APPENDIX G
BIOLOGICAL RESOURCES SUPPORT INFORMATION

BACKGROUND REPORTS

APPENDIX G
BIOLOGICAL RESOURCES SUPPORT INFORMATION

This page is intentionally left blank.

BIOLOGICAL TECHNICAL REPORT

SYCAMORE TO PEÑASQUITOS 230 KILOVOLT TRANSMISSION LINE PROJECT

CITY OF SAN DIEGO
SAN DIEGO COUNTY, CALIFORNIA

Prepared for:

SAN DIEGO GAS & ELECTRIC COMPANY
8315 Century Park Court, CP21E
San Diego, California 92123
Contact: Rob Fletcher

Prepared by:

BUSBY BIOLOGICAL SERVICES, INC.
4629 Cass Street, #192
San Diego, California 92109
Contact: Melissa Busby

Prepared on behalf of:

TRC SOLUTIONS, INC.
123 Technology Drive
Irvine, California 92618
Contact: Josh Taylor

April 2014

TABLE OF CONTENTS

Page

SECTION 1.0 – EXECUTIVE SUMMARY 1

SECTION 2.0 – PROPOSED PROJECT DESCRIPTION 2
2.1. PROPOSED PROJECT OVERVIEW 2
2.2. PROPOSED PROJECT LOCATION 3
2.3. PROPOSED PROJECT COMPONENTS 3
2.3.1 Transmission Line Segments 4
2.3.1.1 Segment A – Sycamore Canyon Substation to Carmel Valley Road 4
2.3.1.2 Segment B – Carmel Valley Road 4
2.3.1.3 Segment C – Carmel Valley Road to Peñasquitos Junction 4
2.3.1.4 Segment D – Peñasquitos Junction to Peñasquitos Substation 5
2.3.2 Associated Substation Work 5
2.3.2.1 Sycamore Canyon Substation 5
2.3.2.2 Peñasquitos Substation 6
2.3.2.3 Minor Substation Alterations 6
2.3.3 Proposed Transmission and Power Line Facilities 6
2.3.3.1 Transmission and Power Line Poles 6
2.3.3.2 Distribution Underbuild 6
2.3.3.3 Reconductoring 6
2.3.3.4 Grounding Rods 7
2.4. PROPOSED CONSTRUCTION AREAS 7
2.4.1 Permanent Work Areas 7
2.4.2 Temporary Work Areas 7
2.4.2.1 Material Storage and Staging 7
2.4.2.2 Stringing Sites 9
2.4.2.3 Structure Work Areas 11
2.4.2.4 Guard Structures 12
2.4.2.5 Temporary Right-of-Way 12
2.4.2.6 Access 12
2.4.2.7 Underground Transmission Line Construction 13
2.4.3 Road Crossings 13
2.4.4 Helicopter Usage during Transmission Line Construction 13
2.4.5 Site Cleanup 13
2.4.6 Removed Structures/Poles, Materials, and Components 14

SECTION 3.0 – REGULATORY SETTING 15
3.1. FEDERAL REGULATIONS 15
3.1.1 Federal Endangered Species Act of 1973 (16 United States Code [USC] 1531 *et seq.*) 15
3.1.2 Clean Water Act of 1972 (33 USC 1251 *et seq.*) 15

3.1.3 Coastal Zone Management Act of 1972 (16 USC 1451 through 1464, Chapter 33) 16
3.1.4 Migratory Bird Treaty Act of 1918 (16 USC 703 through 711) 16
3.1.5 Bald and Golden Eagle Protection Act (16 USC 668) 16
3.2. STATE REGULATIONS 17
3.2.1 California Environmental Quality Act (Public Resources Code 21000 *et seq*) 17
3.2.2 California Endangered Species Act (Fish and Game Code 2050 *et seq*) 18
3.2.3 California Fish and Game Code 18
3.2.4 California Native Plant Protection Act 20
3.2.5 California Coastal Act and Environmentally Sensitive Habitat Areas 20
3.2.6 Coastal Zone Management Program 21
3.2.7 California Porter-Cologne Water Quality Control Act 21
3.2.8 California Natural Community Conservation Planning Program 21
3.3. LOCAL REGULATIONS 22
3.3.1 SDG&E Subregional Natural Community Conservation Plan 22
3.3.2 City of San Diego and City of Poway Multiple Species Conservation Program Subarea Plans 23
3.3.3 Marine Corps Air Station, Miramar Integrated Natural Resources Management Plan 23
3.3.4 Local Coastal Program 24
3.3.5 City of San Diego Urban Forestry Section (City Council Policy 200-5) 24
3.3.6 City of Poway Urban Forestry Ordinance 24
3.3.7 Other Preserves and Conserved Areas 24

SECTION 4.0 – METHODS 26
4.1. LITERATURE AND HISTORICAL DATA REVIEW 26
4.2. VEGETATION MAPPING 26
4.3. FLORA 27
4.4. WILDLIFE 27
4.5. SPECIAL-STATUS SPECIES 27
4.5.1 Special-Status Species Habitat Assessment 29
4.5.2 Special-Status Plant Surveys 29
4.5.3 Coastal California Gnatcatcher Surveys 30
4.6. CRITICAL HABITAT 31
4.7. ENVIRONMENTALLY SENSITIVE HABITAT AREAS 31
4.8. PRESERVE AREAS 31
4.9. JURISDICTIONAL DELINEATION SURVEY 31
4.9.1 Literature Review 31
4.9.2 Field Survey 32
4.10. IMPACT DETERMINATION 32

SECTION 5.0 – RESULTS AND DISCUSSION 33
5.1. TOPOGRAPHY 33
5.2. VEGETATION COMMUNITIES AND LAND COVER TYPES 33

5.2.1 Coastal Sage Scrub 34
5.2.1.1 Diegan Coastal Sage Scrub (Holland Code 32510) 34
5.2.1.2 Diegan Coastal Sage Scrub – Disturbed (Similar to Holland Code 32510) 35
5.2.1.3 Coastal Sage Scrub – Revegetated (Similar to Holland Code 32510) 35
5.2.2 Coastal Sage/Chaparral Mix 35
5.2.3 Chaparral 36
5.2.3.1 Chamise Chaparral (Holland Code 37200) 36
5.2.3.2 Chamise Chaparral – Disturbed (Similar to Holland Code 37200) 36
5.2.3.3 Southern Mixed Chaparral (Holland Code 37120) 36
5.2.3.4 Southern Mixed Chaparral – Disturbed (Similar to Holland Code 37120) 37
5.2.3.5 Scrub Oak Chaparral (Holland Code 37900) 37
5.2.4 Grassland 37
5.2.4.1 Native Grassland (Holland Code 42110) 37
5.2.4.2 Nonnative Grassland (Holland Code 42200) 38
5.2.5 Alkali Marsh (similar to Holland Code 52310) 38
5.2.6 Freshwater Marsh (Holland Code 52410) 38
5.2.7 Inland Water 38
5.2.7.1 San Diego Mesa Vernal Pools (Holland Code 44321) 38
5.2.7.2 Open Water (No Holland Code) 39
5.2.8 Riparian Scrub 39
5.2.8.1 Southern Riparian Scrub (Holland Code 63300) 39
5.2.8.2 Mulefat Scrub (Holland Code 63310) 39
5.2.8.3 Southern Willow Scrub (Holland Code 63320) 39
5.2.8.4 Tamarisk Scrub (Holland Code 63810) 39
5.2.9 Coast Live Oak Riparian Forest (Holland Code 61310) 40
5.2.10 Eucalyptus Forest (no Holland Code) 40
5.2.11 Disturbed Habitat (no Holland Code) 40
5.2.12 Other Land Cover Types 40
5.2.12.1 Developed Lands 40
5.2.12.2 Ornamental 41
5.2.12.3 Bare Ground 41
5.3. FLORA 41
5.4. FAUNA 41
5.5. SENSITIVE BIOLOGICAL RESOURCES 42
5.5.1 Sensitive Vegetation Communities 42
5.5.1.1 Coastal Sage Scrub Communities 43
5.5.1.2 Chaparral Communities 43
5.5.1.3 Grassland Communities 43
5.5.1.4 Riparian and Wetland Communities 43
5.5.2 Special-Status Plant Species 44
5.5.2.1 San Diego Thorn-Mint 45

5.5.2.2 Spineshrub 46
5.5.2.3 San Diego Ambrosia 46
5.5.2.4 Del Mar Manzanita 46
5.5.2.5 San Diego Sagewort 47
5.5.2.6 Encinitas Baccharis 47
5.5.2.7 San Diego Sunflower 47
5.5.2.8 San Diego Goldenstar 47
5.5.2.9 Orcutt's Brodiaea 48
5.5.2.10 Brewer's Calandrinia 48
5.5.2.11 Wart-Stemmed Ceanothus 48
5.5.2.12 Southern Tarplant 49
5.5.2.13 Long-Spined Spineflower 49
5.5.2.14 Summer-Holly 49
5.5.2.15 Del Mar Mesa Sand Aster 49
5.5.2.16 Short-Leaved Dudleya 50
5.5.2.17 Variegated Dudleya 50
5.5.2.18 Sticky Dudleya 50
5.5.2.19 San Diego Button-Celery 51
5.5.2.20 Coast Barrel Cactus 51
5.5.2.21 Palmer's Grapplinghook 51
5.5.2.22 Graceful Tarplant 52
5.5.2.23 Decumbent Goldenbush 52
5.5.2.24 San Diego Marsh-Elder 52
5.5.2.25 Spiny Rush 52
5.5.2.26 Robinson's Pepper-Grass 53
5.5.2.27 Willowy Monardella 53
5.5.2.28 Little Mousetail 53
5.5.2.29 California Orcutt Grass 54
5.5.2.30 Torrey Pine 54
5.5.2.31 San Diego Mesa Mint 54
5.5.2.32 Nuttall's Scrub Oak 54
5.5.2.33 Chaparral Ragwort 55
5.5.2.34 Purple Stemodia 55
5.5.3 Special-Status Wildlife Species 55
5.5.3.1 San Diego Fairy Shrimp 57
5.5.3.2 Riverside Fairy Shrimp 58
5.5.3.3 Quino Checkerspot Butterfly 58
5.5.3.4 Western Spadefoot 59
5.5.3.5 Western Pond Turtle 59
5.5.3.6 California Legless Lizard 60
5.5.3.7 San Diego Banded Gecko 60

5.5.3.8 Coast Horned Lizard 60
5.5.3.9 Coronado Skink 61
5.5.3.10 Belding's Orange-Throated Whiptail 61
5.5.3.11 Rosy Boa 62
5.5.3.12 Coast Patch-Nosed Snake 62
5.5.3.13 Red Diamond Rattlesnake 62
5.5.3.14 San Diego Ringneck Snake 63
5.5.3.15 Two-Striped Garter Snake 63
5.5.3.16 Cooper's Hawk 63
5.5.3.17 Ferruginous Hawk 64
5.5.3.18 Northern Harrier 64
5.5.3.19 White-Tailed Kite 65
5.5.3.20 Merlin 65
5.5.3.21 Burrowing Owl 65
5.5.3.22 Long-Eared Owl 66
5.5.3.23 Loggerhead Shrike 66
5.5.3.24 Least Bell's Vireo 67
5.5.3.25 California Horned Lark 68
5.5.3.26 Coastal Cactus Wren 68
5.5.3.27 Coastal California Gnatcatcher 68
5.5.3.28 Yellow Warbler 69
5.5.3.29 Yellow-Breasted Chat 69
5.5.3.30 Southern California Rufous-Crowned Sparrow 70
5.5.3.31 Grasshopper Sparrow 70
5.5.3.32 Bell's Sage Sparrow 71
5.5.3.33 Tricolored Blackbird 71
5.5.3.34 Western Bluebird 72
5.5.3.35 Mexican Long-Tongued Bat 72
5.5.3.36 Pallid Bat 72
5.5.3.37 Townsend's Big-Eared Bat 73
5.5.3.38 Spotted Bat 73
5.5.3.39 Western Red Bat 73
5.5.3.40 Western Mastiff Bat 74
5.5.3.41 Big Free-Tailed Bat 74
5.5.3.42 San Diego Black-Tailed Jackrabbit 75
5.5.3.43 Dulzura Pocket Mouse 75
5.5.3.44 Northwestern San Diego Pocket Mouse 75
5.5.3.45 San Diego Desert Woodrat 76
5.5.3.46 Southern Grasshopper Mouse 76
5.5.3.47 Ringtail 76
5.5.3.48 American Badger 77

5.5.3.49 Mountain Lion 77
5.5.3.50 Southern Mule Deer 77
5.6. CRITICAL HABITAT 78
5.7. PRESERVE AREAS 79
5.8. ENVIRONMENTALLY SENSITIVE HABITAT AREAS 80
5.9. WILDLIFE MOVEMENT CORRIDORS 81
5.10. JURISDICTIONAL RESOURCES 82
5.10.1 USACE Jurisdiction 83
5.10.2 RWQCB Jurisdiction 83
5.10.3 CDFW Jurisdiction 84
5.10.4 CCC Jurisdiction 84

SECTION 6.0 – IMPACTS 85
6.1. IMPACT DEFINITIONS 85
6.1.1 Proposed Project-Specific Permanent Impacts 86
6.1.2 Proposed Project-Specific Temporary Impacts 87
6.1.2.1 Material Storage and Staging Yards 87
6.1.2.2 Stringing Sites 87
6.1.2.3 Structure Work Areas 87
6.1.2.4 Guard Structures 88
6.1.2.5 Underground Construction 88
6.2. SIGNIFICANCE CRITERIA 88
6.3. PROPOSED PROJECT-SPECIFIC IMPACTS 89
6.3.1 Sensitive Vegetation Community Impacts 89
6.3.1.1 Permanent Sensitive Vegetation Community Impacts 91
6.3.1.2 Temporary Sensitive Vegetation Community Impacts 91
6.3.1.3 Summary of Anticipated SDG&E Mitigation 92
6.3.2 Special-Status Plant Impacts 93
6.3.3 Special-Status Wildlife Impacts 94
6.3.3.1 Special-Status Invertebrate Impacts 95
6.3.3.2 Special-Status Fish Species 95
6.3.3.3 Special-Status Amphibian Species Impacts 95
6.3.3.4 Special-Status Reptile Impacts 96
6.3.3.5 Special-Status Avian and Nesting Bird Impacts 97
6.3.3.6 Special-Status Mammal Impacts 99
6.3.4 Critical Habitat Impacts 100
6.3.5 Preserve Area Impacts 100
6.3.5.1 Permanent Preserve Area Impacts 101
6.3.5.2 Temporary Preserve Area Impacts 101
6.3.6 ESHA Impacts 102
6.3.7 Wildlife Movement Corridor Impacts 103
6.3.8 Jurisdictional Resources Impacts 104

SECTION 7.0 – AVOIDANCE AND MINIMIZATION OF IMPACTS TO BIOLOGICAL RESOURCES..... 105
7.1. ADDITIONAL AVOIDANCE AND MINIMIZATION EFFORTS 105
7.2. ADDITIONAL FOCUSED, SPECIAL-STATUS SPECIES SURVEYS 106
7.2.1 Special-Status Plant Species 106
7.2.2 Special-Status Wildlife Species 106
7.3. POST-CONSTRUCTION REPORT 106

SECTION 8.0 – REFERENCES 107

LIST OF APPENDICES

APPENDIX A – Figures

APPENDIX B – Plant Species Observed within BSA

APPENDIX C – Wildlife Species Detected within BSA

APPENDIX D – Special-Status Plant Species with a Potential for Occurrence in Vicinity of BSA

APPENDIX E – Special-Status Plant Survey Memo

APPENDIX F – Special-Status Wildlife Species with a Potential for Occurrence in Vicinity of BSA

APPENDIX G – Coastal California Gnatcatcher Survey Summary Report

APPENDIX H – Jurisdictional Delineation of San Diego Gas & Electric's Sycamore to Peñasquitos 230 Kilovolt Transmission Line Improvements Project

LIST OF TABLES

Table **Page**

Table 1. Special-Status Abbreviations and Explanations 28
Table 2. Criteria for Evaluating Special-status Species Potential for Occurrence 29
Table 3. Vegetation Communities and Land Cover Types within the BSA 33
Table 4. Critical Habitat in Vicinity of BSA 79
Table 5. Vegetation Communities and Land Cover Types within Preserve Areas 79
Table 6. Vegetation Communities and Land Cover Types within ESHAs 80
Table 7. Summary of Jurisdictional Features by Regulatory Agency 82
Table 8. Summary of Vegetation Communities by Jurisdiction 83
Table 9. Summary of Anticipated Impacts 86
Table 10. Potential Vegetation Community Impacts 90
Table 11. Summary of Anticipated SDG&E Mitigation 92
Table 12. Summary of Impacts within Preserves 100
Table 13. Summary of Impacts within ESHAs 103

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	*Subregional Natural Community Conservation Plan*
NEPA	National Enviornmental Policy Act
NOAA	National Ocenic and Atmospheric Administration
NPPA	Native Plant Protection Act
NRCS	National Resource s 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[1]) 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[2].

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[2];
- 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;

[1] Transmission Line number (TL) to be assigned at a later date.

[2] 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[4] 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.

[3] These structures were previously permitted by the CPUC to support 230 kV.

[4] 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.

[5] 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.

[6] 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, dulled 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[7] 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.

[7] 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 Sante 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 reconductored 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 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[8]. 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

[8] 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 Alternation 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* (CNDDB; CDFW 2013a) was performed to identify known sensitive biological resources within a 5-mile buffer of the Proposed Project alignment. The CNDDB 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 CNDDB, 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, OR 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, AND 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 CNDDB, 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 CNDDB 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 CNDDB 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* (Polioptila 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 waddles 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 filaginifoila* 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-leafed, 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 CNDDB 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 vernally 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 it's 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

Willowy 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. Willowy 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).

Willowy 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 mousetail 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 (*Erempohila 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 hammondii*) 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 19th and 20th 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 though 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 virgultea*) 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 hammondii*) 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 20th 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 at 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 is 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 though 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, it's 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 CNDDB 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 21st 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 breading 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 is 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 is 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 CNDDB 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. sandiegenis* 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 hallow 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 there 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 scatted 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 CNDDB 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 (*Polioptila 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 verity 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 20th 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 20th 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 of 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 form 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 breading 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 (*Acanthomintha ilicifolia*)	2 areas within about .25 mile of alignment, another one about 3 miles east of alignment (USFWS 2008)
Willowy monardella (*Monardella viminea*)	about 2.5 miles southeast of alignment (USFWS 2012)
Spreading navarretia (*Navarretia fossalis*)	about 5 miles south of alignment (USFWS 2010)
San Diego fairy shrimp (*Branchinecta sandiegonensis*)	many designations within buffer, alignment crosses (USFWS 2007b)
Western snowy plover (*Charadrius alexandrinus nivosus*)	closest about 2 miles west of alignment (USFWS 2006)
Least Bell's vireo (*Vireo bellii pusillus*)	4.5 miles south of alignment (USFWS 1994)
Coastal California gnatcatcher (*Polioptila californica californica*)	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

Vegetation Community	Approx. Acres
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
TOTAL PRESERVE ACREAGE	557.67*

*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

Vegetation Community	Approx. Acres
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
TOTAL ESHA ACREAGE	110.85*

*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[1]	3.81	3.82	5.32	1.57
Non-native Upland Habitat[2]	0.61	0.61	1.53	0.02
Other[3]	0.30	0.41	0.20	--
TOTAL	**9.21**	**9.34**	**14.92**	**1.66**

[1] 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
[2] Includes Eucalyptus Woodland, Nonnative Grassland, and Tamarisk Scrub
[3] Includes Bare Ground, Developed Lands, Disturbed Habitat, and Ornamental
[4] 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
	Total Anticipated Permanent impacts	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
	Total Anticipated Temporary Impacts	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 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
	TOTAL	7.56**	329,668**	75.03**	3,268,126**

*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, leass 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
Total Anticipated Credit Withdrawal for Permanent Impacts				--	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
Total Anticipated Enhancement & Monitoring for Temporary Impacts				--	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 crieteria 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 migitation 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 migitation 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
	TOTAL	4.76**	207,739**	31.17**	1,357,692**

*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.

SECTION 8.0 – REFERENCES

Atwood, J.L., and D.R. Bontrager
2001 California Gnatcatcher (*Polioptila californica*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/574

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors
2012 *The Jepson manual: vascular plants of California, second edition*. University of California Press, Berkeley.

Bat Conservation International, Inc. (Batcon)
2013 Bat species profiles from Bat Conservation International Website at http://www.batcon.org/index.php/all-about-bats/species-profiles.html. Accessed October 2013.

Bauder, E.T.
1986. San Diego vernal pools, recent and projected losses; their condition; and threats to their existence 1979-1990. U.S. Fish and Wildlife Service, Office of Endangered Species.

Beason, R.C.
1995. Horned Lark (*Eremophila alpestris*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/195

Beauchamp, M.
1986 *A Flora of San Diego County, California*. Sweetwater River Press, National City, California.

Beauchamp, R. M.
1979 San Diego regional vernal pool survey. California Department of Fish and Game, Sacramento, CA.

Bechard, M.J., and J.K. Schmutz
1995 Ferruginous Hawk (*Buteo regalis*). In The Birds of North America, No. 172 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and The American Ornithologists' Union, Washington, D.C.

Beedy, E.C., and W. J. Hamilton, III.
1997 Tricolored Blackbird status update and Management Guidelines. Retrieved from the California Department of Fish and Game website: http://www.dfg.ca.gov/habcon/cgi-bin/read_one.asp?specy=birds&idNum=112
1999 Tricolored Blackbird (*Agelaius tricolor*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/423

Beier, P., and S. Loe
1992 A checklist for evaluating impacts to wildlife movement corridors. Wildl. soc. bull. 20: 434-440.

Beier, P., and R.F. Noss
1998 Do Habitat Corridors Provide Connectivity? Conservation Biology, Vol. 12, No. 6, pp. 1241-1252.

Beier, P., and R.F. Noss
2000 Arguing over Little Things. Conservation Biology, Vol. 14, No. 5, pp. 1546-1548.

Bennett, A.F.
1990 Habitat Corridors and the Conservation of Small Mammals in the Fragmented Forest Environment. Landscape Ecology. 4: 109-122.

Bleich, V.C., and S.A. Holl
1982 Management of Chaparral Habitat for Mule Deer and Mountain Sheep in Southern California. In *Proceedings of the Symposium on Dynamics and Management of Mediterranean-type Ecosystems,* technical coordinators C. E. Conrad and W. C. Oechel, pp. 247-254. June 22-26, 1981, San Diego, CA. General Technical Report PSW-58. Pacific Southwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture, Berkeley.

Blood, D.A.
1993 Spotted Bat; Wildlife at Risk in British Columbia. Brochure. Ministry of Water, Land and Air Protection, Victoria, British Columbia.

Bock, C.E., and B. Webb
1984 Birds as grazing indicator species in southeastern Arizona. J. Wildl. Manage. 48: 1045–1049.

Bolger, D.T., A.C. Alberts, R.M. Sauvajot, P. Potenza, C. McCalvin, D. Tran, S. Mazzoni, and M.E. Soul
1997 Responses of rodents to habitat fragmentation in coastal southern California. *Ecological Applications* 7:552-563.

Bond, S.I.
1977 An annotated list of the mammals of San Diego County, California. In: Transactions of San Diego County Society of Natural History 18(14): 229-248.

Bontrager, D.R.
1991. Habitat Requirements, Home Range and Breeding Biology of the California Gnatcatcher (*Polioptila californica*) in South Orange County, California. Prepared for Santa Margarita Company, Rancho Santa Margarita, California.

Brattstrom, B.H.
2000 The Range, Habitat Requirements, and Abundance of the Orange-throated Whiptail, *Cnemidophorus hyperythrus beldingi*. In *Bulletin of the Southern California Academy of Sciences* 99: 1-24.

Brown, B.T.
1993 Bell's Vireo (*Vireo bellii*). In *The Birds of North America*, No. 35 (A. Poole, P. Stettenheim, and F. Gill, Eds.). Philadelphia: The Academy of Natural Sciences; Washington, DC: The American Ornithologists' Union.

Brylski, P.
1983 California Habitat Relationships System, California Department of Fish and Game, California Interagency Wildlife Task Group. Available from [www.dfg.ca.gov/whdab/html/M094.html] (copyright 2003).

Bull, E.L., and C.T. Collins.
2007. Vaux's Swift (*Chaetura vauxi*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/077

Bury, R., and T. Balgooyen
1976 Temperature Selectivity in the Legless Lizard, Anniella pulchra. Copeia, No. 1: 152-155.

Bury, B.R., and D.J. Germano
2008 *Actinemys marmorata (Baird and Girard 1852) – Western Pond Turtle, Pacific, Pond Turtle.* Conservation Biology of Freshwater Turtles and Tortoises: A Compilation Project of the IUCN/SSC Tortoise and Freshwater Turtle Specialists Group. Chelonian Research Foundation. USA. May 2008.

California Herps (CAHerps)
2013 A Guide to the Amphibians and Reptiles of California. Accessed in October 2013 from http://www.californiaherps.com/

California Department of Fish and Wildlife (CDFW)
1991 California Fish and Game Code from www.dfg.ca.gov. Accessed October and November 2012.
2011a CDFW Biogeographic Data Branch, California Natural Diversity Database. Special Vascular Plants, Bryophytes, and Lichens List from http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPPlants.pdf. October 2012.
2011b CDFW Biogeographic Data Branch, California Natural Diversity Database. Special Animals List from http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/spanimals.pdf. January 2011.
2013a Natural Diversity Data Base. Nongame-Heritage Program, California Department of Fish and Wildlife, Sacramento.
2013b California Wildlife Habitat Relationships: CWHR Life History Accounts and Range Maps at http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx. Accessed October and November 2013.

2013c CDFW Lake and Streambed Alteration Program, http://www.dfg.ca.gov/habcon/1600/. Accessed November 2013.

California Native Plant Society (CNPS)
2013 *Inventory of Rare and Endangered Vascular Plants of California* from http://www.rareplants.cnps.org/. Accessed October and November 2013.

Call, M.W.
1978 Nesting habits and survey techniques for common western raptors. U.S. Department of the Interior, Bureau of Land Management, Portland, OR. Technical Note No. 316. 115pp.

Collins, C.P., and T.D. Reynolds, Ph.D
2005 Ferruginous Hawk (*Buteo regalis*):A Technical Conservation Assessment Prepared for the USDA Forest Service, Rocky Mountain Region, Species Conservation Project. http://www.fs.fed.us/r2/projects/scp/assessments/ferruginoushawk.pdf

Collins, P.W.
1999 Rufous-crowned Sparrow (*Aimophila ruficeps*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/472

Craig, D., and P.L. Williams
1998 Willow Flycatcher (*Empidonax traillii*). *In* The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. http://www.prbo.org/calpif/htmldocs/riparian_v-2.html.

Crooks, K.R.
2002 Relative sensitivities of mammalian carnivores to habitat fragmentation. Conservation Biology Vol. 16, No. 2, pp. 488–502.

Crooks, K.R., and M.E. Soulé
1999 Mesopredator release and avifaunal extinctions in a fragmented system. Nature 400:563-566.

Curtis, O.E., R.N. Rosenfield, and J. Bielefeldt
2006 Cooper's Hawk (*Accipiter cooperii*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/075.

Devitt, T. J., S.E.C. Devitt, B.D. Hollingsworth, J.A. McGuire, and C. Moritz
2013 Montane refugia predict population genetic structure in the Large-blotched Ensatina salamander. Molecular Ecology, 22: 1650–1665. doi: 10.1111/mec.12196

Dunk, J.R.
1995 White-tailed kite (*Elanus leucurus*). In *The Birds of North America*, No. 178 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and The American Ornithologists' Union, Washington, D.C.

Dunn, J.L., and J. Alderfer
2008 National Geographic Society. National Geographic field guide to the birds of Western North America. National Geographic Society, Washington, DC.

Emmel, T.C., and J.F. Emmel
1973 *The Butterflies of Southern California*. Natural History Museum of Los Angeles County Science Series No. 26.

Eng, L.L., D. Belk, and C.H. Eriksen
1990 California Anostraca: distribution, habitat, and status. Journal of Crustacean Biology 10:247-277.

Eriksen C.H., and D. Belk
1999 Fairy Shrimps of California's Puddles, Pools and Playas.

Farhig, L., and G. Merriam
1985 Habitat Patch Connectivity and Population Survival. Ecology 66:1,762-1,768.

Faulkner, D., and M. Klein
2006 San Diego County Sensitive Butterfly Workshop.

Fisher, R.N., and T.J. Case
2011 A Field Guide to the Reptiles and Amphibians of Coastal Southern California. USGS website: http://www.werc.usgs.gov/Project.aspx?ProjectID=75 accessed 2011

Fraser, J.D., and D.R. Luukkonen
1986 The loggerhead shrike. Pages 933-941 in R. L. DiSilvestro, editor. Audubon Wildlife Report 1986. Academic Press, New York.

Frey, J.K.
1995 Mammals of the Negrito Creek Watershed, Gila National Forest, Reserve Ranger District, Catron Company, New Mexico. A Final Report Submitted to Gila National Forest, Reserve District, USDA Forest Service. 38 pp. September.

Gaines, D.
1974 Review of the status of the Yellow-billed Cuckoo in California: Sacramento Valley populations. Condor 76:204-209.

Garrett, K., and J. Dunn
1981 Birds of southern California: status and distribution. Los Angeles Audubon Soc., Los Angeles.

Glassberg, J.
2001 Butterflies through Binoculars: A Field Guide to the Butterflies of Western North America. Oxford University Press, Inc., New York.

Glatston, A.R.
1994 The Red Panda, Olingos, Coatis, Raccoons, and their Relatives. The World Conservation Union.

Goldwasser, S.
1981 *Habitat Requirements of the Least Bell's Vireo*. Final Report. California Department of Fish and Game. Job IV-38.1.

Google
2013 Google Earth. US Department of State Geographer. Data SIO, U.S. Navy, NGA, GEBCO. earth.google.com/

Gray, M.V., and J.M. Greaves
1984 Riparian forest as habitat for the Least Bell's Vireo. pp. 605-611, *In:* R.E. Warner and K. M. Hendrix, (eds.), California riparian systems: Ecology, conservation, and productive management. Univ. California Press, Berkeley, California.

Grinnell, J., and A.H. Miller
1944 The Distribution of the Birds of California. *Pacific Coast Avifauna* No. 27, 608 pp.

Grinnell, J., J. Dixon, and J.M. Linsdale
1937 Fur-bearing mammals of California. 2 vol., University of California Press, Berkeley, 777 pp.

Guinan, J.A., P.A. Gowaty and E.K. Eltzroth.
2008 Western Bluebird (*Sialiamexicana*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/510

Haddad, N.M., D.K. Rosenberg, and B.R. Noon
2002 On Experimentation and the Study of Corridors: Response to Beier and Noss ... Volume 14, No. 5, pp. 1543-1545.

Hall, E.R.
1981 *The Mammals of North America.* Second Edition. John Wiley & Sons, New York, NY.

Harvey, M.J., J.S. Altenbach, and T.L. Best
1999 Bats of the United States. Published by the Arkansas Game and Fish Commission in cooperation with the Ashfield Field Office, United States Fish and Wildlife Service.

Harris, J.
1983 California Habitat Relationships System, California Department of Fish and Game, California Interagency Wildlife Task Group. Available from [www.dfg.ca.gov/whdab/html/M037.html] (copyright 2003).

Harris, L.D., and P.B. Gallagher
1989 New Initiatives For Wildlife Conservation: The Need For Movement Corridors. Pages 11-34 in, Defenders of Wildlife. In Defense of Wildlife: Preserving Communities and Corridors. Defenders of Wildlife, Washington, D.C.

Haug, E.A., B.A. Millsap, and M.S. Martell
1993 Burrowing Owl (*Speotyto cunicularia*). In: A. Poole and F. Gill (eds.), The Birds of North America, No. 61. Philadelphia: The Academy of Natural Sciences; Washington, D.C.: The American Ornithologists' Union.

Hickman, J.C., ed.
1993 *The Jepson Manual: Higher Plants of California.* University of California Press, Berkeley and Los Angeles.

Holland, R.F.
1986 *Preliminary Descriptions of the Terrestrial Natural Communities of California*. State of California, The Resources Agency, Department of Fish and Game, Natural Heritage Division, Sacramento, California.

Hollingsworth, B., K. Gray-Lovich, and R. Lovich
2010 *Bufo californicus,* Arroyo Toad. San Diego Natural History Museum. Online: http://www.sdnhm.org/fieldguide/herps/bufo-cal.html

Howell, D.H., and B. Schropfer Roth
1981 Sexual Reproduction in Agaves: the benefits of bats; the cost of semelparous advertising. In: Ecology. Vo. 62.N.1. February 1981. 1-7

Jennings, M.R.
1987 Impact of the curio trade for San Diego Horned Lizards (*Phrynosoma coronatum blainvillii*) in the Los Angeles Basin, California: 1885-1930. J. Herpetol. 21(4):356-358.
1988 *Phrynosoma coronatum*. Cat. Amer. Amph. Rept. 428.1-5.

Jennings, M.R., and M.P. Hayes.
1994 *Amphibian and Reptile Species of Special Concern in California*. Report prepared for California Department of Fish and Game, Rancho Cordova, California. 255 pp.

Jones, L.L., and R.E. Lovich, editors.
2009 Lizards of the American Southwest A Photographic Field Guide. Rio Nuevo Publishers. Tucson, Arizona.

Kays, R.W., and D.E. Wilson
2002 Mammals of North America. Princeton University Press. Princeton and Oxford.

Klauber, L.M.
1939 Studies of reptile life in the arid southwest. Bull. Zool. Soc. San Diego 14:1-100.

Klute, D.S., L.W. Ayers, M.T. Green, W.H. Howe, S.L. Jones, J.A. Shaffer, S.R. Sheffield, and T.S. Zimmerman
2003 Status Assessment and Conservation Plan for the Western Burrowing Owl in the United States. United States Department of Interior, Fish and Wildlife Service, Biological Technical Publication FWS/BTP-R6001-2003, Washington D.C.

Kunz, T.H., and R.A. Martin
1982 Plecotus townsendii. Mammalian Species 175:1-6. American Society of Mammalogists.

Kus, B.
2002 Least Bell's vireo (*Vireo bellii pusillus*). In California Partners in Flight. The riparian bird conservation plan: a strategy for reversing the decline of riparian-associated birds in California. Available at: http://www.prbo.org/calpif/htmldocs/riparian_v-2.html.

Lemm, J.M.
2006 Field guide to Amphibians and Reptiles of the San Diego Region. University of California Press. Berkeley, California.

Lightner, J.
2006 *San Diego County Native Plants*. San Diego Flora, San Diego, California.

Lowther, P.E., C. Celada, N.K. Klein, C.C. Rimmer, and D.A. Spector
1999 Yellow Warbler (Dendroica petechia). Species Account Number 454. The Birds of North America Online (A. Poole, Ed.). Ithaca, NY: Cornell Laboratory of Ornithology; Retrieved 3/25/2008 from The Birds of North America Online database: http://bna.birds.cornell.edu/bna/

Martin, J.W., and B. A. Carlson
1998 Sage Sparrow (*Amphispiza belli*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/326

Mattoni, R., G.F. Pratt, J.F. Longcore, and J.N. George
1997 The Endangered Quino Checkerspot Butterfly, *Euphydryas editha quino* (Lepidoptera: Nymphalidae), J. Res. Lepid 34:99-118.

Mayer, K.E., and W.F. Laudenslayer, Jr.
1988 *A Guide to the Wildlife Habitats of California*. California Department of Forestry and Fire Protection, Sacramento.

Merriam, C.H.
1890 Molossus californicus North American Fauna, 4:31. Alhambra, Los Angeles County, California.

Miller , C.M.
1944 Ecological relationships and adaptations of the limbless lizards of the genus Anniella. Ecol. Monographs. 14: 271-289.

Mock, P.
2004 California Gnatcatcher (*Polioptila californica*). In The Coastal Scrub and Chaparral Bird Conservation Plan: a strategy for protecting and managing coastal scrub and chaparral habitats and associated birds in California. California Partners in Flight. http://www.prbo.org/calpif/htmldocs/scrub.html

Munz, P.
1974 *A California Flora and Supplement*. University of California Press, Berkeley, California.

NatureServe
2013 NatureServe Explorer: an online encyclopedia of life. Available at http://www.natureserve.org/explorer/. Accessed October and November 2013.

Noss, R.F.
1983 A regional landscape approach to maintain diversity. BioScience 33:700-706.
1987 Corridors in real landscapes: a reply to Simberloff and Cox. Conserv. Biol. 1:159-164.

O'Farrell, M.J.
1990 Stephens' Kangaroo Rat: Natural History, Distribution, and Current Status. Pp 78-84, In P.J. Bryant and J. Remington (eds.), *Memoirs of the Natural History Foundation of Orange County*; Vol. 3. Published by Natural History Foundation of Orange County.

O'Farrell, M.J., and C.E. Uptain
1987 Distribution and Aspects of the Natural History of Stephens' Kangaroo Rat (*Dipodomys stephensi*) on the Warner Ranch, San Diego County, California. *The Wasmann Journal*, 45:34-48.
1989 Assessment of Population and Habitat Status of the Stephens' Kangaroo Rat (*Dipodomys stephensi*). California Department of Fish and Game, Non-game Bird and Mammal Section Report (July 1989).

O'Farrell, M.J., S.M. Juarez, and C.E. Uptain
1986 A New Addition to the Known Range of Stephens' Kangaroo Rat (*Dipodomys stephensi*) in San Diego County. *California Fish and Game*, 72:187-189.

Opler, P.A., K. Lotts, and T. Naberhaus, coordinators
2010 *Butterflies and Moths of North America*. Bozeman, MT: Big Sky Institute. http://www.butterfliesandmoths.org/ (Version 01/11/2011).

Patten, M.A., G. McCaskie, and P. Unitt
2003 Birds of the Salton Sea. Univ. of California Press, Los Angeles.

Pavlik, B., P.C. Muick, S.G. Johnson, and M. Popper
2006 *Oaks of California*. Cachuma Press, Los Olivos, California.

Penrod, K., R. Hunter, and M. Merrifield.
2001 Missing Linkages: Restoring Connectivity to the California Landscape, Conference Proceedings. Co-sponsored by California Wilderness Coalition, The Nature Conservancy, U.S. Geological Survey, Center for Reproduction of Endangered Species, and California State Parks.

Pierson, E.D., and W.E. Rainey
1998 Terrestrial Mammal Species of Special Concern in California, Bolster, B.C., Ed. Accessed at: http://www.dfg.ca.gov/wildlife/nongame/ssc/docs/mammal/species/06.pdf

Polite, C., and J. Pratt
2008 *California Wildlife Habitat Relationships (CWHR) System*. Written for CDFG California Interagency Wildlife Task Group.

Rea, A.M., and K. Weaver
1990 The taxonomy, distribution, and status of coastal California Cactus Wrens. Western Birds 21: 81-126.

Rebman, J.P., and M.G. Simpson
2006 *Checklist of the Vascular Plants of San Diego County*, 4th Edition. San Diego. Natural History Museum, San Diego, California.

Remsen, Jr., J.V.
1978 Bird species of special concern in California: an annotated list of declining or vulnerable bird species. Calif. Dept. Fish and Game, Nongame Wildlife Investigation, Wildlife Management Branch, Administration Rep.No. 78-l.

Roberts, F.M.
1995 *Illustrated Guide to the Oaks of the Southern Californian Floristic Province: The Oaks of Coastal Southern California and Northwestern Baja California*. F.M. Roberts Publishing, Encinitas, California.

Rosenberg, K.V., R.D. Ohmart, W.C. Hunter, and B.W. Anderson
1991 Birds of the lower Colorado River valley. Univ. of Arizona Press, Tucson.

San Diego Gas and Electric Company (SDG&E)
1995 *Subregional Natural Communities Conservation Plan*

San Diego Natural History Museum (SDNHM)
2013a http://www.sdnhm.org/science/birds-and-mammals/projects/san-diego-county-bird-atlas/. Bird Atlas Project. Accessed October and November 2013.
2013b www.sdplantatlas.org . Plant Atlas Project. Accessed Oct and November 2013

Sanborn, J.
1932 Eumops perotis californicus Mamm., 13:351

Sawyer, Jr., J.O., and T. Keeler-Wolf
1995 *A Manual of California Vegetation*. California Native Plant Society, Sacramento, California.

Sedgwick, J.A.
2000 Willow Flycatcher (*Empidonax traillii*). In *The Birds of North America*, No. 533 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, Pennsylvania.

Sherbrooke, W.C.
2003 *Introduction to Horned Lizards of North America.* California Natural History Guides.

Shiraiwa, K.
2009 *The Butterflies of San Diego. Introduction and Identification Guide*. Self-published by Kojiro Shiraiwa.

Shuford, W.D., and T. Gardali
2008 California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Sibley, D.A.
2003 The Sibley Field Guide to Birds of Western North America. Alfred A. Knopf, Inc., New York (distributed by Random House, New York).

Simberloff, D.S., and J. Cox.
1987 Consequences and Costs of Conservation Corridors. Conservation Biology 1:63-71.

Small, A.
1994 California birds: their status and distribution. Ibis Publ. Co., Vista, CA.

Sodhi, N.S., L.W. Oliphant, P.C. James, and I.G. Warkentin
2005 Merlin (*Falco columbarius*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/044

Sogge, M.K., R.M. Marshall, S.J. Sferra, and T.J. Tibbitts
1997 A Southwestern Willow Flycatcher Natural History Summary and Survey Protocol. Technical Report NPS/NAUCPRS/NRTR-97/12. USGS Colorado Plateau Research Station, Northern Arizona University, Flagstaff, Arizona.

Sogge, M.K., S.J. Sferra, T.D. McCarthey, S.O. Williams, and B.E. Kus
2003 Distribution and characteristics of Southwestern Willow Flycatcher breeding sites and territories: 1993-2001. Studies in Avian Biology No. 26:5–11. Colorado River Valley. Univ. of Arizona Press, Tucson.

Solek, C., and L. Szijj
2004 Cactus Wren (*Campylorhynchus brunneicapillus*). In The Coastal Scrub and Chaparral Bird Conservation Plan: a strategy for protecting and managing coastal scrub and chaparral habitats and associated birds in California. California Partners in Flight. http://www.prbo.org/calpif/htmldocs/scrub.html

Soulé, M.E.
1987 Viable populations for conservation. Cambridge Univ. Press, Cambridge.

Soulé, M.E., D.T. Bolger, A.C. Roberts, J. Wright, M. Sorice, and S. Hill
1988 Reconstructed dynamics of rapid extinctions of chaparral-requiring birds in urban habitat islands. Conserv. Biol. 2:75- 92.

Spencer, W.D., P. Beier, K. Penrod, K. Winters, C. Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler
2010 California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California. Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration.

Stebbins, R.C.
1985 *A Field Guide to Western Reptiles and Amphibians*. Second Edition. Houghton Mifflin Company, Boston, Massachusetts.
2003 *Western Reptiles and Amphibians*. Third Edition. Houghton Mifflin Company. New York, NY.

Stephenson, J.R., and G.M. Calcarone
1999 *Southern California Mountains and Foothills Assessment: Habitat and Species Conservation Issues*. Albany, California: Pacific Southwest ResearchStation, USDA Forest Service. General Technical Report PSW-GTR-172.

Streubel, D.
2000 Taxidea taxus (American Badger). Idaho Museum of Natural History. Available from[http://imnh.isu.edu/digitalatlas/bio/mammal/Carn/muste/amba/badger.htm].

Thorngate, N., and M. Parsons.
2005 Rufous-crowned Sparrow (*Aimophila ruficeps*). In The Coastal Scrub and Chaparral Bird Conservation Plan: a strategy for protecting and managing coastal scrub and chaparral habitats and associated birds in California. California Partners in Flight. http://www.prbo.org/calpif/htmldocs/scrub.html

United States Army Corps of Engineers (USACE)
1987 *U.S. Army Corps of Engineers Wetlands Delineation Manual*, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.
2008 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.*

United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS)

2010 Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Official Soil Series Descriptions [Online WWW]. Available URL: "http://soils.usda.gov/technical/classification/osd/index.html" [Accessed on August 10, 2011].

2011 List of Hydric Soils - National List; all states.

United States Fish and Wildlife Service (USFWS)

1986 Endangered and Threatened Wildlife and Plants: Determination of Endangered Status for the Least Bell's Vireo. Federal Register 51(85), May 2.

1991 Summary of the proposed rule to list the coastal California gnatcatcher (*Polioptila californica*) as endangered in California and Baja, Mexico. September. 114 pp.

1993 Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for Three Vernal Pool Plants and the Riverside Fairy Shrimp. Federal Register 58: 41384-41392.

1994 ETWP; Designation of Critical habitat for the Least Bell's Vireo. February 1994.

1997a Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Guidelines – February 28, 1997.

1997b Determination of Endangered Status for the San Diego Fairy Shrimp. 50 CFR Part 17, February 3, 1997.

1997c Federal Register / Vol. 62, No. 11. Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the Laguna Mountains Skipper and Quino Checkerspot Butterfly. January.

1998a Vernal Pools of Southern California Recovery Plan. U.S. Fish and Wildlife Service, Portland, Oregon. 113+ pp.

1998b Draft Recovery Plan for the Least Bell's Vireo. U.S. Fish and Wildlife Service, Portland, OR. 139pp.

1999 Arroyo southwestern toad (Bufo microscaphus californicus) recovery plan. US Fish and Wildlife Service, Portland, Oregon.

2001 Western Snowy Plover Pacific Coast Population Draft Recovery Plan. May 2001.

2002a *Quino Checkerspot Butterfly* (Euphydryas editha quino) *Survey Protocol Information.* February 2002.

2002b *Federal Designation of Critical Habitat for Quino Checkerspot Butterfly* (*Euphydryas editha quino*). Federal Register, 67:18355-18395.

2002c Final Recovery Plan Southwestern Willow Flycatcher (*Empidonax traillii extimus*). Prepared By Southwestern Willow Flycatcher Recovery Team Technical Subgroup. August 2002.

2007a Proposed Low-Effect Quino Checkerspot Butterfly Habitat Conservation Plan for the San Diego Gas and Electric Company, San Diego, Riverside, and Orange Counties, CA. March 2007.

2007b Designation of Critical Habitat for the San Diego Fairy Shrimp (*Brnchinecta sandiegonensis*); Final Rule. December 2007.

2007c Revised Designation of Critical Habitat for the Coastal California Gnatcatcher (Polioptila californica californica); Final Rule. December 2007.

2008 Designation of Critical Habitat for Acanthomintha ilicifolia (*San Diego thornmint*); final rule. August 2008.

2010 Revised Critical Habitat for Navarretia fossalis (*Spreading Navarretia*); Final Rule. October 2010.

2012a Revised Endangered Status, Revised Critical Habitat Designation, and Taxonimic Revision for Monardella linoides ssp. viminea; Final Rule. March 2012.

2012b Revised Designation of Critical Habitat for the Pacific Coast Population of the Western Snowy Plover Final Rule. June 2012.

Unitt, P.A.

2004 San Diego County Bird Atlas. San Diego Natural History Museum. San Diego, CA.

2008 San Diego Cactus Wren. In: *California Bird Species of Special Concern*. W.D. Shuford and T. Gardali, eds. *Studies of Western Birds No. 1*. Western Field Ornithologists/California Dept. of Fish and Game.

University of California, Berkeley

2013 Essig Museum of Entomology: Laguna Mountains Skipper. Berkely, California. http://essig.berkeley.edu/endins/ruralis.htm (Accessed on October 9, 2013).

Verner, J., G.N. Steger, G.P. Eberlein, D.A. Leal, and T.E. Munton

1991 Annual progress report, 1990, spotted owl home-range size and composition in the Sierra National Forest; 2, demography of spotted owls in the Sierra National Forest and Sequoia/Kings Canyon National Parks. USDA, For. Serv. PSW For. & Range Exp. Stn., Fresno, CA.

Westman, W.

1981a Diversity Relations and Succession in California Coastal Sage Scrub. *Ecology* 62:170-184.

1981b Factors Influencing the Distribution of Species of California Coastal Sage Scrub. *Ecology* 62:439-455.

Wheelwright, N.T., and J.D. Rising

1993 Savannah Sparrow (*Passerculus sandwichensis*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/045

White, C.M., N.J. Clum, T.J. Cade, and W.G. Hunt

2002 Peregrine Falcon (Falco peregrinus), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/660.

Williams, D.F.

1986 Mammalian species of concern in California. California Department of Fish and Game Report 86-1. Sacramento, CA: California Department of Fish and Game.

Wilson, D.E., and S. Ruff

1999 Smithsonian Book of North American Mammals. UCB Press, Vancouver and Toronto. In association with the Smithsonian Institute Press and the American Society of Mammologists.

Winkler, D.W.
1996 California Gull (*Larus californicus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/259

Wolf, B.O., and S.L. Jones
2000 Vermilion Flycatcher (*Pyrocephalus rubinus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/484

Woodbridge, B.
1998 Swainson's Hawk (*Buteo swainsoni*). The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. http://www.prbo.org/calpif/htmldocs/species/riparian/swainsons_hawk.htm

Xerces Society for Invertebrate Conservation, The
2013 Skippers: Laguna Mountains skipper (Pyrgus ruralis lagunae). Profile prepared by Scott Hoffman Black and Mace Vaughan. http://www.xerces.org/laguna-mountains-skipper/ (Accessed on October 9, 2013).

Yosef, R.
1996 Loggerhead Shrike (*Lanius ludovicianus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/231.

Zeiner, D.C., W.F. Laudenslayer, Jr., and K.E. Mayer
1988 *California's Wildlife. Volume I. Amphibians and Reptiles*. California Statewide Wildlife Habitat Relationships System, California Department of Fish and Game, Sacramento, California.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White
1990 *California's Wildlife: Volume III. Mammals*. California Department of Fish and Game.

Zusi, R.L., and D. Bridge
1981 On the Slit Pupil of the Black Skimmer (*Rynchops niger*). Journal of Field Ornithology. Vol.52, No.4.

Zweifel, R.G.
1952 Notes on the lizards of the Coronado Islands, Baja California, Mexico. Herpetologica 8:9-11.

APPENDIX A

Figures

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_BusbyLocation.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Location

Figure 1

Proposed Project

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

N W E S

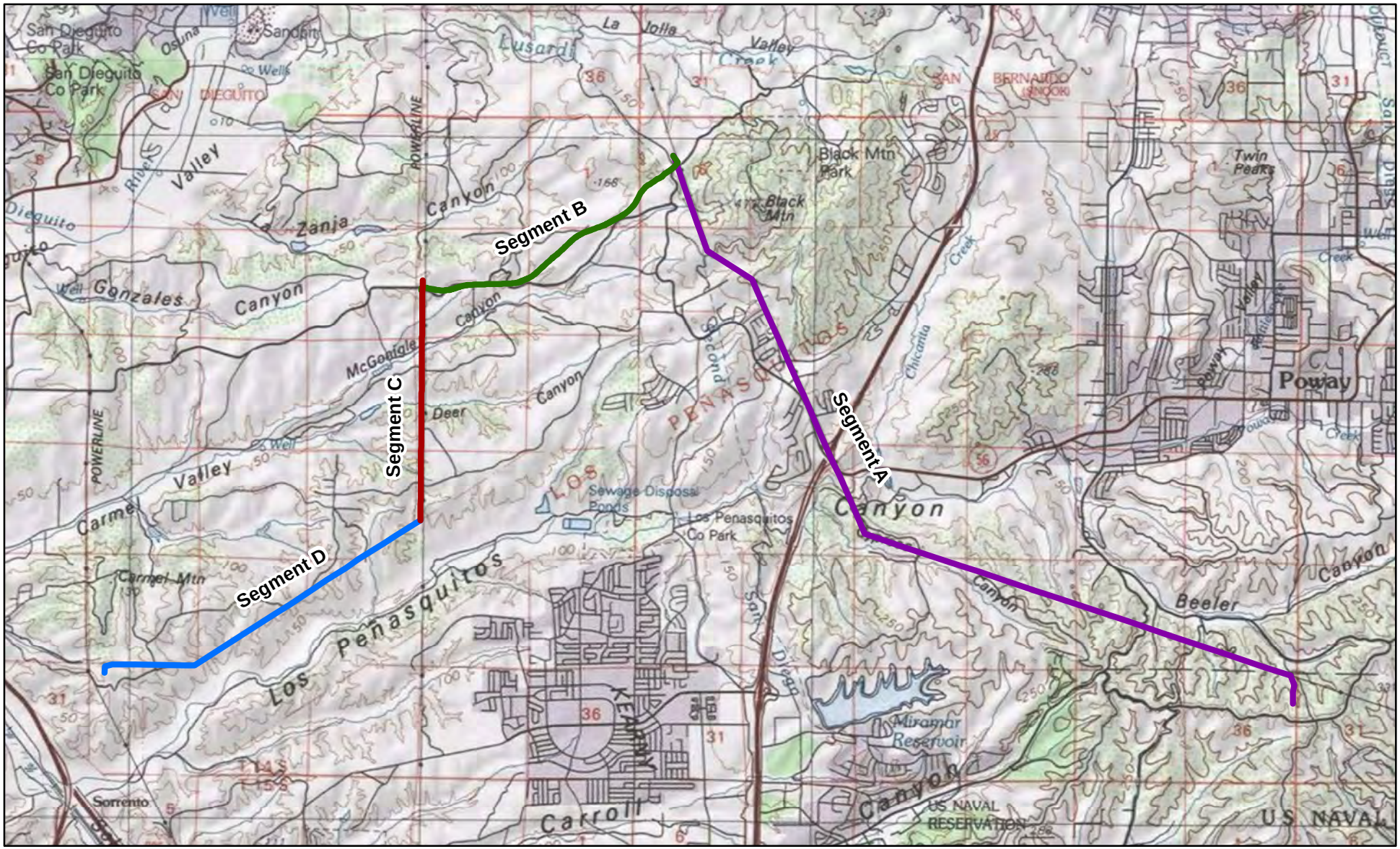
0 10 20 30 Miles

3/18/2014

TRC

SDGE A Sempra Energy utility

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



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_BusbyVicinity.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

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

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Vicinity

Figure 2

Date: 3/18/2014

0 1 2 3 Miles

Sources: SDG&E; Copyright:© 2013 National Geographic Society, i-cubed

TRC

SDGE

A Sempra Energy utility

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)

TRC

SDGE A Sempra Energy utility

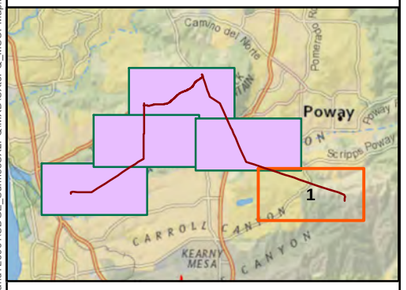
3/18/2014

N W E S

0 4 8 12

Miles

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.



Sources: SDG&E;SanGIS/SANDAG Data WarehouseSources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

G:\SDGE_SX2PQandTL698\TSDGE_SunriseSX2PQ\MXDs\SXtoPQ_MSCPMap.mxd

MCAS Miramar

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)

TRC

SDGE — A Sempra Energy utility

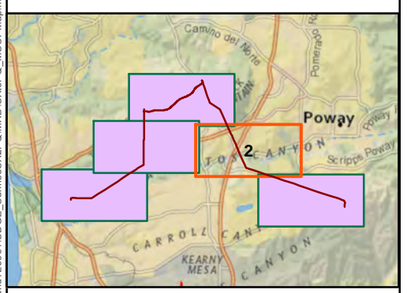
3/18/2014

N W E S

0 4 8 12

Miles

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.



G:\SDGE_SX2Poland\T.6861\SDGE_SunriseSX2PQ\MXD\SX6PQ_MSCPMap.mxd

Sources: SDG&E;SanGIS/SANDAG Data WarehouseSources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

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)

TRC

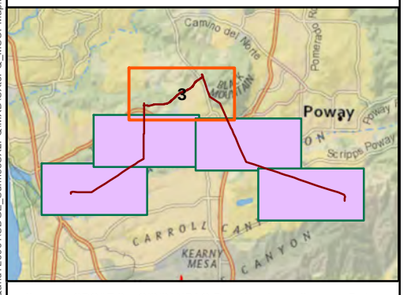
SDGE A Sempra Energy utility

3/18/2014

0 4 8 12

Miles

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.



Sources: SDG&E;SanGIS/SANDAG Data WarehouseSources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

G:\SDGE_SX2PQan\TL6861\SDGE_SunriseSX2PQ\MXD\SX0PQ_MSCPMap.mxd

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)

TRC

SDGE

A Sempra Energy utility

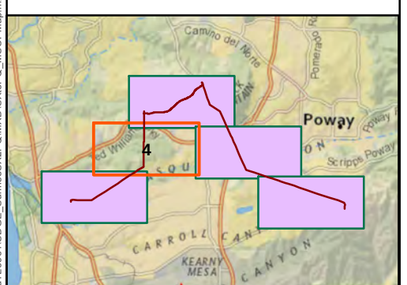
3/18/2014

N W E S

0 4 8 12

Miles

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.



Sources: SDG&E;SanGIS/SANDAG Data WarehouseSources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

G:\SDGE_SX2PoandT\L6981\SDGE_SunriseSX2PQ\MXD\SX6PQ_MSCPMap.mxd

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)

TRC

SDGE A Sempra Energy utility

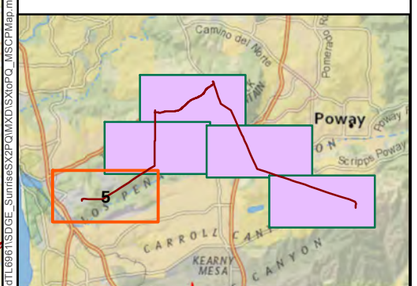
3/18/2014

N W E S

0 4 8 12

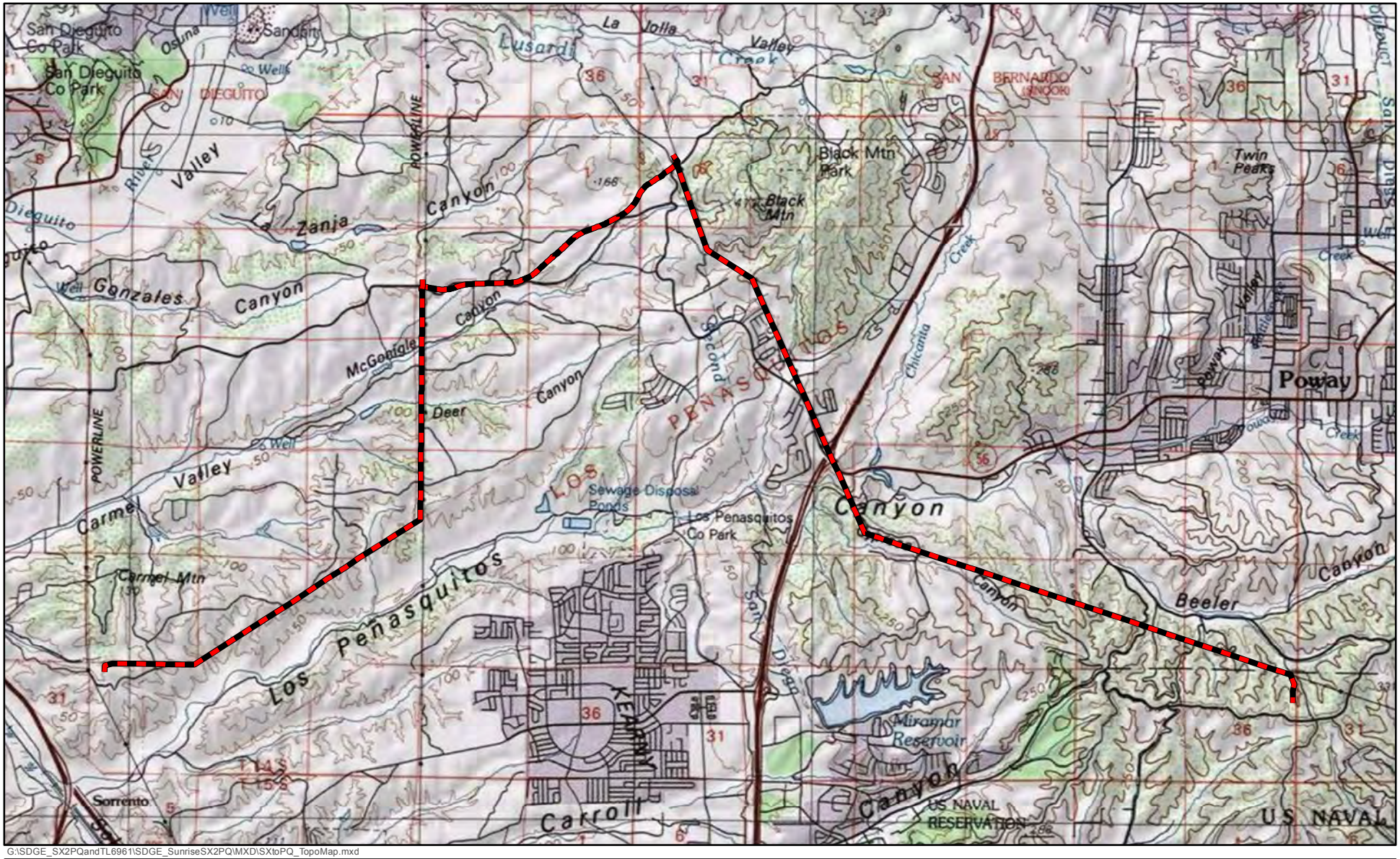
Miles

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.



Sources: SDG&E;SanGIS/SANDAG Data WarehouseSources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

G:\SDGE_SX2P\and1.6861\SDGE_SunriseSX2PQ\MXD\SXtoPQ_MSCPMap.mxd



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_TopoMap.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Topographic

Figure 4

Proposed Project

N W E S

0 1 2 3 Miles

3/18/2014

TRC SDGE A Sempra Energy utility

Sources: SDG&E; Copyright:© 2013 National Geographic Society, i-cubed

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

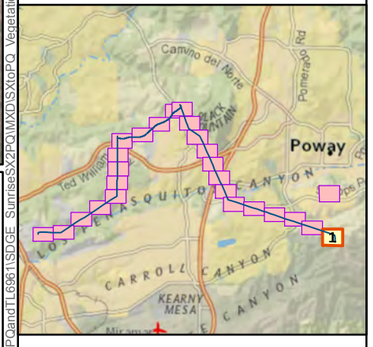
TRC

SDGE A Sempra Energy utility

3/26/2014

0 250 500 750

Feet



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

G:\SDGE_SX2P\and\T1696\1\SDGE_SunriseSX2PQ\MXD\SXtoPQ_VegetationCommunities2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

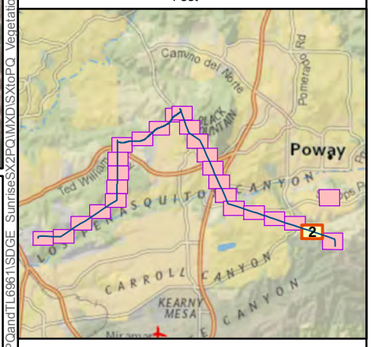
TRC

SDGE A Sempra Energy utility

3/26/2014

0 210 420 630

Feet



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

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SX2toPQ_VegetationCommunities2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

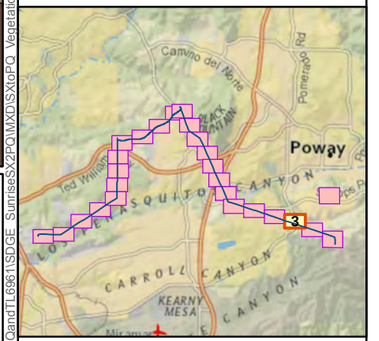
TRC

SDGE A Sempra Energy utility

3/26/2014

0 210 420 630

Feet



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

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SX2PQ_VegetationCommunities2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

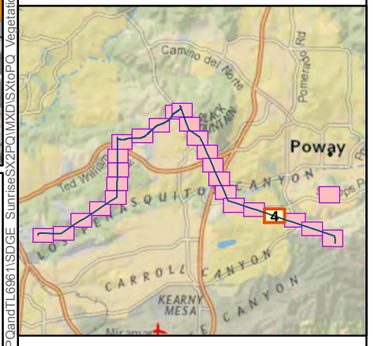
TRC

SDGE A Sempra Energy utility

3/26/2014

0 210 420 630

Feet



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

G:\SDGE_SX2PQandT\69611SDGE_SunriseSX2PQ\MXD\SX2toPQ_VegetationCommunities2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

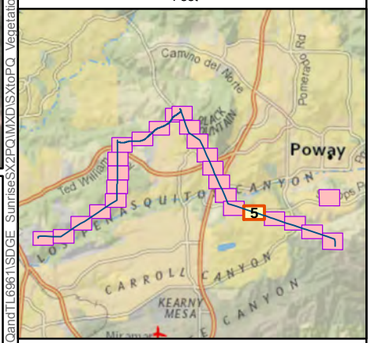
TRC

SDGE A Sempra Energy utility

3/26/2014

0 210 420 630

Feet



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

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PO\MXD\SXtoPQ_VegetationCommunities2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

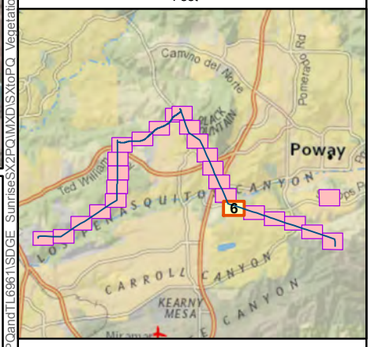
TRC

SDGE A Sempra Energy utility

3/26/2014

0 210 420 630

Feet



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

G:\SDGE SX2PQandTL6961\SDGE SunriseSX2PQ\MXD\SXtoPQ_VegetationCommunities2.mxd

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

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

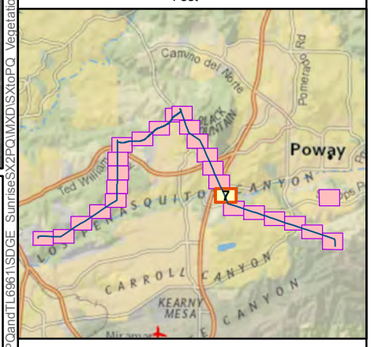
TRC

SDGE A Sempra Energy utility

3/26/2014

0 210 420 630

Feet



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

G:\SDGE SX2PQandTL6961\SDGE SunriseSX2PQ\MXD\SXtoPQ_VegetationCommunities2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

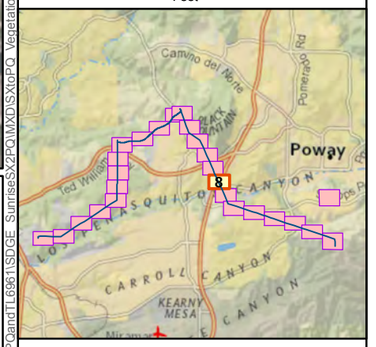
TRC

SDGE A Sempra Energy utility

3/26/2014

0 210 420 630

Feet



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

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_VegetationCommunities2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

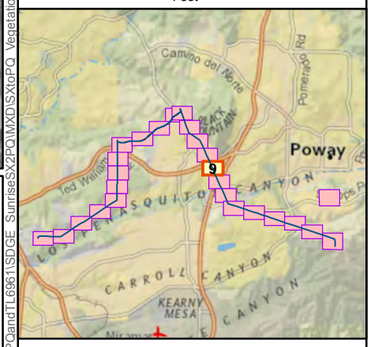
TRC

SDGE A Sempra Energy utility

3/26/2014

0 210 420 630

Feet



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

G:\SDGE SX2PQandTL6961\SDGE SunriseSX2PQ\MXD\SXtoPQ_VegetationCommunities2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

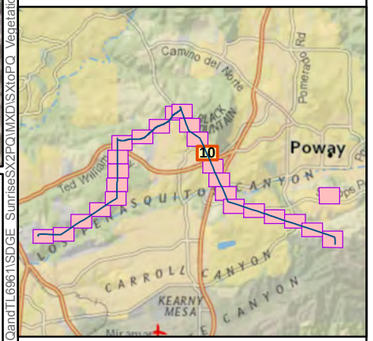
Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

3/26/2014

0 210 420 630

Feet



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

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SX1toPQ_VegetationCommunities2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

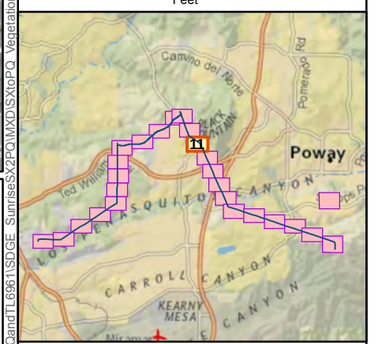
SDGE

A Sempra Energy utility

3/26/2014

0 210 420 630

Feet



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

G:\SDGE_SX2POandT\69611SDGE_SunriseSX2POandT\MXDs\SX2POandT_VegetationCommunities2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

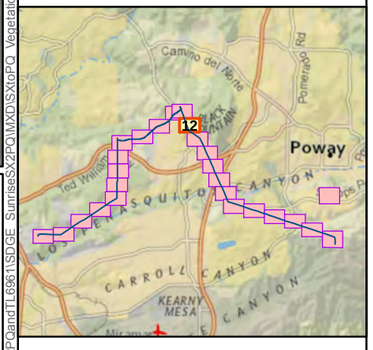
TRC

SDGE A Sempra Energy utility

3/26/2014

0 210 420 630

Feet



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

G:\SDGE SX2PQandT\ 69611\SDGE SunriseSX2PQ\MXD\SXtoPQ_VegetationCommunities2.mxd

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

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

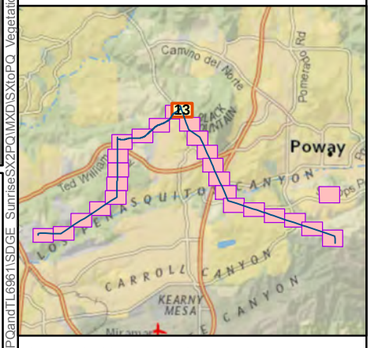
TRC

SDGE A Sempra Energy utility

3/26/2014

0 210 420 630

Feet



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

G:\SDGE_SX2P\and\T1696\1\SDGE_SunriseSX2PQ\MXD\SXtoPQ_VegetationCommunities2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

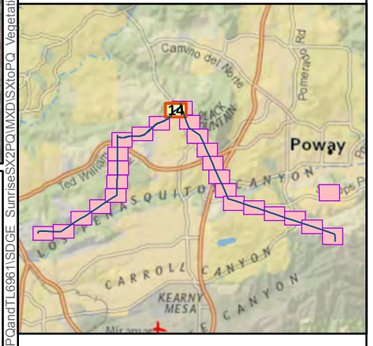
SDGE

A Sempra Energy utility

3/26/2014

0 210 420 630

Feet



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

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_VegetationCommunities2.mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

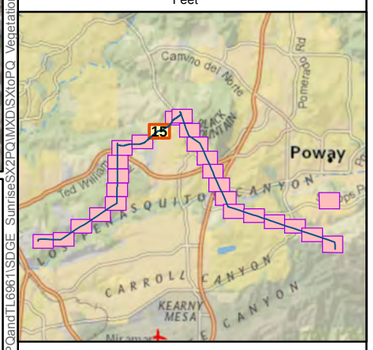
TRC

SDGE A Sempra Energy utility

3/26/2014

0 210 420 630

Feet



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

G:\SDGE SX2PQandTL6961\SDGE SunriseSX2PQ\MXD\SXtoPQ_VegetationCommunities2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

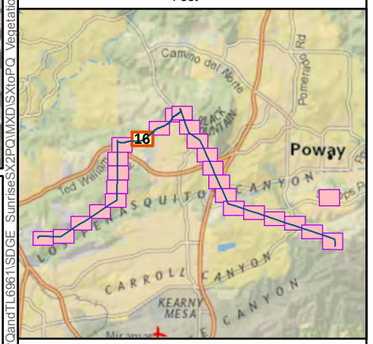
TRC

SDGE A Sempra Energy utility

3/26/2014

0 210 420 630

Feet



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

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SX2PQ_VegetationCommunities2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

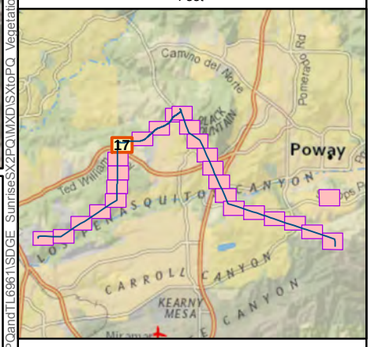
TRC

SDGE A Sempra Energy utility

3/26/2014

0 230 460 690

Feet



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

G:\SDGE_SX2POandTL6961\SDGE_SunriseSX2PO\MXD\SX2toPQ_VegetationCommunities2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

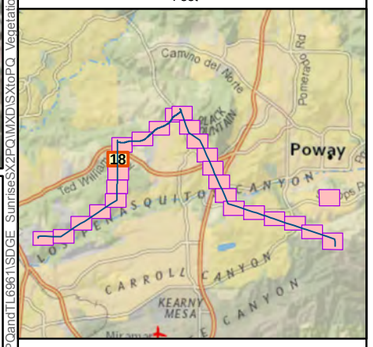
TRC

SDGE A Sempra Energy utility

3/26/2014

0 210 420 630

Feet



G:\SDGE SX2PQ\and\TL6861\SDGE SunriseSX2PQ\MXD\SXtoPQ_VegetationCommunities2.mxd

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

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

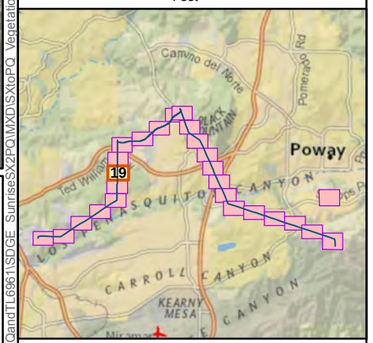
TRC

SDGE A Sempra Energy utility

3/26/2014

0 210 420 630

Feet



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

G:\SDGE SX2PQandTL6961\SDGE SunriseSX2PQ\MXD\SXtoPQ VegetationCommunities2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

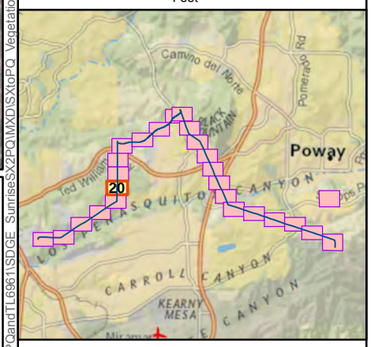
Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

3/26/2014

0 210 420 630

Feet



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

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_VegetationCommunities2.mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

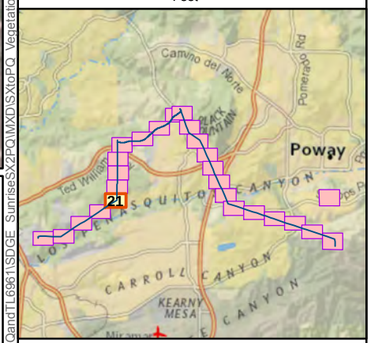
TRC

SDGE A Sempra Energy utility

3/26/2014

0 210 420 630

Feet



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

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_VegetationCommunities2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

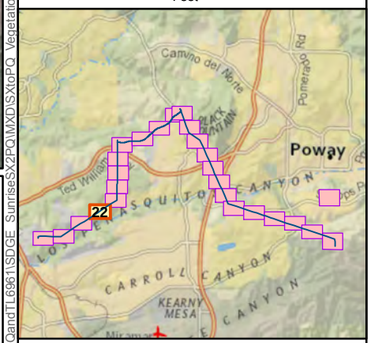
TRC

SDGE A Sempra Energy utility

3/26/2014

0 210 420 630

Feet



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

G:\SDGE SX2PQandTL6961\SDGE SunriseSX2PQ\MXD\SXtoPQ VegetationCommunities2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

