★ Survey 4 Detections
- Survey 5 Detections
- Survey 6 Detections

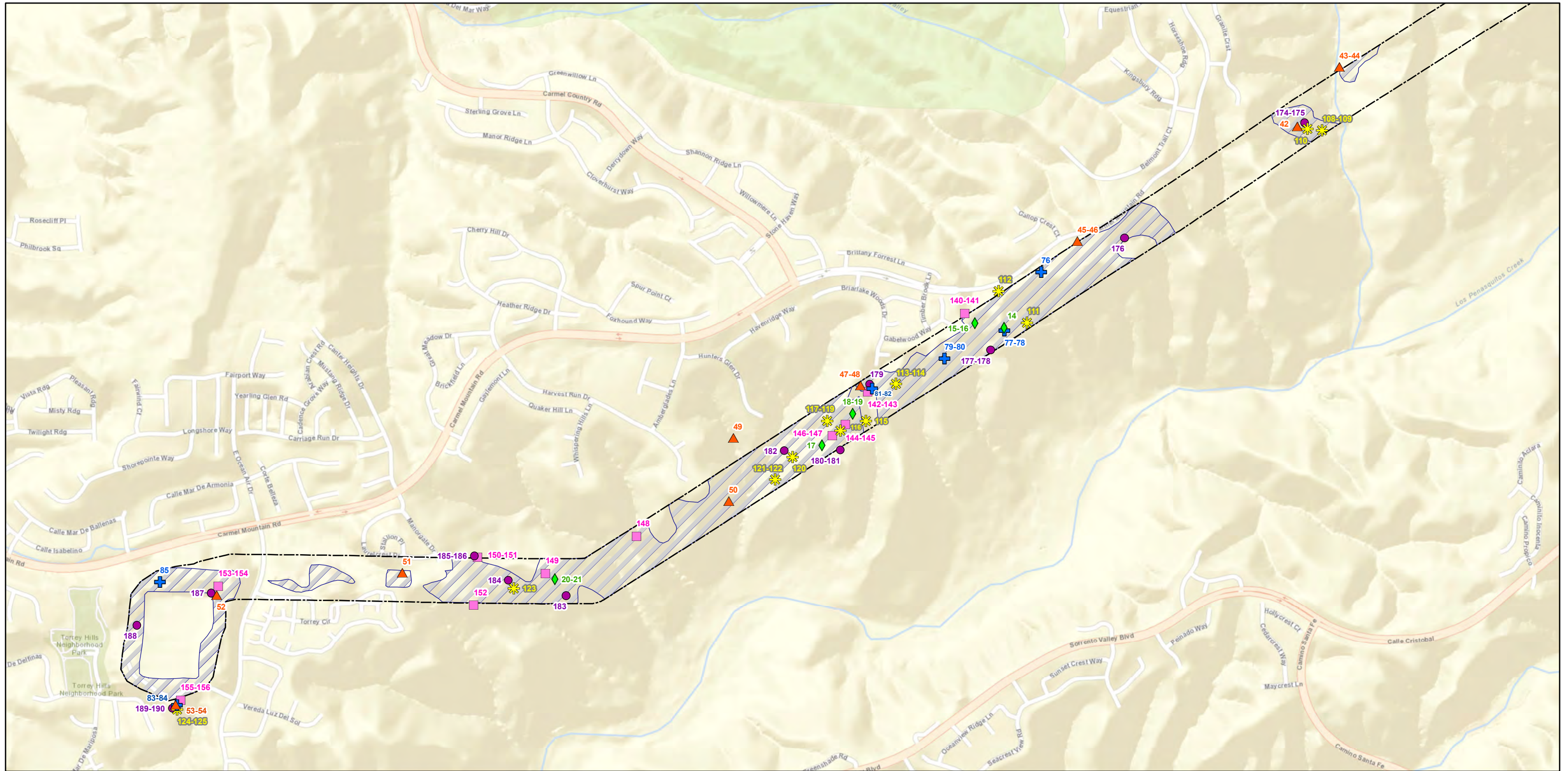
□ Biological Survey Area

▨ Coastal California Gnatcatcher Suitable Habitat & Survey Area

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Date: 4/2/2014



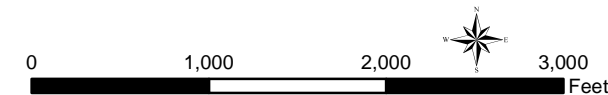
G:\SDGE\_SX2PQandTL6961\SDGE\_SunriseSX2PQ\MXD\ISXtoPQ\_CAGN\ISXtoPQ\_CAGN\_DetectionsMapFig4A6x.mxd



- ◆ Survey 1 Detections
- ▲ Survey 2 Detections
- ⊕ Survey 3 Detections
- ✻ Survey 4 Detections
- Survey 5 Detections
- Survey 6 Detections
- ▭ Biological Survey Area
- ▨ Coastal California Gnatcatcher Suitable Habitat & Survey Area

**Sycamore to Peñasquitos 230 kV Transmission Line Project**  
 Coastal California Gnatcatcher Detections  
 Proposed Project  
**Figure 4a-6**

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## **APPENDIX B – Survey Conditions**

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## Appendix B – Survey Conditions

Survey Round	Survey Day	Date	Time		Weather				Surveyors
					Temp	Wind	Clouds	Precip.	
					(°F)	(mph)	(%)		
1	1	9/16/13	Start	615	61	0-2	0	0	LG assisted by CV
			End	1200	85	2-9	0	0	
	2	9/17/13	Start	630	68	0	100	0	
			End	1200	88	1-4	0	0	
	3	9/18/13	Start	618	65	0-2	100	0	
			End	923	80	4-9	0	0	
	4	9/19/13	Start	615	67	0-1	100	0	
			End	1220	81	2-5	5	0	
	5	9/20/13	Start	615	67	0-1	100	0	
			End	1052	72	0-1	100	0	
2	1	9/26/13	Start	620	63	0-5	100	0	DB assisted by CV
			End	1200	68	1-3	65	0	
	2	9/27/13	Start	620	56	0-2	0	0	TC assisted by CV
			End	1140	78	0-3	0	0	
	3	9/30/13	Start	620	60	0-2	0	0	
			End	1200	86	1-3	0	0	
	4	10/1/13	Start	635	59	0-1	100	0	LG assisted by CV
			End	1225	79	0-1	0	0	
	5	10/2/13	Start	640	64	0-1	100	0	
			End	1140	73	2-5	15	0	
3	1	10/7/13	Start	645	55	0-3	25	0	LG assisted by CV
			End	1205	80	2-6	70	0	
	2	10/8/13	Start	630	60	0-2	100	0	
			End	1210	73	1-4	95	0	
	3	10/10/13	Start	630	55	0-2	60	0	
			End	1240	73	0-2	40	0	
	4	10/11/13	Start	630	52	0-1	0	0	
			End	1300	70	2-10	0	0	
	5	10/12/13	Start	630	70	0-1	100	0	
			End	1110	68	2-5	5	0	

## Appendix B – Survey Conditions

Survey Round	Survey Day	Date	Time		Weather				Surveyors
					Temp	Wind	Clouds	Precip.	
					(°F)	(mph)	(%)		
4	1	10/17/13	Start	630	53	1-2	0	0	LG assisted by CV
			End	1125	86	0-3	0	0	
	2	10/18/13	Start	640	58	0-1	0	0	
			End	1200	82	1-4	0	0	
	3	10/21/13	Start	700	57	0-1	100	0	
			End	1240	79	1-3	0	0	
	4	10/22/13	Start	700	62	0-1	100	0	
			End	1115	7-Feb	69	0	0	
	5	10/23/13	Start	645	63	0-2	100	0	
			End	1130	72	0-2	100	0	
5	1	10/28/13	Start	700	60	1-2	100	light drizzle	LG assisted by CV
			End	1115	62	0-2	100	light drizzle	
	2	10/29/13	Start	640	55	1-2	100	0	
			End	1130	71	0-3	40	0	
	3	10/31/13	Start	645	55	1-3	0	0	
			End	1240	75	2-4	0	0	
	4	11/1/13	Start	700	55	0-2	0	0	
			End	1200	84	1-5	0	0	
	5	11/2/13	Start	640	58	0-2	0	0	
			End	1200	73	3-8	0	0	
6	1	11/7/13	Start	610	46	1-3	7	0	LG assisted by CV
			End	1100	85	0-3	50	0	
	2	11/8/13	Start	615	54	0-2	0	0	
			End	1145	77	4-8	0	0	
	3	11/11/13	Start	610	53	0-2	0	0	
			End	1100	73	1-5	0	0	
	4	11/12/13	Start	640	57	0-2	40	0	
			End	1230	78	1-4	0	0	
	5	11/13/13	Start	615	62	0-1	0	0	
			End	1100	78	1-4	0	0	

## **APPENDIX C – Survey Results**

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### Appendix C – Survey Results

CAGN # on Map	Survey Round	Detection Date	GPS Location		Notes
			Northing	Easting	
1	1	9/16/13	32.92648	-117.05464	One uncapped CAGN foraging and calling in black sage scrub, approx. 60% grade, west-facing slope, just east of Creek Rd.
2-3	1	9/17/13	32.94438	-117.10286	A pair of CAGN (one uncapped, one with darker eyebrow) foraging together and calling back and forth in CSS on south-facing slope, just north of riparian habitat and south of Poway Rd.
4-5	1	9/18/13	32.96172	-117.11232	Pair of CAGN (one uncapped, one with darker eyebrow) foraging together and calling back and forth in CSS on south-facing slope, north of Carmel Mountain Rd. They appeared to be juveniles.
6-7	1	9/18/13	32.98044	-117.12716	Two uncapped CAGN foraging and calling in CSS on a north-facing slope just south of Maler Rd. They appeared to be juveniles.
8-9	1	9/18/13	32.98187	-117.12769	Two uncapped CAGN foraging and calling in CSS on a south-facing slope, north of Maler Rd.
10	1	9/18/13	32.98549	-117.13213	One uncapped CAGN foraging and calling in CSS on a south-facing slope just off the northern terminus of Black Mountain Rd.
11	1	9/19/13	32.98606	-117.13074	One CAGN heard calling within restored CSS on a south-facing slope, just north of Carmel Valley Rd., just northeast of the dirt access road entrance.
12-13	1	9/19/13	32.95952	-117.16970	Two CAGN (one observed to have darker eyebrow) foraging together and calling back and forth in CSS in a topographically flat area. They appeared to be juveniles.
14	1	9/19/13	32.92759	-117.18928	One uncapped CAGN foraging and calling in black sage and chamise on a northeast-facing slope.
15-16	1	9/19/13	32.92773	-117.19033	Two CAGN (one observed to have darker eyebrow) foraging together and calling back and forth in CSS underneath power lines on an east-facing slope.
17	1	9/20/13	32.92395	-117.19581	One CAGN foraging and calling in CSS on a north-facing slope, then flew out of the survey area behind a hill to the south.
18-19	1	9/20/13	32.92493	-117.19472	Two uncapped CAGN foraging and calling in CSS on an east-facing slope.
20-21	1	9/20/13	32.91980	-117.20542	Two uncapped CAGN foraging and calling in CSS on a southwest-facing slope.
22	2	9/26/13	32.92554	-117.05384	One CAGN foraging near the base of a south-facing slope.
23-24	2	9/27/13	32.94578	-117.10253	Pair of CAGN foraging together.
25	2	9/27/13	32.96414	-117.11318	One male CAGN.

## Appendix C – Survey Results

CAGN # on Map	Survey Round	Detection Date	GPS Location		Notes
			Northing	Easting	
26-27	2	9/27/13	32.96965	-117.11588	Two CAGN foraging.
28-29	2	9/27/13	32.97358	-117.12078	Pair of CAGN foraging together.
30	2	9/30/13	32.98257	-117.12826	One solitary female CAGN.
31-32	2	9/30/13	32.98500	-117.13295	One female CAGN.
33-35	2	9/30/13	32.98543	-117.13072	Three CAGN (one pair plus one solitary female type).
36-37	2	9/30/13	32.97199	-117.15287	Two CAGN foraging together and countercalling 100-200 ft. north of bridge.
38-39	2	9/30/13	32.97053	-117.15393	Two CAGN (one male observed, one CAGN heard in territory).
40-41	2	9/30/13	32.95838	-117.16974	Pair of CAGN countercalling and foraging together along trail. One male observed.
42	2	10/1/13	32.93381	-117.17875	One CAGN foraging and calling occasionally. Darker head plumage.
43-44	2	10/1/13	32.93563	-117.17725	Pair of CAGN countercalling and foraging together. Male eyebrow visible. North of duck pond along trail.
45-46	2	10/1/13	32.93024	-117.18666	Two uncapped CAGN detected countercalling and foraging together.
47-48	2	10/1/13	32.92579	-117.19445	Two uncapped CAGN foraging and calling in CSS on an east-facing slope.
49	2	10/2/13	32.92416	-117.19902	One CAGN heard calling within CSS habitat in a canyon just north of the BSA.
50	2	10/2/13	32.92223	-117.19916	One male (darker cap visible) CAGN foraging and calling in black sage on an east-facing slope.
51	2	10/2/13	32.91996	-117.21093	One uncapped CAGN foraging and calling in small patch of CSS just east of a dog park.
52	2	10/2/13	32.91922	-117.21763	Single uncapped CAGN foraging and calling at NE corner of substation.
53-54	2	10/2/13	32.91587	-117.21907	Two CAGN (one uncapped, one not visualized) foraging and countercalling and approaching in response to playback.
55	3	10/8/13	32.94527	-117.10346	One male CAGN (with darker cap) foraging and calling in CSS on a southwest facing slope.
56-57	3	10/8/13	32.94761	-117.10335	Two uncapped CAGN, one with significantly browner wash, foraging together and calling 50 ft. north of access road between Sabre Springs sign and cul de sac.
58	3	10/8/13	32.95120	-117.10579	One uncapped CAGN, likely female due to brown wash on body. Foraging in CSS. Called once in 20 minute period.
59-60	3	10/8/13	32.96197	-117.11275	Two CAGN (one uncapped, one not visualized) foraging together and countercalling on south facing slope between access road and parking lot below.

## Appendix C – Survey Results

CAGN # on Map	Survey Round	Detection Date	GPS Location		Notes
			Northing	Easting	
61-62	3	10/8/13	32.97003	-117.11670	A pair of CAGN foraging and counter-calling in CSS along drainage under power lines, northeast of school football field.
63-64	3	10/10/13	32.97455	-117.12330	Two CAGN (one uncapped, the other not visualized) counter calling across the canyon to each other.
65	3	10/10/13	32.97778	-117.12607	One lone male CAGN foraging and calling in CSS on west facing slope adjacent to housing community, west of access road.
66	3	10/10/13	32.98005	-117.12597	One CAGN calling in CSS. Could not determine sex before CAGN flew east and out of view.
67	3	10/10/13	32.98320	-117.12827	Single male CAGN with black eye brow leading into darkish cap. Not vocalizing. Just north of access road leading to tower and water tank.
68-69	3	10/10/13	32.98626	-117.13037	A pair of CAGN (male with visible eyebrow, female with browner wash) counter calling in CSS in south-facing slope, north of Carmel Valley Rd.
70-71	3	10/10/13	32.98481	-117.13127	Two CAGN (1 male with eye brow, 1 female with significantly browner wash and no brow/cap) foraging together. Possible 3rd CAGN present but not confirmed.
72-73	3	10/10/13	32.97132	-117.15225	A pair of CAGN foraging and counter calling in CSS, beginning just southeast of culvert and moving further east within habitat polygon.
74-75	3	10/10/13	32.97042	-117.15359	Two CAGN (one w/ brown wash, one gray without cap/brow) foraging together and countercalling infrequently 200 ft. south of Carmel Valley Rd. between small trail and riparian corridor.
76	3	10/11/13	32.92930	-117.18795	Single uncapped CAGN with possible faint eye brow between access road and Carmel Mountain Rd. around drainage below trail about halfway between tower structures.
77-78	3	10/11/13	32.92750	-117.18927	Two CAGN (one gray, one with brown wash) foraging together and vocalizing on top of ridge 225 ft. south of tower near dual wooden poles.
79-80	3	10/11/13	32.92664	-117.19142	A pair of CAGN foraging and calling in CSS along south-facing drainage.
81-82	3	10/11/13	32.92570	-117.19402	A pair of CAGN (male with visible eyebrow) counter calling and foraging in CSS on rocky south-facing slope.
83-84	3	10/12/13	32.91586	-117.21903	Two uncapped CAGN (one possibly juvenile male with faint eyebrow, one likely female due to brown wash) counter calling and foraging in CSS on southwest-facing slope.
85	3	10/12/13	32.91962	-117.21968	One uncapped CAGN (slight brown wash with juvenile-like appearance) foraging and calling.

## Appendix C – Survey Results

CAGN # on Map	Survey Round	Detection Date	GPS Location		Notes
			Northing	Easting	
86-87	4	10/18/13	32.94574	-117.10262	Two CAGN (one uncapped, one with darkish cap) foraging together and counter calling at very top of slope.
88-89	4	10/18/13	32.94781	-117.10317	Two uncapped CAGN (one with darker eyebrow, one with slight hint of brown wash) counter calling and foraging in CSS adjacent and just downhill of housing community.
90-91	4	10/18/13	32.95116	-117.10521	Pair of CAGN (one with dark eyebrow, one with browner wash) foraging together in CSS just west of chain link fence and then moved west into the BSA.
92-93	4	10/18/13	32.96249	-117.11235	Two CAGN (one with dark eyebrow, one with brown wash).
94	4	10/18/13	32.96958	-117.11703	One CAGN with black eyebrow, vocalizing, foraging between prominent rock outcropping and fence to north of football field, then foraging inside of fence closer to football field.
95-96	4	10/21/13	32.98644	-117.12900	Pair of CAGN (one with brown wash, both uncapped.) foraging and calling in response to taped vocalization.
97	4	10/21/13	32.98519	-117.13073	One uncapped CAGN foraging in CSS with browner wash than CAGN west of Black Mountain Rd.
98-99	4	10/21/13	32.98539	-117.13334	Two CAGN (one male with prominent black cap) displaying aggressive dash to second uncapped individual.
100	4	10/21/13	32.98309	-117.13323	One uncapped CAGN (slight brownish wash, likely female) foraging and calling, west of Black Mountain Rd and south of Carmel Valley Rd.
101-102	4	10/21/13	32.97185	-117.15158	A pair of CAGN calling and foraging on north side of access road, south of Carmel Valley Rd.
103	4	10/21/13	32.97190	-117.15205	One CAGN (slight eyebrow) observed foraging and calling in CSS on north side of Carmel Valley Rd.
104-105	4	10/21/13	32.97015	-117.15387	A pair of CAGN (one with dark eyebrow) calling and foraging in CSS southeast of housing community.
106-107	4	10/21/13	32.95881	-117.16997	Two CAGN (one male with brow, one audible) foraging and locative countercalling west of trail bordering western end of plot.
108-109	4	10/22/13	32.93369	-117.17786	Pair of CAGN (one with faint dark eyebrow) counter calling.
110	4	10/22/13	32.93373	-117.17838	One CAGN heard calling in CSS.
111	4	10/22/13	32.92775	-117.18845	Single CAGN audible, mewling from drainage below.
112	4	10/22/13	32.92871	-117.18949	Single uncapped male with black eyebrow responds to playback with harsh scolding churrs and tail fans.

## Appendix C – Survey Results

CAGN # on Map	Survey Round	Detection Date	GPS Location		Notes
			Northing	Easting	
113-114	4	10/22/13	32.92585	-117.19316	Two CAGN (one uncapped brown wash, one dark gray with darkish cap) countercalling and foraging around dual wooden poles then around reveg area toward houses.
115	4	10/22/13	32.92471	-117.19423	Single CAGN (sex not determined) responding to playback from across drainage vocalizing loudly drawing in two CAGN from above.
116	4	10/22/13	32.92441	-117.19516	Single CAGN (sex not determined), heard and seen.
117-119	4	10/22/13	32.92471	-117.19563	Two CAGN (one with eyebrow) giving alarm calls in aerial dispute with third CAGN with brownish wash.
120	4	10/23/13	32.92360	-117.19688	One CAGN heard calling on opposite slope facing west.
121-122	4	10/23/13	32.92290	-117.19750	Pair of CAGN counter calling in CSS on opposite slope (steep slope facing northwest).
123	4	10/23/13	32.91951	-117.20690	One CAGN calling in canyon below power lines.
124-125	4	10/23/13	32.91573	-117.21901	Two CAGN (both appear uncapped, one lighter w/ brown wash other darker gray) foraging and countercalling in drainage south of substation toward top of slope near the tower structure.
126-127	5	10/30/13	32.94583	-117.10262	Pair of CAGN foraging. Male responded to playback tape with vocalization.
128-129	5	10/30/13	32.96279	-117.11285	One CAGN of unknown sex observed and locative countercalling heard with a second CAGN from 125 feet south of dual poles to area just north of parking lot at southern end of plot.
130	5	10/30/13	32.97484	-117.12377	One CAGN audible, possible second CAGN 275 ft. SE of tower structure.
131-132	5	10/31/13	32.98577	-117.12903	Pair of CAGN foraging closely together, vocalizing infrequently.
133-135	5	10/31/13	32.98504	-117.13150	Three CAGN observed foraging in CSS near intersection of Carmel Valley Rd. and Black Mountain Rd. All uncapped, one with brownish wash, another with slight brownish wash.
136	5	10/31/13	32.98637	-117.13039	One uncapped CAGN foraging in CSS on south-facing slope. Did not vocalize.
137	5	10/31/13	32.98525	-117.13260	One CAGN calling and moving about in CSS south-facing bowl.
138	5	10/31/13	32.96000	-117.16984	One male CAGN (uncapped but eyebrow visible and had gray wash) foraging in CSS. Called softly 2-3 times during observation and stayed low in vegetation.
139	5	10/31/13	32.95990	-117.16990	One uncapped CAGN with brown wash foraging quickly and low in vegetation.
140-141	5	11/1/13	32.92801	-117.19071	Two CAGN counter calling in restored CSS just south of the bridge.



## Appendix C – Survey Results

CAGN # on Map	Survey Round	Detection Date	GPS Location		Notes
			Northing	Easting	
142-143	5	11/1/13	32.92561	-117.19419	Pair of CAGN observed foraging in CSS on south-facing slope. One short vocalization heard.
144-145	5	11/1/13	32.92459	-117.19498	Pair of CAGN foraging and interacting in the air. Observed and heard calling in CSS on south-facing slope.
146-147	5	11/1/13	32.92426	-117.19544	Pair of CAGN foraging in CSS on hilltop.
148	5	11/2/13	32.92113	-117.20249	Single CAGN of unknown sex foraging and vocalizing alone along east-facing steep ridge of canyon.
149	5	11/2/13	32.91998	-117.20577	Single uncapped CAGN (no eyebrow with brown wash) responding to playback and vocalizing.
150-151	5	11/2/13	32.92046	-117.20821	Two CAGN foraging and countercalling together 230 feet north of the access road.
152	5	11/2/13	32.91898	-117.20834	Single uncapped CAGN (no eyebrow with brown wash) foraging and vocalizing alone in area between the access road and trail leading to the south.
153-154	5	11/2/13	32.91949	-117.21758	Pair of CAGN (both uncapped, one with brown wash and the other gray) foraging in CSS.
155-156	5	11/2/13	32.91600	-117.21889	Pair of CAGN observed foraging and heard counter calling in CSS on south-facing slope.
157	6	11/7/13	32.92503	-117.05219	Two uncapped CAGN with grayish wash and no obvious eyebrow calling and flying about restored CSS on south-facing slope. Very vocal.
158-159	6	11/8/13	32.94412	-117.10283	Pair of CAGN foraging together and counter calling.
160-161	6	11/8/13	32.94859	-117.10436	Pair of CAGN foraging and calling in CSS on northwest facing slope.
162-163	6	11/8/13	32.95237	-117.10683	Two uncapped CAGN, possible pair (one grayish wash but no obvious eyebrow, other with brownish wash) foraging in CSS under power lines, above car wash building.
164	6	11/8/13	32.95445	-117.10781	One uncapped CAGN foraging and calling on west-facing slope.
165-166	6	11/8/13	32.96300	-117.11291	A pair of CAGN, one with obvious eyebrow and other with browner wash, foraging together in CSS and calling in respond to playback tape.
167-168	6	11/8/13	32.97509	-117.12427	Two uncapped CAGN. COHA in area. CAGN making alarm calls, calling back and forth with COHA.
169-170	6	11/8/13	32.97540	-117.12393	A pair of CAGN foraging in CSS just southeast of power line. Male had gray wash, dark eyebrow, and was banded.
171	6	11/11/13	32.98633	-117.12906	Single CAGN (no eyebrow with brown wash) foraging without vocalizing.

## Appendix C – Survey Results

CAGN # on Map	Survey Round	Detection Date	GPS Location		Notes
			Northing	Easting	
172-173	6	11/12/13	32.95640	-117.16985	A pair of CAGN foraging together and counter calling in monotypic chamise chaparral.
174-175	6	11/12/13	32.93392	-117.17848	Two CAGN heard counter calling in CSS in valley south of the duck pond and east of the BSA.
176	6	11/12/13	32.93035	-117.18496	Single uncapped CAGN foraging and vocalizing in southern drainage of canyon between tower structures.
177-178	6	11/12/13	32.92690	-117.18975	Pair of CAGN seen briefly, foraging together and locative counter calling in canyon southeast of houses.
179	6	11/12/13	32.92582	-117.19410	Pair of CAGN (male with darkish cap and no wash, female uncapped, no eyebrow with brown wash) foraging and locative countercalling on revegetated slope south of Briarlake Woods Dr.
180-181	6	11/12/13	32.92381	-117.19514	Pair of CAGN (one female uncapped with brown wash, one of unknown sex but likely male) foraging and locative countercalling in area south of dual poles.
182	6	11/12/13	32.92377	-117.19717	One uncapped CAGN of unknown sex calling on opposite (northwest-facing) slope. Traveling large distances up and down and around the slope, calling very loudly.
183	6	11/13/13	32.91930	-117.20500	Single CAGN male with slight eyebrow, responding to playback, vocalizing occasionally at top of trail in area between dual poles.
184	6	11/13/13	32.91975	-117.20709	Single CAGN audible in drainage S of trail juncture.
185-186	6	11/13/13	32.92048	-117.20832	Two CAGN (one male uncapped with eyebrow, one uncapped CAGN of unknown sex) foraging in CSS east of and below houses along trail.
187	6	11/13/13	32.91928	-117.21782	One male CAGN foraging and calling in CSS just above the northeast corner of the substation.
188	6	11/13/13	32.91828	-117.22050	One CAGN (uncapped with brown wash, likely female) foraging and calling in CSS on west side of Penasquitos Substation moving northward while foraging.
189-190	6	11/13/13	32.91575	-117.21918	A pair of CAGN (both uncapped, one grayish with dark eyebrow) foraging and calling.