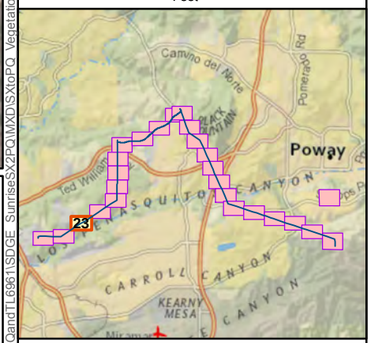
TRC

SDGE A Sempra Energy utility

3/26/2014

0 210 420 630

Feet



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

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_VegetationCommunities2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

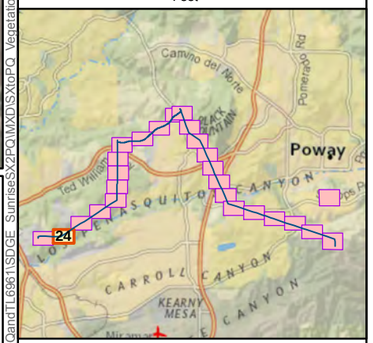
TRC

SDGE A Sempra Energy utility

3/26/2014

0 210 420 630

Feet



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

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SX2toPQ_VegetationCommunities2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

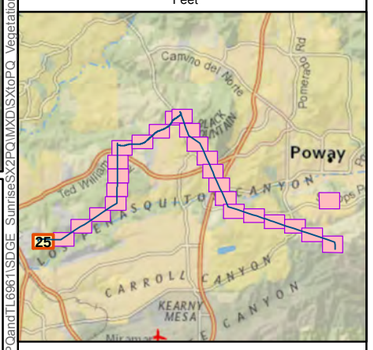
SDGE

A Sempra Energy utility

3/26/2014

0 210 420 630

Feet



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

G:\SDGE SX2PQandTL6961\SDGE SunriseSX2PQ\MXD\SXtoPQ VegetationCommunities2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Communities

Figure 5

Biological Survey Area

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

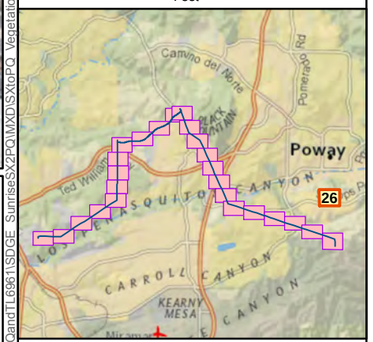
SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

SDGE
A Sempra Energy utility

3/26/2014

0 250 500 750
Feet



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

G:\SDGE SX2PQandTL6961\SDGE SunriseSX2PQ\MXD\SXtoPQ VegetationCommunities2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

CNDDB Results - Flora

Figure 6

- Proposed Project
- 1-mile Project Buffer
- 3-mile Project Buffer
- 5-mile Project Buffer

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

Path: G:\SDGE_SX2PQandTL69611\SDGE_SunriseSX2PQMXD\SXtoPQ_CNDDB.FloraPts5m.mxd

0 1 2 3

Miles

3/18/2014

Sources: CA Fish and Wildlife (CNDDB), August 2013 Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom

G:\SDGE_SX2PQandTL69961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_RarePlantsMap.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

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

0 1 2 3 Miles

N W E S

Date: 3/18/2014

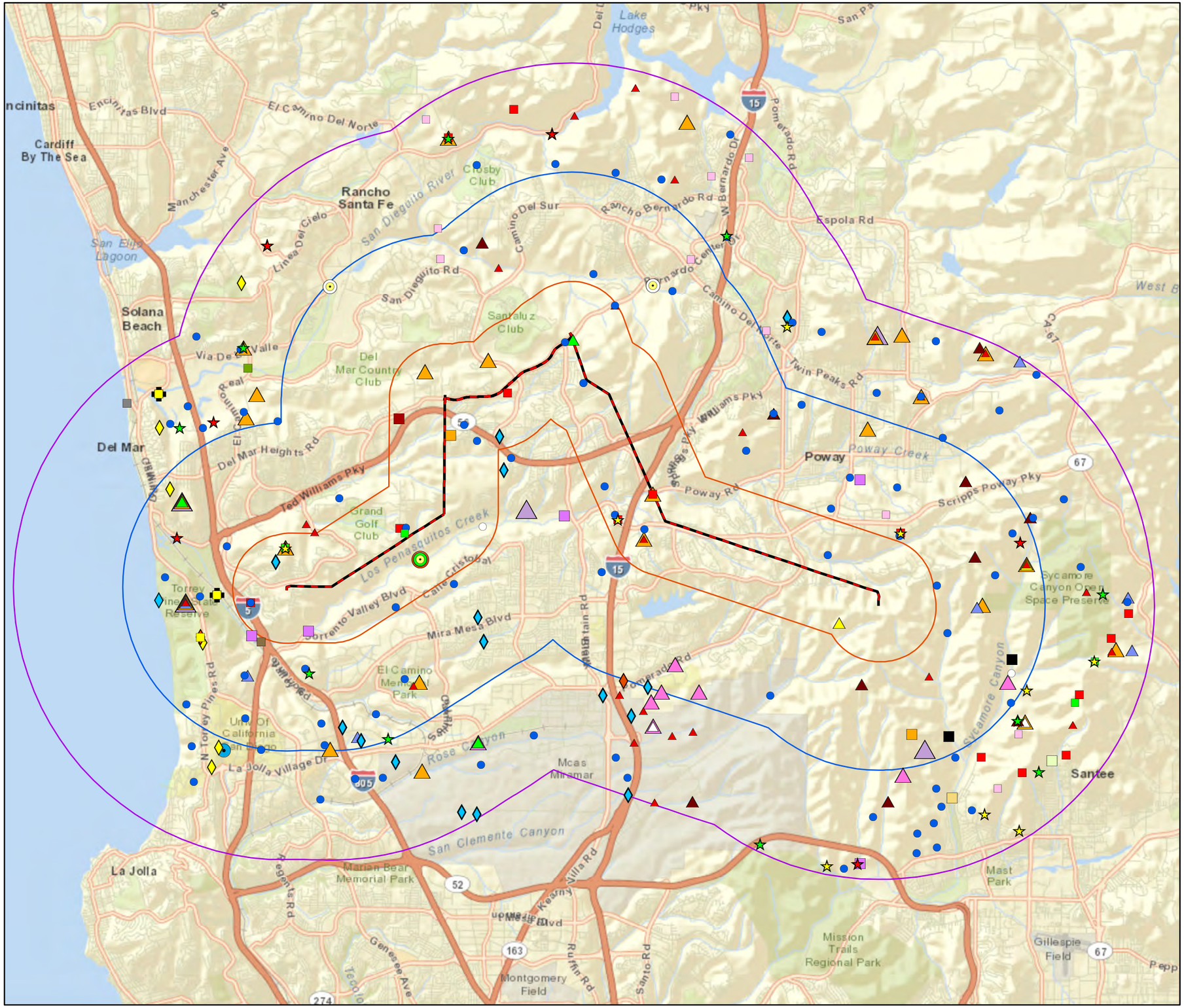
Sources:Busby Biological, SDG&E; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

CNDDB Results - Fauna

Figure 8



- Proposed Project
- 1-mile Project Buffer
- 3-mile Project Buffer
- 5-mile Project Buffer

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

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

0 1 2 3

Miles

3/18/2014

Path: G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_CNDDB_FuanaPts5m.mxd

Figure 9a-3

Figure 9a-4

Figure 9a-2

Figure 9a-5

Figure 9a-1

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_SpecialStatusWildlifeMap.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

- *Accipiter cooperii* Cooper's Hawk
- *Chaetura vaux*i 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
- *Odocoileus hemionus* Southern Mule Deer
- *Eremophila alpestris actia* California Horned Lark
- *Polioptila californica californica* Coastal California Gnatcatcher
- Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Special-Status Wildlife Detected

Figure 9

0 1 2 3 Miles

3/18/2014

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

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_SpecialStatusWildlifeMap9a1x.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

- *Accipiter cooperii* Cooper's Hawk
- *Chaetura vaux*i 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
- *Odocoileus hemionus* Southern Mule Deer
- *Eremophila alpestris actia* California Horned Lark
- *Polioptila californica californica* Coastal California Gnatcatcher
- Biological Survey Area

0 1,500 3,000 4,500 Feet

3/18/2014

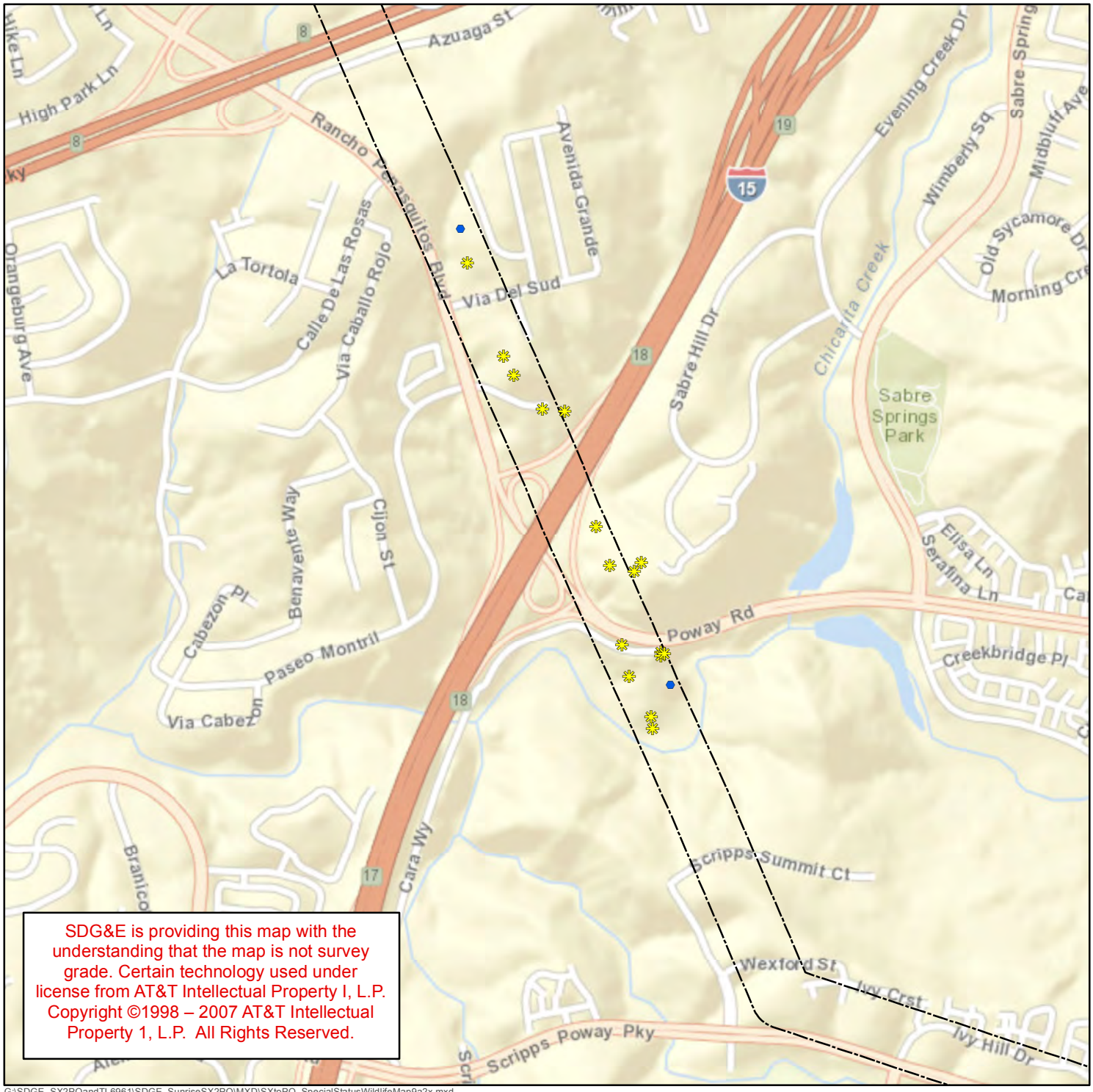
Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Special-Status Wildlife Detected

Figure 9a-1

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



SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_SpecialStatusWildlifeMap9a2x.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Special-Status Wildlife Detected

Figure 9a-2

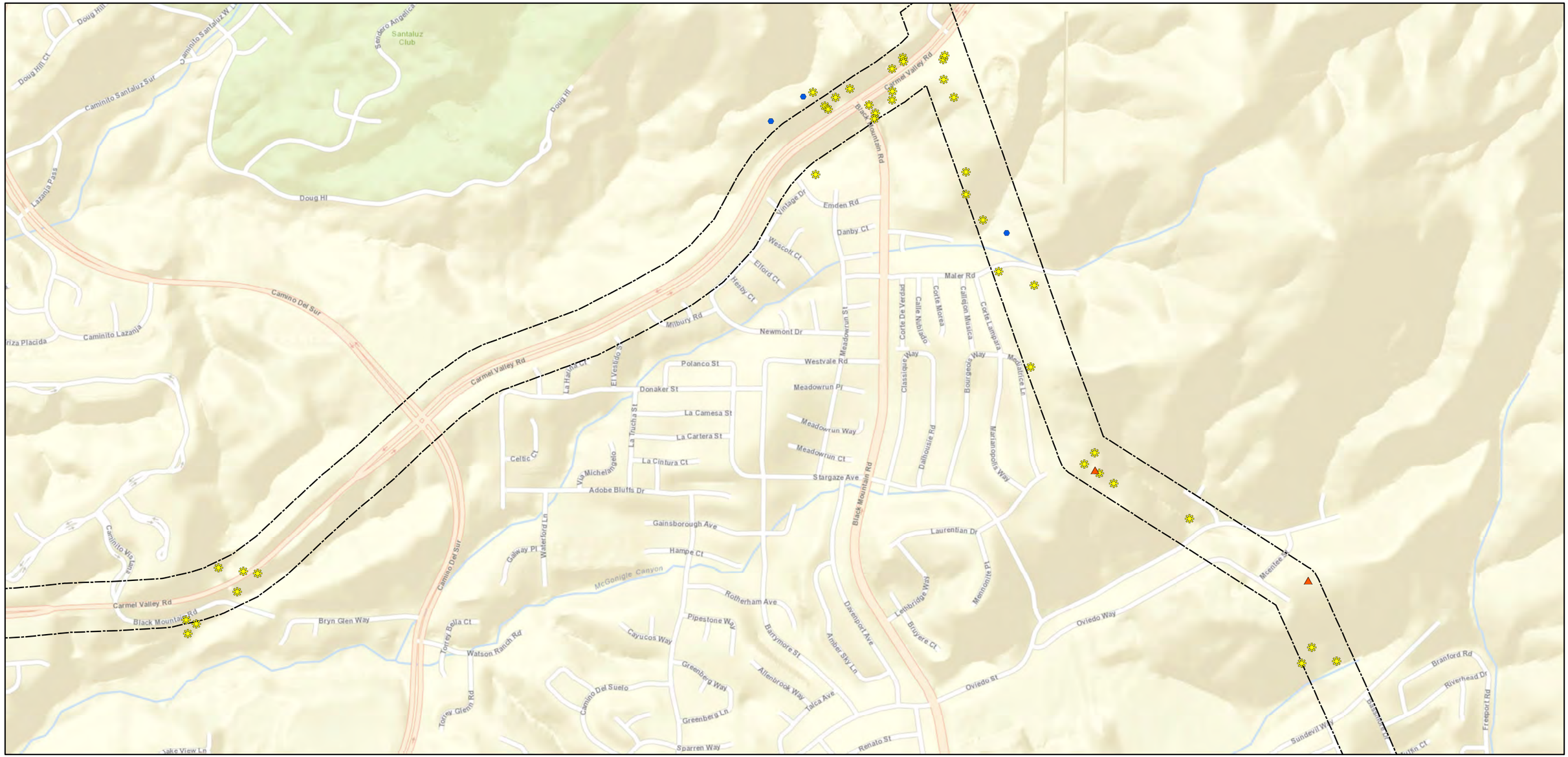
- *Accipiter cooperii* Cooper's Hawk
- *Chaetura vaux*i Vaux's Swift
- *Sialia mexicana* Western Bluebird
- *Lanius ludovicianus* Loggerhead Shrike
- *Odocoileus hemionus* Southern Mule Deer
- *Eremophila alpestris actia* California Horned Lark
- *Polioptila californica californica* Coastal California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

Biological Survey Area

0 1,000 2,000 3,000 Feet

3/18/2014

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



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_SpecialStatusWildlifeMap9a3x.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

- *Accipiter cooperii* Cooper's Hawk
- *Chaetura vaux*i Vaux's Swift
- *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

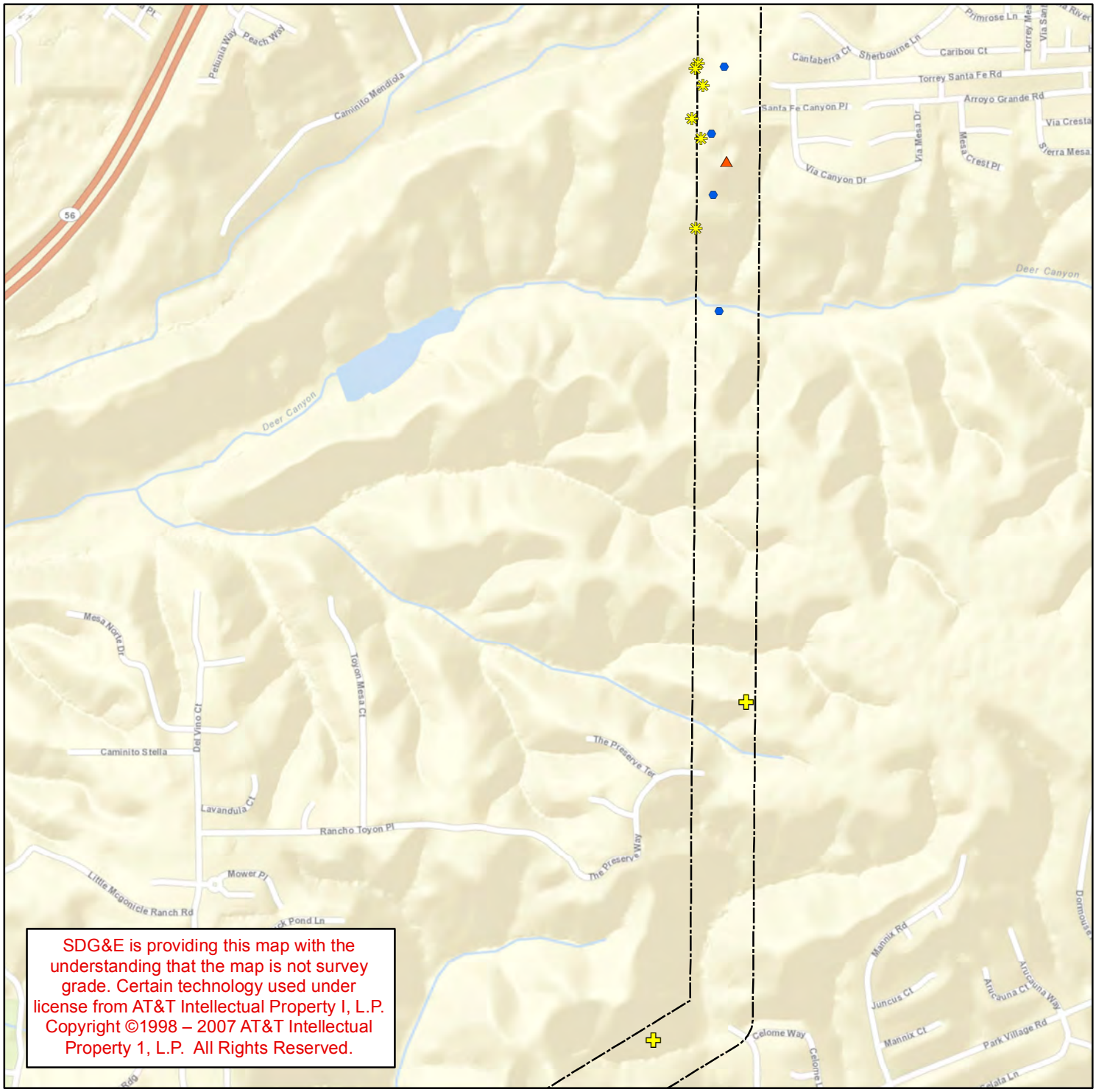
Special-Status Wildlife Detected

Figure 9a-3

0 0.25 0.5 0.75 Miles

3/18/2014

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



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_SpecialStatusWildlifeMap9a4x.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Special-Status Wildlife Detected

Figure 9a-4

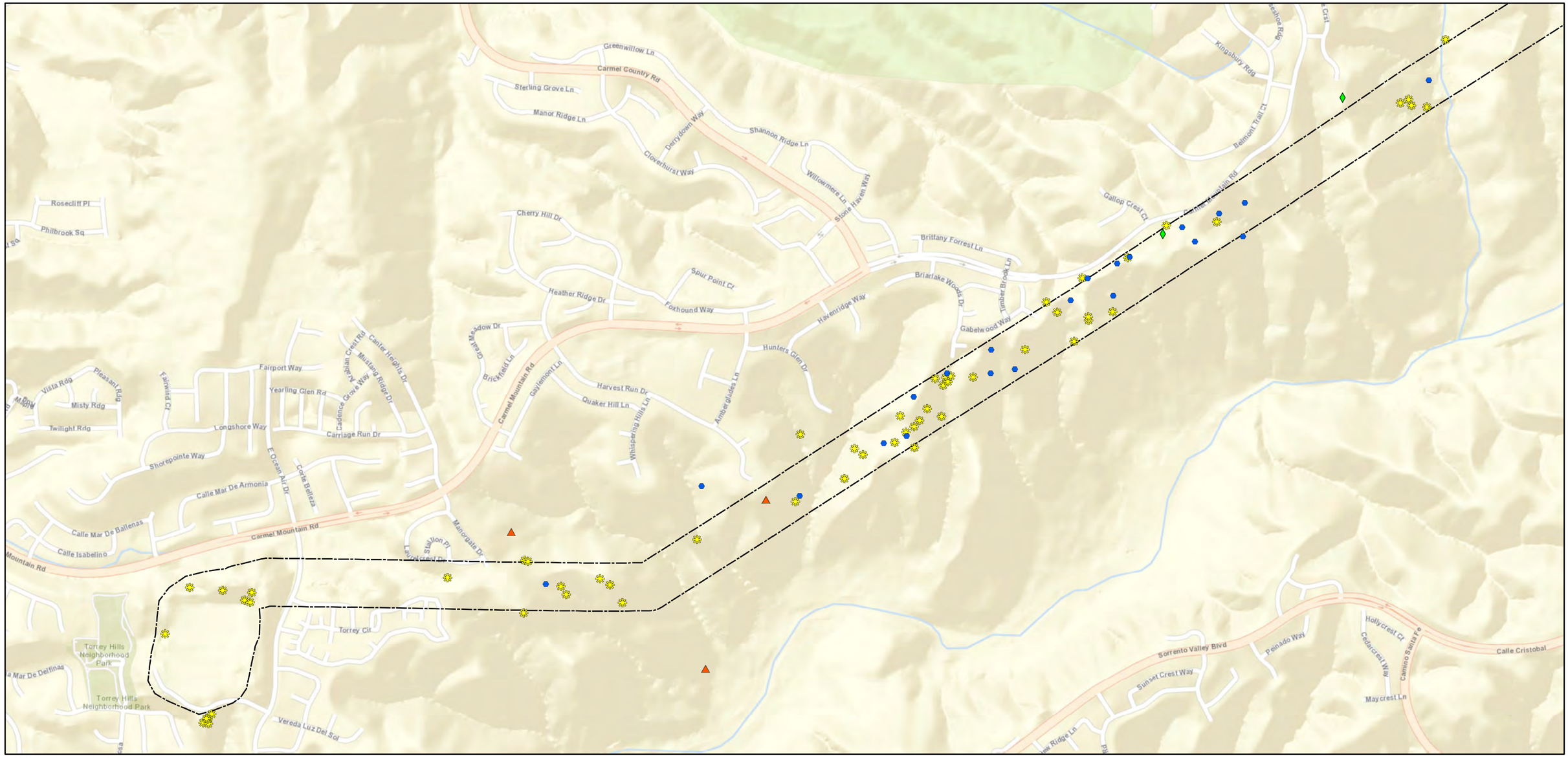
- *Accipiter cooperii* Cooper's Hawk
- *Chaetura vaux*i Vaux's Swift
- *Sialia mexicana* Western Bluebird
- *Lanius ludovicianus* Loggerhead Shrike
- *Odocoileus hemionus* Southern Mule Deer
- *Eremophila alpestris actia* California Horned Lark
- *Polioptila californica californica* Coastal California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

Biological Survey Area

0 1,000 2,000 3,000 Feet

3/18/2014

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



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_SpecialStatusWildlifeMap9a5x.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

- ▲ *Accipiter cooperii* Cooper's Hawk
- ✚ *Chaetura vaux*i Vaux's Swift
- ■ *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-5

0 0.25 0.5 0.75 Miles

3/18/2014

Sources: Busby Biological; 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

Critical Habitat

Figure 10

- Proposed Project
- 5-mile Project Buffer

Critical Habitat

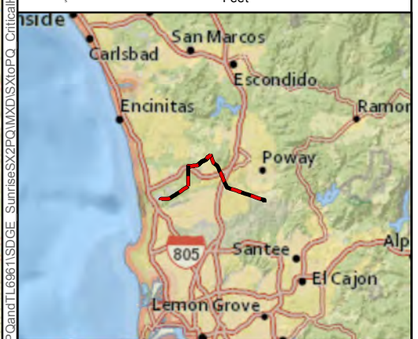
- Coastal California gnatcatcher
- Least Bell's vireo
- San Diego fairy shrimp
- San Diego thornmint
- Spreading navarretia
- Western snowy plover
- Willowy monardella

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC SDGE A Sempra Energy utility

3/18/2014

0 5,000 10,000 15,000 Feet



Sources: US Fish & Wildlife; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

G:\SDGE_SX2PQand\T1.696\1\SDGE_SunriseSX2PQ\MXD\SXtoPQ_CriticalHabitatMap.mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

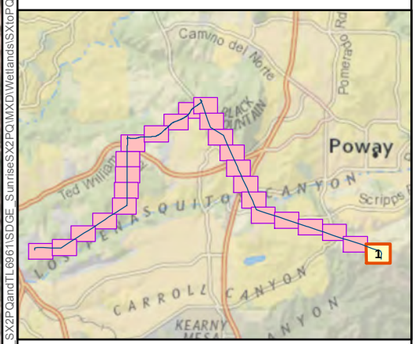
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 200 400 600

Feet



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

G:\SDGE_SX2PQand\TL6961\SDGE_SunriseSX2PQ\MXD\WetlandsSXtoPQ_WetlandsMap_ACOE.CDFW.RWQCB.mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

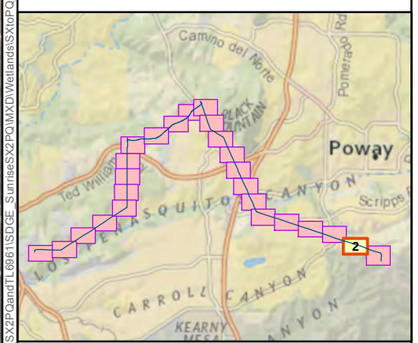
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



G:\SDGE_SX2PQand\TL 6961\SDGE_SunriseSX2PQ\MXD\WetlandsSXtoPQ_WetlandsMap_ACOE.CDFW.RWQCB.mxd

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

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

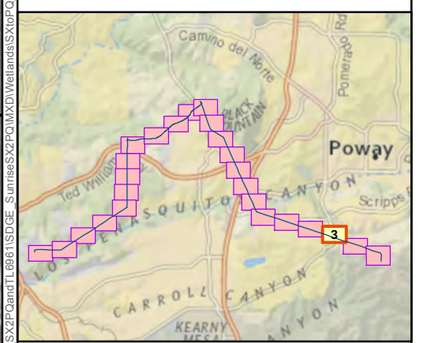
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE_SX2PQandTL6961\SDGE_SunrisesSX2PQ\MXD\WetlandsISXtoPQ_WetlandsMap_ACOE_CDFW_RWQCB.mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

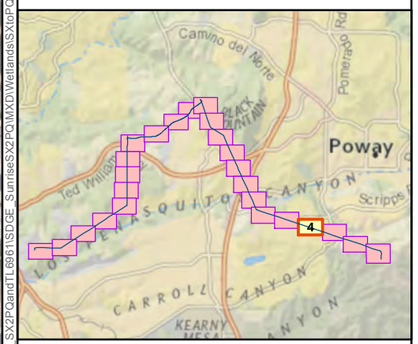
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE - SX2PQandTL69611\SDGE_SunriseSX2PQ\MXD\WetlandsSXtoPQ_WetlandsMap_ACOE_CDFW_RWQCB.mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

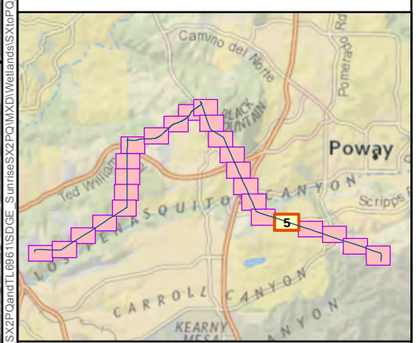
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE_SX2PQand7\TL6961\SDGE_Sunrise\SX2PQ\MXD\WetlandsISXtoPQ_WetlandsMap_ACOE_CDFW_RWQCB.mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

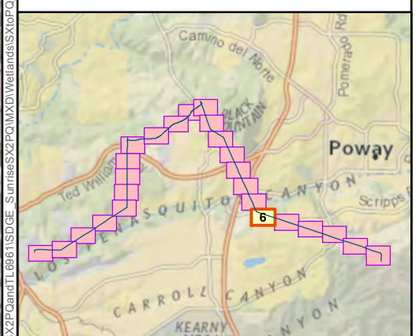
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE_SX2PQandTL6961\SDGE_Sunrise\SX2PQ\MXD\WetlandsISXtoPQ_WetlandsMap_ACOE.CDFW.RWQCB.mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

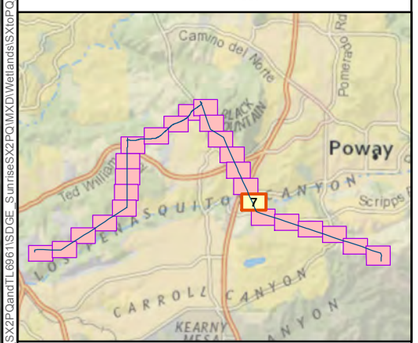
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE_SX2PQandTL 6961\SDGE_SunriseSX2PQ\MXD\WetlandsISXtoPQ_WetlandsMap_ACOE.CDFW.RWQCB.mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

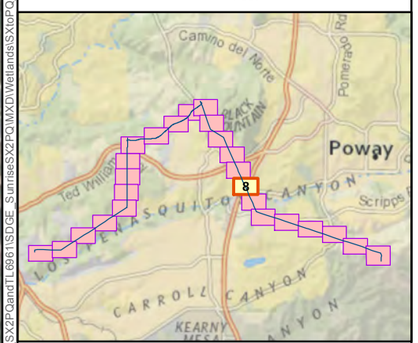
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandsSXtoPQ_WetlandsMap_ACOE.CDFW.RWQCB.mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

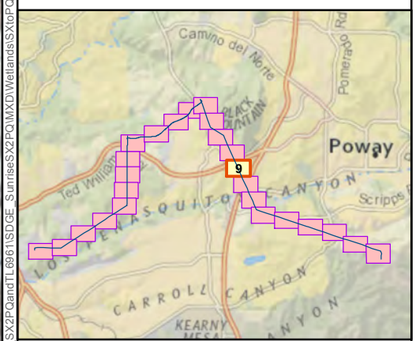
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE_SX2PQand TL 6961\SDGE_Sunrise\SX2PQ\MXD\WetlandsISXtoPQ_WetlandsMap_ACOE CDFW RWQCB .mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

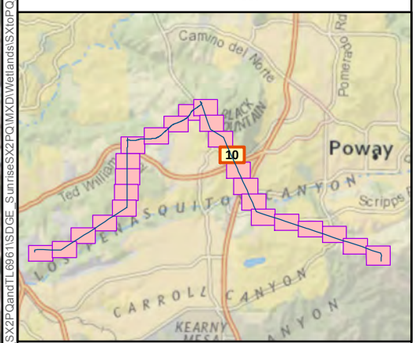
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE_SX2PQand\TL6961\SDGE_Sunrise\SX2PQ\MXD\WetlandsSXtoPQ_WetlandsMap_ACOE.CDFW.RWQCB.mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

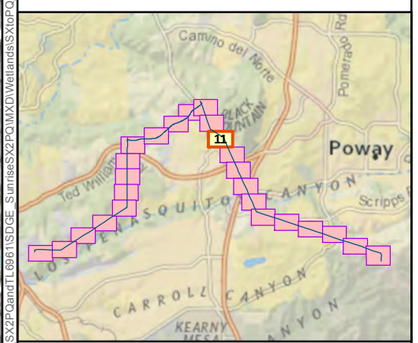
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE_SX2PQand\TL 6961\SDGE_Sunrise\SX2PQ\MXD\WetlandsSX to PQ_WetlandsMap_ACOE CDFW RWQCB.mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

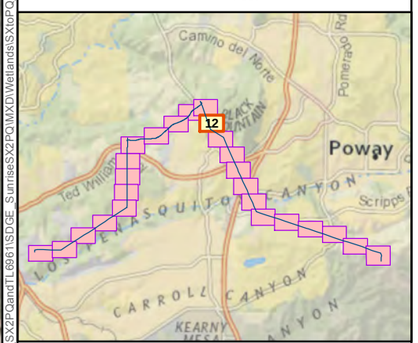
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE_SX2PQand\TL 6961\SDGE_SunriseSX2PQ\MXD\WetlandsSXtoPQ_WetlandsMap_ACOE.CDFW.RWQCB.mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

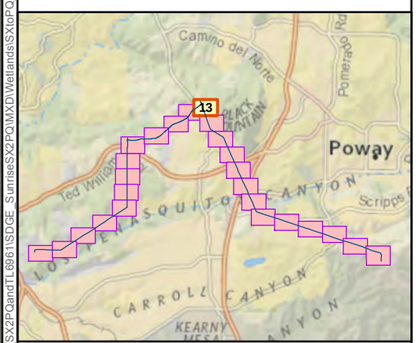
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandsSXtoPQ_WetlandsMap_ACOE.CDFW.RWQCB.mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

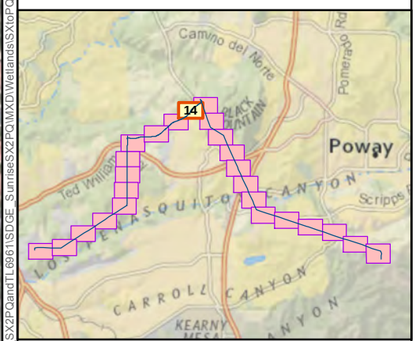
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE_SX2PQand\TL 6961\SDGE_Sunrise\SX2PQ\MXD\WetlandsISXtoPQ_WetlandsMap_ACOE CDFW RWQCB .mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

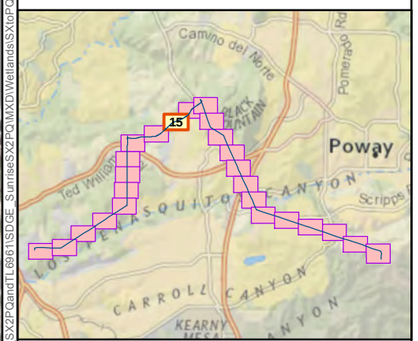
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE_SX2PQand\TL 6961\SDGE_SunriseSX2PQ\MXD\WetlandsSXtoPQ_WetlandsMap_ACOE CDFW RWQCB.mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

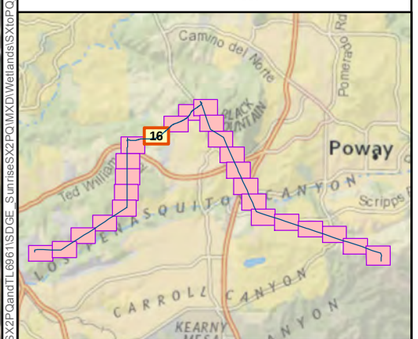
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE_SX2PQand TL 6961\SDGE_SunriseSX2PQ\MXD\WetlandsSXtoPQ_WetlandsMap_ACOE CDFW RWQCB.mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

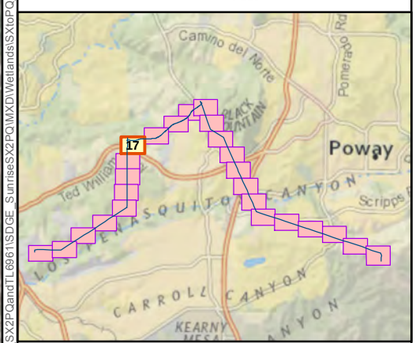
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE_SX2PQand\TL 6961\SDGE_SunriseSX2PQ\MXD\WetlandsISXtoPQ_WetlandsMap_ACOE CDFW RWQCB .mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

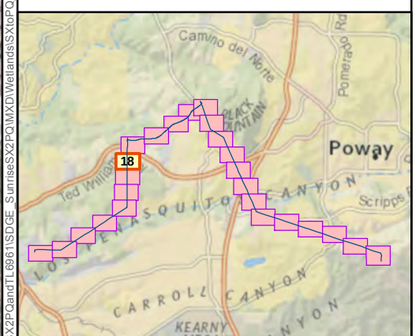
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE_SX2PQand\TL 6961\SDGE_Sunrise\SX2PQ\MXD\WetlandsSXtoPQ_WetlandsMap_ACOE,CDFW,RWQCB.mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

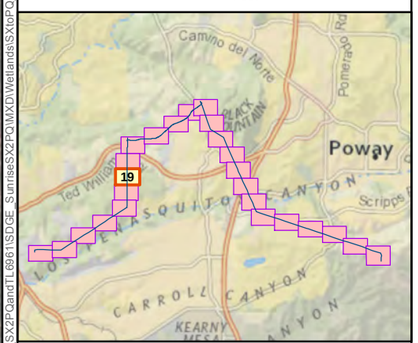
TRC

SDGE A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE_SX2PQandTL 6961\SDGE_SunriseSX2PQ\MXD\WetlandsSXtoPQ_WetlandsMap_ACOE_CDFW_RWQCB.mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

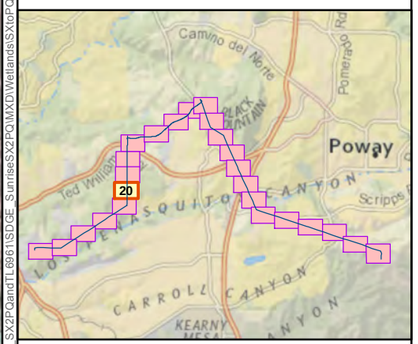
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE_SX2PQand\TL 6961\SDGE_Sunrise\SX2PQ\MXD\WetlandsSXtoPQ_WetlandsMap_ACOE CDFW RWQCB .mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

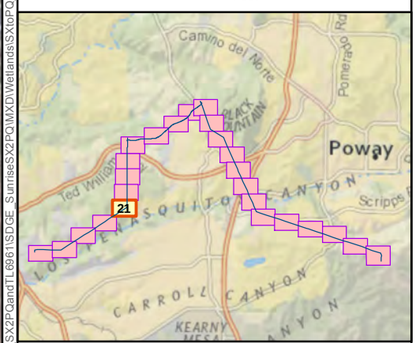
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandsSXtoPQ_WetlandsMap_ACOE.CDFW.RWQCB.mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

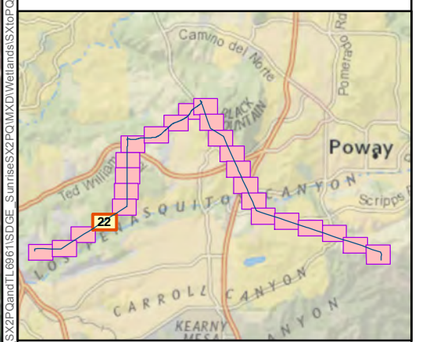
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE_SX2PQand\TL6961\SDGE_SunriseSX2PQ\MXD\WetlandsSXtoPQ_WetlandsMap_ACOE.CDFW.RWQCB.mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

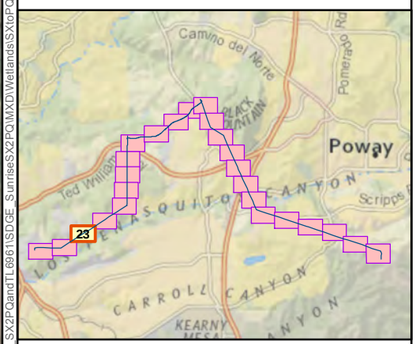
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE_SX2PQand\TL 6961\SDGE_SunriseSX2PQ\MXD\WetlandsSXtoPQ_WetlandsMap_ACOE CDFW RWQCB .mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

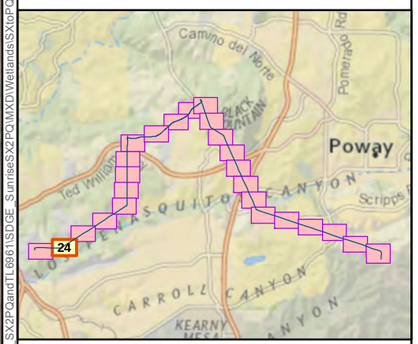
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE_SX2PQandTL6961\SDGE_Sunrise\SX2PQ\MXD\WetlandsSXtoPQ_WetlandsMap_ACOE_CDFW_RWQCB.mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

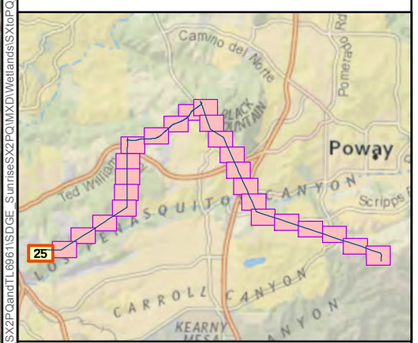
SDGE

A Sempra Energy utility

Date: 3/27/2014

0 190 380 570

Feet



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

G:\SDGE_SX2PQand\TL 6961\SDGE_SunriseSX2PQ\MXD\WetlandsSXtoPQ_WetlandsMap_ACOE CDFW RWQCB mxd

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

SDGE

A Sempra Energy utility

3/27/2014

0 500 1,000 1,500

Feet

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

G:\SDGE_SX2PQand1L696\SDGE_SunriseSX2PQ\MXD\WetlandsSXtoPQ_WetlandsMap_CCC.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12

- Biological Survey Area
- Permanent Impact
- Temporary Impact

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

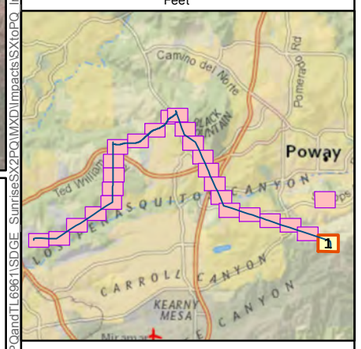
TRC

SDGE A Sempra Energy utility

Date: 4/2/2014

0 200 400 600

Feet



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

G:\SDGE_SX2POandTL6861\SDGE_SunriseSX2POMXD\Impacts\SXtoPQ_Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12

Biological Survey Area

Permanent Impact

Temporary Impact

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

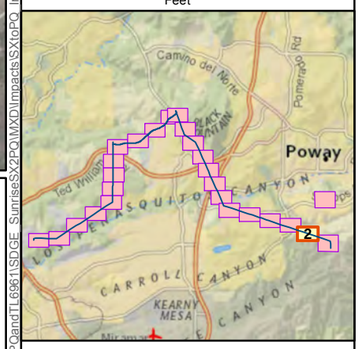
SDGE

A Sempra Energy utility

Date: 4/2/2014

0 170 340 510

Feet



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

G:\SDGE SX2PQandTL6861\SDGE SunriseSX2PQ\MXD\Impacts\SXtoPQ Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12

Biological Survey Area

Permanent Impact

Temporary Impact

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

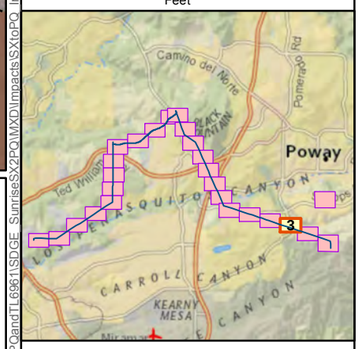
SDGE

A Sempra Energy utility

Date: 4/2/2014

0 170 340 510

Feet



1-Diegan Coastal Sage Scrub

2-Diegan Coastal Sage Scrub - Disturbed

3-Coastal Sage Scrub - Revegetated

4-Coastal Sage - Chaparral Scrub

5-Southern Mixed Chaparral

6-So. Mixed Chaparral - Disturbed

7-Scrub Oak Chaparral

8-Chamise Chaparral

9-Chamise Chaparral - Disturbed

10-Open Water

11-Alkali Marsh - Revegetated

12-Freshwater Marsh

13-SD Mesa Vernal Pool

14-Southern Willow Scrub

15-Southern Riparian Scrub

16-Mulefat Scrub

17-So. Coast Live Oak Riparian Forest

18-Eucalyptus Woodland

19-Tamarisk Scrub

20-Nonnative Grassland

21-Native Grassland

0-Bare Ground

22-Developed Lands

23-Ornamental

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

G:\SDGE SX2PQandTL6861\SDGE SunriseSX2PQ\MXD\Impacts\SXtoPQ_Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12

Biological Survey Area

Permanent Impact

Temporary Impact

1-Diegan Coastal Sage Scrub

2-Diegan Coastal Sage Scrub - Disturbed

3-Coastal Sage Scrub - Revegetated

4-Coastal Sage - Chaparral Scrub

5-Southern Mixed Chaparral

6-So. Mixed Chaparral - Disturbed

7-Scrub Oak Chaparral

8-Chamise Chaparral

9-Chamise Chaparral - Disturbed

10-Open Water

11-Alkali Marsh - Revegetated

12-Freshwater Marsh

13-SD Mesa Vernal Pool

14-Southern Willow Scrub

15-Southern Riparian Scrub

16-Mulefat Scrub

17-So. Coast Live Oak Riparian Forest

18-Eucalyptus Woodland

19-Tamarisk Scrub

20-Nonnative Grassland

21-Native Grassland

0-Bare Ground

22-Developed Lands

23-Ornamental

24-Disturbed Habitat

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

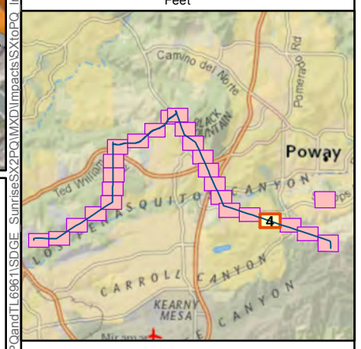
SDGE

A Sempra Energy utility

Date: 4/2/2014

0 170 340 510

Feet



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

G:\SDGE SX2PQandTL6861\SDGE SunriseSX2PQ\MXD\Impacts\SXtoPQ Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12

Biological Survey Area

Permanent Impact

Temporary Impact

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

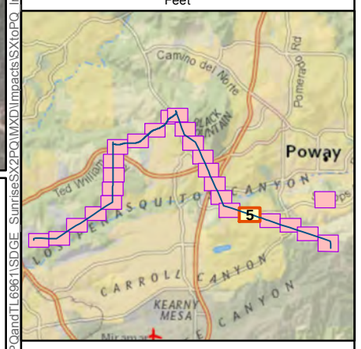
SDGE

A Sempra Energy utility

Date: 4/2/2014

0 170 340 510

Feet



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

G:\SDGE SX2PQandTL6861\SDGE SunriseSX2PQ\MXD\Impacts\SXtoPQ Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12

Biological Survey Area

Permanent Impact

Temporary Impact

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

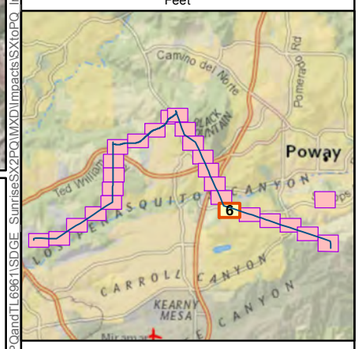
SDGE

A Sempra Energy utility

Date: 4/2/2014

0 170 340 510

Feet



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

G:\SDGE SX2PQandTL6861\SDGE SunriseSX2PQ\MXD\Impacts\SXtoPQ Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12

Biological Survey Area

Permanent Impact

Temporary Impact

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

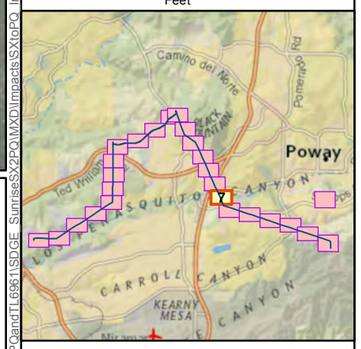
SDGE

A Sempra Energy utility

Date: 4/2/2014

0 170 340 510

Feet



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

G:\SDGE SX2POandTL6861\SDGE SunriseSX2POMXD\Impacts\SXtoPQ Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12

Biological Survey Area

Permanent Impact

Temporary Impact

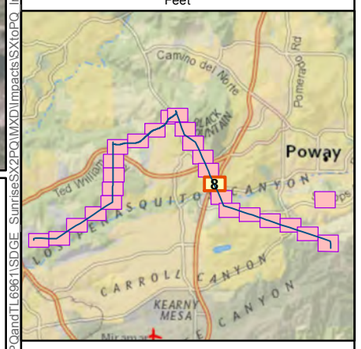
1-Diegan Coastal Sage Scrub
2-Diegan Coastal Sage Scrub - Disturbed
3-Coastal Sage Scrub - Revegetated
4-Coastal Sage - Chaparral Scrub
5-Southern Mixed Chaparral
6-So. Mixed Chaparral - Disturbed
7-Scrub Oak Chaparral
8-Chamise Chaparral
9-Chamise Chaparral - Disturbed
10-Open Water
11-Alkali Marsh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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC SDGE A Sempra Energy utility

Date: 4/2/2014

0 170 340 510
Feet



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

G:\SDGE SX2PQandTL6861\SDGE SunriseSX2PQ\MXD\Impacts\SXtoPQ Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12

Biological Survey Area

Permanent Impact

Temporary Impact

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

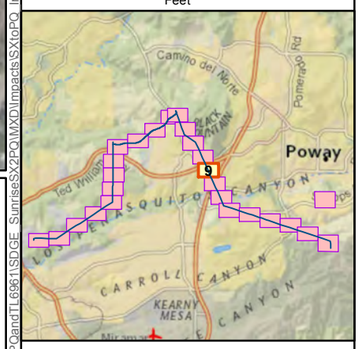
SDGE

A Sempra Energy utility

Date: 4/2/2014

0 170 340 510

Feet



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

G:\SDGE SX2PQandTL6861\SDGE SunriseSX2PQ\MXD\Impacts\SXtoPQ Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12

Biological Survey Area

Permanent Impact

Temporary Impact

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

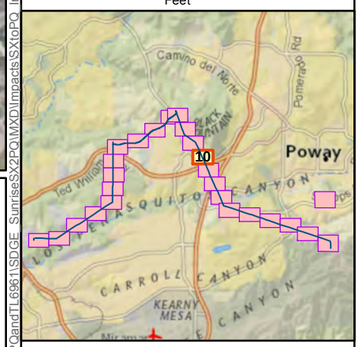
SDGE

A Sempra Energy utility

Date: 4/2/2014

0 170 340 510

Feet



1-Diegan Coastal Sage Scrub

2-Diegan Coastal Sage Scrub - Disturbed

3-Coastal Sage Scrub - Revegetated

4-Coastal Sage - Chaparral Scrub

5-Southern Mixed Chaparral

6-So. Mixed Chaparral - Disturbed

7-Scrub Oak Chaparral

8-Chamise Chaparral

9-Chamise Chaparral - Disturbed

10-Open Water

11-Alkali Marsh - Revegetated

12-Freshwater Marsh

13-SD Mesa Vernal Pool

14-Southern Willow Scrub

15-Southern Riparian Scrub

16-Mulefat Scrub

17-So. Coast Live Oak Riparian Forest

18-Eucalyptus Woodland

19-Tamarisk Scrub

20-Nonnative Grassland

21-Native Grassland

0-Bare Ground

22-Developed Lands

23-Ornamental

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

G:\SDGE_SX2POandTL6861\SDGE_SunriseSX2POMXD\Impacts\SXtoPQ_Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12

Biological Survey Area

Permanent Impact

Temporary Impact

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

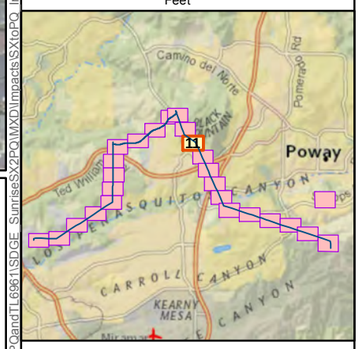
SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC SDGE A Sempra Energy utility

Date: 4/2/2014

0 170 340 510

Feet



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

G:\SDGE SX2POandTL6861\SDGE SunriseSX2POMXD\Impacts\SXtoPQ Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12

Biological Survey Area

Permanent Impact

Temporary Impact

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

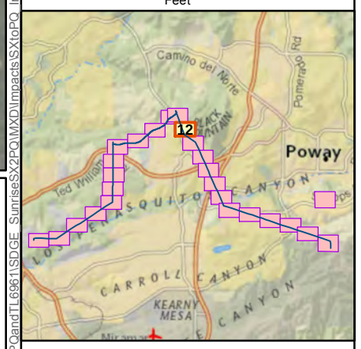
SDGE

A Sempra Energy utility

Date: 4/2/2014

0 170 340 510

Feet



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

G:\SDGE_SX2PQandTL6861\SDGE_SunriseSX2PQ\MXD\Impacts\SXtoPQ_Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12

Biological Survey Area

Permanent Impact

Temporary Impact

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

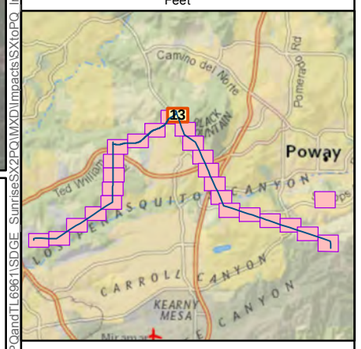
SDGE

A Sempra Energy utility

Date: 4/2/2014

0 170 340 510

Feet



1-Diegan Coastal Sage Scrub

2-Diegan Coastal Sage Scrub - Disturbed

3-Coastal Sage Scrub - Revegetated

4-Coastal Sage - Chaparral Scrub

5-Southern Mixed Chaparral

6-So. Mixed Chaparral - Disturbed

7-Scrub Oak Chaparral

8-Chamise Chaparral

9-Chamise Chaparral - Disturbed

10-Open Water

11-Alkali Marsh - Revegetated

12-Freshwater Marsh

13-SD Mesa Vernal Pool

14-Southern Willow Scrub

15-Southern Riparian Scrub

16-Mulefat Scrub

17-So. Coast Live Oak Riparian Forest

18-Eucalyptus Woodland

19-Tamarisk Scrub

20-Nonnative Grassland

21-Native Grassland

0-Bare Ground

22-Developed Lands

23-Ornamental

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

G:\SDGE SX2PQandTL6861\SDGE SunriseSX2PQ\MXD\Impacts\SXtoPQ Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12

- Biological Survey Area
- Permanent Impact
- Temporary Impact

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

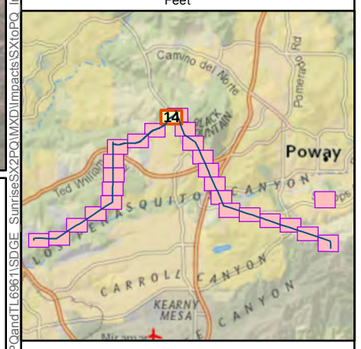
SDGE

A Sempra Energy utility

Date: 4/2/2014

0 170 340 510

Feet



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

G:\SDGE SX2PGandTL6861\SDGE_SunriseSX2PG\MXD\Impacts\SXtoPQ_Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12

Biological Survey Area

Permanent Impact

Temporary Impact

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

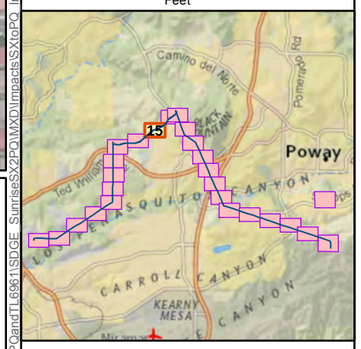
SDGE

A Sempra Energy utility

Date: 4/2/2014

0 170 340 510

Feet



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

G:\SDGE SX2POandTL6861\SDGE SunriseSX2POMXD\Impacts\SXtoPQ_Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12

Biological Survey Area

Permanent Impact

Temporary Impact

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

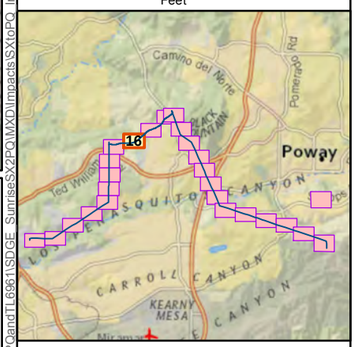
SDGE

A Sempra Energy utility

Date: 4/2/2014

0 170 340 510

Feet



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

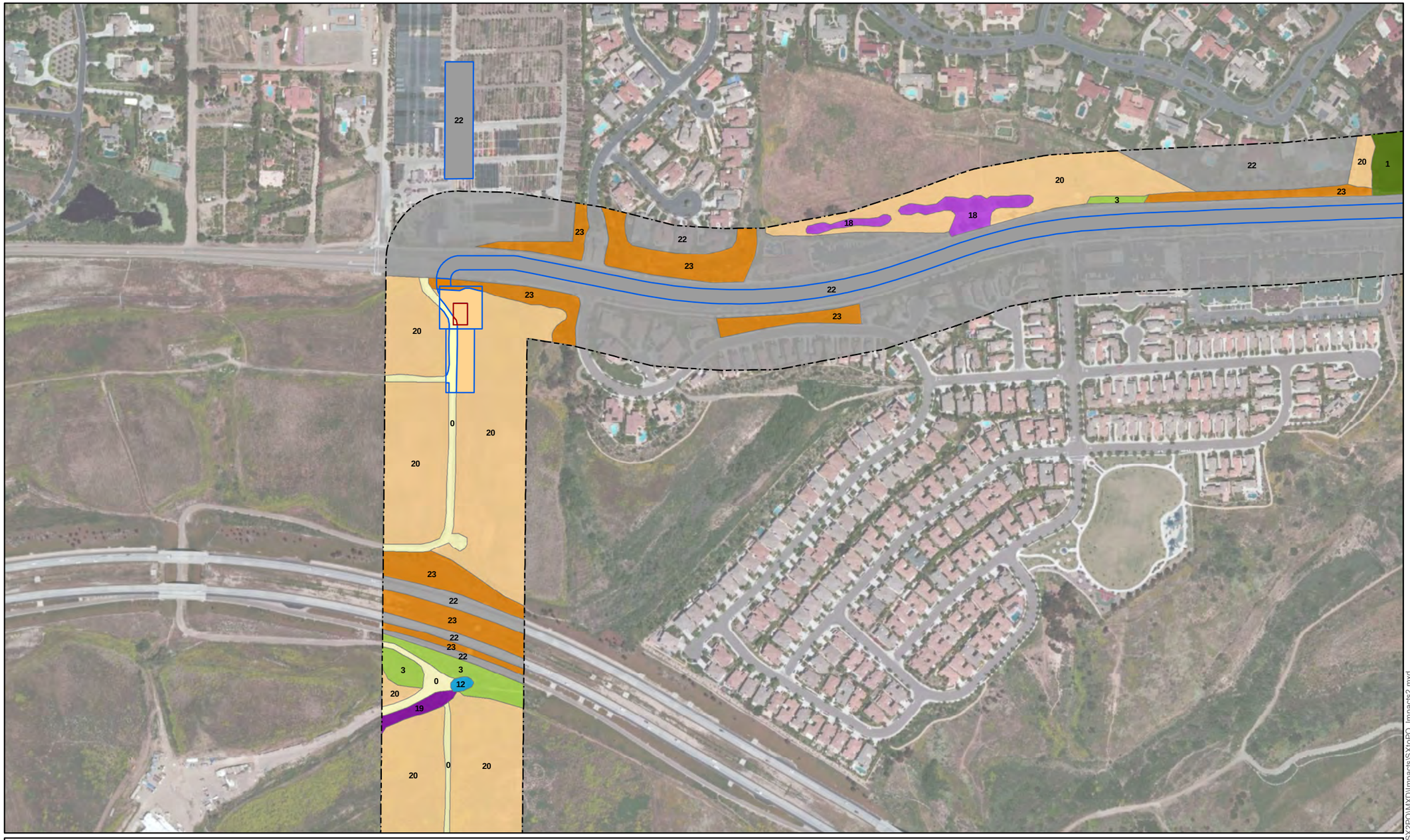
G:\SDGE SX2PQandTL6861\SDGE_SunriseSX2PQ\MXD\Impacts\SXtoPQ_Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12



- Biological Survey Area
- Permanent Impact
- Temporary Impact

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

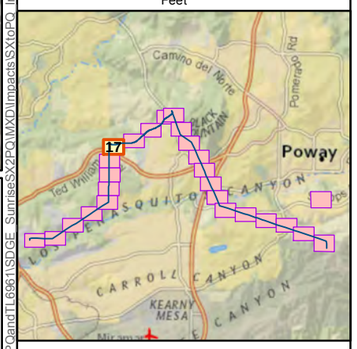
SDGE

A Sempra Energy utility

Date: 4/2/2014

0 180 360 540

Feet



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

G:\SDGE SX2POandTL6861\SDGE SunriseSX2PO\MXD\Impacts\SXtoPO_Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12

Biological Survey Area

Permanent Impact

Temporary Impact

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

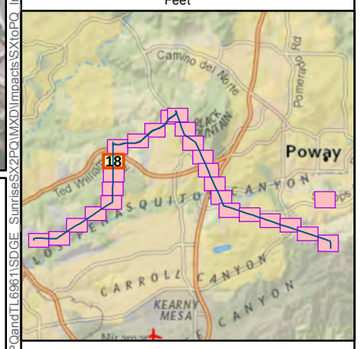
SDGE

A Sempra Energy utility

Date: 4/2/2014

0 170 340 510

Feet



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

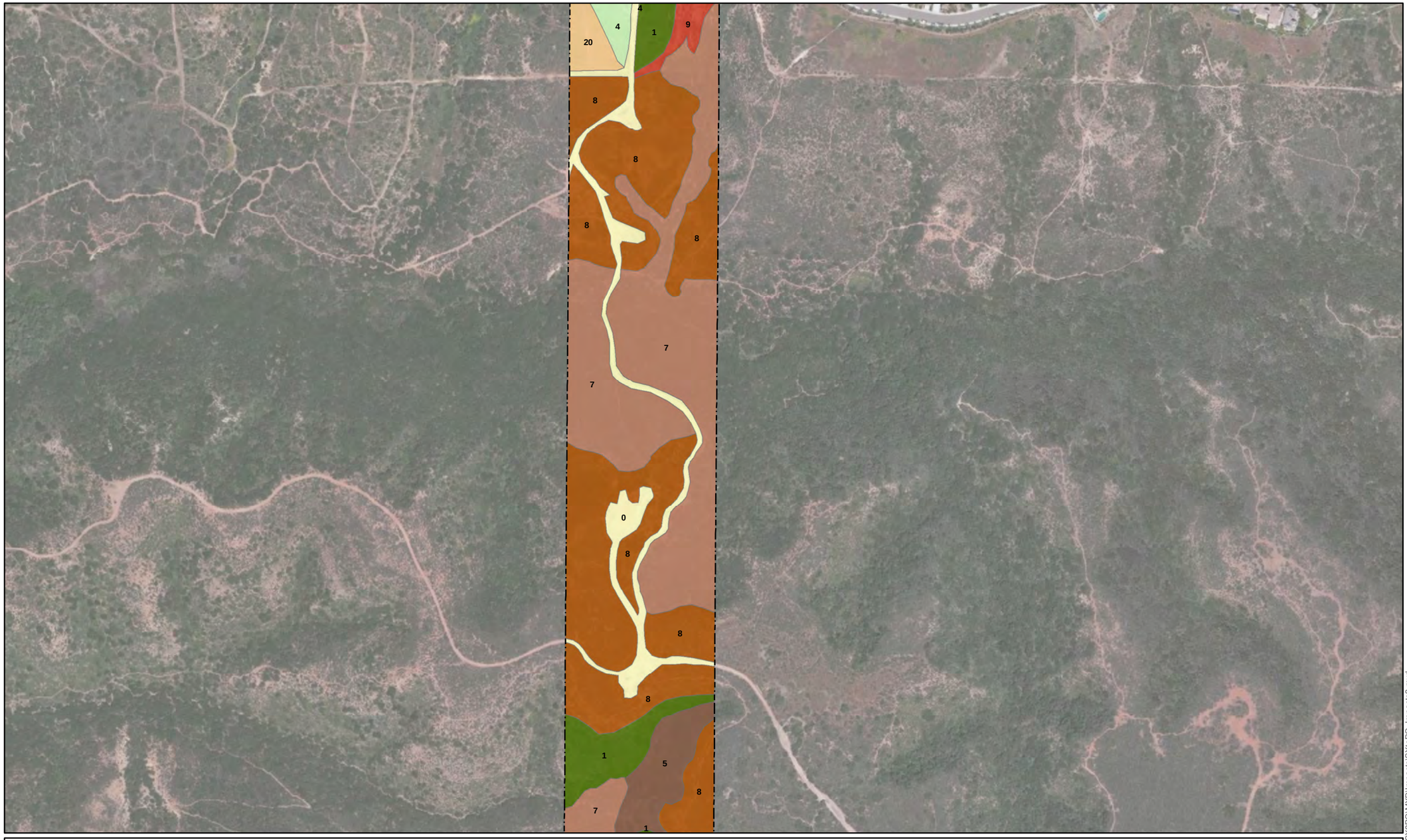
G:\SDGE SX2PQandTL6861\SDGE SunriseSX2PQ\MXD\Impacts\SXtoPQ Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12



Biological Survey Area

Permanent Impact

Temporary Impact

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

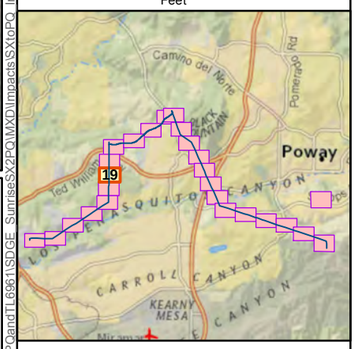
SDGE

A Sempra Energy utility

Date: 4/2/2014

0 170 340 510

Feet



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

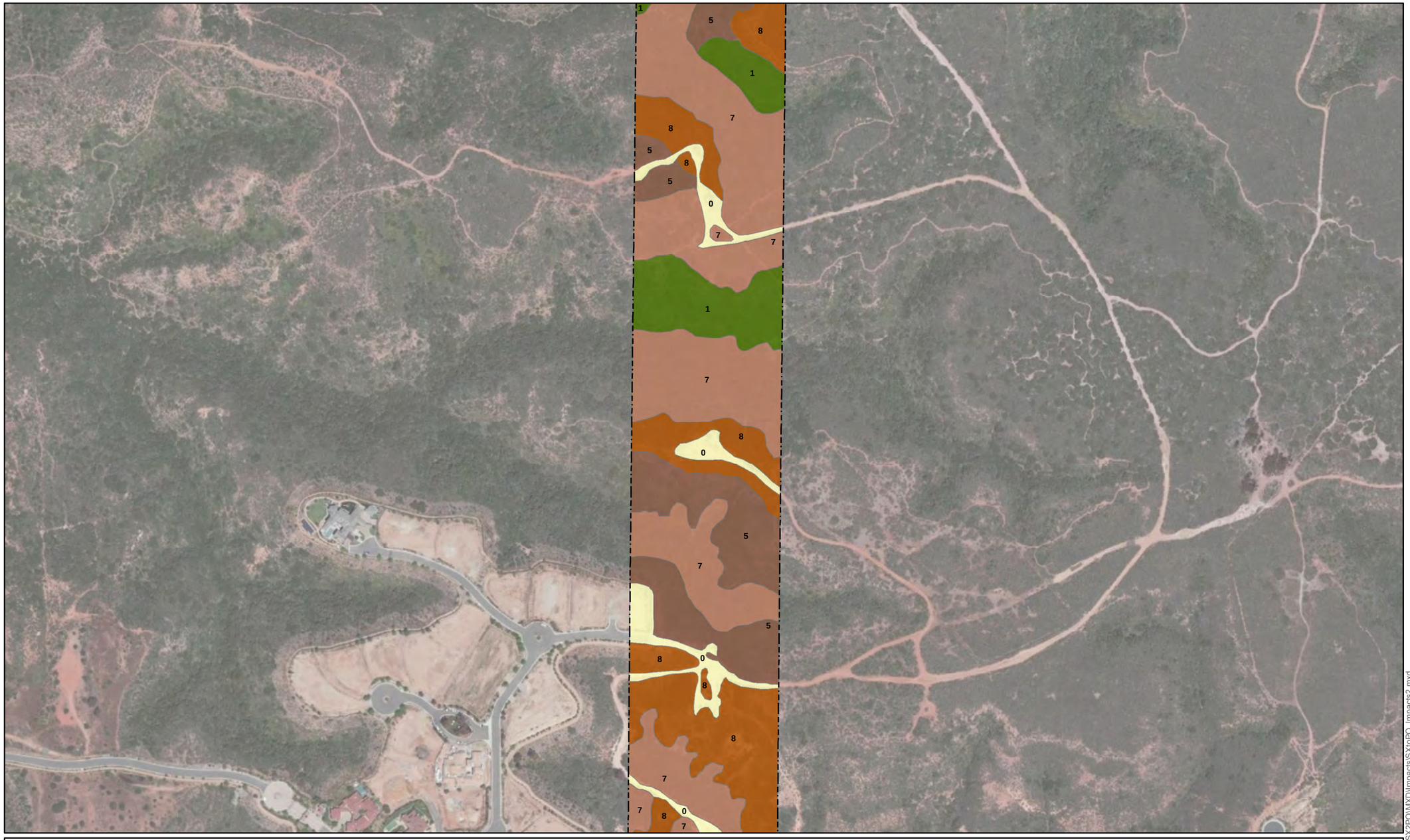
G:\SDGE SX2PQandTL6861\SDGE SunriseSX2PQ\MXD\Impacts\SXtoPQ Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12



- Biological Survey Area
- Permanent Impact
- Temporary Impact

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

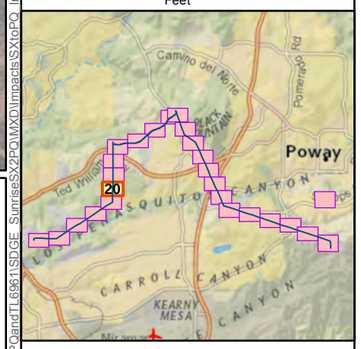
SDGE

A Sempra Energy utility

Date: 4/2/2014

0 170 340 510

Feet



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

G:\SDGE SX2POandTL6861\SDGE_SunriseSX2POMXD\Impacts\SXtoPQ_Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12

Biological Survey Area

Permanent Impact

Temporary Impact

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

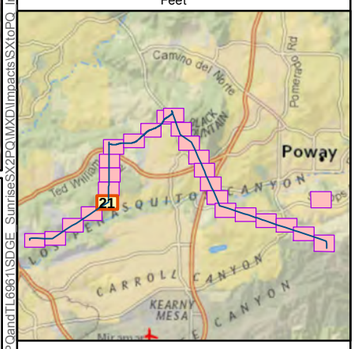
SDGE

A Sempra Energy utility

Date: 4/2/2014

0 170 340 510

Feet



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

G:\SDGE SX2PQandTL6861\SDGE SunriseSX2PQ\MXD\Impacts\SXtoPQ Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12

Biological Survey Area

Permanent Impact

Temporary Impact

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

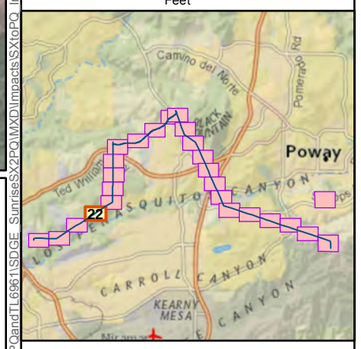
SDGE

A Sempra Energy utility

Date: 4/2/2014

0 170 340 510

Feet



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

G:\SDGE SX2POandTL6861\SDGE SunriseSX2PO\MXD\Impacts\SXtoPQ Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12

Biological Survey Area

Permanent Impact

Temporary Impact

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

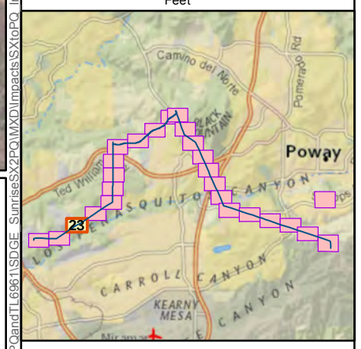
SDGE

A Sempra Energy utility

Date: 4/2/2014

0 170 340 510

Feet



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

G:\SDGE SX2POandTL6861\SDGE SunriseSX2POMXD\Impacts\SXtoPQ_Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12

Biological Survey Area

Permanent Impact

Temporary Impact

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

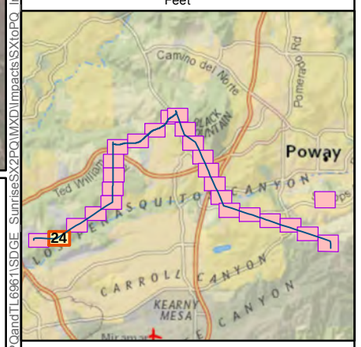
SDGE

A Sempra Energy utility

Date: 4/2/2014

0 170 340 510

Feet



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

G:\SDGE SX2POandTL6861\SDGE_SunriseSX2POMXD\Impacts\SXtoPQ_Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12

Biological Survey Area

Permanent Impact

Temporary Impact

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

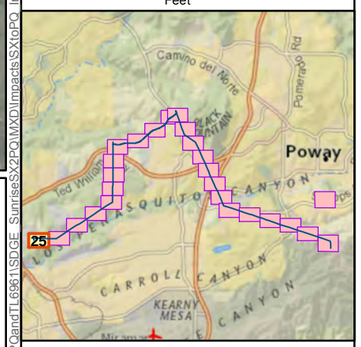
SDGE

A Sempra Energy utility

Date: 4/2/2014

0 170 340 510

Feet



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

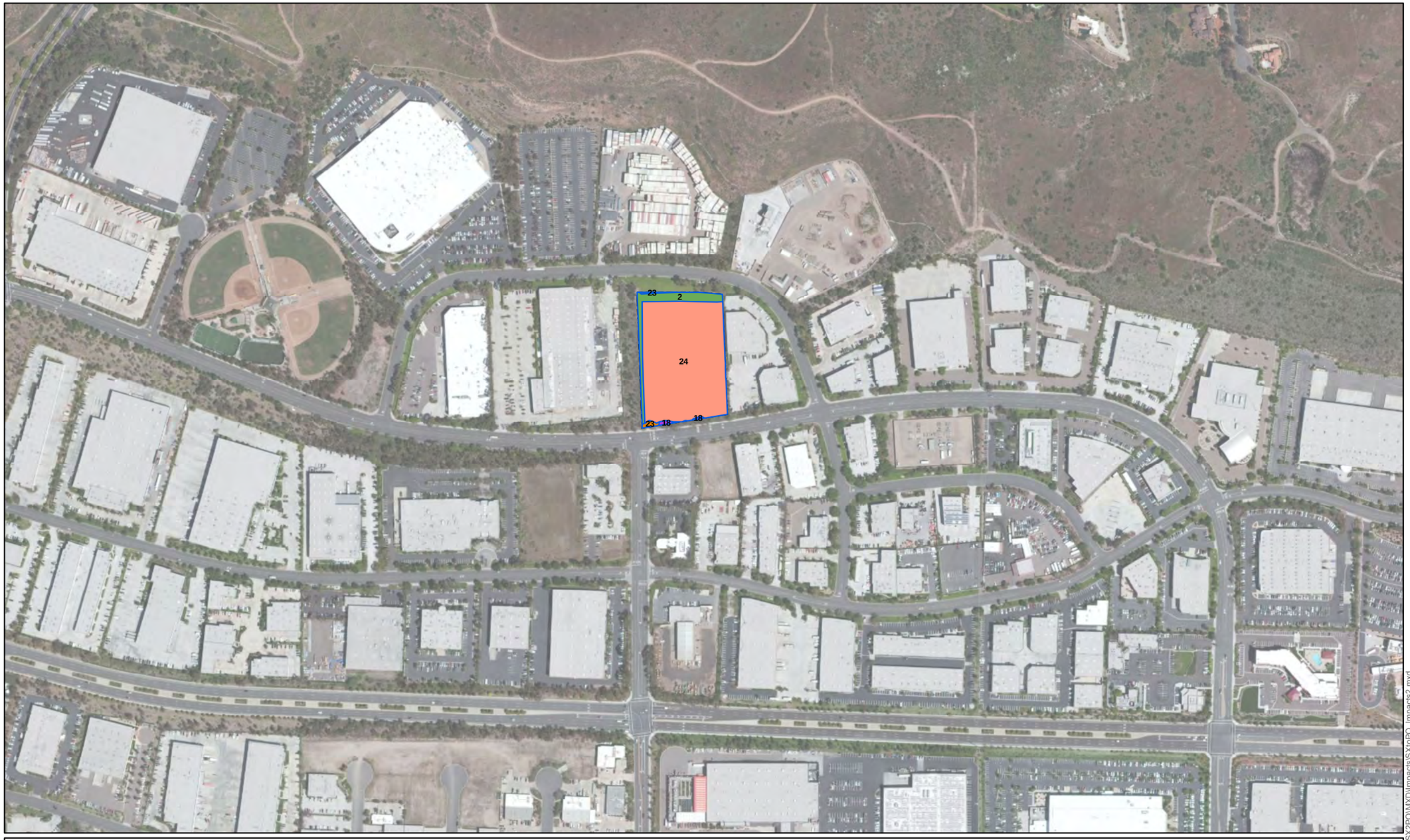
G:\SDGE SX2PQandTL6861\SDGE SunriseSX2PQ\MXD\Impacts\SXtoPQ Impacts2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Vegetation Community Impacts

Figure 12



Biological Survey Area

Permanent Impact

Temporary Impact

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

TRC

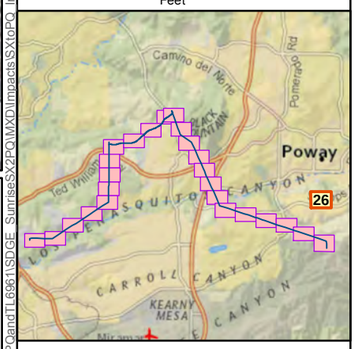
SDGE

A Sempra Energy utility

Date: 4/2/2014

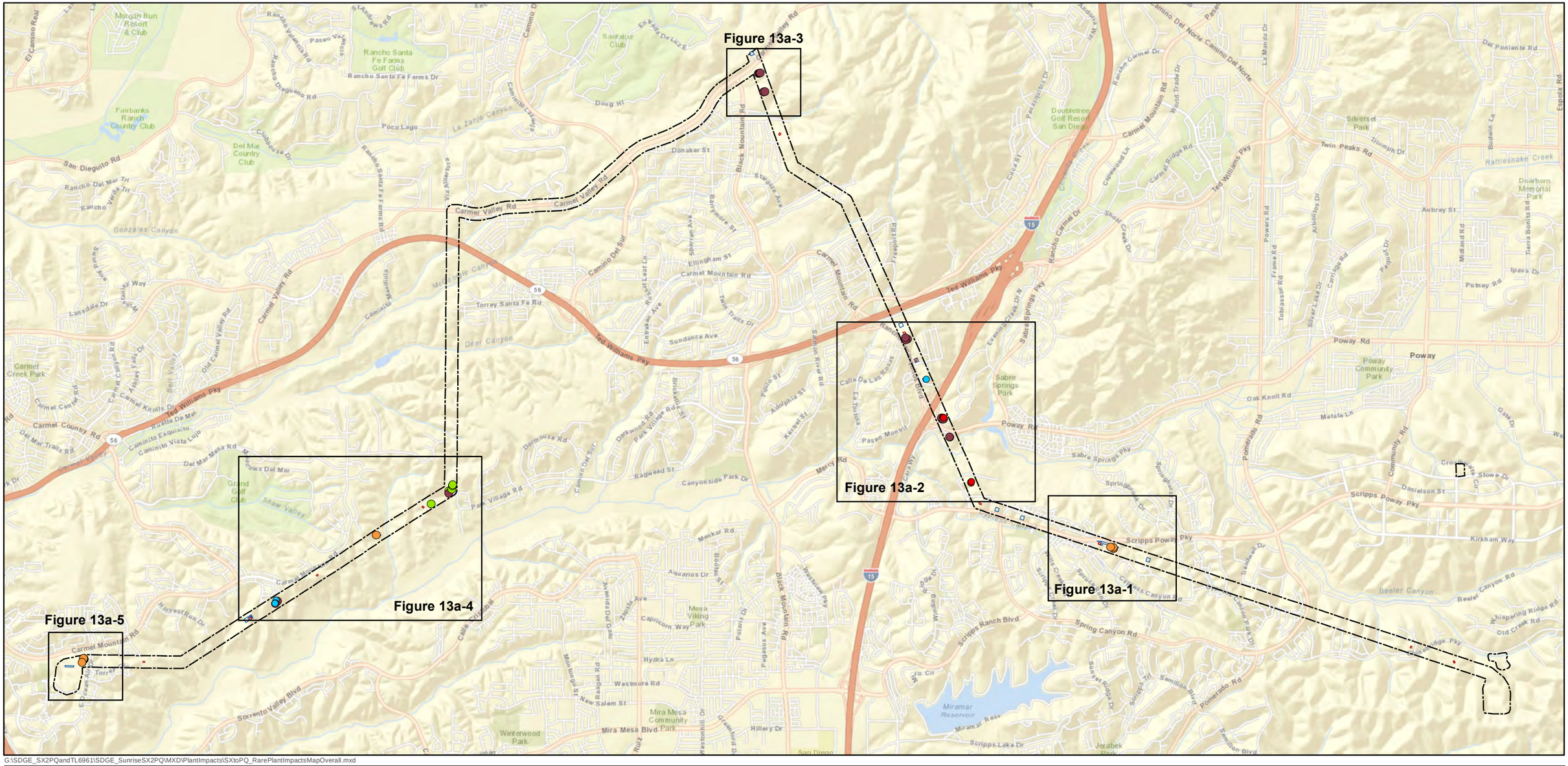
0 200 400 600

Feet



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

G:\SDGE SX2PQandTL6861\SDGE SunriseSX2PQ\MXD\Impacts\SXtoPQ Impacts2.mxd



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\PlantImpacts\SXtoPQ_RarePlantImpactsMapOverall.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

- *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

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

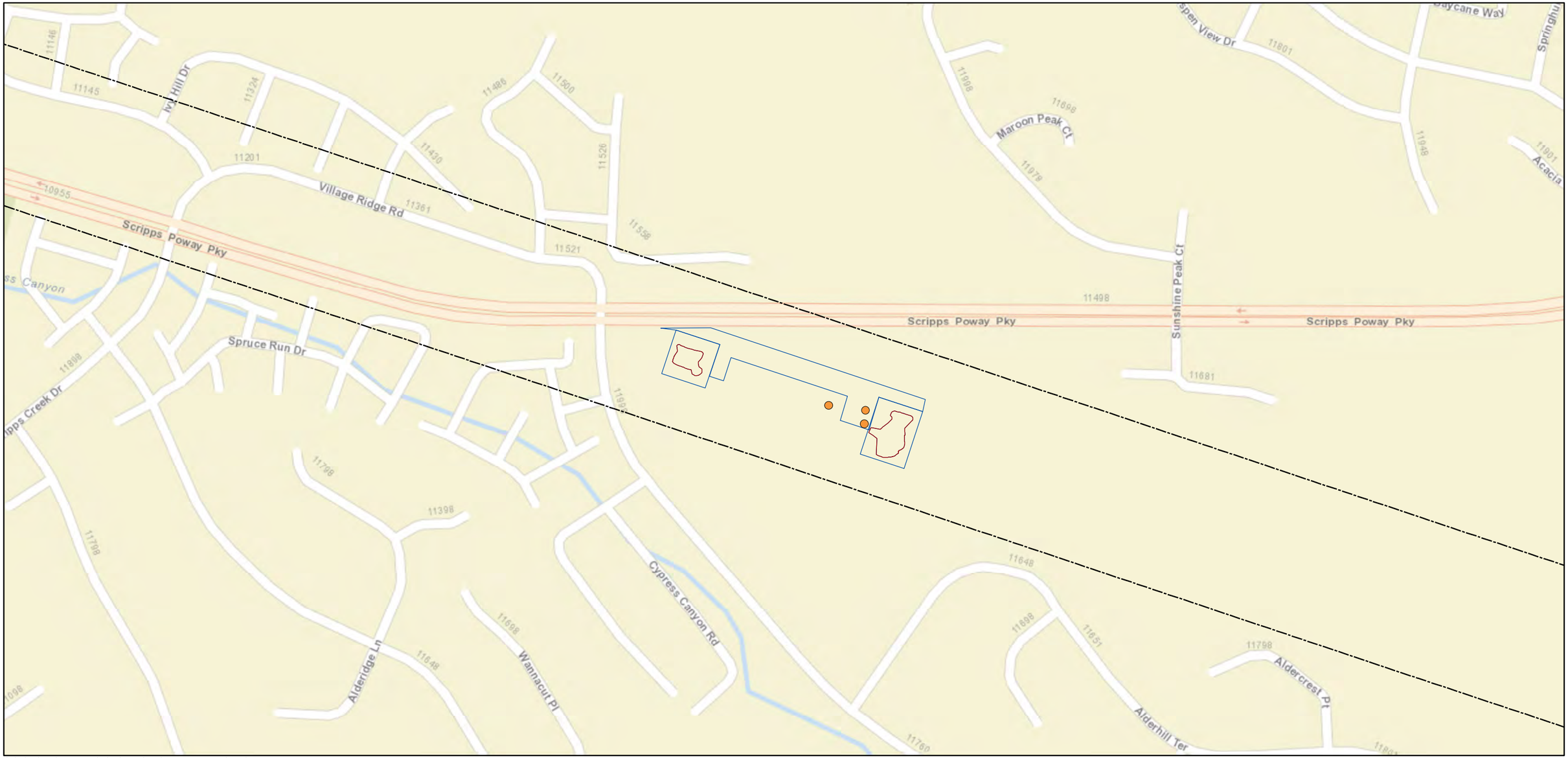
Special-Status Plant Impacts

Figure 13

0 1 2 3 Miles

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;



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\PlantImpacts\SXtoPQ_RarePlantImpactsMap13a1.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

- *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

0 500 1,000 1,500 Feet

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Special-Status Plant Impacts

Figure 13a-1

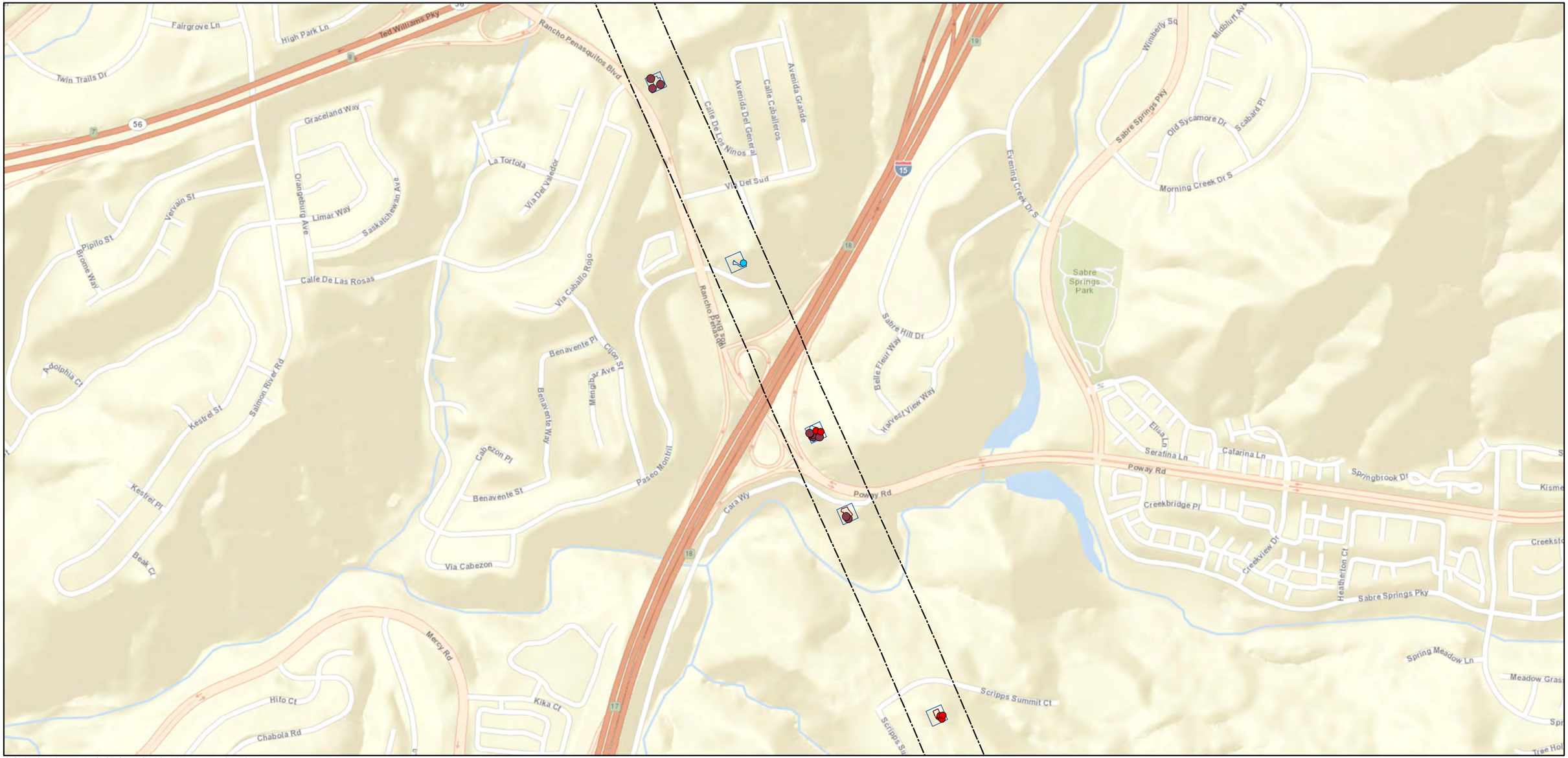
TRC

Date: 3/18/2014

SDGE

A Sempra Energy utility

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;



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\PlantImpacts\SXtoPQ_RarePlantImpactsMap13a2.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

- *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

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Special-Status Plant Impacts

Figure 13a-2

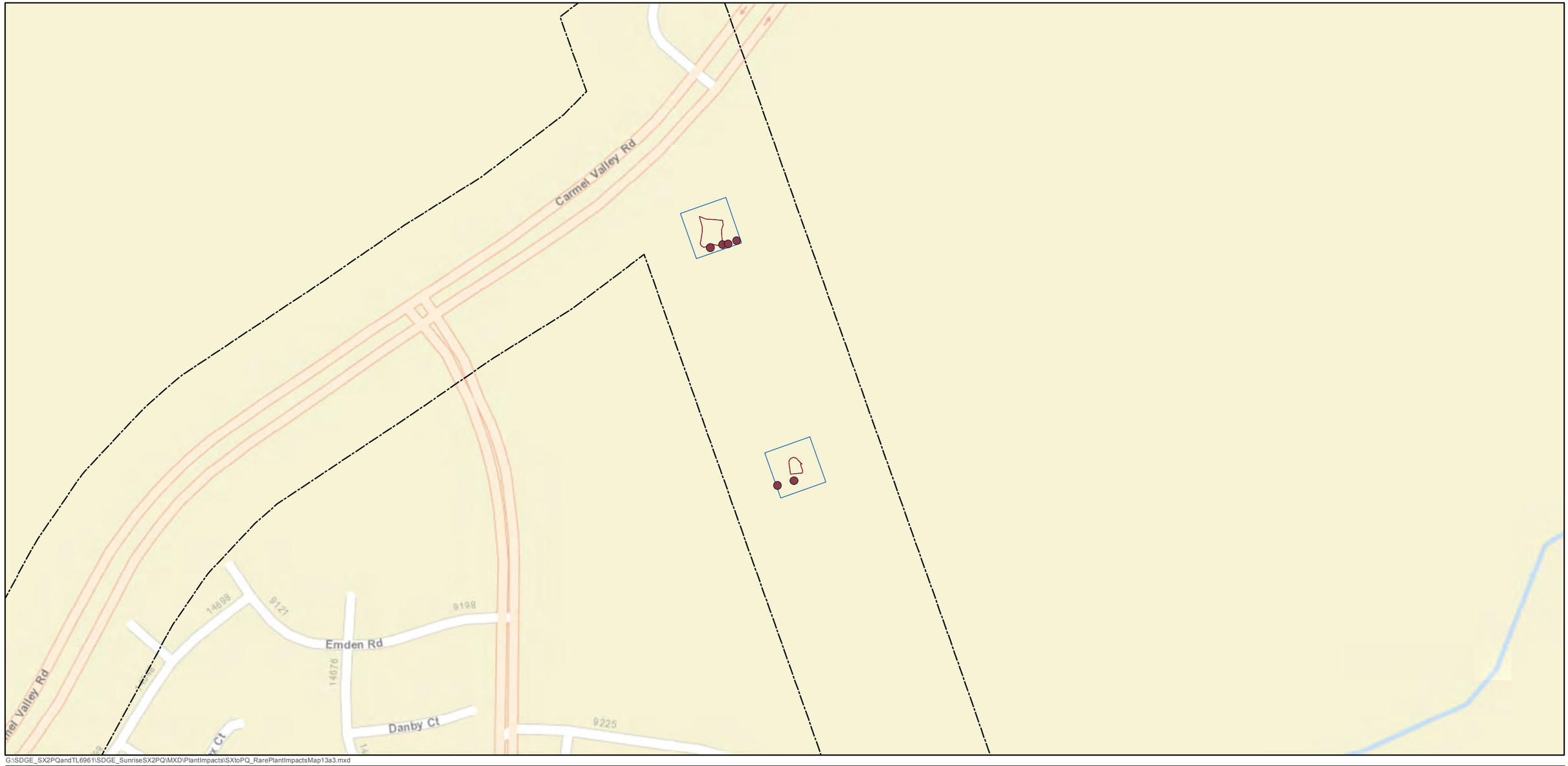
0 1,000 2,000 3,000 Feet

TRC

Date: 3/18/2014

SDGE A Sempra Energy utility

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;



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\PlantImpacts\SXtoPQ_RarePlantImpactsMap13a3.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

- *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

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

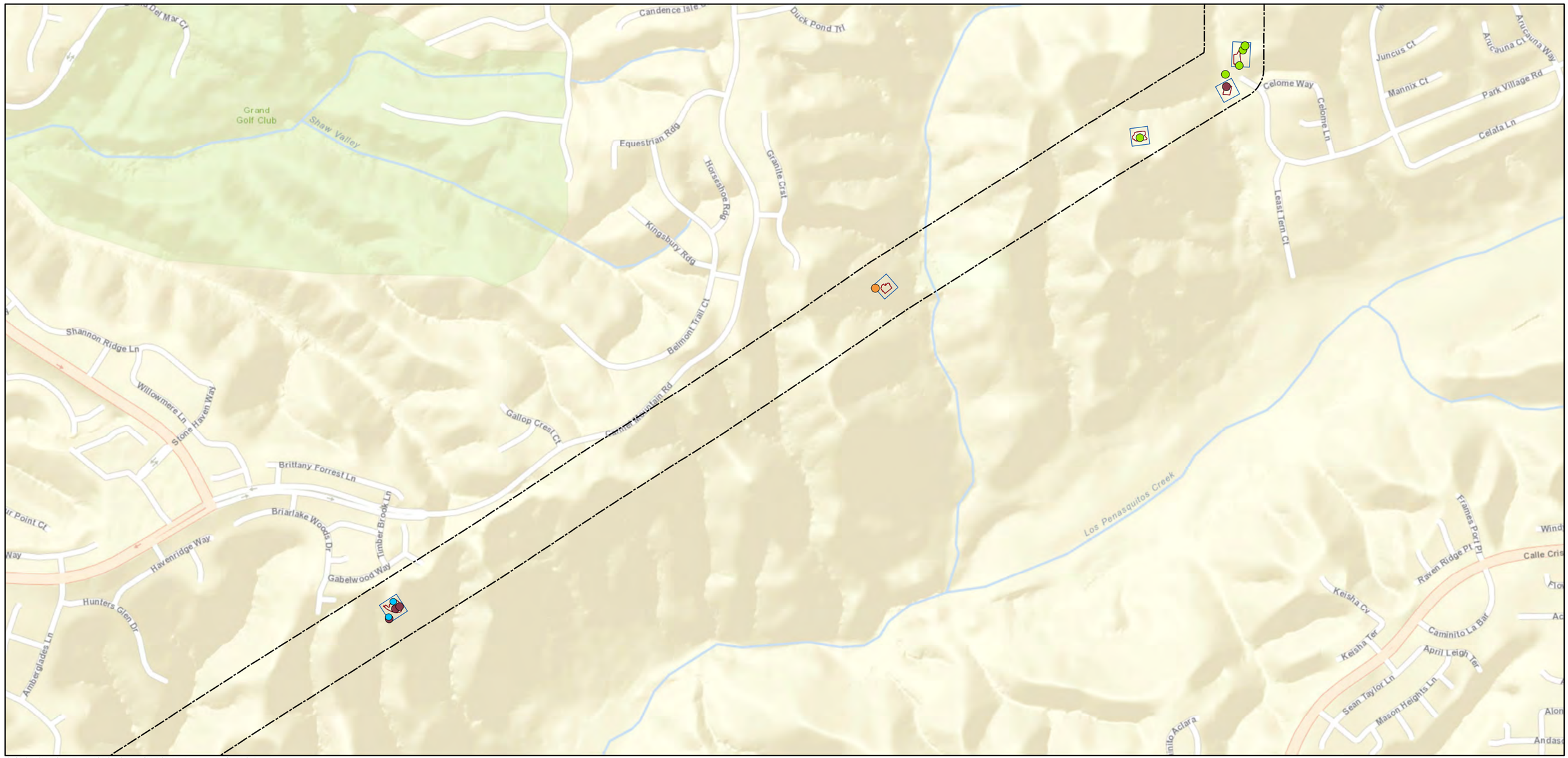
Special-Status Plant Impacts

Figure 13a-3

0 400 800 1,200 Feet

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;



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\PlantImpacts\SXtoPQ_RarePlantImpactsMap13a4.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

- *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

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

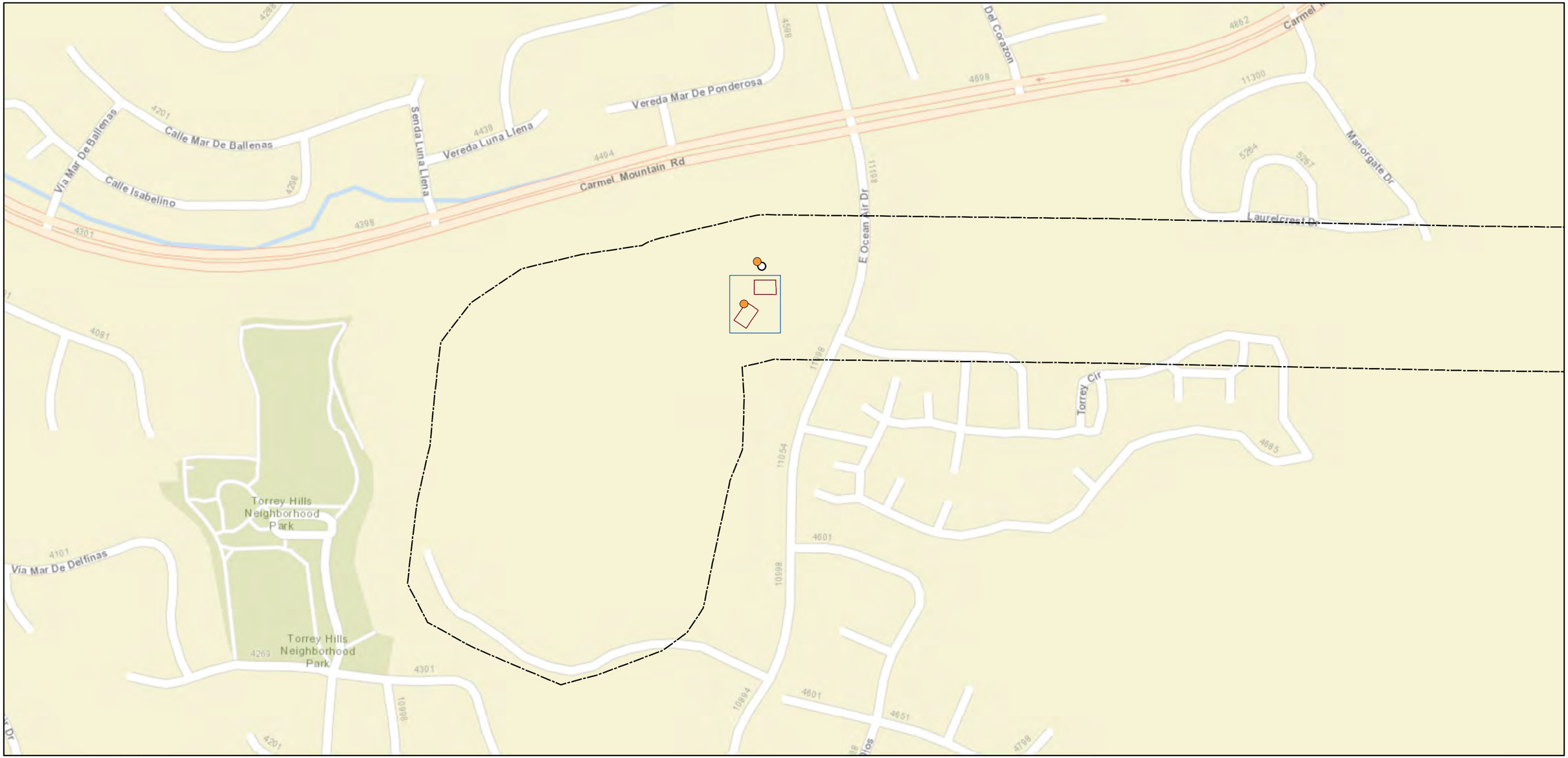
Special-Status Plant Impacts

Figure 13a-4

0 1,000 2,000 3,000 Feet

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;



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\PlantImpacts\SXtoPQ_RarePlantImpactsMap13a5.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

- *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

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Special-Status Plant Impacts

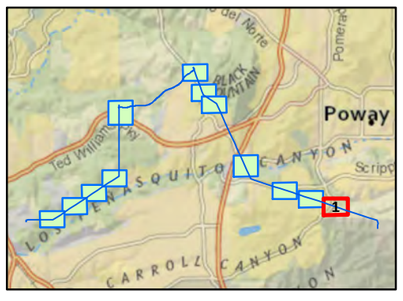
Figure 13a-5

0 400 800 1,200 Feet

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;

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\ESHAPreserves\SXtoPQ_ESHA.PreserveVegImpactsMap.mxd



1-Diegan Coastal Sage Scrub
2-Diegan Coastal Sage Scrub - Disturbed
3-Coastal Sage Scrub - Revegetated
4-Coastal Sage - Chaparral Scrub
5-Southern Mixed Chaparral
6-So. Mixed Chaparral - Disturbed
7-Scrub Oak Chaparral
8-Chamise Chaparral
9-Chamise Chaparral - Disturbed
14-Southern Willow Scrub
17-So. Coast Live Oak Riparian Forest
20-Nonnative Grassland
21-Native Grassland
0-Bare Ground
22-Developed Lands
23-Ornamental
24-Disturbed Habitat
Permanent Impacts
Temporary Impacts
California Coastal Zone
Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

0 500 1,000 1,500 Feet

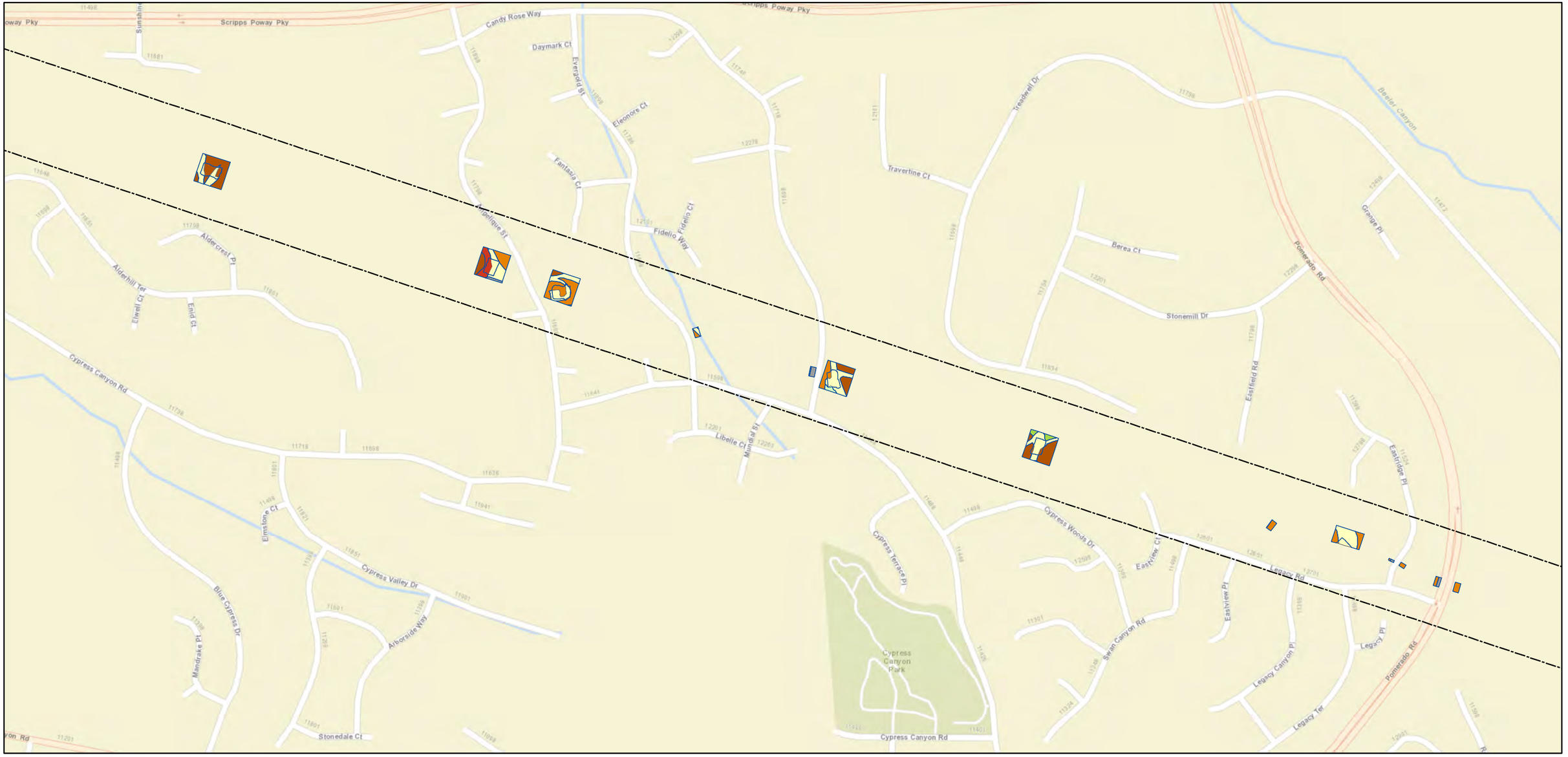
Date: 4/2/2014

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

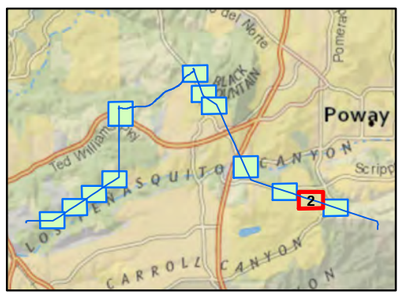
Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project
Preserve/ESHA Impacts

Figure 14



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\ESHAPreserves\SXtoPQ_ESHA.PreserveVegImpactsMap.mxd



1-Diegan Coastal Sage Scrub
2-Diegan Coastal Sage Scrub - Disturbed
3-Coastal Sage Scrub - Revegetated
4-Coastal Sage - Chaparral Scrub
5-Southern Mixed Chaparral
6-So. Mixed Chaparral - Disturbed
7-Scrub Oak Chaparral
8-Chamise Chaparral
9-Chamise Chaparral - Disturbed
14-Southern Willow Scrub
17-So. Coast Live Oak Riparian Forest
20-Nonnative Grassland
21-Native Grassland
0-Bare Ground
22-Developed Lands
23-Ornamental
24-Disturbed Habitat
Permanent Impacts
Temporary Impacts
California Coastal Zone
Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

0 500 1,000 1,500 Feet

Date: 4/2/2014

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

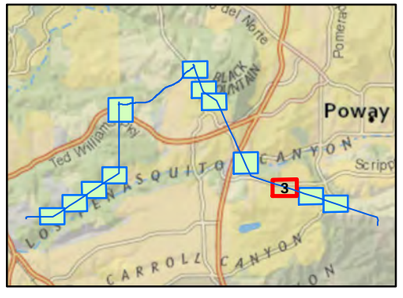
Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Preserve/ESHA Impacts

Figure 14

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\ESHAPreserves\SXtoPQ_ESHA.PreserveVegImpactsMap.mxd



1-Diegan Coastal Sage Scrub
2-Diegan Coastal Sage Scrub - Disturbed
3-Coastal Sage Scrub - Revegetated
4-Coastal Sage - Chaparral Scrub
5-Southern Mixed Chaparral
6-So. Mixed Chaparral - Disturbed
7-Scrub Oak Chaparral
8-Chamise Chaparral
9-Chamise Chaparral - Disturbed
14-Southern Willow Scrub
17-So. Coast Live Oak Riparian Forest
20-Nonnative Grassland
21-Native Grassland
0-Bare Ground
22-Developed Lands
23-Ornamental
24-Disturbed Habitat
Permanent Impacts
Temporary Impacts
California Coastal Zone
Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

0 500 1,000 1,500 Feet

Date: 4/2/2014

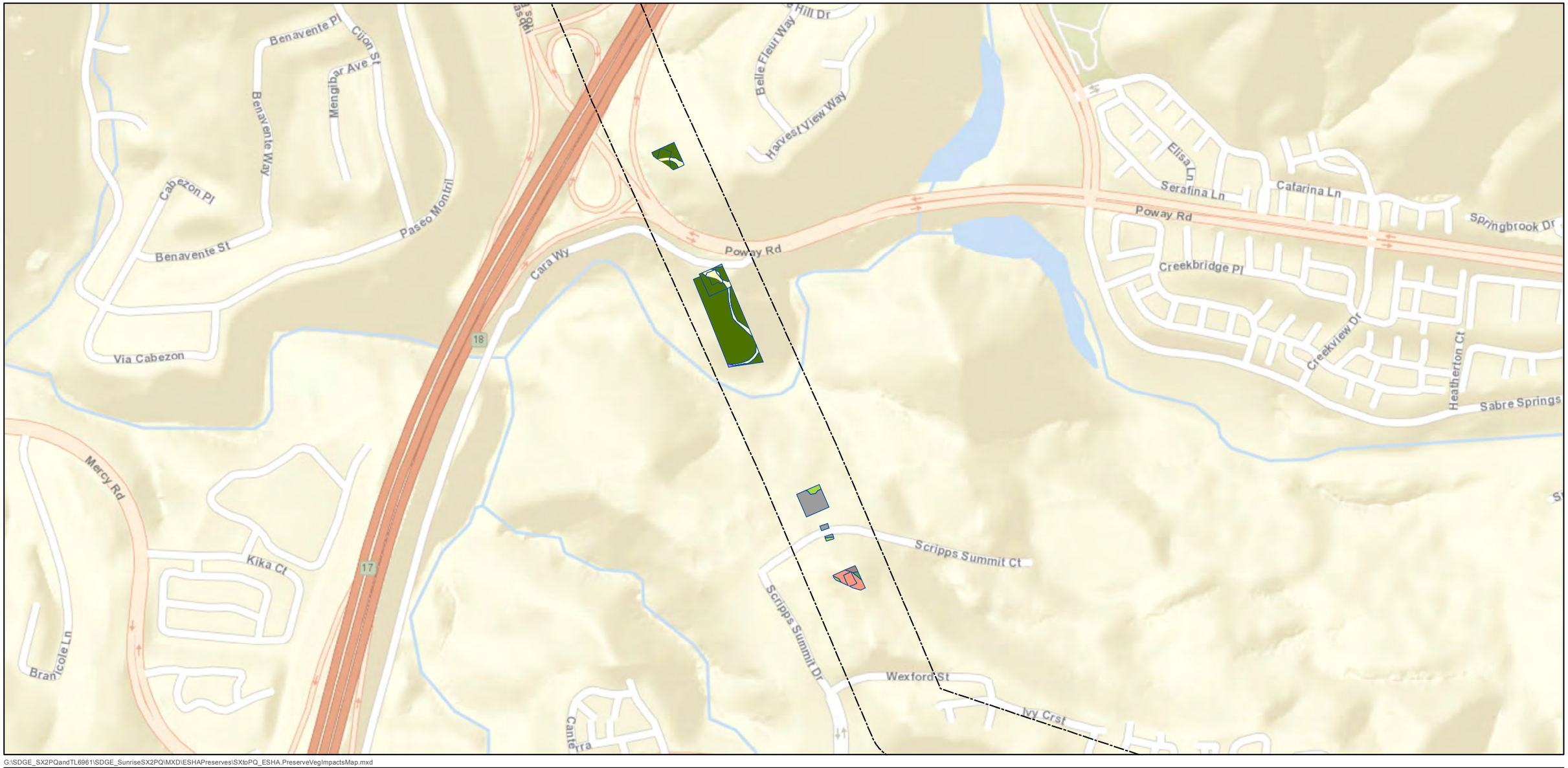
Sources: Busby Biological 2013;SDG&E,2013;Esri,DigitalGlobe, GeoEye, i-cubed, USDA, USGS, EX,Getmapping,Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Sycamore to Peñasquitos 230 kV Transmission Line Project

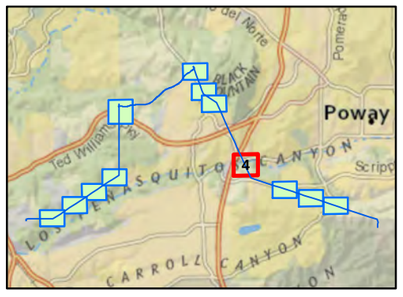
Proposed Project

Preserve/ESHA Impacts

Figure 14



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\ESHAPreserves\SXtoPQ_ESHA.PreserveVegImpactsMap.mxd



- 1-Diegan Coastal Sage Scrub
- 2-Diegan Coastal Sage Scrub - Disturbed
- 3-Coastal Sage Scrub - Revegetated
- 4-Coastal Sage - Chaparral Scrub
- 5-Southern Mixed Chaparral
- 6-So. Mixed Chaparral - Disturbed
- 7-Scrub Oak Chaparral
- 8-Chamise Chaparral
- 9-Chamise Chaparral - Disturbed
- 14-Southern Willow Scrub
- 17-So. Coast Live Oak Riparian Forest
- 20-Nonnative Grassland
- 21-Native Grassland
- 0-Bare Ground
- 22-Developed Lands
- 23-Ornamental
- 24-Disturbed Habitat
- Permanent Impacts
- Temporary Impacts
- California Coastal Zone
- Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

0 590 1,180 1,770 Feet

Date: 4/2/2014

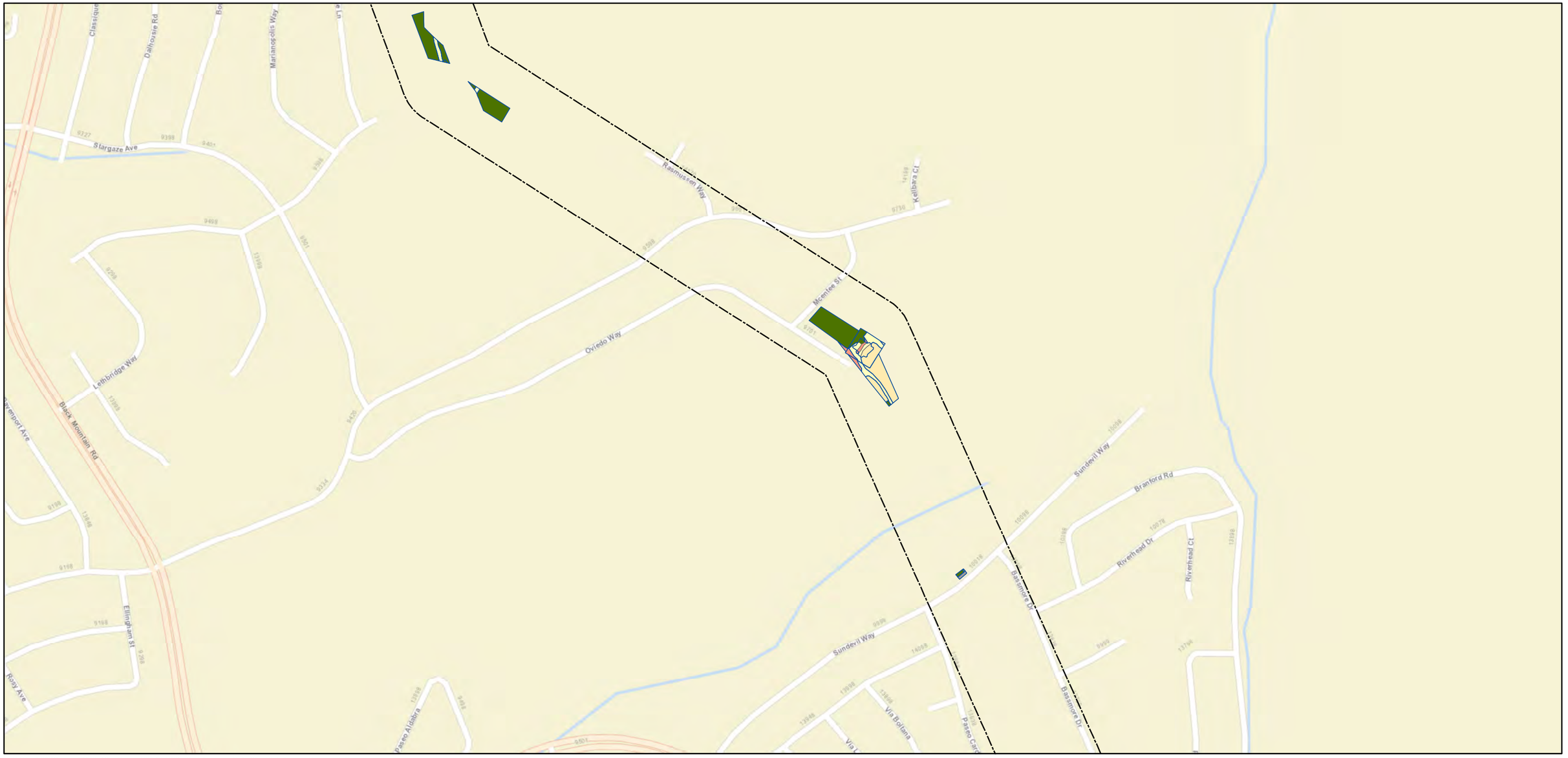
Sources: Busby Biological 2013;SDG&E,2013;Esri,DigitalGlobe, GeoEye, i-cubed, USDA, USGS, EX,Getmapping,Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Sycamore to Peñasquitos 230 kV Transmission Line Project

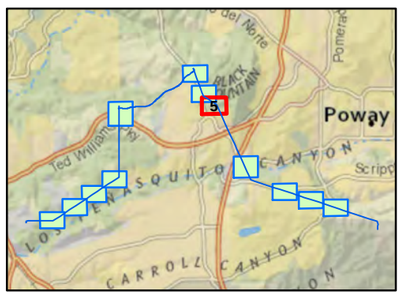
Proposed Project

Preserve/ESHA Impacts

Figure 14



G:\SDGE_SX2PQandTL69961\SDGE_SunriseSX2PQ\MXD\ESHAPreserves\SXtoPQ_ESHA.PreserveVegImpactsMap.mxd



- 1-Diegan Coastal Sage Scrub
- 2-Diegan Coastal Sage Scrub - Disturbed
- 3-Coastal Sage Scrub - Revegetated
- 4-Coastal Sage - Chaparral Scrub
- 5-Southern Mixed Chaparral
- 6-So. Mixed Chaparral - Disturbed
- 7-Scrub Oak Chaparral
- 8-Chamise Chaparral
- 9-Chamise Chaparral - Disturbed
- 14-Southern Willow Scrub
- 17-So. Coast Live Oak Riparian Forest
- 20-Nonnative Grassland
- 21-Native Grassland
- 0-Bare Ground
- 22-Developed Lands
- 23-Ornamental
- 24-Disturbed Habitat
- Permanent Impacts
- Temporary Impacts
- California Coastal Zone
- Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

0 500 1,000 1,500 Feet

Date: 4/2/2014

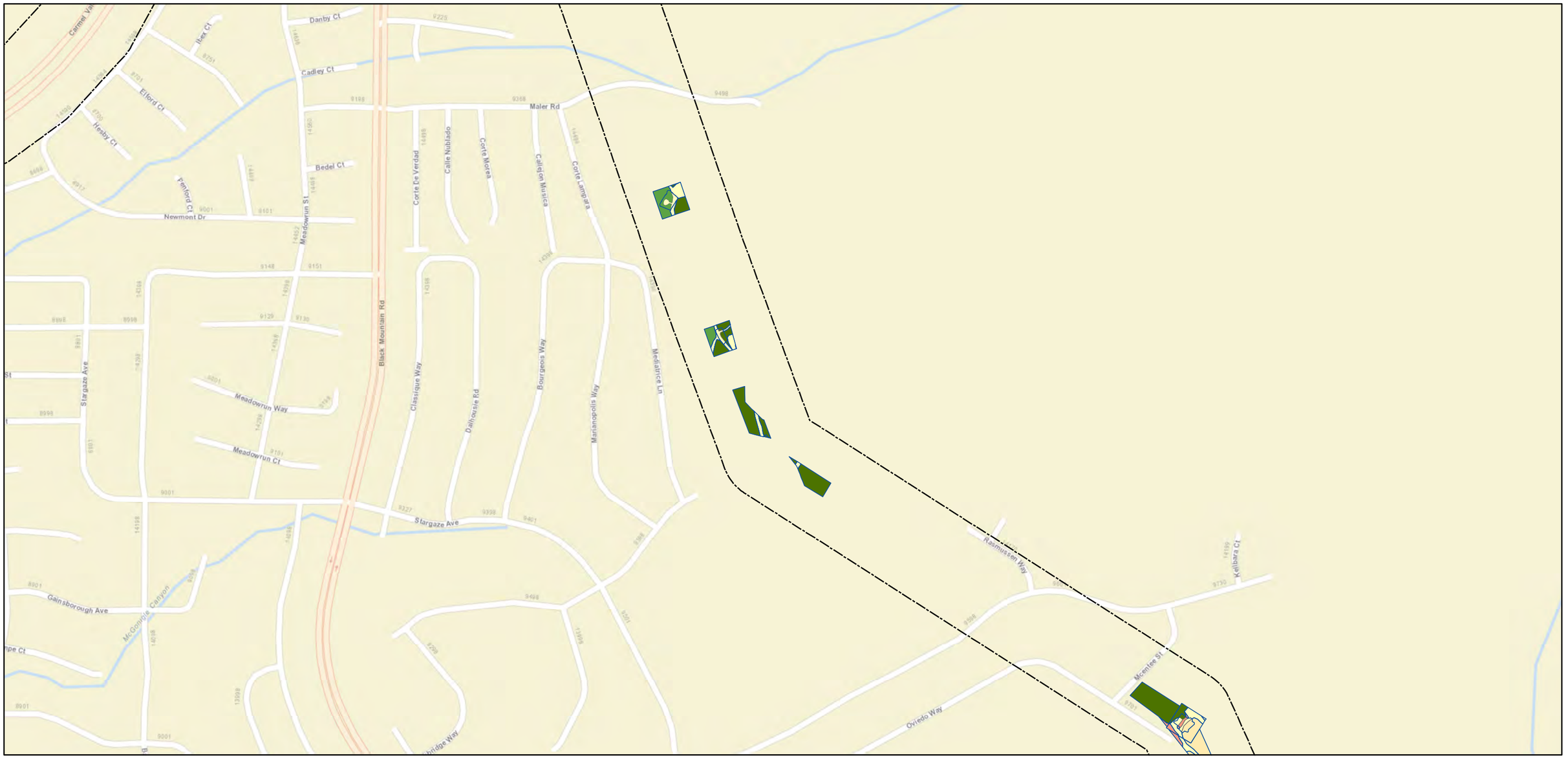
Sources: Busby Biological 2013;SDG&E,2013;Esri,DigitalGlobe, GeoEye, i-cubed, USDA, USGS, EX,Getmapping,Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Sycamore to Peñasquitos 230 kV Transmission Line Project

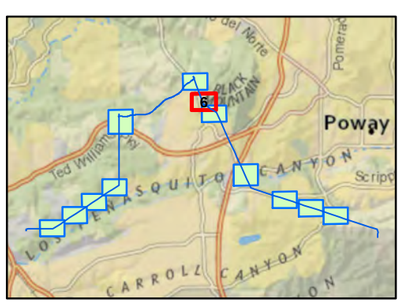
Proposed Project

Preserve/ESHA Impacts

Figure 14



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\ESHAPreserves\SXtoPQ_ESHA.PreserveVegImpactsMap.mxd



- 1-Diegan Coastal Sage Scrub
- 2-Diegan Coastal Sage Scrub - Disturbed
- 3-Coastal Sage Scrub - Revegetated
- 4-Coastal Sage - Chaparral Scrub
- 5-Southern Mixed Chaparral
- 6-So. Mixed Chaparral - Disturbed
- 7-Scrub Oak Chaparral
- 8-Chamise Chaparral
- 9-Chamise Chaparral - Disturbed
- 14-Southern Willow Scrub
- 17-So. Coast Live Oak Riparian Forest
- 20-Nonnative Grassland
- 21-Native Grassland
- 0-Bare Ground
- 22-Developed Lands
- 23-Ornamental
- 24-Disturbed Habitat
- Permanent Impacts
- Temporary Impacts
- California Coastal Zone
- Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

0 500 1,000 1,500 Feet

Date: 4/2/2014

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

Sycamore to Peñasquitos 230 kV Transmission Line Project

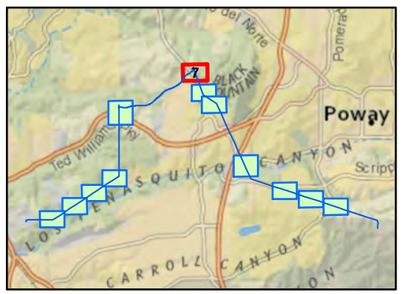
Proposed Project

Preserve/ESHA Impacts

Figure 14

Entrada De Luz E
Carmel Valley Rd
Emden Rd
Danby Ct
Ibert Ct
Cadley Ct
Elford Ct
Maler Rd

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\ESHAPreserves\SXtoPQ_ESHA.PreserveVegImpactsMap.mxd



- 1-Diegan Coastal Sage Scrub
- 2-Diegan Coastal Sage Scrub - Disturbed
- 3-Coastal Sage Scrub - Revegetated
- 4-Coastal Sage - Chaparral Scrub
- 5-Southern Mixed Chaparral
- 6-So. Mixed Chaparral - Disturbed
- 7-Scrub Oak Chaparral
- 8-Chamise Chaparral
- 9-Chamise Chaparral - Disturbed
- 14-Southern Willow Scrub
- 17-So. Coast Live Oak Riparian Forest
- 20-Nonnative Grassland
- 21-Native Grassland
- 0-Bare Ground
- 22-Developed Lands
- 23-Ornamental
- 24-Disturbed Habitat
- Permanent Impacts
- Temporary Impacts
- California Coastal Zone
- Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

0 500 1,000 1,500 Feet

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

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

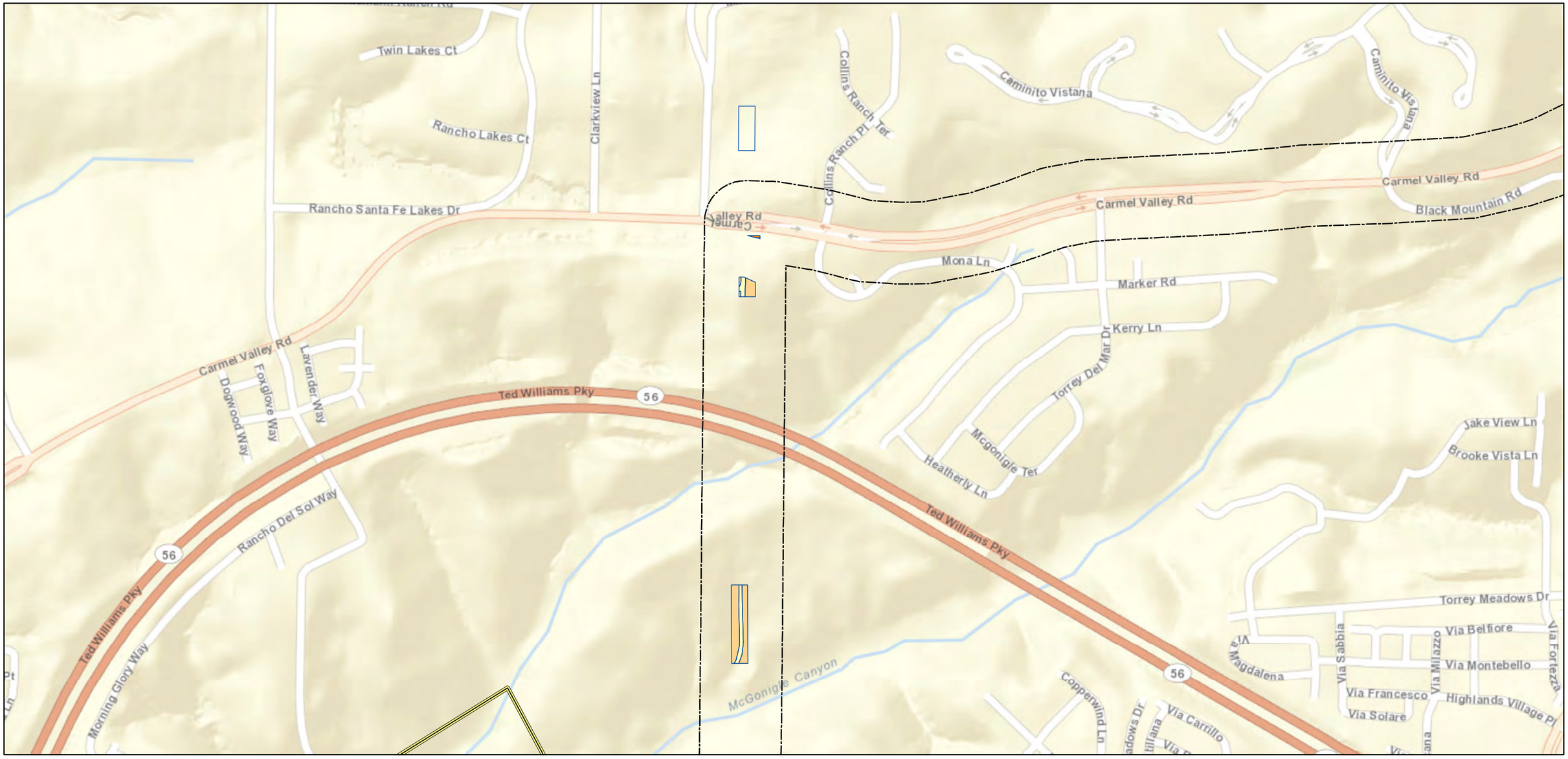
Preserve/ESHA Impacts

Figure 14

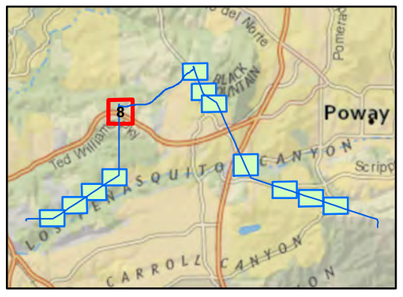
TRC

Date: 4/2/2014

SDGE A Sempra Energy utility



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\ESHAPreserves\SXtoPQ_ESHA.PreserveVegImpactsMap.mxd



- 1-Diegan Coastal Sage Scrub
- 2-Diegan Coastal Sage Scrub - Disturbed
- 3-Coastal Sage Scrub - Revegetated
- 4-Coastal Sage - Chaparral Scrub
- 5-Southern Mixed Chaparral
- 6-So. Mixed Chaparral - Disturbed
- 7-Scrub Oak Chaparral
- 8-Chamise Chaparral
- 9-Chamise Chaparral - Disturbed
- 14-Southern Willow Scrub
- 17-So. Coast Live Oak Riparian Forest
- 20-Nonnative Grassland
- 21-Native Grassland
- 0-Bare Ground
- 22-Developed Lands
- 23-Ornamental
- 24-Disturbed Habitat
- Permanent Impacts
- Temporary Impacts
- California Coastal Zone
- Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

0 590 1,180 1,770 Feet

Date: 4/2/2014

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

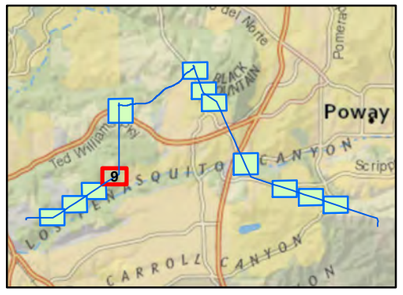
Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Preserve/ESHA Impacts

Figure 14

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\ESHAPreserves\SXtoPQ_ESHA.PreserveVegImpactsMap.mxd



- 1-Diegan Coastal Sage Scrub
- 2-Diegan Coastal Sage Scrub - Disturbed
- 3-Coastal Sage Scrub - Revegetated
- 4-Coastal Sage - Chaparral Scrub
- 5-Southern Mixed Chaparral
- 6-So. Mixed Chaparral - Disturbed
- 7-Scrub Oak Chaparral
- 8-Chamise Chaparral
- 9-Chamise Chaparral - Disturbed
- 14-Southern Willow Scrub
- 17-So. Coast Live Oak Riparian Forest
- 20-Nonnative Grassland
- 21-Native Grassland
- 0-Bare Ground
- 22-Developed Lands
- 23-Ornamental
- 24-Disturbed Habitat
- Permanent Impacts
- Temporary Impacts
- California Coastal Zone
- Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

0 500 1,000 1,500 Feet

Date: 4/2/2014

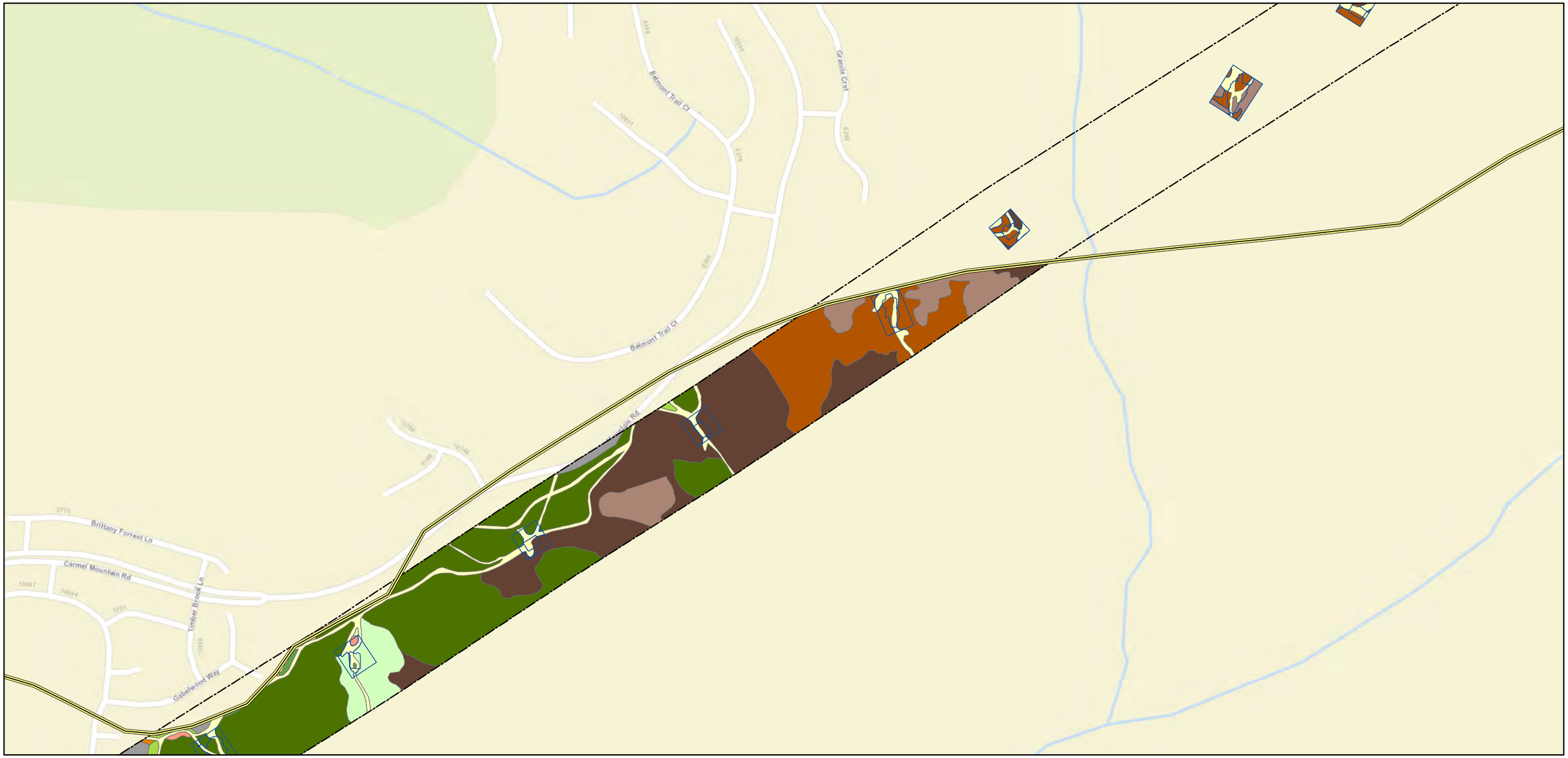
Sources: Busby Biological 2013;SDG&E,2013;Esri,DigitalGlobe, GeoEye, i-cubed, USDA, USGS, EX,Getmapping,Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Sycamore to Peñasquitos 230 kV Transmission Line Project

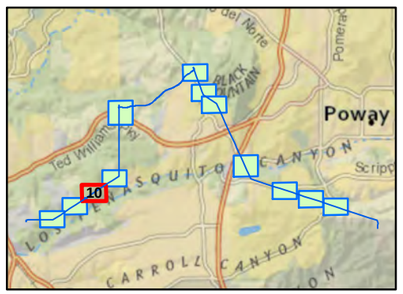
Proposed Project

Preserve/ESHA Impacts

Figure 14



G:\SDGE_SX2PQandTL69611\SDGE_SunriseSX2PQ\MXD\ESHAPreserves\SXtoPQ_ESHA.PreserveVegImpactsMap.mxd



- 1-Diegan Coastal Sage Scrub
- 2-Diegan Coastal Sage Scrub - Disturbed
- 3-Coastal Sage Scrub - Revegetated
- 4-Coastal Sage - Chaparral Scrub
- 5-Southern Mixed Chaparral
- 6-So. Mixed Chaparral - Disturbed
- 7-Scrub Oak Chaparral
- 8-Chamise Chaparral
- 9-Chamise Chaparral - Disturbed
- 14-Southern Willow Scrub
- 17-So. Coast Live Oak Riparian Forest
- 20-Nonnative Grassland
- 21-Native Grassland
- 0-Bare Ground
- 22-Developed Lands
- 23-Ornamental
- 24-Disturbed Habitat
- Permanent Impacts
- Temporary Impacts
- California Coastal Zone
- Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

0 500 1,000 1,500 Feet

Date: 4/2/2014

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

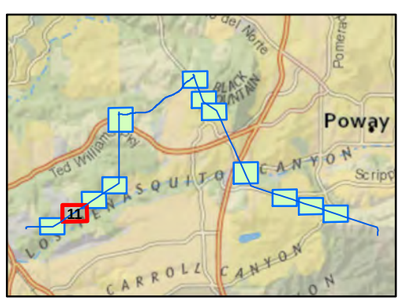
Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Preserve/ESHA Impacts

Figure 14

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\ESHAPreserves\SXtoPQ_ESHA.PreserveVegImpactsMap.mxd



- 1-Diegan Coastal Sage Scrub
- 2-Diegan Coastal Sage Scrub - Disturbed
- 3-Coastal Sage Scrub - Revegetated
- 4-Coastal Sage - Chaparral Scrub
- 5-Southern Mixed Chaparral
- 6-So. Mixed Chaparral - Disturbed
- 7-Scrub Oak Chaparral
- 8-Chamise Chaparral
- 9-Chamise Chaparral - Disturbed
- 14-Southern Willow Scrub
- 17-So. Coast Live Oak Riparian Forest
- 20-Nonnative Grassland
- 21-Native Grassland
- 0-Bare Ground
- 22-Developed Lands
- 23-Ornamental
- 24-Disturbed Habitat
- Permanent Impacts
- Temporary Impacts
- California Coastal Zone
- Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

0 500 1,000 1,500 Feet

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

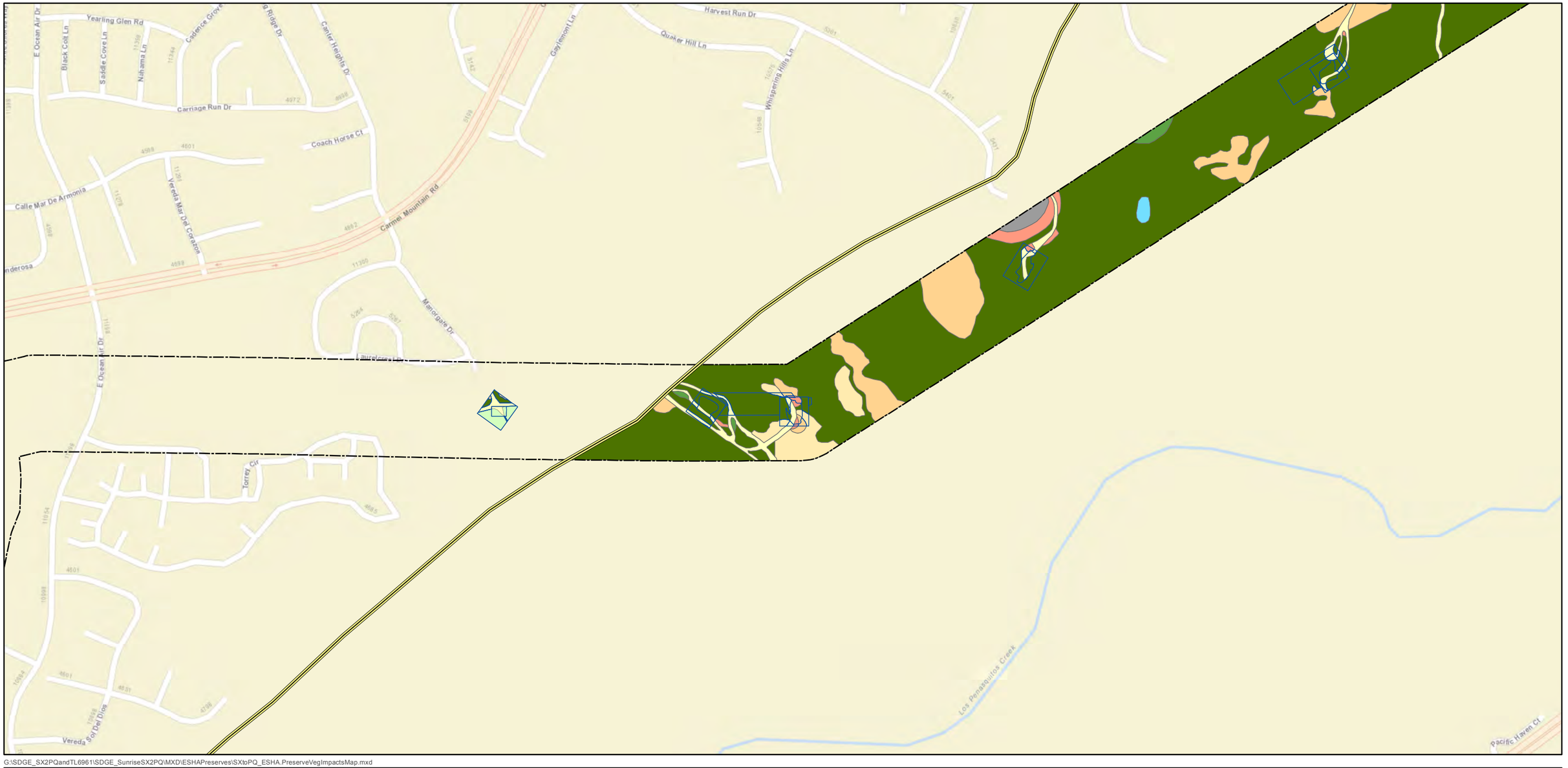
Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

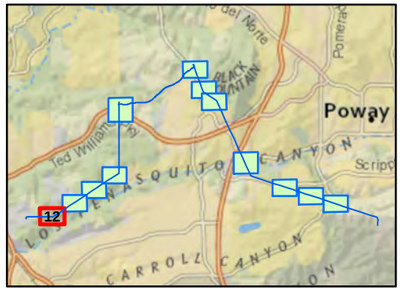
Preserve/ESHA Impacts

Figure 14

Date: 4/2/2014



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\ESHAPreserves\SXtoPQ_ESHA.PreserveVegImpactsMap.mxd



- 1-Diegan Coastal Sage Scrub
- 2-Diegan Coastal Sage Scrub - Disturbed
- 3-Coastal Sage Scrub - Revegetated
- 4-Coastal Sage - Chaparral Scrub
- 5-Southern Mixed Chaparral
- 6-So. Mixed Chaparral - Disturbed
- 7-Scrub Oak Chaparral
- 8-Chamise Chaparral
- 9-Chamise Chaparral - Disturbed
- 14-Southern Willow Scrub
- 17-So. Coast Live Oak Riparian Forest
- 20-Nonnative Grassland
- 21-Native Grassland
- 0-Bare Ground
- 22-Developed Lands
- 23-Ornamental
- 24-Disturbed Habitat
- Permanent Impacts
- Temporary Impacts
- California Coastal Zone
- Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

0 500 1,000 1,500 Feet

Date: 4/2/2014

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

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Preserve/ESHA Impacts

Figure 14

APPENDIX B

Plant Species Observed within BSA

Appendix B: Plant Species Observed Within BSA

Taxonomic Group	Common Name	Scientific Name
Lycophytes		
Selaginellaceae – Spike-Moss Family		
	mesa spike-moss	*Selaginella cinerascens*
Leptosporangiate		
Pteridaceae – Brake Family		
	California lace ferm	*Aspidotis californica*
	coffee fern	*Pellaea andromedifolia*
Dicotyledones		
Aizoaceae – Fig-Marigold Family		
	crystalline iceplant*	*Mesembryanthemum crystallinum*
Amaranthaceae – Amaranth Family		
	Mexican fireweed*	*Kochia scoparia* ssp. *s*
Anacardiaceae - Sumac Family		
	laurel sumac	*Malosma laurina*
	lemonadeberry	*Rhus integrifolia*
	western poison oak	*Toxicodendron diversilobum*
Apiaceae - Carrot Family		
	poison hemlock*	*Conium maculatum*
FE, SE, CRPR 1B.1	San Diego button-celery	*Eryngium aristulatum* ssp. *parishii*
	fennel*	*Foeniculum vulgare*
Asteraceae - Sunflower Family		
	western ragweed	*Ambrosia psilostachya*
	California sagebrush	*Artemisia californica*
	mugwort	*Artemisia douglasiana*
CRPR 4.2	Palmer's sagewort	*Artemisia palmeri*
	broom brush	*Baccharis pilularis*
	mule fat	*Baccharis salicifolia*
CRPR 4.2	San Diego sunflower	*Bahiopsis laciniata*
	tocalote*	*Centaurea melitensis*
	Italian thistle*	*Carduus pycnocephalus*
	common sand-aster	*Corethrogyne filaginifolia (=Lessingia f.* var. *f.)*
	artichoke thistle*	*Cynara cardunculus*
	fascicled tarplant	*Deinandra fasciculata*
	California encelia	*Encelia californica*
	brittlebush, incienso	*Encelia farinosa*
	golden yarrow	*Eriophyllum confertiflorum*
	crown daisy*	*Glebionis coronarium*
	southern sawtooth goldenbush	*Hazardia squarrosas* var. *grindelioides*
	telegraph weed	*Heterotheca grandiflora*
CRPR 4.2	graceful tarplant	*Holocarpha virgata* ssp. *elongata*
	smooth cat's-ear*	*Hypochaeris glabra*
	spreading goldenbush	*Isocoma menziesii* var. *m*
CRPR 2B.2	San Diego marsh-elder	*Iva hayesiana*
	prickly lettuce*	*Lactuca serriola*
	osmadenia	*Osmadenia tenella*
	woolly-heads	*Psilocarphus brevissimus* var. *b*
	slender woolly-heads	*Psilocarphus tenellus* var. *t*
	Spanish false-fleabane*	*Pulicaria paludosa*
	cocklebur	*Xanthium strumarium*

Appendix B: Plant Species Observed Within BSA (Continued)