## **APPENDIX D – Wildlife Species Detected**

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## Appendix D - Wildlife Species Detected

Scientific Name	Common Name
<b>Invertebrates</b>	
<i>Danaus plexippus</i>	monarch butterfly
<i>Vanessa cardui</i>	painted lady
<i>Apodemia virgulti</i>	Behr's metalmark
<b>Amphibians</b>	
<i>Hyla cadaverina</i>	California treefrog
<b>Reptiles</b>	
<i>Sceloporus occidentalis</i>	western fence lizard
<i>Uta stansburiana</i>	side-blotched lizard
<b>Birds</b>	
<i>Anas strepera</i>	gadwall
<i>Anas americana</i>	American wigeon
<i>Anas platyrhynchos</i>	mallard
<i>Callipepla californica</i>	California quail
<i>Ardea alba</i>	great egret
<i>Cathartes aura</i>	turkey vulture
<i>Accipiter cooperii</i>	Cooper's hawk
<i>Buteo lineatus</i>	red-shouldered hawk
<i>Buteo jamaicensis</i>	red-tailed Hawk
<i>Falco sparverius</i>	American kestrel
<i>Fulica americana</i>	American coot
<i>Charadrius vociferus</i>	killdeer
<i>Larus occidentalis</i>	western gull
<i>Zenaida macroura</i>	mourning dove
<i>Geococcyx californianus</i>	greater roadrunner
<i>Bubo virginianus</i>	great horned owl
<i>Phalaenoptilus nuttallii</i>	common poorwill
<i>Chaetura vauxi</i>	Vaux's swift
<i>Aeronautes saxatalis</i>	white-throated swift
<i>Calypte anna</i>	Anna's hummingbird
<i>Selasphorus sasin</i>	Allen's hummingbird
<i>Melanerpes formicivorus</i>	acorn woodpecker
<i>Sphyrapicus sp.</i>	sapsucker sp.
<i>Picoides nuttallii</i>	Nuttall's woodpecker
<i>Colaptes auratus</i>	northern flicker
<i>Empidonax difficilis</i>	Pacific-slope flycatcher
<i>Sayornis nigricans</i>	black phoebe
<i>Sayornis saya</i>	Say's phoebe
<i>Tyrannus vociferans</i>	Cassin's kingbird
<i>Tyrannus verticalis</i>	western kingbird
<i>Lanius ludovicianus</i>	loggerhead shrike
<i>Apelocoma californica</i>	western scrub-Jay

## Appendix D - Wildlife Species Detected

Scientific Name	Common Name
<i>Corvus brachyrhynchos</i>	American crow
<i>Corvus corax</i>	common raven
<i>Eremophila alpestris actia</i>	California horned lark
<i>Psaltriparus minimus</i>	bushtit
<i>Thryomanes bewickii</i>	Bewick's wren
<i>Troglodytes aedon</i>	house wren
<i>Regulus calendula</i>	ruby-crowned kinglet
<i>Polioptila caerulea</i>	blue-gray gnatcatcher
<i>Polioptila californica californica</i>	coastal California gnatcatcher
<i>Sialia mexicana</i>	western bluebird
<i>Catharus guttatus</i>	hermit thrush
<i>Chamaea fasciata</i>	wrentit
<i>Mimus polyglottos</i>	northern mockingbird
<i>Toxostoma redivivum</i>	California thrasher
<i>Sturnus vulgaris</i>	European starling
<i>Vermivora celata</i>	orange-crowned warbler
<i>Dendroica coronata</i>	yellow-rumped warbler
<i>Dendroica nigrescens</i>	black-throated gray warbler
<i>Geothlypis trichas</i>	common yellowthroat
<i>Pipilo maculatus</i>	spotted towhee
<i>Pipilo crissalis</i>	California towhee
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow
<i>Melospiza melodia</i>	song sparrow
<i>Zonotrichia leucophrys</i>	white-crowned sparrow
<i>Zonotrichia atricapilla</i>	golden-crowned sparrow
<i>Sturnella neglecta</i>	western meadowlark
<i>Carduelis psaltria</i>	lesser goldfinch
<b>Mammals</b>	
<i>Sylvilagus audubonii</i>	desert cottontail
<i>Spermophilus beecheyi</i>	California ground squirrel
<i>Neotoma lepida</i>	desert woodrat
<i>Canis familiaris</i>	domestic dog
<i>Canis latrans</i>	coyote
<i>Procyon lotor</i>	raccoon
<i>Felis rufus</i>	bobcat
<i>Equus caballus</i>	domestic horse
<i>Odocoileus hemionus</i>	southern mule deer

## **APPENDIX H**

### **Jurisdictional Delineation of San Diego Gas & Electric's Sycamore to Peñasquitos 230 Kilovolt Transmission Line Improvements Project**



Environmental  
Intelligence, LLC

**JURISDICTIONAL DELINEATION OF  
SAN DIEGO GAS & ELECTRIC COMPANY'S  
SYCAMORE TO PEÑASQUITOS 230 KILOVOLT  
TRANSMISSION LINE IMPROVEMENTS PROJECT  
LOCATED IN SAN DIEGO COUNTY, CALIFORNIA**

---

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**Date:** April 2014

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## COMMON ACRONYMS AND ABBREVIATIONS

amsl	above mean sea level
CCC	California Coastal Commission
CDFW	California Department of Fish and Wildlife
CFR	Code of Federal Register
CWA	Clean Water Act
EI	Environmental Intelligence, LLC
ESHA	Environmentally Sensitive Habitat Areas
GIS	Geographic Information System
GPS	Global Positioning Systems
kV	kilovolt
MCAS	Marine Corps Air Station
NRCS	National Resources Conservation Service
NWI	National Wetlands Inventory
OHWM	Ordinary High Water Mark
ROW	right-of-way
RPW	Relatively Permanent Waters
RWQCB	Regional Water Quality Control Board
SanGIS	San Diego Geographic Information Source
SAA	Streambed Alteration Agreement
SDGE	San Diego Gas and Electric
SWANCC	Solid Waste Agency of Northern Cook County
SWRCB	State Water Resources Control Board
TL	Transmission Line
TNW	Traditional Navigable Waters
TOB	Top of bank
TRC	TRC Solutions, Inc.
USACE	U.S. Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WoS	Waters of the State
WoUS	Waters of the United States



## EXECUTIVE SUMMARY

On behalf of TRC Solutions, Inc., Environmental Intelligence, LLC (EI) conducted a jurisdictional delineation for San Diego Gas & Electric Company's (SDG&E) Sycamore to Peñasquitos 230 kilovolt (kV) Transmission Line Project (Proposed Project) located in San Diego County, California. Surveys were conducted within a 500-foot wide Survey Area surrounding the proposed linear project.

The Proposed Project entails the addition of a 230 kV transmission line (TL 230XX) between the existing Sycamore Canyon Substation located in the City of San Diego on the Marine Corps Air Station (MCAS) Miramar base and the existing Peñasquitos Substation located in the Torrey Hills community of the City of San Diego. In addition to the new 230 kV line, the Proposed Project would also include the following components: I) the consolidation of two existing 230 kV transmission lines (TL 23001 and 23004); II) reconfiguration of one existing 138 kV power line (TL 13804); III) rebuilding two separate existing 69 kV power lines (TL 675 and TL 6906) onto one double circuit set of structures; and IV) other construction related activities associated with maintenance, roads, pads, laydown areas, pulling/stringing, upgrades to existing substations and other related facilities. The Proposed Project's length totals approximately 16.7 miles located in SDG&E right-of-way (ROW).

EI conducted jurisdictional surveys in September and October 2013. These surveys evaluated all aquatic resources under the regulation of the United States Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW), California Coastal Commission (CCC), and the State Water Resources Control Board (SWRCB) as implemented by the San Diego Regional Water Quality Control Board (RWQCB).

Wetlands were delineated using the USACE, Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 1987, 2008a). Under this protocol, indicators, as listed within the supplement, of wetland hydrology, hydrophytic vegetation, and hydric soils must be present for positive determination of a wetland. For areas under the regulation of the CCC, wetlands were delineated using the one parameter definition as defined in the California Code of Regulations Title 14. The delineation of non-wetland features was based on the width of the ordinary high water mark (OHWM) for USACE and RWQCB delineations. Evaluation of state jurisdiction followed guidance in the Fish and Game Code and related CDFW materials. For each feature, total stream length and the width of the top of bank (TOB) were measured. A summary of total jurisdictional area and length is provided in Table ES-01.



TABLE ES-01: SUMMARY OF TOTAL JURISDICTION BY REGULATORY AGENCY

Regulatory Agency	Number of Named Features	Total Area of Jurisdiction (acre)	Total length of Jurisdiction (linear feet)	Dominant Vegetation Type <sup>1</sup>										
				Wetland / Riparian								Upland		
				Open Water	Alkali Marsh	Fresh-water Marsh	Mulefat Scrub	So. Coast Live Oak Riparian Forest	San Diego Mesa Vernal Pool	So. Riparian Scrub	So. Willow Scrub	Native Upland Habitat <sup>2</sup>	Non-native Upland Habitat <sup>3</sup>	Other <sup>4</sup>
US Army Corps of Engineers	35	9.21	43,952	0.91	0.17	0.26	0.16	1.71	0.03	0.16	1.10	3.81	0.61	0.30
Regional Water Quality Control Board <sup>5</sup>	35	9.34	47,430	0.91	0.17	0.26	0.16	1.71	0.03	0.16	1.10	3.82	0.61	0.41
California Department of Fish and Wildlife	31	14.92	43,953	0.92	0.17	0.28	0.96	2.31	0.00	1.16	2.09	5.32	1.53	0.20
California Coastal Commission Wetlands	8	1.66	9,396	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.02	1.57	0.02	0.00
California Coastal Commission ESHA <sup>6</sup>	NA	103.25	NA	**	**	**	**	**	**	**	**	**	**	**

<sup>1</sup> From Biological Technical Report for the Sycamore to Peñasquitos 230 kV Transmission Line Project, Dated March 2014 prepared by Busby Biological Services Inc..

<sup>2</sup> Includes Chamise Chaparral, Coastal Sage Scrub – Revegetated, Diegan Coastal Sage Scrub, Diegan Coastal Sage Scrub – Disturbed, Native Grassland, So. Mixed Chaparral, and Scrub Oak Chaparral

<sup>3</sup> Includes Eucalyptus Woodland, Nonnative Grassland, and Tamarisk Scrub

<sup>4</sup> Includes Bare Ground, Developed Lands, Disturbed Habitat, and Ornamental

<sup>5</sup> Excludes 1.84 acres (29,493 linear feet) of RWQCB exempt, MS4 erosion control V-ditches

<sup>6</sup> For more information, see the Biological Technical Report.



## 1.0 INTRODUCTION

This report summarizes the regulatory framework, associated methodology, and results pertaining to jurisdictional waters and wetlands regulated by the USACE, RWQCB, CDFW, and CCC for the Proposed Project (Exhibit 1). These findings are subject to confirmation by the regulatory agencies.

### 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 and San Diego Counties, California. The Proposed Project is intended to meet the area load growth and service reliability within San Diego County.

The Proposed Project entails the addition of a 230 kV transmission line (TL 230XX) between the existing Sycamore Canyon Substation located in the City of San Diego on the MCAS Miramar base and the existing Peñasquitos Substation located in the Torrey Hills community in the City of San Diego. In addition to the new 230 kV line, the Proposed Project would also include the following components:

- Consolidation of two existing 230 kV transmission lines (TL 23001 and 23004);
- Reconfiguration of one existing 138 kV power line (TL 13804);
- Rebuilding two separate existing 69 kV power lines (TL 675 and TL 6906) onto one double circuit set of structures; and
- Other construction related activities associated with maintenance, roads, pads, laydown areas, pulling/stringing, upgrades to existing substations, and other related facilities.

The Proposed Project's length totals approximately 16.7 miles within an existing SDG&E ROW. The transmission portion of the Proposed Project would be mostly located within existing SDG&E ROWs and franchise positions on city streets. The Proposed Project is located in the City of San Diego except for a short segment located within the City of Poway.

## 2.0 REGULATORY FRAMEWORK

The jurisdictional limits between regulatory agencies vary due to different governing documents and their different definitions of the limits of jurisdiction. The following section describes the regulatory documents under which jurisdiction of wetlands and waters is given to the USACE, RWQCB, CDFW, and CCC.

### 2.1 U.S. Army Corps of Engineers

The discharge of dredged and/or fill material, both temporary and permanent, into Waters of the United States (WoUS) is regulated by the USACE pursuant to Section 404 of the Clean Water Act (CWA).

#### 2.1.1 WATERS OF THE UNITED STATES (WOUS)

The USACE administers and enforces Section 404 of the CWA. Pursuant to Section 404 of the CWA, the USACE regulates the discharge of dredged and/or fill material into WoUS. The term WoUS is defined in USACE 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. 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 (USEPA).*

In the absence of wetlands, the limits of USACE jurisdiction in non-tidal waters, such as intermittent streams, extend to the 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.

### 2.1.2 WETLAND WATERS OF THE US

The term “wetlands” (a subset of “WoUS.”) 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 USACE published a manual to guide its field personnel in determining jurisdictional wetland boundaries. The methodology set forth in the 1987 Wetland Delineation Manual (Manual; USACE 1987) and the Arid West Supplement (USACE 2008a) 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.”

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, such as soil saturation, must be present. Whereas the Manual requires that hydrologic characteristics indicate that the ground is saturated to within 12 inches of the surface for at least 5 percent of the growing season during a normal rainfall year, the Arid West Supplement does not include 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.

### 2.1.3 EXTENT OF JURISDICTION

#### 2.1.3.1 *Solid Waste Agency of Northern Cook County (SWANCC) v. USACE*

The extent of WoUS was modified by the January 9, 2001 U.S. Supreme Court Decision, *Solid Waste Agency of Northern Cook County v. USACE* (2001) 531 U.S. 159 (*SWANCC*). In the *SWANCC* decision, the Supreme Court held that the USACE exceeded its authority by asserting CWA jurisdiction over an abandoned sand and gravel pit, solely because it provided habitat for migratory birds. The *SWANCC* ruling removed USACE jurisdiction from waters that are non-navigable or isolated and clarified that the USACE staff should no longer rely on the use of waters by migratory birds as the sole basis for asserting jurisdiction. As such, the court’s majority opinion stated that wetlands and waters must have some direct connection to navigable



waters for them to fall within USACE jurisdiction. Isolated and intrastate wetlands, including many vernal pools, fens, bogs, playas and others, were deemed outside of USACE jurisdiction unless there was a significant connection to navigable waters or a clear relation to commerce.

### 2.1.3.2 *Rapanos v. United States and Carabell v. USACE*

In 2006, the U.S. Supreme Court again ruled on two cases questioning the extent to which the USACE had jurisdiction under Section 404 of the Clean Water Act as it pertains to weakly connected tributaries to WoUS. See, *Rapanos v. United States* (2006) 547 U.S. 715. Following the consolidated decision of these two cases, the USACE and United States Environmental Protection Agency (USEPA) issued guidance measures describing the wetlands and waters over which the USACE will maintain its jurisdiction. The guidance stated that the USACE must apply the significant nexus standard for project sites that include waters other than Traditional Navigable Waters (TNW) and/or their adjacent wetlands, or Relatively Permanent Waters (RPW) that are tributaries to TNWs and/or their adjacent wetlands. The joint guidance also requires an evaluation by the USACE and USEPA, for “isolated” waters, to evaluate the presence of other interstate commerce clause nexuses, not addressed in the SWANCC decision.

Based on the ruling of *Rapanos*, the USACE will assert jurisdiction over the following waters (USEPA 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; RPWs); 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 RPWs;
- Wetlands adjacent to non-navigable tributaries that are not RPWs; and
- Wetlands adjacent to but which do not directly abut a RPW.
- Certain geographic features (e.g., swales, ditches, pipes) that may contribute to a surface hydrologic connection where the features:
  - replace or relocate a WoUS, or
  - connect a WoUS to another WoUS, or
  - provide relatively permanent flow to a WoUS.

The USACE 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.





### 2.1.3.3 Vernal Pools

Vernal pools are depressional wetlands that fill with rain water in the winter and spring and are dry at other points of the year and often house endangered species such as San Diego button celery (*Eryngium aristulatum*, OBL) and San Diego fairy shrimp (*Branchinecta sandiegonensis*), both of which are protected under the Federal Endangered Species Act. Vernal pools are classified as “problem areas” because one or more of the traditional wetland indicators are typically missing (USACE 1987). On November 25, 1997, USACE issued Regional General Condition #1: Vernal Pool Notification to address discharge of dredged or fill material into any vernal pool. The USACE included a list of vernal pool “indicator species” in the 1997 notice. The presence of any one of the indicators could be used to bypass the normal hydric soil, wetland hydrology, and hydrophytic vegetation requirements to identify a jurisdictional vernal pool.

Based on the rulings in *SWANCC v. USACE* (See Section 2.1.3.1) and *Rapanos v. United States* (See Section 2.1.3.2), respectively, the USACE’s jurisdiction over isolated waters (and vernal pools) in the United States was constrained to those waters with a “significant nexus” to a TNW (Environmental Law Institute 2007). For the USACE to take jurisdiction of a vernal pool, the pool must therefore contain both an USACE vernal pool indicator species and a hydrologic connection to a downstream TNW.

## 2.2 State Water Resources Control Board/ Regional Water Quality Control Board

### 2.2.1 SECTION 401 OF THE CLEAN WATER ACT

The SWRCB requires that, as stated in Section 401 of the CWA, “any applicant for a Federal permit for activities that involve a discharge to Waters of the United States, shall provide the Federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the Federal CWA.”

### 2.2.2 PORTER-COLOGNE ACT AND WATERS OF THE STATE

The SWRCB, as regulated by the RWQCB, regulates “any person discharging waste, or proposing to discharge waste, within any region that could affect the waters of the state (Water Code 13260(a)). “Waters of the State” (WoS) are defined as “any surface water or groundwater, including saline waters, within the boundary of the state” (Water Code 13050 (e)). Additionally, pursuant to the definition of WoS in the Porter-Cologne Act, the state maintains jurisdiction of isolated waters, despite the US Supreme Court’s ruling in *SWANCC* (See Section 3.1.2.1). In other words, the RWQCB regulates all activity, including dredging and filling, in WoS that are not regulated by the USACE, including vernal pools and other waters showing lack of connectivity to a TNW.

## 2.3 California Department of Fish and Wildlife

Under the California Fish and Game Code Sections 1600-1603, the CDFW regulates any person, state or local government agency, or public utility that proposes to “substantially divert[s] or obstruct[s] the natural flow or substantially change[s] the bed, channel, or bank of any river, stream, or lake designated by the department, or use[s] any material from the streambeds”. This jurisdiction includes ephemeral, intermittent, and perennial streams, dry washes, and lakes characterized by a defined bed and bank and observed relationship to fish or wildlife resources. This jurisdiction extends to adjacent habitats that function as part of the riparian system, regardless of the riparian area’s federal status. When riparian vegetation is present, CDFW jurisdiction reaches to the outer limits of the riparian vegetation dripline. Further, CDFW asserts



jurisdiction over vernal pools only when California State threatened and/or endangered species (e.g., thread leaved brodiaea [*Brodiaea filifolia*, FAC]) are present.

## 2.4 California Coastal Commission

The CCC regulates the diking, filling, or dredging of wetlands within the coastal zone. The Coastal Act at Public Resources Code Section 30121 defines “wetlands” as land “which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.” The 1981 CCC Statewide Interpretive Guidelines state that hydric soils and hydrophytic vegetation “are useful indicators of wetland conditions, but the presence or absence of hydric soils and/or hydrophytes alone are not necessarily determinative when the Commission identifies wetlands under the Coastal Act.”

In addition, Public Resources Code Section 30240(a) restricts land uses within or adjacent to environmentally sensitive habitat areas (ESHAs). Section 30107.5 defines an ESHA as: “...any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.” Included within this definition are wetlands, estuaries, streams, riparian habitats, lakes, and portions of open coastal waters, which meet the rare or valuable habitat criteria. Not all wetlands necessarily meet the “rare or valuable habitat criteria” and as set forth in Section 30233, “where there is no feasible less environmentally damaging alternative, and where feasible mitigation avoidance and minimization measures have been provided to minimize adverse environmental effects” degraded or low-value wetlands that do not which meet the rare criteria.

## 3.0 METHODS

Prior to beginning the field delineation, EI analyzed numerous available data sets to determine the locations of potential areas of jurisdiction. These data included:

- A 1:2,400 color aerial photograph of the Proposed Project;
- National Wetlands Inventory (NWI) data (USFWS 2013a);
- U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil mapping data (NRCS 2013a, NRCS 2013b);
- Historic and recent aerial photographs (Google 2013, Bing 2013); and
- USGS topographic maps.

Fieldwork for the delineation was conducted from September 17 to October 4, 2013 by EI biologists Travis Kegel, Stephen Reynolds, and Megan Minter. The delineation field work involved walking the entire survey area, 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 over 16 miles long and 500 wide feet centered along the transmission corridors and several potential equipment staging areas (Exhibit 1). This survey area was determined as all areas where the Proposed Project may have the potential to impact aquatic resources during construction. While in the field, notes were taken documenting the characteristics of jurisdictional areas. Widths of potential jurisdictional hydrologic features 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 with sub-meter accuracy. In areas where movement was restricted by the extremely dense vegetation or other hazards (e.g.,



thick patches of poison oak (*Toxicodendron diversilobum*, FAC), steep slopes, etc.) data were offset and corrected to match a detailed two foot contour map for the site (SanGIS 1999). Field data were 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. All wetlands data sheets are included in Appendix A. WoS were identified pursuant to criteria outlined in Section 1600 of the Fish and Game Code, including the presence of a defined bed and bank and any associated riparian vegetation. For each feature, total stream length and the width of the TOB were measured. For streams with riparian vegetation, this width was extended to the outer drip-line of this vegetation. Drainages that appeared to meet the criteria for WoUS or WoS were considered potentially jurisdictional for the relevant agency, however any determination is subject to verification by the agency itself. For areas under the regulation of the CCC (2008), wetlands were delineated using the one parameter definition as defined in the California Code of Regulations Title 14.

Vernal pool watersheds and potential jurisdictional boundaries were identified and mapped using observations of hydrology (sheet flow, rilling, etc.), microtopographic breaks, and the presence/absence of vernal pool indicator species (USACE 1997). As surveys were conducted outside of the wet season, evidence of vernal pool ponding included observed line on bank, changes in vegetation, surface soil cracking, and presence of vernal pool obligate species (USACE 1997, Zedler 1987, Keeler-Wolf et al. 1998). The extent of ponding for potential federal and state jurisdiction of each vernal pool was mapped using a Trimble GPS hand-held unit with sub-meter accuracy.

Hydrologic depressions observed on access roads were assumed to be jurisdictional vernal pools when USACE vernal pool indicator species were present or assumed. Indicator species not observable at the time of the survey were assumed to be present when depressions were observed within mapped soil types known to produce vernal pools, showed evidence of ponding, and were located within 500 feet of known species locations or mapped critical habitat.

## **4.0 RESULTS**

### **4.1 Topography and Hydrology**

The Proposed Project survey area comprises approximately 982 acres and crosses three named blue-line drainages as depicted on the USGS topographic maps (Exhibit 1). These drainages include Deer Canyon Creek, McGonigle Canyon Creek, and Los Peñasquitos Creek. Elevation within the Proposed Project survey area ranged from approximately 110 to 900 feet above mean sea level (amsl).

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 chaparral, 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.



## 4.2 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, chaparral and coastal sage scrub dominate the terrain.

## 4.3 Hydric Soils

The Proposed Project survey area contained one hydric soil type, Riverwash (Rm), listed as a hydric soil by the NRCS (NRCS 1991). Riverwash is not well drained and is composed of sand and stratified coarse sand to sandy loam. The parent material is sandy and gravelly alluvium. These soils occur on fans at diverse elevations above mean sea level. A full list of all soils found in the Proposed Project survey area is provided as Appendix B and are shown in Exhibit B-1.

## 4.4 Areas of Potential Jurisdiction

The Proposed Project survey area supports thirty-seven drainage systems or features that are potentially subject to jurisdiction by the USACE, RWQCB, CDFW and/or CCC. The location and limits of the USACE (Table 1), RWQCB (Table 2), CDFW (Table 3), and CCC (Table 4) jurisdictional areas are depicted in Exhibit 2. Representative site photographs are provided as Appendix C, Site Photographs. For each feature, general descriptions, limits of jurisdiction, vegetation, and soils information are provided below.

### 4.4.1 FEATURE 1: PEÑASQUITOS SUBSTATION

#### *General Description:*

The Peñasquitos Substation at the far western end of the Proposed Project contains one jurisdictional V-ditch that constitutes a re-alignments of waters. The concrete-lined V-ditch is medium-gradient and drains from Carmel Mountain Road upslope. This drainage flows north, into a stormdrain system and presumably to the Pacific Ocean.

#### *Jurisdiction:*

A total of 0.01 acre of USACE non-wetland WoUS occur within this drainage feature. A total of 0.01 acre of RWQCB WoS was observed, as well as 0.16 acre of exempt, MS4 erosion control V-ditches. The CDFW jurisdiction associated with Peñasquitos Substation totals 0.01 acre of CDFW unvegetated streambed. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 1.

#### *Vegetation:*

No vegetation was associated with the feature. The drainage consisted of a bare concrete lined V-ditch. Photographs of the Peñasquitos Substation are included as Appendix C, Photos 1 and 2.

#### *Soils:*

No soil pits were excavated due to a lack of hydrophytic vegetation. No soils were associated with the V-ditch.

### 4.4.2 FEATURE 2: TRIBUTARY TO PEÑASQUITOS CREEK 1

#### *General Description:*

Tributary to Peñasquitos Creek 1 consists of a steep ephemeral wash. The drainage originates within the Proposed Project survey area in a natural watershed and flows offsite to Peñasquitos Creek, and ultimately the Pacific Ocean, the closest TNW. The drainage was slightly incised



with the drainage bottom approximately 1 foot below the surrounding uplands. The drainage was dry at the time of survey and is expected to flow only during and directly after storm events.

*Jurisdiction:*

A total of 0.03 acre of USACE non-wetland WoUS occur within this drainage feature. A total of 0.03 acre of RWQCB non-wetland WoS was observed. The CDFW jurisdiction associated with Tributary to Peñasquitos Creek 1 totals 0.05 acre of CDFW unvegetated streambed. The CCC jurisdiction associated with this feature is 0.04 acre, all of which is ESHA, and none of which is riparian vegetation. Results of the survey have been mapped on Exhibit 2, Sheet 2.

*Vegetation:*

Vegetation associated with Tributary to Peñasquitos Creek 1 is composed of dense upland coastal sage scrub vegetation. Dominant species included black sage (*Salvia mellifera*, UPL) and California buckwheat (*Eriogonum fasciculatum*, UPL). No riparian vegetation was associated with the drainage. Photographs of Tributary to Peñasquitos Creek 1 are included as Appendix C, Photos 3 and 4.

*Soils:*

No soil pits were excavated due to a lack of hydrophytic vegetation. Soils consisted primarily of hard clay and cobbles associated with high water velocities and consistent with the drainage's steep grade and are unlikely to produce hydric soils.

#### 4.4.3 FEATURE 3: TRIBUTARY TO PEÑASQUITOS CREEK 2

*General Description:*

Tributary to Peñasquitos Creek 2 consists of a deeply incised intermittent drainage and two small associated tributaries. The drainage originates north of the Proposed Project survey area in a semi natural watershed and flows offsite to Peñasquitos Creek, and ultimately the Pacific Ocean, the closest TNW. The main drainage was deeply incised with the drainage bottom approximately 12 to 15 feet below the surrounding uplands. The drainage was dry at the time of survey but is presumed to receive nuisance flows from upstream residential developments. The two ephemeral feeder tributaries originate onsite and were very steep with a small irregular OHW.

*Jurisdiction:*

A total of 0.13 acre of USACE non-wetland WoUS occur within this drainage feature. A total of 0.13 acre of RWQCB non-wetland WoS was observed. The CDFW jurisdiction associated with Tributary to Peñasquitos Creek 2 totals 0.43 acre, of which 0.03 is CDFW unvegetated streambed and 0.40 acre is riparian vegetation. The CCC jurisdiction associated with this feature totals 0.44 acre, all of which is ESHA, and 0.41 of which is riparian vegetation. Results of the survey have been mapped on Exhibit 2, Sheet 2.

*Vegetation:*

Vegetation associated with the main Tributary to Peñasquitos Creek 2 is composed of weedy riparian vegetation. Dominant riparian species included poison oak and poison hemlock (*Conium maculatum*, FACW). Upland species associated with the drainages included lemonade berry (*Rhus integrifolia*, UPL) and non-native brome grasses (*Bromus* spp., UPL) Photographs of Tributary to Peñasquitos Creek 2 are included as Appendix C, Photos 5 and 6.



*Soils:*

No soil pits were excavated due to a lack of hydrophytic vegetation meeting dominance requirements. Soils consisted primarily of hard clay and cobbles associated with high water velocities and consistent with the feature's deep incisions. No hydric soils are expected due to the drainage's high velocity flows and hard surface substrate.

#### 4.4.4 FEATURE 4: TRIBUTARY TO PEÑASQUITOS CREEK 3

*General Description:*

Tributary to Peñasquitos Creek 3 consists of a system of two ephemeral drainages. The westernmost drainage originates onsite and confluences with the larger ephemeral feature near the southern boundary of the Proposed Project survey area. The drainage flows offsite to Peñasquitos Creek, and ultimately the Pacific Ocean, the closest TNW. The drainage was slightly incised with the drainage bottom approximately one to three feet below the surrounding uplands. The drainage was dry at the time of survey and is expected to flow only during and directly after storm events.

*Jurisdiction:*

A total of 0.09 acre of non-wetland WoUS occur within this drainage feature. A total of 0.09 acre of RWQCB non-wetland WoS was observed. The CDFW jurisdiction associated with Tributary to Peñasquitos Creek 3 totals 0.14 acre of unvegetated streambed. The CCC jurisdiction associated with this feature totals 0.14 acre, all of which is ESHA, and none of which is riparian vegetation. Results of the survey have been mapped on Exhibit 2, Sheet 2.

*Vegetation:*

Vegetation associated with Tributary to Peñasquitos Creek 3 is composed of upland coastal sage scrub vegetation. Dominant species included black sage, lemonade berry, and non-native brome grasses. No riparian vegetation was associated with the drainage. Photographs of Tributary to Peñasquitos Creek 3 are included as Appendix C, Photos 7 and 8.

*Soils:*

No soil pits were excavated due to a lack of hydrophytic vegetation. Soils consisted primarily of hard clay and cobbles associated with high water velocities and consistent with the feature's deep incisions. No hydric soils are expected due to the drainage's high velocity flows and hard surface substrate.

#### 4.4.5 FEATURE 5: TRIBUTARY TO PEÑASQUITOS CREEK 4

*General Description:*

Tributary to Peñasquitos Creek 4 consists of a system of four steep incised ephemeral drainages. Three of the four drainages originate within the Proposed Project survey area in a natural watershed. The drainages converge and flow offsite to Peñasquitos Creek, and ultimately the Pacific Ocean, the closest TNW. The drainage was moderately incised with the drainage bottom approximately two to six feet below the surrounding uplands.

*Jurisdiction:*

A total of 0.34 acre of non-wetland WoUS occur within this drainage feature. A total of 0.34 acre of RWQCB non-wetland WoS was observed. The CDFW jurisdiction associated with Tributary to Peñasquitos Creek 4 totals 0.52 acre, of which 0.43 acre is CDFW unvegetated streambed and



0.09 acre is riparian vegetation. The CCC jurisdiction associated with Tributary to Peñasquitos Creek 4 totals 0.52 acre all of which is ESHA, and 0.09 acre of which is riparian vegetation. Results of the survey have been mapped on Exhibit 2, Sheet 2.

*Vegetation:*

Vegetation associated with Tributary to Peñasquitos Creek 4 is composed of dense upland coastal sage scrub vegetation. Dominant species included lemonade berry, and non-native brome grasses. The only riparian vegetation associated with the drainage was composed of two individual arroyo willows (*Salix lasiolepis*, FACW). Photographs of Tributary to Peñasquitos Creek 4 are included as Appendix C, Photos 9, 10, and 11.

*Soils:*

No soil pits were excavated due to a lack of hydrophytic vegetation meeting dominance requirements. Soils consisted primarily of hard clay and cobbles associated with high water velocities and consistent with the feature's deep incisions. No hydric soils are expected due to the drainage's high velocity flows and hard surface substrate.

4.4.6 FEATURE 6: TRIBUTARY TO PEÑASQUITOS CREEK 5

*General Description:*

Tributary to Peñasquitos Creek 5 is a series of eight ephemeral tributaries draining mesa tops on site. Each of these channels is very high-gradient and incised. These channels likely receive very infrequent high-velocity flows. The dominant substrates are large cobbles and sand. Very few depositional areas are present. Shelving, scour, and sediment sorting are all present at the ordinary high water mark. These drainages flow offsite to the south, into Los Peñasquitos Creek and ultimately to the Pacific Ocean.

*Jurisdiction:*

A total of 0.10 acre of non-wetland WoUS occur within this drainage feature. A total of 0.10 acre of RWQCB non-wetland WoS was observed. The CDFW jurisdiction associated with Tributary to Peñasquitos Creek 5 totals 0.11 acre of CDFW unvegetated streambed. The CCC jurisdiction associated with this feature totals 0.12 acre, all of which is ESHA and 0.001 of which is riparian vegetation. Results of the survey have been mapped on Exhibit 2, Sheet 3.

*Vegetation:*

Vegetation associated with this drainage is dominated by chaparral vegetation and includes: non-native brome grasses, sugar bush (*Rhus ovata*, UPL), black sage, and redberry (*Rhamnus crocea*, UPL). Photographs of Tributary to Peñasquitos Creek 5 are included as Appendix C, Photos 12, 13, 14, and 15.

*Soils:*

No soil pits were excavated due to a lack of hydrophytic vegetation meeting dominance requirements. Soils consisted primarily of hard clay and cobbles associated with high water velocities and consistent with the feature's deep incisions. No hydric soils are expected due to the drainage's high velocity flows and hard surface substrate.



#### 4.4.7 FEATURE 7: TRIBUTARY TO PEÑASQUITOS CREEK 6

##### *General Description:*

Tributary to Peñasquitos Creek 6 is a series of four high-gradient ephemeral tributaries. Each of these channels is very steep and incised. These channels drain mesa tops and likely receive infrequent high-velocity flows. The dominant substrates are large cobbles and sand. Very few depositional areas are present. Shelving, scour, and sediment sorting are all present at the ordinary high water mark. These drainages flow offsite to the south, into Los Peñasquitos Creek and ultimately to the Pacific Ocean.

##### *Jurisdiction:*

A total of 0.18 acre of non-wetland WoUS occur within this drainage feature. A total of 0.18 acre of RWQCB non-wetland WoS was observed. The CDFW jurisdiction associated with Tributary to Peñasquitos Creek 6 totals 0.22 acre of CDFW unvegetated streambed. The CCC jurisdiction associated with this feature totals 0.23 acre, all of which is ESHA and none of which is riparian vegetation. Results of the survey have been mapped on Exhibit 2, Sheet 4.

##### *Vegetation:*

Vegetation associated with this drainage consists of chaparral vegetation and includes: non-native brome grasses, scrub oak (*Quercus berberidifolia*, UPL), sugar bush and chamise (*Adenostoma fasciculatum*, UPL). Photographs of Tributary to Peñasquitos Creek 6 are included as Appendix C, Photos 16 and 17.

##### *Soils:*

No soil pits were excavated due to a lack of hydrophytic vegetation. Soils consisted primarily of hard clay and cobbles associated with high water velocities and consistent with the drainage's steep grade. No hydric soils are expected due to the drainage's high velocity flows and hard surface substrate.

#### 4.4.8 FEATURE 8: TRIBUTARY TO PEÑASQUITOS CREEK 7

##### *General Description:*

Tributary to Peñasquitos Creek 7 is a system of high gradient ephemeral tributaries and one central intermittent tributary. The central tributary contains a pond with wetland fringe within the study area. The easternmost tributaries are a group of three high-gradient ephemeral channels flowing into a medium gradient ephemeral channel; the drainage dissipates downstream and is isolated from the main system. The dominant substrates are cobbles and sand. Scour and sediment sorting are present at the OHWM. The westernmost tributaries are a similar system of high-gradient ephemeral channels converging to form a larger medium-gradient ephemeral drainage. Similarly to the easternmost tributaries, the main ephemeral trunk dissipates and is isolated from the rest of the system. The dominant substrate is sand and the channel exhibits a pattern of erosional and depositional areas. These drainages likely receive infrequent high velocity flows that are slowed by the lower gradient in the intermittent channels and the wetland area. The medium-gradient intermittent channels flow through wide canyon bottoms and these confluences are deeply incised. These drainages flow offsite to the south, into Los Peñasquitos Creek and ultimately to the Pacific Ocean.





*Jurisdiction:*

A total of 1.90 acres of WoUS occur within this drainage feature, of which 0.99 acre are non-wetland WoUS and 0.91 acre are wetland WoUS. A total of 2.00 acres of WoS occur within this drainage feature including 1.09 acres of non-wetland WoS and 0.91 acre of wetland WoS. The CDFW jurisdiction associated with Tributary to Peñasquitos Creek 7 totals 2.46 acres, of which 0.10 is CDFW unvegetated streambed and 2.36 acres is riparian vegetation. The CCC jurisdiction associated with this feature totals 0.02 acre, all of which is ESHA and none of which is riparian vegetation. Results of the survey have been mapped on Exhibit 2, Sheet 4 and 5.

*Vegetation:*

Vegetation associated with this drainage consists of upland and riparian vegetation. USACE wetland WoUS were composed of emergent marsh vegetation dominated by California bulrush (*Schoenoplectus maritimus*, OBL) and limited to areas with an OHWM. CDFW riparian jurisdictional resources on site were composed of riparian scrub dominated by black willow (*Salix gooddingii*, FACW), and mule fat. Upland vegetation includes non-native brome grasses, scrub oak, chamise, and ladies' tobacco (*Pseudognaphalium californicum*, UPL). Photographs of Tributary to Peñasquitos Creek 7 are included as Appendix C, Photos 18, 19, 20, 21, and 22.

*Soils:*

Hydric soils were identified in the feature that fall into the Sandy Redox indicator category. Soils consisted of clay and sand. Results of the data pit are recorded in Appendix A (Sampling Point 1).

#### 4.4.9 FEATURE 9: TRIBUTARY TO PEÑASQUITOS CREEK 8

*General Description:*

Tributary to Peñasquitos Creek 8 is a system of three high-gradient ephemeral tributaries. These channels are deeply incised at the headwaters and flow into a wide canyon. They likely receive infrequent, high-velocity flows. The dominant substrates include cobbles and sand. Very few depositional areas are present. Scour, sediment sorting, and disturbed leaf litter are present at the ordinary high water mark. These channels are deeply incised at confluences and headcuts are also present throughout. These drainages flow offsite to the south, into Los Peñasquitos Creek and ultimately to the Pacific Ocean.

*Jurisdiction:*

A total of 0.04 acre of non-wetland WoUS occur within this drainage feature. A total of 0.04 acre of RWQCB non-wetland WoS was observed. The CDFW jurisdiction associated with Tributary to Peñasquitos Creek 8 totals 0.06 acre of CDFW unvegetated streambed. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 5.

*Vegetation:*

Vegetation associated with this drainage consists of upland vegetation and includes: non-native brome grasses, scrub oak, and chamise. Photographs of Tributary to Peñasquitos Creek 8 are included as Appendix C, Photos 23 and 24.

*Soils:*

No soil pits were excavated due to a lack of hydrophytic vegetation. Soils consisted primarily of hard sands and cobbles associated with high water velocities and consistent with the feature's



deep incisions. No hydric soils are expected due to the drainage's high velocity flows and hard surface substrate.

#### 4.4.10 FEATURE 10: TRIBUTARY TO PEÑASQUITOS CREEK 9

##### *General Description:*

Tributary to Peñasquitos Creek 9 is a large drainage system that consists of one intermittent drainage and several associated ephemeral tributaries. The ephemeral tributaries are generally high-gradient, narrow channels. The dominant substrate is cobble and sand. The ephemeral channels likely receive infrequent high-velocity flows. They exhibit scour, sediment sorting, and disturbed leaf litter at the OHWM. The intermittent tributary flows through wide canyon bottoms and likely have infrequent moderate-velocity flows. This channel exhibits a pattern of erosional and depositional areas with scour, sediment sorting, disturbed leaf litter, sediment deposition, and wracking are all present at the OHWM. The substrate is dominated by sand, gravel, and small cobbles. These channels flow into Los Peñasquitos Creek and ultimately to the Pacific Ocean.

##### *Jurisdiction:*

A total of 0.30 acre of USACE non-wetland WoUS occur within this drainage feature. A total of 0.30 acre of RWQCB non-wetland WoS was observed. The CDFW jurisdiction associated with Tributary to Peñasquitos Creek 9 totals 0.37 acre of CDFW unvegetated streambed. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheets 5 and 6.

##### *Vegetation:*

Vegetation associated with this drainage consists of upland vegetation and includes: non-native brome grasses, scrub oak, and chamise. Photographs of Tributary to Peñasquitos Creek 9 are included as Appendix C, Photos 25, 26, 27, and 28.

##### *Soils:*

No soil pits were excavated due to a lack of hydrophytic vegetation. Soils consisted primarily of hard clay and cobbles associated with high water velocities and consistent with the feature's deep incisions. No hydric soils are expected due to the drainage's high velocity flows and hard surface substrate.

#### 4.4.11 FEATURE 11: TRIBUTARY TO DEER CANYON 1

##### *General Description:*

Tributary to Deer Canyon 1 consists of a system of three drainages that converge offsite to form a main stem tributary to Deer Canyon Creek. These drainages are all medium to high gradient and flow through steep canyons. The northernmost drainage consists of two high-gradient ephemeral channels that converge to form a medium-gradient intermittent drainage. The dominant substrate consists of large cobbles and sand. These channels likely receive infrequent, high-velocity flows. Shelving and scour are present at the OHWM. To the south, a short high-gradient ephemeral channel flows into a medium-gradient intermittent drainage. The dominant substrates are cobble, gravel, and sand. Shelving and scour are both present at the ordinary high water mark. The southernmost drainage consists of two high-gradient ephemeral channels that converge to form a medium-gradient intermittent drainage. The intermittent drainage is wide



and sandy and shows evidence of medium-velocity flows. A few depositional areas are present within the channel. The dominant substrate is sand and cobble.

*Jurisdiction:*

A total of 0.15 acre of USACE non-wetland WoUS occur within this drainage feature. A total of 0.15 acre of RWQCB non-wetland WoS was observed. The CDFW jurisdiction associated with Tributary to Deer Canyon 1 totals 0.17 acre of CDFW unvegetated streambed. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheets 7 and 8.

*Vegetation:*

This drainage is dominated by dense, upland vegetation. Vegetation includes chamise, scrub oak, black sage, laurel sumac, and manzanita. Photographs of Tributary to Deer Canyon 1 are included as Appendix C, Photos 29, 30, and 31.

*Soils:*

No soil pits were excavated due to a lack of hydrophytic vegetation. Soils consisted primarily of hard clay and cobbles associated with high water velocities and consistent with the feature's steep grade. No hydric soils are expected due to the drainage's high velocity flows and hard surface substrate.

4.4.12 FEATURE 12: TRIBUTARY TO DEER CANYON 2

*General Description:*

Tributary to Deer Canyon 2 is a system of six high-gradient ephemeral drainages originating within the study area. Two of the westernmost drainages originate on a pad containing a lattice tower and flow into a natural drainage to the northwest. The four easternmost drainages form a mainstem tributary to Deer Canyon Creek. All these drainages are steep, incised and show evidence of high-velocity flows. Scour and shelving are present at the OHWM. Very few depositional areas are present. The dominant substrate is large cobbles and sand. These drainages flow into Deer Canyon Creek and eventually into the Pacific Ocean.

*Jurisdiction:*

A total of 0.04 acre of USACE non-wetland WoUS occur within this drainage feature. A total of 0.04 acre of RWQCB non-wetland WoS was observed. The CDFW jurisdiction associated with Tributary to Deer Canyon 2 totals 0.04 acre of CDFW unvegetated streambed. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 8.

*Vegetation:*

This drainage is dominated by dense, upland vegetation. Vegetation includes chamise, scrub oak, black sage, laurel sumac (*Malosma laurina*, UPL), and manzanita (*Arctostaphylos* sp., UPL). Photographs of Tributary to Deer Canyon 1 are included as Appendix C, Photos 32 and 33.

*Soils:*

No soil pits were excavated due to a lack of hydrophytic vegetation. Soils consisted primarily of hard clay and cobbles associated with high water velocities and consistent with the feature's



steep grade. No hydric soils are expected due to the drainage's high velocity flows and hard surface substrate.

#### 4.4.13 FEATURE 13: DEER CANYON CREEK

##### *General Description:*

Deer Canyon Creek is one of the named, blue-line drainages depicted on USGS topographic maps crossed by the Proposed Project. This perennial drainage is low to medium gradient and is in a densely vegetated, narrow canyon bottom. At the time of the survey, the drainage was wet from nuisance flow. Vegetation destruction, disturbed leaf litter, shelving, scour, sediment sorting, and a change in plant community are all present at the OHWM. This drainage likely receives infrequent high-velocity flows as well as nuisance flow. This jurisdictional drainage crosses the Proposed Project access road within the study area. Deer Canyon Creek flows to the west out of the study area and eventually into the Pacific Ocean.

##### *Jurisdiction:*

A total of 0.12 acre of USACE wetland WoUS occur within this drainage feature. A total of 0.12 acre of RWQCB wetland WoS was observed. The CDFW jurisdiction associated with Deer Canyon Creek totals 0.29 acre of riparian vegetation. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 9.

##### *Vegetation:*

This drainage is dominated by dense, upland vegetation with riparian vegetation being concentrated around the small wetland. Upland vegetation includes chamise, and scrub oak. Riparian vegetation is characterized as mule fat scrub while wetland vegetation includes emergent broadleaf cattail (*Typha latifolia*, OBL) and mule fat. Photographs of Deer Canyon Creek are included as Appendix C, Photos 34 and 35.

##### *Soils:*

Hydric soils were identified in the feature that had a hydrogen sulfide odor. Soils consisted of clays and loams. Results of the data pit are recorded in Appendix A (Sampling Point 4).

#### 4.4.14 FEATURE 14: TRIBUTARY TO DEER CANYON 3

##### *General Description:*

Tributary to Deer Canyon 3 is a system of drainages containing one concrete-lined V-ditch and three high-gradient ephemeral channels that form the mainstem tributary. The V-ditch was constructed along the outer perimeter of a residential development and drains into the easternmost high-gradient tributary. The three high-gradient tributaries all have evidence of infrequent, moderate to high velocity flows. A few depositional areas are present and the substrate is dominated by small and large cobbles and sand. Shelving, scour, and sediment sorting are all present at the OHWM. The mainstem tributary was wet from nuisance flow at the time of the survey. The substrate consists of cobble, gravel, and sand. Vegetation destruction, disturbed leaf litter, shelving, scour, sediment sorting, and sediment deposition are all present at the OHWM. This drainage flows into Deer Canyon Creek and ultimately into the Pacific Ocean.

##### *Jurisdiction:*

A total of 0.12 acre of USACE non-wetland WoUS occur within this drainage feature. A total of 0.12 acre of RWQCB WoS was observed. Also present is 0.02 acre of RWQCB exempt, MS4 erosion control V-ditches and 0.12 acre of non-wetland WoS. The CDFW jurisdiction associated



with Tributary to Deer Canyon 3 totals 0.12 acre of CDFW unvegetated streambed. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 9.

*Vegetation:*

This drainage is dominated by dense, upland vegetation. Vegetation includes chamise and scrub oak. Photographs of Tributary to Deer Canyon 1 are included as Appendix C, Photos 36, 37, and 38.

*Soils:*

No soil pits were excavated due to a lack of hydrophytic vegetation. Soils consisted primarily of hard clay and cobbles associated with high water velocities and consistent with the feature's steep grade. No hydric soils are expected due to the drainage's high velocity flows and hard surface substrate.

4.4.15 FEATURE 15: MCGONIGLE CANYON CREEK

*General Description:*

McGonigle Canyon Creek is one of the named, blue-line drainages depicted on USGS topographic maps crossed by the Proposed Project. This drainage is a braided, low-gradient system that was dry at the time of the survey. The substrate consists of dense cobbles and packed sand. This drainage likely receives infrequent high-velocity flows. A wrack line is present in vegetation at the TOB. Debris jams and headcuts occur along the length of the channel within the study area. Shelving, scour, sediment sorting, and vegetation destruction are all present at the ordinary high water mark. The drainage is incised; the bank height is approximately two to three feet. This drainage flows offsite to the southwest and eventually to the Pacific Ocean.

*Jurisdiction:*

A total of 0.28 acre of USACE non-wetland WoUS occur within this drainage feature. A total of 0.28 acre of RWQCB WoS was observed. Also present are 0.02 acre of RWQCB exempt, MS4 erosion control V-ditches. The CDFW jurisdiction associated with McGonigle Canyon Creek totals 1.84 acres of riparian vegetation. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 10.

*Vegetation:*

Riparian vegetation on site is generally dominated bluegum eucalyptus (*Eucalyptus globulus*, UPL), arroyo willow, mule fat, and sugar bush. This vegetation did not meet USACE hydrophytic vegetation dominance requirements. Photographs of Tributary to McGonigle Canyon Creek are included as Appendix C, Photos 39, 40, 41, and 42.

*Soils:*

This drainage is dominated by upland soils and a restrictive layer of dense cobbles. A soil pit was excavated but no hydric soils are present. Results of the data pit are recorded in Appendix A (Sampling Point 6).



## 4.4.16 FEATURE 16: TRIBUTARY TO MCGONIGLE CANYON CREEK 1

*General Description:*

Tributary to McGonigle Canyon Creek 1 consists of two low-gradient ephemeral, concrete-lined channels flowing into a small basin containing a wetland. The channels are both V-ditches that likely receive nuisance flow. One drainage begins at a culvert outlet underneath State Route 56 at Ted Williams Freeway. The other begins at the southern edge of State Route 56 and flows to the west and into the basin.

*Jurisdiction:*

A total of 0.07 acre of WoUS occur within this drainage feature, of which 0.04 acre are non-wetland WoUS and 0.03 acre are wetland WoUS. A total of 0.07 acre of RWQCB WoS was observed, which includes 0.04 acre of non-wetland WoS and 0.03 acre of wetland WoS. Also present are 0.02 acre of RWQCB exempt, MS4 erosion control V-ditches. The CDFW jurisdiction associated with Tributary to McGonigle Canyon Creek 1 totals 0.38 acre of riparian vegetation. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 10.

*Vegetation:*

Vegetation on site includes non-native grasses and other ruderal vegetation. Riparian vegetation was dominated by mule fat scrub while wetland vegetation was dominated by broadleaf cattail, fat-hen (*Atriplex prostrata*, FACW), marsh fleabane (*Pluchea odorata*, FACW), and wild celery (*Angelica lucida*, FAC). Photographs of Tributary to McGonigle Canyon Creek 1 are included as Appendix C, Photos 43 and 44.

*Soils:*

Hydric soils were identified in the feature that had a hydrogen sulfide odor. Soils consisted of loamy sandy soils. Results of the data pit are recorded in Appendix A (Sampling Point 5).

## 4.4.17 FEATURE 17: TRIBUTARY TO MCGONIGLE CANYON CREEK 2

*General Description:*

Tributary to McGonigle Canyon Creek 2 consists of four ephemeral channels flowing into a culvert that crosses under Carmel Valley Road. Two of the ephemeral channels are medium-gradient concrete lined V-ditches. Both likely receive runoff from nuisance flows. The three northernmost ephemeral drainages flow southeast into a small basin containing a wetland. The substrate consists of sand and small cobbles. Sediment sorting, scour, and vegetation matting are all present at the OHWM. This channel was wet at the time of the survey and likely receives nuisance flow from a residential development upslope. This drainage flows under Carmel Valley Road, under a residential development, and offsite to McGonigle Canyon Creek and ultimately to the Pacific Ocean.

*Jurisdiction:*

A total of 0.09 acre of WoUS occur within this drainage feature, of which 0.03 acre are non-wetland WoUS and 0.06 acre are wetland WoUS. A total of 0.09 acre of RWQCB WoS was observed, which includes 0.03 acre on non-wetland WoS and 0.06 acre of wetland WoS. Also present are 0.12 acre of RWQCB exempt, MS4 erosion control V-ditches. The CDFW jurisdiction associated with Tributary to McGonigle Canyon Creek 2 totals 0.17 acre, of which 0.03 acre is CDFW unvegetated streambed and 0.14 acre is riparian vegetation. This area falls



outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 12.

*Vegetation:*

Upland vegetation associated with this drainage includes non-native grasses, Mexican elderberry (*Sambucus nigra* ssp. *caerulea*, FAC) and bluegum eucalyptus. Riparian vegetation, a mix of mule fat and southern willow scrub, was dominated by red willow (*Salix laevigata*, FACW) and mule fat. Wetland vegetation was dominated by emergent broadleaf cattail with sparse black willow. Photographs of Tributary to McGonigle Canyon Creek 2 are included as Appendix C, Photos 45, 46, and 47.

*Soils:*

Hydric soils were identified in the feature that had a hydrogen sulfide odor. Soils consisted of loamy and clay soils. Results of the data pit are recorded in Appendix A (Sampling Point 3).

4.4.18 FEATURE 18: TRIBUTARY TO MCGONIGLE CANYON CREEK 3

*General Description:*

Tributary to McGonigle Canyon Creek 3 consists of a system of three ephemeral channels flowing into an intermittent drainage. The ephemeral channels are all medium-gradient concrete-lined V-ditches. The V-ditches likely receive nuisance flow as well as infrequent low-to moderate velocity runoff flows. The intermittent channel was wet from nuisance flow at the time of the survey. This channel meanders and is narrow and incised in some portions within the study area and broad and shallow in other portions. Just north of Carmel Valley Road, the channel widens and flows into a wetland. The channel substrate consists of sand, clay, and few cobbles. Sediment deposition, sediment sorting, scour, and vegetation matting are all present at the OHWM. This channel likely receives infrequent low-to-moderate velocity flows as well as nuisance flow. The drainage flows into McGonigle Canyon Creek and ultimately into the Pacific Ocean.

*Jurisdiction:*

A total of 1.19 acres of WoUS occur within this drainage feature, of which 0.03 acre of non-wetland WoUS and 1.16 acres of wetland WoUS was observed. A total of 1.19 acres of RWQCB WoS was observed of which 0.03 acre is non-wetland WoS and 1.16 acres is wetland WoS. Also present are 0.04 acre of RWQCB exempt, MS4 erosion control V-ditches. The CDFW jurisdiction associated with Tributary to McGonigle Canyon Creek 3 totals 1.22 acres, of which 0.06 acre is CDFW unvegetated streambed and 1.16 acres is riparian vegetation. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 12.

*Vegetation:*

Vegetation associated with the drainage was almost entirely composed of riparian and facultative species. Riparian and wetland vegetation associated with this drainage includes spiny rush (*Juncus acutus*, FACW), broadleaf cattail, San Diego marsh elder (*Iva hayesiana*, FACW), arroyo willow, black willow, mugwort (*Artemisia douglasiana*, FAC), ragweed (*Ambrosia psilostachya*, FACU), rabbitsfoot grass (*Polypogon monspeliensis*, FACW), and mule fat. Photographs of Tributary to McGonigle Canyon Creek 3 are included as Appendix C, Photos 48 and 49.



*Soils:*

Hydric soils were identified in the feature that fall into the Redox Dark Surface indicator category. Soils consisted of loams and clay-loams. Results of the data pit are recorded in Appendix A (Sampling Point 2).

**4.4.19 FEATURE 19: TRIBUTARY TO MCGONIGLE CANYON CREEK 4***General Description:*

Tributary to McGonigle Canyon Creek 4 consists of one intermittent drainage and one ephemeral drainage. The ephemeral drainage is a concrete-lined V-ditch that flows into the intermittent drainage. The intermittent drainage is medium gradient and originates from a culvert underneath Carmel Valley road. The culvert has rip-rap at the outlet to slow water velocity. A large PVC pipe extends from the culvert outlet and through the middle of the channel for approximately 50-60 feet. The channel is narrow and incised. A defined bed and bank are present but little to no scour or other ordinary high water mark indicators are present. It likely receives moderate runoff from Carmel Valley road and Camino Del Sur. The substrate consists of cobbles and sand. The drainage flows into McGonigle Canyon Creek and ultimately into the Pacific Ocean.

*Jurisdiction:*

A total of 0.01 acre of USACE non-wetland WoUS occur within this drainage feature. A total of 0.01 acre of RWQCB non-wetland WoS was observed. Also present are 0.01 acre of RWQCB exempt, MS4 erosion control V-ditches. The CDFW jurisdiction associated with Tributary to McGonigle Canyon Creek 4 totals 0.02 acre, of which 0.01 acre is CDFW unvegetated streambed and 0.01 acre is riparian vegetation. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 13.

*Vegetation:*

Non-native grasses and other upland ruderal vegetation are associated with this drainage. Riparian vegetation was also present along the intermittent channel. This vegetation includes tamarisk and cattail. Photographs of Tributary to McGonigle Canyon Creek 4 are included as Appendix C, Photos 50, 51, and 52.

*Soils:*

No soil pits were excavated due to a dense cobble layer at the drainage surface and lack of hydrophytic vegetation. The drainage was dominated by upland vegetation with riparian vegetation representing less than 10 percent of the cover. No hydric soils are expected due to the drainage's hard surface substrate.

**4.4.20 FEATURE 20: TRIBUTARY TO LA ZANJA CANYON 1***General Description:*

Tributary to La Zanja Canyon 1 consists of two intermittent drainages. The intermittent drainages are low-gradient and flow underneath Carmel Valley Road through culverts. The westernmost drainage originates offsite in a residential development. The easternmost intermittent drainage originates offsite north to La Zanja Canyon 2 and flows westward under Carmel Valley Road. The drainages meander through a wide valley and likely receive infrequent, moderate to high flows that are slowed by culvert baffles under Carmel Valley road. Leaf litter in the channel is undisturbed and vegetation is growing in the channel. Depositional





areas are also present. Scour and sediment sorting are present at the ordinary high water mark. The drainage flows offsite, into La Zanja Canyon, and ultimately into the Pacific Ocean.

*Jurisdiction:*

A total of 0.06 acre of USACE non-wetland WoUS occur within this drainage feature. A total of 0.06 acre of RWQCB non-wetland WoS was observed. Also present are 0.08 acre of RWQCB exempt, MS4 erosion control V-ditches. The CDFW jurisdiction associated with Tributary to La Zanja Canyon 1 totals 0.62 acre, of which 0.01 acre is CDFW unvegetated streambed and 0.61 acre is riparian vegetation. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 13 and 14.

*Vegetation:*

Vegetation associated with the drainage includes open grassland and dense vegetation in the riparian area. Upland vegetation includes laurel sumac and lemonade berry. Riparian vegetation includes arroyo willow, mule fat, and black willow. Photographs of Tributary to La Zanja Canyon 1 are included as Appendix C, Photos 53, 54, 55, and 56.

The tributary is lined with concreted riprap near the culverts adjacent to Carmel Valley Road. Only a thin 1-2 inch layer of soils was present in areas dominated by riparian vegetation. No data pit was excavated due to a lack of soil in areas dominated by hydrophytic vegetation.

4.4.21 FEATURE 21: TRIBUTARY TO LA ZANJA CANYON 2

*General Description:*

Tributary to La Zanja Canyon 2 is a small ephemeral drainage system that begins at a large culvert and flows into Tributary to La Zanja Canyon 1. The channel is medium gradient and likely receives moderate to high flows. The culvert at the top of the drainage contains baffles and large rip-rap to slow flow velocity. Downstream of the culvert and rip-rap, the substrate consists of large cobbles and sand. Little to no scour and sediment sorting are present at the OHWM. However, a defined bed and bank are present.

*Jurisdiction:*

A total of 0.04 acre of USACE non-wetland WoUS occur within this drainage feature. A total of 0.04 acre of RWQCB WoS was observed, as was 0.05 acre of exempt, MS4 erosion control V-ditches. The CDFW jurisdiction associated with Tributary to La Zanja Canyon 2 totals 0.04 acre of CDFW unvegetated streambed. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 14.

*Vegetation:*

Vegetation associated with the drainage includes California sagebrush (*Artemisia californica*, UPL), California brittlebrush (*Encelia californica*, UPL), and laurel sumac. Photographs of Tributary to La Zanja Canyon 2 are included as Appendix C, Photos 57 and 58.

*Soils:*

No soil pits were excavated due to a lack of dominant hydrophytic vegetation. Soils consisted primarily of hard sand and cobbles associated with moderate to high water velocities and consistent with the feature's steep grade. No hydric soils are expected due to the drainage's high velocity flows and hard surface substrate.



#### 4.4.22 FEATURE 22: TRIBUTARY TO MCGONIGLE CANYON CREEK 5

##### *General Description:*

Tributary to McGonigle Canyon Creek 5 consists of a system of four ephemeral and one intermittent drainages. Two of the ephemeral drainages are high-gradient and deeply incised. Little to no scour and sediment sorting are present however the channels have defined bed and banks. These drainages likely receive infrequent, moderate to low flows. The other two ephemeral drainages are medium-gradient, incised channels that originate offsite. These channels have defined bed and banks but little to no scour and sediment sorting. One of these channels flows into the intermittent drainage in the system. The other, northern-most ephemeral drainage, is isolated and does not connect to the main tributary system. The intermittent drainage is medium to low gradient and was wet from nuisance flow at the time of the survey. Few signs of scour and vegetation matting were present at the OHWM. The channel flows into a narrow basin with evidence of ponding, then offsite into McGonigle Canyon Creek and ultimately to the Pacific Ocean.