Taxonomic Group	Common Name	Scientific Name
Berberidaceae – Berberis Family		
	shiny-leaf barberry	*Berberis pinnata* ssp. *p*
Boraginaceae - Borage Family		
	common forget-me-not	*Cryptantha intermedia*
	pride-of-madeira*	*Echium candicans*
Brassicaceae - Mustard Family		
	black mustard*	*Brassica nigra*
	perennial mustard *	*Hirschfeldia incana*
	radish*	*Raphanus sativus*
Cactaceae - Cactus Family		
	coast cholla	*Cylindropuntia prolifera*
CRPR 2B.1	coast barrel cactus	*Ferocactus viridescens*
	coast prickly pear	*Opuntia littoralis*
Caryophyllaceae - Pink Family		
	tread lightly	*Cardionema ramosissima*
Caprifoliaceae - Honeysuckle Family		
	honeysuckle	*Lonicera subspicata* var. *denudata*
	blue elderberry	*Sambucus mexicana*
Capparaceae – Caper Family		
	bladderpod	*Isomeris arborea*
Chenopodiaceae - Goosefoot Family		
	quailbush	*Atriplex lentiformis*
	Australian saltbush*	*Atriplex semibaccata*
	Russian-thistle* tumbleweed	*Salsola tragus*
Cistaceae - Rock-Rose Family		
	rock rose*	*Cistus ladanifer*
Convolvulaceae- Morning-Glory Family		
	morning glory	*Calystegia macrostegia*
Crassulaceae -Stone-Crop Family		
	chalk live-forever	*Dudleya pulverulenta*
Curcurbitaceae - Gourd Family		
	wild cucumber	*Marah macrocarpus*
Ericaceae - Heath Family		
	manzanita	*Arctostaphylos glandulosa* ssp. *g*
CRPR 1B.2	summer-holly	*Comarostaphylis diversifolia* ssp. *d*
	mission Manzanita	*Xylococcus bicolor*
Euphorbiaceae -Spurge Family		
	turkey mullein, dove weed	*Croton setigerus*
Fabaceae - Pea Family		
	cyclops acacia*	*Acacia cyclops*
	desert carpet*	*Acacia redolens*
	coast locoweed	*Astragalus trichopodus* var. *lonchus*
	brittlebush, incienso	*Encelia farinosa*
Fagaceae - Oak Family		
	coast live oak, Encina	*Quercus agrifolia* var. *agrifolia*
CRPR 1B.1	Nuttall's scrub oak	*Quercus dumosa*
Grossulariaceae – Gooseberry Family		
	fuchsia-flower gooseberry	*Ribes speciosum*
Lamiaceae - Mint Family		
	horehound*	*Marrubium vulgare*
	white sage	*Salvia apiana*
	black sage	*Salvia mellifera*

Appendix B: Plant Species Observed Within BSA (Continued)

Taxonomic Group	Common Name	Scientific Name
Myrtaceae – Myrtle Family		
	eucalyptus*	*Eucalyptus* spp.
Plantaginaceae - Plantain Family		
	California plantain	*Plantago erecta*
Polygonaceae - Buckwheat Family		
	California buckwheat	*Eriogonum fasciculatum* ssp. *f*
Phrymaceae - Lopseed family		
	coast monkey-flower	*Mimulus aurantiacus* var. *puniceus*
Pinaceae – Pine Family		
CRPR 1B.2	Torrey pine	*Pinus torreyana*
Plumbaginaceae – Leadwort Family		
	Perez's marsh-rosemary*	*Limonium perezii*
Primulaceae – Primrose Family		
	padre's shooting star	*Dodecatheon clevelandii* ssp. *c*
Rhamnaceae - Buckthorn Family		
CRPR 2B.1	spineshrub	*Adolphia californica*
	Ramona-lilac	*Ceanothus tomentosus*
	spiny redberry	*Rhamnus crocea*
Rosaceae - Rose Family		
	chamise	*Adenostoma fasciculatum*
	christmas berry, toyon	*Heteromeles arbutifolia*
	holly-leaf cherry	*Prunus illicifolia*
Rutaceae – Citrus Family		
	coast spice bush	*Cneoridium dumosum*
Salicaceae - Willow Family		
	Goodding's black willow	*Salix gooddingii*
	red willow	*Salix laevigata*
	arroyo willow	*Salix lasiolepis*
Scrophulariaceae - Figwort Family		
	ngaio*	*Myoporum laetum*
Solanaceae - Nightshade Family		
	jimson weed	*Datura wrightii*
	tree tobacco*	*Nicotiana glauca*
Tamaricaceae – Tamarisk Family		
	tamarisk, salt cedar*	*Tamarix ramosissima*
Monocotyledoneae		
Agavaceae - Agave Family		
	Mohave yucca	*Yucca schidigera*
Iridaceae – Iris Family		
	blue-eyed grass	*Sisyrinchium bellum*
Juncaceae - Rush Family		
CRPR 4.2	southwestern spiny rush	*Juncus acutus* ssp. *leopoldii*
Poaceae - Grass Family		
	slender wild oat*	*Avena barbata*
	purple falsebrome*	*Brachypodium distachyon*
	ripgut grass*	*Bromus diandrus*
	soft chess*	*Bromus hordeaceus*
	foxtail chess*	*Bromus madritensis* ssp. *rubens*
	panic veldt grass*	*Ehrharta erecta*
	nit grass*	*Gastridium phleoides (=G. ventricosum)*
	nodding needlegrass	*Stipa cernua*
	foothill needlegrass	*Stipa lepida*

Appendix B: Plant Species Observed Within BSA (Continued)

Taxonomic Group	Common Name	Scientific Name
	purple needlegrass	*Stipa pulchra*
Themidaceae - Brodiaea Family		
CRPR 1B.1	San Diego goldenstar	*Bloomeria clevelandii*
Typhaceae - Cattail Family		
	southern cattail	*Typha domingensis*

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
Invertebrates	
Danaus plexippus	monarch butterfly
Vanessa cardui	painted lady
Apodemia virgulti	Behr's metalmark
Amphibians	
Hyla cadaverina	California treefrog
Reptiles	
Sceloporus occidentalis	western fence lizard
Uta stansburiana	side-blotched lizard
Aspidoscelis hyperythra beldingi	Belding's orange-throated whiptail
Birds	
Anas strepera	gadwall
Anas americana	American wigeon
Anas platyrhynchos	mallard
Callipepla californica	California quail
Ardea alba	great egret
Cathartes aura	turkey vulture
Accipiter cooperii	Cooper's hawk
Buteo lineatus	red-shouldered hawk
Buteo jamaicensis	red-tailed Hawk
Falco sparverius	American kestrel
Fulica americana	American coot
Charadrius vociferus	killdeer
Larus occidentalis	western gull
Zenaida macroura	mourning dove
Geococcyx californianus	greater roadrunner
Bubo virginianus	great horned owl
Phalaenoptilus nuttallii	common poorwill
Chaetura vauxi	Vaux's swift
Aeronautes saxatalis	white-throated swift
Calypte anna	Anna's hummingbird
Selasphorus sasin	Allen's hummingbird
Melanerpes formicivorus	acorn woodpecker
Sphyrapicus sp.	sapsucker sp.
Picoides nuttallii	Nuttall's woodpecker
Colaptes auratus	northern flicker
Empidonax difficilis	Pacific-slope flycatcher
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe
Tyrannus vociferans	Cassin's kingbird
Tyrannus verticalis	western kingbird
Lanius ludovicianus	loggerhead shrike
Aphelocoma californica	western scrub-Jay
Corvus brachyrhynchos	American crow

Appendix C: Wildlife Species Detected Within BSA (Continued)

Scientific Name	Common Name
Corvus corax	common raven
Eremophila alpestris actia	California horned lark
Psaltriparus minimus	bushtit
Thryomanes bewickii	Bewick's wren
Troglodytes aedon	house wren
Regulus calendula	ruby-crowned kinglet
Polioptila caerulea	blue-gray gnatcatcher
Polioptila californica	coastal California gnatcatcher
Sialia mexicana	western bluebird
Catharus guttatus	hermit thrush
Chamaea fasciata	wrentit
Mimus polyglottos	northern mockingbird
Toxostoma redivivum	California thrasher
Sturnus vulgaris	European starling
Vermivora celata	orange-crowned warbler
Dendroica coronata	yellow-rumped warbler
Dendroica nigrescens	black-throated gray warbler
Geothlypis trichas	common yellowthroat
Pipilo maculatus	spotted towhee
Pipilo crissalis	California towhee
Aimophila ruficeps canescens	southern California rufous-crowned sparrow
Melospiza melodia	song sparrow
Zonotrichia leucophrys	white-crowned sparrow
Zonotrichia atricapilla	golden-crowned sparrow
Sturnella neglecta	western meadowlark
Carduelis psaltria	lesser goldfinch
Mammals	
Sylvilagus audubonii	desert cottontail
Spermophilus beecheyi	California ground squirrel
Neotoma lepida	desert woodrat
Canis familiaris	domestic dog
Canis latrans	coyote
Procyon lotor	raccoon
Felis rufus	bobcat
Equus caballus	domestic horse
Odocoileus hemionus	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 (*Acanthomintha ilicifolia*)	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 (*Acmispon* [*Lotus nuttallianus*] *prostrata*)	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 (*Adolphia californica*)	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 (*Agave shawii* var. *shawii*)	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 (*Ambrosia pumila*)	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 (*Aphanisma blitoides*)	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 (*Arctostaphylos glandulosa* ssp. *crassifolia*)	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 (*Arctostaphylos otayensis*)	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 (*Artemisia palmeri*)	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 (*Astragalus tener* var. *titi*)	FE SE CRPR 1B.1 NCCP-NE	Annual herb. Blooms Mar-May. Vernally mesic areas in coastal dunes, coastal bluff scrub, coastal prairie. Elev 3-165 ft.	Not Expected. Species restricted to immediate coast.
Coulter's saltbush (*Atriplex coulteri*)	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 (*Atriplex pacifica*)	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 (*Baccharis vanessae*)	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 (*Bahiopsis* [*Viguiera*] *laciniata*)	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 (*Berberis nevinii*)	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 (*Bergerocactus emoryi*)	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 (*Bloomeria clevelandii*)	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 (*Brodiaea filifolia*)	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 (*Brodiaea orcuttii*)	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 (*Calandrinia breweri*)	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 (*Calochortus dunnii*)	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 (*Caulanthus simulans*)	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 (*Ceanothus cyaneus*)	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 (*Ceanothus verrucosus*)	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 (*Centromadia parryi* ssp. *australis*)	CRPR 1B.1	Annual herb. Blooms May-Nov. Vernal pools, along the margins of marshes, in vernally 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 (*Chaenactis glabriuscula* var. *orcuttiana*)	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	Hemiparasititc 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
(*Chloropyron maritimum* ssp. *maritimum*)	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 (*Chorizanthe orcuttiana*)	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 (*Chorizanthe polygonoides* var. *longispina*)	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 (*Clinopodium chandleri*)	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 (*Comarostaphylis diversifolia* ssp. *diversifolia*)	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 (*Corethrogyne filaginifolia* var. *incana*)	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 (*Corethrogyne filaginifolia* var. *linifolia*)	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 (*Cylindropuntia californica* var. *californica*)	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 (*Deinandra conjugens*)	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 (*Dicranostegia orcuttiana*)	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 (*Dudleya brevifolia*)	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 (*Dudleya multicaulis*)	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 (*Dudleya variegata*)	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 (*Dudleya viscida*)	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 (*Ericameria palmeri* ssp. *palmeri*)	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 (*Eryngium aristulatum* var. *parishii*)	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 (*Erysimum ammophilum*)	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 (*Euphorbia misera*)	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 (*Ferocactus viridescens*)	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 (*Harpagonella palmeri*)	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 (*Hesperocyparis* [*Cupressus*] *forbesii*)	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 (*Heterotheca sessiliflora* ssp. *sessiliflora*)	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 (*Holocarpha virgata* ssp. *elongata*)	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 (*Isocoma menziesii* var. *decumbens*)	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 (*Iva hayesiana*)	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 (*Juncus acutus* ssp. *leopoldii*)	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 (*Lasthenia glabrata* ssp. *coulteri*)	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 (*Lepechinia cardiophylla*)	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 (*Lepechinia gander*)	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 (*Lepidium virginicum* var. *robinsonii*)	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 (*Leptosyne maritima*)	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 (*Monardella hypoleuca* ssp. *lanata*)	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 (*Monardella viminea*)	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 (*Myosurus minimus* ssp. *apus*)	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 (*Navarretia fossalis*)	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 (*Nemacaulis denudata* var. *denudata*)	CRPR 1B.2	Annual herb. Blooms Apr-Sep. Coastal dunes. Elev 0-330 ft.	Not Expected. Species restricted to immediate coast.
Dehesa beargrass (*Nolina interrata*)	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 (*Orcuttia californica*)	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 (*Orobanche parishii* ssp. *brachyloba*)	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 (*Packera ganderi*)	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 (*Pinus torreyana* ssp. *torreyana*)	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 (*Pogogyne abramsii*)	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 (*Pogogyne nudiuscula*)	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 (*Quercus dumosa*)	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 (*Rosa minutifolia*)	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 (*Senecio aphanactis*)	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 (*Stemodia durantifolia*)	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 (*Suaeda esteroa*)	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 tetracoccus (*Tetracoccus dioicus*)	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

BUSBY
Biological Services

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 (CNDDB), 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 CNDDB 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 CNDDB 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 CNDDB 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 Schmidtmann (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 (*Acanthomintha ilicifolia*)	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 (*Adolphia californica*)	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 (*Ambrosia pumila*)	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 (*Arctostaphylos glandulosa* ssp. *crassifolia*)	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 (*Artemisia palmeri*)	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 (*Baccharis vanessae*)	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 (*Bahiopsis* [*Viguiera*] *laciniata*)	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 (*Bloomeria clevelandii*)	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 (*Brodiaea orcuttii*)	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 (*Calandrinia breweri*)	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 (*Ceanothus verrucosus*)	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 (*Centromadia parryi* ssp. *australis*)	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 vernally mesic areas within grassland. Elev 0-1,395ft.	X	X
long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*)	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 (*Comarostaphylis diversifolia* ssp. *diversifolia*)	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 (*Corethrogyne filaginifolia* var. *linifolia*)	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 (*Dudleya brevifolia*)	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 (*Dudleya variegata*)	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 (*Dudleya viscida*)	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 (*Eryngium aristulatum* var. *parishii*)	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 (*Ferocactus viridescens*)	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 (*Harpagonella palmeri*)	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 (*Holocarpha virgata* ssp. *elongata*)	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 (*Isocoma menziesii* var. *decumbens*)	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 (*Iva hayesiana*)	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 (*Juncus acutus* ssp. *leopoldii*)	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 (*Lepidium virginicum* var. *robinsonii*)	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
willowy monardella (*Monardella viminea*)	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 (*Myosurus minimus* ssp. *apus*)	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 (*Orcuttia californica*)	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 (*Pinus torreyana* ssp. *torreyana*)	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 (*Pogogyne abramsii*)	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 (*Quercus dumosa*)	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 (*Senecio aphanactis*)	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 (*Stemodia durantifolia*)	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 CNDDB 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 (*Acmispon* [*Lotus nuttallianus*] *prostrata*)	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 (*Agave shawii* var. *shawii*)	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 (*Aphanisma blitoides*)	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 (*Arctostaphylos otayensis*)	None. Species restricted to Otay Mtn. area in southern San Diego County.	CRPR 1B.2 NCCP	Evergreen shrub. Blooms Jan-Apr. Chaparral, cismontane woodland. Elev900-5,580ft.
coastal dunes milk-vetch (*Astragalus tener* var. *titi*)	None. Species restricted to immediate coast.	FE SE CRPR 1B.1 NCCP-NE	Annual herb. Blooms Mar-May. Vernally mesic areas in coastal dunes, coastal bluff scrub, coastal prairie. Elev 3-165ft.
Coulter's saltbush (*Atriplex coulteri*)	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 (*Atriplex pacifica*)	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 (*Berberis nevinii*)	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 (*Bergerocactus emoryi*)	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 (*Brodiaea filifolia*)	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 (*Calochortus dunnii*)	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 (*Caulanthus simulans*)	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 (*Ceanothus cyaneus*)	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 (*Chaenactis glabriuscula* var. *orcuttiana*)	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 (*Chloropyron maritimum* ssp. *maritimum*)	None. Species restricted to immediate coast. BSA outside of elevation range for species.	FE SE CRPR 1B.2 NCCP-NE	Hemiparasititc 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 (*Chorizanthe orcuttiana*)	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 (*Clinopodium chandleri*)	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 (*Corethrogyne filaginifolia* var. *incana*)	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 (*Cylindropuntia californica* var. *californica*)	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 (*Deinandra conjugens*)	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 (*Dicranostegia orcuttiana*)	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 (*Dudleya multicaulis*)	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 (*Ericameria palmeri* ssp. *palmeri*)	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 (*Erysimum ammophilum*)	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 (*Euphorbia misera*)	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 (*Hesperocyparis* [*Cupressus*] *forbesii*)	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 (*Heterotheca sessiliflora* ssp. *sessiliflora*)	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 (*Lasthenia glabrata* ssp. *coulteri*)	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 (*Lepechinia cardiophylla*)	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 (*Lepechinia gander*)	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 (*Leptosyne maritima*)	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 (*Monardella hypoleuca* ssp. *lanata*)	None. Outside known range of species.	CRPR 1B.2 NCCP	Rhizomatous herb. Blooms Jun-Aug. chaparral, cismontane woodland. Elev 980-5,170ft.
spreading navarretia (*Navarretia fossalis*)	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 (*Nemacaulis denudata* var. *denudata*)	None. Species restricted to immediate coast.	CRPR 1B.2	Annual herb. Blooms Apr-Sep. Coastal dunes. Elev 0-330ft.
Dehesa beargrass (*Nolina interrata*)	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 (*Orobanche parishii* ssp. *brachyloba*)	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 (*Packera ganderi*)	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 (*Pogogyne nudiuscula*)	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 (*Rosa minutifolia*)	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 (*Suaeda esteroa*)	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 tetracoccus (*Tetracoccus dioicus*)	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 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

References

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors.
2012 *The Jepson manual: vascular plants of California, second edition*. University of California Press, Berkeley.

California Native Plant Society
2013 Inventory of Rare and Endangered Plants, http://www.rareplants.cnps.org/. Accessed October and November 2013.

Consortium of California Herbaria
2013 Data provided by the participants of the Consortium of California Herbaria (ucjeps.berkeley.edu/consortium/). Accessed October and November 2013.

Rebman, J., and M.S. Simpson
2006 *Checklist of the Vascular Plants of San Diego County*. 4th edition.

San Diego Natural History Museum
2013 www.sdplantatlas.org. Accessed October and November 2013.

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_BusbyLocation.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Location

Figure 1

Proposed Project

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

N W E S

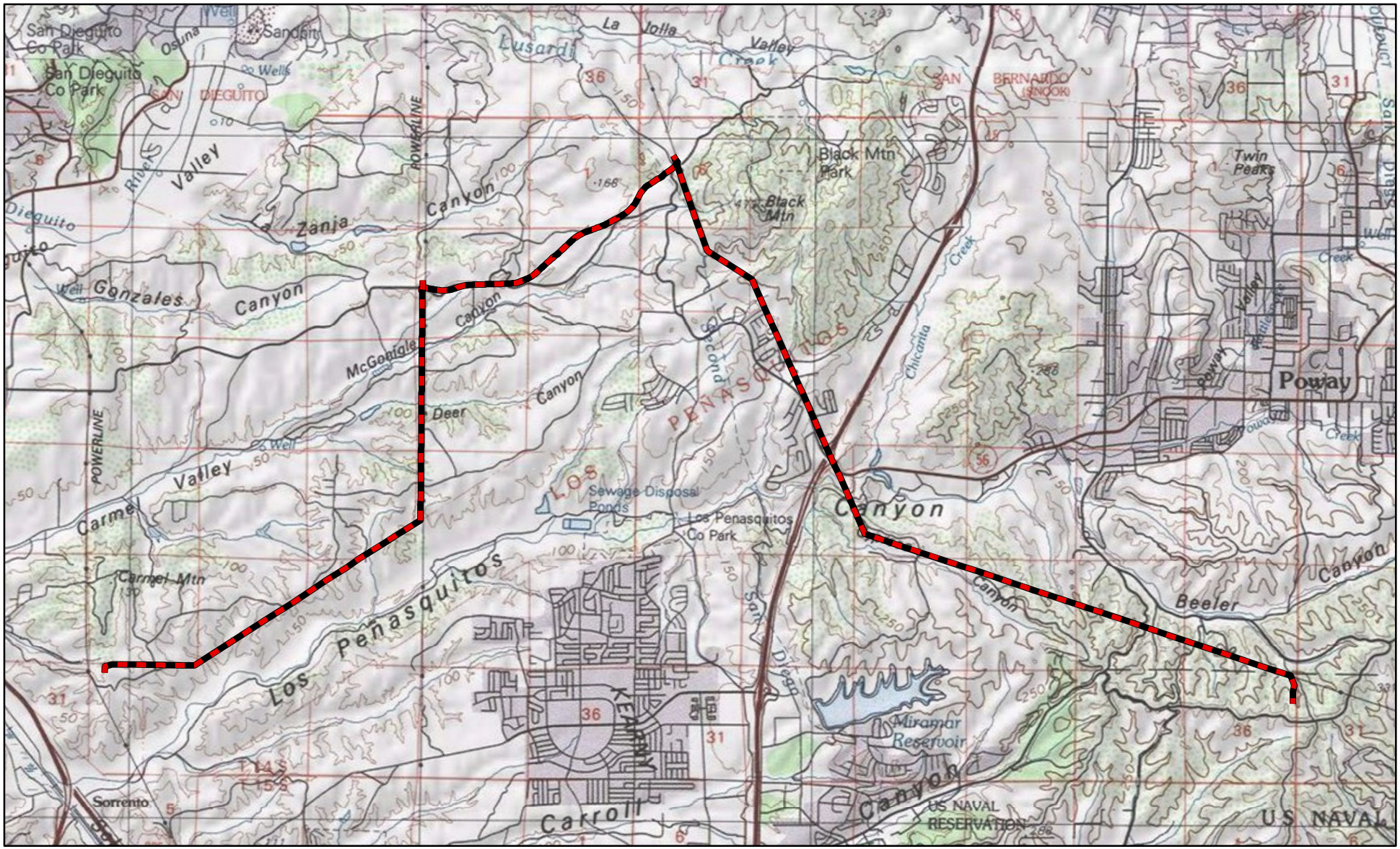
0 10 20 30 Miles

3/18/2014

TRC

SDGE A Sempra Energy utility

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



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_BusbyVicinity.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Vicinity

Figure 2

Proposed Project

N W E S

0 1 2 3 Miles

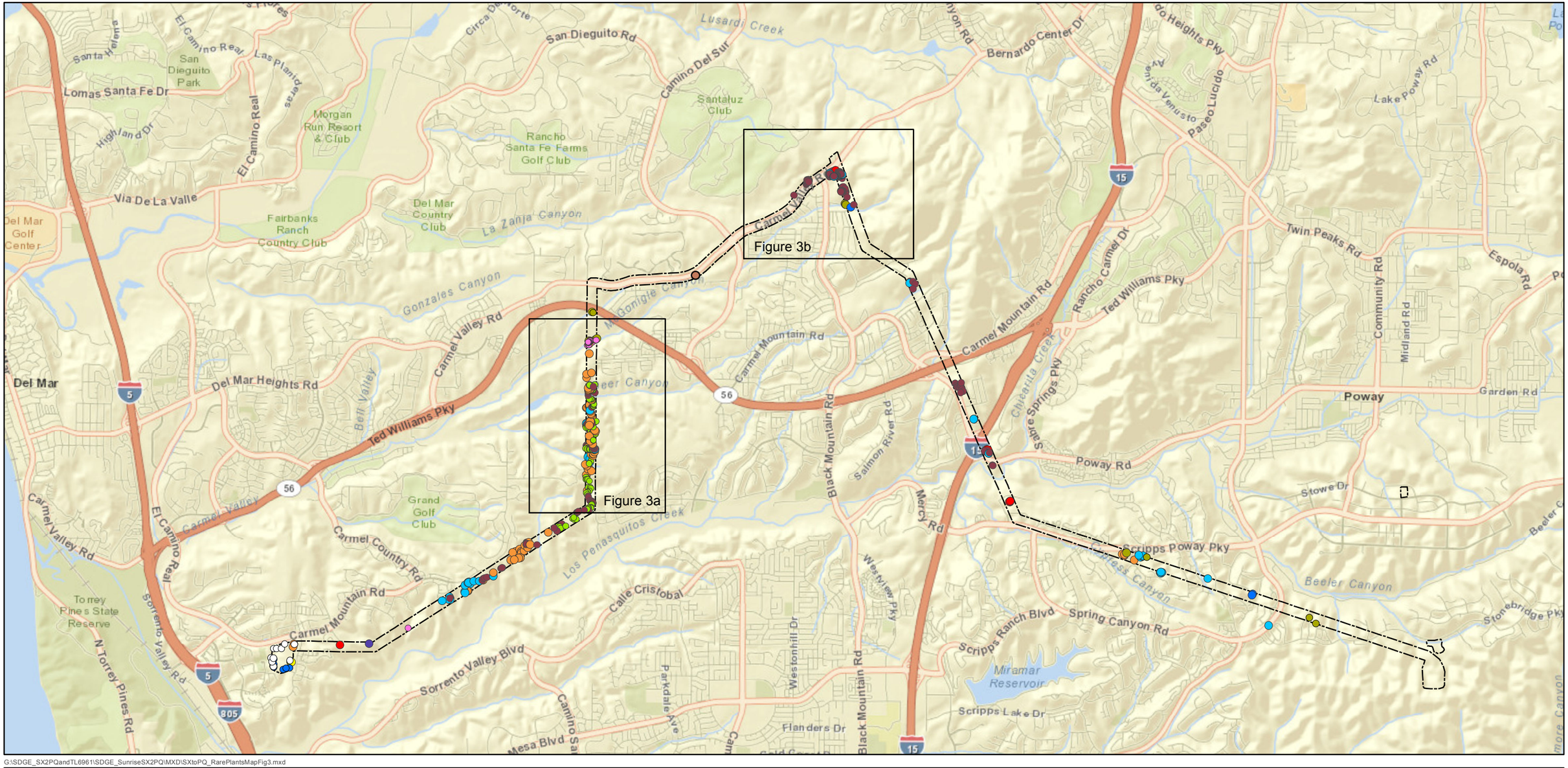
Date: 3/27/2014

TRC

SDGE

A Sempra Energy utility

Sources: SDG&E; Copyright:© 2013 National Geographic Society, i-cubed



G:\SDGE_SX2PQandTL69961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_RarePlantsMapFig3.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

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

0 1 2 3 Miles

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

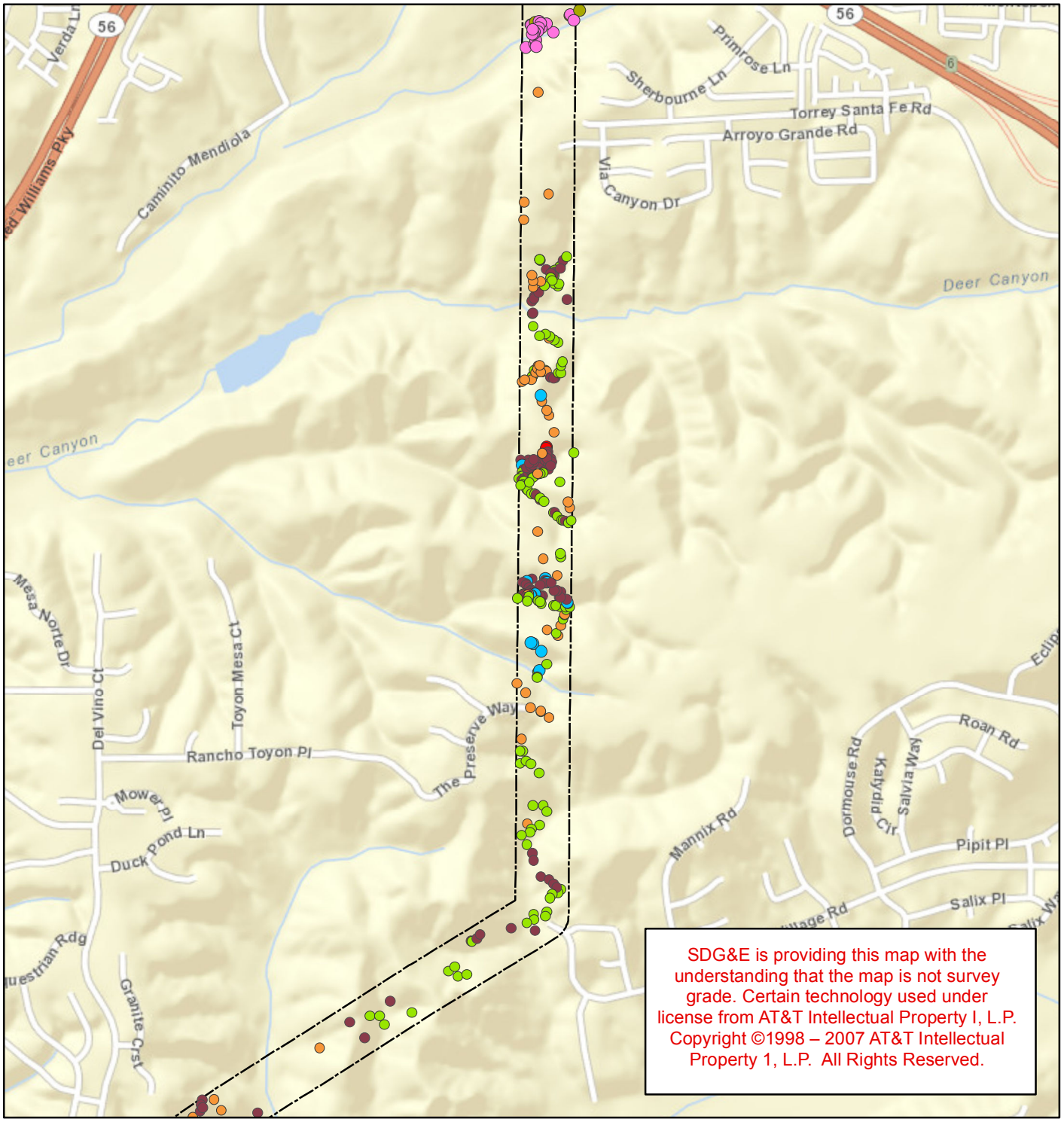
Fall 2013 Special-Status Plant Survey Results

Figure 3

TRC

Date: 3/27/2014

SDGE A Sempra Energy utility



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_RarePlantsMapFig3a.mxd

- *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
- *Bahiopsis 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

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Fall 2013

Special-Status Plant Survey Results

Figure 3a

N W E S

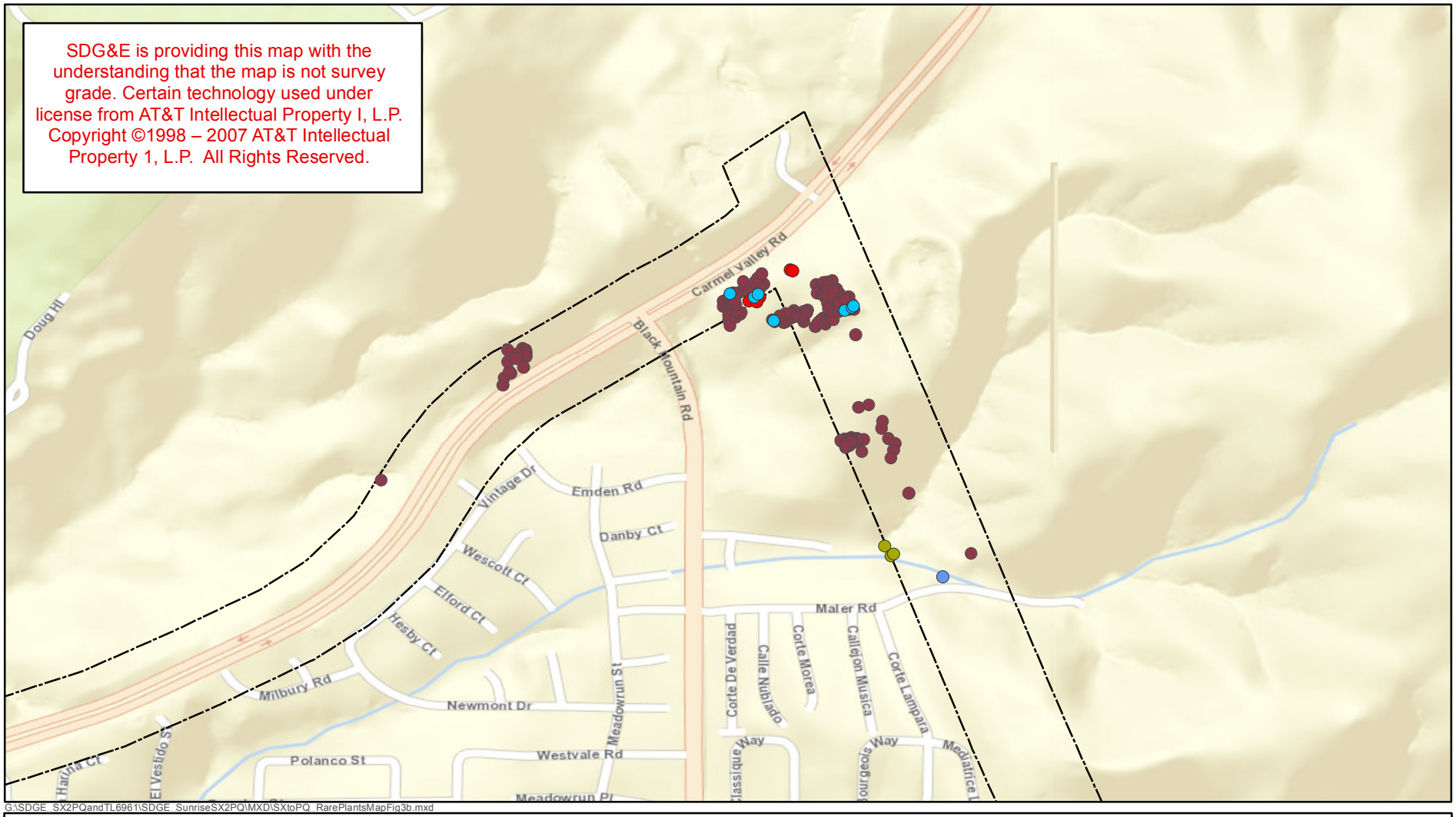
0 1 2 3 Miles

3/27/2014

TRC SDGE A Sempra Energy® utility

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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_RarePlantsMapFig3b.mxd

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

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Fall 2013

Special-Status Plant Survey Results

Figure 3b

0 1 2 3 Miles

3/27/2014

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

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
Invertebrates (Nomenclature from McLaughlin, P.A., et. al 2005; Opler and Warren 2005)			
San Diego fairy shrimp (*Branchinecta sandiegonensis*)	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, CNDDB records from BSA vicinity. Portion of BSA within designated critical habitat Subunit 4A/B (Del Mar Mesa).
Riverside fairy shrimp (*Streptocephalus woottoni*)	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 CNDDB records from BSA vicinity, but only marginally suitable habitat for this species exists within BSA.
Thorne's hairstreak butterfly (*Mitoura thornei*)	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 (*Euphydryas editha quino*)	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 (*Panoquina errans*)	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 CNDDB records or other known occurrences within the vicinity of BSA.
Fishes (Nomenclature from Nelson, J.S., et. al 2004)			
southern steelhead (*Oncorhynchus mykiss irideus*) (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 CNDDB records or other known occurrences within the vicinity of the BSA area.

Species Name	Status	Habitat Description*	Potential for Occurrence
tidewater goby (*Eucyclogobius newberryi*)	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 CNDDB records or other known occurrences within the vicinity of BSA.
Amphibians (Nomenclature from Collins, J.T., et. al 2009; Crother, B. I. 2012)			
arroyo toad (*Anaxyrus californicus*)	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 CNDDB records or other known occurrences within the vicinity of BSA, no suitable breeding habitat present within BSA or vicinity.
California red-legged frog (*Rana draytonii*)	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 (*Rana muscosa*)	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 (*Spea hammondii*)	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 (*Ensatina eschscholtzii klauberi*)	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 (*Taricha torosa torosa*)	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.
Reptiles (Nomenclature from Collins and Taggart 2009; Crother, B. I. 2012)			
western pond turtle (*Actinemys marmorata*)	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 (*Anniella pulchra*)	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 (*Coleonyx variegatus abbotti*)	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 (*Phrynosoma blainvillii*)	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 (*Plestiodon skiltonianus interparietalis*)	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 (*Aspidoscelis hyperythra beldingi*)	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 preset throughout BSA and vicinity.
rosy boa (*Charina trivirgata*)	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 (*Salvadora hexalepis virgultea*)	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 (*Crotalus ruber*)	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 (*Diadophis punctatus similis*)	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 (*Thamnophis hammondii*)	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 (*Thamnophis sirtalis infernalis*)	SSC	Marsh and upland habitats near permanent water, northern coastal San Diego County.	Not expected. BSA outside known range of species.
Birds (Nomenclature from American Ornithologists' Union 1998; Chesser, R.T., et. al 2010)			
brant (*Branta bernicla*) (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 CNDDB records or other known occurrences from BSA vicinity. Potential to be observed in flight during migration and winter.
cackling (=Aleutian Canada) goose (*Branta hutchinsii leucopareia*) (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 CNDDB records or other known occurrences from BSA vicinity. Potential to be observed in flight during migration and winter.
American white pelican (*Pelecanus erythrorhynchos*) (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 (*Pelecanus occidentalis californicus*) (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 CNDDB records or other known occurrences from BSA vicinity. Potential to be observed in flight.
double-crested cormorant (*Phalacrocorax auritus*) (Nesting colony)	WL	Bays, lagoons, estuaries. Non-breeding year-round visitor.	Not expected to nest. No suitable habitat present within BSA or vicinity, no CNDDB records or other known occurrences from BSA vicinity. Potential to be observed in flight.
reddish egret (*Egretta rufescens*)	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 CNDDB records or other known occurrences from BSA vicinity. Potential to be observed during migration and winter.
least bittern (*Ixobrychus exilis*) (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. CNDDB records from BSA vicinity. Potential to be observed in flight.
white-faced ibis (*Plegadis chihi*) (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 CNDDB records or other known occurrences from BSA vicinity. Potential to be observed in flight.
Cooper's hawk (*Accipiter cooperii*) (Nesting)	WL NCCP	Mature forest, open woodlands, wood edges, river groves. Parks and residential areas.	High potential to nest. Suitable nesting habitat preset throughout BSA, CNDDB records from BSA vicinity. Species observed during biological surveys in fall during non-breeding season.
sharp-shinned hawk (*Accipiter striatus*) (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 (*Aquila chrysaetos*) (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 CNDDB records from BSA vicinity.
ferruginous hawk (*Buteo regalis*) (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 CNDDB records from BSA vicinity. Potential to be observed in flight during migration and winter.
Swainson's hawk (*Buteo swainsoni*) (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 (*Circus cyaneus*) (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 CNDDB records from BSA vicinity.
white-tailed kite (*Elanus leucurus*) (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, CNDDB records from BSA vicinity.
bald eagle (*Haliaeetus leucocephalus*) (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 CNDDB records or other known occurrences BSA vicinity.
osprey (*Pandion haliaetus*) (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 CNDDB records or other known occurrences from BSA vicinity. Potential to be observed in flight year-round.
merlin (*Falco columbarius*) (Wintering)	WL	Rare winter visitor. Grasslands, agricultural fields, occasionally mud flats.	Moderate potential to winter. Moderately suitable foraging habitat present within BSA. No CNDDB 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 (*Falco mexicanus*) (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 CNDDB 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 (*Falco peregrinus anatum*) (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 CNDDB records or other known occurrences from BSA vicinity. Potential to be observed in flight during migration and winter.
California black rail (*Laterallus jamaicensis coturniculus*)	ST CFP	Tidal marshes, grassy marshes. Resident populations extirpated.	Not expected to nest. Species extirpated from region. CNDDB record from vicinity is from 1952.
light-footed clapper rail (*Rallus longirostris levipes*)	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 CNDDB records are from immediate coast.
mountain plover (*Charadrius montanus*) (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 (*Charadrius alexandrinus nivosus*) (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 CNDDB records are from immediate coast.
long-billed curlew (*Numenius americanus*) (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 (*Chlidonias niger*) (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 (*Gelochelidon nilotica*) (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 CNDDB records or other known nesting occurrences from BSA vicinity. Potential to be observed in flight during migration and winter.
California gull (*Larus californicus*) (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 (*Rynchops niger*) (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 CNDDB records or other known nesting occurrences from BSA vicinity. Potential to be observed in flight during migration and winter.
California least tern (*Sternula antillarum browni*) (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 CNDDB records are from immediate coast.
elegant tern (*Thalasseus elegans*) (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 CNDDB records or other known nesting occurrences from BSA vicinity. Potential to be observed in flight during migration and winter.
western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) (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 CNDDB records or other known occurrences from BSA vicinity.
burrowing owl (*Athene cunicularia*) (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. CNDDB records from BSA vicinity, BSA within the known range of this species.
long-eared owl (*Asio otus*) (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 CNDDB 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 (*Strix occidentalis occidentalis*)	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 CNDDB records or other known occurrences from BSA vicinity. BSA outside known range of species.
Vaux's swift (*Chaetura vauxi*) (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 (*Cypseloides niger*) (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 (*Empidonax traillii extimus*) (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 CNDDB records or other known nesting occurrences from BSA vicinity. Potential to be observed during migration.
vermilion flycatcher (*Pyrocephalus rubinus*) (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 CNDDB records from BSA vicinity. BSA outside known breeding range of species.
loggerhead shrike (*Lanius ludovicianus*) (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 CNDDB records from BSA vicinity.
least Bell's vireo (*Vireo bellii pusillus*) (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, CNDDB records from BSA vicinity.

Species Name	Status	Habitat Description*	Potential for Occurrence
California horned lark (*Erempohila alpestris actia*)	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, CNDDB records from BSA vicinity.
purple martin (*Progne subis*) (Nesting)	SSC	Breeds in montane coniferous woodland.	Not expected to nest. No suitable nesting habitat present within BSA or vicinity, no CNDDB records or other known occurrences from BSA vicinity. BSA outside known breeding range of species.
bank swallow (*Riparia riparia*) (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 (*Campylorhynchus brunneicapillus sandiegensis*)	SSC NCCP-NE	Maritime succulent scrub, coastal sage scrub with Opuntia thickets. Rare localized resident.	Moderate potential to nest. Limited suitable habitat present, CNDDB records from BSA vicinity, BSA within known range of species.
coastal California gnatcatcher (*Polioptila californica californica*)	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 preset throughout BSA. CNDDB records from BSA vicinity.
yellow warbler (*Dendroica petechia brewsteri*) (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 CNDDB records from BSA vicinity.
yellow-breasted chat (*Icteria virens*) (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, CNDDB records from BSA vicinity.
southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	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 preset throughout BSA, CNDDB 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 (*Ammodramus savannarum*) (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, CNDDB records from BSA vicinity.
Bell's sage sparrow (*Amphispiza belli belli*)	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, CNDDB records from BSA vicinity.
Belding's savannah sparrow (*Passerculus sandwichensis beldingi*)	SE NCCP	Salt marshes, lagoons dominated by *Salicornia*. Resident.	Not expected. No suitable nesting or foraging habitat present and no known nesting occurrences within BSA or vicinity. CNDDB records are from immediate coast.
large-billed savannah sparrow (*Passerculus sandwichensis rostratus*) (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 CNDDB records or other known occurrences from BSA vicinity.
tricolored blackbird (*Agelaius tricolor*) (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 (*Sialia mexicana*)	NCCP	Open woodlands, parks, farmlands, orchards.	High. BSA within known range of species, suitable nesting and foraging habitat present within BSA and vicinity. No CNDDB records from BSA vicinity.
Mammals (Nomenclature from Baker, R. J., et. Al 2003)			
Mexican long-tongued bat (*Choeronycteris mexicana*)	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. CNDDB records from BSA vicinity.
pallid bat (*Antrozous pallidus*)	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 CNDDB records from BSA vicinity.

Species Name	Status	Habitat Description*	Potential for Occurrence
Townsend's big-eared bat (*Corynorhinus townsendii*)	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 CNDDB records from BSA vicinity.
spotted bat (*Euderma maculatum*)	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. CNDDB records from BSA vicinity.
western red bat (*Lasiurus blossevillii*)	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. CNDDB records from BSA vicinity.
western mastiff bat (*Eumops perotis californicus*)	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. CNDDB records from BSA vicinity.
big free-tailed bat (*Nyctinomops macrotis*)	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. CNDDB records from BSA vicinity.
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	SSC NCCP	Open areas of scrub, grasslands, agricultural fields.	High. BSA within known range of species and suitable habitat present within BSA and vicinity. CNDDB records from BSA vicinity.
Dulzura pocket mouse (*Chaetodipus californicus femoralis*)	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. CNDDB records from BSA vicinity.
northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*)	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. CNDDB 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 (*Dipodomys stephensi*)	FE ST NCCP	Grassland, open areas.	Not expected. BSA outside known range of species. No CNDDB records from BSA vicinity.
Pacific pocket mouse (*Perognathus longimembris pacificus*)	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. CNDDB record from BSA vicinity are from vicinity of coast and believed to be misidentified.
San Diego desert woodrat (*Neotoma lepida intermedia*)	SSC NCCP	Coastal sage scrub and chaparral	High. BSA within known range of species and suitable habitat present within BSA and vicinity. CNDDB records from BSA vicinity.
southern grasshopper mouse (*Onychomys torridus ramona*)	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 CNDDB records from BSA vicinity.
ringtail (*Bassariscus astutus*)	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 CNDDB records from BSA vicinity.
American badger (*Taxidea taxus*)	SSC NCCP	Grasslands, savannas, meadows, sparse scrublands	Low. BSA within known range of species and marginal habitat present within BSA and vicinity. No CNDDB records from BSA vicinity.
mountain lion (*Puma concolor*)	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 CNDDB records from BSA vicinity.
southern mule deer (*Odocoileus hemionus*)	NCCP	Widespread throughout undeveloped portions of San Diego County,	Present. Suitable habitat preset throughout BSA and vicinity. Several individuals observed throughout BSA during fall biological surveys. No CNDDB records from BSA vicinity.

APPENDIX G

Coastal California Gnatcatcher Survey Summary Report

BUSBY
Biological Services

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[2];
- Installation of two new 230 kV cables pole structures[1] 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[2]) 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[3] 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).

[1] 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.
[2] These structures were previously permitted by the CPUC to support 230 kV
[3] 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* (CNDDB; 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 (*Erempohila 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 or 858.334.9507 or Darin Busby at darin@busbybiological.com or 858.334.9508 if you have any questions.

Sincerely,

Melissa Busby
Owner/Principal Biologist
Busby Biological Services, Inc.

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 Section10(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.

Darin Busby
Principal Biologist/Owner
Busby Biological Services, Inc.
ESA Permit Number TE-115373-2

Laurie Gorman
Senior Biologist/Project Manager
Busby Biological Services, Inc.
ESA Permit Number TE-233367-1

Travis Cooper
Principal Biologist
Cooper Biological Services
ESA Permit Number TE-170389-2

REFERENCES

Atwood, J.
1990 Status review of the California gnatcatcher (*Polioptila californica*). Manomet Bird Observatory, Manomet, Massachusetts.

Atwood, J. L. and J. S. Bolsinger
1991 Elevational distribution of California gnatcatchers in the United States. Journal of Field Ornithology 63(2):159-168.

Barbour, M. G., and J. Major eds.
1977 Terrestrial vegetation of California. John Wiley and Sons, New York.

Bontrager, D. R.
1991 Habitat requirements, home range and breeding biology of the California gnatcatcher (*Polioptila californica*) in South Orange County, California. Prepared for Santa Margarita Company, Rancho Santa Margarita, California.

Braden, G. T., R. L. McKernan, and S. M. Powell.
1997 Association of within-territory vegetation characteristics and fitness components of California Gnatcatchers. The Auk 114:601-609.

California Department of Fish and Wildlife (CDFW)
2013 Natural Diversity Data Base. Nongame-Heritage Program, California Department of Fish and Wildlife, Sacramento.

Campbell, K. F., R. A. Erickson, W. E. Haas, and M. A. Patten
1998 California Gnatcatcher use of habitats other than coastal sage scrub: conservation and management implications. Western Birds 29: 421-433.

Grishaver, M. A., P. J. Mock, and K. L. Preston
1998 Breeding behavior of the California Gnatcatcher in southwestern San Diego County, California. Western Birds 29: 299-322.

Kirkpatrick, J. B. and C. F. Hutchinson
1977 The Community Composition of Californian Coastal Sage Scrub. Vegetation vol. 35, 1:21 33.

Mock, P. J., B. L. Jones, and J. Konecny
1990 California Gnatcatcher Survey Guidelines. Unpublished Report Prepared by Environmental and Energy Services Company, San Diego, California.

O'Leary, J. F.
1990 Californian coastal sage scrub: general characteristics and considerations for biological conservation. Pages 24-41 in Schoenherr, A. A, (ed.), Endangered plant communities of southern California. Southern California Botanists Special Publication No. 3.

Preston, K. L., P. J. Mock, M. A. Grishaver, E. A. Bailey, and D. F. King
1998 California gnatcatcher territorial behavior. Western Birds 29(4):242-257.

United States Fish and Wildlife Service
1997 Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Guidelines – February 28, 1997.

2007 Critical Habitat for the Coastal California Gnatcatcher (Polioptila californica californica), Final Rule. Department of the Interior. Federal Register: December 19, 2007 (Volume 72, Number 243), 50 CFR Part 17.

2010 Coastal California gnatcatcher (*Polioptila californica californica*) 5-year Review: Summary and Evaluation. Carlsbad Fish and Wildlife Office, Carlsbad, California. 51 pp.

Weaver, K. L.
1998 A new site of sympatry of the California and Black-tailed Gnatcatchers in the United States. Western Birds 29(4):476-479.

Westman, W.
1981a Diversity relations and succession in California coastal sage scrub. Ecology 62:170-184.
1981b Factors influencing the distribution of species of California coastal sage scrub. Ecology 62:439-455

APPENDIX A – Figures

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_BusbyLocation.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Location

Figure 1

Proposed Project

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

N W E S

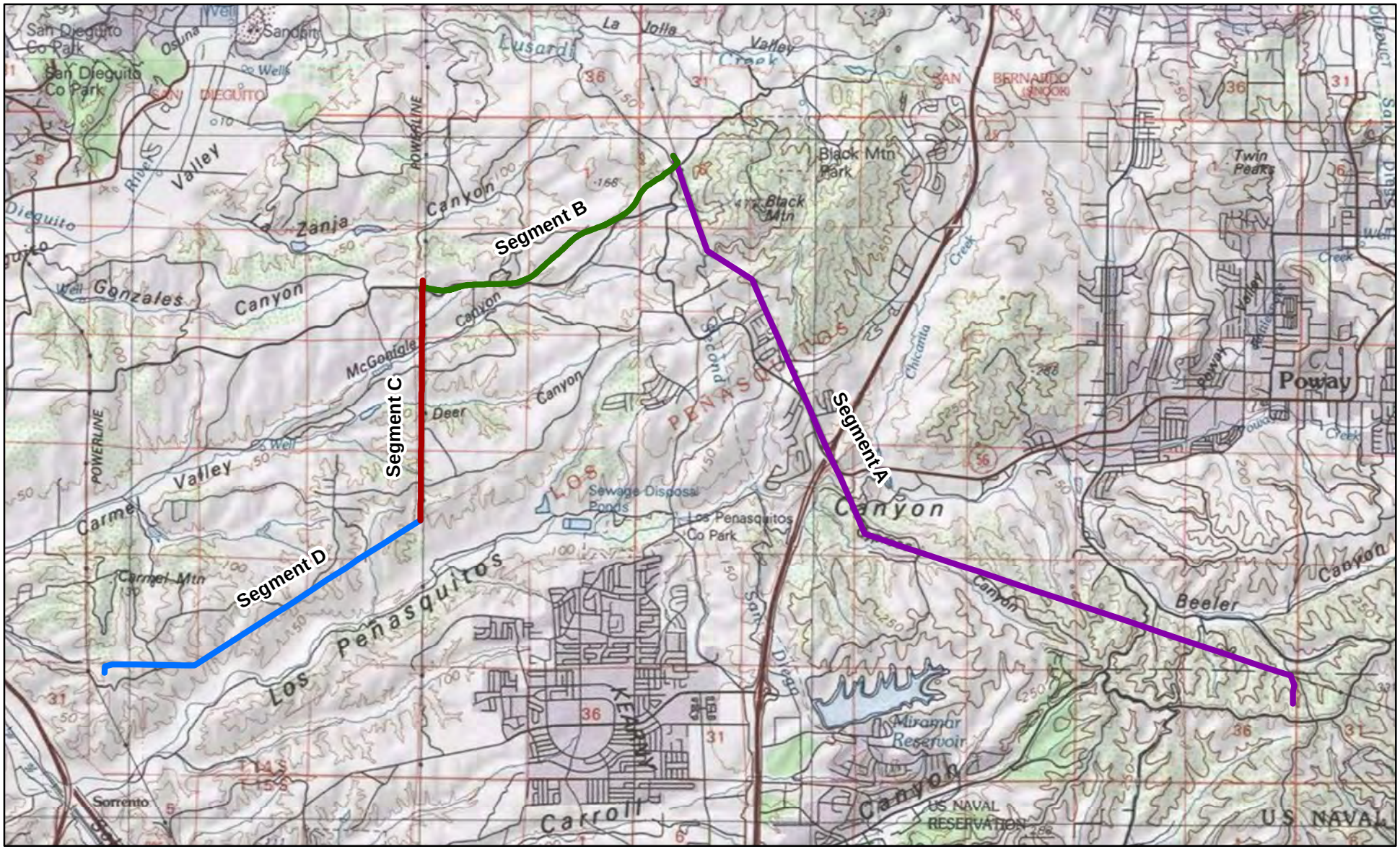
0 10 20 30 Miles

3/18/2014

TRC

SDGE A Sempra Energy utility

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



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_BusbyVicinity.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

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

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Vicinity

Figure 2

Date: 3/18/2014

0 1 2 3 Miles

Sources: SDG&E; Copyright:© 2013 National Geographic Society, i-cubed

TRC

SDGE

A Sempra Energy utility

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_CAGN\SXtoPQ_CAGN_ObsvMapFig3.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

Sycamore to Peñasquitos 230 kV Transmission Line Project

Coastal California Gnatcatcher Suitable Habitat Map

Proposed Project

Figure 3

Biological Survey Area

Coastal California Gnatcatcher Suitable Habitat & Survey Area

0 1 2 3 Miles

Date: 4/2/2014

Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPCSDG&E, 2013; TRC, 2013

Figure 4a-4

Figure 4a-3

Figure 4a-5

Figure 4a-2

Figure 4a-1

Figure 4a-6

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_CAGN\SXtoPQ_CAGN_DetectionsMapFig4.mxd

Coastal California Gnatcatcher Detections

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

Sycamore to Peñasquitos 230 kV Transmission Line Project

Coastal California Gnatcatcher Detections (Overview)

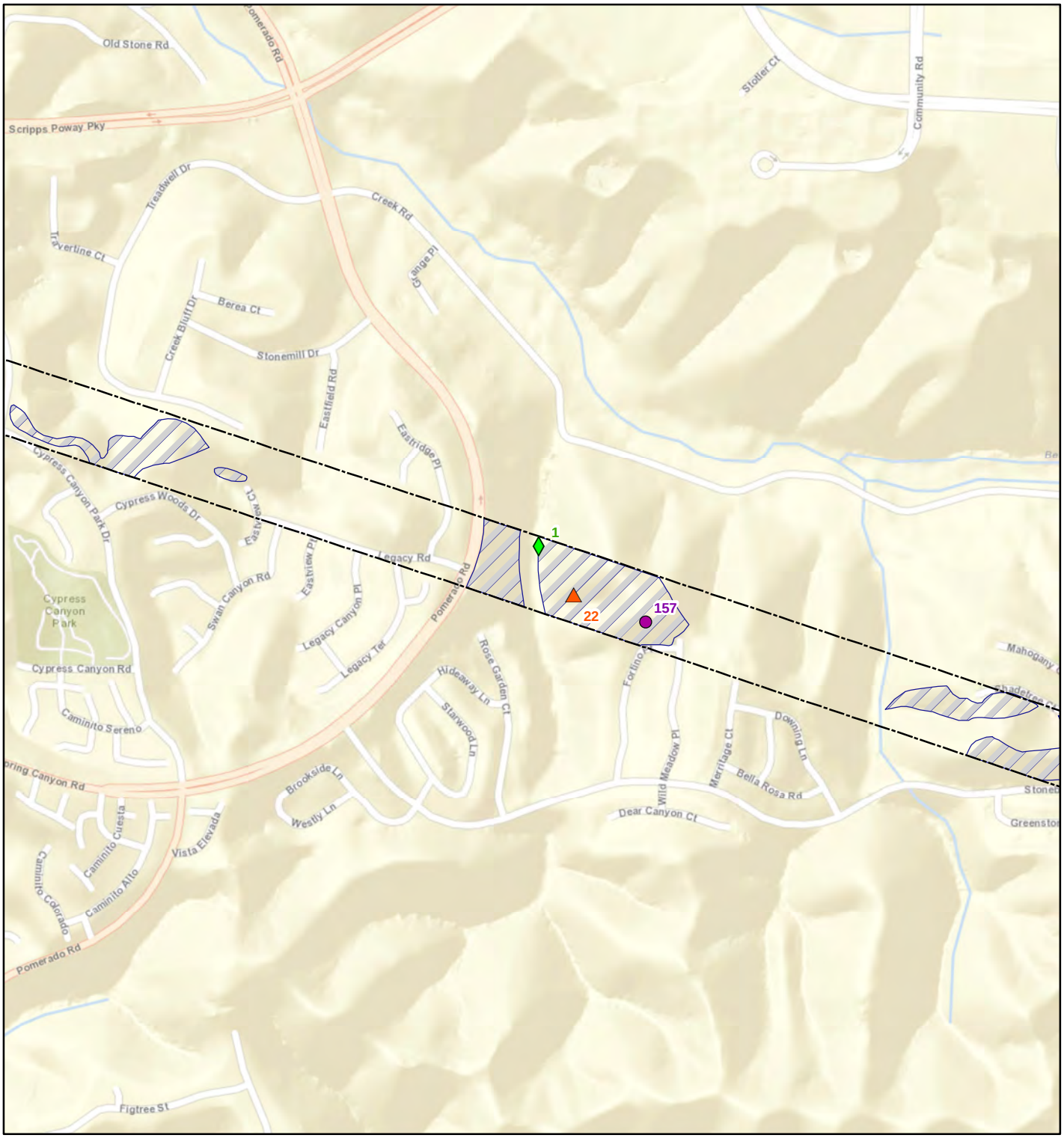
Proposed Project

Figure 4

0 1 2 3 Miles

Date: 4/2/2014

Busby Biological, 2013; SDG&E, 2013; TRC, 2013; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, PC



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_CAGN\SXtoPQ_CAGN_DetectionsMapFig4A1x.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

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

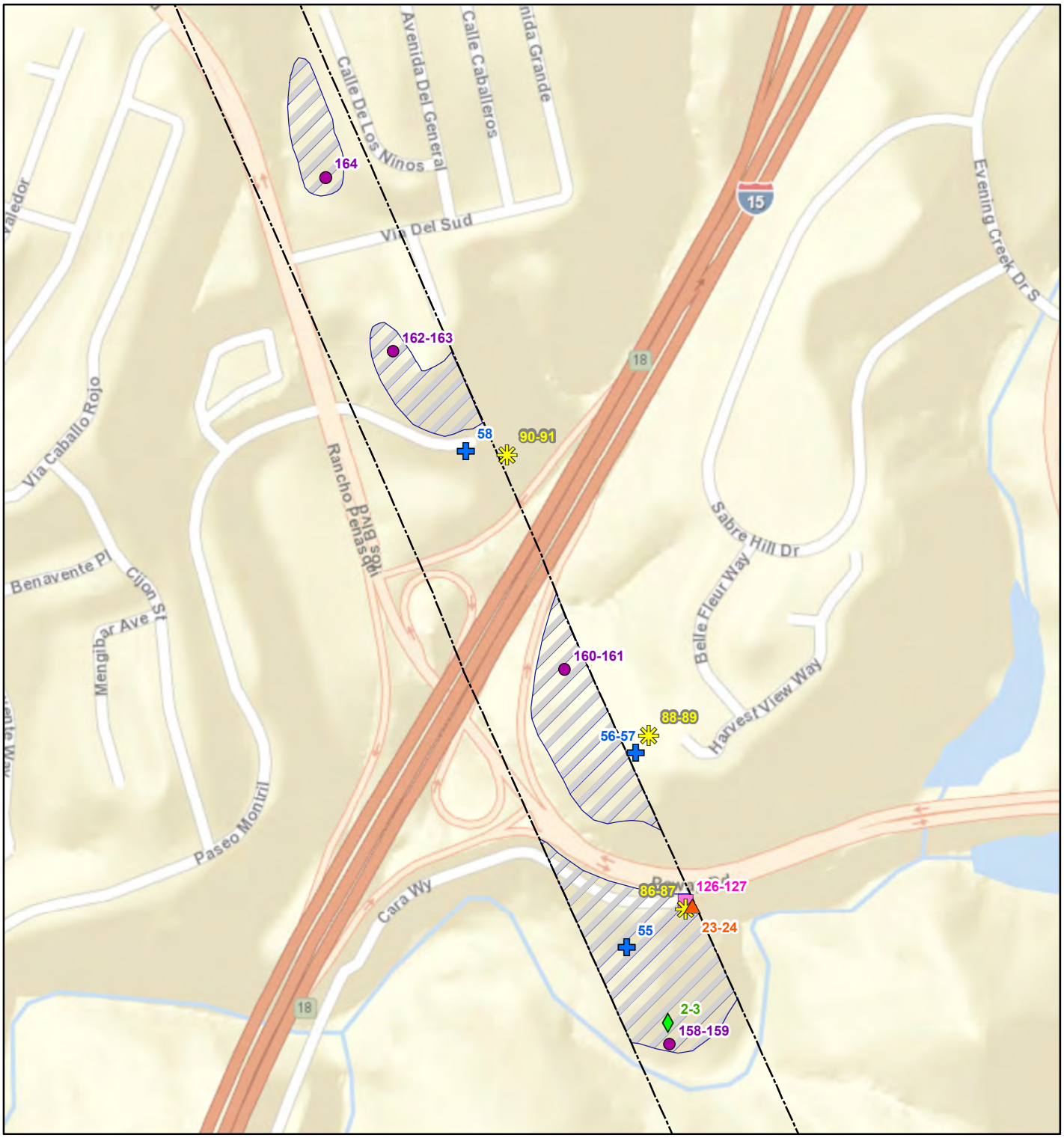
0 500 1,000 1,500 Feet

Date: 4/2/2014

TRC

SDGE A Sempra Energy utility

Busby Biological, 2013; SDG&E, 2013; TRC, 2013; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_CAGN\SXtoPQ_CAGN_DetectionsMapFig4A2x.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

Sycamore to Peñasquitos 230 kV Transmission Line Project

Coastal California Gnatcatcher Detections

Proposed Project

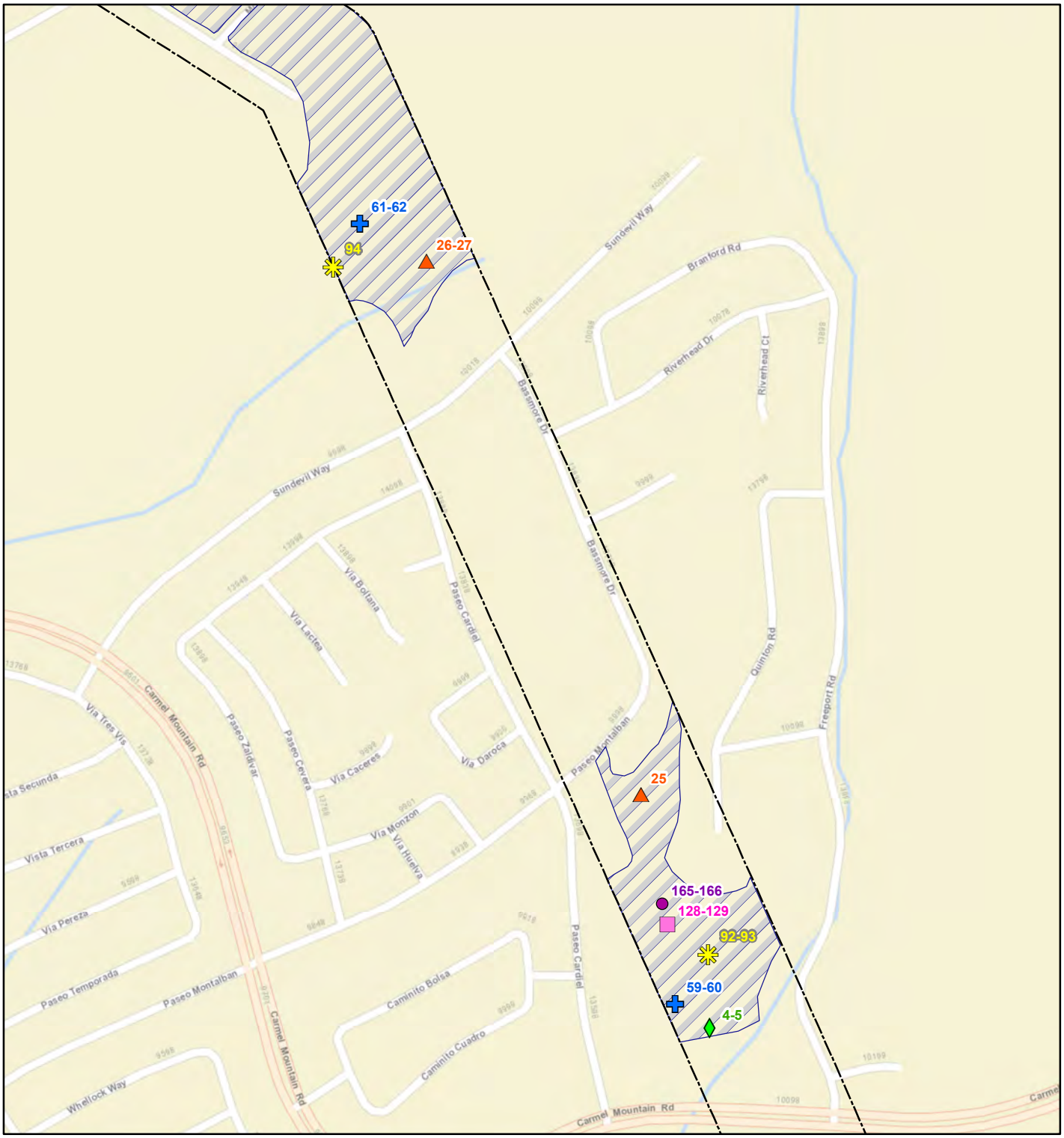
Figure 4a-2

- 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

0 500 1,000 1,500 Feet

4/2/2014

Busby Biological, 2013; SDG&E, 2013; TRC, 2013; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_CAGN\SXtoPQ_CAGN_DetectionsMapFig4A3x.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

Sycamore to Peñasquitos 230 kV Transmission Line Project

Coastal California Gnatcatcher Detections

Proposed Project

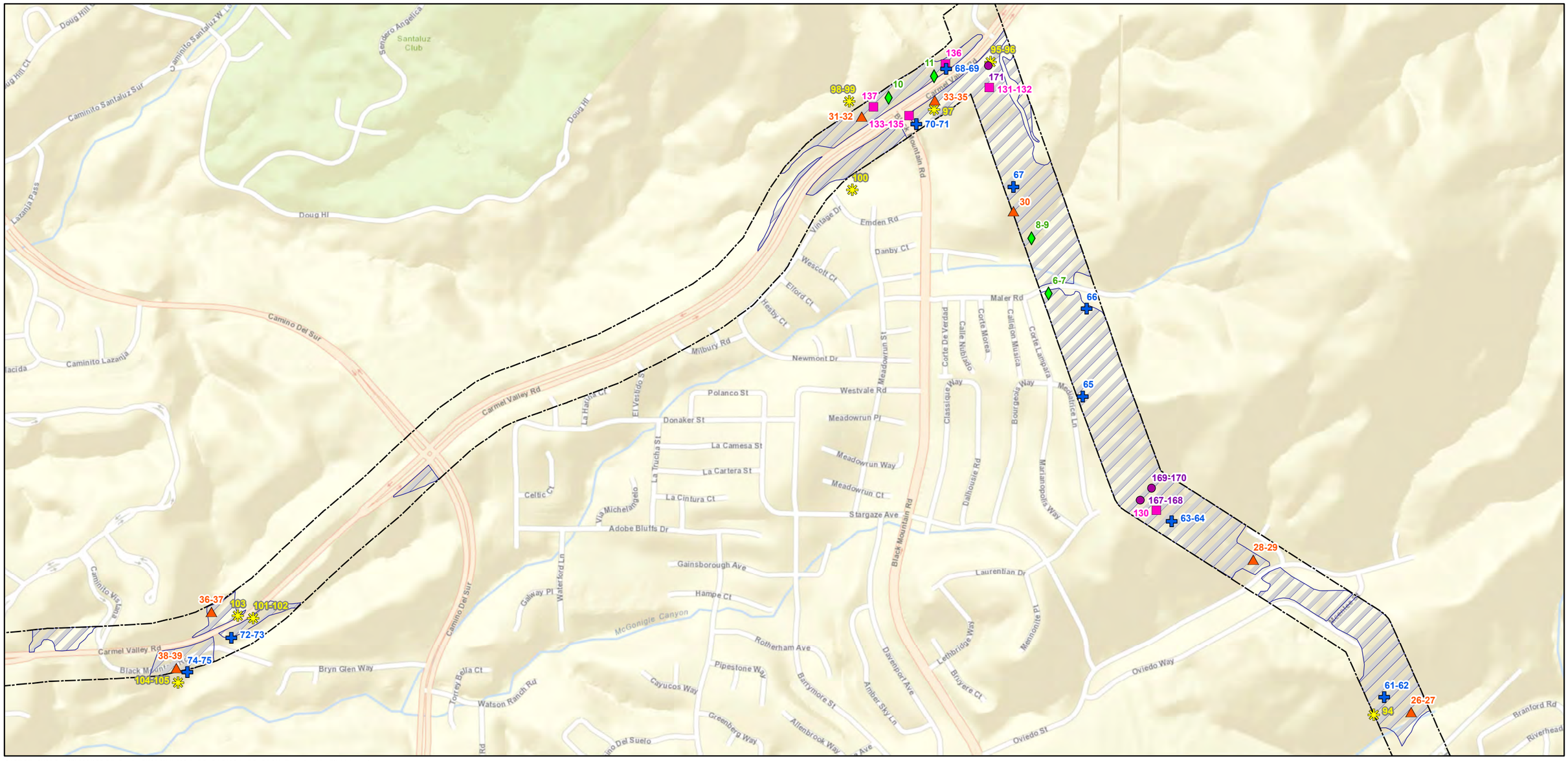
Figure 4a-3

- 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

0 400 800 1,200 Feet

4/2/2014

Busby Biological, 2013; SDG&E, 2013; TRC, 2013; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_CAGN\SXtoPQ_CAGN_DetectionsMapFig4A4x.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

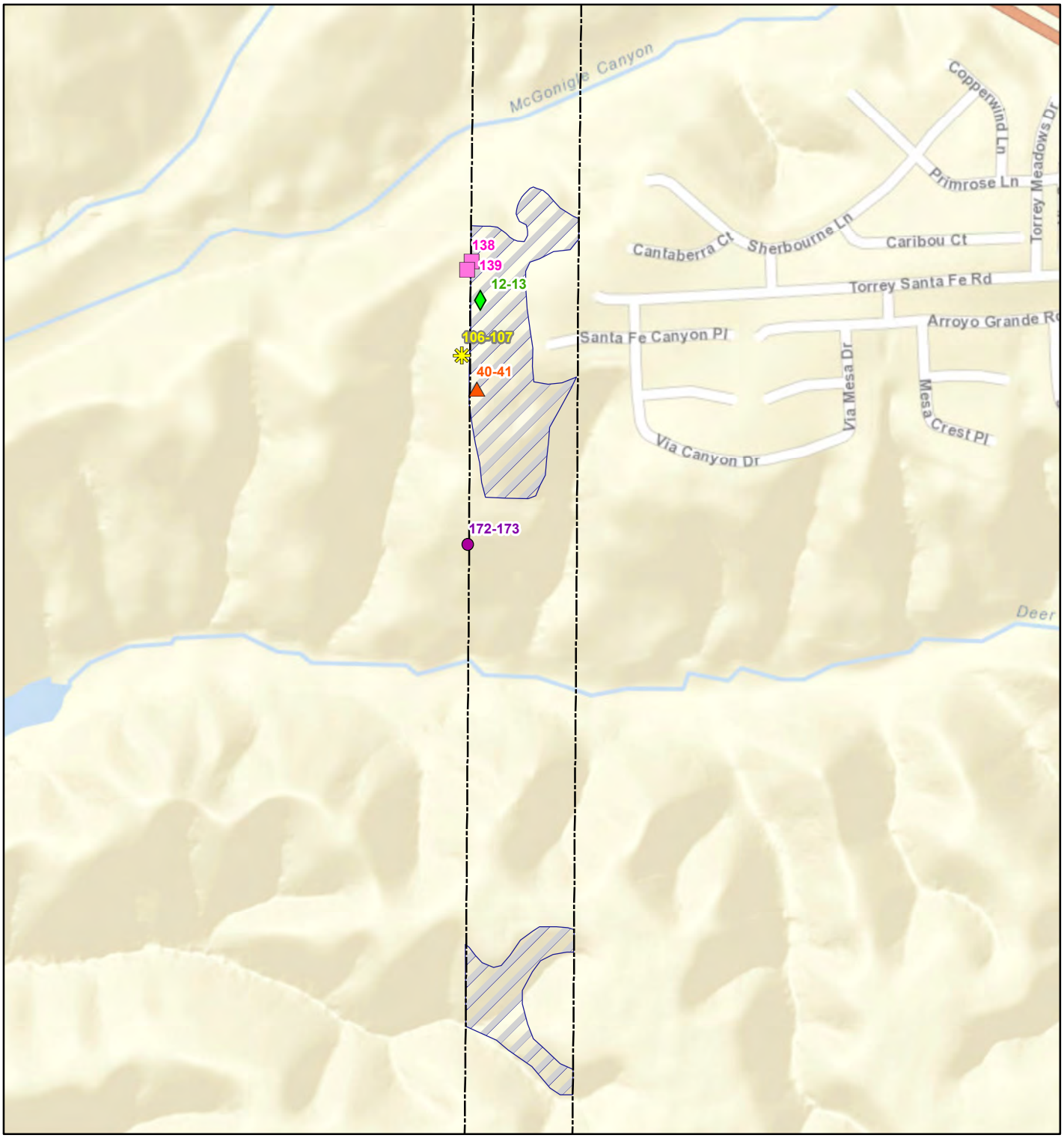
Figure 4a-4

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

0 1,000 2,000 3,000 Feet

4/2/2014

Busby Biological, 2013; SDG&E, 2013; TRC, 2013; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA,



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_CAGN\SXtoPQ_CAGN_DetectionsMapFig4A5x.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