##### *Jurisdiction:*

A total of 0.05 acre of USACE non-wetland WoUS occur within this drainage feature. A total of 0.07 acre of RWQCB non-wetland WoS was observed. The CDFW jurisdiction associated with Tributary to McGonigle Canyon Creek 5 totals 0.18 acre, of which 0.04 acre is CDFW unvegetated streambed and 0.14 acre is riparian vegetation. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 15.

##### *Vegetation:*

Vegetation associated with the drainage includes broom baccharis (*Baccharis sarothroides*), black sage, laurel sumac, and buckwheat. Riparian vegetation includes red willow, California bulrush, and mule fat. Photographs of Tributary to McGonigle Canyon Creek 5 are included as Appendix C, Photos 59 and 60.

##### *Soils:*

Soils were found only within four inches of the surface in areas dominated by hydrophytic vegetation, with riprap found below. No data pit was excavated due to the subsurface riprap. This area was wet with nuisance flow and the riprap was likely placed to provide erosion control support. As such, the soil observed is likely recently deposited and transitory and would not have time to develop hydric characteristics.

#### 4.4.23 FEATURE 23: BLACK MOUNTAIN FEATURES

##### *General Description:*

The Black Mountain Features consist of three high-gradient ephemeral drainages, most of which are concrete-lined V-ditches. In areas not lined with concrete, the substrate consists mostly of sand with a few cobbles. The drainages likely receive very infrequent moderate to low velocity flows. Some scour and sediment sorting are present at the ordinary high water mark. The features are first order drainages that begin offsite in generally unmodified watersheds. The largest drainage flows several hundred feet through dense upland vegetation and into a concrete-lined V-ditch. The features drain to municipal storm drain systems that are believed to ultimately discharge into the Pacific Ocean.



*Jurisdiction:*

A total of 0.07 acre of USACE non-wetland WoUS occur within this drainage feature. A total of 0.08 acre of RWQCB non-wetland WoS was observed. The CDFW jurisdiction associated with Black Mountain Features totals 0.07 acre of CDFW unvegetated streambed. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 16 and 17.

*Vegetation:*

Vegetation associated with the drainage includes dense chaparral dominated by chamise and broom baccharis. No riparian vegetation is present. Photographs of Black Mountain Features are included as Appendix C, Photos 61 and 62.

*Soils:*

No soil pit was excavated due to the lack of riparian vegetation. Soils consisted of sand and cobbles. No hydric soils are expected due to the drainage's high velocity flows and hard surface substrate.

#### 4.4.24 FEATURE 24: LOS PEÑASQUITOS MESA FEATURES 1

*General Description:*

Los Peñasquitos Mesa Features 1 consists of a low-gradient tributary that flows into the study area through a culvert underneath Bassmore Drive and then into a wide basin containing riparian vegetation. The channel becomes braided near the basin. The substrate primarily consists of clay and sand and small cobbles. This channel likely receives infrequent moderate to low flows. Many depositional areas were present.

*Jurisdiction:*

A total of 0.69 acre of WoUS occur within this drainage feature, including 0.02 acre of non-wetland WoUS and 0.67 acre of wetland WoUS. A total of 0.69 acre of RWQCB WoS was observed, including 0.02 acre of non-wetland WoS, and 0.67 acre of wetland WoS. Also present are 0.01 acre of RWQCB exempt, MS4 erosion control V-ditches. The CDFW jurisdiction associated with Los Peñasquitos Mesa Features 1 totals 0.68 acre, of which 0.01 acre is CDFW unvegetated streambed and 0.67 acre is riparian vegetation. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 17.

*Vegetation:*

Riparian and wetland vegetation, of equal extent, was dominated by: tamarisk and American bulrush with intrusions of pampas grass (*Cortaderia selloana*, FACU). Photographs of Los Peñasquitos Mesa Features 1 are included as Appendix C, Photos 63 and 64.

*Soils:*

No soil pit was surveyed due to a restrictive layer of cobbles at 5 inches in depth beneath loamy clay in the upper 5 inches. However, hydric soils were identified within the feature based on the presence of hydrogen sulfide odor in the upper five inches of this emergent habitat.



#### 4.4.25 FEATURE 25: LOS PEÑASQUITOS MESA FEATURES 2

##### *General Description:*

Los Peñasquitos Mesa Features 2 consists of an intermittent tributary that flows through a wide basin adjacent to Rancho Peñasquitos Blvd. The valley is lined with ornamental ice-plant (*Carpobrotus edulis*, UPL) and very little substrate is exposed. This channel likely receives infrequent moderate to low flows. The drainage flows offsite, into a Los Peñasquitos Mesa stormdrain system and presumably into the Pacific Ocean.

##### *Jurisdiction:*

A total of 0.02 acre of USACE non-wetland WoUS occur within this drainage feature. A total of 0.02 acre of RWQCB non-wetland WoS was observed. Also present are 0.06 acre of RWQCB exempt, MS4 erosion control V-ditches. The CDFW jurisdiction associated with Los Peñasquitos Mesa Features 2 totals 0.13 acre, of which 0.01 acre is CDFW unvegetated streambed and 0.12 acre is riparian vegetation. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 18.

##### *Vegetation:*

Upland vegetation associated with this drainage includes ice-plant, broom baccharis and artichoke thistle (*Cynara cardunculus*, UPL). Riparian vegetation was characterized by mule fat scrub with a single tamarisk also present in the channel. A photograph of Los Peñasquitos Mesa Features 2 is included as Appendix C, Photo 65.

##### *Soils:*

No soil pits were excavated due to a lack of dominant hydrophytic vegetation meeting USACE requirements. Soils consisted of hard sand and gravel. Hydric soils are not anticipated due to drainages' infrequent flows.

#### 4.4.26 FEATURE 26: LOS PEÑASQUITOS MESA FEATURES 3

##### *General Description:*

Los Peñasquitos Mesa Features 3 consists of two high-gradient ephemeral drainages that are incised. They flow into erosion control V-ditches present on the southeast side of Interstate 15. The substrate consists of cobbles and sand. Scour and sediment sorting were present at the ordinary high water mark. These ephemeral tributaries likely receive moderate flows and few depositional areas were present. The northernmost channel flows into a small depression with riparian vegetation before draining into a V-ditch. The southern channel begins as a concrete lined V-ditch and flows offsite into a lower-gradient natural channel. The drainage flows offsite, into Los Peñasquitos Mesa and ultimately into the Pacific Ocean.

##### *Jurisdiction:*

A total of 0.01 acre of USACE non-wetland WoUS occur within this drainage feature. A total of 0.01 acre of RWQCB non-wetland WoS was observed. Also present are 0.08 acre of RWQCB exempt, MS4 erosion control V-ditches. The CDFW jurisdiction associated with Los Peñasquitos Mesa Features 3 totals 0.01 acre of CDFW unvegetated streambed. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 19.



*Vegetation:*

Riparian vegetation associated with this feature includes broadleaf cattail, iris-leaf juncus (*Juncus xiphioides*, OBL), sedges (*Cyperus* sp., FACW), tamarisk, red willow, and mule fat. A photograph of Los Peñasquitos Mesa Features 3 is included as Appendix C, Photo 66.

*Soils:*

No hydric soils were identified in this feature. After excavating a data pit, the soils were found to not meet hydric soil diagnostic requirements. Soils consisted of hard clays. Results of the data pit are found in Appendix A, Data Pit 7.

#### 4.4.27 FEATURE 27: TRIBUTARY TO PEÑASQUITOS CREEK 10

*General Description:*

Tributary to Peñasquitos Creek 10 consists of a system of four ephemeral tributaries. Each of these channels is a direct tributary to Los Peñasquitos Creek. These tributaries are very high gradient. The dominant substrate consists of cobble and sand. These drainages likely receive high-velocity flows. The drainages are very incised, each with a one to three foot bank height. Vegetation destruction, disturbed leaf litter, wracking, shelving, scour, and sediment sorting are all present at the ordinary high water mark. These channels flow into Los Peñasquitos Creek and ultimately to the Pacific Ocean.

*Jurisdiction:*

A total of 0.01 acre of USACE non-wetland WoUS occur within this drainage feature. A total of 0.01 acre of RWQCB non-wetland WoS was observed. Also present are 0.34 acre of RWQCB exempt, MS4 erosion control V-ditches. The CDFW jurisdiction associated with Tributary to Peñasquitos Creek 10 totals 0.01 acre of CDFW unvegetated streambed. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 20 and 21.

*Vegetation:*

Vegetation associated with this drainage consists mostly of upland vegetation and includes: non-native brome grasses, laurel sumac, redberry, coast live oak (*Quercus agrifolia*, UPL), broom baccharis, and California sagebrush. Photographs of Tributary to Peñasquitos Creek 10 are included as Appendix C, Photos 67 and 68.

*Soils:*

No soil pits were excavated due to a lack of hydrophytic vegetation. Soils consisted primarily of hard sand and cobbles associated with high flows in erosional areas. No hydric soils are expected within the feature.

#### 4.4.28 FEATURE 28: LOS PEÑASQUITOS CREEK

*General Description:*

Los Peñasquitos Creek is one of the named, blue-line drainages depicted on USGS topographic maps crossed by the Proposed Project. The ROW crosses the drainage just upstream of a very large debris jam. Upstream of the debris jam, the drainage is wet and below it the drainage is generally dry. The observed flow regime is generated from nuisance flow from upstream residential developments. The channel is braided and shows strong evidence of high-velocity flows. A wrack line in the vegetation is present approximately one to two feet above the TOBs.



Direct tributaries to this stream within the study area are high-gradient and also show evidence of high-velocity flows. Sediment sorting, scour, vegetation destruction, and bank undercutting are all present at the ordinary high water mark. The channel exhibits a pattern of erosional and depositional areas consisting of riffles, runs, pools, and glides. The drainage flows offsite and directly into the Pacific Ocean.

*Jurisdiction:*

A total of 1.97 acres of USACE wetland WoUS occur within this drainage feature. A total of 1.97 acres of RWQCB wetland WoS was observed. The CDFW jurisdiction associated with Los Peñasquitos Creek totals 2.63 acres of riparian vegetation. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 20.

*Vegetation:*

Vegetation associated with this drainage is composed of dense coast live oak vegetation at the edges as well as riparian vegetation in the drainage interior. Riparian vegetation, best characterized as sycamore woodland, is dominated by sycamore (*Platanus racemosa*, FAC) with scattered arroyo willow, black willow, and poison oak. Wetland vegetation occurs in areas of low flow and is dominated by cattail and bulrush with scattered arroyo willow, black willow, and yerba mansa (*Anemopsis californica*, OBL). Photographs of Los Peñasquitos Creek are included as Appendix C, Photos 69 and 70.

*Soils:*

Hydric soils were identified within the feature presence of hydrogen sulfide odor. No formal data sheet was prepared due to the submerged nature of the area, but due to the presence of hydrology, hydric soil indicators, and hydrophytic vegetation, wetland status is assumed throughout the drainage. Soils downstream of the debris jam consisted primarily of hard sand and cobbles associated with high flows in erosional areas.

4.4.29 FEATURE 29: TRIBUTARY TO PEÑASQUITOS CREEK 11

*General Description:*

Tributary to Peñasquitos Creek 11 consists of two drainage systems that confluence offsite and drain to Peñasquitos Creek. The westernmost drainage consists of three V-ditches and five ephemeral tributaries flowing into a culvert that flows forth under Scripps Poway Parkway. All of these channels originate on site. At the culvert, a small wetland is present. The dominant substrates in the drainage consist of clay and sand, gravel, and large cobbles. This drainage likely receives infrequent, moderate-velocity flows. Some of the depositional areas and the wetland have undisturbed leaf litter. Shelving, scour, sediment sorting, and sediment deposition are all present at the ordinary high water mark. The easternmost drainage consists of four high-gradient ephemeral tributaries that drain into a larger ephemeral tributary. The dominant substrates are clay and sand, gravel, and large cobbles. This drainage also likely receives infrequent, moderate-velocity flows. The larger drainage exhibits a pattern of erosional and depositional areas and is deeply incised at confluences with ephemeral drainages. Shelving, scour, sediment sorting, and sediment deposition are all present at the ordinary high water mark. These drainages confluence offsite and flow into Peñasquitos Creek and ultimately to the Pacific Ocean.



*Jurisdiction:*

A total of 0.20 acre of USACE non-wetland WoUS occur within this drainage feature and <0.001 acre of wetland WoUS. A total of 0.20 acre of RWQCB WoS was observed, which includes 0.20 acre of non-wetland WoS and <0.001 acre of wetland WoS. Also present are 0.03 acre of RWQCB exempt, MS4 erosion control V-ditches. The CDFW jurisdiction associated with Tributary to Peñasquitos Creek 11 totals 0.31 acre, of which 0.20 acre is CDFW unvegetated streambed and 0.11 acre is riparian vegetation. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 23.

*Vegetation:*

This drainage is dominated by dense, upland vegetation including chamise, scrub oak, black sage, holly-leaf cherry (*Prunus ilicifolia*, UPL), and buckbrush (*Ceanothus* sp., UPL). Riparian and wetland vegetation is present and includes red willow and mule fat. Photographs of Tributary to Peñasquitos Creek 11 are included as Appendix C, Photos 71, 72, and 73.

*Soils:*

Hydric soils were identified in the feature that fall into the Sandy Redox indicator category. Soils consisted of cobbles, sand, and sandy loam. Results of the data pit are recorded in Appendix A (Sampling Point 8).

#### 4.4.30 FEATURE 30: CYPRESS CANYON FEATURE 1

*General Description:*

Cypress Canyon Feature 1 is a series of concrete lined V-ditches and constructed ditches with natural substrate that drain from residential developments on upstream mesa tops. The channels likely receive infrequent, moderate-velocity flows. All of these features are believed to be RWQCB exempt, MS4 erosion control features. These features enter storm drain systems and are presumed to eventually drain into Cypress Canyon and ultimately to the Pacific Ocean.

*Jurisdiction:*

A total of 0.17 acre of RWQCB exempt, MS4 erosion control V-ditches occur in Cypress Canyon Feature 1. There are no USACE WoUS, RWQCB WoS, or CDFW jurisdictional areas present. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 24.

*Vegetation:*

Vegetation associated with these features is generally upland vegetation and ornamental vegetation. Vegetation includes: non-native brome grasses, ice-plant, broom baccharis, and chamise. A stand of mule fat was present near one of the drainages but it not considered riparian vegetation. A photo of Cypress Canyon Feature 1 is included as Appendix C, Photo 74.

*Soils:*

No soil pits were excavated due to a lack of hydrophytic vegetation. Most of the features were concrete lined and areas with natural substrate had soils consisting of primarily of hard sand and cobbles. No hydric soils are expected within the feature.



#### 4.4.31 FEATURE 31: CYPRESS CANYON FEATURE 2

##### *General Description:*

Cypress Canyon Feature 2 consists of a medium gradient concrete lined V-ditch draining from Eastridge Court within the study area. The channel likely receives infrequent, high-velocity flows. Undisturbed leaf litter was present. All of these features are isolated and believed to be RWQCB exempt, MS4 erosion control features. The channel drains into a small culverted depression, into Cypress Canyon, and ultimately to the Pacific Ocean.

##### *Jurisdiction:*

A total of 0.05 acre of RWQCB exempt, MS4 erosion control V-ditches and related depression was observed. There are no USACE WoUS, RWQCB WoS, or CDFW jurisdictional areas present. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 24.

##### *Vegetation:*

Vegetation present in the depressional area includes: narrowleaf cattail, California bulrush, and arroyo willow. Upland vegetation present includes: ice-plant, broom baccharis and non-native brome grasses. A photo of Cypress Canyon Feature 2 is included as Appendix C, Photo 75, 76, and 77.

##### *Soils:*

Soils consisted primarily of hard clays and cobbles associated with high flows water velocities and consistent with the feature's high gradient. No hydric soils are expected due to the drainage's high velocity flows.

#### 4.4.32 FEATURE 32: TRIBUTARY TO BEELER CREEK 1

##### *General Description:*

Tributary to Beeler Creek 1 is a system of four steep ephemeral drainages and two intermittent mainstem tributaries to Beeler Creek. The ephemeral headwater tributaries consist of high-gradient, narrow, and deeply incised channels. These headwaters show evidence of high-velocity infrequent flows with little to no deposition. The channel substrates consist mostly of large cobbles. Sediment sorting and scour is present at the ordinary high water marks of the ephemeral tributaries. The two intermittent tributaries flow through wide canyon bottoms and both have an adjacent unpaved access road. The stream bank adjacent to the access road is lined with rip-rap for erosion protection. The intermittent tributaries have substrates consisting of small and large cobbles and sand. Few depositional areas were present in each channel. These tributaries likely receive infrequent, high-velocity flows. Sediment sorting, scour, and shelving are all present at the ordinary high water mark. The drainage flows offsite into Beeler Creek and ultimately to the Pacific Ocean.

##### *Jurisdiction:*

A total of 0.29 acre of USACE non-wetland WoUS occur within this drainage feature. A total of 0.29 acre of RWQCB non-wetland WoS was observed. Also present are 0.11 acre of RWQCB exempt, MS4 erosion control V-ditches. The CDFW jurisdiction associated with Tributary to Beeler Creek 1 totals 1.23 acres, of which 0.14 acre is CDFW unvegetated streambed and 1.09 acres is riparian vegetation. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 25.





*Vegetation:*

Vegetation associated with Tributary to Beeler Creek 1 is composed of dense upland scrub oak vegetation. Riparian vegetation is present and includes mule fat, arroyo willow, ragweed, and poison oak. Photographs of Tributary to Beeler Creek 1 are included as Appendix C, Photos 78, 79, 80, and 81.

*Soils:*

Soils consisted primarily of hard sand and cobbles associated with high flows water velocities and consistent with the feature's high gradient. No hydric soils are expected due to the drainage's high velocity flows.

**4.4.33 FEATURE 33: TRIBUTARY TO BEELER CREEK 2***General Description:*

Tributary to Beeler Creek 2 is a wide, meandering ephemeral drainage and one associated steep, ephemeral tributary. The ephemeral tributary is moderately incised and very steep. At the confluence between the tributary and main channel, the channel widens and becomes braided. Evidence of overland sheetflow is also present as evidenced by matted vegetation. Tributary to Beeler Creek 2 begins at the confluence of two headwater tributaries that receive flow from V-ditches created around Sycamore Substation. These tributaries are lined with rip-rap and drain the associated V-ditches. Tributary to Beeler Creek 2 likely receives very infrequent moderate to high flows. The channel exhibits a pattern of erosional and depositional areas, scour, and small side channels. The substrate consists of small and large cobbles and sand. Also present are vegetation matting and sediment sorting at the OHWM. The drainage flows offsite into Beeler Creek and ultimately to the Pacific Ocean.

*Jurisdiction:*

A total of 0.38 acre of USACE non-wetland WoUS occur within this drainage feature. A total of 0.38 acre of RWQCB non-wetland WoS was observed. Also present are 0.39 acre of RWQCB exempt, MS4 erosion control V-ditches. The CDFW jurisdiction associated with Tributary to Beeler Creek 2 totals 0.39 acre of CDFW unvegetated streambed. This area falls outside of the Coastal Zone and CCC jurisdiction. Results of the survey have been mapped on Exhibit 2, Sheet 26 and 27.

*Vegetation:*

Vegetation associated with Tributary to Beeler Creek 2 is generally composed of dense upland scrub oak vegetation with poison oak and holly-leaf cherry. Photographs of Tributary to Beeler Creek 1 are included as Appendix C, Photos 82, 83, and 84.

*Soils:*

No soil pits were excavated due to a lack of hydrophytic vegetation. Soils consisted primarily of hard sand and cobbles associated with high flows in erosional areas. No hydric soils are expected due to the drainage's high velocity flows.

**4.5 Vernal Pools****4.5.1 FEATURE 34: VERNAL POOL COMPLEX 1**

Vernal Pool Complex 1 is a man-made SDG&E mitigation site located near the Peñasquitos Substation. Only the northernmost pool is located within the survey area.



This system was dry during the field survey due to normal seasonal conditions. The hydrologic indicators observed include soil cracking and a biotic crust. The primary hydrologic inputs to this system are precipitation and overland sheetflow from adjacent uplands. Vernal pool species identified in this system included woolly marbles (*Psilocarphus tenellus*, OBL) and the federally threatened spreading navarretia (*Navarretia fossalis*, OBL). Soils consisted primarily of compacted sand and clay. Soil pits were not excavated in order to avoid impacts to sensitive resources, however hydric soils were assumed under hydric soils indicator ‘Vernal pools’ due to wetland hydrology indicators and vernal pool vegetation.

While the pools appear isolated, the USFWS reported the presence of San Diego fairy shrimp in this area (USFWS 2013b). As such, under the Regional General Conditions to Nationwide Permits (USACE 1997), these pools are likely under the jurisdiction of the USACE. The potential jurisdictional boundary associated with these pools is 0.03 acre, all of which is wetland WoUS and wetland WoS. Because no State-listed threatened or endangered species were observed, these pools are not within CDFW jurisdiction. This area falls outside of the Coastal Zone and CCC jurisdiction. Photographs of Vernal Pool Complex 1 are included as Appendix C, Photos 85 and 86. Results of the survey have been mapped on Exhibit 2, Sheet 1.

#### 4.5.2 FEATURE 35: VERNAL POOL COMPLEX 2

Vernal Pool Complex 2 consists of a vernal pool system and road swales located on a mesa top adjacent to Carmel Mountain Road. The main pools have been fenced off to avoid pedestrian traffic and disturbance. This system was dry during the field survey due to normal seasonal conditions. The hydrologic indicators observed include soil cracking and a biotic crust. The primary hydrologic inputs to this system are runoff from a culvert under Carmel Mountain Road and precipitation. The dominant vegetation in this system is rabbit’s foot grass and clustered tarweed (*Deinandra fasciculata*, FACU) with vernal components including woolly marbles. Soils consisted primarily of compacted sand and clay. Soil pits were not excavated in order to avoid impacts to sensitive resources, however hydric soils were assumed under hydric soils indicator ‘Vernal pools’ due to wetland hydrology indicators and vernal pool vegetation.

While the pools appear isolated, the USFWS reported the presence of San Diego fairy shrimp in this area (USFWS 2013b). As such, these pools are likely under the jurisdiction of the USACE. The potential jurisdictional boundary associated with the pools is 0.15 acre all of which is wetland WoUS and wetland WoS. Because no State-listed threatened or endangered species were observed, these pools are not within CDFW jurisdiction. CCC jurisdiction includes 0.15 acre of wetland all of which is ESHA. Photographs of Vernal Pool Complex 2 are included as Appendix C, Photos 87 and 88. Results of the survey have been mapped on Exhibit 2, Sheet 3 and 4.

#### 4.5.3 FEATURE 36: VERNAL POOL COMPLEX 3

Vernal Pool Complex 3 consists of a series of road ruts in an access road along a mesa top south of Deer Canyon Creek near an existing lattice tower. This system was dry during the field survey due to normal seasonal conditions. The hydrologic indicators observed include soil cracking and a biotic crust. The primary hydrologic input to this system is precipitation. The dominant vegetation in this system consisted of rabbit’s foot grass with vernal components including woolly marbles. Soil pits were not excavated in order to avoid impacts to sensitive resources, however hydric soils were assumed due to the presence of wetland hydrology indicators and hydrophytic vegetation. Hydric soils were assumed under hydric soils indicator ‘Vernal pools’ due to wetland hydrology indicators and vernal pool vegetation.



While the pools appear isolated, San Diego fairy shrimp are known in this area (USFWS 2013b) and these pools fall within designated Critical Habitat for this species (50 CFR Part 17). As such, these pools are likely under the jurisdiction of the USACE. The potential jurisdictional boundary associated with the pools is 0.05 acre all of which is wetland WoUS and wetland WoS. Because no State-listed threatened or endangered species were observed, these pools are not within CDFW jurisdiction. This area falls outside of the Coastal Zone and CCC jurisdiction. Photographs of Vernal Pool Complex 3 are included as Appendix C, Photos 89 and 90. Results of the survey have been mapped on Exhibit 2, Sheet 8.

#### 4.5.4 FEATURE 37: ROAD RUTS

Numerous road ruts were present on nearby dirt access roads. These ruts have the potential to support vernal pool species and appear to have a hard substrate similar to vernal pools, but at the time of the survey were dry and contained no vegetation. Eight road ruts, totaling <0.01 acre, occur within 500 feet of known San Diego fairy shrimp species locations or mapped critical habitat (USFWS 2013b, 50 CFR Part 17). Photographs of representative road ruts are included as Appendix C, Photos 91, 92, and 93. Results of the survey have been mapped on Exhibit 2, Sheet 3, 4, 7, and 8. It is recommended that these areas be subject to further investigation during the appropriate season to determine the viability of vernal pool species including fairy shrimp.

## 4.6 Staging Areas

In addition to the ROW survey area, several proposed staging areas, were surveyed when accessible. Inaccessible yards were delineated using recent aerial photographs and other available data.

### 4.6.1 STOWE STAGING YARD

The Stowe Staging Yard is characterized as a large vacant field near the intersection of Stowe Drive and Crosthwaite Circle. Vegetation was dominated by non-native brome grasses and short pod mustard. No potentially jurisdictional features were identified at the Stowe Yard. Photographs of the yard are included as Appendix C, Photos 100, 101, and 102.

### 4.6.2 STONEBRIDGE STAGING YARD

The Stonebridge Staging Yard is characterized as a large vacant field near the intersection of Stonebridge Parkway and Deprise Cove. The area was recently hydroseeded with native vegetation. Vegetation was dominated by deerweed (*Acmispon glaber*, UPL), coyote bush (*Baccharis pilularis*, UPL), and coastal goldenbush (*Isocoma menziesii*, FAC). A small isolated debris basin is located in the northwest corner of the site near the site entrance. Additionally there is 2-foot erosion control V-ditch running along the western edge of the yard. A total of 0.08 acre of RWQCB exempt, MS4 erosion control features were observed. Photographs of the yard are included as Appendix C, Photos 103, 104, and 105.

### 4.6.3 TORREY SANTA FE STAGING YARD

The Torrey Santa Fe Staging Yard was only partially surveyed due to a lack of access authorization. The area that was surveyed consisted of an active staging yard with heavy equipment and materials. No potentially jurisdictional areas were observed in the area surveyed, however based on an investigation of the whole Torrey Santa Fe Staging Yard by aerial map there may be debris basins that would be RWQCB exempt, MS4 features. Further investigation of the area is recommended to determine the extent of the jurisdiction, if any, within the yard. Photographs of the yard are included as Photographs 106 and 107.



## 4.7 Summary of Potential Jurisdiction

### 4.7.1 USACE JURISDICTION

A total of thirty-one (31) drainage systems were identified within the Proposed Project survey area under the regulation of the USACE. Of those, two (2) had perennial features, eight (8) had intermittent features, and twenty-one (21) were ephemeral. Additionally, three vernal pool complexes and eight road ruts were considered under the jurisdiction of the USACE. USACE jurisdiction totaled 9.21 acres, of which 5.15 acres were wetland WoUS and 4.06 acres were non-wetland WoUS. A summary of the acreage, itemized by feature, is provided in Table 1.



TABLE 1: SUMMARY OF USACE JURISDICTION

Feature ID	Feature Name	Area (ac)			Linear Feet
		Non-wetland WoUS	Wetland WoUS	Total Acreage	
1	Peñasquitos Substation	0.01	0.00	0.01	268
2	Tributary to Peñasquitos Creek 1	0.03	0.00	0.03	575
3	Tributary to Peñasquitos Creek 2	0.13	0.00	0.13	1,095
4	Tributary to Peñasquitos Creek 3	0.09	0.00	0.09	1,175
5	Tributary to Peñasquitos Creek 4	0.34	0.00	0.34	2,934
6	Tributary to Peñasquitos Creek 5	0.10	0.00	0.10	2,538
7	Tributary to Peñasquitos Creek 6	0.18	0.00	0.18	1,854
8	Tributary to Peñasquitos Creek 7	0.99	0.91	1.90	502
9	Tributary to Peñasquitos Creek 8	0.04	0.00	0.04	1,418
10	Tributary to Peñasquitos Creek 9	0.30	0.00	0.30	5,560
11	Tributary to Deer Canyon 1	0.15	0.00	0.15	2,713
12	Tributary to Deer Canyon 2	0.04	0.00	0.04	1,271
13	Deer Canyon Creek	0.00	0.12	0.12	637
14	Tributary to Deer Canyon 3	0.12	0.00	0.12	1,338
15	McGonigle Canyon Creek	0.28	0.00	0.28	1,305
16	Tributary to McGonigle Canyon Creek 1	0.04	0.03	0.07	551
17	Tributary to McGonigle Canyon Creek 2	0.03	0.06	0.09	395
18	Tributary to McGonigle Canyon Creek 3	0.03	1.16	1.19	1,129
19	Tributary to McGonigle Canyon Creek 4	0.01	0.00	0.01	100
20	Tributary to La Zanja Canyon 1	0.06	0.00	0.06	668
21	Tributary to La Zanja Canyon 2	0.04	0.00	0.04	392
22	Tributary to McGonigle Canyon Creek 5	0.05	0.00	0.05	934
23	Black Mountain Features	0.07	0.00	0.07	1,478
24	Los Peñasquitos Mesa Features 1	0.02	0.67	0.69	564
25	Los Peñasquitos Mesa Features 2	0.02	0.00	0.02	517
26	Los Peñasquitos Mesa Features 3	0.01	0.00	0.01	167
27	Tributary to Peñasquitos Creek 10	0.01	0.00	0.01	349
28	Los Peñasquitos Creek	0.00	1.97	1.97	530
29	Tributary to Peñasquitos Creek 11	0.20	<0.01	0.20	4,068
32	Tributary to Beeler Creek 1	0.29	0.00	0.29	4,210
33	Tributary to Beeler Creek 2	0.38	0.00	0.38	2,717
34	Vernal Pool Complex 1	0.00	0.03	0.03	NA
35	Vernal Pool Complex 2	0.00	0.15	0.15	NA
36	Vernal Pool Complex 3	0.00	0.05	0.05	NA
37	Road Ruts	0.00	<0.01	<0.01	NA
<b>Total</b>		<b>4.06</b>	<b>5.15</b>	<b>9.21</b>	<b>43,952</b>



#### 4.7.2 RWQCB JURISDICTION

The areas under RWQCB jurisdiction described below include all areas under USACE jurisdiction as well as other isolated waters. The RWQCB jurisdiction includes thirty-five (35) features totaling 9.34 acres of which 5.15 acres are wetland WoS and 4.19 acres are non-wetland WoS. Also present are 1.84 acres of RWQCB exempt, MS4 V-ditches and erosional features. A summary of the acreage, itemized by feature, is provided in Table 2.



TABLE 2: SUMMARY OF RWQCB JURISDICTION

Feature ID	Feature Name	Waters of the State				Exempt, MS4 V-Ditches	
		Area (ac)			Linear Feet	Area (ac)	Linear Feet
		Non-wetland WoS	Wetland WoS	Total Area			
1	Peñasquitos Substation	0.01	0.00	0.01	268	0.16	2,672
2	Tributary to Peñasquitos Creek 1	0.03	0.00	0.03	575	0.00	0
3	Tributary to Peñasquitos Creek 2	0.13	0.00	0.13	1,095	0.00	0
4	Tributary to Peñasquitos Creek 3	0.09	0.00	0.09	1,175	0.00	0
5	Tributary to Peñasquitos Creek 4	0.34	0.00	0.34	2,934	0.00	0
6	Tributary to Peñasquitos Creek 5	0.10	0.00	0.10	2,538	0.00	0
7	Tributary to Peñasquitos Creek 6	0.18	0.00	0.18	1,854	0.00	0
8	Tributary to Peñasquitos Creek 7	1.09	0.91	2.00	3,001	0.00	0
9	Tributary to Peñasquitos Creek 8	0.04	0.00	0.04	1,418	0.00	0
10	Tributary to Peñasquitos Creek 9	0.30	0.00	0.30	5,560	0.00	0
11	Tributary to Deer Canyon 1	0.15	0.00	0.15	2,713	0.00	0
12	Tributary to Deer Canyon 2	0.04	0.00	0.04	1,271	0.00	0
13	Deer Canyon Creek	0.00	0.12	0.12	637	0.00	0
14	Tributary to Deer Canyon 3	0.12	0.00	0.12	1,338	0.02	349
15	McGonigle Canyon Creek	0.28	0.00	0.28	1,305	0.02	483
16	Tributary to McGonigle Canyon Creek 1	0.04	0.03	0.07	551	0.02	409
17	Tributary to McGonigle Canyon Creek 2	0.03	0.06	0.09	395	0.12	1,832
18	Tributary to McGonigle Canyon Creek 3	0.03	1.16	1.19	1,129	0.04	522
19	Tributary to McGonigle Canyon Creek 4	0.01	0.00	0.01	100	0.01	208
20	Tributary to La Zanja Canyon 1	0.06	0.00	0.06	668	0.08	2,813
21	Tributary to La Zanja Canyon 2	0.04	0.00	0.04	392	0.05	0.00
22	Tributary to McGonigle Canyon Creek 5	0.07	0.00	0.07	1,634	0.00	0
23	Black Mountain Features	0.08	0.00	0.08	1,757	0.00	0
24	Los Peñasquitos Mesa Features 1	0.02	0.67	0.69	564	0.01	353
25	Los Peñasquitos Mesa Features 2	0.02	0.00	0.02	517	0.06	1,347
26	Los Peñasquitos Mesa Features 3	0.01	0.00	0.01	167	0.08	1,535
27	Tributary to Peñasquitos Creek 10	0.01	0.00	0.01	349	0.34	6,065
28	Los Peñasquitos Creek	0.00	1.97	1.97	530	0.00	0
29	Tributary to Peñasquitos Creek 11	0.20	<0.01	0.20	4,068	0.03	491
30	Cypress Canyon Feature 1	0.00	0.00	0.00	0	0.17	2,161
31	Cypress Canyon Feature 2	0.00	0.00	0.00	0	0.05	352
32	Tributary to Beeler Creek 1	0.29	0.00	0.29	4,210	0.11	704
33	Tributary to Beeler Creek 2	0.38	0.00	0.38	2,717	0.39	6,719



Feature ID	Feature Name	Waters of the State				Exempt, MS4 V-Ditches	
		Area (ac)			Linear Feet	Area (ac)	Linear Feet
		Non-wetland WoS	Wetland WoS	Total Area			
34	Vernal Pool 1	0.00	0.03	0.03	NA	0.00	NA
35	Vernal Pool 2	0.00	0.15	0.15	NA	0.00	NA
36	Vernal Pool 3	0.00	0.05	0.05	NA	0.00	NA
37	Road Ruts	0.00	<0.01	<0.01	NA	0.00	NA
38	Stonebridge Staging Yard	0.00	0.00	0.00	0.00	0.08	478
<b>Total</b>		<b>4.19</b>	<b>5.15</b>	<b>9.34</b>	<b>47,430</b>	<b>1.84</b>	<b>29,493</b>





### 4.7.3 CDFW JURISDICTION

Under Section 1600 of the California Fish and Game Code, CDFW asserts jurisdiction to the TOB of unvegetated streambeds as well as to the outer drip line of any associated riparian vegetation. Additionally, CDFW extends jurisdiction to artificial stock ponds and irrigation ditches constructed in uplands and vernal pools where state endangered or threatened species are present. No state endangered or threatened species were observed. CDFW jurisdiction totaled 14.92 acres across thirty-one (31) features. Of this total, 2.88 acres were unvegetated streambed and 12.04 acres included riparian vegetation. A summary of the acreage, itemized by feature, is provided in Table 3.



TABLE 3: SUMMARY OF CDFW JURISDICTION

Feature ID	Feature Name	Acreage		Total Acreage	Linear Feet
		Unvegetated Streambed	Riparian Vegetation		
1	Peñasquitos Substation	0.01	0.00	0.01	268
2	Tributary to Peñasquitos Creek 1	0.05	0.00	0.05	575
3	Tributary to Peñasquitos Creek 2	0.03	0.40	0.43	1,095
4	Tributary to Peñasquitos Creek 3	0.14	0.00	0.14	1,175
5	Tributary to Peñasquitos Creek 4	0.43	0.09	0.52	2,146
6	Tributary to Peñasquitos Creek 5	0.11	0.00	0.11	2,539
7	Tributary to Peñasquitos Creek 6	0.22	0.00	0.22	1,854
8	Tributary to Peñasquitos Creek 7	0.10	2.36	2.46	502
9	Tributary to Peñasquitos Creek 8	0.06	0.00	0.06	1,419
10	Tributary to Peñasquitos Creek 9	0.37	0.00	0.37	5,438
11	Tributary to Deer Canyon 1	0.17	0.00	0.17	2,714
12	Tributary to Deer Canyon 2	0.04	0.00	0.04	1,085
13	Deer Canyon Creek	0.00	0.29	0.29	637
14	Tributary to Deer Canyon 3	0.12	0.00	0.12	1,687
15	McGonigle Canyon Creek	0.00	1.84	1.84	1,305
16	Tributary to McGonigle Canyon Creek 1	0.00	0.38	0.38	551
17	Tributary to McGonigle Canyon Creek 2	0.03	0.14	0.17	688
18	Tributary to McGonigle Canyon Creek 3	0.06	1.16	1.22	1,651
19	Tributary to McGonigle Canyon Creek 4	0.01	0.01	0.02	308
20	Tributary to La Zanja Canyon 1	0.01	0.61	0.62	760
21	Tributary to La Zanja Canyon 2	0.04	0.00	0.04	392
22	Tributary to McGonigle Canyon Creek 5	0.04	0.14	0.18	1,635
23	Black Mountain Features	0.07	0.00	0.07	1,478
24	Los Peñasquitos Mesa Features 1	0.01	0.67	0.68	564
25	Los Peñasquitos Mesa Features 2	0.01	0.12	0.13	517
26	Los Peñasquitos Mesa Features 3	0.01	0.00	0.01	167
27	Tributary to Peñasquitos Creek 10	0.01	0.00	0.01	349
28	Los Peñasquitos Creek	0.00	2.63	2.63	530
29	Tributary to Peñasquitos Creek 11	0.20	0.11	0.31	4,068
32	Tributary to Beeler Creek 1	0.14	1.09	1.23	3,139
33	Tributary to Beeler Creek 2	0.39	0.00	0.39	2,717
<b>Total</b>		<b>2.88</b>	<b>12.04</b>	<b>14.92</b>	<b>43,953</b>



## 4.7.4 CCC JURISDICTION

The California Coastal Commission takes jurisdiction over all wetlands (isolated or non-isolated) in the coastal zone as well as ESHA. The CCC defines a wetland as land “which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.” The absence of hydrophytic vegetation or hydric soils is not enough to exclude an area from jurisdiction. CCC jurisdiction totaled 1.67 acres across seven (7) features. This total includes 1.66 acres of wetland and 110.85 acres of ESHA. A summary of the CCC jurisdiction is provided in Table 4.

TABLE 4: SUMMARY OF CCC JURISDICTION

Feature Name	CCC Wetlands	
	Area (ac)	Linear Feet
<b>Wetlands</b>		
Tributaries to Peñasquitos Creek 1	0.04	392
Tributaries to Peñasquitos Creek 2	0.44	575
Tributaries to Peñasquitos Creek 3	0.14	1,095
Tributaries to Peñasquitos Creek 4	0.52	1,175
Tributaries to Peñasquitos Creek 5	0.12	2,934
Tributaries to Peñasquitos Creek 6	0.23	2,539
Tributaries to Peñasquitos Creek 7	0.02	686
Vernal Pool Complex 2	0.15	NA
<b>Total Wetlands</b>	<b>1.66</b>	<b>9,396</b>
<b>Environmentally Sensitive Habitat Areas</b>		
<b>Total ESHA</b>	<b>110.85</b>	<b>NA</b>

## 5.0 CONCLUSIONS

The Proposed Project location includes wetland WoUS and non-wetland WoUS (regulated by the USACE), non-wetland WoS and wetland WoS (regulated by RWQCB), streambeds and riparian areas (regulated by the CDFW), and wetlands and ESHA under the jurisdiction of the CCC. As such, should the Proposed Project impact these features, USACE, RWQCB, CDFW, and CCC permit authorizations will be required.



## 6.0 LITERATURE CITED

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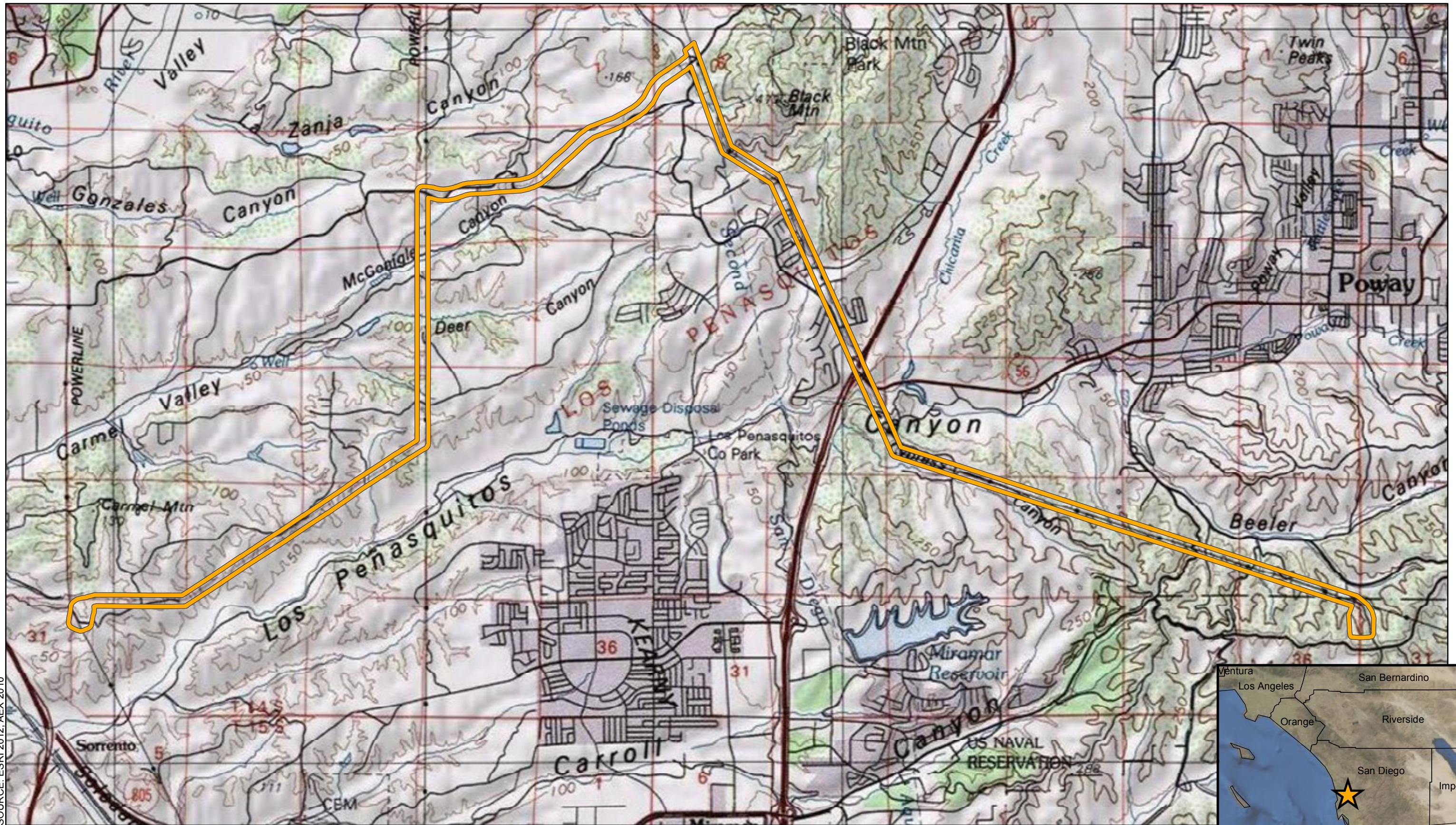
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SOURCE: ESRI 2012, AEX 2010

Environmental Intelligence. Date: 3/25/2014. Q:\TRC\SDG&E SX to PQ\05\_GIS\_Data\mapswkspc\2013\JDReport\Exhibit\_1\_Vicinity\_EI01\_20131011.mxd


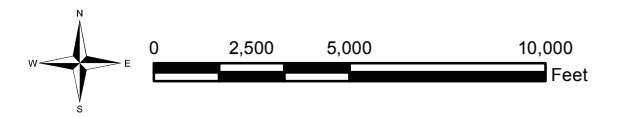
 SX to PQ Survey Corridor



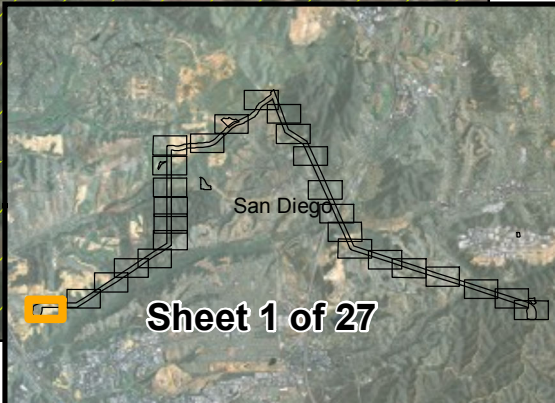
EXHIBIT 1: PROJECT VICINITY AND OVERVIEW  
SDG&E - SX TO PQ | SAN DIEGO COUNTY, CA



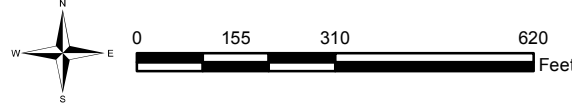


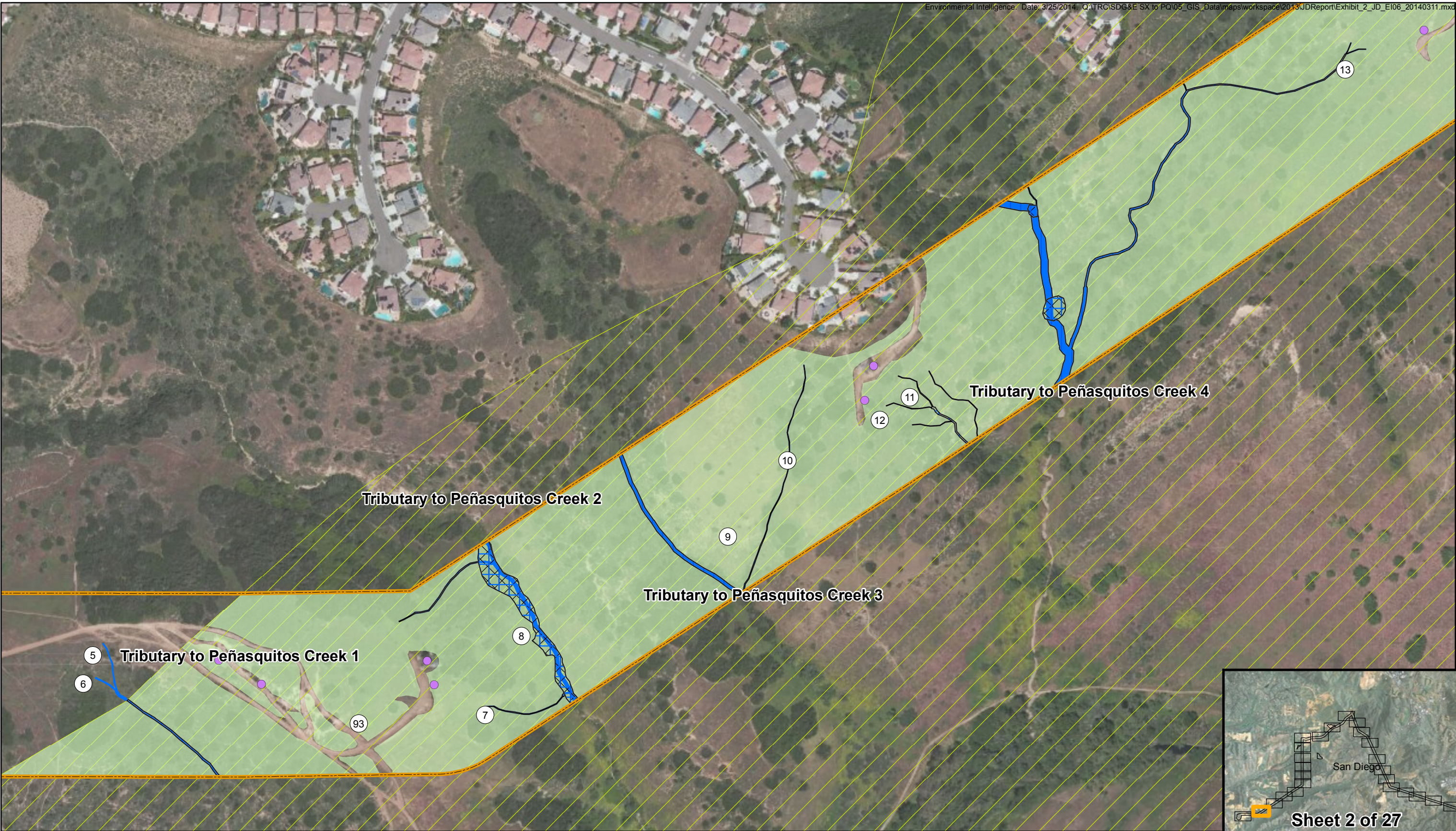
SOURCE: ESRI 2012, AEX 2010

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|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |

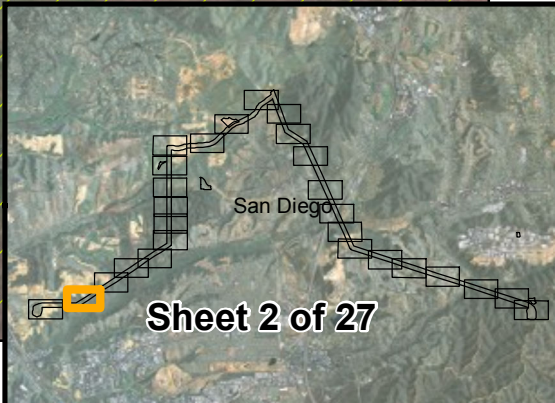


**EXHIBIT 2: DELINEATION RESULTS, SHEET 1 OF 27**  
SDG&E - SYCAMORE TO PEÑASQUITOS | SAN DIEGO COUNTY, CA





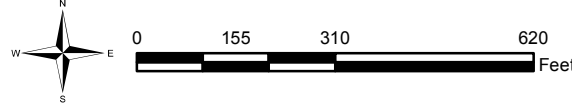
SOURCE: ESRI 2012, AEX 2010



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|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |



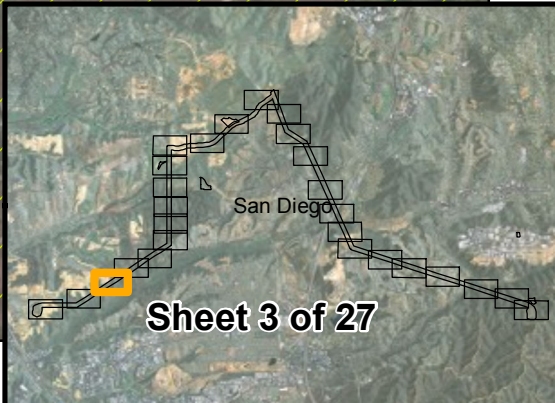
**EXHIBIT 2: DELINEATION RESULTS, SHEET 2 OF 27**  
SDG&E - SYCAMORE TO PEÑASQUITOS | SAN DIEGO COUNTY, CA







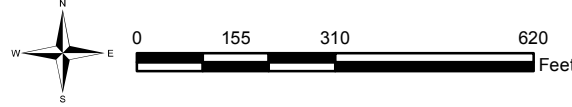
SOURCE: ESRI 2012, AEX 2010

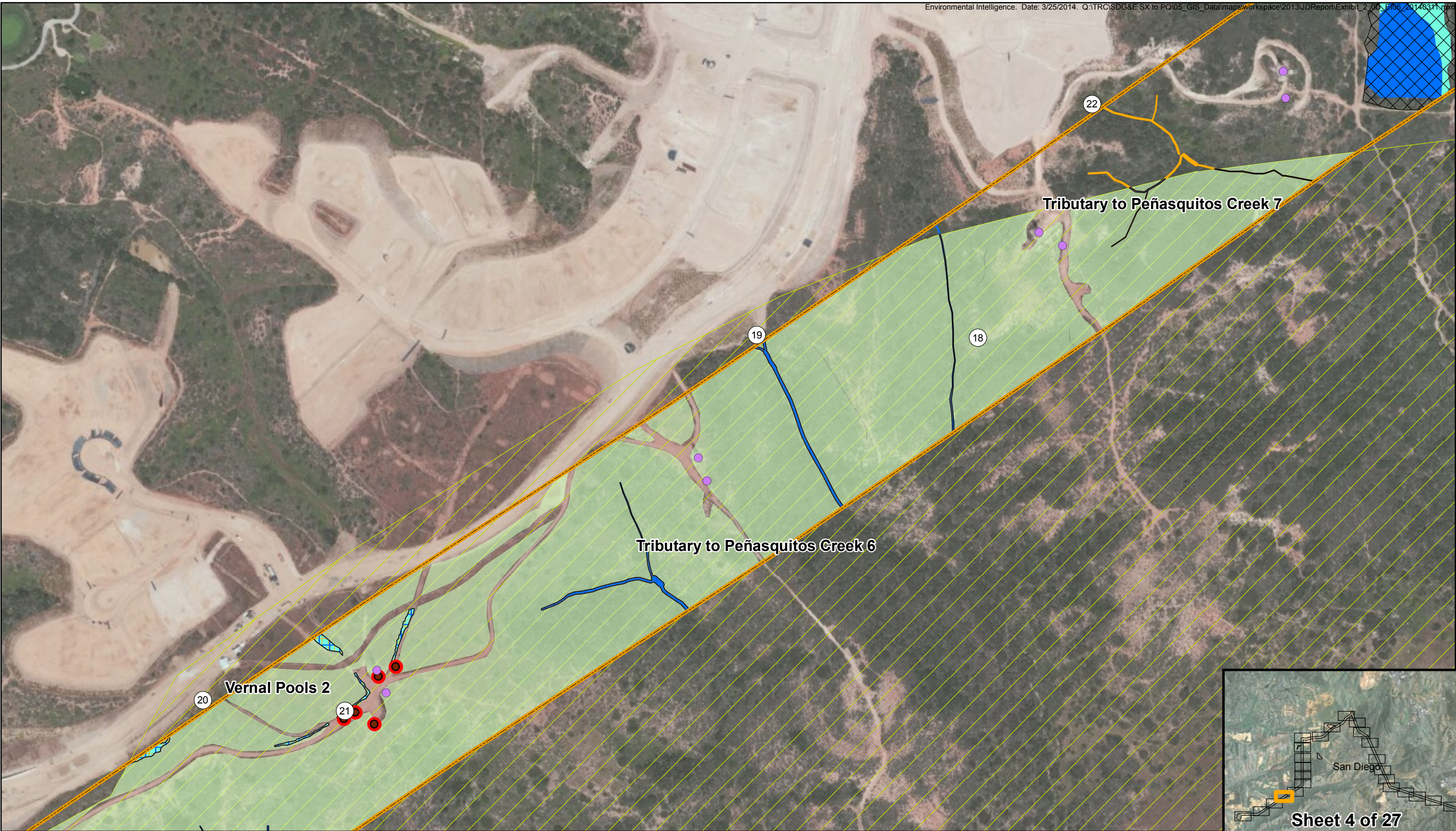


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|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |

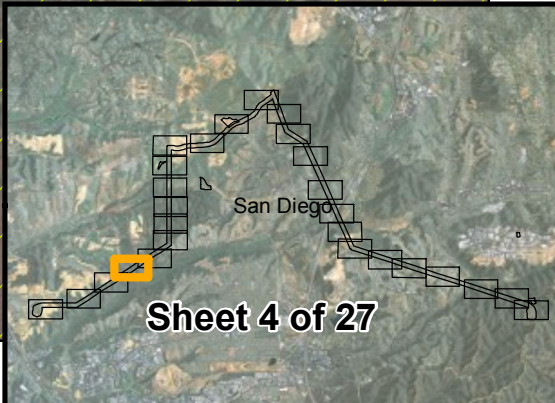


**EXHIBIT 2: DELINEATION RESULTS, SHEET 3 OF 27**  
SDG&E - SYCAMORE TO PEÑASQUITOS | SAN DIEGO COUNTY, CA



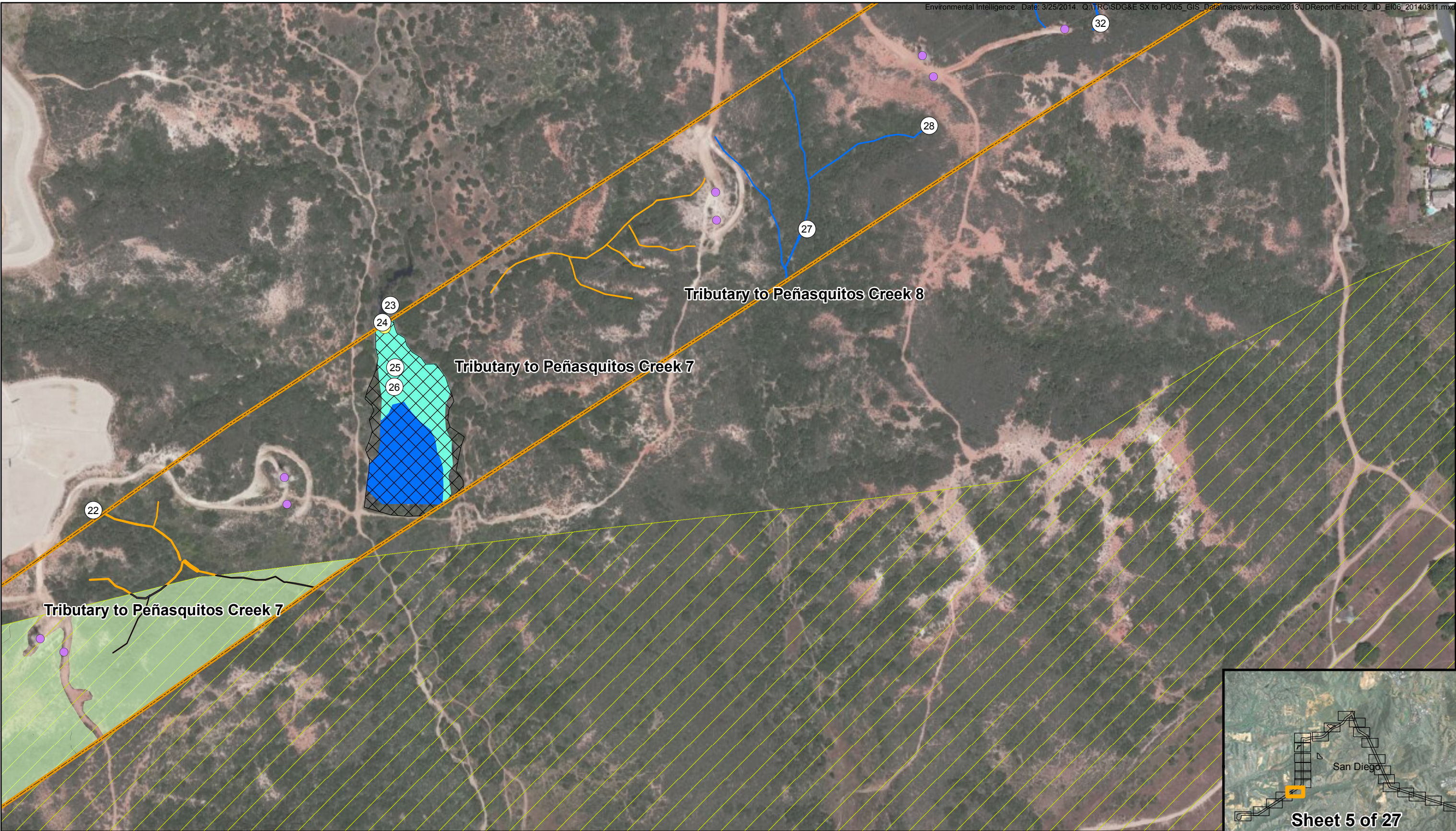


SOURCE: ESRI 2012, AEX 2010

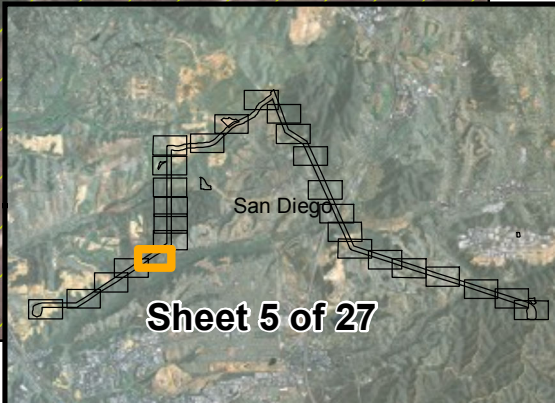


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|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |





SOURCE: ESRI 2012, AEX 2010



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|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |

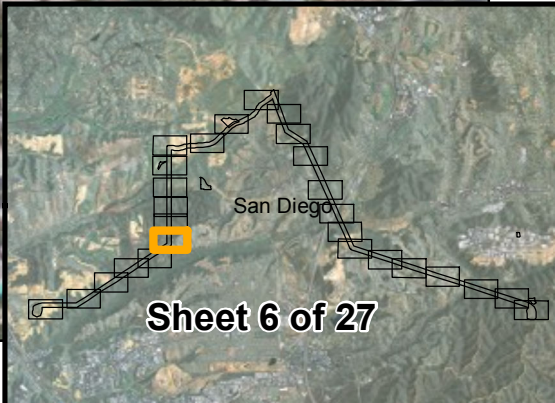


**EXHIBIT 2: DELINEATION RESULTS, SHEET 5 OF 27**  
SDG&E - SYCAMORE TO PEÑASQUITOS | SAN DIEGO COUNTY, CA





SOURCE: ESRI 2012, AEX 2010



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|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |

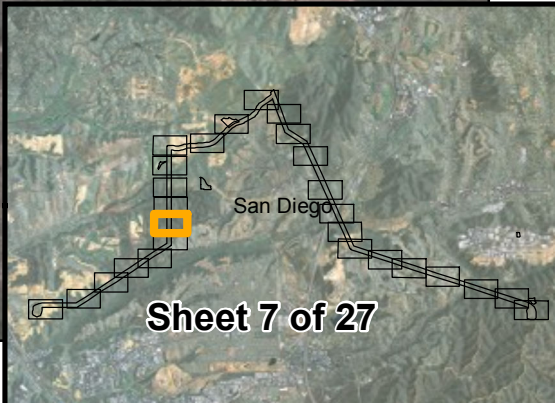


**EXHIBIT 2: DELINEATION RESULTS, SHEET 6 OF 27**  
SDG&E - SYCAMORE TO PEÑASQUITOS | SAN DIEGO COUNTY, CA

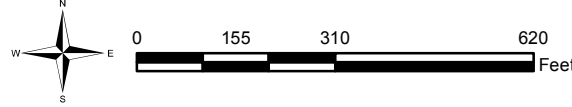


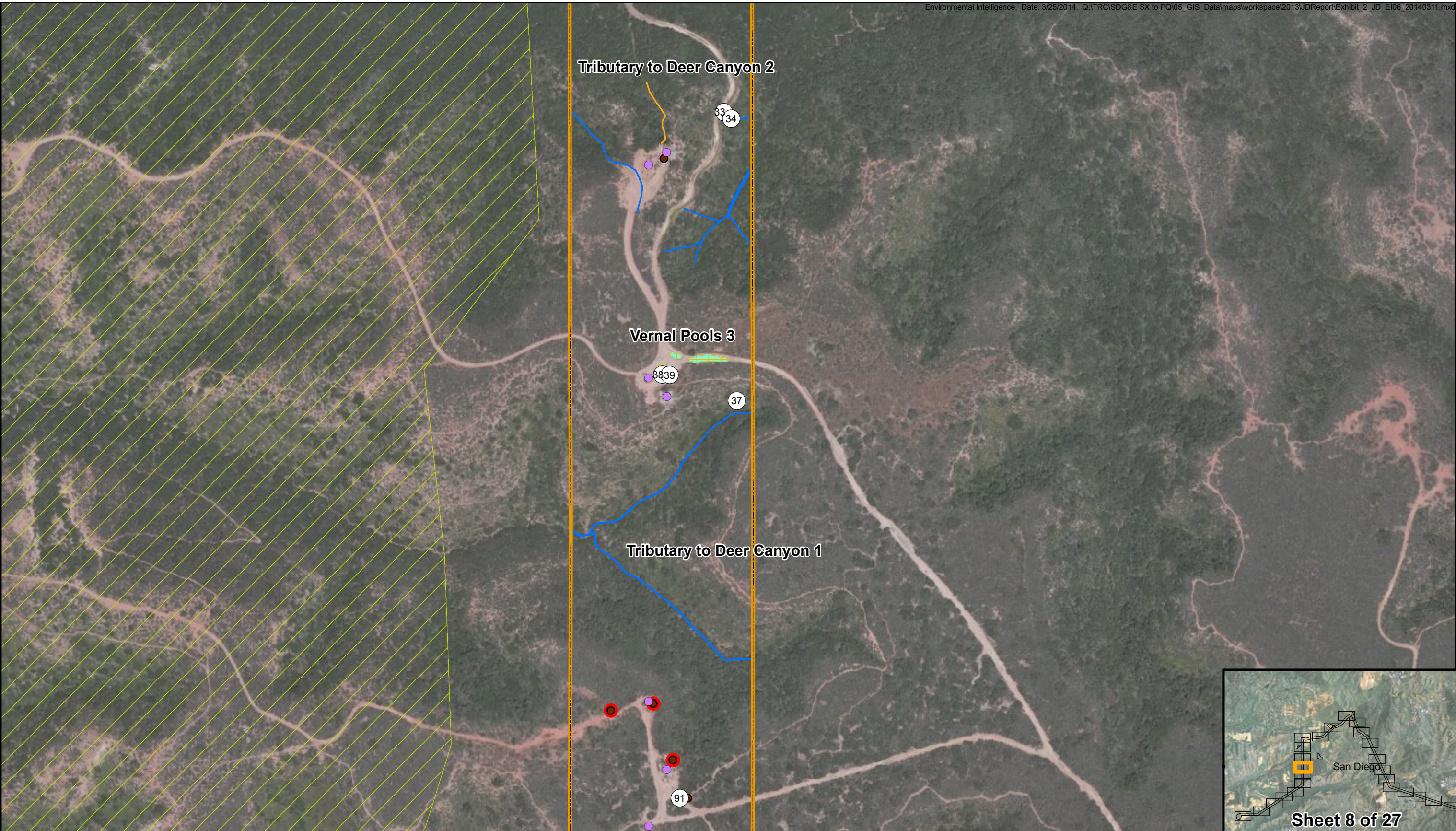


SOURCE: ESRI 2012, AEX 2010

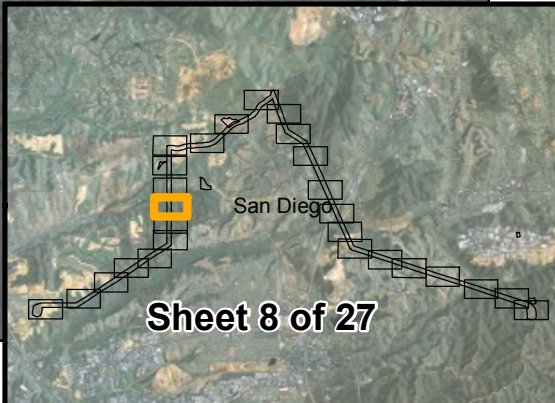


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|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |

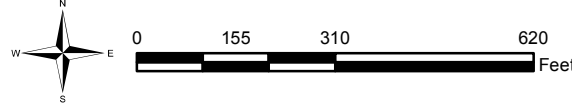




SOURCE: ESRI 2012, AEX 2010

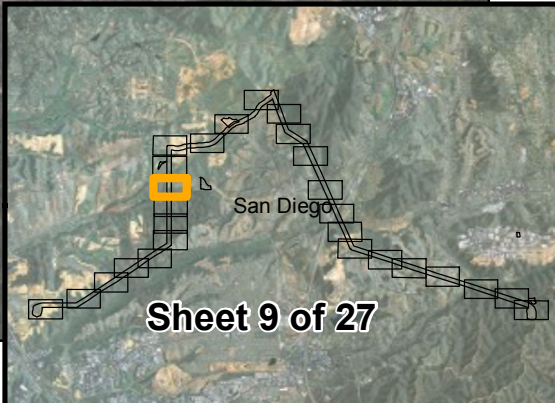


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|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |

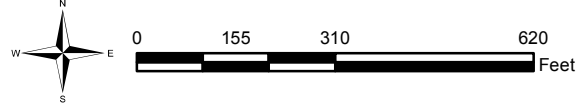


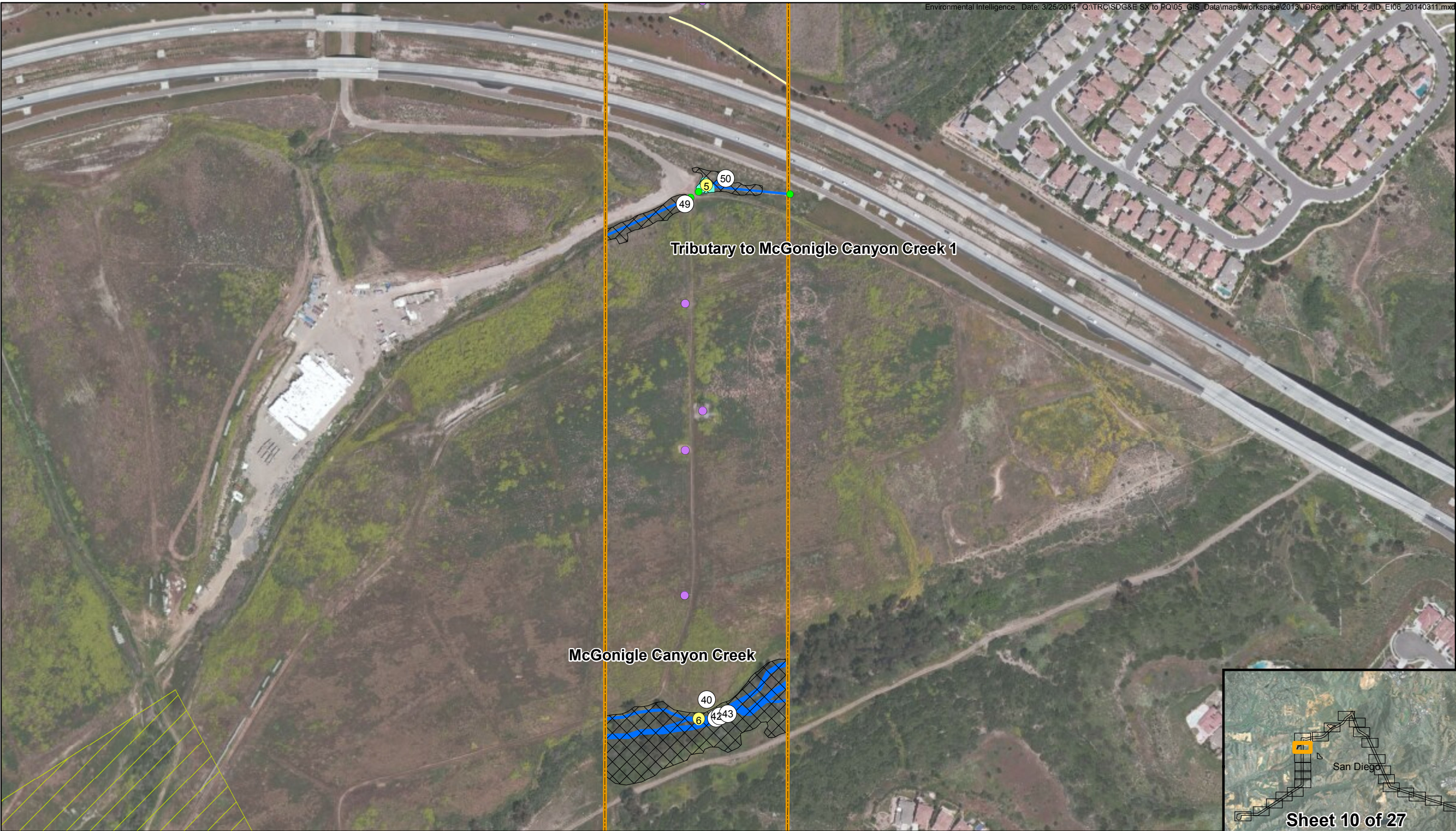


SOURCE: ESRI 2012, AEX 2010

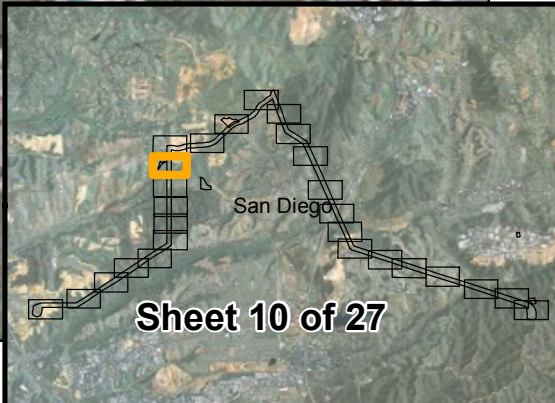


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|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |





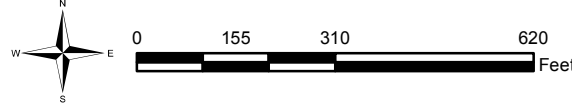
SOURCE: ESRI 2012, AEX 2010



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|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |



EXHIBIT 2: DELINEATION RESULTS, SHEET 10 OF 27  
SDG&E - SYCAMORE TO PEÑASQUITOS | SAN DIEGO COUNTY, CA







SOURCE: ESRI 2012, AEX 2010

- SX to PQ Survey Corridor
- Coastal Zone (CCC 2008)
- Proposed Pole Locations
- Photo Locations

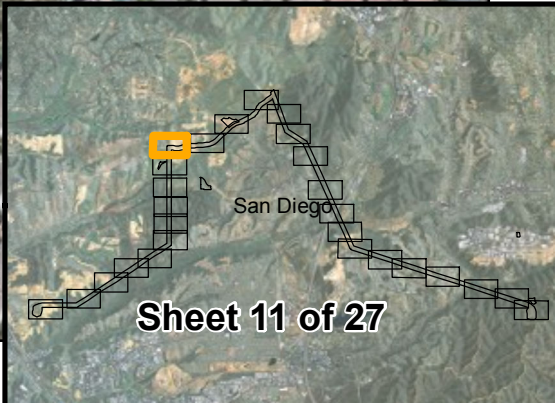
- Data Pit Locations
- Potential Road Rut Vernal Pool
- Road Rut
- Culvert Location

- ACOE and RWQCB Jurisdiction**
- Waters of the U.S. and State
  - Wetland Waters of the U.S. and State

- CDFW Jurisdiction**
- CDFW Unvegetated Streambed
  - CDFW Riparian

- RWQCB Jurisdiction Only**
- Isolated Waters of the State
  - Isolated Wetland Waters of the State
  - V-ditch (exempt)

- CCC Jurisdiction**
- CCC Wetland
  - ESHA



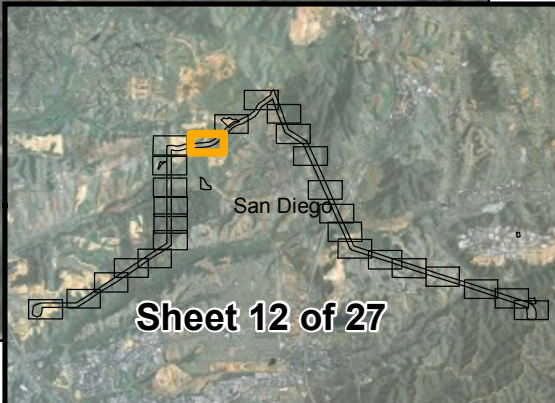
**EXHIBIT 2: DELINEATION RESULTS, SHEET 11 OF 27**  
 SDG&E - SYCAMORE TO PEÑASQUITOS | SAN DIEGO COUNTY, CA





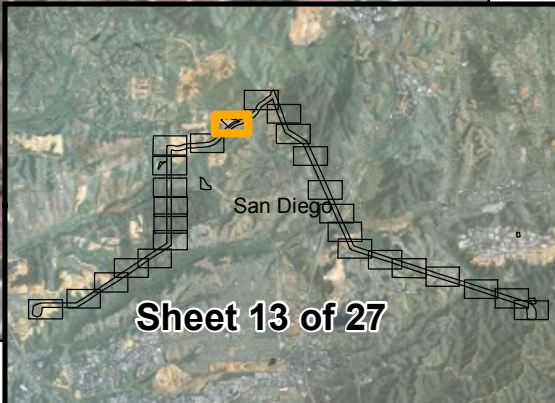
SOURCE: ESRI 2012, AEX 2010

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|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |





SOURCE: ESRI 2012, AEX 2010

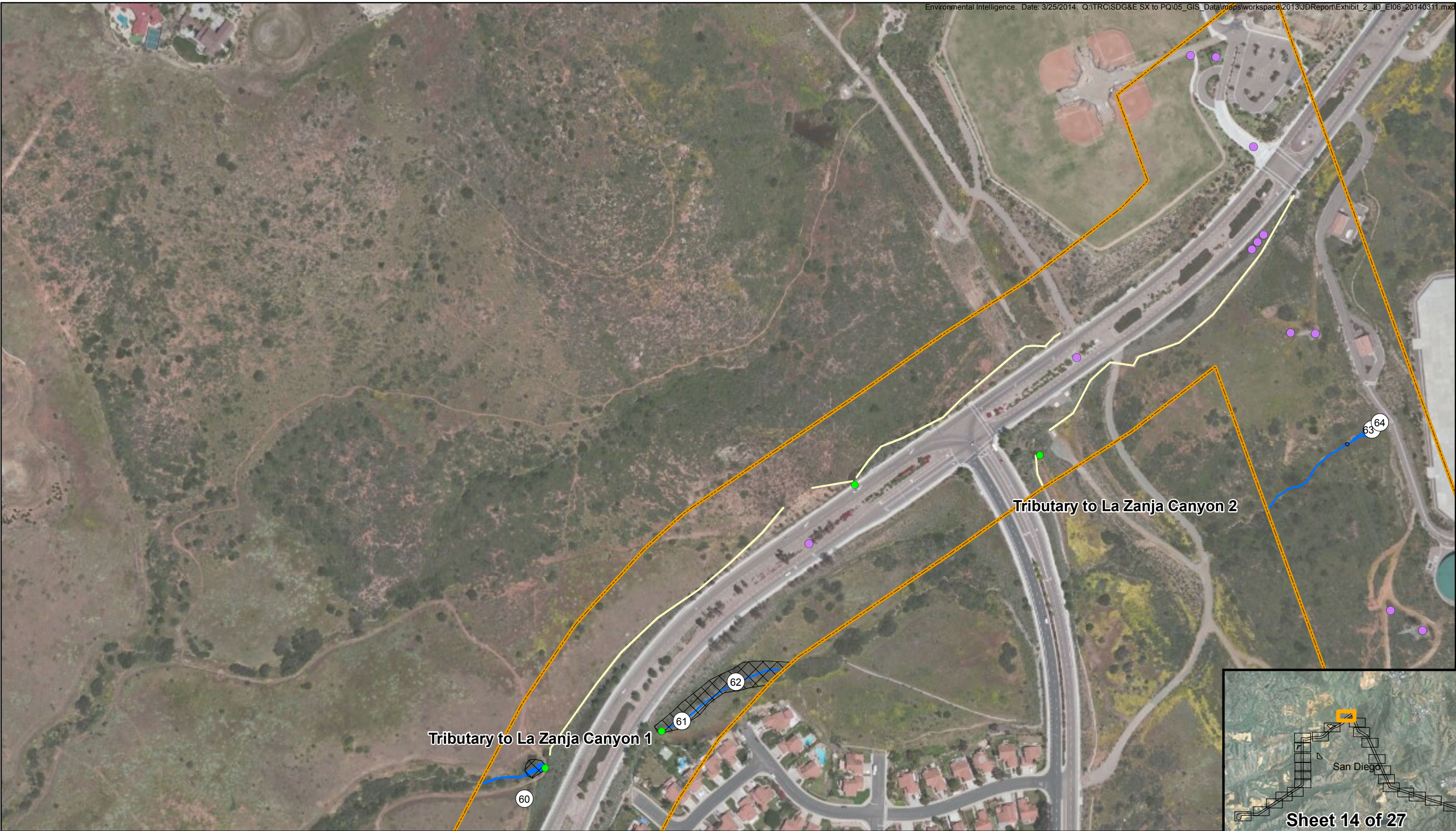


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|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |



EXHIBIT 2: DELINEATION RESULTS, SHEET 13 OF 27  
SDG&E - SYCAMORE TO PEÑASQUITOS | SAN DIEGO COUNTY, CA





SOURCE: ESRI 2012, AEX 2010

- SX to PQ Survey Corridor
- Coastal Zone (CCC 2008)
- Proposed Pole Locations
- Photo Locations

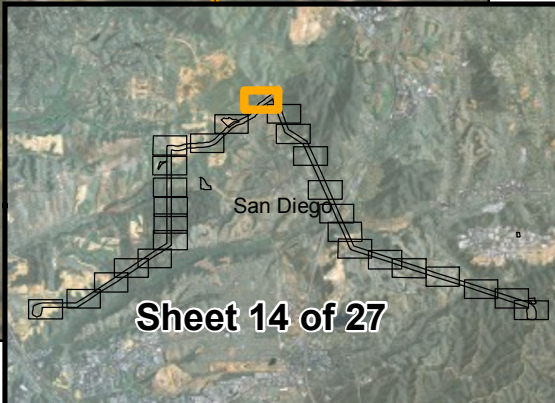
- Data Pit Locations
- Potential Road Rut Vernal Pool
- Road Rut
- Culvert Location

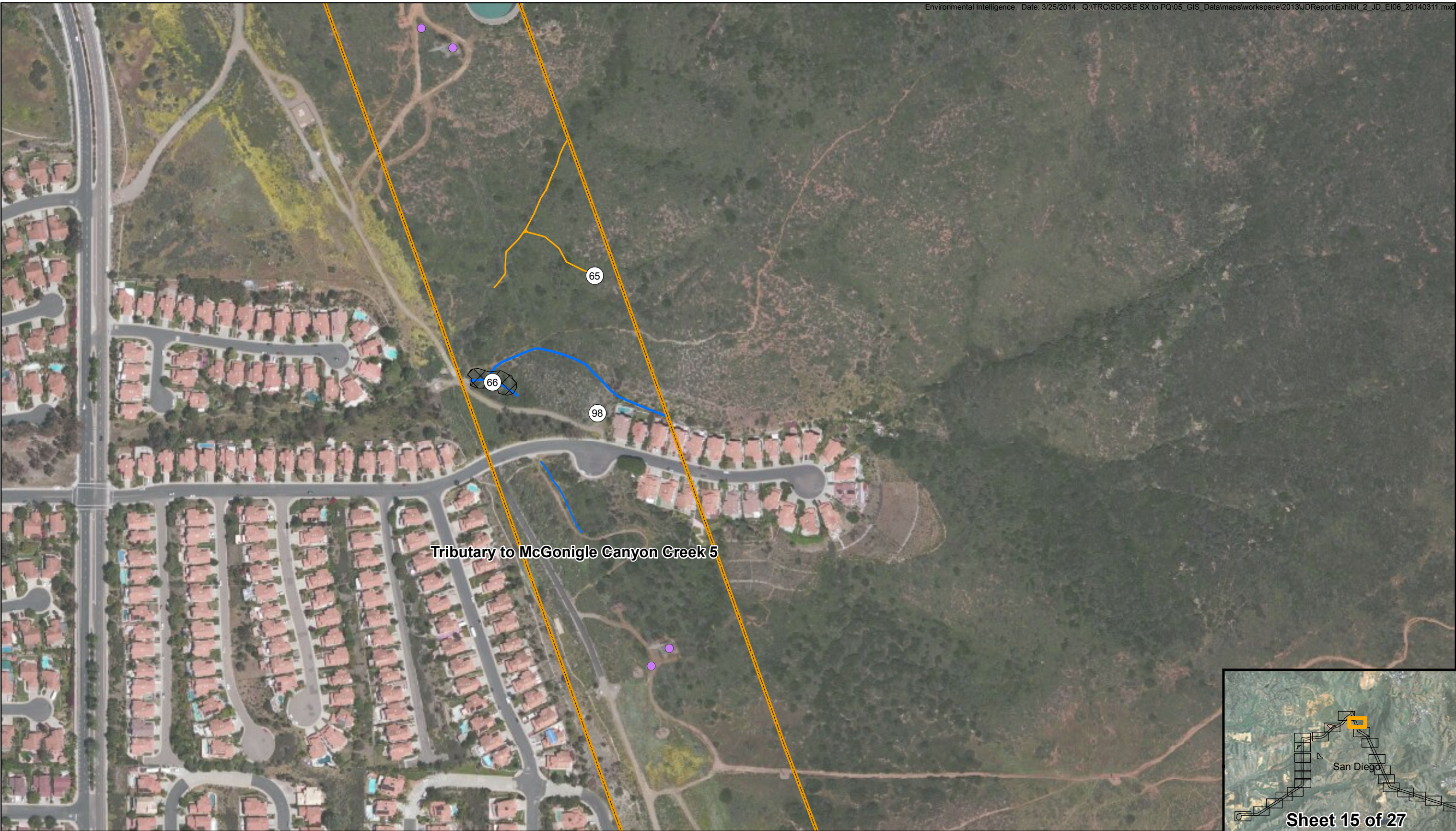
- ACOE and RWQCB Jurisdiction**
- Waters of the U.S. and State
  - Wetland Waters of the U.S. and State

- CDFW Jurisdiction**
- CDFW Unvegetated Streambed
  - CDFW Riparian

- RWQCB Jurisdiction Only**
- Isolated Waters of the State
  - Isolated Wetland Waters of the State
  - V-ditch (exempt)

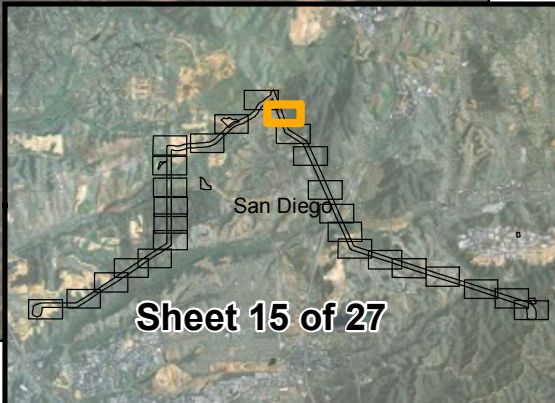
- CCC Jurisdiction**
- CCC Wetland
  - ESHA





SOURCE: ESRI 2012, AEX 2010

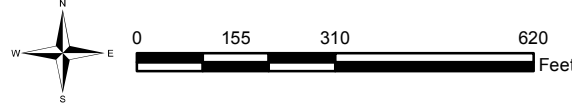
Tributary to McGonigle Canyon Creek 5



- |                          |                                |                                      |                            |                                      |                         |
|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |



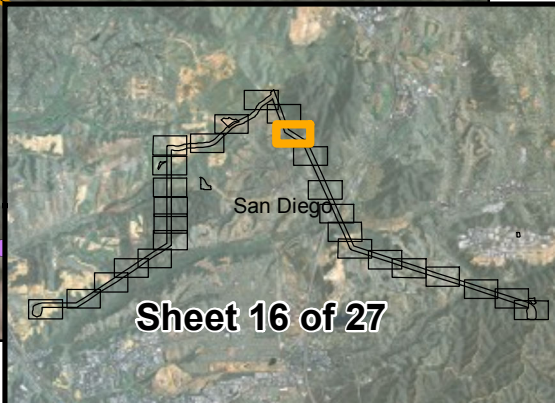
EXHIBIT 2: DELINEATION RESULTS, SHEET 15 OF 27  
SDG&E - SYCAMORE TO PEÑASQUITOS | SAN DIEGO COUNTY, CA



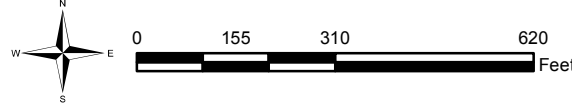


SOURCE: ESRI 2012, AEX 2010

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|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |

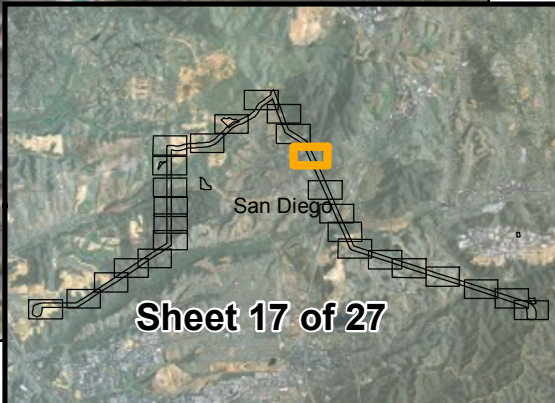


**EXHIBIT 2: DELINEATION RESULTS, SHEET 16 OF 27**  
SDG&E - SYCAMORE TO PEÑASQUITOS | SAN DIEGO COUNTY, CA





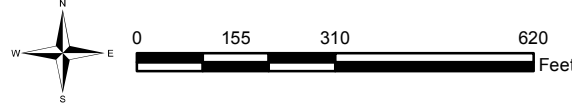
SOURCE: ESRI 2012, AEX 2010



- |                          |                                |                                      |                            |                                      |                         |
|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |

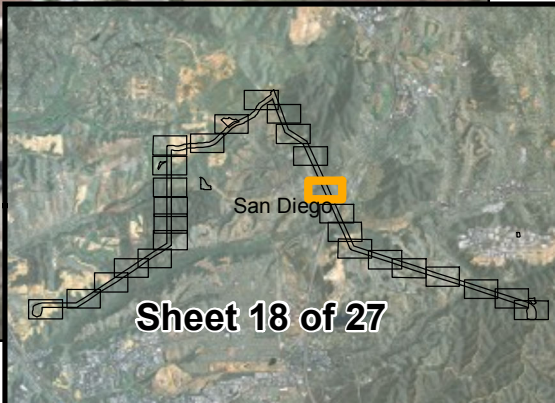


EXHIBIT 2: DELINEATION RESULTS, SHEET 17 OF 27  
SDG&E - SYCAMORE TO PEÑASQUITOS | SAN DIEGO COUNTY, CA



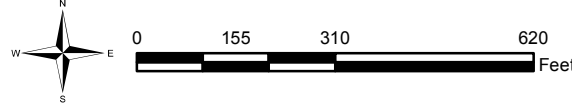


SOURCE: ESRI 2012, AEX 2010



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|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |

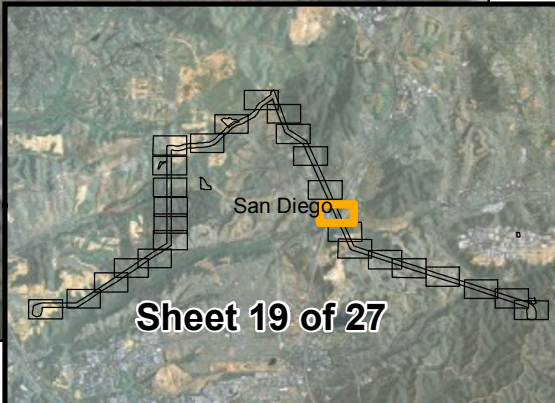
**EXHIBIT 2: DELINEATION RESULTS, SHEET 18 OF 27**  
 SDG&E - SYCAMORE TO PEÑASQUITOS | SAN DIEGO COUNTY, CA







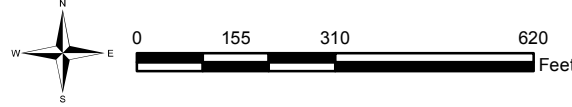
SOURCE: ESRI 2012, AEX 2010

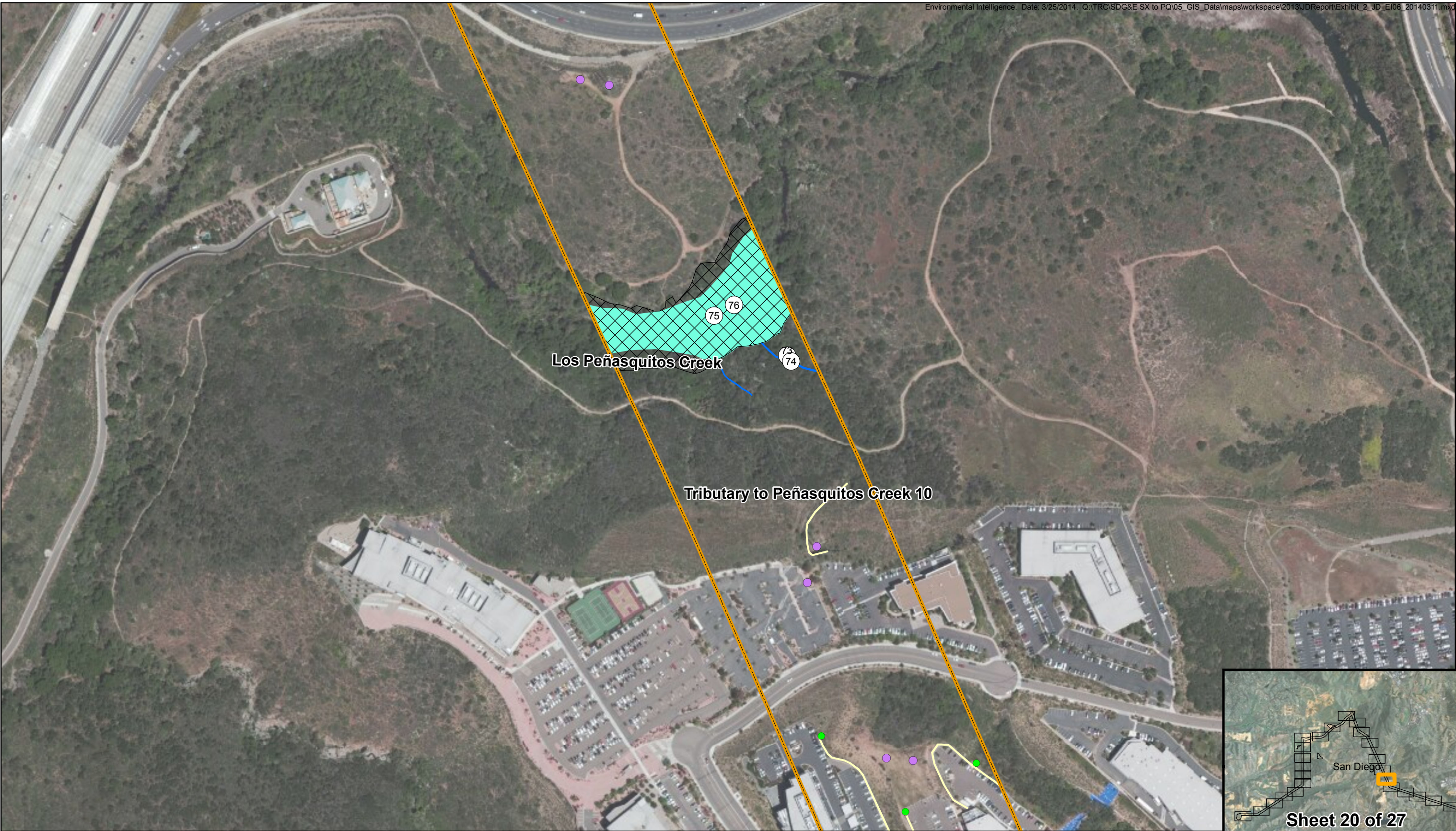


- |                          |                                |                                      |                            |                                      |                         |
|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |

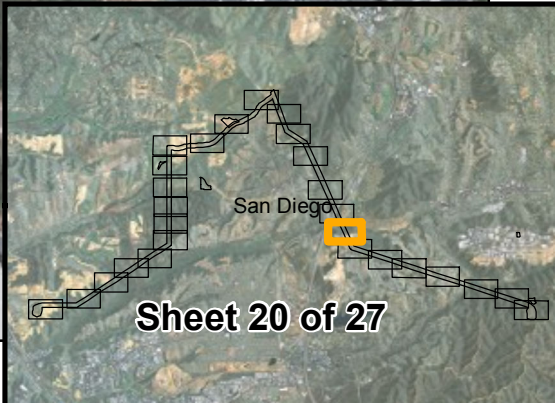


EXHIBIT 2: DELINEATION RESULTS, SHEET 19 OF 27  
SDG&E - SYCAMORE TO PEÑASQUITOS | SAN DIEGO COUNTY, CA





SOURCE: ESRI 2012, AEX 2010



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|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |

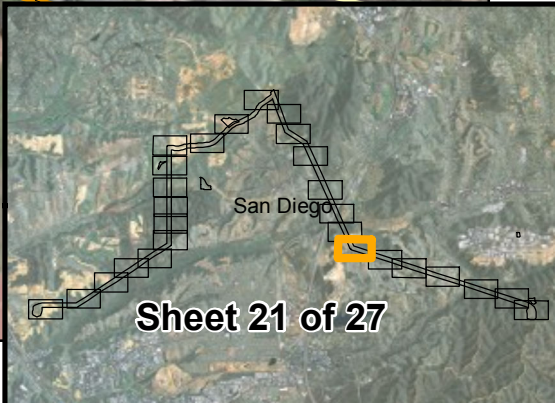


EXHIBIT 2: DELINEATION RESULTS, SHEET 20 OF 27  
SDG&E - SYCAMORE TO PEÑASQUITOS | SAN DIEGO COUNTY, CA





SOURCE: ESRI 2012, AEX 2010



- |                          |                                |                                      |                            |                                      |                         |
|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |



EXHIBIT 2: DELINEATION RESULTS, SHEET 21 OF 27  
SDG&E - SYCAMORE TO PEÑASQUITOS | SAN DIEGO COUNTY, CA





SOURCE: ESRI 2012, AEX 2010

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|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |

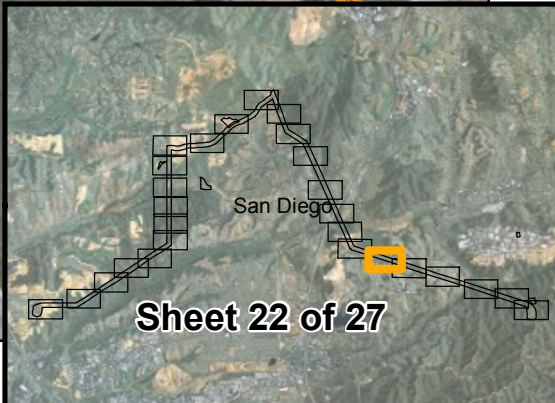
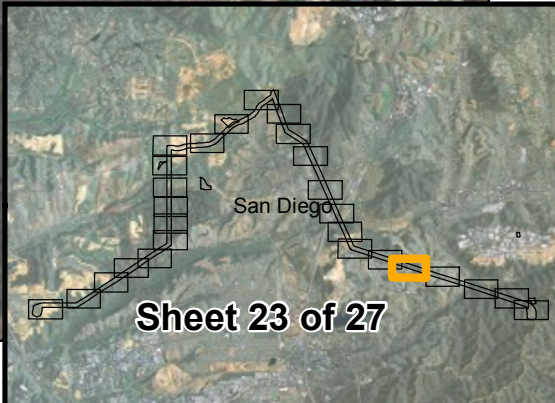


EXHIBIT 2: DELINEATION RESULTS, SHEET 22 OF 27  
SDG&E - SYCAMORE TO PEÑASQUITOS | SAN DIEGO COUNTY, CA





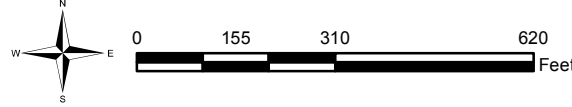
SOURCE: ESRI 2012, AEX 2010



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|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |



**EXHIBIT 2: DELINEATION RESULTS, SHEET 23 OF 27**  
SDG&E - SYCAMORE TO PEÑASQUITOS | SAN DIEGO COUNTY, CA





SOURCE: ESRI 2012, AEX 2010

- |                          |                                |                                      |                            |                                      |                         |
|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |

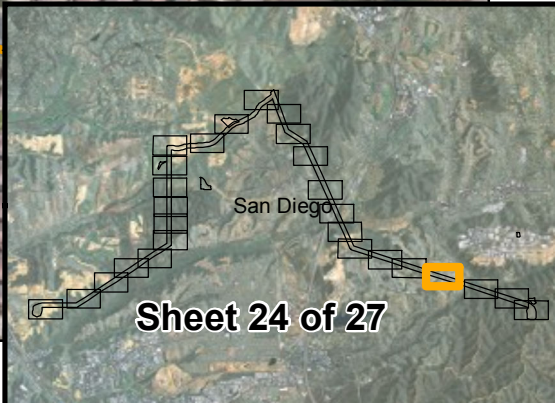
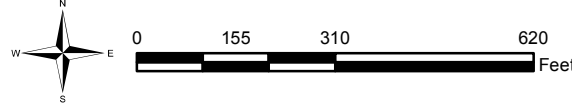
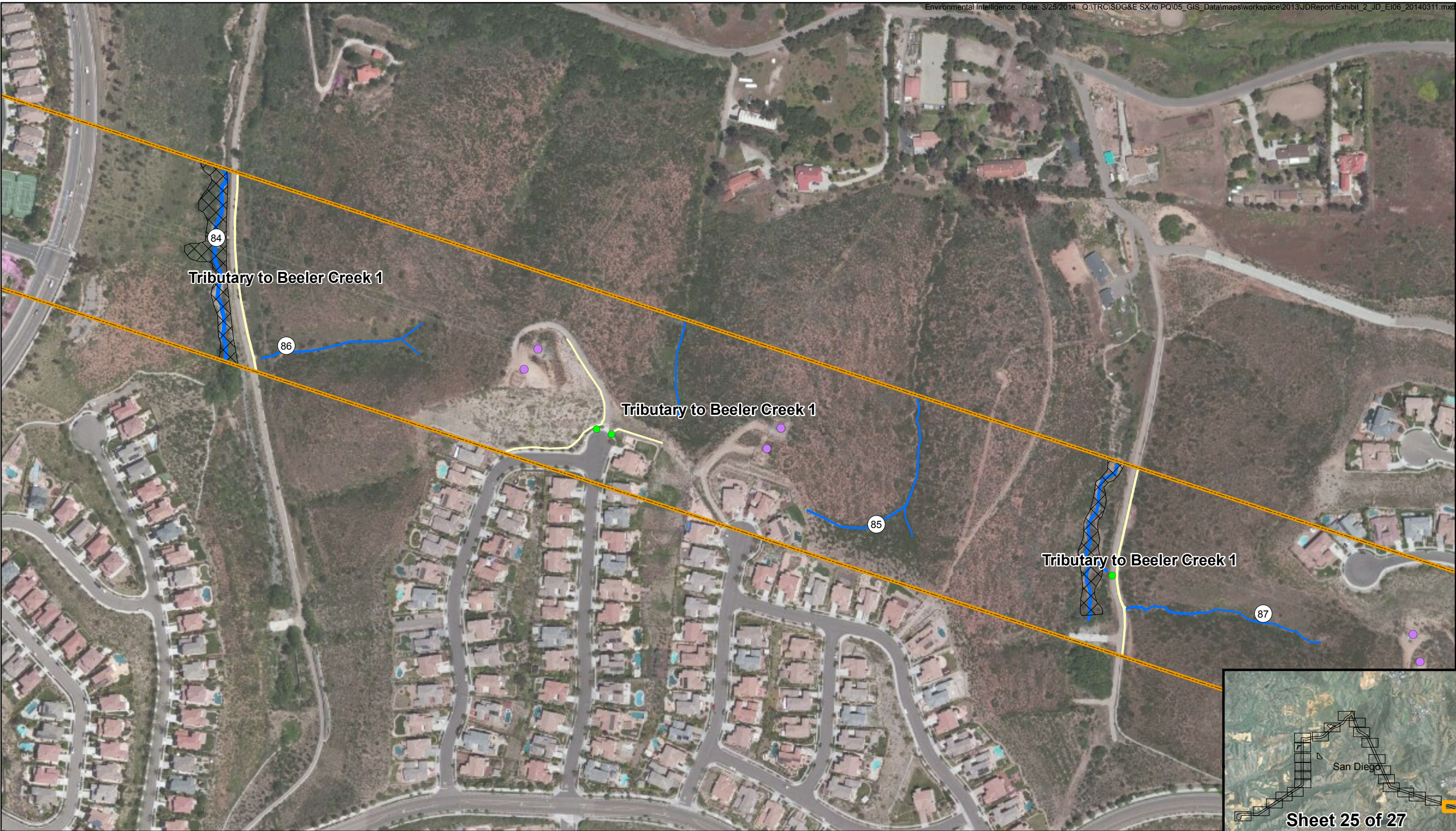
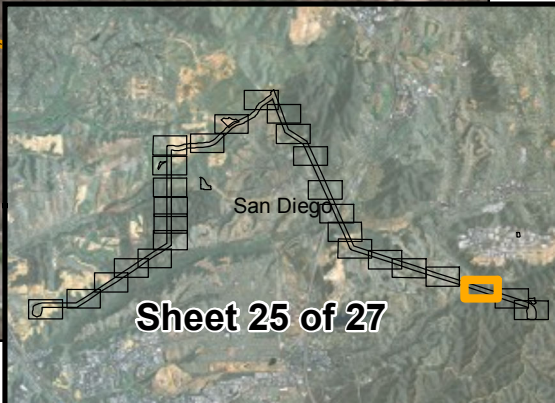


EXHIBIT 2: DELINEATION RESULTS, SHEET 24 OF 27  
SDG&E - SYCAMORE TO PEÑASQUITOS | SAN DIEGO COUNTY, CA





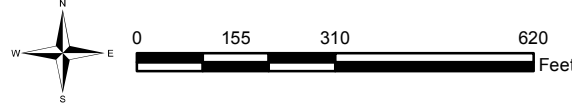
SOURCE: ESRI 2012, AEX 2010



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|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |

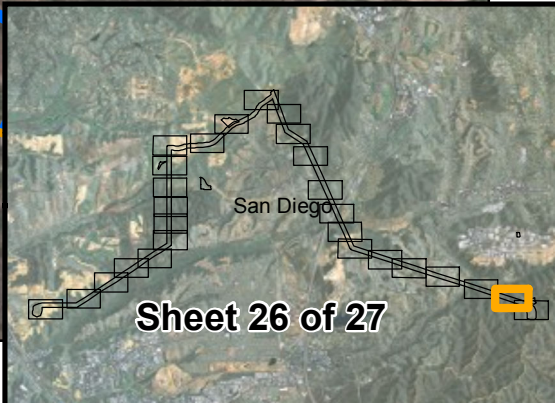


**EXHIBIT 2: DELINEATION RESULTS, SHEET 25 OF 27**  
SDG&E - SYCAMORE TO PEÑASQUITOS | SAN DIEGO COUNTY, CA



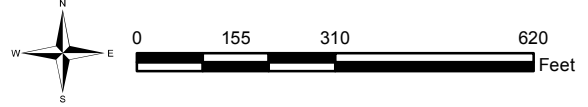


SOURCE: ESRI 2012, AEX 2010

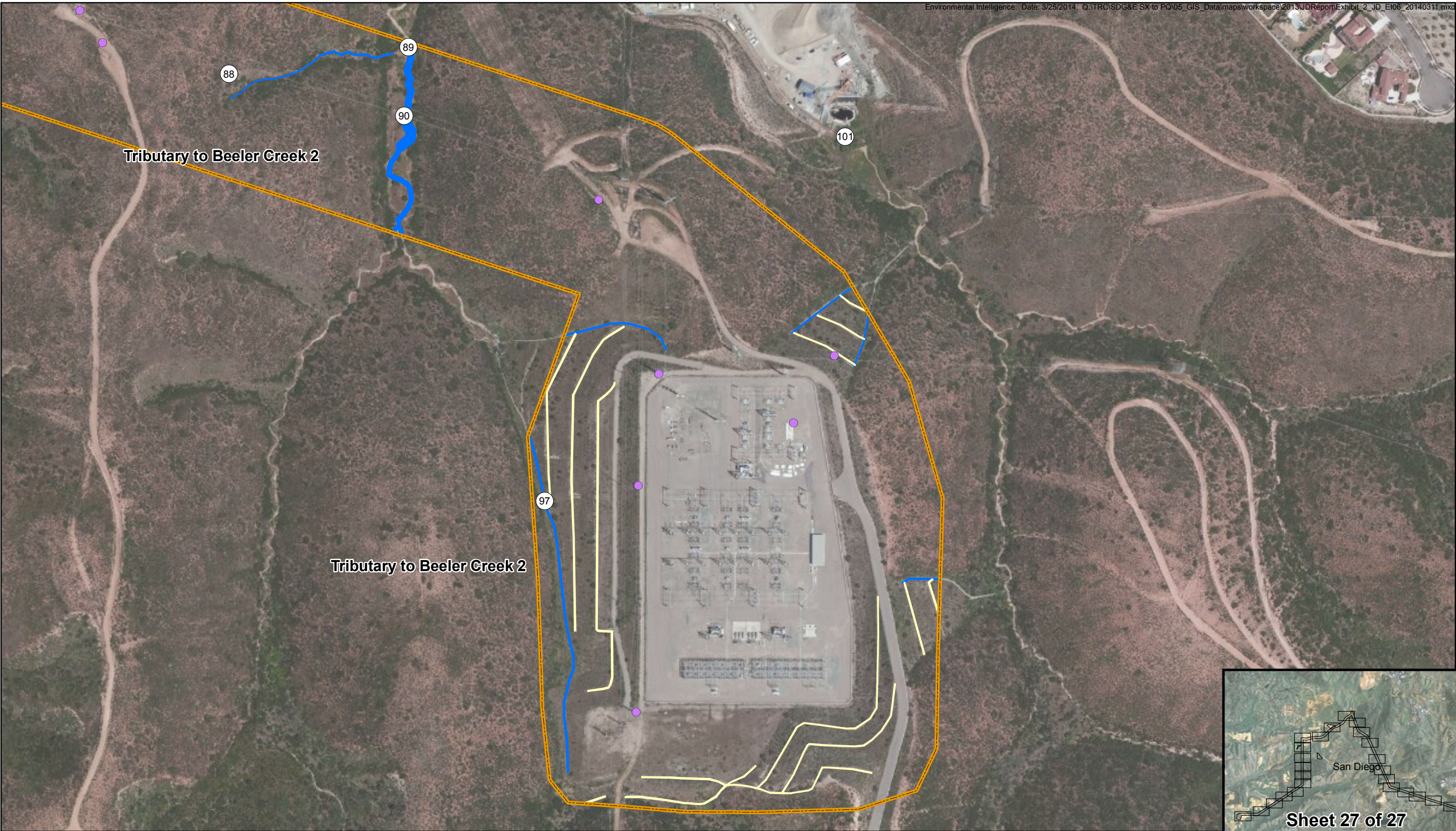


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|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |

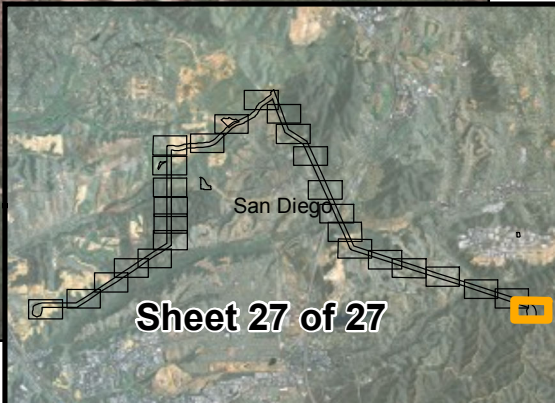
**EXHIBIT 2: DELINEATION RESULTS, SHEET 26 OF 27**  
 SDG&E - SYCAMORE TO PEÑASQUITOS | SAN DIEGO COUNTY, CA







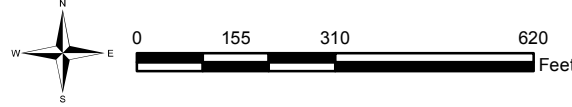
SOURCE: ESRI 2012, AEX 2010



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|--------------------------|--------------------------------|--------------------------------------|----------------------------|--------------------------------------|-------------------------|
| SX to PQ Survey Corridor | Data Pit Locations             | <b>ACOE and RWQCB Jurisdiction</b>   | <b>CDFW Jurisdiction</b>   | <b>RWQCB Jurisdiction Only</b>       | <b>CCC Jurisdiction</b> |
| Coastal Zone (CCC 2008)  | Potential Road Rut Vernal Pool | Waters of the U.S. and State         | CDFW Unvegetated Streambed | Isolated Waters of the State         | CCC Wetland             |
| Proposed Pole Locations  | Road Rut                       | Wetland Waters of the U.S. and State | CDFW Riparian              | Isolated Wetland Waters of the State | ESHA                    |
| Photo Locations          | Culvert Location               |                                      |                            | V-ditch (exempt)                     |                         |



**EXHIBIT 2: DELINEATION RESULTS, SHEET 27 OF 27**  
SDG&E - SYCAMORE TO PEÑASQUITOS | SAN DIEGO COUNTY, CA



*Appendix A:*  
WETLAND DATA FORMS



## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SX-PQ City/County: San Diego Sampling Date: 09/20/2013  
 Applicant/Owner: SDG&E State: CA Sampling Point: 1  
 Investigator(s): TK, MM Section, Township, Range: Section 22, Township 14S, Range 3W  
 Landform (hillslope, terrace, etc.): valley Local relief (concave, convex, none): concave Slope (%): 1  
 Subregion (LRR): C Lat: 32.935335 Long: -117.177541 Datum: NAD83  
 Soil Map Unit Name: Terrace escarpments NWI classification: PSS

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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30x30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Salix gooddingii</u>	40	Y	FACW	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>83</u> (A/B)
2. _____				
3. _____				
4. _____				
<u>40</u> = Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: <u>10x10</u>)</b>				
1. <u>Schoenoplectus maritimus</u>	30	Y	OBL	
2. <u>Baccharis salicifolia</u>	10	Y	FAC	
3. _____				
4. _____				
5. _____				
<u>40</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>10x10</u>)</b>				
1. <u>Gnaphalium californicum</u>	20	Y	UPL	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. <u>Schoenoplectus maritimus</u>	5	Y	OBL	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>25</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>10x10</u>)</b>				
1. <u>NA</u>				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>75</u>		% Cover of Biotic Crust <u>0</u>		<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:				

Remarks:

**SOIL**

Sampling Point:   1  

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	Organic							
2-4	10YR 5/3	70	2.5YR 4/6	20	RM	M	Sand	
	Organic	10						
4-8	10YR 5/2	50	5YR 4/6	50	C	M&PL	Sandy Clay	
8-18	10YR 4/1	50	5YR 4/6	50	C	M&PL	Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1) <input checked="" type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Vernal Pools (F9) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></b>
--	---

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Water Marks (B1) (Riverine) <input checked="" type="checkbox"/> Sediment Deposits (B2) (Riverine) <input checked="" type="checkbox"/> Drift Deposits (B3) (Riverine) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)	

<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	<b>Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></b>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: SX-PQ City/County: San Diego Sampling Date: 09/20/2013  
 Applicant/Owner: SDG&E State: CA Sampling Point: 2  
 Investigator(s): TK, MM Section, Township, Range: Section 12, Township 14S, Range 3W  
 Landform (hillslope, terrace, etc.): valley Local relief (concave, convex, none): concave Slope (%): 1  
 Subregion (LRR): C Lat: 32.971290 Long: -117.152625 Datum: NAD 83  
 Soil Map Unit Name: Las Flores loamy fine sand, 15-30% slopes NWI classification: PEM

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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____
Remarks:	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30x30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>NA</u>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____				
3. _____				
4. _____				
	<u>0</u>	= Total Cover		
<b>Sapling/Shrub Stratum (Plot size: <u>10x10</u>)</b>				
1. <u>NA</u>				<b>Prevalence Index worksheet:</b> 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 = _____
2. _____				
3. _____				
4. _____				
5. _____				
<b>Herb Stratum (Plot size: <u>10x10</u>)</b>				
1. <u>Iva sp.</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. <u>Juncus acutus</u>	<u>70</u>	<u>Y</u>	<u>OBL</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
	<u>80</u>	= Total Cover		
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. <u>NA</u>				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
2. _____				
	<u>0</u>	= Total Cover		
% Bare Ground in Herb Stratum <u>20</u> % Cover of Biotic Crust <u>0</u>				
Remarks:				

**SOIL**

Sampling Point: \_\_\_\_\_

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Vernal Pools (F9)	

<sup>3</sup>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)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input checked="" type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Salt Crust (B11)	
<input checked="" type="checkbox"/> Biotic Crust (B12)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**

Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	<b>Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></b>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): _____	