Sycamore to Peñasquitos 230 kV Transmission Line Project

Coastal California Gnatcatcher Detections

Proposed Project

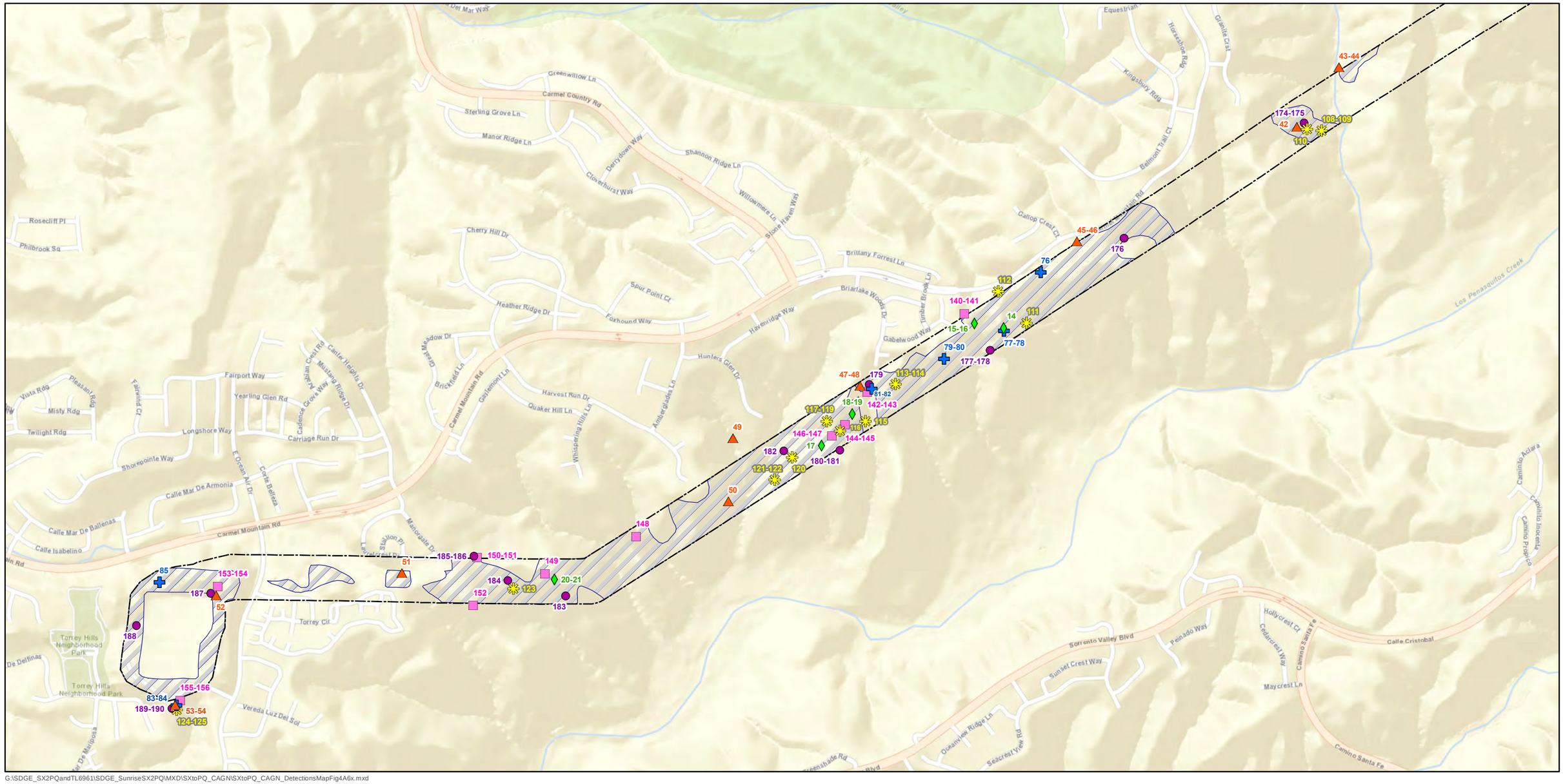
Figure 4a-5

- 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

0 500 1,000 1,500 Feet

Date: 4/2/2014

Busby Biological, 2013; SDG&E, 2013; TRC, 2013; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_CAGN\SXtoPQ_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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

0 1,000 2,000 3,000 Feet

Date: 4/2/2014

TRC

SDG&E A Sempra Energy utility

Busby Biological, 2013; SDG&E, 2013; TRC, 2013; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

APPENDIX B – Survey Conditions

Appendix B – Survey Conditions

Survey Round	Survey Day	Date	Time		Weather				Surveyors
					Temp (°F)	Wind (mph)	Clouds (%)	Precip.	
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 (°F)	Wind (mph)	Clouds (%)	Precip.	
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

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 callng 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, mewing 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 ocasionally 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

Appendix D - Wildlife Species Detected

Scientific Name	Common Name
Invertebrates	
Danaus plexippus	monarch butterfly
Vanessa cardui	painted lady
Apodemia virgulti	Behr's metalmark
Amphibians	
Hyla cadaverina	California treefrog
Reptiles	
Sceloporus occidentalis	western fence lizard
Uta stansburiana	side-blotched lizard
Birds	
Anas strepera	gadwall
Anas americana	American wigeon
Anas platyrhynchos	mallard
Callipepla californica	California quail
Ardea alba	great egret
Cathartes aura	turkey vulture
Accipiter cooperii	Cooper's hawk
Buteo lineatus	red-shouldered hawk
Buteo jamaicensis	red-tailed Hawk
Falco sparverius	American kestrel
Fulica americana	American coot
Charadrius vociferus	killdeer
Larus occidentalis	western gull
Zenaida macroura	mourning dove
Geococcyx californianus	greater roadrunner
Bubo virginianus	great horned owl
Phalaenoptilus nuttallii	common poorwill
Chaetura vauxi	Vaux's swift
Aeronautes saxatalis	white-throated swift
Calypte anna	Anna's hummingbird
Selasphorus sasin	Allen's hummingbird
Melanerpes formicivorus	acorn woodpecker
Sphyrapicus sp.	sapsucker sp.
Picoides nuttallii	Nuttall's woodpecker
Colaptes auratus	northern flicker
Empidonax difficilis	Pacific-slope flycatcher
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe
Tyrannus vociferans	Cassin's kingbird
Tyrannus verticalis	western kingbird
Lanius ludovicianus	loggerhead shrike
Aphelocoma californica	western scrub-Jay

Appendix D - Wildlife Species Detected

Scientific Name	Common Name
Corvus brachyrhynchos	American crow
Corvus corax	common raven
Eremophila alpestris actia	California horned lark
Psaltriparus minimus	bushtit
Thryomanes bewickii	Bewick's wren
Troglodytes aedon	house wren
Regulus calendula	ruby-crowned kinglet
Polioptila caerulea	blue-gray gnatcatcher
Polioptila californica californica	coastal California gnatcatcher
Sialia mexicana	western bluebird
Catharus guttatus	hermit thrush
Chamaea fasciata	wrentit
Mimus polyglottos	northern mockingbird
Toxostoma redivivum	California thrasher
Sturnus vulgaris	European starling
Vermivora celata	orange-crowned warbler
Dendroica coronata	yellow-rumped warbler
Dendroica nigrescens	black-throated gray warbler
Geothlypis trichas	common yellowthroat
Pipilo maculatus	spotted towhee
Pipilo crissalis	California towhee
Aimophila ruficeps canescens	southern California rufous-crowned sparrow
Melospiza melodia	song sparrow
Zonotrichia leucophrys	white-crowned sparrow
Zonotrichia atricapilla	golden-crowned sparrow
Sturnella neglecta	western meadowlark
Carduelis psaltria	lesser goldfinch
Mammals	
Sylvilagus audubonii	desert cottontail
Spermophilus beecheyi	California ground squirrel
Neotoma lepida	desert woodrat
Canis familiaris	domestic dog
Canis latrans	coyote
Procyon lotor	raccoon
Felis rufus	bobcat
Equus caballus	domestic horse
Odocoileus hemionus	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

Prepared For: **TRC Solutions, Inc.**
123 Technology Drive
Irvine, CA 92618
Contact: Mr. Joshua Taylor

Prepared By: **Environmental Intelligence, LLC**
1590 South Coast Highway, Suite 17
Laguna Beach, CA 92651
Contact: Mr. Stephen Reynolds

Date: April 2014

TABLE OF CONTENTS

EXECUTIVE SUMMARY 5
1.0 INTRODUCTION 7
1.1 Project Overview 7
2.0 REGULATORY FRAMEWORK 7
2.1 U.S. Army Corps of Engineers 7
2.1.1 Waters of the United States (WoUS) 7
2.1.2 Wetland Waters of the US 9
2.1.3 Extent of Jurisdiction 9
2.1.3.1 Solid Waste Agency of Northern Cook County (SWANCC) v. USACE 9
2.1.3.2 Rapanos v. United States and Carabell v. USACE 10
2.1.3.3 Vernal Pools 11
2.2 State Water Resources Control Board/ Regional Water Quality Control Board 11
2.2.1 Section 401 of the Clean Water Act 11
2.2.2 Porter-Cologne Act and Waters of the State 11
2.3 California Department of Fish and Wildlife 11
2.4 California Coastal Commission 12
3.0 METHODS 12
4.0 RESULTS 13
4.1 Topography and Hydrology 13
4.2 Land use 14
4.3 Hydric Soils 14
4.4 Areas of Potential Jurisdiction 14
4.4.1 Feature 1: Peñasquitos Substation 14
4.4.2 Feature 2: Tributary to Peñasquitos Creek 1 14
4.4.3 Feature 3: Tributary to Peñasquitos Creek 2 15
4.4.4 Feature 4: Tributary to Peñasquitos Creek 3 16
4.4.5 Feature 5: Tributary to Peñasquitos Creek 4 16
4.4.6 Feature 6: Tributary to Peñasquitos Creek 5 17
4.4.7 Feature 7: Tributary to Peñasquitos Creek 6 18
4.4.8 Feature 8: Tributary to Peñasquitos Creek 7 18
4.4.9 Feature 9: Tributary to Peñasquitos Creek 8 19
4.4.10 Feature 10: Tributary to Peñasquitos Creek 9 20
4.4.11 Feature 11: Tributary to Deer Canyon 1 20
4.4.12 Feature 12: Tributary to Deer Canyon 2 21
4.4.13 Feature 13: Deer Canyon Creek 22
4.4.14 Feature 14: Tributary to Deer Canyon 3 22
4.4.15 Feature 15: McGonigle Canyon Creek 23
4.4.16 Feature 16: Tributary to McGonigle Canyon Creek 1 24
4.4.17 Feature 17: Tributary to McGonigle Canyon Creek 2 24
4.4.18 Feature 18: Tributary to McGonigle Canyon Creek 3 25
4.4.19 Feature 19: Tributary to McGonigle Canyon Creek 4 26
4.4.20 Feature 20: Tributary to La Zanja Canyon 1 26
4.4.21 Feature 21: Tributary to La Zanja Canyon 2 27
4.4.22 Feature 22: Tributary to McGonigle Canyon Creek 5 28
4.4.23 Feature 23: Black Mountain Features 28
4.4.24 Feature 24: Los Peñasquitos Mesa Features 1 29
4.4.25 Feature 25: Los Peñasquitos Mesa Features 2 30
4.4.26 Feature 26: Los Peñasquitos Mesa Features 3 30
4.4.27 Feature 27: Tributary to Peñasquitos Creek 10 31
4.4.28 Feature 28: Los Peñasquitos Creek 31
4.4.29 Feature 29: Tributary to Peñasquitos Creek 11 32
4.4.30 Feature 30: Cypress Canyon Feature 1 33
4.4.31 Feature 31: Cypress Canyon Feature 2 34
4.4.32 Feature 32: Tributary to Beeler Creek 1 34

4.4.33 Feature 33: Tributary to Beeler Creek 2....35
4.5 Vernal Pools....35
4.5.1 Feature 34: Vernal Pool Complex 1....35
4.5.2 Feature 35: Vernal Pool Complex 2....36
4.5.3 Feature 36: Vernal Pool Complex 3....36
4.5.4 Feature 37: Road Ruts....37
4.6 Staging Areas....37
4.6.1 Stowe Staging Yard....37
4.6.2 Stonebridge Staging Yard....37
4.6.3 Torrey Santa Fe Staging Yard....37
4.7 Summary of Potential Jurisdiction....38
4.7.1 USACE Jurisdiction....38
4.7.2 RWQCB Jurisdiction....40
4.7.3 CDFW Jurisdiction....43
4.7.4 CCC Jurisdiction....45
5.0 CONCLUSIONS....45
6.0 LITERATURE CITED....46

TABLES

Table ES-01: Summary of Total Jurisdiction by Regulatory Agency 6
Table 1: Summary of USACE Jurisdiction.....39
Table 2: Summary of RWQCB Jurisdiction 41
Table 3: Summary of CDFW Jurisdiction 44
Table 4: Summary of CCC Jurisdiction.....45

EXHIBITS

EXHIBIT 1: PROJECT VICINITY AND OVERVIEW
EXHIBIT 2: JURISDICTIONAL DELINEATION RESULTS

APPENDICES

A. WETLANDS DATA SHEETS
B. SOILS DESCRIPTIONS
C. SITE PHOTOGRAPHS

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 Resource s 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[1]										
				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[2]	Non-native Upland Habitat[3]	Other[4]
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[5]	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[6]	NA	103.25	NA	**	**	**	**	**	**	**	**	**	**	**

[1] From Biological Technical Report for the Sycamore to Peñasquitos 230 kV Transmission Line Project, Dated March 2014 prepared by Busby Biological Services Inc..
[2] 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
[3] Includes Eucalyptus Woodland, Nonnative Grassland, and Tamarisk Scrub
[4] Includes Bare Ground, Developed Lands, Disturbed Habitat, and Ornamental
[5] Excludes 1.84 acres (29,493 linear feet) of RWQCB exempt, MS4 erosion control V-ditches
[6] 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 course 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 1are 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 OHWM.

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 gooddingiii,* 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 though 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 gasses 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 partial surveyed due 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
	Total	**4.06**	**5.15**	**9.21**	**43,952**

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
Total		**4.19**	**5.15**	**9.34**	**47,430**	**1.84**	**29,493**

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
	Total	**2.88**	**12.04**	**14.92**	**43,953**

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
Wetlands		
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
Total Wetlands	**1.66**	**9,396**
Environmentally Sensitive Habitat Areas		
Total ESHA	**110.85**	**NA**

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

Bing, 2013. Aerial as taken: March, 2011. Online.

Busby Biological Services Inc., 2014. Biological Technical Report for the Sycamore to Peñasquitos 230 kV Transmission Line Project.

California Resources Agency. 1969. Porter-Cologne Water Quality Control Act. California Water Code, Section 13000 et seq.: "Water Quality."

Google, 2013. Aerial as taken: November, 2003 through January, 2013. Online.

Environmental Law Institute. 2007 The Clean Water Act Jurisdictional Handbook. 2007 Edition. Washington D.C.

Federal Register. 2002. Vol. 67, No. 10 Tuesday, January 15, 2002.

Keeler-Wolf, T, DR Elam, K Lewis, and SA Flint. 1998. California Vernal Pool Assessment Preliminary Report. Prepared for State of California Department of Fish and Game.

Lichvar, R.W. 2013. The National Wetland Plant List: 2013 wetland ratings. Phytoneuron 2013-49: 1–241.Published17 July 2013. ISSN 2153 733X

NRCS (Natural Resources Conservation Service). 2013a. *Web Soil Survey*. Online. http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.

NRCS (Natural Resources Conservation Services). 2013b. *National List of Hydric Soils*. Online. http://soils.usda.gov/use/hydric/.

Reed, P.B., Jr. 1988. National list of plant species that occur in wetlands: national summary. U.S. Fish Hildl. Serv. Biol. Rep. 88(24). 244 pp

USACE (U.S. Army Corps of Engineers). 1987. USACE of Engineers Wetlands Delineation Manual. U.S. Army Corps of Engineers Waterways Experiment Station. Vicksburg, MS.

USACE (U.S. Army Corps of Engineers). 1997. Indicator Species for Vernal Pools. In: Special Public Notice, Regional General Conditions to Nationwide Permits, November 25, 1997. Prepared by the Los Angeles District, Regulatory Branch. November 1997.

USACE (U.S. Army Corps of Engineers). 2008a. Regional Supplement to the USACE of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

USACE (U.S. Army Corps of Engineers). 2008b. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States, R. W. Lichvar, and S. M. McColley. ERDC/ CRREL TR-08-12. Hanover, NH: U.S. Army Engineer Research and Development Center.

USEPA (U.S. Environmental Protection Agency). 2008. Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States.

USFWS (United States Fish and Wildlife Service). 2013a. National Wetlands Inventory Mapper Application. Online. Accessed September 2013.

USFWS (United States Fish and Wildlife Service). 2013b. Threatened and Endangered Species Occurrence Data. Online. Accessed November 2013.

Wilson, Craig M. January 25, 2001. Memo addressed to the State Board Members and Regional Board Executive Officers.

Zedler, P.H. 1987. The Ecology of Southern California Vernal Pools: A Community Profile. U.S. Fish and Wildlife Service. Biological Report 85(7.11).

SOURCE: ESRI 2012, AEX 2010

SX to PQ Survey Corridor

Environmental Intelligence. Date: 3/25/2014. Q:\TRC\SDG&E SX to PQ\05_GIS_Data\maps\workspace\2013\JDReport\Exhibit_1_Vicinity_EI01_20131011.mx

Exhibit 1: Project Vicinity and Overview

SDG&E - SX to PQ | San Diego County, CA

N W E S

0 2,500 5,000 10,000 Feet

Peñasquitos Substation

Vernal Pool 1

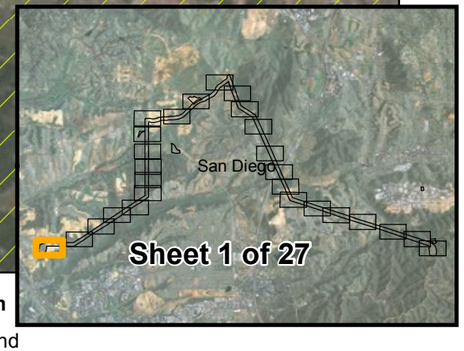
1

2

3

4

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 Juridiction
- 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

N W E S

0 155 310 620 Feet

Exhibit 2: Delineation Results, Sheet 1 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

Tributary to Peñasquitos Creek 4

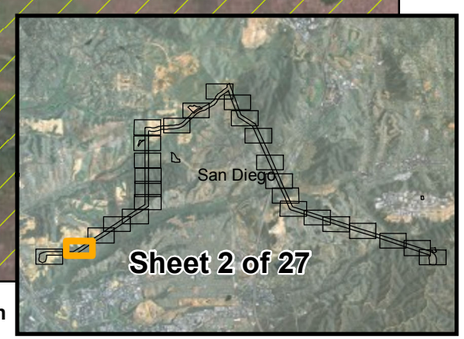
Tributary to Peñasquitos Creek 2

Tributary to Peñasquitos Creek 3

Tributary to Peñasquitos Creek 1

13
11
12
10
9
8
7
5
6
93

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 Juridiction
- 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 2 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

Vernal Pools 2

Tributary to Peñasquitos Creek 5

Tributary to Peñasquitos Creek 5

Tributary to Peñasquitos Creek 5

20
21
16
17
15
14
13

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 Juridiction
- 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

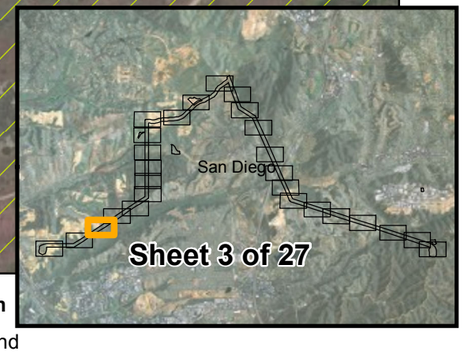


Exhibit 2: Delineation Results, Sheet 3 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

Environmental Intelligence. Date: 3/25/2014. Q:\TRC\SDG&E SX to PQ\05_GIS_Data\mapsworkspace\2013\JDReport\Exhibit_2_JD_FDS_20140311.mxd

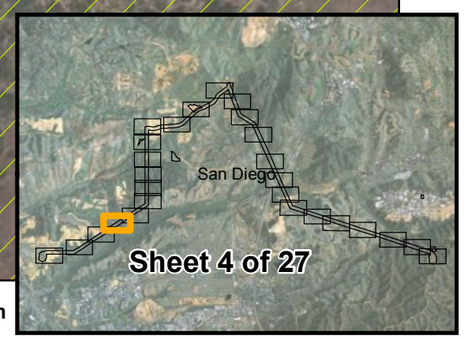
Tributary to Peñasquitos Creek 7

Tributary to Peñasquitos Creek 6

Vernal Pools 2

22
19
18
20
21

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 Juridiction
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 4 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

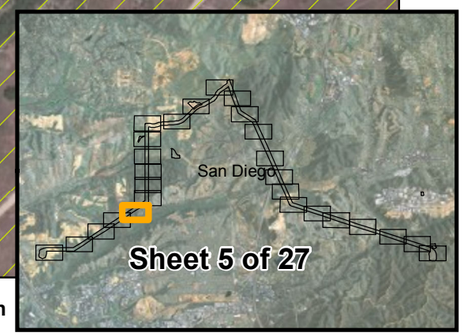
Tributary to Peñasquitos Creek 8

Tributary to Peñasquitos Creek 7

Tributary to Peñasquitos Creek 7

22 23 24 25 26 27 28 32

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 Juridiction
- 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 5 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

Tributary to Peñasquitos Creek 9

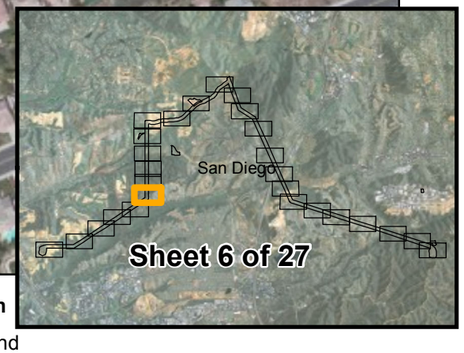
30

31

Tributary to Peñasquitos Creek 9

32

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 Juridiction
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 6 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

Tributary to Deer Canyon 1

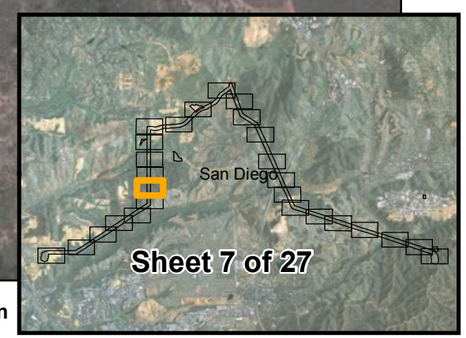
91

36

35

29

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 Juridiction
- 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 7 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

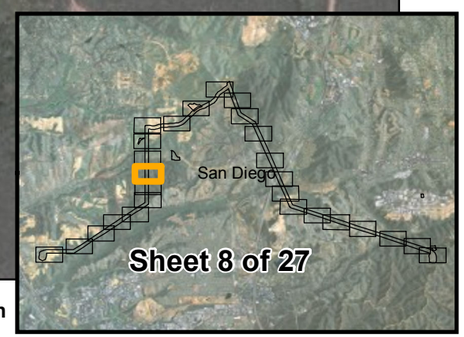
0 155 310 620 Feet

Tributary to Deer Canyon 2

Vernal Pools 3

Tributary to Deer Canyon 1

33
34
38
39
37
91



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 Juridiction
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

N
W
E
S
0 155 310 620 Feet

Exhibit 2: Delineation Results, Sheet 8 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

95
92
44
46
45
47
48
Tributary to Deer Canyon 3
Deer Canyon Creek
San Diego
Sheet 9 of 27

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 Juridiction
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 9 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

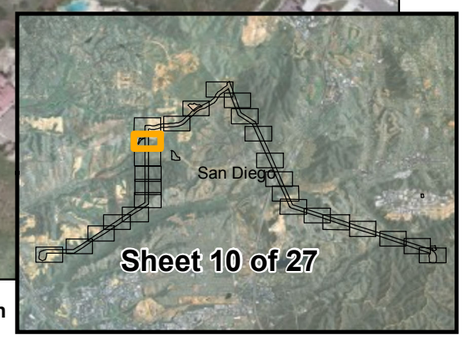
N W E S
0 155 310 620 Feet

Environmental Intelligence. Date: 3/25/2014 Q:\TRC\SDG&E SX to PQ\05_GIS_Data\mapsworkspace\2013JDReport\Exhibit_2_JD_EI06_20140311.mxd

Tributary to McGonigle Canyon Creek 1

McGonigle Canyon Creek

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 Juridiction
- 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 10 of 27

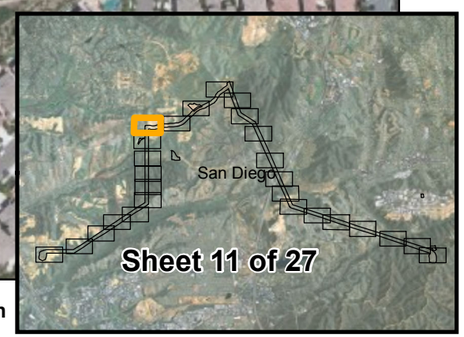
SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

Environmental Intelligence. Date: 3/25/2014. Q:\TRC\SDG&E SX to PQ\05_GIS_Data\maps\workspace\2013\JDReport\Exhibit_2_JD_EI06_20140311.mxd

94



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 Juridiction
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

N W E S

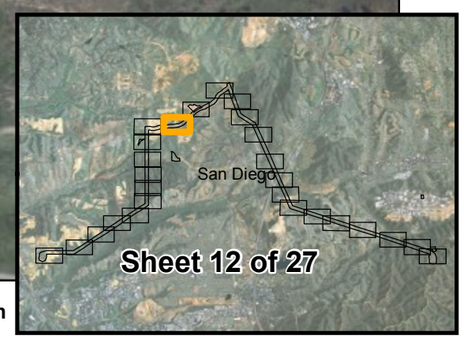
0 155 310 620 Feet

Environmental Intelligence. Date: 3/25/2014. Q:\TRC\SDG&E SX to PQ\05_GIS_Data\maps\workspace\2013\JDReport\Exhibit_2_JD_EI06_20140311.mxd

Tributary to McGonigle Canyon Creek 2

Tributary to McGonigle Canyon Creek 3

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 Juridiction
- 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 12 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

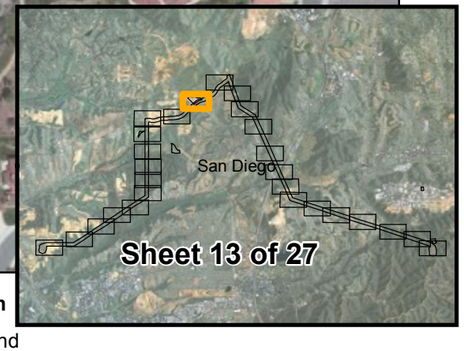
Tributary to La Zanja Canyon 1

59

96

Tributary to McGonigle Canyon Creek 4

58



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 Juridiction
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

N
W
E
S
0 155 310 620
Feet

Exhibit 2: Delineation Results, Sheet 13 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

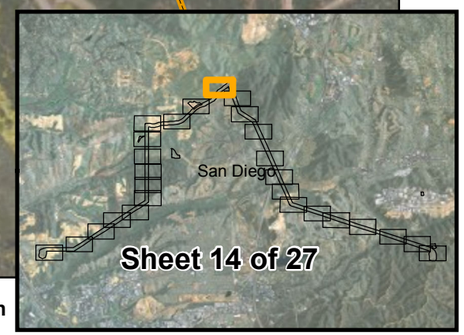
Environmental Intelligence. Date: 3/25/2014. Q:\TRC\SDG&E SX to PQ\05_GIS_Data\maps\workspace\2013\JDReport\Exhibit_2_JD_EI06_20140311.mxd

Tributary to La Zanja Canyon 2

Tributary to La Zanja Canyon 1

60 61 62 63 64

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 Juridiction
- 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 14 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

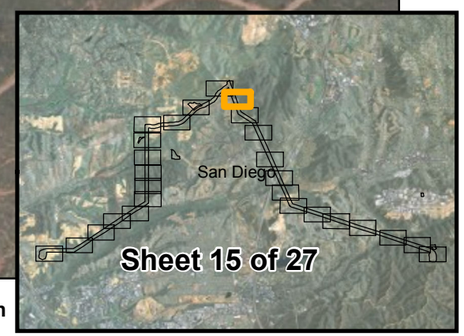
65

66

98

Tributary to McGonigle Canyon Creek 5

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 Juridiction
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 15 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

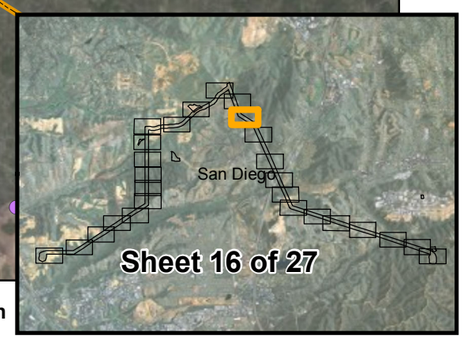
Environmental Intelligence. Date: 3/25/2014. Q:\TRC\SDG&E SX to PQ\05_GIS_Data\maps\workspace\2013\JDReport\Exhibit_2_JD_EI06_20140311.mxd

68

67

99

Black Mountain Features



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 Juridiction
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 16 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N
W E
S

0 155 310 620 Feet

Environmental Intelligence. Date: 3/25/2014. Q:\TRC\SDG&E SX to PQ\05_GIS_Data\maps\workspace\2013\JDReport\Exhibit_2_JD_EI06_20140311.mxd

Black Mountain Features

Los Peñasquitos Mesa Features 1

69

70

San Diego

Sheet 17 of 27

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 Juridiction
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

N
W
E
S

0 155 310 620 Feet

Exhibit 2: Delineation Results, Sheet 17 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

Environmental Intelligence, Date: 3/25/2014. Q:\TRC\SDG&E SX to PQ\05_GIS_Data\maps\workspace\2013\JDReport\Exhibit_2_JD_EI06_20140311.mxd

Los Peñasquitos Mesa Features 2

71

San Diego

Sheet 18 of 27

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 Juridiction
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 18 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

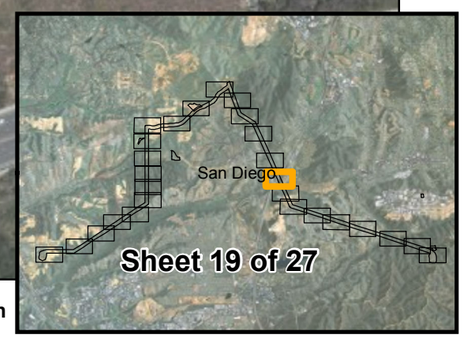
N W E S

0 155 310 620 Feet

7

72

Los Peñasquitos Mesa
Features 3



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 Juridiction
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 19 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N
W
E
S
0 155 310 620 Feet

Los Peñasquitos Creek

76

75

74

Tributary to Peñasquitos Creek 10

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 Juridiction
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 20 of 27

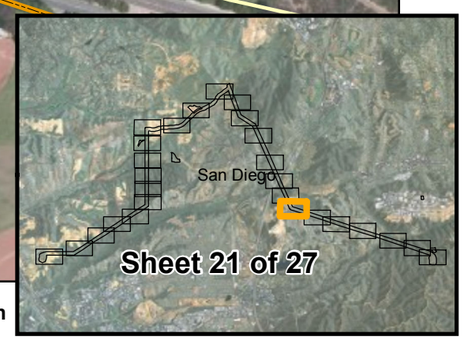
SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N
W
E
S

0 155 310 620 Feet

Tributary to Peñasquitos Creek 10

Tributary to Peñasquitos Creek 10



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 Juridiction
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 21 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

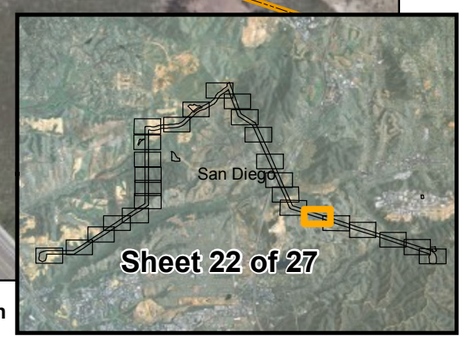
0 155 310 620 Feet

Environmental Intelligence. Date: 3/25/2014. Q:\TRC\SDG&E SX to PQ\05_GIS_Data\maps\workspace\2013\JDReport\Exhibit_2_JD_EI06_20140311.mxd

Tributary to Peñasquitos Creek 10

77

Tributary to Peñasquitos Creek 11



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 Juridiction
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

N
W
E
S
0 155 310 620 Feet

Exhibit 2: Delineation Results, Sheet 22 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

78

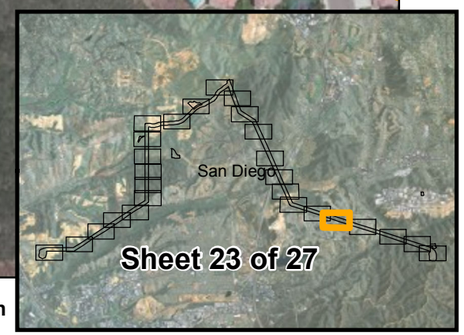
77

8

Tributary to Peñasquitos Creek 11

Tributary to Peñasquitos Creek 11

79



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 Juridiction
- 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 23 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

Cypress Canyon Feature 1

Cypress Canyon Feature 1

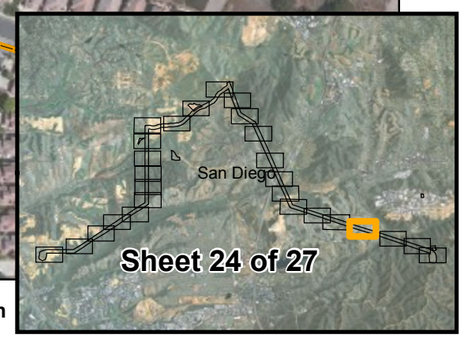
Cypress Canyon Feature 2

80

81

82

83



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 Juridiction
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

N
W
E
S

0 155 310 620 Feet

Exhibit 2: Delineation Results, Sheet 24 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

Tributary to Beeler Creek 1

84

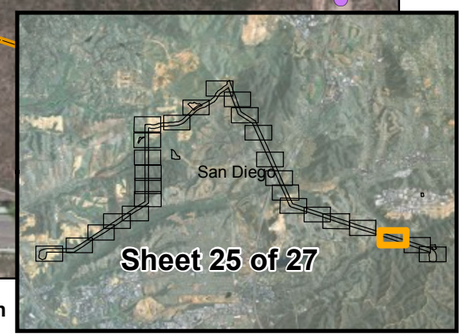
86

Tributary to Beeler Creek 1

85

Tributary to Beeler Creek 1

87



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 Juridiction
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 25 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

Environmental Intelligence. Date: 3/25/2014. Q:\TRC\SDG&E SX to PQ\05_GIS_Data\maps\workspace\2013\JDReport\Exhibit_2_JD_EI06_20140311.mxd

Tributary to Beeler Creek 2

88

89

90

Tributary to Beeler Creek 2

San Diego

Sheet 26 of 27

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 Juridiction
- CDFW Unvegetated Streambed
- CDFW Riparian

RWQCB Jurisdiction Only
- Isolated Waters of the State
- Isolated Wetland Waters of the State
- V-ditch (exempt)

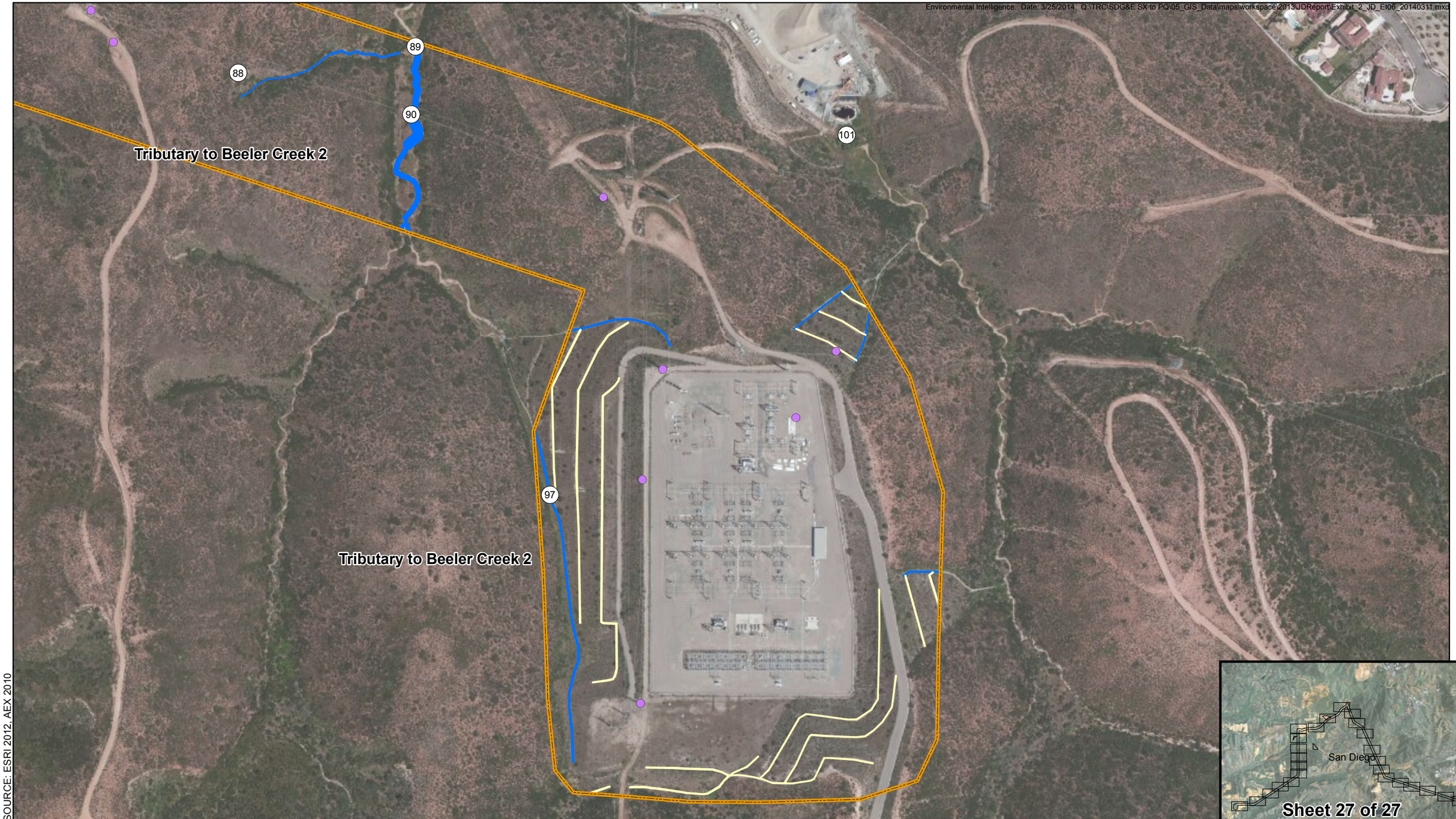
CCC Jurisdiction
- CCC Wetland
- ESHA

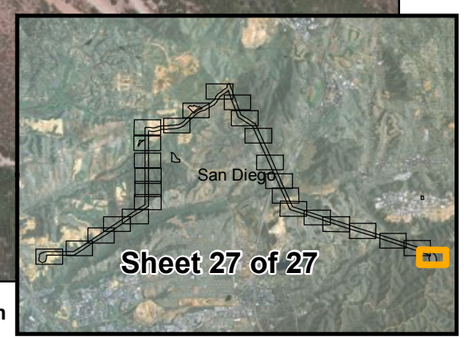
N W E S

0 155 310 620 Feet

Exhibit 2: Delineation Results, Sheet 26 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 Juridiction
- 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 27 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix gooddingii	40	Y	FACW
2.			
3.			
4.			
	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Schoenoplectus maritimus	30	Y	OBL
2. Baccharis salicifolia	10	Y	FAC
3.			
4.			
5.			
	40	= Total Cover	
Herb Stratum (Plot size: 10x10)			
1. Gnaphalium californicum	20	Y	UPL
2. Schoenoplectus maritimus	5	Y	OBL
3.			
4.			
5.			
6.			
7.			
8.			
	25	= Total Cover	
Woody Vine Stratum (Plot size: 10x10)			
1. NA			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 75 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: 1

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

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

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ✔ No ___

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 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 ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10x10)			
1. NA			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 10x10)			
1. Iva sp.	10	N	FACW
2. Juncus acutus	70	Y	OBL
3.			
4.			
5.			
6.			
7.			
8.			
	80	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1. NA			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 1 (B)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: _____

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

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

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 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, Towship 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 ✔ No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔ No _____	
Wetland Hydrology Present?	Yes ✔ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix laevigata	20	Y	FACW
2. Salix gooddingii	15	Y	FACW
3.			
4.			
	35 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Typha angustifolia	50	Y	OBL
2.			
3.			
4.			
5.			
	50 = Total Cover		
Herb Stratum (Plot size: 10x10)			
1. Baccharis salicifolia	10	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10 = Total Cover		
Woody Vine Stratum (Plot size: 10x10)			
1.			
2.			
	_____ = Total Cover		

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: _____

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

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

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 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 ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Typha latifolia	80	Y	OBL
2. Baccharis salicifolia	20	Y	FACW
3.			
4.			
5.			
	100 = Total Cover		
Herb Stratum (Plot size: 10x10)			
1. NA			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0 = Total Cover		
Woody Vine Stratum (Plot size: 10x10)			
1. NA			
2.			
	0 = Total Cover		

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

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: 4

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

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

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ✔ No ___ Depth (inches): 3

Water Table Present? Yes ✔ No ___ Depth (inches): 3

Saturation Present? (includes capillary fringe) Yes ✔ No ___ Depth (inches): to surface

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: 09/26/2013

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

Investigator(s): TK, MM Section, Township, Range: Section 11, Towship 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 ✔ No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔ No _____	
Wetland Hydrology Present?	Yes ✔ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Typha angustifolia	50	Y	OBL
2.			
3.			
4.			
5.			
	50 = Total Cover		
Herb Stratum (Plot size: 10x10)			
1. Atriplex prostrata	25	Y	FACW
2. Pluchea odorata	10	Y	FACW
3. Apium sp.	10	Y	UPL
4.			
5.			
6.			
7.			
8.			
	45 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 55 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: 5

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

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

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

Water Table Present? Yes ✔ No ___ Depth (inches): 16

Saturation Present? (includes capillary fringe) Yes ✔ No ___ Depth (inches): 16

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: 09/26/2013

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

Investigator(s): TK, MM Section, Township, Range: Section 11, Towship 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 ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Eucalyptus globulus	40	Y	UPL
2. Salix lasiolepis	10	N	FACW
3. Baccharis salicifolia	10	N	FAC
4.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Baccharis salicifolia	15	Y	FAC
2. Schoenoplectus maritimus	5	Y	OBL
3. Rhus ovata	5	Y	UPL
4.			
5.			
	25	= Total Cover	
Herb Stratum (Plot size: 10x10)			
1. NA			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0	= Total Cover	
Woody Vine Stratum (Plot size: 10x10)			
1. NA			
2.			
	0	= Total Cover	

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	10	x 2 =	20
FAC species	25	x 3 =	75
FACU species	0	x 4 =	0
UPL species	45	x 5 =	225
Column Totals:	85 (A)		325 (B)

Prevalence Index = B/A = 3.8

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: _____

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

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

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ✔ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 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 ✔	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5x10)			
1. Typha latifolia	60	Y	OBL
2. Baccharis salicifolia	10	N	FAC
3.			
4.			
5.			
	70	= Total Cover	
Herb Stratum (Plot size: 5x10)			
1. Juncus xiphioides	4	N	OBL
2. Cyperus sp.	1	N	FACW*
3.			
4.			
5.			
6.			
7.			
8.			
	5	= Total Cover	
Woody Vine Stratum (Plot size: 5x10)			
1. NA			
2.			
	0	= Total Cover	

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

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 1 (B)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

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 Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/1	100					Sandy Loar	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: Dense cobbles

Depth (inches): 12

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): 2

Saturation Present? (includes capillary fringe) Yes ✔ No ___ Depth (inches): to surface

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: 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 ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix laevigata	90	Y	FACW
2. Quercus berberidifolia	5	N	UPL
3.			
4.			
	95	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Baccharis salicifolia	5	Y	FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 10x10)			
1. NA			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0	= Total Cover	
Woody Vine Stratum (Plot size: 10x10)			
1. NA			
2.			
	0	= Total Cover	

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

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: 8

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	2.5Y 7/3	60	10YR 7/6	40	C	M	Sand	
5-8							Cobbles	
8-18	10YR 5/3						Sandy Loar	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ✔ **No** ___

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

Remarks:

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, calcerous sandstone and shale.
DaD	Diablo clay, 9 to 15 percent slopes. This soil consists of well-drained, deep clays. The parent material is soft, calcerous 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 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

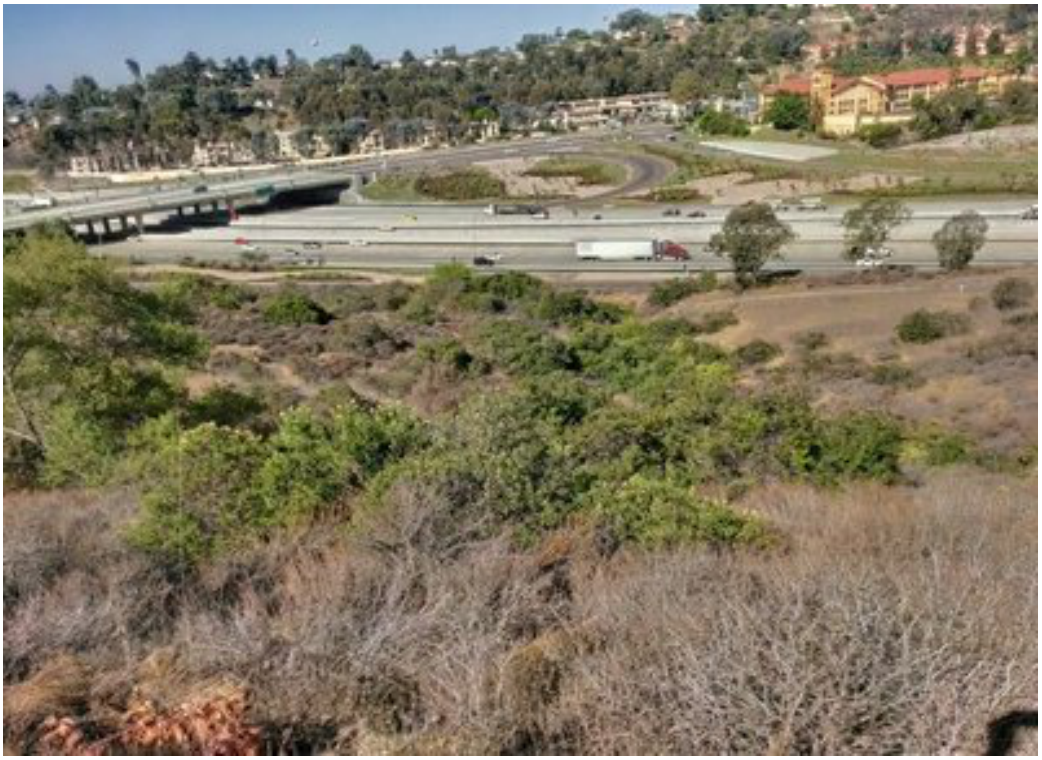


Photo 66: Los Peñasquitos Mesa Features 3, downstream overview of headwater channel in the southern portion of the drainage; Photo direction: NW

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

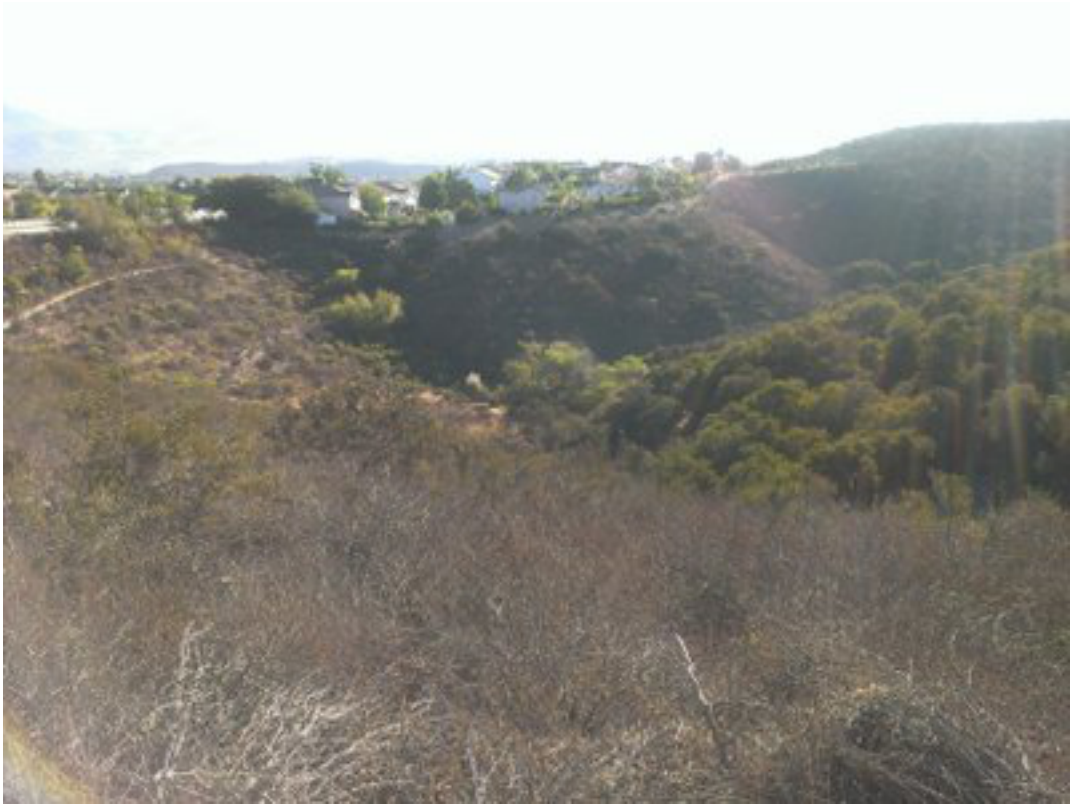


Photo 71: Tributary to Peñasquitos Creek 11, overview of top of headwater tributaries on western side of drainage; Photo direction: E

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

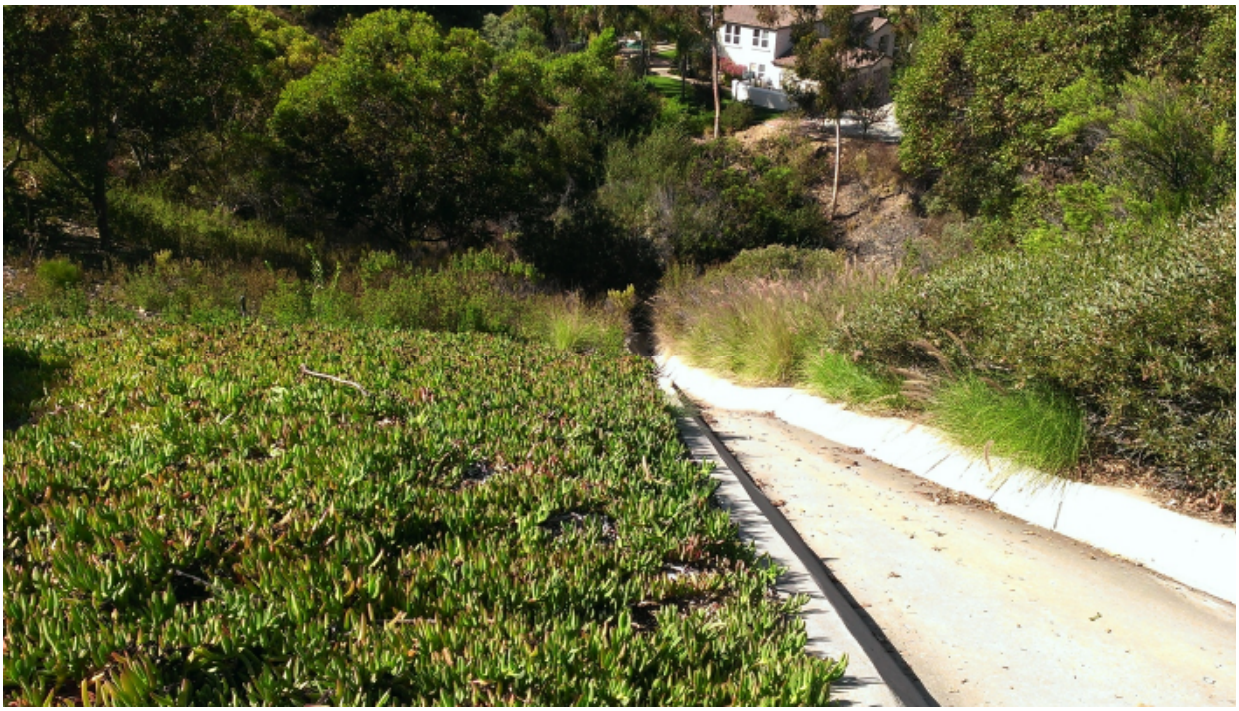


Photo 77: Cypress Canyon Feature 2, V-ditch inflow into depressional area; Photo direction: NW

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

BUSBY
Biological Services

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[2];
- Installation of two new 230 kV cables pole structures[1] 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[2]) 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[3] 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).

[1] 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.
[2] These structures were previously permitted by the CPUC to support 230 kV
[3] 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* (CNDDB; 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 (*Erempohila 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 or 858.334.9507 or Darin Busby at darin@busbybiological.com or 858.334.9508 if you have any questions.

Sincerely,

Melissa Busby
Owner/Principal Biologist
Busby Biological Services, Inc.

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 Section10(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.

Darin Busby
Principal Biologist/Owner
Busby Biological Services, Inc.
ESA Permit Number TE-115373-2

Laurie Gorman
Senior Biologist/Project Manager
Busby Biological Services, Inc.
ESA Permit Number TE-233367-1

Travis Cooper
Principal Biologist
Cooper Biological Services
ESA Permit Number TE-170389-2

REFERENCES

Atwood, J.
1990 Status review of the California gnatcatcher (*Polioptila californica*). Manomet Bird Observatory, Manomet, Massachusetts.

Atwood, J. L. and J. S. Bolsinger
1991 Elevational distribution of California gnatcatchers in the United States. Journal of Field Ornithology 63(2):159-168.

Barbour, M. G., and J. Major eds.
1977 Terrestrial vegetation of California. John Wiley and Sons, New York.

Bontrager, D. R.
1991 Habitat requirements, home range and breeding biology of the California gnatcatcher (*Polioptila californica*) in South Orange County, California. Prepared for Santa Margarita Company, Rancho Santa Margarita, California.

Braden, G. T., R. L. McKernan, and S. M. Powell.
1997 Association of within-territory vegetation characteristics and fitness components of California Gnatcatchers. The Auk 114:601-609.

California Department of Fish and Wildlife (CDFW)
2013 Natural Diversity Data Base. Nongame-Heritage Program, California Department of Fish and Wildlife, Sacramento.

Campbell, K. F., R. A. Erickson, W. E. Haas, and M. A. Patten
1998 California Gnatcatcher use of habitats other than coastal sage scrub: conservation and management implications. Western Birds 29: 421-433.

Grishaver, M. A., P. J. Mock, and K. L. Preston
1998 Breeding behavior of the California Gnatcatcher in southwestern San Diego County, California. Western Birds 29: 299-322.

Kirkpatrick, J. B. and C. F. Hutchinson
1977 The Community Composition of Californian Coastal Sage Scrub. Vegetation vol. 35, 1:21 33.

Mock, P. J., B. L. Jones, and J. Konecny
1990 California Gnatcatcher Survey Guidelines. Unpublished Report Prepared by Environmental and Energy Services Company, San Diego, California.

O'Leary, J. F.
1990 Californian coastal sage scrub: general characteristics and considerations for biological conservation. Pages 24-41 in Schoenherr, A. A, (ed.), Endangered plant communities of southern California. Southern California Botanists Special Publication No. 3.

Preston, K. L., P. J. Mock, M. A. Grishaver, E. A. Bailey, and D. F. King
1998 California gnatcatcher territorial behavior. Western Birds 29(4):242-257.

United States Fish and Wildlife Service
1997 Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Guidelines – February 28, 1997.

2007 Critical Habitat for the Coastal California Gnatcatcher (Polioptila californica californica), Final Rule. Department of the Interior. Federal Register: December 19, 2007 (Volume 72, Number 243), 50 CFR Part 17.

2010 Coastal California gnatcatcher (*Polioptila californica californica*) 5-year Review: Summary and Evaluation. Carlsbad Fish and Wildlife Office, Carlsbad, California. 51 pp.

Weaver, K. L.
1998 A new site of sympatry of the California and Black-tailed Gnatcatchers in the United States. Western Birds 29(4):476-479.

Westman, W.
1981a Diversity relations and succession in California coastal sage scrub. Ecology 62:170-184.
1981b Factors influencing the distribution of species of California coastal sage scrub. Ecology 62:439-455

APPENDIX A – Figures

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_BusbyLocation.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Location

Figure 1

Proposed Project

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

N W E S

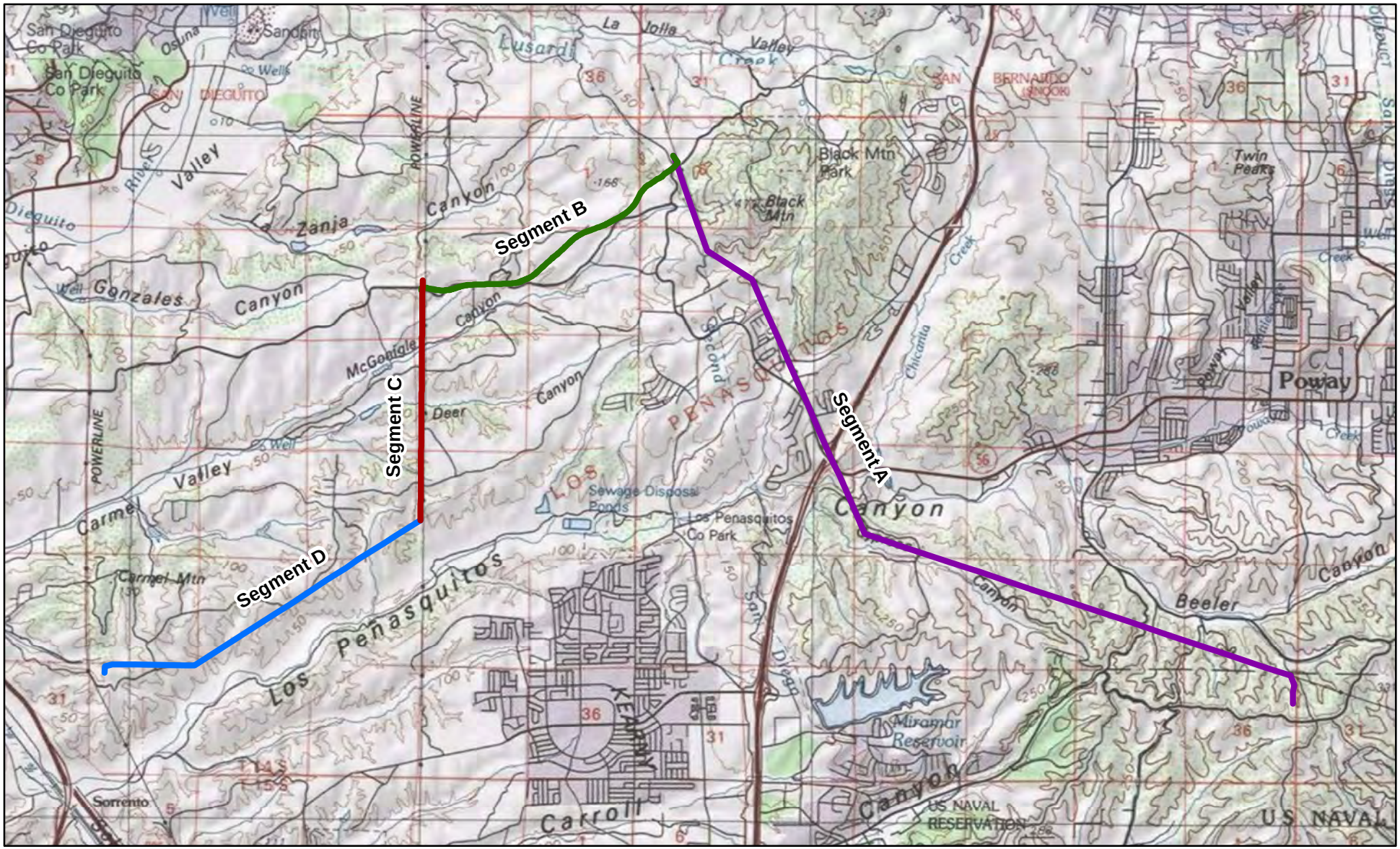
0 10 20 30 Miles

3/18/2014

TRC

SDGE A Sempra Energy utility

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



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_BusbyVicinity.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

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

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Vicinity

Figure 2

Date: 3/18/2014

0 1 2 3 Miles

Sources: SDG&E; Copyright:© 2013 National Geographic Society, i-cubed

TRC

SDGE

A Sempra Energy utility

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_CAGN\SXtoPQ_CAGN_ObsvMapFig3.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

Sycamore to Peñasquitos 230 kV Transmission Line Project

Coastal California Gnatcatcher Suitable Habitat Map

Proposed Project

Figure 3

Biological Survey Area

Coastal California Gnatcatcher Suitable Habitat & Survey Area

0 1 2 3 Miles

Date: 4/2/2014

Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPCSDG&E, 2013; TRC, 2013

Figure 4a-4

Figure 4a-3

Figure 4a-5

Figure 4a-2

Figure 4a-1

Figure 4a-6

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_CAGN\SXtoPQ_CAGN_DetectionsMapFig4.mxd

Coastal California Gnatcatcher Detections

Biological Survey Area

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

Sycamore to Peñasquitos 230 kV Transmission Line Project

Coastal California Gnatcatcher Detections (Overview)

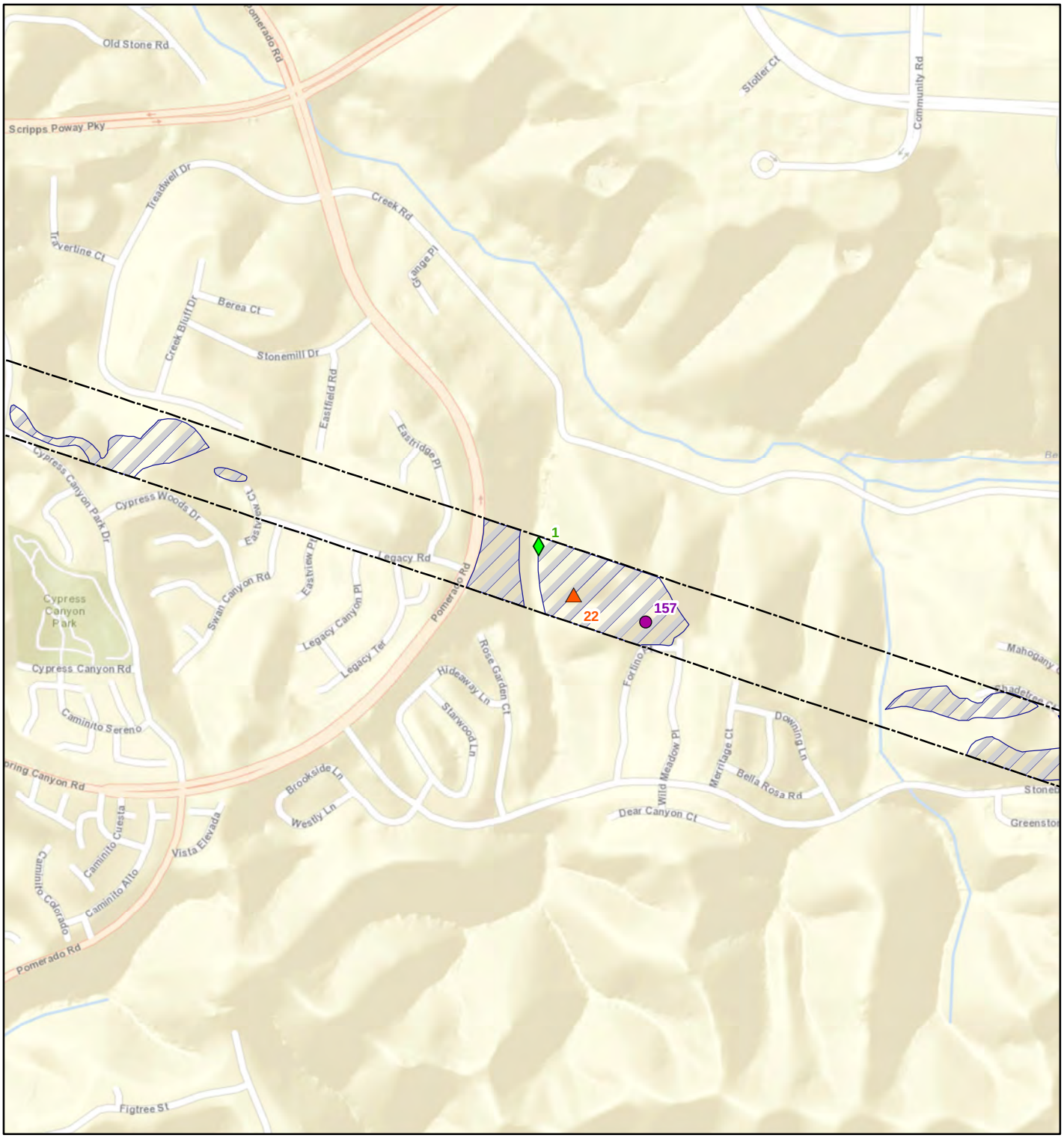
Proposed Project

Figure 4

0 1 2 3 Miles

Date: 4/2/2014

Busby Biological, 2013; SDG&E, 2013; TRC, 2013; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, PC



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_CAGN\SXtoPQ_CAGN_DetectionsMapFig4A1x.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

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

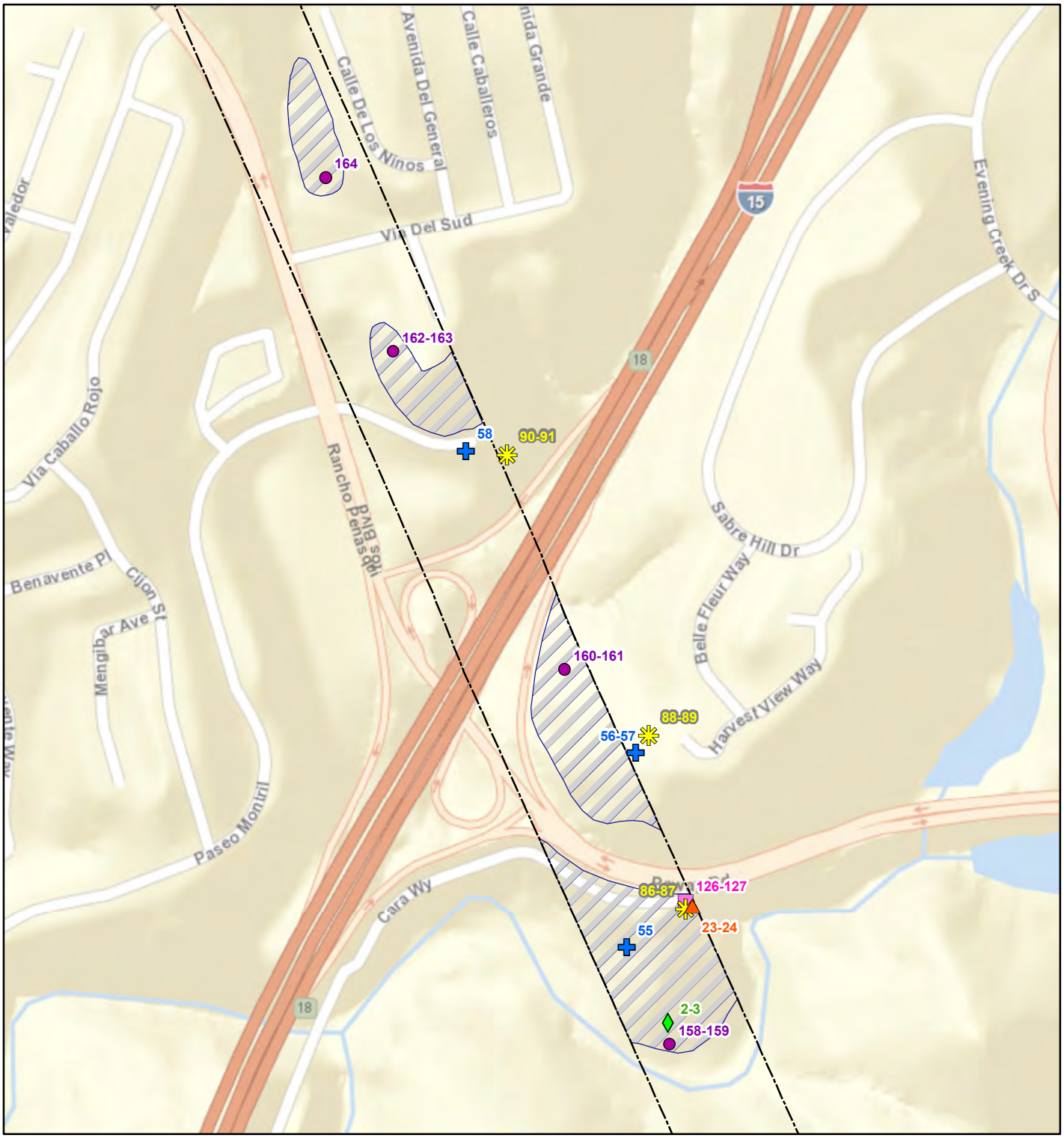
0 500 1,000 1,500 Feet

Date: 4/2/2014

TRC

SDGE A Sempra Energy utility

Busby Biological, 2013; SDG&E, 2013; TRC, 2013; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_CAGN\SXtoPQ_CAGN_DetectionsMapFig4A2x.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

Sycamore to Peñasquitos 230 kV Transmission Line Project

Coastal California Gnatcatcher Detections

Proposed Project

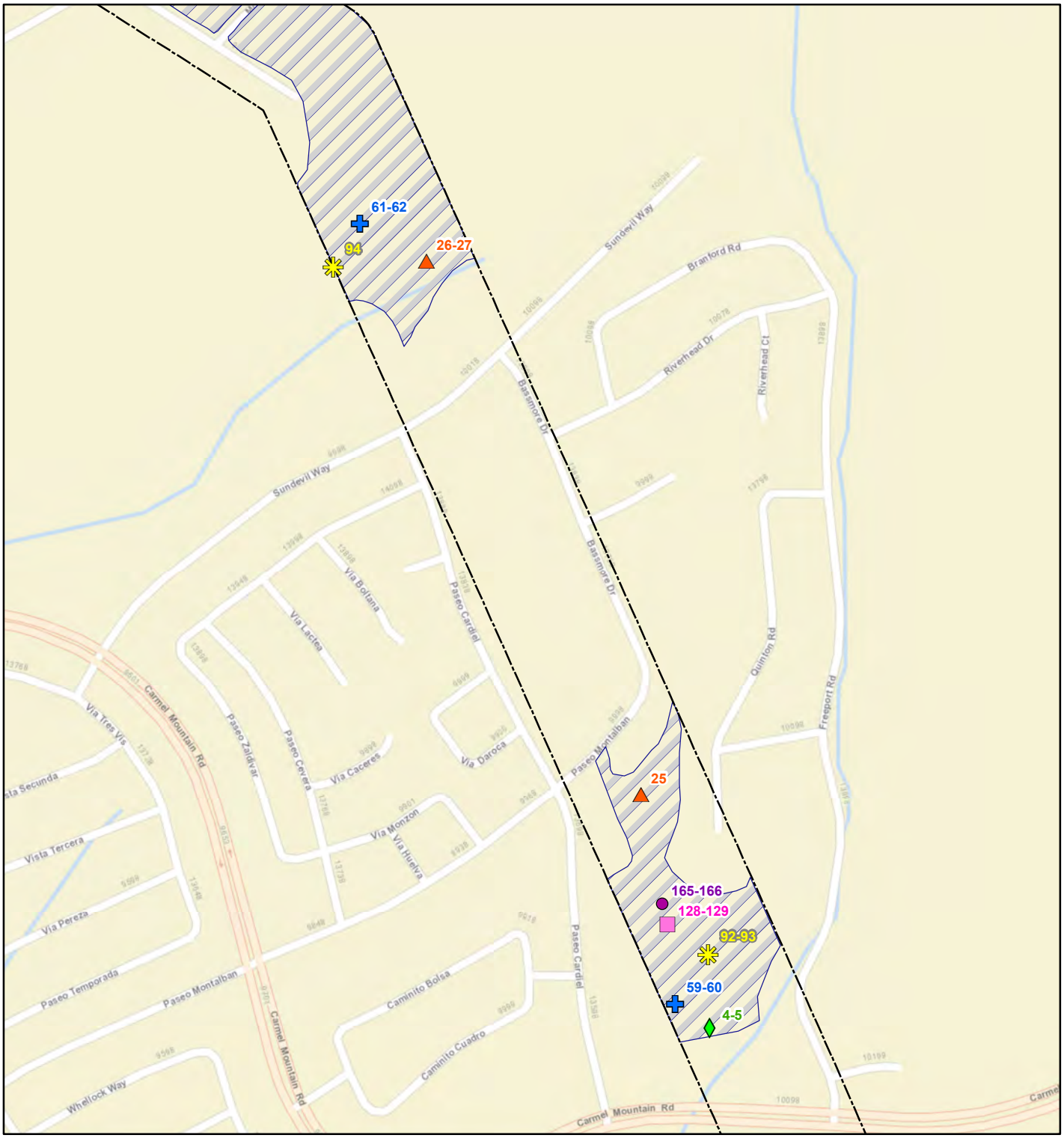
Figure 4a-2

- 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

0 500 1,000 1,500 Feet

4/2/2014

Busby Biological, 2013; SDG&E, 2013; TRC, 2013; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_CAGN\SXtoPQ_CAGN_DetectionsMapFig4A3x.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

Sycamore to Peñasquitos 230 kV Transmission Line Project

Coastal California Gnatcatcher Detections

Proposed Project

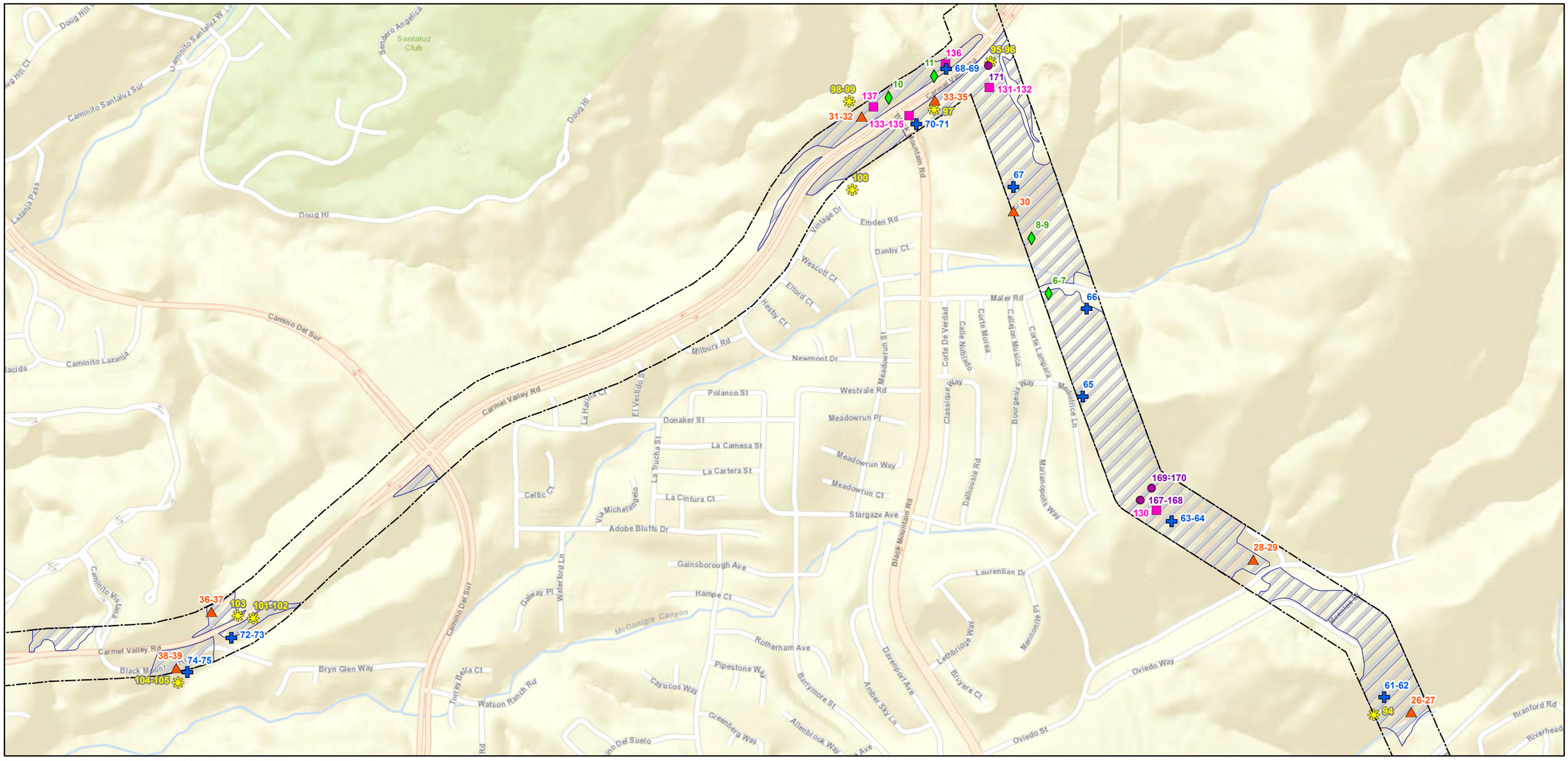
Figure 4a-3

- 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

0 400 800 1,200 Feet

4/2/2014

Busby Biological, 2013; SDG&E, 2013; TRC, 2013; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_CAGN\SXtoPQ_CAGN_DetectionsMapFig4A4x.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

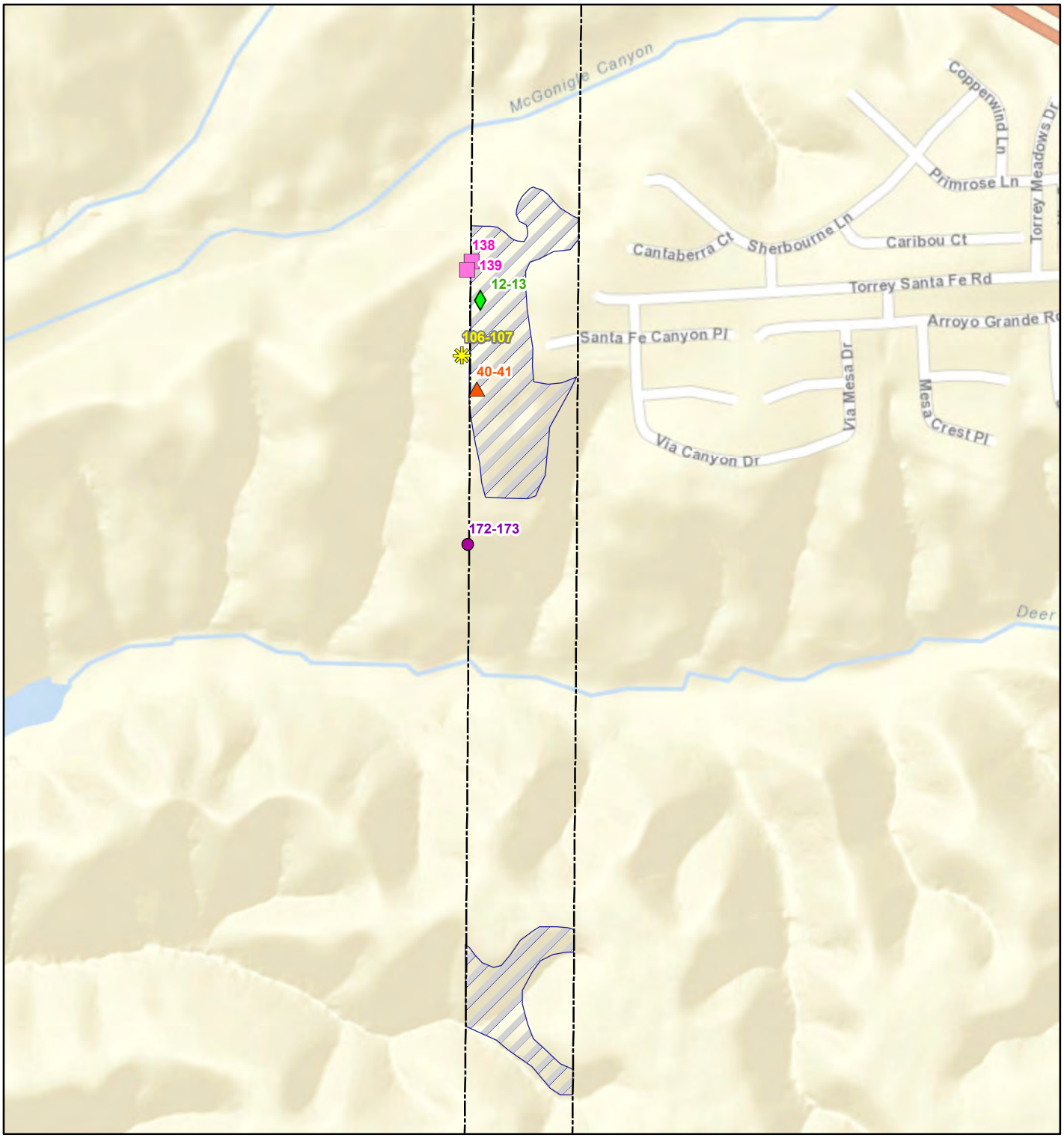
Figure 4a-4

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

0 1,000 2,000 3,000 Feet

4/2/2014

Busby Biological, 2013; SDG&E, 2013; TRC, 2013; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA,



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_CAGN\SXtoPQ_CAGN_DetectionsMapFig4A5x.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

Sycamore to Peñasquitos 230 kV Transmission Line Project

Coastal California Gnatcatcher Detections

Proposed Project

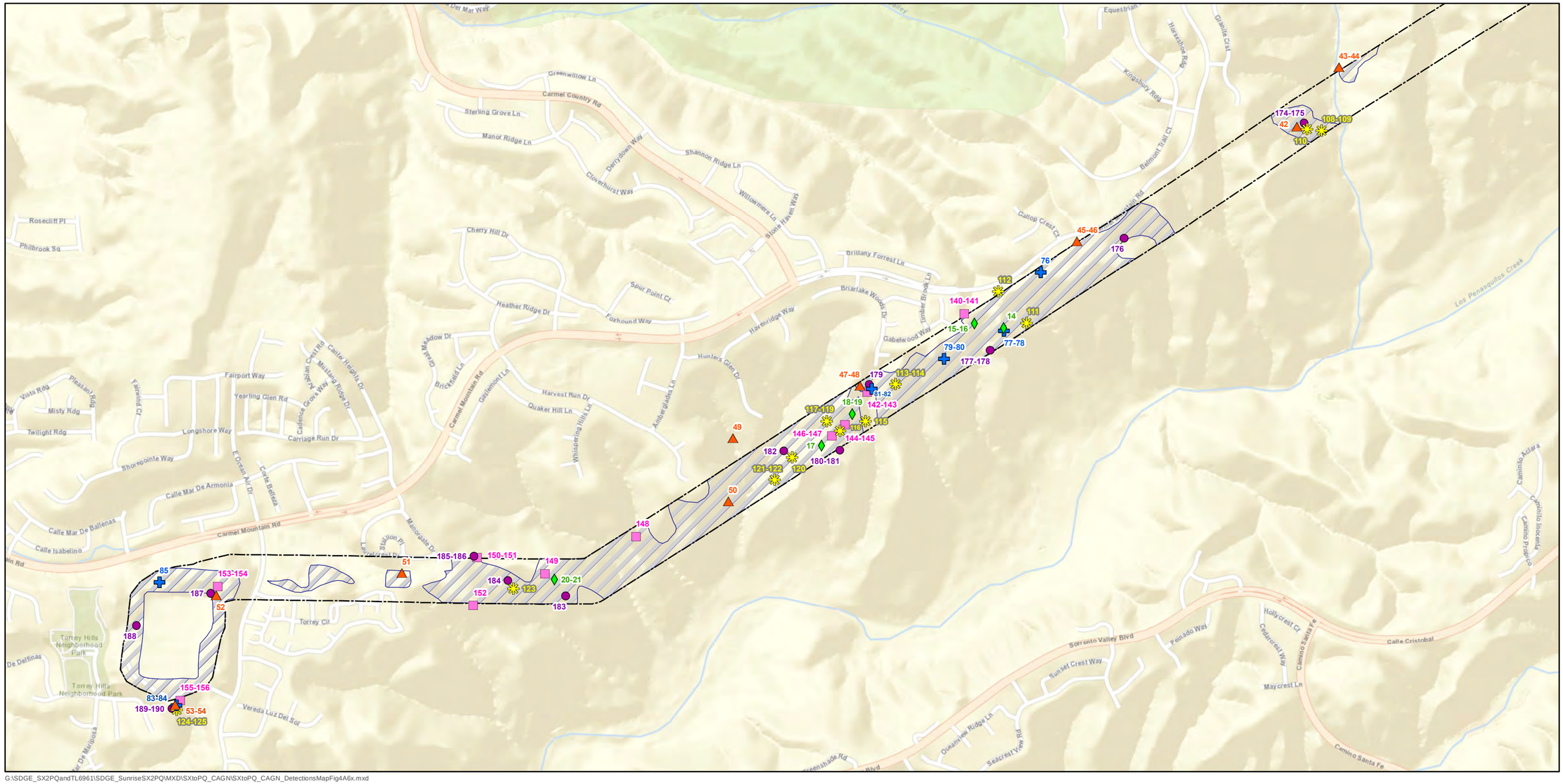
Figure 4a-5

- 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

0 500 1,000 1,500 Feet

Date: 4/2/2014

Busby Biological, 2013; SDG&E, 2013; TRC, 2013; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_CAGN\SXtoPQ_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

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

0 1,000 2,000 3,000 Feet

Date: 4/2/2014

TRC

SDG&E A Sempra Energy utility

Busby Biological, 2013; SDG&E, 2013; TRC, 2013; Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

APPENDIX B – Survey Conditions

Appendix B – Survey Conditions

Survey Round	Survey Day	Date	Time		Weather				Surveyors
					Temp (°F)	Wind (mph)	Clouds (%)	Precip.	
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 (°F)	Wind (mph)	Clouds (%)	Precip.	
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

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 callng 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, mewing 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 ocasionally 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

Appendix D - Wildlife Species Detected

Scientific Name	Common Name
Invertebrates	
Danaus plexippus	monarch butterfly
Vanessa cardui	painted lady
Apodemia virgulti	Behr's metalmark
Amphibians	
Hyla cadaverina	California treefrog
Reptiles	
Sceloporus occidentalis	western fence lizard
Uta stansburiana	side-blotched lizard
Birds	
Anas strepera	gadwall
Anas americana	American wigeon
Anas platyrhynchos	mallard
Callipepla californica	California quail
Ardea alba	great egret
Cathartes aura	turkey vulture
Accipiter cooperii	Cooper's hawk
Buteo lineatus	red-shouldered hawk
Buteo jamaicensis	red-tailed Hawk
Falco sparverius	American kestrel
Fulica americana	American coot
Charadrius vociferus	killdeer
Larus occidentalis	western gull
Zenaida macroura	mourning dove
Geococcyx californianus	greater roadrunner
Bubo virginianus	great horned owl
Phalaenoptilus nuttallii	common poorwill
Chaetura vauxi	Vaux's swift
Aeronautes saxatalis	white-throated swift
Calypte anna	Anna's hummingbird
Selasphorus sasin	Allen's hummingbird
Melanerpes formicivorus	acorn woodpecker
Sphyrapicus sp.	sapsucker sp.
Picoides nuttallii	Nuttall's woodpecker
Colaptes auratus	northern flicker
Empidonax difficilis	Pacific-slope flycatcher
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe
Tyrannus vociferans	Cassin's kingbird
Tyrannus verticalis	western kingbird
Lanius ludovicianus	loggerhead shrike
Aphelocoma californica	western scrub-Jay

Appendix D - Wildlife Species Detected

Scientific Name	Common Name
Corvus brachyrhynchos	American crow
Corvus corax	common raven
Eremophila alpestris actia	California horned lark
Psaltriparus minimus	bushtit
Thryomanes bewickii	Bewick's wren
Troglodytes aedon	house wren
Regulus calendula	ruby-crowned kinglet
Polioptila caerulea	blue-gray gnatcatcher
Polioptila californica californica	coastal California gnatcatcher
Sialia mexicana	western bluebird
Catharus guttatus	hermit thrush
Chamaea fasciata	wrentit
Mimus polyglottos	northern mockingbird
Toxostoma redivivum	California thrasher
Sturnus vulgaris	European starling
Vermivora celata	orange-crowned warbler
Dendroica coronata	yellow-rumped warbler
Dendroica nigrescens	black-throated gray warbler
Geothlypis trichas	common yellowthroat
Pipilo maculatus	spotted towhee
Pipilo crissalis	California towhee
Aimophila ruficeps canescens	southern California rufous-crowned sparrow
Melospiza melodia	song sparrow
Zonotrichia leucophrys	white-crowned sparrow
Zonotrichia atricapilla	golden-crowned sparrow
Sturnella neglecta	western meadowlark
Carduelis psaltria	lesser goldfinch
Mammals	
Sylvilagus audubonii	desert cottontail
Spermophilus beecheyi	California ground squirrel
Neotoma lepida	desert woodrat
Canis familiaris	domestic dog
Canis latrans	coyote
Procyon lotor	raccoon
Felis rufus	bobcat
Equus caballus	domestic horse
Odocoileus hemionus	southern mule deer

MEMORANDUM

TO: Robert Fletcher, San Diego Gas & Electric

FROM: Melissa Busby, Busby Biological Services, Inc.

DATE: December 15, 2014

RE: Response to Data Request #3, Issue 26: Complete biological surveys in all areas of the Proposed Project that have not been surveyed for biological resources.

The California Public Utilities Commission (CPUC) has identified data needs for the proposed San Diego Gas & Electric Company (SDG&E) Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project (Proposed Project), Application No. 14-04-011. Data Request #3, Issue 26 states the following:

> ***"Complete biological surveys in all areas of the Proposed Project that have not been surveyed for biological resources.***
>
> *SDG&E's response to Data Request #2 was incomplete. There remain some project areas that have not been surveyed based on the revised project GIS and updated survey boundaries (See attachment 2). Additionally, supplemental surveys for rare plants and California gnatcatcher will need to be completed in Spring 2015 as indicated in the response provided. Provide specific dates when these pending submittals will be provided.*

To respond to this data request, Busby Biological Services, Inc. (BBS) conducted general biological surveys (i.e., vegetation mapping and habitat assessments) within the portions of the Biological Survey Area (BSA) that were added after the initial surveys of the original BSA were completed and after the surveys conducted in response to Data Request #2 were performed.

This memorandum provides a description of the methods and results used for the general biological surveys. This information is intended to supplement the information provided in the Biological Technical Report (BTR) prepared for the Proposed Project (BBS 2014a). For additional information pertaining to the biological resources associated with the Proposed Project, please refer to the BTR.

METHODS

The methods used for the vegetation mapping and habitat assessments are described, below.

Vegetation Mapping Methods

Vegetation communities and land cover types within the portions of the BSA that are outside of previously surveyed areas were delineated by hand in the field using color aerial imagery with an approximately 1 inch equals 84-foot scale. Access roads that may be used during implementation of the Proposed Project were surveyed and included a 30-foot buffer from the center line of the road to capture both the road and an approximately 20-foot buffer along both sides of the road. Other areas – such as staging yards and stringing sites that are part of the Proposed Project footprint – were surveyed along with a 50-foot buffer around the potential impact area.

Biologists mapped the vegetation communities and land cover types by walking through the areas that were not previously surveyed and documented the dominant plant species within each of the vegetation communities and land cover types. After the field mapping was completed, biologists reviewed each map for consistency or errors, and the hand drawn vegetation community and land cover type boundaries were digitized in the office using Geographic Information Systems (GIS) software.

Vegetation community classifications are consistent with, or similar to, Holland (1986) and plant names largely follow Rebman and Simpson (2006), but updated names are included where applicable (Baldwin et. al 2012). Vegetation communities are identified according to the estimated percent cover of the combination of dominant plant species observed. Vegetation community classifications are based on a dominant species comprising approximately 50 percent or more of the total cover within the mapped unit relative to the list of dominant species for a given Holland vegetation community (e.g., grasslands must have approximately 50 percent cover of dominant grassland species to be mapped as that particular community). Mixed communities are identified where species comprising a second vegetation community are present at approximately 35 percent or higher percent cover 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 disturbed 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.

Habitat Assessments Methods

In addition to the vegetation mapping, BBS also conducted habitat assessments within the portions of the BSA and associated buffers that were not surveyed previously. These habitat assessments were intended to determine if the potential for occurrence of any of the previously discussed special-status species needed to be updated, if additional special-status species needed to be added to the lists of special-status species with a potential to occur within the BSA, and/or if additional focused special-status species surveys may be required to assess potential impacts that are anticipated to occur from implementation of the Proposed Project.

RESULTS

The results of the vegetation mapping and habitat assessments are described, below.

Vegetation Mapping Results

Biologists mapped vegetation communities and land cover types in the newly added areas of the BSA between late November and mid December 2014. No additional vegetation communities or land cover types were identified within the portions of the BSA assessed as part of this survey effort, and the descriptions of the vegetation communities and land cover types remain consistent with those presented in the BTR (BBS 2014a).

With the addition of new access roads, staging areas, stringing sites, and other new work areas, the BSA is now approximately 1,214.79 acres. This includes the original BSA that is presented in the BTR (BBS 2014a) as well as all of the newly added staging yards, access roads, Encina Hub, Mira Mesa Hub, and other work areas and their associated survey buffers (i.e., 20 feet for roads and 50 feet for other types of work areas).

Table 1, below, provides a breakdown of this acreage into the 25 different vegetation community and land cover type categories. For a detailed description of each vegetation community, please refer to the BTR that was prepared for the original BSA (BBS 2014).

Table 1. 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	188.39
	Diegan Coastal Sage Scrub – Disturbed	42.39
	Coastal Sage Scrub – Revegetated	63.63
Coastal Sage/Chaparral Mix	Coastal Sage – Chaparral Scrub	11.19
Chaparral	Chamise Chaparral	79.42
	Chamise Chaparral - Disturbed	5.74
	Southern Mixed Chaparral	100.61
	Southern Mixed Chaparral – Disturbed	13.63
	Scrub Oak Chaparral	81.54
Grassland	Native Grassland	10.97
	Nonnative Grassland	91.71
Alkali Marsh	Alkali Marsh – Revegetated	0.29
Freshwater Marsh	Freshwater Marsh	0.49
Inland Water	San Diego Mesa Vernal Pool	0.10
	Open Water*	0.92
Riparian Scrub	Southern Riparian Scrub	1.72
	Mulefat Scrub	1.77
	Southern Willow Scrub	3.41
	Tamarisk Scrub	0.40
Coast Live Oak Riparian Forest	Southern Coast Live Oak Riparian Forest	2.86
Eucalyptus Forest	Eucalyptus Woodland*	5.14
Disturbed Habitat	Disturbed Habitat*	56.62
N/A	Developed Lands*	290.63
	Ornamental*	94.03
	Bare Ground*	67.19
	TOTAL	1,214.79**

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

Habitat Assessments Results

The habitat assessments conducted in the portions of the BSA that were not previously surveyed and the associated buffer areas indicate that additional special-status species surveys may be required to assess potential impacts that are anticipated to occur from implementation of the Proposed Project. Suitable habitat for both special-status plant species and special-status wildlife species was identified during these surveys. However, no additional special-status species that were not covered in the BTR have the potential to occur within the BSA, and the potential for occurrence for all of the special-status species did not change based on the habitat assessments in these areas (BBS 2014a and BBS 2014b).

DISCUSSION

No focused special-status species surveys were conducted in the portions of the BSA and buffer areas that were surveyed and assessed as part of the general biological surveys described above. Based on the results of the vegetation mapping and habitat assessments conducted in these areas, we anticipate that focused special-status plant species surveys, coastal California gnatcatcher surveys, and burrowing owl surveys will be required. In addition, a focused wetland assessment will be performed within the areas of the BSA that have not been assessed for wetlands, and a wetland delineation will be performed, if needed. Each of these surveys will be conducted in 2014 or 2015, and the results will be presented in survey summary memorandums/reports for each individual task. No other focused special-status species surveys are anticipated for the Proposed Project.

REFERENECES

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors.

2012 *The Jepson manual: vascular plants of California, second edition*. University of California Press, Berkeley.

Busby Biological Services, Inc. (BBS)

2014a Biological Technical Report for Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, City of San Diego, San Diego County, California. March 2014.

2014b Special-Status Plant Survey Summary Report for the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, San Diego County, California. June 2014.

Rebman, J.P. and M.G. Simpson

2006 *Checklist of the Vascular Plants of San Diego County*, 4th Edition. San Diego. Natural History Museum, San Diego, California.

MEMORANDUM

TO: Robert Fletcher, San Diego Gas & Electric

FROM: Melissa Busby, Busby Biological Services, Inc.

DATE: November 3, 2014

RE: Response to Data Request 102: Complete biological surveys in all areas of the Proposed Project that have not been surveyed for biological resources.

The California Public Utilities Commission (CPUC) has identified data needs for the proposed San Diego Gas & Electric Company (SDG&E) Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project (Proposed Project), Application No. 14-04-011. Data Request 102 states the following:

> ***"Complete biological surveys in all areas of the Proposed Project that have not been surveyed for biological resources.***
>
> *SDG&E has proposed use of many miles of access roads, stringing sites, other work areas, and staging yards that have not been surveyed for biological resources. The areas requiring biological surveys are shown on the Biological Survey Maps included in Attachment 5. The overview maps show all project areas requiring survey including the long access roads that remain in the GIS dataset. The detailed maps only show a close up of the areas that require survey along the project corridor. SDG&E must complete surveys for all remaining work areas including access roads, staging yards, and stringing sites that are proposed for Project use. The survey data are required to establish baseline biological resource conditions along proposed roadways and work areas. These data are necessary to analyze the existing conditions and environmental impacts under CEQA; therefore, the CPUC requires this information for the Draft EIR."*

To respond to this data request, Busby Biological Services, Inc. (BBS) conducted general biological surveys (i.e., vegetation mapping and habitat assessments) within the portions of the BSA that are outside of previously surveyed areas. BBS did not conduct focused, special-status species surveys but used the results of the general surveys to quantify the areas that may require additional focused, special-status species surveys.

This memorandum provides a description of the methods and results used for the general biological surveys. This information is intended to supplement the information provided in

the Biological Technical Report (BTR) prepared for the Proposed Project (BBS 2014a). For additional information pertaining to the biological resources associated with the Proposed Project, please refer to the BTR.

METHODS

The methods used for the vegetation mapping and habitat assessments are described, below.

Vegetation Mapping Methods

Vegetation communities and land cover types within the portions of the BSA that are outside of previously surveyed areas were delineated by hand in the field using color aerial imagery with an approximately 1 inch equals 84-foot scale. Access roads that may be used during implementation of the Proposed Project were surveyed along with a 20-foot buffer on either side of the road. Other areas – such as staging yards and stringing sites that are part of the Proposed Project footprint – were surveyed along with a 50-foot buffer around the potential impact area.

Biologists mapped the vegetation communities and land cover types by walking through the areas that were not previously surveyed and documented the dominant plant species within each of the vegetation communities and land cover types. 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 the field mapping was completed, biologists reviewed each map for consistency or errors, and the hand drawn vegetation community and land cover type boundaries were digitized in the office using Geographic Information Systems (GIS) software.

Vegetation community classifications are consistent with, or similar to, Holland (1986) and plant names largely follow Rebman and Simpson (2006), but updated names are included where applicable (Baldwin et. al 2012). Vegetation communities are identified according to the estimated percent cover of the combination of dominant plant species observed. Vegetation community classifications are based on a dominant species comprising approximately 50 percent or more of the total cover within the mapped unit relative to the list of dominant species for a given Holland vegetation community (e.g., grasslands must have approximately 50 percent cover of dominant grassland species to be mapped as that particular community). Mixed communities are identified where species comprising a second vegetation community are present at approximately 35 percent or higher percent cover 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 disturbed 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.

Habitat Assessments Methods

In addition to the vegetation mapping, BBS also conducted habitat assessments within the portions of the BSA and associated buffers that were not surveyed previously. These habitat assessments were intended to determine if the potential for occurrence of any of the previously discussed special-status species needed to be updated, if additional special-status species needed to be added to the lists of special-status species with a potential to occur within the BSA, and/or if additional focused special-status species surveys may be required to assess potential impacts that are anticipated to occur from implementation of the Proposed Project.

RESULTS

The results of the vegetation mapping and habitat assessments are described, below.

Vegetation Mapping Results

Biologists mapped vegetation communities and land cover types during the week of October 10, 2014. No additional vegetation communities or land cover types were identified within the portions of the BSA assessed as part of this survey effort, and the descriptions of the vegetation communities and land cover types remain consistent with those presented in the BTR (BBS 2014a).

With the addition of the access roads, new staging areas, new stringing sites, and other new work areas, the BSA is now approximately 1,170 acres. Table 1, below, provides a breakdown of this acreage into the 25 different vegetation community and land cover type categories.

Table 1. 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	181.48
	Diegan Coastal Sage Scrub –	33.27

	Disturbed	
	Coastal Sage Scrub – Revegetated	61.92
Coastal Sage/Chaparral Mix	Coastal Sage – Chaparral Scrub	10.60
Chaparral	Chamise Chaparral	76.72
	Chamise Chaparral - Disturbed	5.65
	Southern Mixed Chaparral	97.85
	Southern Mixed Chaparral – Disturbed	8.66
	Scrub Oak Chaparral	80.33
Grassland	Native Grassland	10.87
	Nonnative Grassland	92.70
Alkali Marsh	Alkali Marsh – Revegetated	0.29
Freshwater Marsh	Freshwater Marsh	0.49
Inland Water	San Diego Mesa Vernal Pool	0.10
	Open Water*	0.92
Riparian Scrub	Southern Riparian Scrub	1.37
	Mulefat Scrub	1.57
	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*	56.73
N/A	Developed Lands*	283.67
	Ornamental*	93.05
	Bare Ground*	60.55
	TOTAL	1,170.33**

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

Habitat Assessments Results

The habitat assessments conducted in the portions of the BSA that were not previously surveyed and the associated buffer areas indicate that additional special-status species surveys may be required to assess potential impacts that are anticipated to occur from implementation of the Proposed Project. Suitable habitat for both special-status plant species and special-status wildlife species was identified during these surveys. However, no additional special-status species that were not covered in the BTR have the potential to occur within the BSA, and the potential for occurrence for all of the special-status species did not change based on the habitat assessments in these areas (BBS 2014a and BBS 2014b).

DISCUSSION

No focused special-status species surveys were conducted in the portions of the BSA and buffer areas that were surveyed and assessed as part of the general biological surveys described above. Based on the results of the vegetation mapping and habitat assessments conducted in these areas, we anticipate that focused special-status plant surveys and focused coastal California gnatcatcher surveys will be required within these survey areas during spring 2015. In addition, a focused burrowing owl habitat assessment will be conducted during fall 2014 to determine if there is suitable habitat that will require focused burrowing owl surveys during spring 2015. No other focused special-status species surveys are anticipated for the Proposed Project.

REFERENECES

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors.

2012 *The Jepson manual: vascular plants of California, second edition*. University of California Press, Berkeley.

Busby Biological Services, Inc. (BBS)

2014a Biological Technical Report for Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, City of San Diego, San Diego County, California. March 2014.

2014b Special-Status Plant Survey Summary Report for the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, San Diego County, California. June 2014.

Rebman, J.P. and M.G. Simpson

2006 *Checklist of the Vascular Plants of San Diego County*, 4th Edition. San Diego. Natural History Museum, San Diego, California.

MEMORANDUM

TO: Robert Fletcher, San Diego Gas & Electric

FROM: Melissa Busby, Busby Biological Services, Inc.

DATE: October 29, 2014

RE: Response to Data Request 105: Provide a habitat assessment for the thread-leaved brodiaea (Bf; *Brodiaea filifolia*).

The California Public Utilities Commission (CPUC) has identified data needs for the proposed San Diego Gas & Electric Company (SDG&E) Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project (Proposed Project), Application No. 14-04-011. Data Request 105 states the following:

> ***"Provide a habitat assessment for the thread-leaved brodiaea (Bf*; Brodiaea filifolia*).***
>
> *The* [Proponent's Environmental Assessment (PEA)] *indicates that the* [Biological Survey Area (BSA)] *is outside of the known range of Bf. Several occurrences of Bf were shown on Figure 6 of Appendix A, however, and the June 27, 2014, Special-Status Plant Survey Summary Report for the Project (prepared by Busby and Rocks) documents Bf in the BSA in close proximity to the alignment (page 11 of Figure 3).*
>
> *A habitat assessment for this species needs to be completed to identify areas where the species has potential to occur in the BSA, based on appropriate soils, vegetation communities, and any other habitat requirement for this species. Provide GIS data of the potential Bf habitat areas based on a field assessment and a write-up of how the habitat assessment was completed."*

To respond to this data request, Busby Biological Services, Inc. (BBS) and Rocks Biological Consulting, Inc. (RBC) have:

- analyzed the available data for thread-leaved brodiaea
- conducted a focused habitat assessment within the BSA to map areas of suitable habitat

This memorandum provides a brief description of thread-leaved brodiaea followed by a summary of the methods and results used for this task. This information is intended to supplement the information provided in the Biological Technical Report (BTR) prepared for

the Proposed Project (BBS 2014a). For additional information pertaining to the biological resources associated with the Proposed Project, please refer to the BTR.

THREAD-LEAVED BRODIAEA – SPECIES INFORMATION

Thread-leaved brodiaea is listed as a federally listed threatened species, a state-listed endangered species, a California Rare Plant Rank (CRPR) 1B.1 species, and an *SDG&E Subregional NCCP*-covered species. This species is a perennial, bulbiferous herb that regrows annually from an underground corm. Typically, not all thread-leaved brodiaea individuals in a population emerge and/or flower each year. Thus, many non-emergent corms remain dormant below the ground.

Thread-leaved brodiaea is typically found in habitats that range from grasslands to ephemeral wetlands, such as vernal pools at low elevations, and meadows in montane habitat (CNPS 2014). Specifically, this species occurs in open areas within herbaceous communities, including valley needlegrass grassland, valley sacaton grassland, nonnative grassland, alkali playa, southern interior basalt vernal pools, San Diego mesa hardpan vernal pools, and San Diego mesa claypan vernal pools. It often grows in interstitial areas (often narrow bands of habitat surrounded by other vegetation) in association with coastal sage scrub in some locations when suitable soils and site conditions are present. Thread-leaved brodiaea is associated with clay soils, subsurface clay soils, or clay lenses within loamy, silty loam, loamy sand, silty deposits with cobbles, or alkaline soils (USFWS 2009).

Thread-leaved brodiaea is distributed in southern California from San Diego to Los Angeles counties and east to the San Bernardino Mountains. Thread-leaved brodiaea occurs at elevations ranging from 80 feet to 2,400 feet above mean sea level in San Diego County.

Threats to thread-leaved brodiaea include loss of habitat from urbanization, agricultural conversion, alteration of hydrology and impacts from livestock grazing, unauthorized off-highway vehicles (OHV), discing for fire suppression, and competition from nonnative plants. Thread-leaved brodiaea was state-listed as endangered in 1982 (CNPS 2014) and federally listed as threatened in 1998. When the species was listed in 1998, there were only 39 extant occurrences; however, by 2009 this number increased to about 68 extant occurrences (USFWS 2009).

Thread-leaved brodiaea was found in one location within the BSA adjacent to a known historical location (CNDDB occurrence 89, Figures 1 and 2), which is the southern-most record for this species across its entire range (Figure 1). Approximately 62 flowering individuals were observed growing in clay soils, within a mix of native and non-native grassland, at the City of San Diego's Black Mountain Open Space Preserve. However, as discussed above, many non-flowering corms remain dormant underground during each blooming period. As such, the population size is often much larger than the number of individuals observed flowering. Additional potentially suitable habitat occurs within the BSA

(Figures 1 through 3) in locations where thread-leaved brodiaea was not observed during previous special-status plant species surveys.

METHODS

To evaluate the potential for thread-leaved brodiaea to occur within the BSA, a literature and database review was performed, the special status-plant species survey summary report prepared for the Proposed Project (BBS 2014b) was reviewed, and a focused habitat assessment was conducted in the BSA. The methods for each of these are described in detail below.

Literature & Database Review

A literature review for thread-leaved brodiaea was conducted to supplement the information provided in the BTR (BBS 2014a). In addition, historical occurrence databases (e.g., CNDDB, SanGIS, SDG&E's internal Sunrise Powerlink) were searched and other references were consulted to better understand the historical location data and distribution of this species in San Diego County.

Special-Status Plant Species Surveys Conducted for the Proposed Project

Focused special-status plant species surveys were conducted for the Proposed Project by walking meandering transects throughout the BSA, which includes (1) a 500-foot-wide survey corridor along the approximately 16.5-mile alignment, (2) the existing Sycamore Canyon and Peñasquitos Substations, and (3) the proposed Sycamore and Stowe construction yards. These surveys included three survey rounds – one in fall 2013, one in early spring 2014, and one in late spring 2014.

Thread-leaved brodiaea was included in the target species list for the focused special-status plant species surveys conducted for the Proposed Project. Areas with suitable clay soils were assessed during the special-status plant species surveys for potentially suitable habitat by highly qualified botanists who are familiar with this species and its phenology. No focused habitat assessment was conducted for thread-leaved brodiaea during the three previous surveys; however, botanists noted the locations of clay soils in the alignment because of their high potential to support many special-status species, including thread-leaved brodiaea.

Focused Habitat Assessment in BSA

A focused habitat assessment for special-status plant species was conducted in fall 2014 to evaluate the BSA, including areas previously surveyed for special-status plant species and areas that were not previously surveyed areas that are part of the Proposed Project but that were not included in the original BSA. During these focused habitat assessments, potentially suitable habitats with clay soils in grassland vegetation communities were

assessed for the potential to support thread-leaved brodiaea. Suitable habitats were mapped in the field using aerial imagery of the BSA (1 inch = 200 feet) and handheld Global Positioning Systems (GPS) units. Suitable habitat areas were digitized using Google™ Earth based on field notes and waypoints collected in the field.

RESULTS

The results of the literature and database review, special-status plant species survey summary report review, and the focused habitat assessment in the BSA are provided, below.

Literature & Database Review

The results of the detailed literature and database review were used to prepare the thread-leaved brodiaea species information provided above. CNDDB occurrence 89 – which was inadvertently overlooked during the initial fall 2013 assessment – is located adjacent to the eastern boundary of the BSA (Figure 1), and a new population of thread-leaved brodiaea was documented within the BSA during the late spring 2014 plant surveys (Figure 2). Extant CNDDB occurrences 66, 70, 84, and 90 also occur north of the BSA, within approximately 5 miles of the BSA.

Focused Special-Status Plant Species Surveys Conducted for the Proposed Project

All suitable thread-leaved brodiaea habitat was surveyed during the fall 2013, early spring 2014, and late spring 2014 surveys. Thread-leaved brodiaea was found in one location within the BSA adjacent to a known location (CNDDB occurrence 89), which is located outside of and adjacent to the BSA. Approximately 62 flowering individuals were observed growing in deep clay soils, within a mix of native and non-native grassland, at the City of San Diego's Black Mountain Open Space Preserve.

Focused Habitat Assessment in BSA

Suitable thread-leaved brodiaea habitat, specifically appropriate clay soils, was mapped during the fall 2014 focused habitat assessment. All of the thread-leaved brodiaea suitable habitat included clay soils in grassland habitat adjacent to coastal sage scrub.

Based on the suitable habitat mapping, approximately 4.49 acres of suitable habitat were mapped at two primary locations, in the Black Mountain Open Space Preserve (Figure 2) and near the junction of Carmel Valley Road and Black Mountain Road (Figure 3). These areas include both the areas where thread-leaved brodiaea was observed during the spring 2014 surveys (Figure 2) as well as areas within the BSA that support suitable habitat but where thread-leaved brodiaea was not observed during the previous surveys. Photographs 1 through 3, below, provide examples of suitable habitat within the BSA. No suitable

habitat was identified during the fall 2014 habitat assessment in areas that were previously not surveyed.

Photograph 1, below, shows thread-leaved brodiaea in bloom in the Black Mountain Open Space Preserve. This photograph was taken on May 12, 2014, during the focused special-status plant species surveys conducted for the Proposed Project.

Photograph 1: Thread-leaved Brodiaea (Spring 2014)

Photograph 2, below, shows potentially suitable thread-leaved brodiaea habitat within the Black Mountain Open Space Preserve. This photograph was taken during the fall 2014 habitat assessment. The green arrow indicates the location of the thread-leaved brodiaea population that was observed during the spring 2014 focused special-status plant species surveys. The red arrows point to potentially suitable habitat where thread-leaved brodiaea was not observed during any of the focused special-status plant species surveys conducted for the Proposed Project.

Photograph 2: Black Mountain Open Space Preserve (Fall 2014)

Photograph 3, below, shows the potentially suitable thread-leaved brodiaea habitat that was identified during the fall 2014 habitat assessment near the junction of Black Mountain Road and Carmel Valley Road. This photograph was taken during the fall 2014 habitat assessment. No thread-leaved brodiaea was observed in this suitable habitat during the special-status plant species surveys conducted for the Proposed Project.

Photograph 3: Black Mountain Road and Carmel Valley Road (Fall 2014)

DISCUSSION

As discussed above, not all individuals of thread-leaved brodiaea emerge and/or flower each year. Many corms remain dormant underground and are not observable during focused special-status plant species surveys. As such, a thread-leaved brodiaea population is often much larger than the number of individuals observed.

Thread-leaved brodiaea was found in one location within the BSA adjacent to a known historical location located outside of and adjacent to the BSA (CNDDB occurrence 89, Figures 1 and 2), which is the southern-most record for this species across its entire range (Figure 1). Approximately 62 flowering individuals were observed growing in clay soils, within a mix of native and non-native grassland, at the City of San Diego's Black Mountain Open Space Preserve. However, the population size is likely much larger based on the phenology of the species, which is described above.

Additional potentially suitable habitat occurs within the BSA (Figures 1 through 3). These areas were surveyed during the previous special-status plant species surveys and were assessed during the fall 2014 habitat assessment, thread-leaved broadiaea was not observed during any of these survey efforts.

REFERENCES

Busby Biological Services, Inc. (BBS)

2014a Biological Technical Report for Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, City of San Diego, San Diego County, California. March 2014.

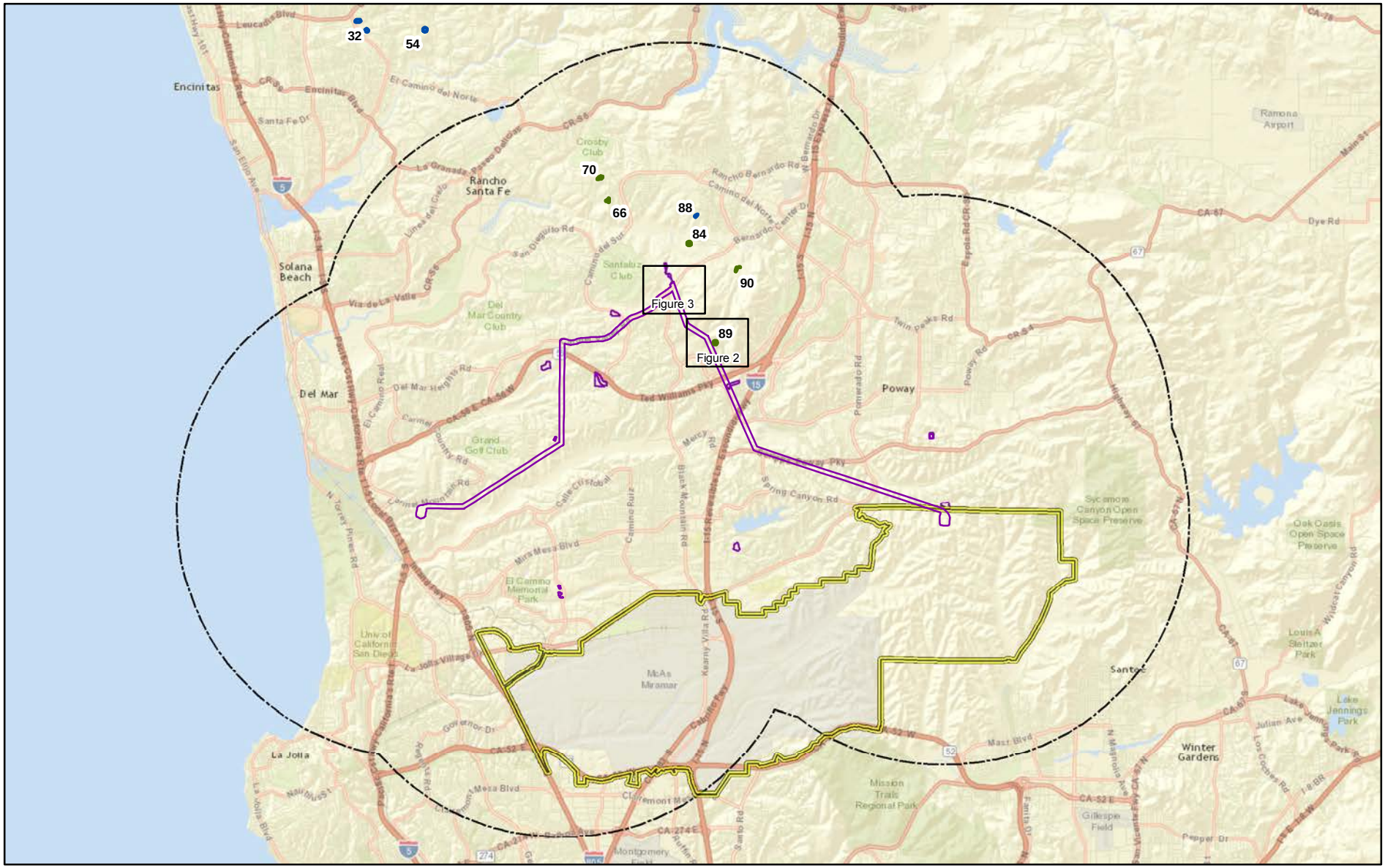
2014b Special-Status Plant Survey Summary Report for the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, San Diego County, California. June 2014.

California Native Plant Society (CNPS)

2014 Rare Plant Program. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website http://www.rareplants.cnps.org [accessed 20 October 2014].

U.S. Fish and Wildlife Service (USFWS)

2009 *Brodiaea filifolia* (thread-leaved brodiaea). Carlsbad Fish and Wildlife Office, CA August 13, 2009. 47 pgs.



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_ThreadleafFig1.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

Extirpated CNDDB Occurrence
Extant CNDDB Occurrence
MCAS Miramar
CNDDB Occurrence Number
BSA
5-Mile Buffer Around BSA

0 2 4 6 Miles

Sycamore to Peñasquitos 230 kV Transmission Line Project
Historical *Brodiaea filifolia* Locations
Figure 1

Sources: CNDDB October 2014 Database, CA Dept. Fish and Wildlife; Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_ThreadleafFig2.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

BSA

Suitable Habitat

Population of *Brodiaea filifolia* documented during 2014 plant surveys

Extant CNDDB Occurrence

\# CNDDB Occurrence Number

Sycamore to Peñasquitos 230 kV Transmission Line Project

Suitable Habitat for *Brodiaea filifolia* in BSA

Figure 2

0 200 400 600 Feet

Sources: CNDDB October 2014 Database, CA Dept. Fish and Wildlife; Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_ThreadleafFig3.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

BSA

Suitable Habitat

Sycamore to Peñasquitos 230 kV Transmission Line Project

Suitable Habitat for *Brodiaea filifolia* in BSA

Figure 3

0 200 400 600 Feet

Sources: CNDDB October 2014 Database, CA Dept. Fish and Wildlife; Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

MEMORANDUM

TO: Robert Fletcher, San Diego Gas & Electric

FROM: Melissa Busby, Busby Biological Services, Inc.

DATE: October 29, 2014

RE: Response to Data Request 106: Provide a habitat assessment for willowy monardella (Mv; *Monardella viminea*).

The California Public Utilities Commission (CPUC) has identified data needs for the proposed San Diego Gas & Electric Company (SDG&E) Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project (Proposed Project), Application No. 14-04-011. Data Request 106 states the following:

> ***"Provide a habitat assessment for willowy monardella (Mv;*** **Monardella viminea*).***
>
> *The* [Proponent's Environmental Assessment (PEA)] *indicates that Mv has very low potential to occur; however, the* [California Natural Diversity Database (CNDDB)] *shows locations in drainages that extend into a 1-mile buffer around the alignment.*
>
> *A habitat assessment for this species needs to be completed to identify areas where the species has potential to occur in the* [Biological Survey Area (BSA)] *based on appropriate habitat requirements for this species. Provide* [Geographic Information Systems (GIS)] *data of the potential Mv habitat areas based on a field assessment and a write-up of how the habitat assessment was completed."*

To respond to this data request, Busby Biological Services, Inc. (BBS) and Rocks Biological Consulting, Inc. (RBC) have:

- analyzed the available data for willowy monardella; and
- conducted a focused habitat assessment within the BSA to map areas of suitable habitat.

This memorandum provides a brief description of willowy monardella followed by a summary of the methods and results for this task. This information is intended to supplement the information provided in the Biological Technical Report (BTR) prepared for the Proposed Project (BBS 2014a). For additional information pertaining to the biological resources associated with the Proposed Project, please refer to the BTR.

WILLOWY MONARDELLA – SPECIES INFORMATION

Willowy monardella is a federally listed endangered species, a state-listed endangered species, a California Rare Plant Rank (CRPR) 1B.1 species, and an *SDG&E Subregional NCCP*-covered, narrow endemic species. It is an aromatic perennial herb or subshrub that, where present, is observable year round. This species is found at elevations from 150 to 850 feet above mean sea level on the sandy bottoms and banks of alluvial, ephemeral washes in chaparral, coastal sage scrub, and riparian habitats in canyons where surface water flows for usually less than 48 hours after a rain event (U.S. Fish and Wildlife Service [USFWS] 2012, California Native Plant Society [CNPS] 2014).

Willowy monardella is known from only eight extant populations in three watersheds north of Kearny Mesa in San Diego County (Figure 1). Six of these extant occurrences occur in drainages east and south of the eastern portion of the BSA on Marine Corps Air Station, (MCAS) Miramar; one of these extant occurrences occurs east of the BSA in Sycamore Canyon Open Space Preserve, which is managed by the County of San Diego; and the other extant occurrence occurs south of the western portion of the BSA in Lopez Canyon.

Willowy monardella is threatened by habitat destruction and modification caused 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 2014). As a result of this habitat destruction, this species was state-listed as endangered in 1979 (CNPS 2014) and federally listed as endangered in 1998. At the time of its federal listing, this species was known from 20 extant occurrences, but by 2012 the number had been reduced to only 8 extant occurrences.

METHODS

To evaluate the potential for willowy monardella to occur within the BSA, a literature and database review was performed, the special status-plant species survey summary report prepared for the Proposed Project (BBS 2014b) was reviewed, a focused habitat assessment was conducted in the areas that were not previously surveyed, and a focused drainage assessment was completed. The methods for each of these are described in detail below.

Literature & Database Review

A literature review for willowy monardella was conducted to supplement the information provided in the BTR (BBS 2014a). In addition, historical occurrence databases (e.g., CNDDB, SanGIS, SDG&E's internal Sunrise Powerlink) were searched and other references were consulted to better understand the historical location data and distribution of this species in San Diego County.

Special-Status Plant Species Surveys Conducted for the Proposed Project

Focused special-status plant species surveys were conducted for the Proposed Project by walking meandering transects throughout the BSA, which includes (1) a 500-foot-wide survey corridor along the approximately 16.5-mile alignment, (2) the existing Sycamore Canyon and Peñasquitos Substations, and (3) the proposed Sycamore and Stowe construction yards. These surveys included three survey rounds – one in fall 2013, one in early spring 2014, and one in late spring 2014.

Willowy monardella, which is a perennial species that is observable year round, was included in the target species list for the focused special-status plant species surveys conducted for the Proposed Project. All drainages were assessed during the special-status plant species surveys for potentially suitable habitat by highly qualified botanists who are familiar with this species and its phenology. Suitable habitat for willowy monardella included drainages with sandy bottoms and banks of alluvial washes in chaparral, coastal sage scrub, and riparian habitats in canyons where surface water flows are ephemeral in nature, usually stopping less than 48 hours after a rain event. Marginally suitable habitat for willowy monardella included drainages having at least some, but not all, of these constituent habitat elements.

Focused Habitat Assessment in Areas Not Yet Surveyed

A focused habitat assessment for special-status plant species was conducted in fall 2014 to evaluate the areas that are part of the Proposed Project but that were not included in the original BSA and, thus, were not surveyed during the previous efforts. During these focused habitat assessments, the new survey areas were assessed for their potential to support special-status plant species with a potential to occur within the BSA, including willowy monardella.

Focused Drainage Assessment

Potentially suitable drainages located within the BSA were surveyed during fall 2013, early spring 2014, and late spring 2014, and were revisited during fall 2014 to critically review their conditions and their potential to support willowy monardella. Suitable habitats were mapped in the field using aerial imagery of the BSA (1 inch = 200 feet) and handheld Global Positioning Systems (GPS) units. Suitable habitat areas were digitized using Google™ Earth based on field notes and waypoints collected in the field.

RESULTS

The results of the literature and database review, special status-plant species survey summary report review, focused habitat assessment in the areas not yet surveyed, and focused vernal pool evaluation are provided, below.

Literature & Database Review

The results of the detailed literature and database review were used to prepare the willowy monardella species information provided above. The closest known natural extant occurrence to the BSA is CNDDB occurrence 21, which is approximately 1 mile east of the eastern portion of the BSA (Figure 1) on MCAS Miramar. Additional occurrences located within approximately 5 miles of the BSA include CNDDB occurrences 8, 12, 24, 26, and 27 on MCAS Miramar; occurrence 29 in Sycamore Canyon Open Space Preserve; and occurrence 1 in Lopez Canyon.

Focused Special-Status Plant Species Surveys Conducted for the Proposed Project

Botanists identified marginally suitable habitat in three alluvial drainages in the eastern portion of the BSA (Figure 2). Botanists thoroughly searched these marginally suitable habitats during the fall 2013, early spring 2014, and late spring 2014 and surveyed these areas again in fall 2014 during the habitat mapping. Willowy monardella was not observed during any of these surveys.

Focused Habitat Assessment in Areas Not Yet Surveyed

Botanists did not identify any additional suitable or marginally suitable habitat for willowy monardella during the fall 2014 assessment of areas not previously surveyed.

Focused Drainage Assessment

The entire BSA was reviewed for potential suitable or marginally suitable willowy monardella habitats by botanists familiar with the species. The three marginally suitable areas identified during the fall 2013, early spring 2014, and late spring 2014 remain the only marginally suitable habitats in the BSA. These areas were revisited in fall 2014, and photographs of these areas are included, below, and indicated on Figure 2. Drainages are discussed from west to east and described as west (Photograph 1), center (Photograph 2), and east drainages (Photograph 3).

Photograph 1, below, shows the west drainage. This drainage has a few open areas, but it does not receive ephemeral flows as evidences by the establishment of upland vegetation within the drainage. Flow regimes have been altered by development and upstream flood control. This drainage lacks sandy alluvium required by willowy monardella. Furthermore, willowy monardella was not observed during thorough searches in fall 2013, early and late spring 2014, and fall 2014.

Photograph 1: West Drainage

Photograph 2, below, shows the center drainage. This drainage has a few open areas, but the flow regimes have been altered by development and upstream flood control. This drainage lacks sandy alluvium required by willowy monardella. Furthermore, willowy monardella was not observed during thorough searches in fall 2013, early and late spring 2014, and fall 2014.

Photograph 2: Center Drainage

Photograph 3, below, shows the east drainage. This drainage is open and likely receives ephemeral flows, despite alteration by upstream development. Cobble alluvium is present; however, the drainage lacks sandy alluvium required by willowy monardella. Furthermore, willowy monardella was not observed during thorough searches in fall 2013, early and late spring 2014, and fall 2014.

Photograph 3: East Drainage

DISCUSSION

Willowy monardella was originally described as having a very low potential to occur within the BSA because it is known to occur within close proximity to the BSA (Figure 1) and there is marginally suitable habitat within the BSA. However, this species is a perennial species that is observable year round but was not observed during any of the focused special-status plant species surveys conducted for the Proposed Project, including those conducted in fall 2013 and spring 2014 as well as the focused habitat assessment conducted in fall 2014.

The results of the focused habitat assessment conducted in the fall 2014 provide additional data to support our conclusion that only very marginal suitable willowy monardella habitat occurs within the BSA, because these drainages have altered flood regimes and lack suitable sandy alluvium required by willowy monardella. While there is a very low potential that this species could colonize the drainages within the BSA, it is unlikely to happen before implementation of the Proposed Project.

Based on the results of the focused special-status plant species surveys and focused habitat assessment conducted for the Proposed Project, the probability for the willowy monardella to occur within the BSA has been reduced from “very low” to “not expected”. Therefore, no impacts to this species are anticipated from implementation of the Proposed Project, and no species-specific avoidance, minimization, or mitigation measures would be

required for willowy monardella. However, because willowy monardella is an *SDG&E Subregional NCCP*-covered, narrow endemic species, SDG&E is required to confer with USFWS and California Department of Fish and Wildlife (CDFW) prior to impacting this species. Therefore, if willowy monardella were observed within the BSA during future survey efforts, SDG&E would avoid impacts to this species because it, and SDG&E would completely avoid impacts to this species. If impacts are unavoidable, SDG&E would confer with USFWS and CDFW to determine appropriate species-specific avoidance, minimization, and mitigation measures to assure the impacts to this species remain less than significant.

REFERENCES

Busby Biological Services, Inc. (BBS)

2014a Biological Technical Report for Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, City of San Diego, San Diego County, California. March 2014.

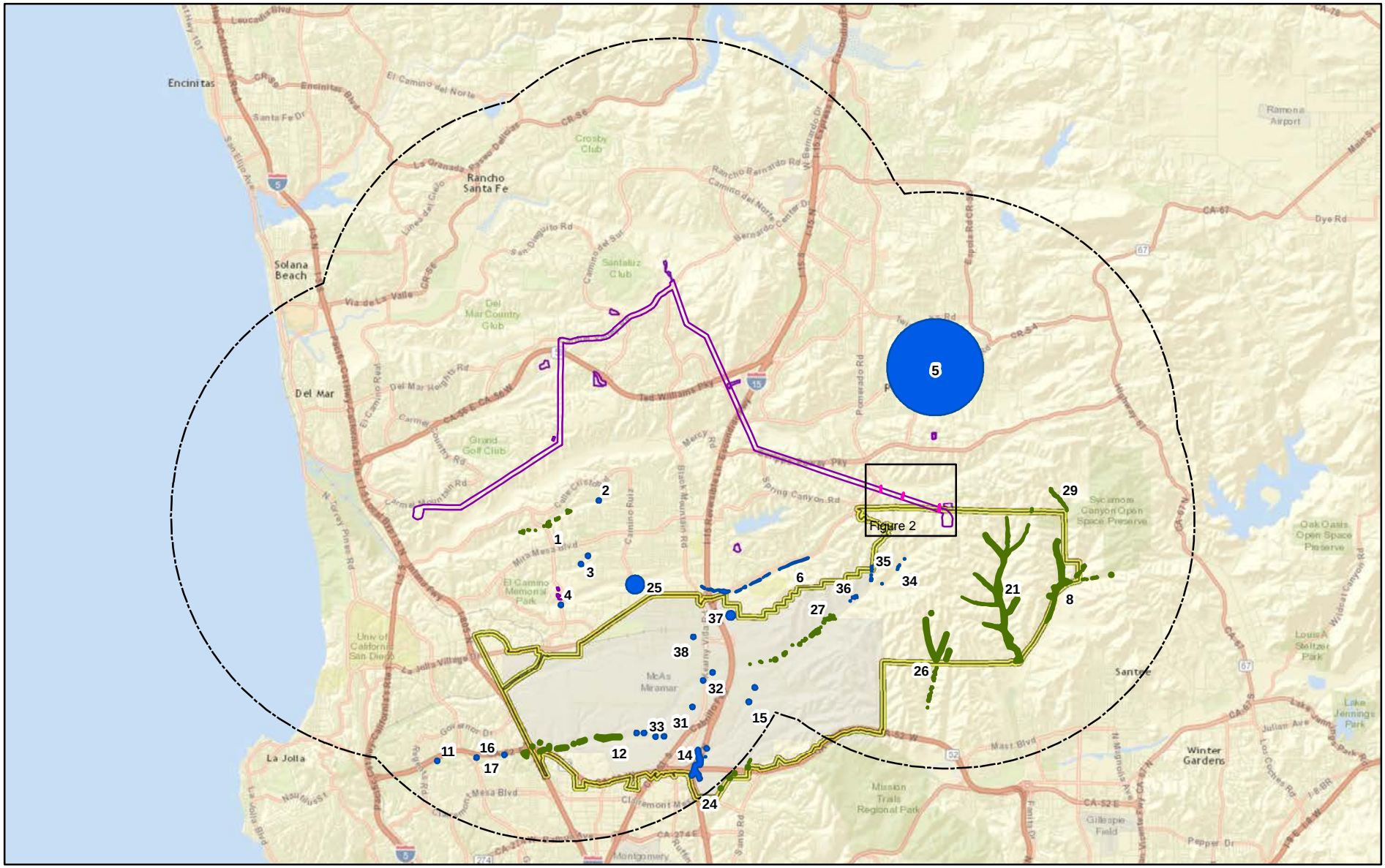
2014b Special-Status Plant Survey Summary Report for the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, San Diego County, California. June 2014.

California Native Plant Society (CNPS)

2014 Rare Plant Program. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website http://www.rareplants.cnps.org [accessed 20 October 2014].

U.S. Fish and Wildlife Service (USFWS)

2012 *Monardella viminea* (Willowy Monardella). Carlsbad Fish and Wildlife Office, CA August 3. 2012. 9 pgs.



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_WillowyMonardellaFig1.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

Marginally Suitable Habitat
Extant CNDDB Occurrence
Extirpated CNDDB Occurrence

CNDDB Occurrence Number
BSA
5-Mile Buffer Around BSA
MCAS Miramar

0 2 4 6 Miles

Sycamore to Peñasquitos 230 kV Transmission Line Project
Historical *Monardella viminea* Locations
Figure 1

Sources: CNDDB October 2014 Database, CA Dept. Fish and Wildlife; Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_WillowyMonardellaFig2.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

BSA

Marginally Suitable Habitat

Sycamore to Peñasquitos 230 kV Transmission Line Project

Marginally Suitable Habitat for *Monardella viminea* in BSA

Figure 2

0 500 1,000 1,500 Feet

SDGE

A Sempra Energy utility

Sources: CNDDB October 2014 Database, CA Dept. Fish and Wildlife; Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

MEMORANDUM

TO: Robert Fletcher, San Diego Gas & Electric

FROM: Melissa Busby, Busby Biological Services, Inc.

DATE: October 22, 2014

RE: Response to Data Request 107: Provide explanation for "very low" potential for California Orcutt grass (Oc; *Orcuttia californica*).

The California Public Utilities Commission (CPUC) has identified data needs for the proposed San Diego Gas & Electric Company (SDG&E) Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project (Proposed Project), Application No. 14-04-011. Data Request 107 states the following:

> ***"Provide explanation for 'very low' potential for California Orcutt grass (Oc;* Orcuttia californica*).***
>
> *The* [Proponent's Environmental Assessment (PEA)] *indicates that Oc has very low potential to occur and that vernal pool habitat is present, but the BSA is outside the known range of the species in San Diego County. However, the* [California Natural Diversity Database (CNDDB)] *shows a location for this species at the western end of the alignment, and a vernal pool is mapped at the western end of the alignment."*

To respond to this data request, Busby Biological Services, Inc. (BBS) and Rocks Biological Consulting, Inc. (RBC) analyzed available data for California Orcutt grass and conducted a brief site visit to confirm the previously determined potential for occurrence for this species. This memorandum provides a brief description of California Orcutt grass followed by a summary of the methods and results for this task.

This information is intended to supplement the information provided in the Biological Technical Report (BTR) prepared for the Proposed Project (BBS 2014a). For additional information pertaining to the biological resources associated with the Proposed Project, please refer to the BTR.

CALIFORNIA ORCUTT GRASS - SPECIES INFORMATION

California Orcutt grass is a federally listed endangered species, a state-listed endangered species, a California Rare Plant Rank (CRPR) 1B.1 species, and an *SDG&E Subregional NCCP*-covered species. This inconspicuous annual grass is restricted to southern California (Los Angeles, Riverside, San Diego, and Ventura counties) and few historical occurrences in northern Baja California, Mexico (U.S. Fish and Wildlife Service [USFWS] 2011, California Native Plant Society [CNPS] 2014). California Orcutt grass is a vernal pool obligate species and is found only in deep, ephemeral vernal pools underlain by clay soils (USFWS 2011), and colonizes adjacent vernal pools through wind dispersal. California Orcutt grass is often associated with a variety of other federally listed vernal pool taxa, including San Diego button celery (*Eryngium aristulatum* var. *parishii*), San Diego mesa mint (*Pogogyne abramsii*), Otay mesa mint (*Pogogyne nudiuscula*), spreading navarretia (*Navarretia fossalis*), San Diego fairy shrimp (*Branchinecta sandiegonensis*), and Riverside fairy shrimp (*Streptocephalus woottoni*).

Threats to California Orcutt grass include urban and agricultural development, grazing, altered hydrology, off-road vehicle use, trampling, and invasion of nonnative plants. As a result of these threats, California Orcutt grass was state-listed endangered in 1979 (USFWS 2011) and federally listed as endangered in 1993 (USFWS 1993). At the time of its federal listing in 1993, California Orcutt grass was known from only four extant locations in Riverside and San Diego counties. In 2011, however, it was known from 28 extant locations, 13 of which occur in San Diego County (USFWS 2011).

Within San Diego County, this species is historically known to occur naturally in Otay Mesa and Mira Mesa, and from a single location in Carlsbad (USFWS 2011). The closest naturally occurring population to the Biological Survey Area (BSA) for the Proposed Project is located in the western portion of U.S. Marine Corps Air Station, Miramar and approximately 4 miles south of the BSA (CNDDB occurrences 43 and 44; Figure 1).

A single CNDDB occurrence for California Orcutt grass (CNDDB occurrence 45) has also been recorded adjacent to the westernmost portion of the BSA, southeast of the Peñasquitos Substation (Figures 1 and 2). Restoration activities in vernal pool habitat just outside of the BSA included the introduction of California Orcutt grass along with other vernal pool species. The last known observation of the California Orcutt grass at this location was in 2007 (CNDDB 2014), and this population is presumed to be extant despite the lapse in available current data. However, research indicates that restored pools that lack appropriate mycorrhizal fungi may not be able to support self-sustaining populations of California Orcutt grass (CPC 2014).

METHODS

To evaluate the potential for California Orcutt grass to occur within the BSA, a detailed literature and database review was performed, the special status-plant species survey summary report prepared for the Proposed Project (BBS 2014b) was reviewed, a focused habitat assessment was conducted in the areas that were not previously surveyed, and a focused vernal pool evaluation was completed. The methods for each of these are described in detail below.

Literature & Database Review

A detailed literature review for California Orcutt grass was conducted to supplement the information provided in the BTR/PEA (BBS 2014a). In addition, historical occurrence databases (e.g., CNDDB, SanGIS, Sunrise Powerlink) were searched and other references were consulted to better understand the historical location data and distribution of this species, particularly in San Diego County.

Focused Special-Status Plant Species Surveys Conducted for the Proposed Project

Focused special-status plant species surveys were conducted for the Proposed Project by experienced botanists familiar with the target special-status plant species. The botanists performed the focused special-status plant species surveys by walking meandering transects throughout the original BSA, which included (1) a 500-foot-wide survey corridor along the approximately 16.5-mile alignment, (2) the existing Sycamore Canyon and Peñasquitos Substations, and (3) the proposed Sycamore and Stowe construction yards. These surveys included three survey rounds – one in fall 2013, one in early spring 2014, and one in late spring 2014.

California Orcutt grass was included in the target species list for the focused special-status plant species surveys conducted for the Proposed Project. All vernal pools within the BSA were assessed during the fall 2013 surveys and thoroughly surveyed for California Orcutt grass during the early spring 2014 and late spring 2014 surveys by highly qualified botanists who are familiar with this species and its phenology. Because many vernal pool species are very small and short-lived, the vernal pools were surveyed thoroughly and carefully for California Orcutt grass and other special-status vernal pool plant species.

To respond to Data Request 107, the data obtained during these focused special-status plant species surveys were reviewed to determine if the probability for occurrence for California Orcutt grass was accurately assessed in the BTR/PEA for the Proposed Project.

Focused Habitat Assessment in Areas Not Yet Surveyed

A focused habitat assessment for special-status plant species was conducted in fall 2014 to evaluate the areas that are part of the Proposed Project but that were not included in the

original BSA and, thus, were not surveyed during the previous efforts. During these focused habitat assessments, the new survey areas were assessed for their potential to support the special-status plant species with a potential to occur within the BSA, including California Orcutt grass.

Focused Vernal Pool Evaluation for California Orcutt Grass

Potentially suitable vernal pool habitat located within the BSA was surveyed during fall 2013, early spring 2014, and late spring 2014, and was revisited during fall 2014 to critically review the vernal pool conditions and their potential to support California Orcutt grass. In addition, three restored vernal pools that are located adjacent to the BSA – where California Orcutt grass was planted as part of the restoration efforts and is, therefore, known to occur – were also visited to provide further data needed to confirm the previously determined potential for occurrence for California Orcutt grass within the BSA.

RESULTS

The results of the literature and database review, special status-plant species survey summary report review, focused habitat assessment in the areas not yet surveyed, and focused vernal pool evaluation are provided, below.

Literature & Database Review

The results of the detailed literature and database review were used to prepare the California Orcutt grass species information provided above. CNDDB occurrences 43 and 44 (Figure 1), which are located approximately 4 miles south of the BSA in the western portion of U.S. Marine Corps Air Station, Miramar, represent the closest known natural occurrence of California Orcutt grass to the BSA. CNDDB occurrence 45 (Figures 2 and 3) is located adjacent to the westernmost portion of the BSA, southeast of the Peñasquitos Substation. This point represents the location of California Orcutt grass that was introduced along with other vernal pool species as part of the restoration activities in several vernal pools that are located outside of the BSA.

Focused Special-Status Plant Species Surveys Conducted for the Proposed Project

Only one vernal pool within the BSA provides potential habitat for California Orcutt grass. Other vernal pools species, such as San Diego button-celery (*Eryngium aristulatum* var*. parishii*), dwarf woolly marbles (*Psilocarphus brevissimus* var. *brevissimus*), African brass-buttons (*Cotula coronopifolia*), and grass poly (*Lythrum hyssopifolia*) were observed during the focused special-status plant species surveys that were conducted for the Proposed Project, indicating that, despite drought conditions, California Orcutt grass would have been detectable during the spring 2014 surveys if it were present. However, no California Orcutt

grass was observed in this vernal pool or in any other part of the BSA during the fall 2013, early spring 2014, or late spring 2014 surveys.

Focused Habitat Assessment in Areas Not Yet Surveyed

No suitable vernal pool habitat with a potential to support California Orcutt grass was identified during the focused habitat assessment conducted in fall 2014 within the portions of the BSA that were not previously surveyed.

Focused Vernal Pool Evaluation for California Orcutt Grass

The single vernal pool within the BSA that provides potential habitat for California Orcutt grass was visited three times during the focused special-status plant species surveys conducted for the Proposed Project, and it was visited again on October 21, 2014, to analyze the conditions within the vernal pool and determine the potential for occurrence of California Orcutt grass in the vernal pool.

Surveyors determined that the vernal pool provides very low quality habitat for California Orcutt grass because it does not provide the deep, clay soils and other attributes required by this species (Photo 1, below). No evidence of California Orcutt grass was observed in any of the vernal pools during the October 2014 visit; however, this is not unexpected, as California Orcutt grass is an ephemeral annual species, and it was not detected during the spring 2014 surveys. San Diego button celery, which was mapped in this vernal pool during the spring 2014 surveys and requires similar conditions to germinate, was observed in fruit in this vernal pool during the October 2014 visit.

Photo 1: Vernal pool with very low quality habitat for California Orcutt grass

Surveyors also visited the three restored vernal pools located adjacent to the BSA where California Orcutt grass was introduced to see if there was any forensic evidence of California Orcutt grass in these pools that would confirm that the species germinated during spring 2014 and that the population is still extant. Surveyors also visited these restored vernal pools to assess their overall quality and to compare the condition of these vernal pools, which are known to support California Orcutt grass, to the one within the BSA. No previous surveys had been conducted in these vernal pools because they are outside of the BSA. San Diego button celery was observed in fruit in these pools; however, remnants of California Orcutt grass were not observed.

CONCLUSION/DISCUSSION

California Orcutt grass has a very low potential to occur within the BSA.

While the BSA is outside the range in which this species naturally occurs, California Orcutt grass has been documented as recently as 2007 in restored vernal pools that are located just outside the BSA, where this species was introduced as part of the restoration effort in those areas. However, the single vernal pool within the BSA that provides potential habitat for this species was assessed in fall 2013 and meticulously surveyed twice in spring 2014 by highly qualified botanists who are familiar with this species and its phenology, and California Orcutt grass was not observed during any of these surveys. This vernal pool was visited again in October 2014, and no remnants of California Orcutt grass were observed.

Typically, a species that is not observed during a thorough special-status plant species survey would be classified as “not expected to occur within the BSA”; however, the vernal pool within the BSA provides low quality habitat for the species and – because California Orcutt grass is wind dispersed – could, theoretically, be colonized by the populations of California Orcutt grass that have been documented within the adjacent restored pools, assuming they are extant. As such, California Orcutt grass has a very low potential for occurrence within the BSA.

Impacts to California Orcutt grass are not anticipated to result from implementation of the Proposed Project. Regardless of its potential for occurrence within the BSA, the California Orcutt grass is a vernal pool obligate, and impacts to the single vernal pool that provides potential habitat for this species will be avoided through Proposed Project design features. As such, no additional avoidance, minimization, or mitigation measures would be required for this species.

REFERENECES

Busby Biological Services, Inc. (BBS)

2014a Biological Technical Report for Sycamore to Peñasqutios 230 Kilovolt Transmission Line Project, City of San Diego, San Diego County, California. March 2014.

2014b Special-Status Plant Survey Summary Report for the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, San Diego County, California. June 2014.

California Native Plant Society (CNPS)

2014 Inventory of Rare and Endangered Plants (online edition, v7-14jun). California Native Plant Society. Sacramento, CA. Available at: http://www.cnps.org/inventory. Accessed October 2014.

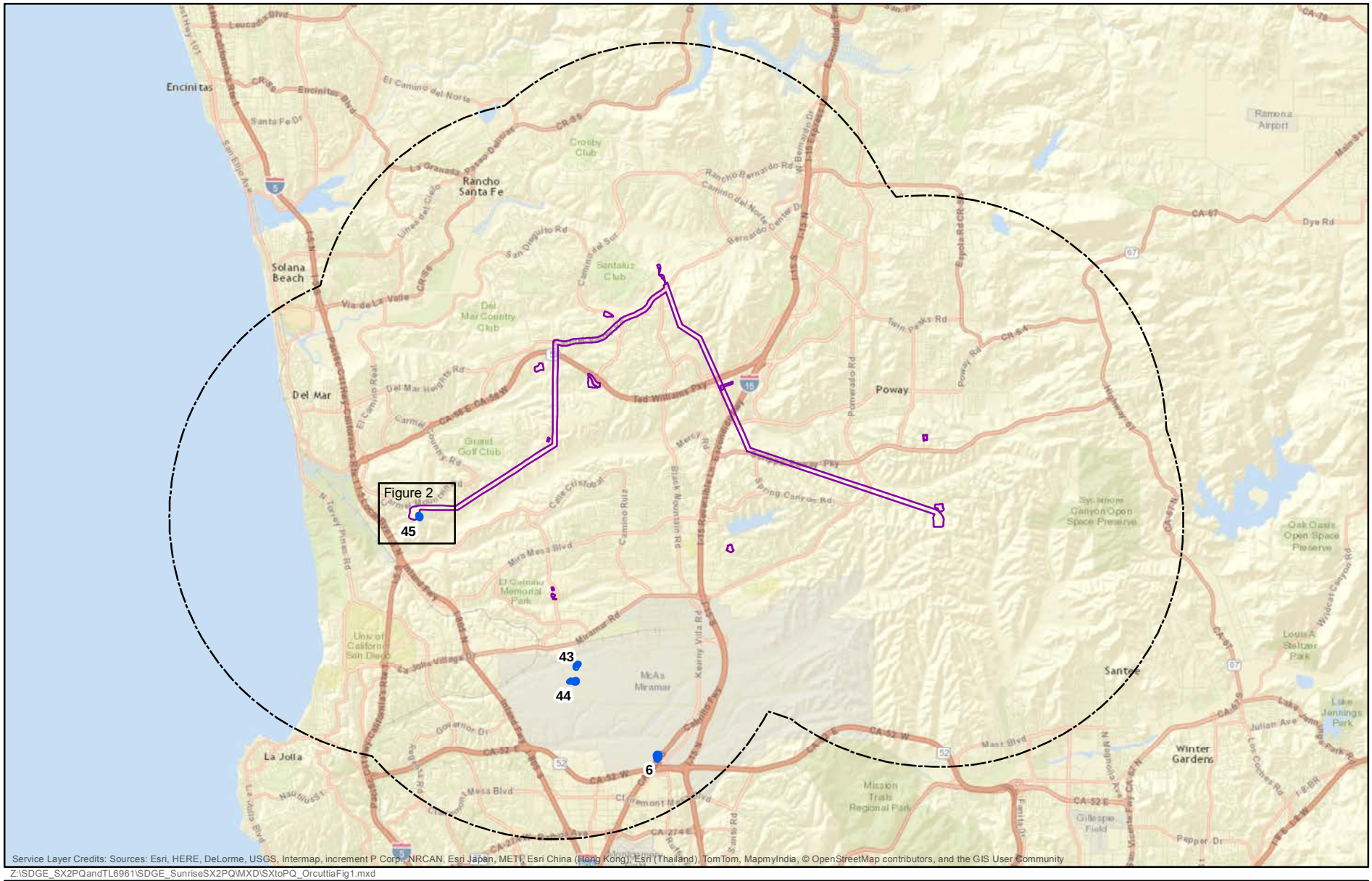
Center for Plant Conservation (CPC)

2014 National Collection Plant Profile available at: http://www.centerforplantconservation.org/collection/cpc_viewprofile.asp?CPCNum=3038. Accessed October 2014.