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

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: SX-PQ City/County: San Diego Sampling Date: 09/25/2013  
 Applicant/Owner: SDG&E State: CA Sampling Point: 3  
 Investigator(s): TK, MM Section, Township, Range: Section 11, Township 14S, Range 3W  
 Landform (hillslope, terrace, etc.): valley Local relief (concave, convex, none): concave Slope (%): 2  
 Subregion (LRR): C Lat: 32.971290 Long: -117.157686 Datum: NAD 83  
 Soil Map Unit Name: Olivenhain cobbly loam, 9 to 30 percent slopes NWI classification: PSS

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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____
Remarks:	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30x30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Salix laevigata</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. <u>Salix gooddingii</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	
3. _____				
4. _____				
<u>35</u> = Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: <u>10x10</u>)</b>				
1. <u>Typha angustifolia</u>	<u>50</u>	<u>Y</u>	<u>OBL</u>	
2. _____				
3. _____				
4. _____				
5. _____				
<u>50</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>10x10</u>)</b>				
1. <u>Baccharis salicifolia</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% ___ Prevalence Index is ≤3.0 <sup>1</sup> ___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>10</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>10x10</u>)</b>				
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>90</u>		% Cover of Biotic Crust <u>0</u>		

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Remarks:

**SOIL**

Sampling Point: \_\_\_\_\_

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>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<sup>3</sup>:**

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

<sup>3</sup>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: SX-PQ City/County: San Diego Sampling Date: 09/25/2013  
 Applicant/Owner: SDG&E State: CA Sampling Point: 4  
 Investigator(s): TK, MM Section, Township, Range: Section 14, Township 14S, Range 3W  
 Landform (hillslope, terrace, etc.): valley Local relief (concave, convex, none): concave Slope (%): 0  
 Subregion (LRR): C Lat: 32.954700 Long: -117.169371 Datum: NAD 83  
 Soil Map Unit Name: Salinas Clay Loam, 2 to 9 percent slopes NWI classification: PSS

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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30x30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>NA</u>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: <u>10x10</u>)</b>				
1. <u>Typha latifolia</u>	<u>80</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Baccharis salicifolia</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
3. _____				
4. _____				
5. _____				
<u>100</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>10x10</u>)</b>				
1. <u>NA</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>0</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>10x10</u>)</b>				
1. <u>NA</u>				
2. _____				
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>100</u>		% Cover of Biotic Crust <u>0</u>		
Remarks:				

**SOIL**

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 3/4	60	10YR 2/1	40	C	M	Clay Loam	
2-18	10YR 3/2	60	7.5YR 2.5/1	30	C	M	Clay Loam	Hydrogen sulfide odor
			7.5YR 5/6	10	RM	M	Clay Loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> )		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> Reduced Vertic (F18)		
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> )			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Vernal Pools (F9)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></b>		
Type: _____ Depth (inches): _____								
Remarks:								

**HYDROLOGY**

Wetland Hydrology Indicators:								
Primary Indicators (minimum of one required; check all that apply)					Secondary Indicators (2 or more required)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input checked="" type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )						
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input checked="" type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )						
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input checked="" type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )						
<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Drainage Patterns (B10)						
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input checked="" type="checkbox"/> Dry-Season Water Table (C2)						
<input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)						
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)						
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)						
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)						
<b>Field Observations:</b>					<b>Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></b>			
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>3</u>						
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>3</u>						
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>to surface</u>						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks:								

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SX-PQ City/County: San Diego Sampling Date: 09/26/2013  
 Applicant/Owner: SDG&E State: CA Sampling Point: 5  
 Investigator(s): TK, MM Section, Township, Range: Section 11, Township 14S, Range 3W  
 Landform (hillslope, terrace, etc.): intermittent stream valley Local relief (concave, convex, none): convex Slope (%): 2  
 Subregion (LRR): C Lat: 32.966056 Long: -117.168940 Datum: NAD83  
 Soil Map Unit Name: Olivenhain cobbly loam, 9 to 30 percent slopes NWI classification: PSS

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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30x30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>NA</u>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: <u>10x10</u>)</b>				
1. <u>Typha angustifolia</u>	<u>50</u>	<u>Y</u>	<u>OBL</u>	
2. _____				
3. _____				
4. _____				
5. _____				
<u>50</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>10x10</u>)</b>				
1. <u>Atriplex prostrata</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Pluchea odorata</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Apium sp.</u>	<u>10</u>	<u>Y</u>	<u>UPL</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>45</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>55</u>		% Cover of Biotic Crust <u>0</u>		<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks:				

**SOIL**

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 2/2	98	5YR 4/6	2		M	Clay Loam	
4-8	10YR 4/1	90	5YR 4/6	10		M	Clay	
8-18	10YR 4/1	70	5YR 4/6	20		M	Clay	
			Gley 2 4/PB	10		M	Clay	Hydrogen sulfide odor

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)			
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)			
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)					

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No _____
--	--

Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input checked="" type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present?    Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present?    Yes <input checked="" type="checkbox"/> No _____    Depth (inches): <u>16</u> Saturation Present?    Yes <input checked="" type="checkbox"/> No _____    Depth (inches): <u>16</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site: SX-PQ City/County: San Diego Sampling Date: 09/26/2013  
 Applicant/Owner: SDG&E State: CA Sampling Point: 6  
 Investigator(s): TK, MM Section, Township, Range: Section 11, Township 14S, Range 3W  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): concave Slope (%): 2  
 Subregion (LRR): C Lat: 32.962056 Long: -117.169004 Datum: NAD 83  
 Soil Map Unit Name: Salinas Clay Loam 2 to 9 percent slopes NWI classification: upland

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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____ _____ _____	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30x30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Eucalyptus globulus</u>	<u>40</u>	<u>Y</u>	<u>UPL</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
2. <u>Salix lasiolepis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
3. <u>Baccharis salicifolia</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
4. _____				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>5</u> x 1 = <u>5</u> FACW species <u>10</u> x 2 = <u>20</u> FAC species <u>25</u> x 3 = <u>75</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>45</u> x 5 = <u>225</u> Column Totals: <u>85</u> (A) <u>325</u> (B)  Prevalence Index = B/A = <u>3.8</u>
<u>60</u> = Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>10x10</u> )				
1. <u>Baccharis salicifolia</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Schoenoplectus maritimus</u>	<u>5</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Rhus ovata</u>	<u>5</u>	<u>Y</u>	<u>UPL</u>	
4. _____				<b>Hydrophytic Vegetation Indicators:</b> ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 <sup>1</sup> ___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. _____				
6. _____				
7. _____				
8. _____				
<u>25</u> = Total Cover				
<u>Herb Stratum</u> (Plot size: <u>10x10</u> )				
1. <u>NA</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>0</u> = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: <u>10x10</u> )				
1. <u>NA</u>				
2. _____				
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>100</u> % Cover of Biotic Crust <u>0</u>				
Remarks: _____ _____ _____				

Hydrophytic Vegetation Present? Yes \_\_\_\_\_ No

**SOIL**

Sampling Point: \_\_\_\_\_

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>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<sup>3</sup>:**

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

<sup>3</sup>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: SX-PQ City/County: San Diego Sampling Date: 09/27/2013  
 Applicant/Owner: SDG&E State: CA Sampling Point: 7  
 Investigator(s): TK, MM Section, Township, Range: Section 17, Township 14S, Range 2W  
 Landform (hillslope, terrace, etc.): toe of slope Local relief (concave, convex, none): concave Slope (%): 5  
 Subregion (LRR): C Lat: 32.949385 Long: -117.104383 Datum: NAD 83  
 Soil Map Unit Name: Friant rocky fine sandy loam, 30 to 70 percent slopes NWI classification: upland  
 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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/>
Remarks:	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>5x30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>NA</u>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: <u>5x10</u>)</b>				
1. <u>Typha latifolia</u>	<u>60</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Baccharis salicifolia</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
3. _____				
4. _____				
5. _____				
<u>70</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>5x10</u>)</b>				
1. <u>Juncus xiphioides</u>	<u>4</u>	<u>N</u>	<u>OBL</u>	
2. <u>Cyperus sp.</u>	<u>1</u>	<u>N</u>	<u>FACW*</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>5</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>5x10</u>)</b>				
1. <u>NA</u>				
2. _____				
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>100</u>		% Cover of Biotic Crust <u>0</u>		
Remarks: Incised channel; vegetation outside the top of banks was not included  * assumed to be FACW; no fruit was present and species was unable to be determined				

**SOIL**

Sampling Point: 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10YR 3/1	100					Sandy Loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)
	<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> ) <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if present):</b> Type: <u>Dense cobbles</u> Depth (inches): <u>12</u>	Hydric Soil Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks:	

**HYDROLOGY**

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> ) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> ) <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> ) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present?    Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?    Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>2</u>	
Saturation Present? (includes capillary fringe)    Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>to surface</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		



## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SX-PQ City/County: San Diego Sampling Date: 10/01/2013  
 Applicant/Owner: SDG&E State: CA Sampling Point: 8  
 Investigator(s): TK, MM Section, Township, Range: Section 22, Township 14S, Range 2W  
 Landform (hillslope, terrace, etc.): valley Local relief (concave, convex, none): concave Slope (%): 0  
 Subregion (LRR): C Lat: 32.933363 Long: -117.079590 Datum: NAD 83  
 Soil Map Unit Name: Redding cobbly loam, dissected, 15 to 50 percent slopes NWI classification: PFO

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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30x30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Salix laevigata</u>	<u>90</u>	<u>Y</u>	<u>FACW</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. <u>Quercus berberidifolia</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	
3. _____				
4. _____				
<u>95</u> = Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: <u>10x10</u>)</b>				
1. <u>Baccharis salicifolia</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
2. _____				
3. _____				
4. _____				
5. _____				
<u>5</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>10x10</u>)</b>				
1. <u>NA</u>				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>0</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>10x10</u>)</b>				
1. <u>NA</u>				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>100</u>		% Cover of Biotic Crust <u>0</u>		<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:				

**SOIL**

Sampling Point: 8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	2.5Y 7/3	60	10YR 7/6	40	C	M	Sand	
5-8							Cobbles	
8-18	10YR 5/3						Sandy Loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histosol (A1)	<input checked="" type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> 1 cm Muck (A9) (LRR C)		
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 2 cm Muck (A10) (LRR B)		
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)				
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)				
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)				
<input type="checkbox"/> Sandy Gleyed Matrix (S4)					

<b>Restrictive Layer (if present):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

**HYDROLOGY**

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input checked="" type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

*Appendix B:*  
SOILS DESCRIPTIONS



Soil Association	Description
AtC	Altamont clay, 5 to 9 percent slopes. This soil is well-drained and formed from material weathered from calcareous shale. These soils occur on uplands with slopes of 5 to 50 percent.
AtF	Altamont clay, 30 to 50 percent slopes. This soil is well-drained and formed from material weathered from calcareous shale. These soils occur on uplands with slopes of 5 to 50 percent.
AwC	Auld clay, 5 to 9 percent slopes. This soil occurs on uplands that have slopes of 5 to 30 percent. It is a well-drained clay underlain by metavolcanic rock.
AwD	Auld clay, 9 to 15 percent slopes. This soil occurs on uplands that have slopes of 5 to 30 percent. It is a well-drained clay underlain by metavolcanic rock.
AyE	Auld stony clay, 9 to 30 percent slopes. This soil consists of well-drained clay underlain by metavolcanic rock. The elevation for this series ranges from 300 to 700 feet.
DaC	Diablo clay, 2 to 9 percent slopes. This soil consists of well-drained, deep clays. The parent material is soft, calcareous sandstone and shale.
DaD	Diablo clay, 9 to 15 percent slopes. This soil consists of well-drained, deep clays. The parent material is soft, calcareous sandstone and shale.
DaE	Diablo clay, 15 to 30 percent slopes. This soil consists of well-drained, deep clays and is present on uplands. The parent material is soft, calcareous sandstone and shale.
DoE	Diablo-Olivenhain complex, 9 to 30 percent slopes. This soil complex is 50 percent Diablo clay and 45 percent Olivenhain cobbly loam. It occurs on uplands with elevations of 100-600 feet.
FxG	Friant rocky fine sandy loam, 30 to 70 percent slopes. This soil consists of well-drained sandy-loams. The parent material is fine-grained metasedimentary rock.
GaF	Gaviota fine sandy loam, 30 to 50 percent slopes. This soil is shallow, well-drained and occurs on uplands. The parent material is weathered marine sandstone.
HrC	Huerhuero loam, 2 to 9 percent slopes. This soil is a moderately-well drained loam that has a clay subsoil. The parent material is sandy marine sediment. It occurs at elevations from 10 to 400 feet.
HrC2	Huerhuero loam, 5 to 9 percent slopes, eroded. This soil is a moderately-well drained loam that has a clay subsoil. The parent material is sandy marine sediment. It occurs at elevations from 10 to 400 feet.
HrE2	Huerhuero loam, 15 to 30 percent slopes, eroded. This soil is a moderately-well drained loam that has a clay subsoil. The parent material is sandy marine sediment. It occurs at elevations from 10 to 400 feet.
LeC	Las Flores loamy fine sand, 2 to 9 percent slopes. This soil is a



	moderately-well drained loamy fine sand that has a clay subsoil. It occurs on uplands with elevations from 100 to 500 feet. The parent material consists of materials weathered from siliceous marine sandstone.
LeC2	Las Flores loamy fine sand, 5 to 9 percent slopes, eroded. This soil is a moderately-well drained loamy fine sand that has a clay subsoil. It occurs on uplands with elevations from 100 to 500 feet. The parent material consists of materials weathered from siliceous marine sandstone.
LeD2	Las Flores loamy fine sand, 9 to 15 percent slopes, eroded. This soil is a moderately-well drained loamy fine sand that has a clay subsoil. It occurs on uplands with elevations from 100 to 500 feet. The parent material consists of materials weathered from siliceous marine sandstone.
LeE	Las Flores loamy fine sand, 15 to 30 percent slopes. This soil is a moderately-well drained loamy fine sand that has a clay subsoil. It occurs on uplands with elevations from 100 to 500 feet. The parent material consists of materials weathered from siliceous marine sandstone.
LsE	Linne clay loam, 9 to 30 percent slopes. This soil is well-drained and consists of moderately-deep clay loams. The parent material is soft, calcareous sandstone and shale.
OhC	Olivenhain cobbly loam, 2 to 9 percent slopes. This soil is well-drained and composed of moderately deep to deep cobbly loams. The parent material is old gravelly and cobbly alluvium.
OhE	Olivenhain cobbly loam, 9 to 30 percent slopes. This soil is well-drained and composed of moderately deep to deep cobbly loams. The parent material is old gravelly and cobbly alluvium.
OhF	Olivenhain cobbly loam, 30 to 50 percent slopes. This soil is well-drained and composed of moderately deep to deep cobbly loams. The parent material is old gravelly and cobbly alluvium.
RdC	Redding gravelly loam, 2 to 9 percent slopes. This soil is a well-drained gravelly-loam formed on gravelly marine terraces.
ReE	Redding cobbly loam, 9 to 30 percent slopes. This soil is a well-drained cobbly-loam formed on gravelly marine terraces.
RfF	Redding cobbly loam, dissected, 15 to 50 percent slopes. This soil is a well-drained cobbly-loam formed on gravelly marine terraces.
SbC	Salinas clay loam, 2 to 9 percent slopes. This soil is formed from sediments washed from Diablo, Linne, Las Flores, Huerhuero, and Olivenhain soils. It is well-drained and consists of clay loams.
ScB	Salinas clay, 2 to 5 percent slopes. This soil is formed from sediments washed from Diablo, Linne, Las Flores, Huerhuero, and Olivenhain soils. It is well-drained and consists of clay.
SmE	San Miguel rocky silt loam, 9 to 30 percent slopes. This soil is well-drained and derived from metavolcanic rock. It occurs in mountainous areas.



SnG	San Miguel-Exchequer rocky silt loams, 9 to 70 percent slopes. This soil is well-drained and derived from metavolcanic rock. It occurs in mountainous areas.
StG	Steep gullied land
TeF	Terrace escarpments
VbB	Visalia gravelly sandy loam, 2 to 5 percent slopes. This soil is a very deep, sandy loam and is derived from granitic alluvium. This soil occurs on alluvial fans and floodplains.



*Appendix C:*  
SITE PHOTOGRAPHS





Photo 1: V-ditch draining the Peñasquitos substation pad; Photo direction: N



Photo 2: V-ditch draining the Peñasquitos substation pad; Photo direction: W





Photo 3: Tributary to Peñasquitos Creek 1, Overview of the confluence of two zero-order headwaters;  
Photo direction: SE



Photo 4: Tributary to Peñasquitos Creek 1, cobble substrate near confluence of headwater tributaries



Photo 5: Tributary to Peñasquitos Creek 2, overview of incised intermittent drainage; Photo direction: E



Photo 6: Tributary to Peñasquitos Creek 2, overview of channel; Photo direction: E



Photo 7: Tributary to Peñasquitos Creek 3, overview of large eastern section of the drainage; Photo direction: S



Photo 8: Tributary to Peñasquitos Creek 3, overview of narrow channel width and clay/cobble substrate; Photo direction: N





Photo 9: Tributary to Peñasquitos Creek 4, overview of western side of drainage; Photo direction: E



Photo 10: Tributary to Peñasquitos Creek 4, cobble substrate in high gradient headwaters in western side of drainage; Photo direction: SE



Photo 11: Tributary to Peñasquitos Creek 4, overview of headwaters in western side of drainage; Photo direction: W



Photo 12: Tributary to Peñasquitos Creek 5, overview of top of westernmost drainage, facing downstream; Photo direction: S



Photo 13: Tributary to Peñasquitos Creek 5, overview of ephemeral headwater in center of drainage, facing downstream; Photo direction: SE



Photo 14: Tributary to Peñasquitos Creek 5, sandy substrate of mainstem tributary



Photo 15: Tributary to Peñasquitos Creek 5, sandy substrate of mainstem tributary



Photo 16: Tributary to Peñasquitos Creek 6, overview of headwaters of easternmost drainage, looking downstream; Photo direction: NW



Photo 17: Tributary to Peñasquitos Creek 6, cobble substrate and incised channel of first-order tributary; Photo direction: N



Photo 18: Tributary to Peñasquitos Creek 7, overview of headwaters of westernmost drainage; Photo direction: SE





Photo 19: Tributary to Peñasquitos Creek 7, wetland vegetation and hard clay substrate at the fringe of a pond located in the study area; Photo direction: S



Photo 20: Tributary to Peñasquitos Creek 7, view of redox features in the soil sample from Site 1



Photo 21: Tributary to Peñasquitos Creek 7, evidence of inundation: cracked substrate and riparian vegetation; Photo direction: S



Photo 22: Tributary to Peñasquitos Creek 7, pond associated with drainage; Photo direction: SW



Photo 23: Tributary to Peñasquitos Creek 8, overview of narrow ephemeral channel near the eastern side of the drainage; Photo direction: NE



Photo 24: Tributary to Peñasquitos Creek 8, headcut and deeply incised portion of a headwater channel on the eastern side of the drainage; Photo direction: NE



Photo 25: Tributary to Peñasquitos Creek 9, overview of the top of the headwaters of the northeastern section of the drainage; Photo direction: SW



Photo 26: Tributary to Peñasquitos Creek 9, overview of the headwaters of the western section of the drainage, photo facing across channel; Photo direction: W



Photo 27: Tributary to Peñasquitos Creek 9, clay and sand substrate in mainstem tributary in the western section of the drainage; Photo direction: SW



Photo 28: Tributary to Peñasquitos Creek 9, sand and cobble substrate in ephemeral headwaters on the western side of the drainage; Photo direction: N





Photo 29: Tributary to Deer Canyon 1, looking across high-gradient headwaters in the southern portion of the drainage; Photo direction: N



Photo 30: Tributary to Deer Canyon 1, sandy substrate in the southwestern headwaters of the drainage



Photo 31: Tributary to Deer Canyon 1, looking across high-gradient headwaters in the northern section of the drainage; Photo direction: S



Photo 32: Tributary to Deer Canyon 2, looking across high-gradient headwaters in the western side of the



drainage; Photo direction: N



Photo 33: Tributary to Deer Canyon 2, substrate of first order tributary at headcut on northeastern side of the drainage; Photo direction: E



Photo 34: Deer Canyon Creek, looking across the deeply-incised mainstem channel from above; Photo direction:



N



Photo 35: Deer Canyon Creek, cobble substrate in the streambed and substrate at a wetland (Site 4) in an access road crossing; Photo direction: N



Photo 36: Tributary to Deer Canyon 3, looking across high-gradient headwaters in the western side of the drainage; Photo direction: SW





Photo 37: Tributary to Deer Canyon 3, cobble substrate and area wet from nuisance flow in lower portion of drainage, just upstream of confluence with Deer Canyon Creek; Photo direction: NE



Photo 38: Tributary to Deer Canyon 3, sandy substrate near confluence of two headwater ephemerals



Photo 39: McGonigle Canyon Creek, overview of riparian and ornamental vegetation; Photo direction: S



Photo 40: McGonigle Canyon Creek, deeply-incised channel and substrate consisting of large cobbles.



**Photo 41:** McGonigle Canyon Creek, substrate and soil sample location



**Photo 42:** McGonigle Canyon Creek, large cobble and sandy substrate



Photo 43: Tributary to McGonigle Canyon Creek 1, overview of dense vegetation along the channel; Photo direction: SE



Photo 44: Tributary to McGonigle Canyon Creek 1, substrate and hydric soil sample location at Site 5



Photo 45: Tributary to McGonigle Canyon Creek 2, overview of depression that the mainstem tributary flows into; Photo direction: NW



Photo 46: Tributary to McGonigle Canyon Creek 2, clay substrate and riparian vegetation in channel near hydric soil sample location





Photo 47: Tributary to McGonigle Canyon Creek 2, clay substrate and hydric soil sample from Site 3



Photo 48: Tributary to McGonigle Canyon Creek 3, overview of Juncus acutus dominated wetland ; Photo direction: NE





Photo 49: Tributary to McGonigle Canyon Creek 3, clay substrate and sample location for Site 2



Photo 50: Tributary to McGonigle Canyon Creek 4, overview from top of headwaters looking downstream; Photo direction: SW







Photo 51: Tributary to McGonigle Canyon Creek 4, sandy substrate of narrow, incised channel



Photo 52: Tributary to McGonigle Canyon Creek 4, overview of narrow channel looking downstream and riparian vegetation growing in channel; Photo direction: SW





Photo 53: Tributary to La Zanja Canyon 1, overview of main channel, looking downstream; Photo direction: NE



Photo 54: Tributary to La Zanja Canyon 1, culvert outlet and cobble substrate near culvert and on channel bottom





Photo 55: Tributary to La Zanja Canyon 1, rip-rap substrate in the higher-gradient western side of the drainage near a residential development; Photo direction: E



Photo 56: Tributary to La Zanja Canyon 1, riparian vegetation in the higher-gradient western side of the drainage near a residential development; Photo direction: NE



Photo 57: Tributary to La Zanja Canyon 2, overview of channel and substrate at culvert outlet, looking downstream; Photo direction: NW



Photo 58: Tributary La Zanja Canyon 2, culvert outfall at top of stream; Photo direction: E



Photo 59: Tributary to McGonigle Canyon Creek 5, looking across high-gradient ephemeral in the northeastern section of the drainage; Photo direction: NE



Photo 60: Tributary to McGonigle Canyon Creek 5, substrate and incised channel containing water from nuisance flow; Photo direction: E



Photo 61: Black Mountain Features, overview of incised headwater drainage, looking downstream; Photo direction: SE



Photo 62: Black Mountain Features, gravel and sand substrate of narrow headwater in the southern section of the drainage; Photo direction: E



Photo 63: Los Peñasquitos Mesa Features 1, interface of wetland and upland vegetation; Photo direction: N



Photo 64: Los Peñasquitos Mesa Features 1, overview of wetland area; Photo direction: SE



Photo 65: Los Peñasquitos Mesa Features 2, overview of iceplant-lined channel; Photo direction: N



Photo 66: Los Peñasquitos Mesa Features 3, downstream overview of headwater channel in the southern portion of the drainage; Photo direction: NW





Photo 67: Tributary to Peñasquitos Creek 10, overview of headwaters at top of drainage; Photo direction: N



Photo 68: Tributary to Peñasquitos Creek 10, sand and cobble substrate in headwaters



Photo 69: Los Peñasquitos Creek, wetted area, cobble substrate and riparian vegetation overview; Photo direction: E



Photo 70: Los Peñasquitos Creek, substrate consisting of large cobbles downstream of debris jam



Photo 71: Tributary to Peñasquitos Creek 11, overview of top of headwater tributaries on western side of drainage; Photo direction: E



Photo 72: Tributary to Peñasquitos Creek 11, cobble substrate of narrow high gradient tributary



Photo 73: Tributary to Los Peñasquitos Creek 11, cobble substrate of lower-gradient tributary



Photo 74: Cypress Canyon Feature 1, overview of iceplant-lined channel; Photo direction: NW



Photo 75: Cypress Canyon Feature 2, overview of depressional area; Photo direction: NW



Photo 76: Cypress Canyon Feature 2, clay substrate of depressional area





Photo 77: Cypress Canyon Feature 2, V-ditch inflow into depressional area; Photo direction: NW



Photo 78: Tributary to Beeler Creek 1, overview of tributary on western side of the drainage; Photo direction: NW



Photo 79: Tributary to Beeler Creek 1, substrate of narrow, higher-gradient channels



Photo 80: Tributary to Beeler Creek 1, substrate of lower gradient channel on western side of the drainage



Photo 81: Tributary to Beeler Creek 1, overview of high-gradient headwater on eastern side of the drainage, looking upstream; Photo direction: SW



Photo 82: Tributary to Beeler Creek 2, overview of the start of a high-gradient ephemeral tributary; Photo direction: N





Photo 83: Tributary to Beeler Creek 2, cobble substrate of mainstem tributary in narrow section of the channel



Photo 84: Tributary to Beeler Creek 2, cobble substrate of mainstem tributary in wide section of the channel;  
Photo direction: S





Photo 85: Vernal pool 1; Photo direction: N



Photo 86: Vernal pool 1 substrate



Photo 87: Vernal pool 2 substrate; Photo direction: NE



Photo 88: Vernal Pool 2; Photo direction: E



Photo 89: Vernal pool 3; Photo direction: S



Photo 90: Vernal pool 3; Photo direction: N



Photo 91: Unvegetated road rut



Photo 92: Unvegetated road rut





Photo 93: Vegetated road rut



Photo 94: RWQCB exempt, MS4 erosion control V-ditch



Photo 95: RWQCB exempt, MS4 erosion control V-ditch



Photo 96: RWQCB exempt, MS4 erosion control V-ditch

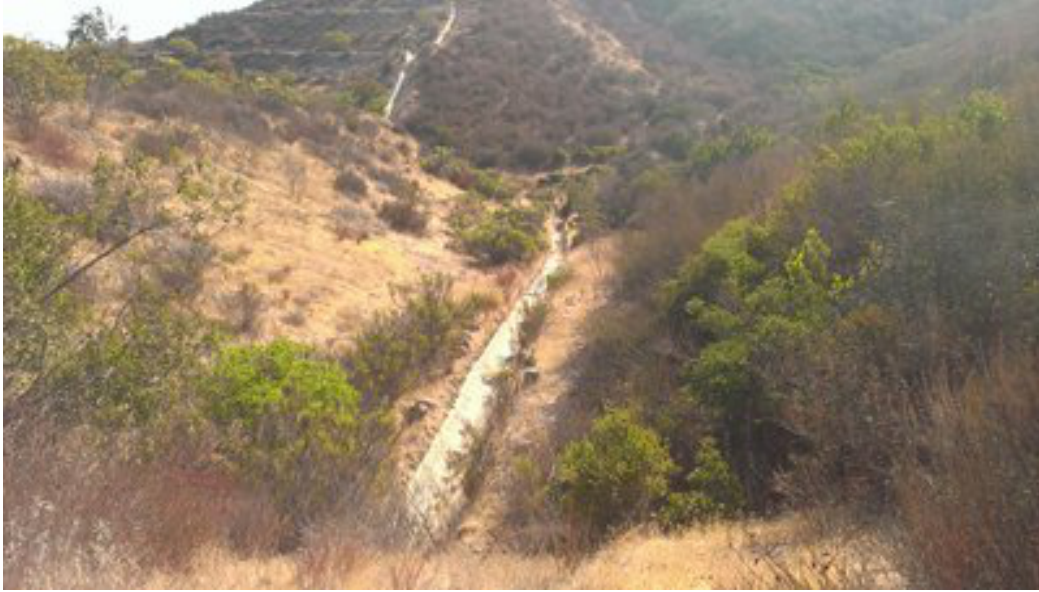


Photo 97: USACE jurisdictional V-ditch



Photo 98: USACE -jurisdictional V-ditch







Photo 99: USACE -jurisdictional V-ditch



Photo 100: Stowe staging yard, erosion control ditch near the perimeter of the yard; Photo direction: S



Photo 101: Stowe staging yard, overview; Photo direction: W



Photo 102: Stowe staging yard, erosion control ditch near the perimeter of the yard; Photo direction: NW





Photo 103: Stonebridge staging yard, overview; Photo direction: NE



Photo 104: Stonebridge staging yard, depressional area near the perimeter of the yard; Photo direction: S



Photo 105: Stonebridge staging yard, erosional feature near the perimeter of the yard; Photo direction: W



Photo 106: Torrey Santa Fe Kilroy staging yard, overview; Photo direction: N



Photo 107: Torrey Santa Fe Kilroy staging yard, overview of work area adjacent to yard; Photo direction: S