United States Fish and Wildlife Service (USFWS)

1993 Determination of Endangered Status for Three Vernal Pool Plants and the Riverside Fairy Shrimp. August 3, 1993.

2011 *Orcuttia californica* (California Orcutt grass) 5-Year Review: Summary and Evaluation. March 11, 2011.



Z:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_OrcuttiaFig1.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

BSA

CNDDB Occurrence Locations

5-Mile Buffer Around BSA

Sycamore to Peñasquitos 230 kV Transmission Line Project

Historical *Orcuttia californica* Locations

Figure 1

0 2 4 6 Miles

SDGE

A Sempra Energy utility

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_OrcuttiaFig2.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

BSA

CNDDB Occurrence 45

Actual CNDDB Occurrence 45 Location

Very Low Potential Habitat in BSA

Sycamore to Peñasquitos 230 kV Transmission Line Project

Orcuttia californica Habitat in BSA

Figure 2

0 150 300 450 Feet

SDGE

A Sempra Energy utility

June 27, 2014

Mr. Joshua D. Taylor
Lead Planner
TRC Solutions, Inc.
123 Technology Drive
Irvine, CA 92618

RE: SPECIAL-STATUS PLANT SURVEY SUMMARY REPORT FOR THE PROPOSED SAN DIEGO GAS & ELECTRIC COMPANY SYCAMORE TO PENASQUITOS 230 kV TRANSMISSION LINE PROJECT, SAN DIEGO COUNTY, CALIFORNIA

Mr. Taylor:

Rocks Biological Consulting, Inc. (RBC) performed special-status plant surveys on behalf of Busby Biological Services, Inc. (BBS) for the proposed San Diego Gas & Electric Company (SDG&E) Sycamore Canyon to Peñasquitos 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). Three rounds of 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), and/or California Native Plant Society (CNPS), and/or plant species on SDG&E's Narrow Endemic Plant list were conducted within the Biological Survey Area (BSA) for the Proposed Project: round 1 in September and October of 2013; round 2 in April 2014; and round 3 in May of 2014.

Three federally and/or state-listed plant species – thread-leaved brodiaea (*Brodiaea filifolia*), Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*), and San Diego button-celery (*Eryngium aristulatum* ssp. *parishii*) – were observed in the BSA. In addition, 18 other special-status plant species, as defined by their California Rare Plant Rank (CRPR), were observed in the BSA. The 21 species observed within the BSA include (in alphabetical order by scientific name):

- spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar manzanita (FE, CRPR 1B.1)
- Palmer's sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- thread-leaved brodiaea (FT, SE, CRPR 1B.1)
- summer-holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- wart-stemmed ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- seaside cistanthe (*Cistanthe maritima*; CRPR 4.2)
- small-flowered Morning-glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa sand aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- western dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego button-celery (FE, SE, CRPR 1B.1)
- coast barrel cactus (*Ferocactus viridescens* var. *viridescens*; CRPR 2B.1)
- Palmer's grapplinghook (*Harpagonella palmeri*; CRPR 4.2)

- graceful tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- decumbent goldenbush *(Isocoma menziesii* var. *decumbens;* CRPR 1B.2)
- San Diego marsh-elder (*Iva hayesiana*; CRPR 2B.2)
- southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Torrey pine (as planted individuals) (*Pinus torreyana*; CRPR 1B.2)
- Nuttall's scrub oak (*Quercus dumosa*; CRPR 1B.1)

This survey report summarizes the methods used to conduct the surveys and the results of the surveys. In addition, a brief discussion about the results is also provided.

PROJECT DESCRIPTION

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 Peñasquitos 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, right-of-way (ROW) or within franchise position within existing public roadways.

BSA DESCRIPTION

The approximately 1,058.88-acre BSA is comprised of mesa tops, which are often developed, and steep canyons that bisect the mesas. The BSA includes a 500-foot-wide survey corridor along the approximately 16.5-mile alignment, the Sycamore Canyon and Peñasquitos Substations, and the proposed Sycamore and Stowe construction yards. Within the BSA, a total of approximately 414.80 acres is classified as developed, disturbed, bare ground, or ornamental land cover types. The dominant natural vegetation communities within the BSA include approximately 179.86 acres of Diegan coastal sage scrub, approximately 93.44 acres of southern mixed chaparral, approximately 85.32 acres of nonnative grassland, approximately 78.51 acres of scrub oak chaparral, and approximately 71.12 acres of chamise chaparral.

The canyons within the BSA drain south into Peñasquitos Creek and often support riparian vegetation communities, including approximately 3.41 acres of southern willow scrub, approximately 2.63 acres of southern coast live oak riparian forest, approximately 1.40 acres of mulefat scrub, and approximately 1.37 acres of southern riparian scrub.

Some areas within the BSA are comprised of revegetated areas and often include special-status plants that were planted either as ornamentals or as mitigation for impacts not associated with the Proposed Project. Because these revegetated communities are human-made, they are

differentiated from naturally occurring vegetation communities, and any special status plants in these areas are mapped with a revegetated modifier.

METHODS

Focused special-status plant surveys were conducted for the Proposed Project within the BSA that includes a 500-foot-wide survey corridor along the approximately 16.5-mile alignment, the Sycamore Canyon and Peñasquitos Substations, and the proposed Sycamore and Stowe construction yards.

Prior to the start of the focused surveys, a list of the special-status plant species that have potential to occur within or adjacent to the BSA was developed from a query of the CDFW's California Natural Diversity Database (CNDDB), 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 CNDDB query included a review of special-status plant species reported within 1, 3, and 5 miles of the Proposed Project alignment. Prior to conducting the surveys, species on the CNDDB 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.

A plant species was classified as 'special-status' if it had one or more of the designations 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	California state-listed endangered species
	ST	California state-listed threatened species
	SR	California state-listed rare species (plants only)
CALIFORNIA RARE PLANT RANK (CRPR)	1A	presumed extirpated in California and rare or extinct elsewhere
	1B	rare, threatened, or 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 CNDDB 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 taxonomic rank has changed, were not included as they do not meet the criteria to be classified as a special-status species.

Surveys were conducted by walking meandering transects throughout the BSA. 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 and incorporated into the Geographic Information System (GIS) database.

Plant names used herein follow the *Checklist of the Vascular Plants of San Diego County, 4th edition* (*Checklist*; Rebman and Simpson 2006). Additional plant references used included *The Jepson Manual: vascular plants of California, Second Edition* (*Jepson Manual*; Baldwin et al. 2012), the Consortium of California Herbarium voucher data, and the San Diego Plant Atlas. If the *Jepson Manual* and the *Checklist* differ in plant taxonomic treatments, such as recognition or lumping of a variety, then the taxonomy of the *Checklist* and the taxonomic opinion of Dr. Jon Rebman (personal communication 2014), Curator of Botany at the SDNHM, took precedence.

RESULTS

Three rounds of special-status plant surveys were conducted: round 1 occurred between September 25 and October 2, 2013; round 2 occurred between April 2 and April 15, 2014; and round 3 occurred between May 12 and May 29, 2014. Surveys were conducted by Lee Ripma (LR; RBC), Jim Rocks (JR; RBC), Brian Lohstroh (BL; Lohstroh Biological Consulting), Margie Mulligan (MM; Mulligan Biological Consulting), Kristen Hasenstab-Lehman (KH; RBC), Ryan Meszaros (RM; BBS), Karen Weber (KW; BBS), Pete Dolan (PD; BBS), and Warren Schmidtmann (WS; SDNHM). A list of surveyors and survey dates are summarized in Table 2, below.

Table 2. Survey Dates and Surveyors

Survey Round	Survey Date	Surveyor(s)
Round 1 (Late Summer/Fall)	9/25/13	LR, JR
	9/26/13	LR, JR, MM, BL
	9/27/13	LR, BL, MM, WS
	9/30/13	LR, JR, MM, BL
	10/1/13	JR, MM, BL, LR
	10/2/13	LR, MM
	10/4/13	LR
Round 2 (Early Spring)	4/2/14	JR, BL, RM, PD
	4/3/14	JR, BL, RM, PD
	4/7/14	LR, MM, BL, JR
	4/8/14	BL, MM, KW
	4/9/14	LR, MM, KW, JR
	4/10/14	LR, BL, KW, MM
	4/11/14	LR, MM, JR, BL, PD
	4/15/14	MM, BL
Round 3 (Late Spring)	5/12/14	LR, JR, MM, BL
	5/13/14	LR, JR, MM, BL
	5/15/14	LR, KH, JR, MM, BL
	5/19/14	LR, KH
	5/21/14	LR, KH, MM, BL

	5/29/14	LR, KH

Special-Status Plant Species Observed

Attachment B contains a list of the target species and their potential to occur within the BSA as well as plants that are known to occur within the vicinity of the BSA based on the CNDDB results but that were excluded from the target list since they have no potential to occur within the BSA. Attachment C is a compendium of plant species observed within the BSA during the special-status plant surveys.

Twenty-one special-status plant species, including three listed plant species – thread-leaved brodiaea (FT, SE), Del Mar manzanita (FE), San Diego button-celery (FE, SE) – were observed in the BSA. The locations of the special-status plant species are presented in Attachment A: Figure 3, Maps 1 through 25. Each special-status plant species observed during these surveys is discussed below, including its distribution, location within the BSA, and threat rank.

Spineshrub (*Adolphia californica*)

Spineshrub 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 2014).

Spineshrub was observed in many locations within the BSA. On the west side of the BSA, populations of spineshrub were found south of the intersection of Carmel Mountain Road and Carmel Country Road east to the intersection of Interstate 15 and Poway Road. Occurrences of spineshrub varied from scattered individuals in open grassland and Diegan coastal sage scrub to hundreds of individuals forming nearly monotypic spineshrub scrub on west and south facing slopes. The approximate total number of individuals within the BSA exceeds 7,500.

Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*)

Del Mar manzanita is a federally listed endangered species, a CRPR 1B.1 species (seriously threatened in California and elsewhere), and an 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 2014).

Del Mar manzanita was found in only one portion of the BSA, southwest of the Del Mar Mesa Preserve, along the Del Mar Mesa Trail. There are six separate occurrences of Del Mar manzanita within the BSA, which contain a total of 10 individuals. Some individuals co-occur in patches with the much more common Eastwood manzanita (*Arctostaphylos glandulosa* ssp. *glandulosa*) that has a very similar appearance.

Because the two subspecies are sympatric and morphologically similar, each *A. glandulosa* observed within the BSA was classified to subspecies level. The endangered Del Mar manzanita is distinguished from Eastwood's manzanita in having hairs that are either puberulent or setaceous, but not glandular (Rebman 2014, pers. comm.). In addition, the fruit of Del Mar manzanita is spheric, but markedly depressed on the top and bottom (Munz 1974; Parker et al. 2013; Rebman 2014, pers. comm.). Some authors use growth habit, leaf margin, and leaf color to distinguish the subspecies, but hair type and fruit (if available) are the key characters that are used to differentiate subspecies (Rebman 2014, pers. comm.).

Palmer's Sagewort (*Artemisia palmeri*)

Palmer's sagewort 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. Palmer's 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 2014).

Palmer's sagewort was found in three discrete areas within the BSA – two populations along drainages associated with Los Peñasquitos Canyon and one in McConigle Canyon just west of State Route 56. Each population consisted of numerous small groupings of three to five individuals, for a total of about 200 individuals within the BSA. Palmer's sagewort was found along drainages with riparian species, such as willows (*Salix* spp.), coast live oak (*Quercus agrifolia*), and western sycamore (*Platanus racemosa*).

San Diego Sunflower (*Bahiopsis laciniata*)

San Diego sunflower 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 2014).

Several hundred individuals of San Diego sunflower were observed naturally occurring across the BSA in patches ranging from five individuals to large populations with up to 100 individuals. This species was also documented in several revegetation areas, including at Peñasquitos Substation and in large plantings on manufactured slopes at the southern terminus of Briarlake Woods Drive and along Maler Drive near Black Mountain Open Space Preserve. This species was not observed east of Interstate 15.

Thread-Leaved Brodiaea (*Brodiaea filifolia*)

Thread-leaved brodiaea is listed as a federally threatened species, a California state-listed endangered species, a CRPR 1B.1 species, and a *SDG&E Subregional NCCP* (NCCP) covered species. Thread-leaved brodiaea is a perennial herb (bulb) in the Asparagaceae family that regrows annually from an underground corm; it is distributed in southern California from San Diego to Los Angeles

and east to the San Bernardino Mountains. The typical habitat of thread-leaved brodiaea ranges from grasslands to ephemeral wetlands, such as vernal pools at low elevations, and meadows in montane habitat (CNPS 2014). Thread-leaved brodiaea occurs at elevations between 80 and 2, 400 feet amsl in San Diego County.

Thread-leaved brodiaea was found in one location within the BSA. Approximately 62 flowering individuals were observed growing in deep clay soils, within a mix of native and non-native grassland, at the City of San Diego's Black Mountain Open Space Preserve. Typically, not all individuals of thread-leaved brodiaea flower each year, and many non-flowering corms remain dormant below ground. As a result, the population size is often much larger than the number of individuals observed flowering. Notably, this population of thread-leaved brodiaea is the southern-most occurrence for this species across its range.

Wart-Stemmed Ceanothus (*Ceanothus verrucosus*)

Wart-stemmed ceanothus is a CRPR 2B.2 species (moderately threatened in California but more common elsewhere) and an 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 2014).

Wart-stemmed ceanothus was found in one discrete area of the BSA, on the north side of Los Peñasquitos Canyon, east of the Peñasquitos Substation, and south of Manorgate Drive. The population consists of approximately 80 plants, most of which are in small patches of one to three plants with one larger area of 30 individuals.

Seaside Cistanthe (*Cistanthe maritima*)

Seaside cistanthe is a CRPR 4.2 species (limited distribution and moderately threatened in California). This species is a small, succulent annual or perennial herb in the Montiaceae family that occurs along the southern coast and throughout the Channel Islands of California and into northern Baja California, Mexico. The typical habitat of seaside cistanthe is sandy soil openings in coastal scrub, or on sea bluffs (CNPS 2014). In San Diego County this species is restricted to low elevations, below 1,000 feet amsl.

Seaside cistanthe was found in one location within the BSA, at the edge of the north side of Los Peñasquitos Canyon, growing with other special-status plant species. Approximately 500 vegetative and flowering individuals were observed in and around a disturbed opening within Diegan coastal sage scrub. Coast barrel cactus was also present at this location, and spineshrub was abundant immediately downslope.

Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*)

Summer-holly 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 2014).

Summer-holly was found in a distinct segment of the BSA occurring in the mix of chaparrals from the north end of the Del Mar Mesa Preserve southwest to where Diegan coastal sage scrub becomes dominant. Summer-holly was observed most often on north facing slopes or along both banks of the ephemeral drainages at the bottom of canyons. Roughly, 700 individuals of summer-holly were observed in the BSA during the surveys.

Small-Flowered Morning-Glory (*Convolvulus simulans*)

Small-flowered morning-glory is a CRPR 4.2 species (limited distribution and moderately threatened in California). It is a small, sprawling annual herb in the Convolvulaceae family and is distributed from San Diego throughout the San Joaquin Valley to the San Francisco Bay area, and also on the Channel Islands in California. This species also occurs in Arizona and Baja California, Mexico. The typical habitat of small-flowered morning-glory is clay soils in annual grasslands, coastal sage scrub, and chaparral (CNPS 2014). Small-flowered morning-glory occurs at elevations between 100 and 2,800 feet amsl in San Diego County.

Small-flowered morning-glory was found within the BSA growing in clay soil in grassland habitat. At each of the five locations, only two to three individuals were observed. This species was observed growing alongside the federally endangered thread-leaved brodiaea.

Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*)

Del Mar Mesa sand aster, a California endemic species, is a CRPR 1B.1 species (seriously threatened in California and elsewhere) and an 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 2014).

Del Mar sand aster was observed in two areas along an existing SDG&E access route within the Del Mar Mesa Preserve. This species was growing in very low numbers along the edge of dirt roads and in openings. It was observed co-occurring with the more widespread common sand aster (*Corethrogyne filaginifolia* var. *filaginifolia*). In total, about 35 individuals of Del Mar Mesa sand aster were observed in the BSA.

This difficult species complex has been moved among genera, split into multiple species, multiple varieties, or treated as a single, highly variable species of *Corethrogyne* (Munz 1974, Lane 1992). The *Jepson Manual* recognizes a single taxon of *Corethrogyne*, *C. filaginifolia,* with no subspecific taxa and contains a note that eliminating subspecific taxa is likely eliminating morphological entities (Markos and Strother 2013). In San Diego, botanists recognize the local varieties because of largely consistent morphological characteristics, soil affinities, and relatively discrete geographic ranges.

The most distinctive character on the Del Mar sand aster (*C. f.* var. *linifolia*) are the flowering heads (inflorescence) that are large, globose, and covered with soft, silvery, tomentose (woolly) trichomes (hairs); this contrasts with the smaller cylindrical heads covered in glandular trichomes of the common sand aster (*C. f.* var. *filaginifolia*) (Munz 1974). During the surveys, plants with intermediate characteristics were observed in the field. If the flowering heads were tomentose rather than glandular, then the individual was determined to be Del Mar sand aster, even where growing with common sand aster (Rebman 2014, pers. comm.).

Western Dichondra (*Dichondra occidentalis*)

Western dichondra is a CRPR 4.2 species (limited distribution and moderately threatened in California). It is a matted, stoloniferous perennial herb in the Convolvulaceae family and is distributed from the central coast, throughout the Channel Islands, and to the Peninsular Ranges within California. Western dichondra also occurs in Baja California, Mexico. This species typically grows amongst rocks and shrubs in coastal sage scrub, chaparral, and oak woodland and is often prevalent following a fire (CNPS 2014). In San Diego County this species occurs at elevations less than 1,700 feet amsl.

Western dichondra was found in five widely spaced locations across the BSA from the Peñasquitos Substation to the hills just west of the Sycamore Canyon Substation. This species is more often seen following a fire or other disturbance and becomes less common as perennial woody vegetation matures. These widely scattered populations within the BSA are a result of the disturbance-following nature of this species.

San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*)

San Diego button-celery 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 2014).

San Diego button-celery was observed in two locations within the BSA - in the vernal pools immediately east of the Peñasquitos Substation and in the vernal pool complexes on Del Mar Mesa. Approximately 125 individuals were observed between the two locations. San Diego button-celery was not observed east of Del Mar Mesa.

Coast Barrel Cactus (*Ferocactus viridescens*)

Coast barrel cactus is a CRPR 2B.1 species (seriously threatened in California but more common elsewhere) and an 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 2014).

Coast barrel cactus was found consistently from the Peñasquitos Substation east to Del Mar Mesa and was less common east of Interstate 15. Of the approximately 1,000 individuals observed during the surveys, coast barrel cactus was most common on the rocky, south and west facing slopes along the north side of Los Peñasquitos Canyon and along Del Mar Mesa. Coast barrel cactus was one of the few plants growing within and under chamise chaparral.

Palmer's Grappling-Hook (*Harpagonella palmeri*)

Palmer's grappling-hook 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 grappling-hook 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 2014).

Palmer's grappling-hook was found on clay soils in openings along the north edge of Los Peñasquitos Canyon and in the grasslands at the base of Black Mountain. This species was largely absent from the Del Mar Mesa area probably as a result of the sandstone soil type in the area. Palmer's grappling-hook was not observed east of Interstate 15.

Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*)

Graceful tarplant, 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 2014).

Graceful tarplant was observed within grassland or along disturbed edges, such as dirt roads and trails in five areas within the BSA. This species typically flowers in the late summer or fall and was observed during the fall 2013 surveys near an existing SDG&E tower and at the base of Black Mountain.

Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*)

Decumbent goldenbush 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 2014).

Decumbent goldenbush was found consistently from near the Peñasquitos Substation across the BSA to just west of Interstate 15, with approximately 2,500 individuals observed within the BSA. This species was found in openings in coastal sage scrub and chaparral along the north side of Los Peñasquitos Canyon and across Del Mar Mesa, and in grasslands with clay soils at the base of Black Mountain.

Taxonomists recognize several varieties of *Isocoma menziesii*. The two varieties that are present within the BSA, *I.m.* var. *decumbens* (decumbent goldenbush) and *I. m.* var. *vernonioides* (coastal goldenbush), can be difficult to differentiate because they have very similar morphology and because they co-occur and can hybridize where their ranges overlap. To separate the two varieties, the type of hairs on each individual was examined, the degree of toothing along the margin of the leaf was considered. Decumbent goldenbush has leaves that have fine, dense, cobwebby hairs and leaf margins that are entire or only have one or two pairs of distal teeth (Keil 2013). In contrast, coastal goldenbush has tomentose leaf hairs with an opaque center that are thicker and more robust. This fine hair difference is the key character for determining the decumbent goldenbush variety (Rebman 2014, pers. comm.).

San Diego Marsh-Elder (*Iva hayesiana*)

San Diego marsh-elder 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 2014).

San Diego marsh-elder was observed growing naturally in two locations within the BSA. This species was documented growing with Palmer's sagewort along the drainage in McGonigle Canyon, and another population was observed along Peñasquitos Creek just east of Interstate 15. This species was also observed as a primary component of a revegetated area (with southwestern spiny rush) within McConigle Canyon where the drainage passes under Carmel Valley Road west of Camino Del Sur.

Southwestern Spiny Rush (*Juncus acutus* ssp. *leopoldii*)

Southwestern spiny rush 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. Southwestern 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 2014).

Southwestern spiny rush was observed in two locations in the BSA. One individual was observed growing in a canyon between residential housing in Rancho Peñasquitos west of Black Mountain. This species was also observed as a primary component of a revegetation effort (with San Diego marsh-elder) within McConigle Canyon, where the drainage passes under Carmel Valley Road west of Camino Del Sur.

Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*)

Robinson's pepper-grass 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 2014).

Robinson's pepper-grass was observed in the BSA on clay soils in open coastal sage scrub or along the edges of dirt roads. Each of the small patches of this plant was observed along the north edge of Los Peñasquitos Canyon immediately south of Carmel Mountain Road.

Robinson's pepper-grass is a dainty annual which is recognized in the 5th edition checklist of San Diego County (Rebman and Simpson 2014, in press), despite no longer being recognized in the *Jepson Manual* treatment of *Lepidium* (Al-Shehbaz 2014). Dr. Rebman (2014, pers. comm.) recognizes this taxon as distinct because of its round glabrous pedicels that are often longer than the fruit as well as its cauline, lobed leaves with narrow segments.

Torrey Pine (as planted individuals) (*Pinus torreyana*)

Torrey pine is a CRPR 1B.2 species (moderately threatened in California and elsewhere) and is 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 engraver bark beetle at Torrey Pines State Reserve, but biological control has contained the infestation (CNPS 2014).

Torrey pine was observed in the BSA as planted individuals around the Peñasquitos Substation. No natural occurrences of this species were observed.

Nuttall's Scrub Oak (*Quercus dumosa*)

Nuttall's scrub oak 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 2014).

Nuttall's scrub oak was present in the BSA as individual shrubs or small patches within chaparral and also as the dominant species on some north and east facing slopes. At least 1,500 individuals were observed within the BSA primarily from State Route 56 across Del Mar Mesa and then to the west along the north side of Los Peñasquitos Canyon. A population of approximately 60 individuals was also present on a north-facing slope east of Interstate 15 south of Scripps Poway Parkway.

Nuttall's scrub oak routinely hybridizes with other *Quercus* species, such as *Q. engelmannii* and *Q. berberidifolia* in San Diego County. One hybrid species, Torrey's scrub oak (*Q.* X *acutidens*), is common in San Diego County (Rebman 2014 pers. comm.) and was frequently observed within the BSA. Hybridization with other *Quercus* species represents a natural threat to the Nuttall's scrub oak (CNPS 2014).

A number of morphological characters were used to differentiate individual oaks as either Torrey's scrub oak (i.e., a hybrid oak) or Nuttall's scrub oak in the field. The first morphological character examined was growth habit and height. Nuttall's scrub oak consists of individuals with a mounded, impenetrable growth habit, 3 to 9 feet in height, whereas hybrids are usually more robust or tree like in growth form (Tucker 2013). Lateral terminal branches of Nuttall's scrub oak appear to be at perpendicular angles, whereas hybrids have an acute branching pattern. Nuttall's scrub oak, though generally evergreen, is not as densely leafy overall and on each branch as other sympatric oaks (Tucker 2013). Most importantly, individuals with softly spreading stellate hairs on the abaxial surface, not strongly appressed stellate hairs, were deemed Nuttall's scrub oaks (Munz 1974; Tucker 2013; Rebman 2014, pers. comm.). In the absence of other field characteristics, hairs were used as the definitive identification feature for Nuttall's scrub oaks (Rebman 2014, pers. comm.).

DISCUSSION

Three separate rounds of special-status plant surveys were conducted within the BSA between late summer 2013 to late spring 2014 to allow for observation and identification of the target special-status plant species identified for the Proposed Project. These surveys spanned the varying germination, vegetative growth, and flowering periods for all target special-status plant species. A total of 21 special-status plant species were documented within the BSA. All are considered to be special-status species based on their federal, state, and/or CRPR designations. Of the 21 species, three are federally listed endangered or threatened, and two of these are also state-listed endangered species.

San Diego County received below average rainfall during the 2014 water year (October 1, 2013, to September 30, 2014). To date, rainfall is currently at 50 percent of average, with a total rainfall of approximately 5.01 inches recorded at Lindbergh Field. For comparison, the 2013 water year had approximately 6.55 inches of rainfall, which is 61 percent of average; the 2012 water year had approximately 7.9 inches of rainfall, which is 73 percent of average; and the 2011 water year had approximately 12.7 inches of rainfall, which is 118 percent of average (CNRFC 2014). The BSA is between approximately 12 and 17 miles away from Lindbergh Field. Although the total rainfall within the BSA may have been slightly different from that recorded at Lindbergh Field, the percent of average is comparable.

While some annual plant species were probably not significantly affected by the below average rainfall, the below average rainfall may have resulted in little or no germination or growth for the

federally listed threatened and state-listed endangered San Diego thornmint (*Acanthomintha ilicifolia*; FT, SE, CRPR 1B.1), whose germination is positively correlated with seasonal rainfall. However, San Diego thornmint was observed flowering in low numbers at a reference population north of the BSA. Other drought-sensitive species – such as southern tarplant (*Centromadia parryi* ssp. *australis*; CRPR 1B.1), long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*; CRPR 1B.2), variegated dudleya (*Dudleya variegata*; CRPR 1B.2), and chaparral ragwort (*Senecio aphanactis*; CRPR 2B.2) – could have been absent as a result of low rainfall or difficult to observe as a result of reduced population sizes resulting from below average rainfall. However, some annuals germinated and flowered within the BSA, including several special-status annuals (e.g., Robinson's pepper-grass, Palmer's grappling-hook) and rainfall-dependent perennials (e.g., thread-leaved brodiaea). It is likely that many of the target annual special-status plant species flowered this season but probably in reduced numbers as compared to years with near average rainfall.

The results of all three rounds of focused special-status plant species surveys will be combined and evaluated to fully assess potential impacts to the special-status plant species within the BSA. 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.

Please do not hesitate to contact me at 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

Attachments
1: Figures 1 through 3
2: Special-status Plants with Potential for Occurrence
3: Plant Species Observed

References

Al-Shehbaz, I.A. 2013. *Lepidium*, in Jepson Flora Project (eds.) *Jepson eFlora*, http://ucjeps.berkeley.edu/cgi- bin/get_IJM.pl?tid=91772, accessed on Jun 13 2014.

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. The Jepson manual: vascular plants of California, second edition. University of California Press, Berkeley.

California Native Plant Society (CNPS). 2014. Inventory of Rare and Endangered Plants (online edition, v7-14jun). California Native Plant Society. Sacramento, CA. Accessed on June 16, 2014 from http://www.cnps.org/inventory.

California Nevada River Forecast Center. 2014. Monthly precipitation data from water year 2011 though water year 2014. http://www.cnrfc.noaa.gov/monthly_precip.php. Accessed June 23, 2014.

Consortium of California Herbaria. 2014. Data provided by the participants of the Consortium of California Herbaria (ucjeps.berkeley.edu/consortium/). Accessed October 2013 and June 2014.

Lane. 1992. Novon 2:213 In: Markos, S. and J.L. Strother. 2013. *Corethrogyne*, in Jepson Flora Project (eds.) Jepson eFlora, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=391, accessed on Jun 24 2014.

Munz, P.A. 1974. A Flora of Southern California. University of California Press, Berkley.

Markos, S. and J.L. Strother. 2013. *Corethrogyne*, in Jepson Flora Project (eds.) Jepson eFlora, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=391, accessed on Jun 24 2014.

Parker, V.T., Vasey, M.C., and J.E. Keeley. 2013. *Arctostaphylos*, in Jepson Flora Project (eds.) *Jepson eFlora*, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=49169, accessed on Jun 17 2014.

Rebman, J. 2014. Personal Communication regarding identification of difficult taxa in San Diego County. June 17.

Rebman, J., and M.S. Simpson. 2006. *Checklist of the Vascular Plants of San Diego County*. 4th edition.

Rebman, J.P. and M.G. Simpson. In press. Checklist of the vascular plants of San Diego County 5th edition.

San Diego Natural History Museum. 2013. www.sdplantatlas.org. Accessed October and November 2013.

Tucker, J.M. 2013. *Quercus*, in Jepson Flora Project (eds.) *Jepson eFlora*, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=40582, accessed on Jun 13 2014.

United States Fish and Wildlife Service. 2011. Section 4 of the Endangered Species Act. http://www.fws.gov/endangered/esa-library/pdf/listing.pdf.

ATTACHMENT A
Figures

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_BusbyLocation.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Location

Figure 1

Proposed Project

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

N W E S

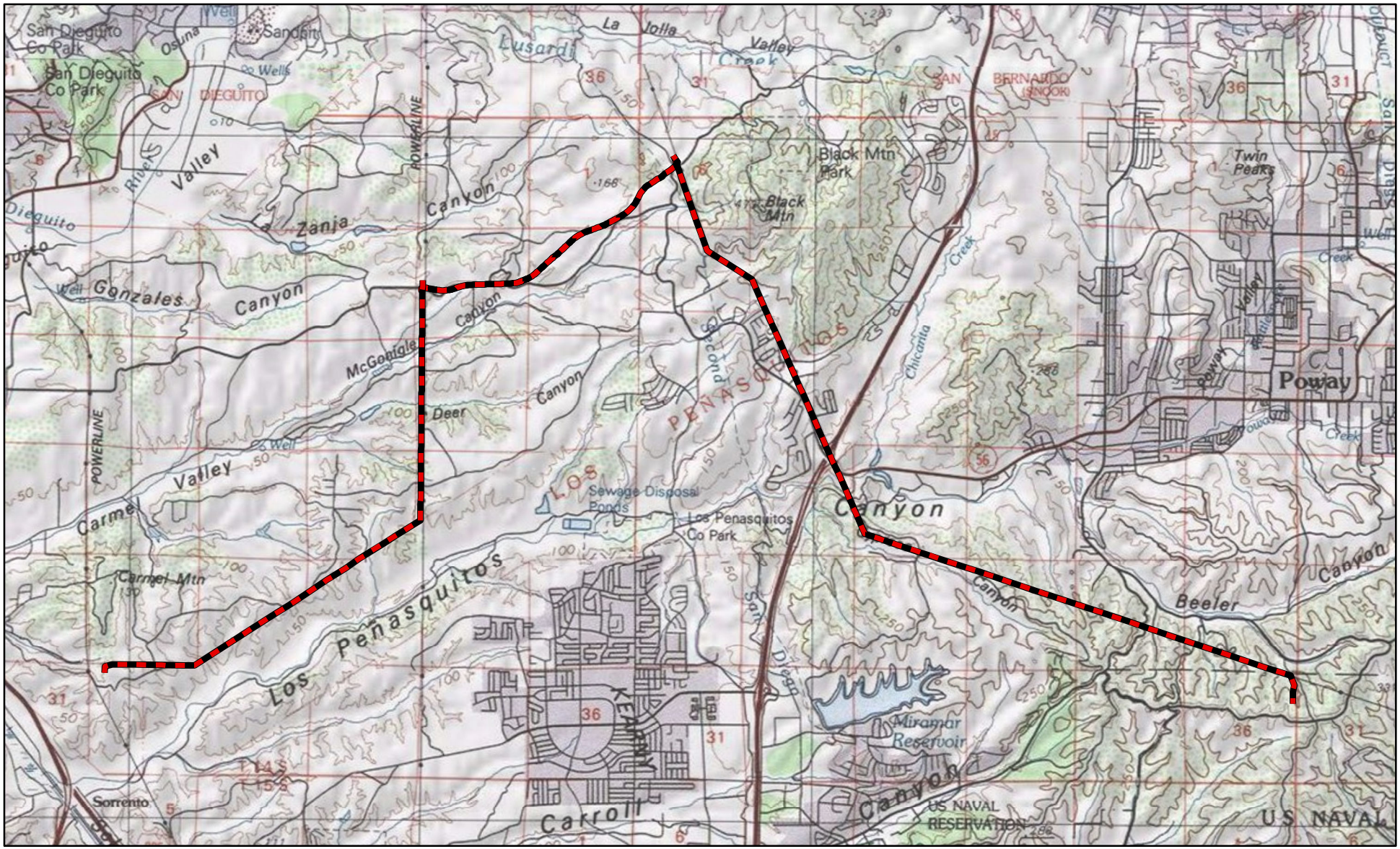
0 10 20 30 Miles

6/17/2014

TRC

SDGE A Sempra Energy utility

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



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_BusbyVicinity.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Vicinity

Figure 2

Proposed Project

N W E S

0 1 2 3 Miles

Date: 6/17/2014

TRC

SDGE

A Sempra Energy utility

Sources: SDG&E; Copyright:© 2013 National Geographic Society, i-cubed

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

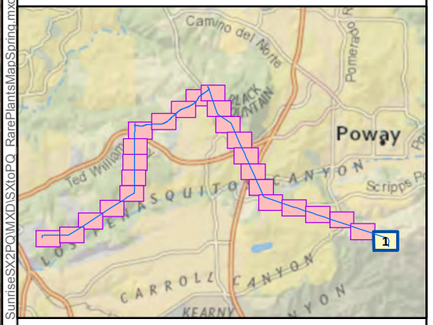
Results of 2013/2014
Special-Status Plant Surveys

TRC 7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED



G:\SDGE_SX2P2\Qand\TL696.1\SDGE_SunriseSX2PQMXD\SXtoPQ_RarePlantsMapSpring.mxd

Sources: 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, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

Results of 2013/2014
Special-Status Plant Surveys

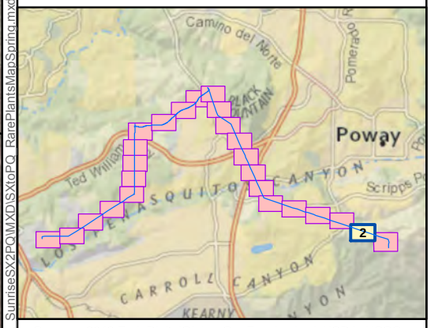
TRC

7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQMXD\SX6PQ_RarePlantsMapSpring.mxd

Sources: 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, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

Results of 2013/2014
Special-Status Plant Surveys

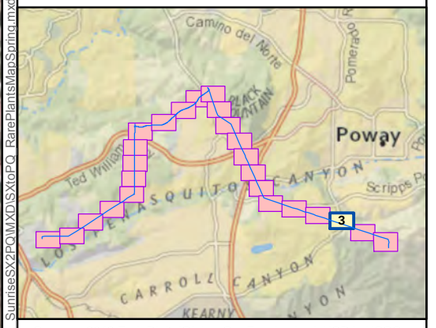
TRC

7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED



G:\SDGE_SX2PQand TL6961\SDGE_Sunrise-SX2PQ\MXD\SXtoPQ_RarePlantsMapSpring.mxd

Sources: 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, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

Results of 2013/2014
Special-Status Plant Surveys

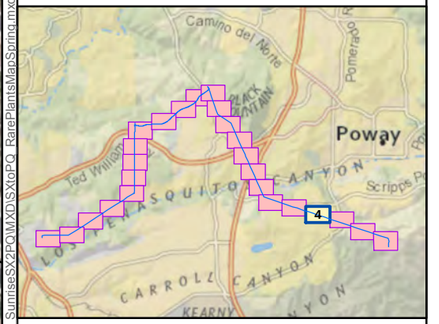
TRC

7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED



G:\SDGE_SX2P\Qgis\T1_696_1\SDGE_SunriseSX2P\MXDs\SXtoPQ_RarePlantsMapSpring.mxd

Sources: 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, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

Results of 2013/2014
Special-Status Plant Surveys

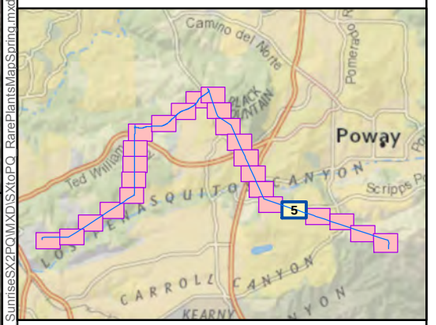
TRC

7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED



Sources: 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, GEBCO, NOAA, iPC

G:\SDGE_SX2PQandTL696\1SDGE_SunriseSX2PQMXDSXtoPQ_RarePlantsMapSpring.mxd

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

Results of 2013/2014
Special-Status Plant Surveys

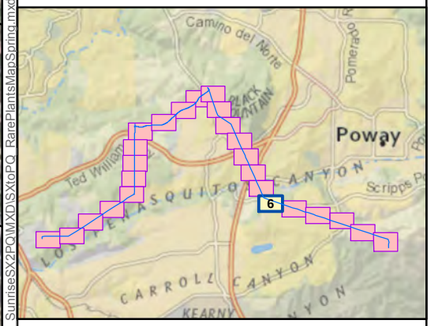
TRC

7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQMXDs\SX2PQMXDSXtoPQ_RarePlantsMapSpring.mxd

Sources: 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, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

Results of 2013/2014
Special-Status Plant Surveys

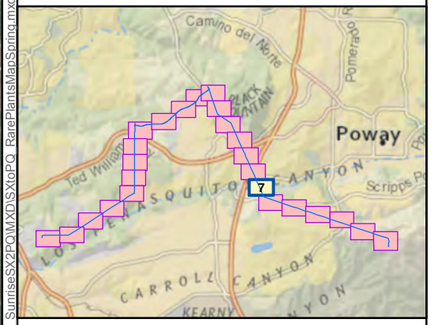
TRC

7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED



G:\SDGE SX2PQand TL696 1\SDGE SunriseSX2PQ\MXD\SXtoPQ_RarePlantsMapSpring.mxd

Sources: 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, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

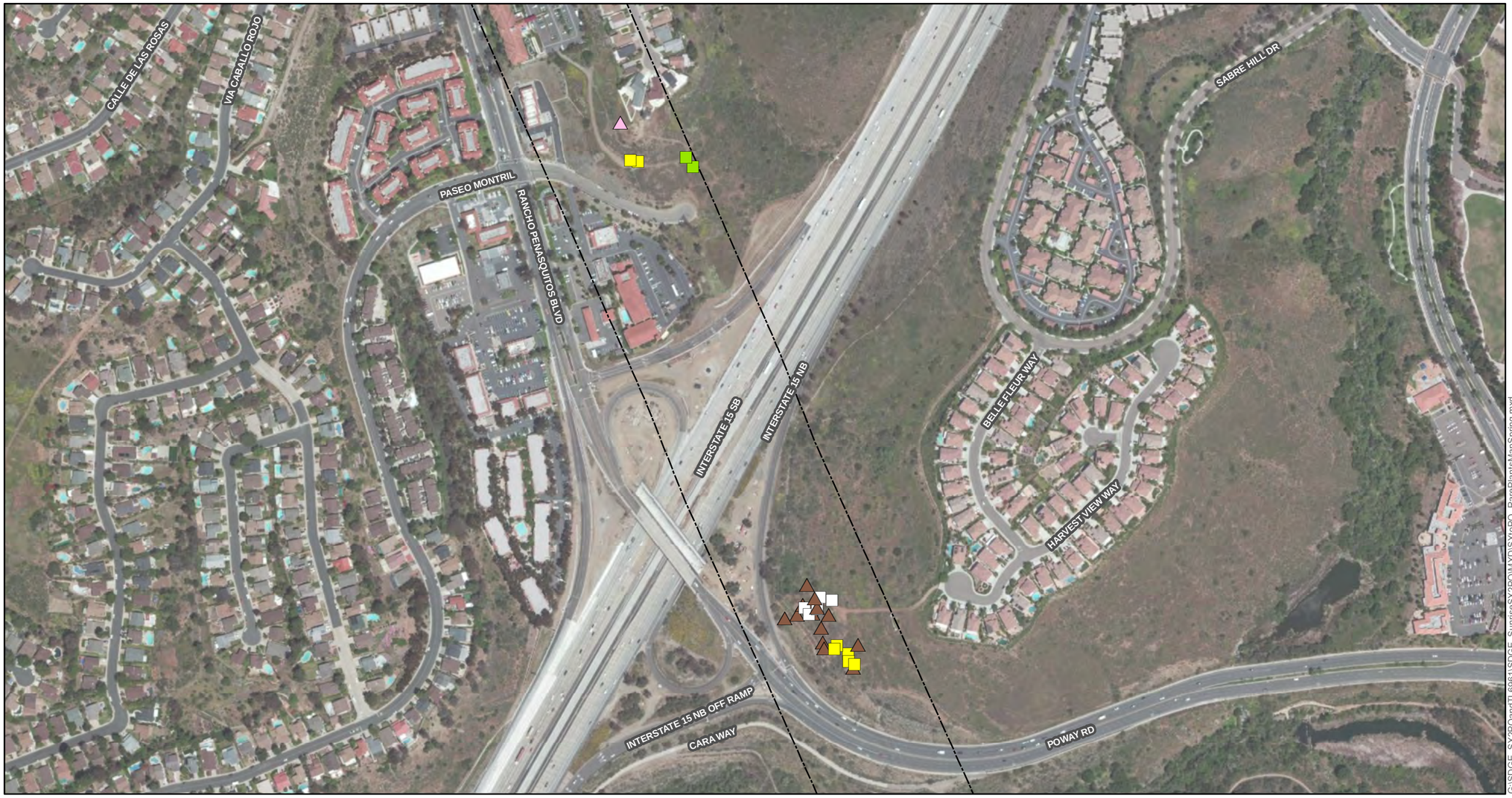
Results of 2013/2014
Special-Status Plant Surveys

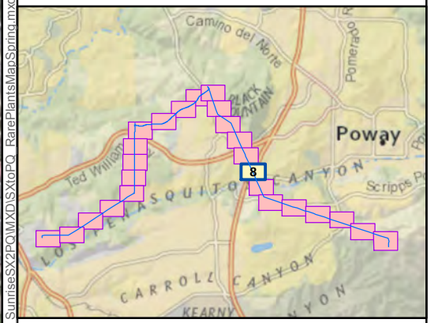
TRC 7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED





G:\SDGE_SX2PQandTL6961\SDGE_Sunrise\SX2PQMXD\SX2PQ_RarePlantsMapSpring.mxd

Sources: 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, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

Results of 2013/2014
Special-Status Plant Surveys

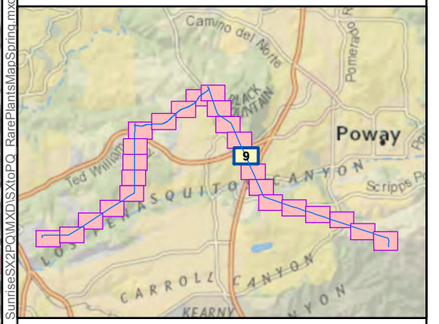
TRC

7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED



Sources: 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, GEBCO, NOAA, iPC

G:\SDGE_SX2PQan\T1696\1SDGE_SunriseSX2PQ\MXD\SXtoPQ_RarePlantsMapSpring.mxd

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

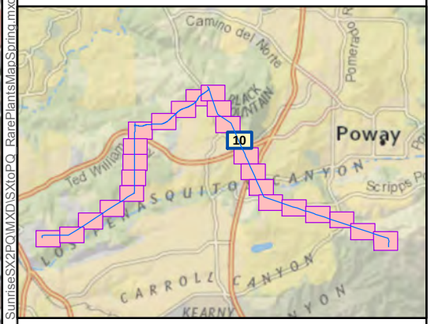
Results of 2013/2014
Special-Status Plant Surveys

TRC 7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED



Sources: 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, GEBCO, NOAA, iPC

G:\SDGE_SX2P\Qand T\L606\1\SDGE_SunriseSX2PQMXDSXtoPQ_RarePlantsMapSpring.mxd

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

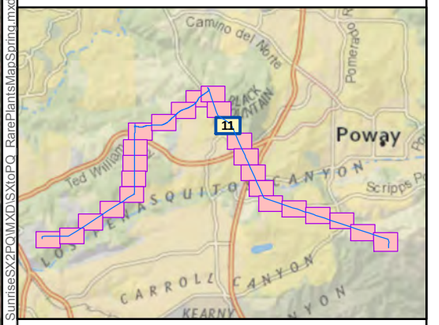
Results of 2013/2014
Special-Status Plant Surveys

TRC 7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED



Sources: 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, GEBCO, NOAA, iPC

G:\SDGE_SX2P\and1T.696.1\SDGE_SunriseSX2PQMXDISXtoPQ_RarePlantsMapSpring.mxd

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

Results of 2013/2014
Special-Status Plant Surveys

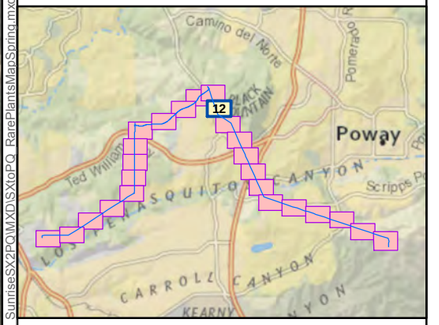
TRC

7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED



G:\SDGE SX2PQand TL696 11SDGE SunriseSX2PQ\MXD\SXtoPQ_RarePlantsMapSpring.mxd

Sources: 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, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

Results of 2013/2014
Special-Status Plant Surveys

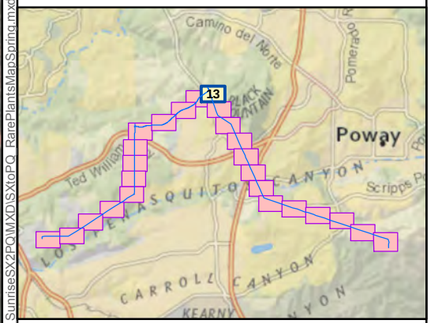
TRC

7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_RarePlantsMapSpring.mxd

Sources: 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, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

Results of 2013/2014
Special-Status Plant Surveys

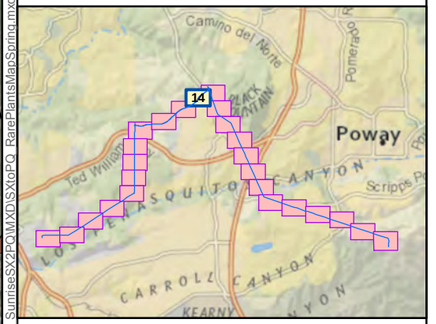
TRC

7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED



Sources: 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, GEBCO, NOAA, iPC

G:\SDGE_SX2P\and1\1.6961\SDGE_SunriseSX2PQM\MXD\SXtoPQ_RarePlantsMapSpring.mxd

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

Results of 2013/2014
Special-Status Plant Surveys

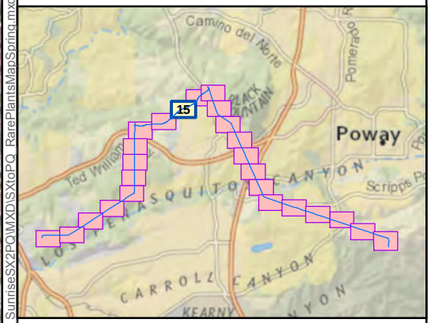
TRC

7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED



G:\SDGE_SX2P2\and\TL696 1\SDGE_Sunrise\SX2PQMXD\SX2PQ_RarePlantsMapSpring.mxd

Sources: 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, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

Results of 2013/2014
Special-Status Plant Surveys

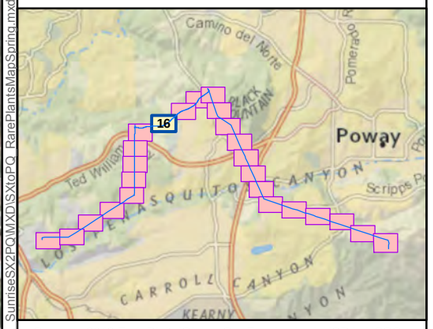
TRC

7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED



Sources: 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, GEBCO, NOAA, iPC

G:\SDGE_SX2PQ\and1\L69661\SDGE_SunriseSX2PQMXD\SXtoPQ_RarePlantsMapSpring.mxd

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

Results of 2013/2014
Special-Status Plant Surveys

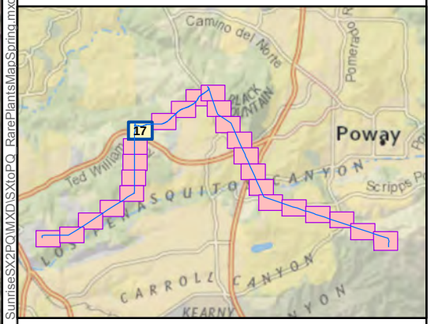
TRC

7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED



G:\SDGE_SX2PQandTL6966\SDGE_SunriseSX2PQMXD\SXtoPQ_RarePlantsMapSpring.mxd

Sources: 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, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

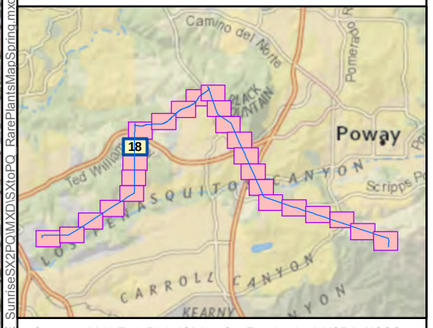
Results of 2013/2014
Special-Status Plant Surveys

TRC 7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED



Sources: 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, GEBCO, NOAA, iPC

G:\SDGE_SX2PQand1L69661\SDGE_SunriseSX2PQMXD\SX2PQ_RarePlantsMapSpring.mxd

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

Results of 2013/2014
Special-Status Plant Surveys

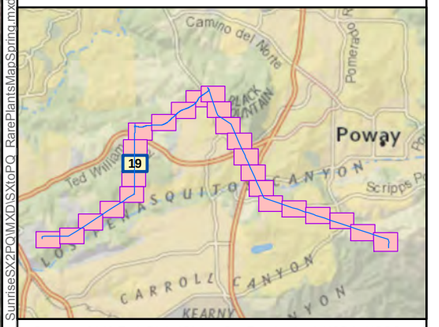
TRC

7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED



Sources: 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, GEBCO, NOAA, iPC

G:\SDGE_SX2POandTL6961\SDGE_SunriseSX2POMXD\SX2PQ_RarePlantsMapSpring.mxd

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

Results of 2013/2014
Special-Status Plant Surveys

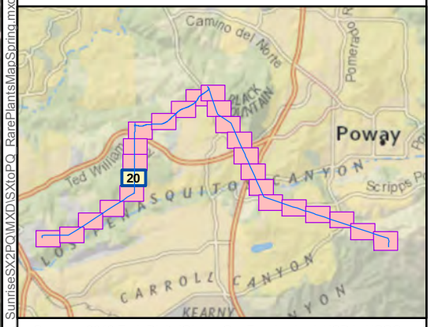
TRC

7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED



Sources: 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, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

G:\SDGE SX2PQ\and\TL 69611\SDGE SunriseSX2PQ\MXD\SXtoPQ_RarePlantsMapSpring.mxd

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

Results of 2013/2014
Special-Status Plant Surveys

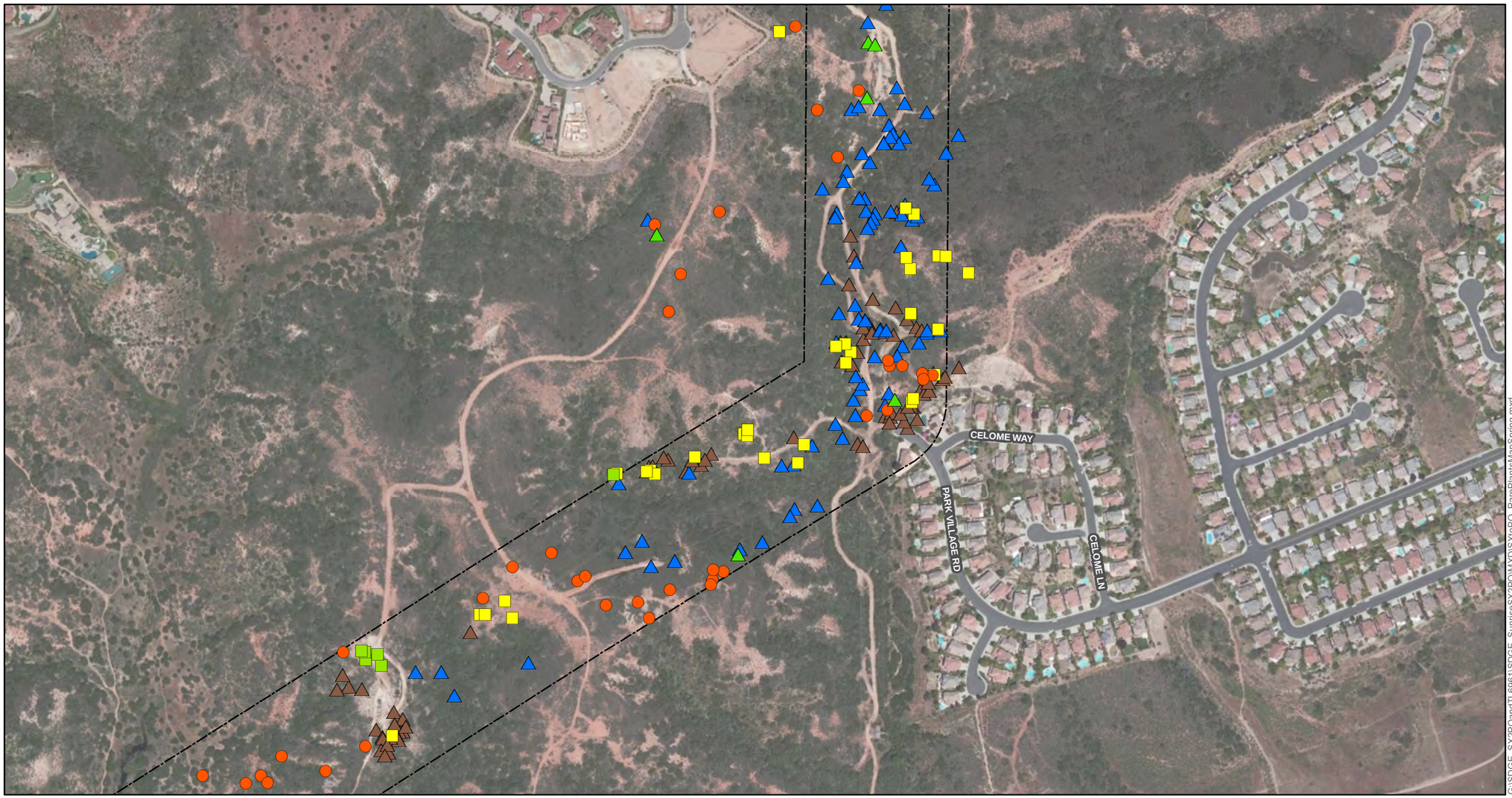
TRC

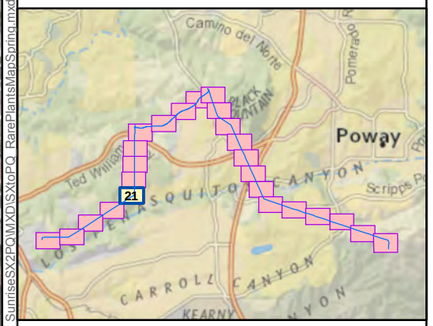
7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED





Sources: 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, GEBCO, NOAA, iPC

G:\SDGE_SX2PandTL6961\SDGE_SunriseSX2PQMXD\SXtoPQ_RarePlantsMapSpring.mxd

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

Results of 2013/2014
Special-Status Plant Surveys

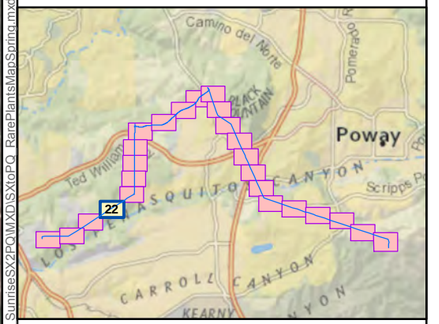
TRC

7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED

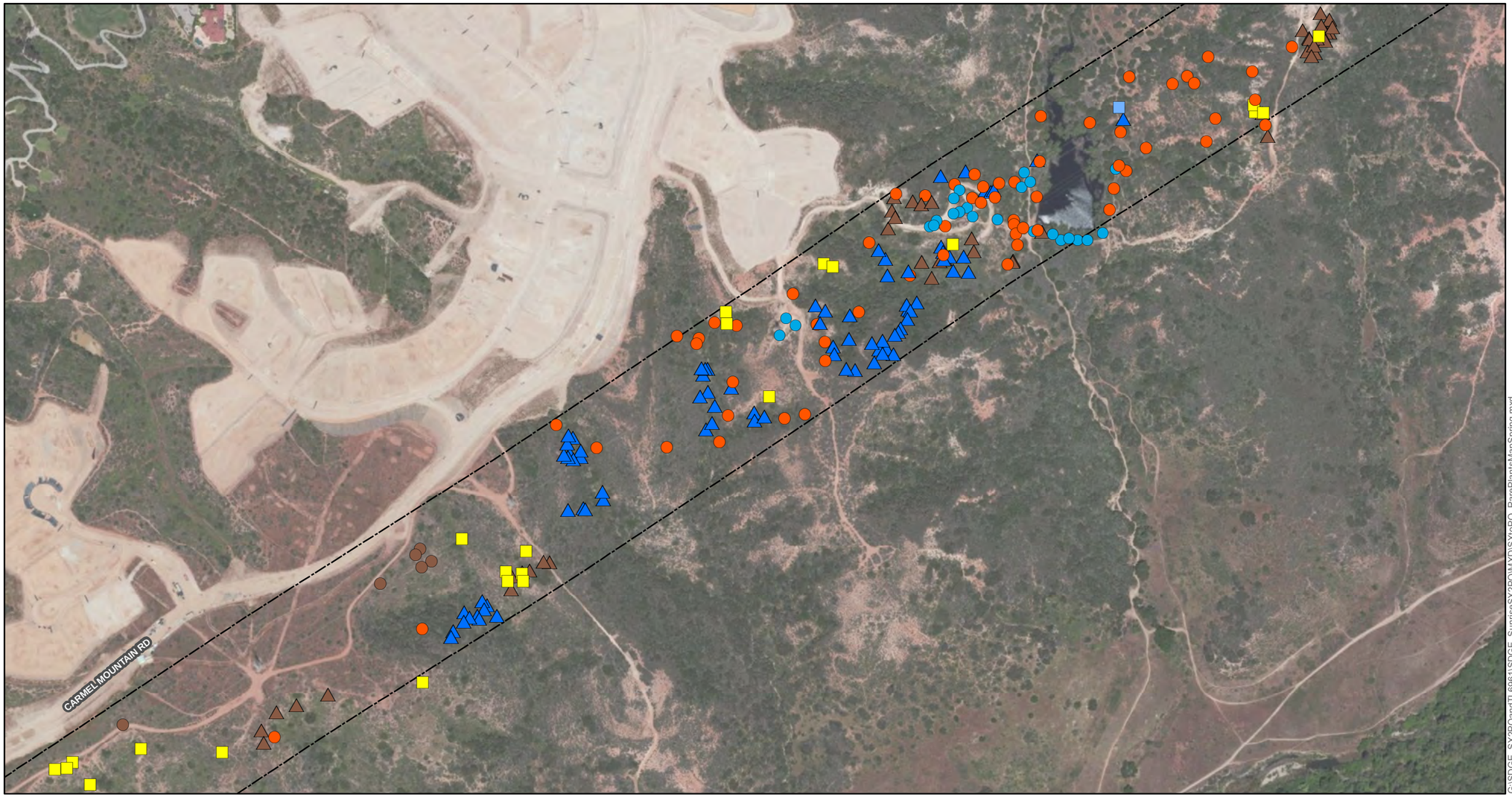


Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community;National Geographic,DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

G:\SDGE_SX2PQandTL69661\SDGE_SunriseSX2PQMXD\SXtoPQ_RarePlantsMapSpring.mxd

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank



Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

Results of 2013/2014
Special-Status Plant Surveys

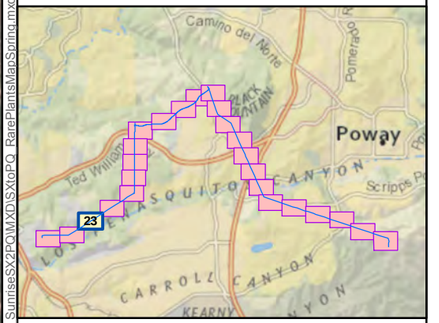
TRC

7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED



Sources: 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, GEBCO, NOAA, iPC

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SX2PQ_MXDSXtoPQ_RarePlantsMapSpring.mxd

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

Results of 2013/2014
Special-Status Plant Surveys

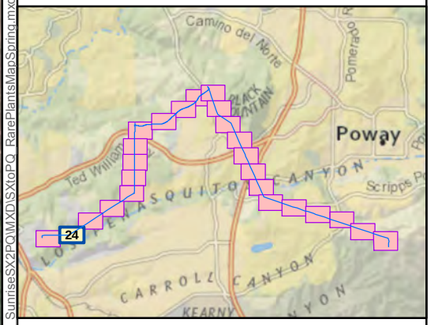
TRC

7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED



G:\SDGE_SX2PQand TL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_RarePlantsMapSpring.mxd

Sources: 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, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project

Figure 3

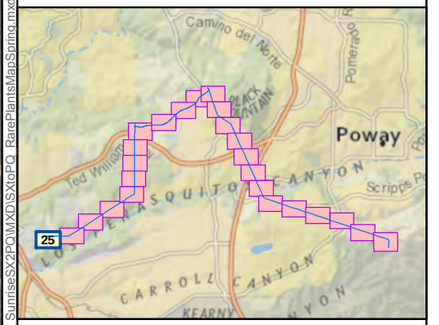
Results of 2013/2014
Special-Status Plant Surveys

TRC 7/1/2014

N

0 300 600 900
Feet

SENSITIVE & CONFIDENTIAL, FOR INTERNAL USE ONLY, NOT FOR PUBLIC REVIEW UNAUTHORIZED DUPLICATION PROHIBITED



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQMXD\SXtoPQ_RarePlantsMapSpring.mxd

Sources: 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, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

Biological Survey Area

ATTACHMENT B
Special-status Plants with Potential for Occurrence

Species Name	Potential to Occur	Status	Habitat Description*
San Diego thornmint (*Acanthomintha ilicifolia*)	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. Not observed within the BSA.	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.
Nuttall's acmispon (*Acmispon* [*Lotus nuttallianus*] *prostrata*)	None. Species restricted to immediate coast. Elevation range in BSA is outside of elevation range for species.	CRPR 1B.1 NCCP	Annual herb. Blooms Mar-Jun. Coastal dunes, coastal sage scrub. Elev 0-35ft.
spineshrub (*Adolphia californica*)	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.
Shaw's agave (*Agave shawii* var. *shawii*)	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.
San Diego ambrosia (*Ambrosia pumila*)	Very low. Known historically from vicinity but suitable habitat not observed within BSA.	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.
aphanisma (*Aphanisma blitoides*)	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.
Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*)	Present. Species observed both north and south of Del Mar Mesa Preserve. Two subspecies of *Arctostaphylos glandulosa* co-occur in the alignment. Most individuals observed were Eastwood's manzanita (*Arctostaphylos glandulosa* ssp. *glandulosa*).	FE CRPR 1B.1 NCCP	Evergreen shrub. Blooms Dec-Jun. Sandy soils in maritime chaparral. Elev 0-1,200ft.
Otay manzanita (*Arctostaphylos otayensis*)	None. Species restricted to Otay Mtn. area in southern San Diego County.	CRPR 1B.2 NCCP	Evergreen shrub. Blooms Jan-Apr. Chaparral, cismontane woodland. Elev900-5,580ft.
Palmer's sagewort (*Artemisia palmeri*)	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.
coastal dunes milk-vetch	None. Species restricted to	FE	Annual herb. Blooms Mar-May.

Species Name	Potential to Occur	Status	Habitat Description*
(*Astragalus tener* var. *titi*)	immediate coast.	SE CRPR 1B.1 NCCP-NE	Vernally mesic areas in coastal dunes, coastal bluff scrub, coastal prairie. Elev 3-165ft.
Coulter's saltbush (*Atriplex coulteri*)	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 (*Atriplex pacifica*)	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.
Encinitas baccharis (*Baccharis vanessae*)	Low. Known historically from vicinity and suitable habitat present, but species extremely rare and not observed in BSA.	FT SE CRPR 1B.1 NCCP-NE	Deciduous shrub. Blooms Aug-Nov. Maritime chaparral, cismontane woodland. Elev 195-2,365ft.
San Diego sunflower (*Bahiopsis laciniata*)	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.
Nevin's barberry (*Berberis nevinii*)	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 (*Bergerocactus emoryi*)	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.
San Diego goldenstar (*Bloomeria clevelandii*)	Moderate. Most collections occurrences are from south San Diego County but suitable habitat is present.	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.
thread-leaved brodiaea (*Brodiaea filifolia*)	Present. Known occurrence at Black Mountain Open Space Preserve was found growing in deep clay soils.	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.
Orcutt's brodiaea (*Brodiaea orcuttii*)	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.
Brewer's calandrinia (*Calandrinia breweri*)	High. Known from Los Penasquitos Canyon Preserve and suitable habitat present. Not	CRPR 4.2	Annual herb. Blooms Mar – Jun. Sandy/loamy soils typically after fire or other disturbance. Elev 30-4,005ft.

Species Name	Potential to Occur	Status	Habitat Description*
	observed in BSA.		
Dunn's mariposa lily (*Calochortus dunnii*)	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 (*Caulanthus simulans*)	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 (*Ceanothus cyaneus*)	None. Outside known range of species.	CRPR 1B.2 NCCP	Evergreen shrub. Blooms Apr-Jun. Chaparral, closed-coned coniferous forest. Elev 770-2,480ft.
wart-stemmed ceanothus (*Ceanothus verrucosus*)	Present. Known historically from vicinity and small population found in BSA.	CRPR 2B.2 NCCP	Evergreen shrub. Blooms Dec-May. Chaparral. Elev 3-1,250ft.
southern tarplant (*Centromadia parryi* ssp. *australis*)	Moderate. Known historically from vicinity but limited suitable habitat present and not observed in BSA.	CRPR 1B.1	Annual herb. Blooms May-Nov. Vernal pools, along the margins of marshes, in vernally mesic areas within grassland. Elev 0-1,395ft.
Orcutt's pincushion (*Chaenactis glabriuscula* var. *orcuttiana*)	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 (*Chloropyron maritimum* ssp. *maritimum*)	None. Species restricted to immediate coast. BSA outside of elevation range for species.	FE SE CRPR 1B.2 NCCP-NE	Hemiparasititc annual herb. Blooms Mar-Oct. Coastal dunes, coastal salt marsh. Elev 0-100ft.
Orcutt's spineflower (*Chorizanthe orcuttiana*)	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.
long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*)	High. Known historically from vicinity and suitable habitat present. Not observed within BSA.	CRPR 1B.2	Annual herb. Blooms Apr-Jul. Clay soils, vernal pools in chaparral, coastal sage scrub, meadows & seeps, grassland. Elev 95-5,020ft.
San Miguel savory (*Clinopodium chandleri*)	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.
summer-holly (*Comarostaphylis diversifolia* ssp. *diversifolia*)	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.
San Diego sand aster (*Corethrogyne filaginifolia* var. *incana*)	None. Species restricted to immediate coast.	CRPR 1B.1	Perennial herb. Blooms Jun-Sep. Coastal bluff scrub, chaparral, coastal sage scrub. Elev 10-380ft.
Del Mar Mesa sand aster (*Corethrogyne*	Present. In the Del Mar Mesa area of the BSA.	CRPR 1B.1 NCCP	Perennial herb. Blooms May-Sep. Coastal bluff scrub, maritime

Species Name	Potential to Occur	Status	Habitat Description*
filaginifolia var. *linifolia*)	Most sand aster observed in the BSA was common sand aster (*Corethrogyne filaginifolia* var. *filaginifolia*).		chaparral, coastal sage scrub. Elev 45-495ft.
snake cholla (*Cylindropuntia californica* var. *californica*)	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 (*Deinandra conjugens*)	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 (*Dicranostegia orcuttiana*)	None. Outside known range of species.	CRPR 2B.1 NCCP	Hemiparasitic annual herb. Blooms Apr-Jun. Coastal sage scrub. Elev 30-1,150ft.
short-leaved dudleya (*Dudleya brevifolia*)	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.
many-stemmed dudleya (*Dudleya multicaulis*)	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.
variegated dudleya (*Dudleya variegata*)	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.
sticky dudleya (*Dudleya viscida*)	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.
Palmer's goldenbush (*Ericameria palmeri* ssp. *palmeri*)	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 (*Erysimum ammophilum*)	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.
San Diego button-celery (*Eryngium aristulatum* var. *parishii*)	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.
cliff spurge (*Euphorbia misera*)	None. Species restricted to immediate coast.	CRPR 2B.2	Shrub. Blooms Dec-Aug. Rocky areas in coastal bluff scrub, coastal sage scrub, Mojavean

Species Name	Potential to Occur	Status	Habitat Description*
			desert scrub. Elev 30-1,640ft.
San Diego barrel cactus (*Ferocactus viridescens*)	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.
Palmer's grapplinghook (*Harpagonella palmeri*)	Present. Common in Diegan Coastal sage scrub openings within the BSA.	CRPR 4.2 NCCP	Annual herb. Blooms Mar-May. Clay soils in chaparral, coastal sage scrub, grassland, disturbed areas. Elev 65-3,135ft.
Tecate cypress (*Hesperocyparis* [*Cupressus*] *forbesii*)	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 (*Heterotheca sessiliflora* ssp. *sessiliflora*)	None. Species restricted to immediate coast.	CRPR 1B.1	Perennial herb. Blooms Mar-Dec. Coastal dunes, chaparral, coastal sage scrub. Elev 0-4,020ft.
graceful tarplant (*Holocarpha virgata* ssp. *elongata*)	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.
decumbent goldenbush (*Isocoma menziesii* var. *decumbens*)	Present. Common in grasslands and Diegan Coastal Sage Scrub within the BSA.	CRPR 1B.2	Shrub. Blooms Apr-Nov. sandy, often disturbed, areas in chaparral, coastal sage scrub. Elev 30-445ft.
San Diego marsh-elder (*Iva hayesiana*)	Present. Observed along drainages and in revegetated areas.	CRPR 2B.2	Perennial herb. Blooms Apr-Oct. Drainages, marshes Playas. Elev 30-1,640ft.
Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*)	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.
Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)	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 (*Lepechinia cardiophylla*)	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 (*Lepechinia gander*)	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.
Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*)	Present. Several individuals found in Diegan Coastal Sage Scrub near Carmel Mountain Road.	CRPR 4.3	Annual herb. Blooms Jan-Jul. Chaparral, coastal sage scrub. Elev 3-2,905ft.
sea dahlia (*Leptosyne maritima*)	None. Suitable habitat not present.	CRPR 2B.2	Perennial herb. Blooms Mar-May. Coastal bluff scrub, coastal sage scrub. Elev 15-495ft.

Species Name	Potential to Occur	Status	Habitat Description*
felt-leaved monardella (*Monardella hypoleuca* ssp. *lanata*)	None. Outside known range of species.	CRPR 1B.2 NCCP	Rhizomatous herb. Blooms Jun-Aug. chaparral, cismontane woodland. Elev 980-5,170ft.
willowy monardella (*Monardella viminea*)	Very low. Known historically from vicinity but only marginally suitable habitat occurs and not observed in the BSA.	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.
little mousetail (*Myosurus minimus* ssp. *apus*)	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.
coast woolly-heads (*Nemacaulis denudata* var. *denudata*)	None. Species restricted to immediate coast.	CRPR 1B.2	Annual herb. Blooms Apr-Sep. Coastal dunes. Elev 0-330ft.
spreading navarretia (*Navarretia fossalis*)	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.
Dehesa beargrass (*Nolina interrata*)	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.
California Orcutt grass (*Orcuttia californica*)	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.
short-lobed broomrape (*Orobanche parishii* ssp. *brachyloba*)	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 (*Packera ganderi*)	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.
Torrey pine (*Pinus torreyana* ssp. *torreyana*)	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.
San Diego mesa mint (*Pogogyne abramsii*)	High. Known from vernal pools within the Del Mar Mesa Preserve and suitable habitat present. Not observed within the BSA.	FE SE CRPR 1B.1 NCCP	Annual herb. Blooms Mar-Jul. Vernal pools. Elev 295-660ft.
Otay Mesa mint (*Pogogyne nudiuscula*)	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.

Species Name	Potential to Occur	Status	Habitat Description*
Nuttall's scrub oak (*Quercus dumosa*)	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.
small-leaved rose (*Rosa minutifolia*)	None. Outside known range of species.	SE CRPR 2B.1 NCCP	Deciduous shrub. Blooms Jan-Jun. Chaparral, coastal sage scrub. Elev 490-525ft.
chaparral ragwort (*Senecio aphanactis*)	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.
purple stemodia (*Stemodia durantifolia*)	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.
estuary seablite (*Suaeda esteroa*)	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 tetracoccus (*Tetracoccus dioicus*)	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

ATTACHMENT C
Plant Species Observed

ATTACHMENT C
Plant Species Observed

Family	Scientific Name	Common Name
Adoxaceae	*Sambucus nigra* ssp. *caerulea*	Blue Elderberry
Agavaceae	*Chlorogalum parviflorum*	Small-Flower Soap-Plant/Amole
Agavaceae	*Hesperoyucca whipplei*	Chaparral Candle
	Yucca schidigera	Mohave Yucca
Aizoaceae	**Aptenia cordifolia*	Baby Sun Rose, Shrubby Dewplant
	**Carpobrotus chilensis*	Sea-fig
	**Carpobrotus edulis*	Iceplant
	**Malephora crocea*	Coppery Mesemb
	**Mesembryanthemum crystallinum*	Crystalline Iceplant
	**Mesembryanthemum nodiflorum*	Slender-Leaf Iceplant
Alliaceae	*Allium praecox*	Early Onion
Amaranthaceae	**Amaranthus blitoides*	Prostrate Amaranth
Anacardiaceae	*Malosma laurina*	Laurel Sumac
	Rhus integrifolia	Lemonadeberry
	**Schinus molle*	Peruvian Pepper Tree
	**Schinus terebinthifolius*	Brazilian Pepper Tree
	Toxicodendron diversilobum	Western Poison-Oak
Apiaceae	**Anthriscus caucalis*	Bur Chervil
	Apium graveolens	Common Celery
	Bowlesia incana	Hoary Bowlesia
	Conium maculatum	Common Poison Hemlock
	Daucus pusillus	Rattlesnake Weed
	Eryngium aristulatum var. *parishii*	San Diego Button-celery
	Foeniculum vulgare	Sweet Fennel
	Sanicula crassicaulis	Pacific Sanicle
	**Torilis arvensis*	Tall Sock-Destroyer
	Yabea microcarpa	California Hedge-Parsley
Apocynaceae	*Asclepias fascicularis*	Narrow-Leaf Milkweed
	Funastrum cynanchoides var. *hartwegii*	Climbing Milkweed
Asphodelaceae	**Asphodelus fistulosus*	Hollow-Stem Asphodel
Asteraceae	*Acourtia microcephala*	Sacapellote
	Ambrosia psilostachya	Western Ragweed
	Artemisia californica	Coastal Sagebrush
	Artemisia douglasiana	Douglas Mugwort
	Artemisia palmeri	Palmer's Sagewort
	Baccharis pilularis	Coyote Brush
	Baccharis salicifolia	Mule-Fat, Seep-Willow
	Baccharis sarothroides	Broom Baccharis
	Bahiopsis laciniata	San Diego Sunflower
	Bebbia juncea var. *aspera*	Rush Sweetbush
	Carduus pycnocephalus	Italian Thistle
	**Centaurea melitensis*	Tocalote
	Corethrogyne filaginifolia var. *filaginifolia*	Sand-Aster
	Corethrogyne filaginifolia var. *linifolia*	Del Mar Mesa Sand Aster
	**Cotula australis*	Australian Brass-Buttons

Family	Scientific Name	Common Name
	Cotula coronopifolia	African Brass-Buttons
	**Cynara cardunculus* ssp. *flavescens*	Artichoke Thistle, Cardoon
	Deinandra fasciculata	Fascicled Tarweed
	**Dittrichia graveolens*	Stinkwort
	Encelia californica	California Encelia
	Encelia farinosa var. *farinosa*	Brittlebush, Incienso
	**Erigeron bonariensis*	Flax-Leaf Horseweed
	Erigeron canadensis	Horseweed
	**Erigeron sumatrensis*	Tropical Horseweed
	Erigeron foliosus var. *foliosus*	Leafy Daisy
	Eriophyllum confertiflorum var. *confertiflorum*	Long-Stem Golden-Yarrow
	**Gazania linearis*	Treasure Flower
	**Glebionis coronaria*	Garland/Crown Daisy
	Grindelia camporum	Gumplant
	Gutierrezia californica	California Matchweed
	Hazardia squarrosa var. *grindelioides*	Southern Sawtooth Goldenbush
	**Hedypnois cretica*	Crete Hedypnois
	Helianthus gracilentus	Slender Sunflower
	**Helminthotheca echioides*	Bristly Ox-Tongue
	Heterotheca grandiflora	Telegraph Weed
	Holocarpha virgata ssp. *elongata*	Graceful Tarplant
	**Hypochaeris glabra*	Smooth Cat's Ear
	Isocoma menziesii var. *decumbens*	Decumbent Goldenbush
	Isocoma menziesii var. *menziesii*	Spreading Goldenbush
	Isocoma menziesii var. *vernonioides*	Coastal Goldenbush
	Iva hayesiana	San Diego Marsh-Elder
	**Lactuca serriola*	Prickly Lettuce
	Lasthenia gracilis	Common Goldfields
	Layia platyglossa	Tidy Tips
	**Logfia gallica*	Narrow-Leaf Cottonrose
	Osmadenia tenella	Osmadenia
	**Pulicaria paludosa*	False-Fleabane
	Pluchea odorata var. *odorata*	Salt Marsh Fleabane
	Pluchea sericea	Arrow Weed
	Porophyllum gracile	Odora
	Pseudognaphalium biolettii	Bicolor Cudweed
	Pseudognaphalium californicum	California Everlasting
	Pseudognaphalium canescens	Wright's Cudweed
	**Pseudognaphalium luteoalbum*	Fragrant Everlasting Cudweed
	Pseudognaphalium microcephalum	White Everlasting
	Psilocarphus brevissimus var. *brevissimus*	Dwarf Woolly Marbles
	Psilocarphus tenellus var. *tenellus*	Slender Woolly Marbles
	Silybum marianum	Milk Thistle
	**Sonchus asper* ssp. *asper*	Prickly Sow-Thistle
	**Sonchus oleraceus*	Common Sow-Thistle
	Stephanomeria diegensis	San Diego Wreath-Plant
	Stephanomeria exigua ssp. *deanei*	Deane's Small Wreath-Plant
	Stephanomeria virgata ssp. *pleurocarpa*	Tall Wreath-Plant
	Stylocline gnaphaloides	Everlasting Nest-Straw
	Tragopogon porrifolius	Salsify, Oyster Plant
	Uropappus lindleyi	Silver Puffs
	Xanthium strumarium	Cocklebur

Family	**Scientific Name**	**Common Name**
Berberidaceae	*Berberis pinnata* ssp. *pinnata*	Shiny-Leaf Barberry
Bignoniaceae	*Catalpa speciosa*	Southern Catalpa
Boraginaceae	*Amsinckia menziesii* var. *intermedia*	Rancher's Fiddleneck
	Cryptantha intermedia var. *intermedia*	Nievitas Cryptantha
	**Echium candicans*	Pride of Madeira
	Eriodictyon crassifolium var. *crassifolium*	Felt-Leaf Yerba Santa
	Eucrypta chrysanthemifolia var. *chrysanthemifolia*	Common Eucrypta
	Harpagonella palmeri	Palmer's Grappling-Hook
	Heliotropium curassavicum var. *oculatum*	Salt Heliotrope
	Pectocarya linearis ssp. *ferocula*	Slender Pectocarya
	Phacelia cicutaria var. *hispida*	Caterpillar Phacelia
	Phacelia distans	Wild-Heliotrope
	Phacelia grandiflora	Giant-Flower Phacelia
	Pholistoma auritum var. *auritum*	Fiesta Flower
	Pholistoma racemosum	San Diego Fiesta Flower
	Plagiobothrys collinus var. *gracilis*	San Diego Popcornflower
Brassicaceae	**Brassica nigra*	Black Mustard
	**Brassica tournefortii*	Sahara Mustard
	Cardamine californica	Milk Maids
	Caulanthus lasiophyllus	California Mustard
	**Coronopus didymus*	Lesser Wart-Cress
	**Hirschfeldia incana*	Short-Pod Mustard
	Lepidium nitidum var. *nitidum*	Shining Peppergrass
	Lepidium virginicum var. *robinsonii*	Robinson's Peppergrass
	Lepidium virginicum ssp. *virginicum*	Virginia Peppergrass
	Raphanus sativus	Wild Radish
	Rorippa palustris ssp. *palustris*	Bog Yellowcress
	**Sisymbrium irio*	London Rocket
	Thysanocarpus curvipes	Lacepod
Cactaceae	*Cylindropuntia prolifera*	Coast Cholla
	Ferocactus viridescens var. *viridescens*	Coast Barrel Cactus
	Opuntia littoralis	Coast Prickly-Pear
	Opuntia phaeacantha	Desert Prickly-Pear
	Opuntia xvaseyi	Mesa Prickly-Pear
Capparaceae	*Cleome arborea*	Bladderpod
Caprifoliaceae	*Lonicera subspicata* var. *denudata*	Johnston's Honeysuckle
Caryophyllaceae	*Cardionema ramosissimum*	Tread Lightly
	Cerastium glomeratum	Mouse-Ear Chickweed
	**Petrorhagia dubia*	Hairy Pink
	**Polycarpon tetraphyllum* var. *tetraphyllum*	Four-Leaf Allseed
	Silene laciniata ssp. *laciniata*	Southern Pink
	Spergula arvensis	Stickwort, Starwort
	**Stellaria media*	Common Chickweed
Chenopodiaceae	*Atriplex canescens* var. *canescens*	Four-wing Saltbush
	Atriplex lentiformis	Big Saltbush
	Atriplex prostrata	Spearscale
	**Atriplex semibaccata*	Australian Saltbush
	**Chenopodium album*	Lamb's Quarters
	Chenopodium californicum	California Goosefoot
	Chenopodium murale	Nettle-Leaf Goosefoot
	**Kochia scoparia* ssp. *scoparia*	Mexican Fireweed

Family	**Scientific Name**	**Common Name**
	**Salsola australis*	Australian Tumbleweed
Cistaceae	**Cistus creticus*	Purple Rock-Rose
	**Cistus ladanifer*	Gum Cistus
	Crocanthemum scoparium var. *scoparium*	Peak Rush-rose
Cleomaceae	*Peritoma arborea* var. *arborea*	Coast Bladderpod
Convolvulaceae	*Calystegia macrostegia* ssp. *arida*	Southern California Morning-Glory
	Calystegia macrostegia ssp. *tenuifolia*	San Diego Morning-Glory
	**Convolvulus arvensis*	Field Bindweed
	Convolvulus simulans	Small-Flower Bindweed
	Cuscuta californica var. *californica*	Chaparral Dodder
	Dichondra occidentalis	Western Dichondra/Ponyfoot
Crassulaceae	*Crassula connata*	Pygmyweed
	**Crassula ovata*	Jade Plant
	Dudleya lanceolata	Lance-Leaf Dudleya
	Dudleya pulverulenta	Chalk Dudleya
Cucurbitaceae	*Marah macrocarpa*	Chilicothe
Cyperaceae	*Bolboschoenus maritimus* ssp. *paludosus*	Prairie Bulrush
	Cyperus eragrostis	Tall Flatsedge
	Cyperus erythrorhizos	Red-Root Flatsedge
	Eleocharis montevidensis	Dombey's Spike-Rush
	Eleocharis parishii	Parish's Spike-Rush
	Schoenoplectus acutus var. *occidentalis*	Viscid Bulrush
	Schoenoplectus americanus	Olney's Bulrush
	Schoenoplectus californicus	California Bulrush
Dryopteridaceae	*Dryopteris arguta*	Coastal Wood Fern
Ericaceae	*Arctostaphylos glandulosa* ssp. *crassifolia*	Del Mar Manzanita
	Arctostaphylos glandulosa ssp. *glandulosa*	Eastwood's Manzanita
	Comarostaphylis diversifolia ssp. *diversifolia*	Summer-Holly
	Xylococcus bicolor	Mission Manzanita
Euphorbiaceae	*Croton setigerus*	Doveweed
	**Euphorbia maculata*	Spotted Spurge
	**Euphorbia peplus*	Petty Spurge
	Euphorbia polycarpa	Small-Seed Sandmat
	**Ricinus communis*	Castor Bean
Fabaceae	*Acacia cyclops*	Western Coastal Wattle
	**Acacia redolens*	Desert Carpet
	Acmispon americanus var. *americanus*	Spanish Lotus
	Acmispon glaber var. *glaber*	Deerweed
	Acmispon micranthus	Grab Lotus
	Acmispon strigosus	Bishop's/Strigose Lotus
	Astragalus trichopodus var. *lonchus*	Ocean Locoweed
	Lathyrus vestitus var. *alefeldii*	San Diego Sweet Pea
	**Melilotus indicus*	Indian Sweetclover
	**Parkinsonia aculeata*	Mexican palo verde
	Trifolium hirtum	Rose Clover
	Vicia villosa ssp. *varia*	Hairy Vetch
Fagaceae	*Quercus agrifolia* var. *agrifolia*	Coast Live Oak, Encina
	Quercus dumosa	Nuttall's Scrub Oak
	Quercus Xacutidens	Torrey's Scrub Oak
Gentianaceae	*Zeltnera venusta*	Canchalagua
Geraniaceae	*Erodium botrys*	Long-Beak Filaree/Storksbill
	Erodium brachycarpum	Short-Beak Filaree/Storksbill

Family	**Scientific Name**	**Common Name**
	Erodium cicutarium	Red-Stem Filaree/Storksbill
	Erodium moschatum	White-Stem Filaree/Storksbill
	Geranium carolinianum	Carolina Geranium
	**Geranium dissectum*	Cut-Leaf Geranium
Grossulariaceae	*Ribes speciosum*	Fuchsia-Flower Gooseberry
Iridaceae	*Sisyrinchium bellum*	Blue-Eyed-Grass
Juncaceae	*Juncus acutus* ssp. *leopoldii*	Southwestern Spiny Rush
Lamiaceae	**Lamium amplexicaule*	Henbit
	Marrubium vulgare	Horehound
	Salvia apiana	White Sage
	Salvia columbariae	Chia
	Salvia leucophylla	San Luis Purple Sage
	Salvia mellifera	Black Sage
	Stachys ajugoides	Ajuga Hedge-Nettle
	Stachys rigida var. *quercetorum*	Oak Hedge-Nettle
Liliaceae	*Calochortus splendens*	Splendid Mariposa Lily
Lythraceae	**Lythrum hyssopifolia*	Grass Poly
Malvaceae	*Malacothamnus densiflorus*	Many-Flower Bushmallow
	Malva parviflora	Cheeseweed
	Malvella leprosa	Alkali Mallow
	Sidalcea malviflora ssp. *sparsifolia*	Checker-Bloom
Melanthiaceae	*Toxicoscordion fremontii*	Death camas
Montiaceae	*Calandrinia ciliata*	Red Maids
Molluginaceae	**Glinus lotoides*	Lotus Sweetjuice
Montiaceae	*Claytonia perfoliata* ssp. *mexicana*	Mexican Miner's-Lettuce
	Cistanthe maritima	Seaside Cistanthe
Myrsinaceae	*Anagallis arvensis*	Scarlet Pimpernel, Poor Man's Weatherglass
Myrtaceae	*Eucalyptus cladocalyx*	Sugar Gum
	**Eucalyptus globulus*	Tasmanian bluegum
Nyctaginaceae	*Mirabilis laevis* var. *crassifolia*	Coastal Wishbone Plant
Onagraceae	*Clarkia epilobioides*	Canyon Godetia
	Clarkia purpurea ssp. *quadrivulnera*	Four-Spot Clarkia
	Epilobium canum ssp. *canum*	California Fuchsia
	Epilobium ciliatum ssp. *ciliatum*	Willow Herb
Orobanchaceae	*Castilleja foliolosa*	Woolly Indian Paintbrush
	Cordylanthus rigidus ssp. *setigerus*	Dark-Tip Bird's Beak
Oxalidaceae	**Oxalis pes-caprae*	Bermuda-Buttercup
Paeoniaceae	*Paeonia californica*	California Peony
Papaveraceae	*Eschscholzia californica*	California Poppy
Phyrmaceae	*Mimulus aurantiacus*	Monkey Flower Bush
	Mimulus guttatus	Seep Monkey Flower
Pinaceae	**Pinus pinea*	Italian Stone Pine
	Pinus torreyana	Torrey Pine
Plantaginaceae	*Antirrhinum nuttallianum* ssp. *subsessile*	Big-Gland Nuttall's Snapdragon
	Collinsia heterophylla var. *heterophylla*	Chinese Houses
	Keckiella cordifolia	Climbing Bush Penstemon
	Plantago coronopus	Cut-Leaf Plantain
	Plantago erecta	Dot-Seed Plantain
Plumbaginaceae	**Limonium californicum*	Western Marsh-Rosemary
	**Limonium perezii*	Perez's Marsh-Rosemary
Poaceae	*Agrostis exarata*	Spike Bent Grass

Family	**Scientific Name**	**Common Name**
	**Avena barbata*	Slender Wild Oat
	**Avena fatua*	Wild Oat
	Bothriochloa barbinodis	Cane Bluestem
	**Brachypodium distachyon*	Purple Falsebrome
	**Briza minor*	Quaking Grass
	**Bromus diandrus*	Ripgut Grass
	**Bromus hordeaceus*	Soft Chess
	**Bromus madritensis* ssp. *rubens*	Foxtail Chess, Red Brome
	**Cortaderia selloana*	Selloa Pampas Grass
	**Crypsis schoenoides*	Swamp Prickle Grass
	**Cynodon dactylon*	Bermuda Grass
	Echinochloa crus-galli	Common Barnyard Grass
	**Ehrharta calycina*	Perennial Veldt Grass
	Ehrharta erecta	Panic Veldt Grass
	Elymus condensatus	Giant Wild-Rye
	**Festuca myuros*	Rat-tail Fescue
	**Festuca perennis*	Perennial ryegrass
	**Hordeum murinum* ssp. *glaucum*	Glaucous Barley
	**Lamarckia aurea*	Golden-Top
	Melica imperfecta	Coast Range Melic
	**Melinis repens* ssp. *repens*	Natal Grass
	Muhlenbergia microsperma	Little-Seed Muhly
	Muhlenbergia rigens	Deergrass
	Pennisetum setaceum	Crimson Fountain Grass
	**Polypogon monspeliensis*	Annual Beard Grass
	Schismus barbatus	Mediterranean Schismus
	Stipa cernua	Nodding Needlegrass
	Stipa coronata	Giant Stipa
	Stipa lepida	Foothill Needlegrass
	Stipa miliacea var. *milacea*	Smilo Grass
	Stipa pulchra	Purple Needlegrass
Polemoniaceae	*Linanthus dianthiflorus*	Farinose Ground Pink
	Navarretia hamata ssp. *hamata*	Hooked Skunkweed
	Navarretia hamata ssp. *leptantha*	Hooked Pincushion Plant
Polygonaceae	*Chorizanthe fimbriata* var. *fimbriata*	Fringed Spineflower
	Eriogonum elongatum var. *elongatum*	Tall Buckwheat
	Eriogonum fasciculatum var. *fasciculatum*	Coast California Buckwheat
	Lastarriaea coriacea	Lastarriaea
	Pterostegia drymarioides	Granny's Hairnet, G. C. P.
	**Rumex crispus*	Curly Dock
Polypodiaceae	*Polypodium californicum*	California Polypody
Portulacaceae	**Calandrinia ciliata*	Red Maids
	**Portulaca oleracea*	Purslane
Primulaceae	*Anagallis arvensis*	Scarlet Pimpernel, Poor Man's Weatherglass
	Primula clevelandii ssp. *clevelandii*	Padre's Shooting Star
	Samolus parviflorus	Water-Pimpernel
Pteridaceae	*Adiantum jordanii*	California Maidenhair
	Cheilanthes clevelandii	Cleveland's Lip Fern
	Pellaea andromedifolia var. *andromedifolia*	Coffee Fern
	Pellaea mucronata ssp. *mucronata*	Bird's Foot Cliff-Brake
	Pentagramma triangularis ssp. *maxonii*	Maxon's Silverback Fern

Family	**Scientific Name**	**Common Name**
	Pentagramma triangularis ssp. *triangularis*	California Goldback Fern
	Pentagramma triangularis ssp. *viscosa*	Sticky Silverback Fern
Ranunculaceae	*Clematis pauciflora*	Ropevine Clematis
	Ranunculus hebecarpus	Hairy-Fruit Buttercup
	Thalictrum fendleri var. *polycarpum*	Smooth-Leaf Meadow-Rue
Resedaceae	*Reseda luteola*	Dyer's Rocket
Rhamnaceae	*Adolphia californica*	Spineshrub
	Ceanothus tomentosus	Ramona-Lilac
	Ceanothus verrucosus	Wart-Stem-Lilac
	Rhamnus crocea	Spiny Redberry
Rosaceae	*Aphanes occidentalis*	Western Lady's Mantle
	Adenostoma fasciculatum	Chamise
	Cercocarpus minutiflorus	San Diego Mountain-Mahogany
	Cotoneaster lacteus	Milk-Flower Cotoneaster
	Heteromeles arbutifolia	Toyon, Christmas Berry
	Prunus ilicifolia ssp. *ilicifolia*	Islay, Holly-Leaf Cherry
	Rubus ursinus	California Blackberry
Rubiaceae	*Galium aparine*	Common Bedstraw, Goose Grass
	Galium nuttallii ssp. *nuttallii*	San Diego Bedstraw
Rutaceae	*Cneoridium dumosum*	Coast Spice Bush, Bush-Rue
Salicaceae	*Salix exigua* var. *hindsiana*	Hinds's Willow
	Salix gooddingii	Goodding's Black Willow
	Salix laevigata	Red Willow
	Salix lasiolepis	Arroyo Willow
Saururaceae	*Anemopsis californica*	Yerba Mansa
Saxifragaceae	*Jepsonia parryi*	Coast Jepsonia
Scrophulariaceae	*Scrophularia californicus*	California Bee Plant
	**Myoporum laetum*	Lollypop Tree
Selaginellaceae	*Selaginella bigelovii*	Bigelow's Spike-Moss
Solanaceae	**Nicotiana glauca*	Tree Tobacco
	Solanum parishii	Parish's Nightshade
	Solanum xanti	Chaparral Nightshade
Tamaricaceae	**Tamarix ramosissima*	Saltcedar
Themidaceae	*Bloomeria crocea* var. *crocea*	Common Goldenstar
	Brodiaea filifolia	Threadleaf Brodiaea
	Dichelostemma capitatum ssp. *capitatum*	Blue Dicks, School Bells
Typhaceae	*Typha domingensis*	Southern Cattail
Urticaceae	*Hesperocnide tenella*	Western Nettle
	Parietaria hespera var. *californica*	California Pellitory
	Parietaria hespera var. *hespera*	Western Pellitory
	Urtica dioica ssp. *holosericea*	Hoary Nettle
	**Urtica urens*	Dwarf Nettle
Violaceae	*Viola pedunculata*	Johnny Jump-Up
Vitaceae	*Vitis girdiana*	Southern California Wild Grape

* = Non-native species

BUSBY
Biological Services

December 7, 2015

Ms. Esther Burkett
California Department of Fish and Wildlife
Wildlife Branch - Nongame Wildlife
1812 9th Street
Sacramento, CA 95811

RE: 2015 BURROWING OWL SURVEY SUMMARY REPORT FOR THE MAIN ALIGNMENT FOR THE PROPOSED SAN DIEGO GAS & ELECTRIC COMPANY SYCAMORE TO PEÑASQUITOS 230 KILOVOLT TRANSMISSION LINE PROJECT, SAN DIEGO COUNTY, CALIFORNIA

Ms. Burkett:

Busby Biological Services, Inc. (BBS) was contracted by Chambers Group, Inc. (Chambers) to conduct a focused habitat assessment and focused surveys for burrowing owl (*Athena cunicularia*) on behalf of San Diego Gas & Electric Company (SDG&E) for the proposed Sycamore to Peñasquitos 230 Kilovolt (kV) Transmission Line Project (Proposed Project) in the City of Carlsbad, City of San Diego, City of Poway, and the extreme northern portion of Marine Corps Air Station (MCAS) Miramar, San Diego County, California (Attachment 1: Figures 1 through 3). This survey summary report provides brief project background information, burrowing owl species and historical occurrence information, methods, and results/discussion.

1.0 PROJECT BACKGROUND INFORMATION

A brief summary of the Proposed Project and burrowing owl surveys are provided in this section.

1.1 Proposed Project Description and Location

The main Proposed Project alignment extends from Sycamore Canyon Substation in the east, which is located on MCAS Miramar, and terminates at Peñasquitos Substation in the west. The main Proposed Project alignment also includes several staging areas as well as the Mira Mesa Hub (Attachment 1: Figures 1 through 3). In addition, the Proposed Project includes the Encina Hub in Carlsbad, California (Attachment 1: Figure 1). However, because the Encina Hub is in a geographically distinct location and is not within the immediate vicinity of the main Proposed Project alignment, the burrowing owl survey results from this portion of the Proposed Project are included in a separate survey summary report (BBS 2015).

The main Proposed Project alignment is within the U.S. Geological Survey (USGS) 7.5-minute Poway, Del Mar, and La Jolla topographic quadrangle (USGS 1967a, 1967b, 1967c). Elevations within the main Proposed Project alignment range from approximately 1,000 feet above mean sea level (amsl) at Sycamore Canyon Substation in the eastern

portion of the main Proposed Project alignment to approximately 120 feet amsl in an unnamed tributary to Peñasquitos Creek in the western portion of the main Proposed Project alignment (Attachment 1: Figure 3).

Topography along the main Proposed Project alignment varies from relatively flat developed and undeveloped areas, to steep and rolling hills and ridges, to wide and narrow drainages and canyons. The main Proposed Project alignment area crosses several unnamed and named drainages and canyons, including Peñasquitos Canyon, McGonigle Canyon, and Deer Canyon (Attachment 1: Figure 3). While the main Proposed Project alignment crosses through both residential and commercial development, including a network of roads and highways and mixed-use development, the majority of the main Proposed Project alignment is located in undeveloped areas that includes parks and other undeveloped open space that have the potential to support sensitive biological resources, including the burrowing owl.

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 (Attachment 1: Figures 1 through 3). 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.

1.2 Brief Survey Area Explanation

Focused burrowing owl surveys were conducted for the Proposed Project within the 2015 burrowing owl survey area, which included all suitable habitats within the current Proposed Project footprint and a 500-foot buffer of the footprint. Because the Encina Hub portion of the Proposed Project is located in a geographically distinct location and is not within the immediate vicinity of the main Proposed Project alignment (Attachment 1: Figure 1), two separate survey summary reports were prepared for the spring 2015 surveys, one for the burrowing owl surveys conducted within the 2015 burrowing owl survey area along the main Proposed Project alignment and one for the surveys that were conducted within the 2015 burrowing owl survey area at the Encina Hub. This report focuses on the results of the focused burrowing owl surveys conducted within the 2015 burrowing owl survey area along the main Proposed Project alignment. The results of the spring 2015 burrowing owl surveys conducted at the Encina Hub are contained in a separate report (BBS 2015).

It should be noted that a proposed staging yard located in the northern portion of the intersection of Camino Del Sur and Carmel Valley Road was added to the main Proposed Project alignment in late spring 2015. Because the current burrowing owl survey protocol requires that at least one breeding season survey be conducted between February 15 and April 15 (CDFW 2012) and because the proposed staging yard was added after this survey window, it was determined that focused breeding season surveys would not be conducted in 2015. However, protocol-level burrowing owl surveys will be conducted in suitable habitat within this proposed staging yard and a 500-foot buffer before this proposed staging yard is utilized for the Proposed Project.

2.0 BURROWING OWL SPECIES & HISTORICAL OCCURRENCE INFORMATION

The burrowing owl is a California Department of Fish and Wildlife (CDFW) Species of Special Concern and a *SDG&E Subregional Natural Community Conservation Plan* (NCCP)-covered, narrow endemic species. This section provides species-specific information about the burrowing owl range and migration patterns, habitat, breeding information, and population threats.

2.1 Burrowing Owl Range & Migration Patterns

The burrowing owl ranges from southwestern Canada and the western United States, south through Central America, and into the northernmost portion of South America as well as the southern half of South America. It can also be found on coastal islands off of Florida and Baja California, Mexico (Haug et. al. 1993). The northernmost populations of this species are almost completely migratory, and wintering birds can be found south to southern Mexico.

The western subspecies of burrowing owl (*A. c. hypugaea*) includes the populations that occur in southern Alberta, Canada, and within the western United States. In California, the western burrowing owl is found throughout the state, with the exception of the northern coast and eastern Sierra Nevada Mountains (Shuford and Gardali 2008). This subspecies remains fairly common in the Imperial Valley, which is home to nearly 70 percent of the entire California population; however, this species is rapidly declining in the remainder of the California populations (Unitt 2004). While the northern populations are often migratory, southern California burrowing owls are only partially migratory as evidenced by reduced population sizes in winter, with some birds remaining on territories throughout the year.

The burrowing owl has disappeared and/or populations have declined in several southern California and San Francisco Bay area counties and in coastal areas throughout California, as they have in other regions throughout the United States and Canada (DeSante et al. 1997, Klute et al. 2003). During the late 1800's and early 1900's, the burrowing owl was widespread and common in San Diego County, primarily along the coast and into the grassy interior; however, by the 1970's, the burrowing owl was considered uncommon and declining in these areas (Unitt 2004; Bent 1961). The burrowing owl currently occupies some historical sites in San Diego County (e.g., Naval Air Station North Island, south San Diego coastal area, and Otay Mesa) in much reduced numbers and is believed to be absent from many developed areas that it formerly occupied (e.g., north-central San Diego County, coastal areas, and the area around the City of San Diego) (Unitt 2004; Lincer and Bloom 2007). Currently, an estimated 41 to 46 pairs breed and 148 to 168 local individuals winter within San Diego County (Lincer and Bloom 2007). During the winter, local wintering burrowing owls are joined by migratory wintering burrowing owls to form a total estimated wintering population of approximately 300 to 370 individuals (Lincer and Bloom 2007).

2.2 Burrowing Owl Habitat

The burrowing owl is a ground-dwelling raptor that requires open, relatively flat terrain with burrows for nesting, roosting, and cover (CDFW 2012). This species can be found in a variety of habitat types that contain suitable burrowing and foraging habitat, including – but not limited to – native and non-native grassland, shrub steppe, shrubland with low density shrub cover, desert, agricultural, golf courses, drainage ditches, earthen berms,

pasturelands, fallow fields, and even ruderal areas and vacant lots (Gervais et al 2008, CDFW 2012, TLMA 2006). The burrowing owl is typically associated with areas containing well-drained, friable soils inhabited by fossorial mammals (Haug et al. 1993, CDFW 2012).

In California, the burrowing owl prefers habitat with short, sparse vegetation and few shrubs, level to gentle topography, and well-drained soils (Haug et al. 1993). In San Diego County, the burrowing owl typically inhabits coastal lowlands in grasslands, agricultural areas, and coastal dunes (Unitt 2004).

In addition to burrowing habitat, the burrowing owl requires ample foraging habitat surrounding its burrows. This species concentrates it foraging within approximately 2,000 feet of its burrow, which equates to an area of up to approximately 300 acres (Haug and Oliphant 1990, Rosenberg and Haley 2004); however, the burrowing owl is known to use much smaller patch sizes, especially when they are located adjacent to suitable breeding and/or foraging habitat. Preferred foraging habitat consists of dry, open, relatively flat expanses with short grasses and sparse shrub cover (Ehrlich et al. 1988).

Although the burrowing owl may dig its own burrows (Thomsen 1971, Barclay 2007), this opportunistic species usually modifies or enlarges existing burrows that were previously used by mammals. In California, the burrowing owl frequently uses burrows of California ground squirrel (*Spermophilus beecheyi*) and round-tailed ground squirrel (*Citellus tereticaudus*), but it may also use dens or holes dug by American badger (*Taxidea taxus*), coyote (*Canis latrans*), and fox (*Vulpes* spp.; Ronan 2002, CDFW 2012). In addition to earthen burrows, the burrowing owl may also use natural rock cavities, debris piles, culverts, openings beneath cement or asphalt pavement, and pipes (Rosenberg et al. 1998) as well as artificial burrows (Smith and Belthoff 2003) for nesting, roosting, and cover (CDFW 2012).

2.3 Burrowing Owl Breeding Information

Burrowing owl breeding behaviors include a wide range of activities associated with site selection by males; breeding pair formation; actual copulation; egg laying, incubation, and hatching; and care of the young during fledging and post-fledging. In California, the burrowing owl breeding season typically occurs between February 1 and August 31; however, breeding outside of this window has been documented under appropriate environmental conditions (CDFW 2012). The peak of the breeding season, when most burrowing owls have active nests, typically occurs between April 15 and July 15. In addition to its nest burrow, the burrowing owl may use satellite burrows to reduce predation and parasite infestation, particularly while caring for nestlings (CDFW 2012).

2.4 Burrowing Owl Population Threats

In California, the burrowing owl is threatened by a variety of factors, including habitat loss, control of burrowing rodents, and direct mortality. Population declines have been attributed to habitat loss, degradation, and fragmentation resulting most often from conversion of suitable habitat as a result of urbanization (Gervais et al. 2008). Burrowing rodent control programs, especially those targeting the California ground squirrel, threaten burrowing owl populations because ground squirrel burrows are the burrows most often utilized by burrowing owl for nesting and cover. Thus, elimination of burrowing rodents has lead to both recent and historical declines of burrowing owl populations in California and

nationwide (Klute et al. 2003). Direct mortality from vehicle collisions (Haug et al. 1993, Gervais et al. 2008), agricultural drain/ditch maintenance, discing in fallow fields (Rosenberg and Haley 2004, Catlin and Rosenberg 2006), and wind turbine collisions (Thelander et al. 2003) as well as exposure to pesticides (Klute et al. 2003, Gervais et al. 2008) have all added to the decline of the burrowing owl in California. In areas of remaining open habitat close to or surrounded by developed areas, disturbance from human activity (e.g., walking, jogging, off-road activity, dog walking) and loose and feral pets are likely factors deterring the burrowing owl from these areas (Wesemann and Rowe 1985, Millsap and Bear 2000).

3.0 METHODS

A focused burrowing owl habitat assessment was performed within the 2015 burrowing owl survey area, which included the main Proposed Project alignment and a 500-foot buffer from the main alignment. Focused burrowing owl surveys were conducted in all suitable habitat identified within the 2015 burrowing owl survey area during the habitat assessment. The methods used for the habitat assessment and focused surveys are presented in this section.

3.1 Habitat Assessment Methods

Prior to initiating the focused burrowing owl surveys within the 2015 burrowing owl survey area, qualified biologists conducted a focused habitat assessment during winter 2015 to identify locations of suitable habitat for the species both within the 2015 burrowing owl survey area. The habitat assessment consisted of an analysis of historical occurrence data, desktop evaluation of available site data and aerial imagery, and a field evaluation to further investigate and map suitable burrowing owl habitat. The following sections provide detail on the habitat assessment methods.

3.1.1 Historical Occurrence Data

BBS obtained historical burrowing owl occurrence data for the main Proposed Project alignment and an approximately 5-mile buffer from the SanBIOS database (County of San Diego 2014) and CDFW *California Natural Diversity Database* (CNDDB; CDFW 2014a). BBS also reviewed other special-status species resources, including the CDFW Special Animals list (CDFW 2014b); Proceedings of the California Burrowing Owl Symposium (Barclay et al. 2007); San Diego County Breeding Bird Atlas (Unit 2004); North American Breeding Bird Survey, Results Analysis 1966-2012 (Sauer et al. 2014); eBIRD (http://ebird.org); Gervais et al. (2008); the San Diego Natural History Museum (SDNHM) Bird Atlas Project (SDNHM 2014); and other regional and site-specific relevant information, data, and literature.

3.1.2 Focused Desktop Evaluation

BBS obtained aerial imagery of the 2015 burrowing owl survey area and prepared a draft map of potentially suitable burrowing owl habitat that may require surveys. Patches of open habitat that could potentially support burrowing owl breeding and/or foraging habitat were identified on the maps, while portions of the 2015 burrowing owl survey area that were fully developed, covered by dense vegetation, or otherwise appeared to be unsuitable based on

the aerial imagery were identified as potentially excludable. All of these were later evaluated during the focused field evaluation, described below.

3.1.3 Focused Field Evaluation

BBS used the results of the background research along with the draft map of potentially suitable burrowing owl habitat as guidance during the field evaluation conducted within the 2015 burrowing owl survey area. BBS assessed the entire 2015 burrowing owl survey area during the field evaluation, with the exception of the proposed staging yard located in the northern portion of the intersection of Camino Del Sur and Carmel Valley Road, because this proposed staging yard was added in late spring 2015. The areas that were excluded during the desktop evaluation were visited to verify that these areas did not support suitable burrowing owl habitat and could be excluded. In addition, the patches of potentially suitable habitat identified on the draft map were field-truthed and refined. Additional areas of suitable habitat that were not identified during the desktop evaluation were drawn onto the map by hand in the field. BBS used binoculars to view portions of the burrowing owl habitat assessment area where lawful access could not be achieved. In addition, photographs were taken of each polygon evaluated in the burrowing owl habitat assessment area.

To consistently and systematically evaluate each patch of potentially suitable habitat within the 2015 burrowing owl survey area for the potential to support the burrowing owl, BBS recorded data on the following criteria:

- polygon patch size
- dominant vegetation and land use within and adjacent to the polygon
- presence of adjacent foraging habitat
- vegetation height and shrub density within the polygon
- presence of friable soils within the polygon
- presence and quantity of burrows and burrow complexes within the polygon
- other evidence of fossorial animal use and burrow features within the polygon
- slope steepness within the polygon

BBS used this data to assess the overall potential of each potentially suitable burrowing owl habitat polygon to support the burrowing owl, taking into consideration the historical occurrence data and the evaluation criteria. Each habitat patch was either determined as not expected to support burrowing owl, or as having a low, moderate, or high potential to support burrowing owl.

3.2 Focused Burrowing Owl Survey Methods

Qualified biologists conducted focused surveys for the burrowing owl in accordance with the current CDFW survey protocol, titled *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). Surveys were conducted within the entire 2015 burrowing owl survey area, with the exception of the proposed staging yard located in the northern portion of the intersection of Camino Del Sur and Carmel Valley Road, because this proposed staging yard was added in late spring 2015 after the first survey window had passed.

A total of four protocol-level surveys spaced at least 3 weeks apart were conducted between February 15 and July 15 – one survey was conducted within the first survey window (i.e., February 15 and April 15), and three more were conducted within the second

survey window (i.e., April 15 and July 15), with one survey after June 15. The surveys were conducted between civil twilight and 10:00 am. Surveys were not conducted during adverse weather conditions (i.e., wind speeds greater than 20 kilometers per hour, rain, or dense fog). Surveyors walked straight-line transects spaced approximately 7 to 20 meters apart, (based on the vegetation height and density) throughout the suitable habitat. The biologists scanned for burrowing owl every 100 meters with the aid of binoculars; watched for burrows, sign, and owls; and listened for burrowing owl calls. Surveyors took care not to flush burrowing owls.

If burrowing owl is detected during a survey, surveyors record 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 collect data on the number of burrowing owl or nesting pairs at each location (by nestlings, juveniles, adults, and those of an unknown age), number of active burrows, burrowing owl sign at burrows, burrowing owl behavior, possible burrowing owl predators present and any evidence of predation on burrowing owl. In addition, during all surveys, surveyors record other wildlife species observed directly or detected indirectly by sign, including scat, tracks, calls, and other evidence.

4.0 RESULTS & DISCUSSION

The results of the habitat assessment and focused surveys for burrowing owl within the 2015 burrowing owl survey area are presented in this section.

4.1 Habitat Assessment Results

This section provides a summary of the results of the historical occurrence data analysis as well as a result of the focused field evaluation.

4.1.1 Historical Burrowing Owl Occurrence within Vicinity of the Proposed Project

A search of the SanBIOS database (County of San Diego 2014) and CNDDB (CDFW 2014a) did not result in any historical burrowing owl occurrence data within the burrowing owl habitat assessment areas and an approximately 5-mile buffer.

According to current literature, breeding burrowing owls are believed to be absent from the main Proposed Project alignment and vicinity (Unitt 2004; Lincer and Bloom 2007). Currently, the closest known breeding occurrences are at Naval Air Station North Island, south San Diego coastal areas, and Otay Mesa (Unitt 2004; Lincer and Bloom 2007). Migrant wintering burrowing owls can utilize a variety of habitats not suitable for breeding individuals; therefore, migrant wintering burrowing owls have a potential to occur throughout the 2015 burrowing owl survey area. Migrant wintering owls were last documented in the vicinity of the main Proposed Project alignment along ridgetops in the northeastern corner of MCAS Miramar during the winter of 1996-1997 (Unitt 2004).

4.1.2 Desktop and Field Evaluation Results

During the initial desktop evaluation of the 2015 burrowing owl survey area, BBS identified 35 individual polygons of potentially suitable burrowing owl habitat within the 2015 burrowing owl survey area based on our understanding of the existing conditions onsite

along with an interpretation of aerial imagery. After the initial desktop assessment, four new polygons were added to the 2015 burrowing owl survey area and are proposed to be used as staging yards, including one polygon for the Evergreen Nursery staging yard, one polygon for the Black Mountain Ranch Community Park staging yard, and two polygons for the Camino Del Sur staging yard.

BBS biologists Darin Busby and Laurie Gorman conducted the field evaluation of the 39 potentially suitable burrowing owl polygons within the 2015 burrowing owl survey area on November 17 and 18, 2014, and on January 26 and February 18, 2015, to (1) verify that areas that were potentially excluded during the desktop evaluation did not support suitable burrowing owl habitat and (2) evaluate the potentially suitable burrowing owl habitat polygons to determine if the existing habitat within these polygons has a potential to support burrowing owl. The Black Mountain Community Park staging yard is no longer part of the Proposed Project; therefore, the results of the habitat assessment at this staging yard will not be discussed in this report.

No burrowing owls or burrowing owl sign was observed during the focused burrowing owl habitat assessment of the 2015 burrowing owl survey area. Based on the field assessment revisions to the potentially suitable habitat, BBS evaluated approximately 404.28 acres within 38 polygons distributed within the 2015 burrowing owl survey area (Attachment 1: Figure 4). A summary of the data collected for each polygon as well as the potential for burrowing owl to occur in each polygon is presented in Attachment 2: Burrowing Owl Habitat Assessment Summary Table. In addition, representative photographs of the polygons evaluated in the 2015 burrowing owl survey area are included in Attachment 3: Burrowing Owl Habitat Assessment Photographs.

Of the 38 polygons evaluated, 13 of the polygons did not provide potentially suitable habitat for breeding and resident burrowing owl (Attachment 1: Figure 4) because they had at least three, and usually more, of the following characteristics:

- small polygon size
- vegetation community and/or density within the polygon not suitable for burrowing owl
- polygon surrounded by unsuitable burrowing owl habitat, such as development or tall, dense vegetation
- compact soils
- few to no small mammal burrows and/or burrow complexes
- no adjacent open foraging or breeding habitat

The remaining 25 polygons provide potentially suitable habitat for breeding and resident burrowing owl (Attachment 1: Figure 4). These polygons had at least four, and sometimes more, of the following characteristics:

- moderate to very large polygon size
- vegetation community and/or density within the polygon suitable for burrowing owl
- friable soils
- small mammal burrows and/or burrow complexes present within the polygon
- adjacent open foraging or breeding habitat

4.2 Focused Burrowing Owl Survey Results

Between March 23 and July 15, 2015, a total of four focused burrowing owl surveys were conducted over 19 days throughout the 2015 burrowing owl survey area (Attachment 1: Figure 4; Attachment 4).

During the last day of the first round of focused burrowing owl surveys on March 26, 2015, approximately 13.71 acres of habitat were excluded (all of the habitat in Polygon 27 and some of the habitat in Polygon 28) from the survey area because of active construction, leaving approximately 360.03 acres across 24 polygons of potentially suitable burrowing owl habitat to be surveyed during the focused burrowing owl surveys.

All surveys were conducted during appropriate weather conditions by BBS biologists Darin Busby and Laurie Gorman with assistance from Brian Lohstroh, Travis Cooper, and Kevin Clark. Attachment 3 contains representative photographs of both unsuitable and suitable burrowing owl habitat within the 2015 burrowing owl survey area. Attachment 4 provides a summary of survey conditions, including survey times and weather conditions, and personnel. Attachment 5 contains a list of wildlife species detected during the surveys.

No burrowing owls or burrowing owl sign were detected during the 2015 focused burrowing owl surveys conducted within the 2015 burrowing owl survey area. During the surveys, all biologists searched for suitable small mammal burrows and burrow complexes that were at least ground squirrel size or larger. Numerous small mammal burrows were observed throughout the 2015 burrowing owl survey area; however, only small mammal burrow complexes and burrows of suitable size and shape were mapped as 'potentially suitable burrows', as displayed in Attachment 1: Figure 4.

A total of 68 wildlife species were detected during the focused burrowing owl surveys. Of these 68 species, three are considered special-status species - the coastal California gnatcatcher (*Polioptila californica californica*) is a federally listed threatened species and a CDFW Species of Special Concern; the grasshopper sparrow (*Ammodramus savannarum*) and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) are both CDFW Species of Special Concern. It should be noted that these special-status species and their locations presented in Attachment 1: Figure 4 may reflect repeated detections of the same individuals of a species from one survey to the next; therefore, Attachment 1: Figure 4 is intended to show the type and general location of these special-status species detected, not quantity of individuals present.

SUMMARY & DISCUSSION

No burrowing owls were detected during the 2015 focused burrowing owl surveys conducted within the 2015 burrowing owl survey area.

The proposed staging yard located in the northern portion of the intersection of Camino Del Sur and Carmel Valley Road (Attachment 1: Figure 4) was added to the main Proposed Project alignment in late spring 2015. Because the current burrowing owl survey protocol requires that at least one breeding season survey be conducted between February 15 and April 15 (CDFW 2012) and because the proposed staging yard was added after this survey window, it was determined that focused breeding season surveys would not be conducted in 2015. However, protocol-level burrowing owl surveys will be conducted in suitable

habitat within this proposed staging yard and a 500-foot buffer before this proposed staging yard is utilized for the Proposed Project.

Please do not hesitate to contact Melissa Busby at melissa@busbybiological.com or 858.334.9507 or Darin Busby at darin@busbybiological.com or 858.334.9508 if you have any questions.

Sincerely,

Melissa Busby
Owner/Principal Biologist

Darin Busby
Owner/Principal Biologist

ATTACHMENTS

Attachment 1: Figures
Attachment 2: Habitat Assessment Summary Table
Attachment 3: Photos
Attachment 4: Survey Conditions
Attachment 5: Wildlife Species Detected

REFERENCES

Barclay, J.H., K.W. Hunting, J.L. Lincer, J. Linthicum, and T.A. Roberts, editors
2007 Proceedings of the California Burrowing Owl Symposium, 11-12 November 2003, Sacramento, California, USA. Bird Populations Monographs No. 1. The Institute for Bird Populations and Albion Environmental, Inc., Point Reyes Station, CA.

Bent, A.C.
1961 Life histories of North American birds of prey. Part 2. U.S. Natl. Mus. Bull. No. 170. Dover Publications, New York.

Busby Biological Services, Inc. (BBS)
2014 *Biological Technical Report for Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project*, City of San Diego, San Diego County, California. March 2014.
2015 *Burrowing Owl Survey Summary Report for the Encina Hub Portion of the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project*, San Diego County, California. July 23.

California Department of Fish and Wildlife (CDFW)
2012 Staff Report on Burrowing Owl Mitigation. State of California. Natural Resources Agency, Department of Fish and Game. March 2012.
2014a Natural Diversity Data Base. Nongame-Heritage Program, California Department of Fish and Wildlife, Sacramento.
2014b CDFW Biogeographic Data Branch, California Natural Diversity Database. Special Animals List. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/spanimals.pdf. January 2011. Accessed October 2014.

Catlin, D.H. and D.K. Rosenberg
2006 Nest destruction increases mortality and dispersal of Burrowing Owls in the Imperial Valley, California. Southwest Naturalist 51: 406–409.

County of San Diego
2014 SanBIOS GIS Database. Created in 2009. Available at: http://www.sangis.org/. Accessed October 2014.

Desante, D.F., E.D. Ruhlen, S.L. Adamany, K.M. Burton, and S. Amin
1997 A census of Burrowing Owls in Central California in 1991. Pages 38-48 in Lincer, J. L. and K. Steenhof [EDS]. 1997. The Burrowing Owl, Its Biology and Management: Including the Proceedings of the First International Burrowing Owl Symposium. Raptor Research Report Number 9.

Ehrlich, P.R., D.S. Dobkin, and D. Wheye
1988 The Birder's Hanbook; A Field Guide to the Natural History of North American Birds. Simon and Schuster Inc. New York.

Garrett, K. and J. Dunn
1981 Birds of southern California: status and distribution. Los Angeles Audubon Soc., Los Angeles.

Gervais, J.A., D.K. Rosenberg, and L.A. Comrack
2008 Burrowing Owl (Athene cunicularia) *in* California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento, California, USA.

Grinnell, J., and A.H. Miller
1986 The Distribution of the Birds of California. *Pacific Coast Avifauna* No. 27, published 1944 and reprinted by Artimisa Press, Lee Vining, California.

Haug, E.A., B.A. Millsap, and M.S. Martell
1993 Burrowing owl (Speotyto cunicularia), *in* A. Poole and F. Gill, editors, The Birds of North America, The Academy of Natural Sciences, Philadelphia, Pennsylvania, and The American Ornithologists' Union, Washington, D.C., USA.

Haug, E.A. and L.W. Oliphant
1990 Movements, activity patterns, and habitat use of burrowing owls in Saskatchewan. Journal of Wildlife Management 54: 27-35.

Klute, D.S., L.W. Ayers, M.T. Green, W.H. Howe, S.L. Jones, J.A. Shaffer, S.R. Sheffield, and T.S. Zimmerman
2003 Status Assessment and Conservation Plan for the Western Burrowing Owl in the United States. U.S. Department of Interior, Fish and Wildlife Service, Biological Technical Publication FWS/BTP-R6001-2003, Washington, D.C.

Lincer, J.L. and P.H. Bloom
2007 The Status of the Burrowing Owl in San Diego County, California. Proceedings of the California Burrowing Owl Symposium 90-102 © The Institute for Bird Populations

Millsap, B.A. and C. Bear
2000 Density and reproduction of Burrowing Owls along an urban development gradient. Journal of Wildlife Management 64:33-41.

Ronan, N.A.
2002 Habitat selection, reproductive success, and site fidelity of burrowing owls in a grassland ecosystem. Thesis, Oregon State University, Corvallis, Oregon, US

Rosenberg, D.K., J.A. Gervais, H. Ober, and D.F. DeSante
1998 An adaptive management plan for the burrowing owl population at Naval Air Station Lemoore, California, USA. Publication 95, Institute for Bird Populations, P.O. Box 1346, Pt. Reyes Station, CA 94956.

Rosenberg, D.K., and K.L. Haley
2004 The ecology of burrowing owls in the agroecosystem of the Imperial Valley, California. Studies in Avian Biology 27:120-135.

Sauer, J.R., J.E. Hines, J.E. Fallon, K.L. Pardieck, D.J. Ziolkowski, Jr., and W.A. Link

2014 *The North American Breeding Bird Survey, Results and Analysis 1966 - 2012.* Version 02.19.2014 USGS Patuxent Wildlife Research Center, Laurel, MD.

San Diego Natural History Museum (SDNHM)
2014 http://www.sdnhm.org/science/birds-and-mammals/projects/san-diego-county-bird-atlas/. Bird Atlas Project. Accessed October 2014.

Shuford, W.D. and T. Gardali
2008 California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Smith, B.W. and J.R. Belthoff
2003 Patterns of artificial burrow occupancy and reuse by burrowing owls in Idaho. Wildlife Society Bulletin 31:1-7.

Thomsen, L.
1971 Behavior and ecology of burrowing owls on the Oakland Municipal Airport Condor 73: 177-192.

U.S. Geological Survey (USGS)
1967a 7.5-minute Poway Topographic Quadrangle (Photorevised 1975)
1967b 7.5-minute Del Mar Topographic Quadrangle (Photorevised 1975)
1967c 7.5-minute La Jolla Topographic Quadrangle (Photorevised 1975)

Unitt, Philip
2004 San Diego County Bird Atlas. San Diego Natural History Museum. San Diego, CA.

Wesemann, T. and M. Rowe.
1985 Factors influencing the distribution and abundance of Burrowing Owls in Cape Coral, Florida. Pages 129-137 in Adams and Leedy, EDS. Integrating Man and Nature in the Metropolitan Environment. Proc. Natl. Symp. on Urban Wildlife.

PROJECT BIOLOGIST SIGNATURE PAGE

All biologists performing focused, protocol-level, burrowing owl (*Athene cunicularia*) surveys for the Encina Hub portion of the proposed Sycamore to Peñasquitos Substation 230 kilovolt transmission line project (Proposed Project) were qualified to survey for this species. The undersigned project biologists certify this report to be a complete and accurate account of the findings and conclusions of surveys for burrowing owl conducted for the Proposed Project during spring 2015.

Darin Busby
Busby Biological Services, Inc.

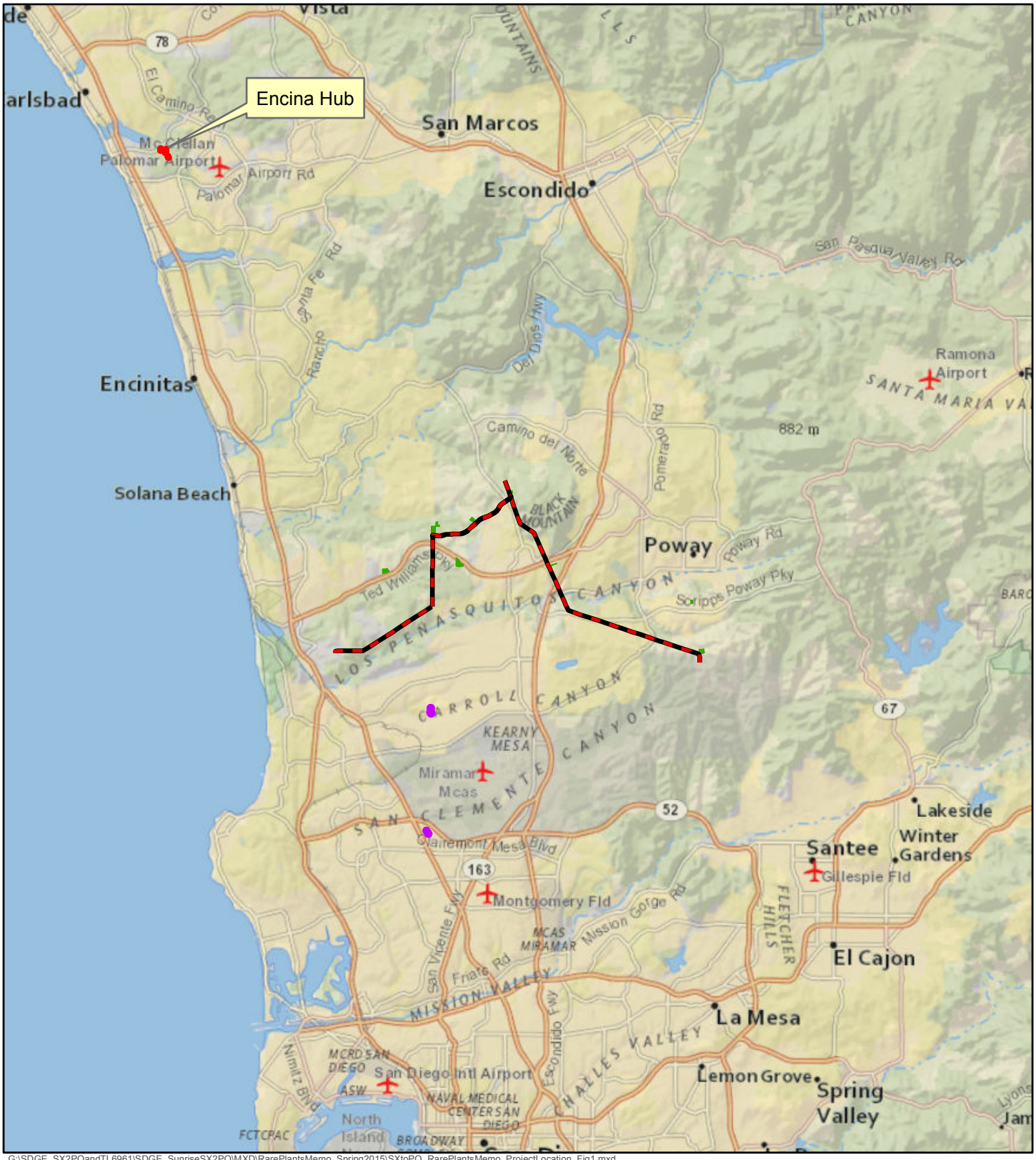
Laurie Gorman
Busby Biological Services, Inc.

Travis Cooper
Cooper Biological Services

Brian Lohstroh
Lohstroh Biological Consulting

Kevin B. Clark
San Diego Natural History Museum

ATTACHMENT 1 – Figures



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_ProjectLocation_Fig1.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Project Location Map

Figure 1

- Proposed Project Route
- Staging Yards
- Encina Hub
- Mira Mesa Hub

4/22/2015

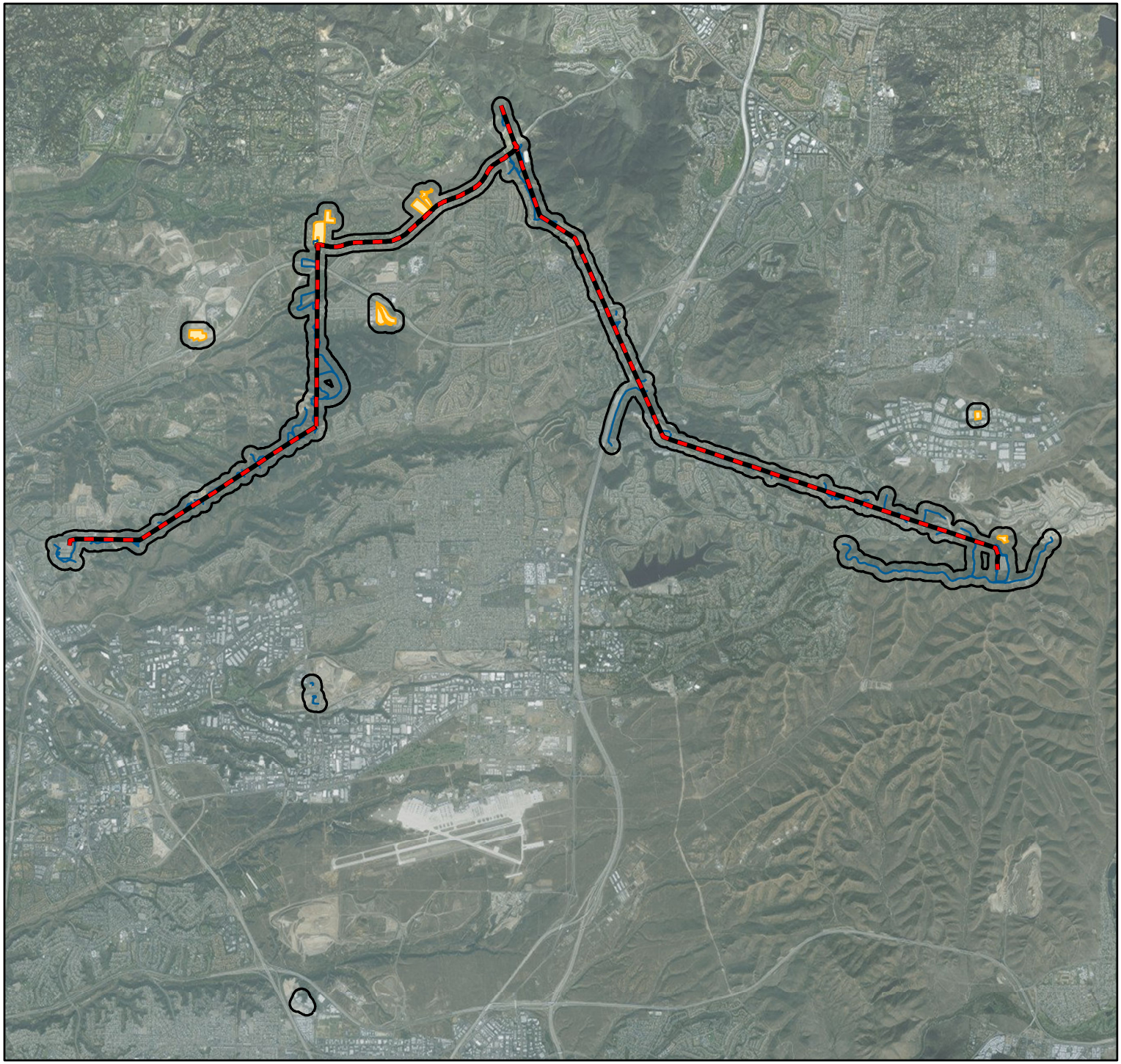
0 2 4 6 Miles

N W E S

TRC

SDGE

A Sempra Energy utility



Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment Area

Figure 2

- Main Project Alignment
- Access Roads
- Staging Yards
- Project Foortprint 500ft Buffer

TRC

SDGE A Sempra Energy utility

8/5/2015

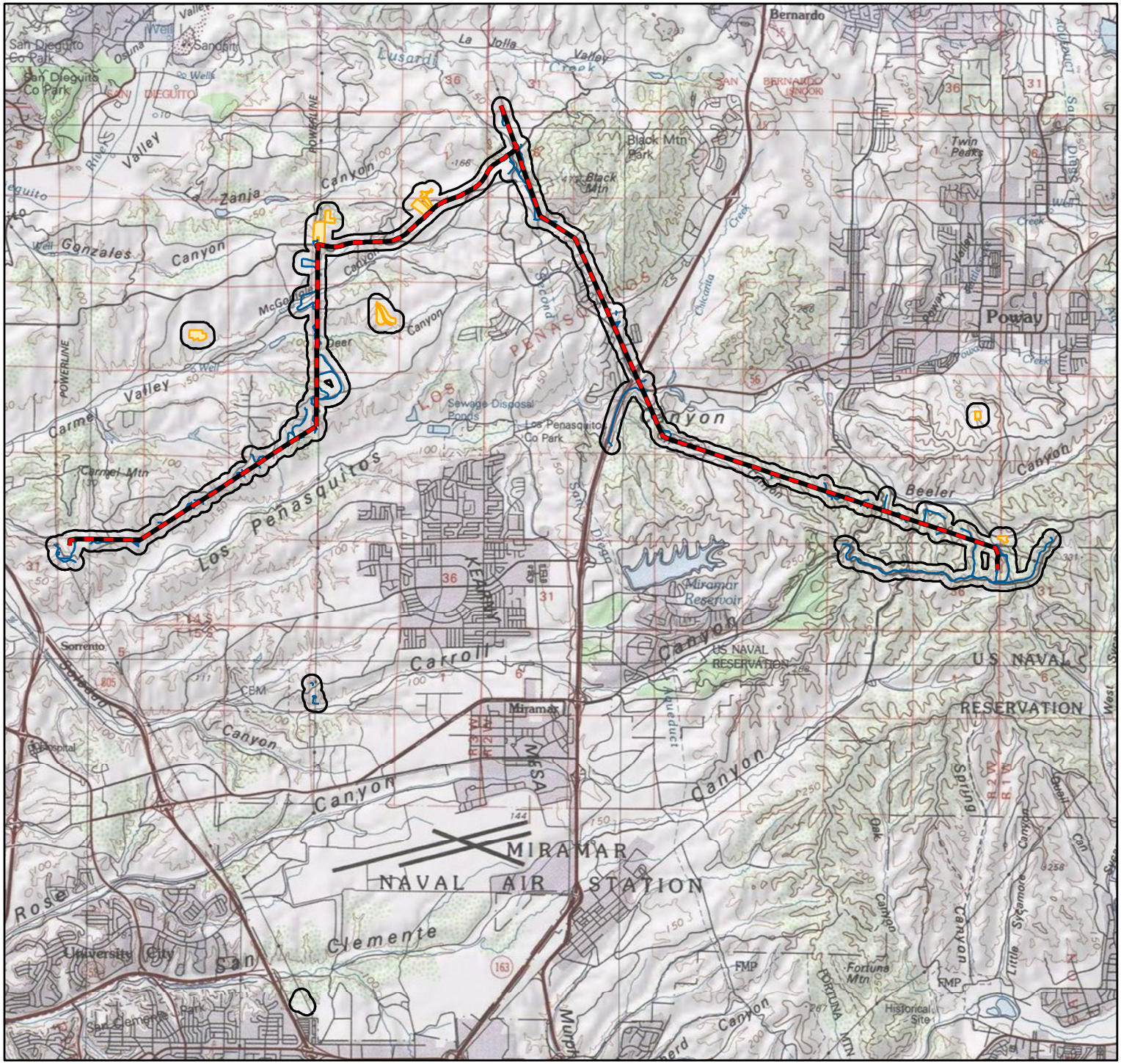
N W E S

0 3,400 6,800 10,200 Feet

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

Sources: TRC, 2015; SDG&E, 2015; NatGeo; ESRI, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, GetMapping, Aerogrid, Earthstar, ICP, AEX, IGN, IGP, swisstopo, DigitalGlobe, GeoEye

C:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_BUOW\SXtoPQ_BUOW_HabAsmtReport_Fig2.mxd



Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment Area

Figure 3

- Main Project Alignment
- Access Roads
- Staging Yards
- Project Foortprint 500ft Buffer

TRC

SDGE

A Sempra Energy utility

8/5/2015

N W E S 0 3,400 6,800 10,200 Feet

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

Sources: TRC, 2015; SDG&E, 2015; NatGeo; ESRI, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, GetMapping, Aerogrid, Earthstar, ICP, AEX, IGN, IGP, swisstopo, DigitalGlobe, GeoEye

C:\SDGE_SX2POandTL6961\SDGE_SunriseSX2PO\MXD\SXtoPQ_BUOWSXtoPQ_BUOW_HabAsmtReport_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment and Survey Results

Figure 4

- San Diego black-tailed jackrabbit
- coastal California gnatcatcher
- grasshopper sparrow
- Potentially suitable burrows
- Main Project Alignment
- Project Access Roads
- Project Footprint 500ft Buffer

Potential for Occurrence

- Excluded because of active construction
- Not Expected to Occur
- Potential to Occur; not yet Surveyed
- Potential to Occur

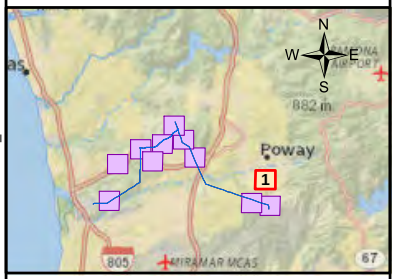
TRC

SDGE A Sempra Energy utility

12/8/2015

0 325 650 975 Feet

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.



Sources: TRC, 2015; Busby Biological Services, 2015; SDG&E, 2015; ESRI, Delorme, USDA, USGS, GeoEye, AEX, Getmapping, IGN, IGP, ICP, swisstopo, UNEP-WCMC, NASA, ESA, METI, NRCAN, GEBCO, NOAA, Earstar, CNES/Airbus, DigitalGlobe, NatGeo

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ BUOW\SXtoPQ_BUOW_HabAsmtReport_Fig4.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment and Survey Results

Figure 4

- San Diego black-tailed jackrabbit
- coastal California gnatcatcher
- grasshopper sparrow
- Potentially suitable burrows
- Main Project Alignment
- Project Access Roads
- Project Footprint 500ft Buffer

Potential for Occurrence

- Excluded because of active construction
- Not Expected to Occur
- Potential to Occur; not yet Surveyed
- Potential to Occur

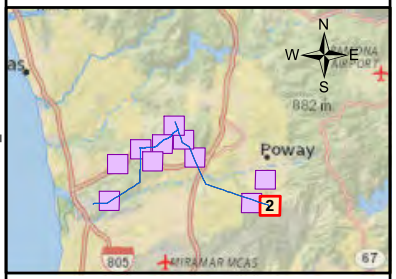
TRC

SDGE A Sempra Energy utility

12/8/2015

0 325 650 975 Feet

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.



Sources: TRC, 2015; Busby Biological Services, 2015; SDG&E, 2015; ESRI, Delorme, USDA, USGS, GeoEye, AEX, Getmapping, IGN, IGP, ICP, swisstopo, UNEP-WCMC, NASA, ESA, METI, NRCAN, GEBCO, NOAA, Earstar, CNES/Airbus, DigitalGlobe, NatGeo

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ BUOW\SXtoPQ_BUOW_HabAsmtReport_Fig4.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment and Survey Results

Figure 4

- San Diego black-tailed jackrabbit
- coastal California gnatcatcher
- grasshopper sparrow
- Potentially suitable burrows
- Main Project Alignment
- Project Access Roads
- Project Footprint 500ft Buffer

Potential for Occurrence

- Excluded because of active construction
- Not Expected to Occur
- Potential to Occur; not yet Surveyed
- Potential to Occur

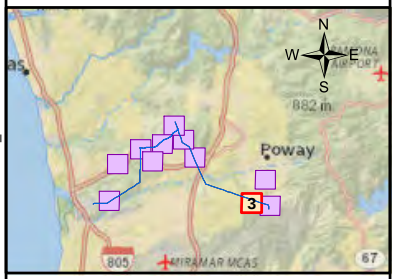
TRC

12/8/2015

SDGE — A Sempra Energy utility

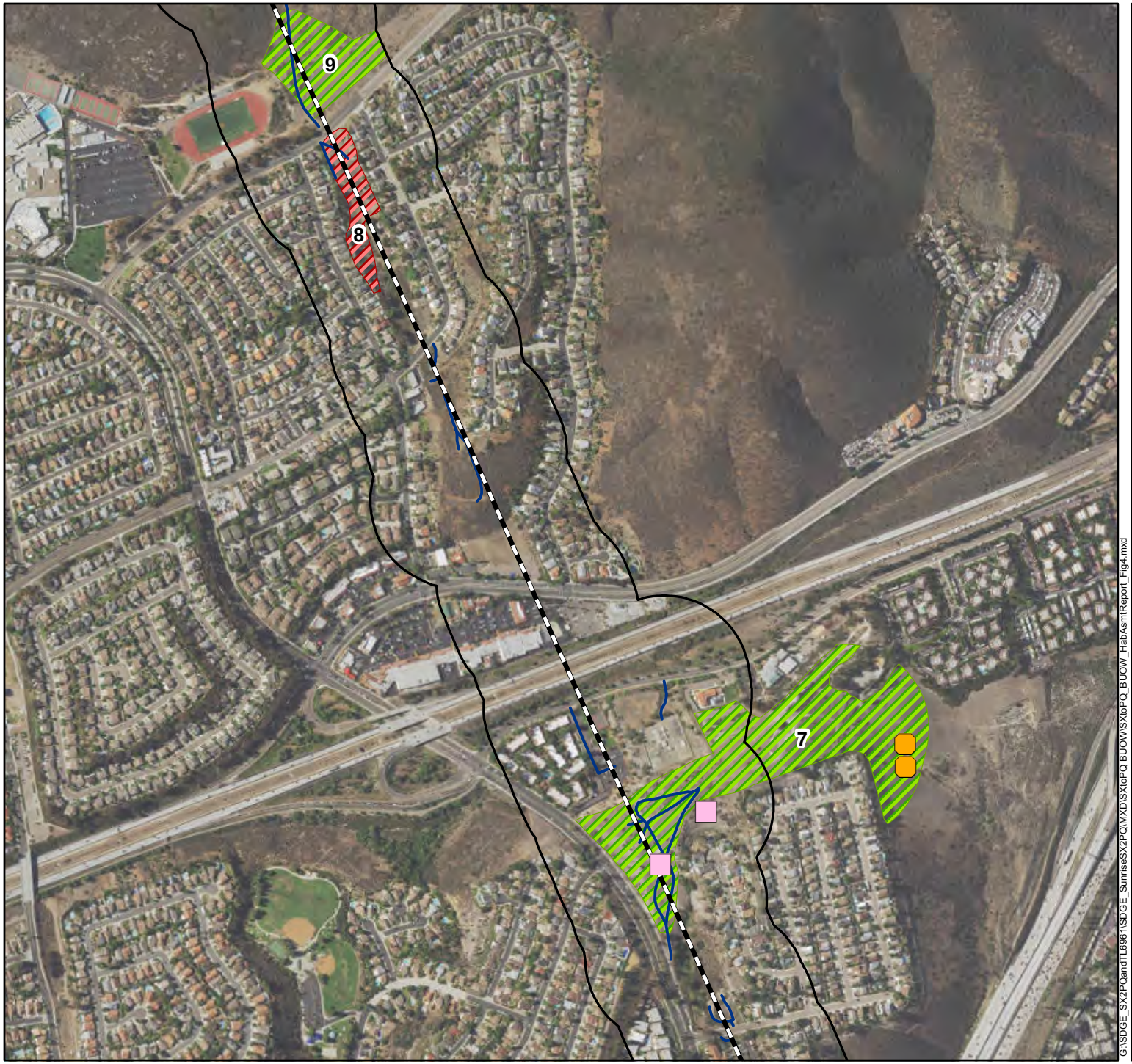
0 325 650 975 Feet

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.



Sources: TRC, 2015; Busby Biological Services, 2015; SDG&E, 2015; ESRI, Delorme, USDA, USGS, GeoEye, AEX, Getmapping, IGN, IGP, ICP, swisstopo, UNEP-WCMC, NASA, ESA, METI, NRCAN, GEBCO, NOAA, Earstar, CNES/Airbus, DigitalGlobe, NatGeo

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ BUOW\SXtoPQ_BUOW_HabAsmtReport_Fig4.mxd



Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment and Survey Results

Figure 4

- San Diego black-tailed jackrabbit
- coastal California gnatcatcher
- grasshopper sparrow
- Potentially suitable burrows
- Main Project Alignment
- Project Access Roads
- Project Footprint 500ft Buffer

Potential for Occurrence

- Excluded because of active construction
- Not Expected to Occur
- Potential to Occur; not yet Surveyed
- Potential to Occur

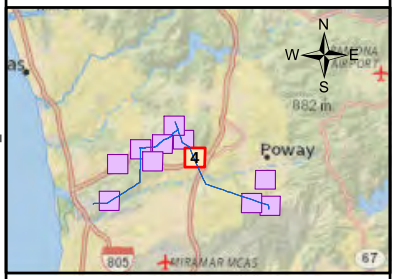
TRC

SDGE A Sempra Energy utility

12/8/2015

0 325 650 975 Feet

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.



Sources: TRC, 2015; Busby Biological Services, 2015; SDG&E, 2015; ESRI, Delorme, USDA, USGS, GeoEye, AEX, Getmapping, IGN, IGP, ICP, swisstopo, UNEP-WCMC, NASA, ESA, METI, NRCAN, GEBCO, NOAA, Earstar, CNES/Airbus, DigitalGlobe, NatGeo

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ BUOWSXtoPQ_BUOW_HabAsmtReport_Fig4.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment and Survey Results

Figure 4

- San Diego black-tailed jackrabbit
- coastal California gnatcatcher
- grasshopper sparrow
- Potentially suitable burrows
- Main Project Alignment
- Project Access Roads
- Project Footprint 500ft Buffer

Potential for Occurrence

- Excluded because of active construction
- Not Expected to Occur
- Potential to Occur; not yet Surveyed
- Potential to Occur

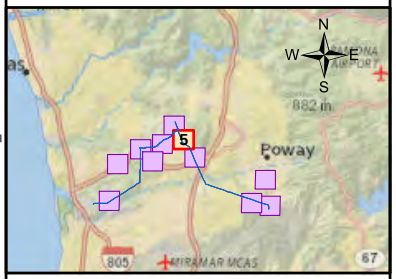
TRC

SDGE A Sempra Energy utility

12/8/2015

0 325 650 975 Feet

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.



Sources: TRC, 2015; Busby Biological Services, 2015; SDG&E, 2015; ESRI, Delorme, USDA, USGS, GeoEye, AEX, Getmapping, IGN, IGP, ICP, swisstopo, UNEP-WCMC, NASA, ESA, METI, NRCAN, GEBCO, NOAA, Earstar, CNES/Airbus, DigitalGlobe, NatGeo

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ BUOW\SXtoPQ_BUOW_HabAsmtReport_Fig4.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment and Survey Results

Figure 4

- San Diego black-tailed jackrabbit
- coastal California gnatcatcher
- grasshopper sparrow
- Potentially suitable burrows
- Main Project Alignment
- Project Access Roads
- Project Footprint 500ft Buffer

Potential for Occurrence

- Excluded because of active construction
- Not Expected to Occur
- Potential to Occur; not yet Surveyed
- Potential to Occur

TRC

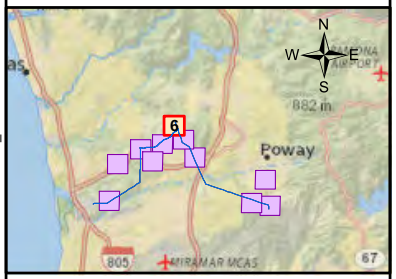
SDGE

A Sempra Energy utility

12/8/2015

0 325 650 975 Feet

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.



Sources: TRC, 2015; Busby Biological Services, 2015; SDG&E, 2015; ESRI, Delorme, USDA, USGS, GeoEye, AEX, Getmapping, IGN, IGP, ICP, swisstopo, UNEP-WCMC, NASA, ESA, METI, NRCAN, GEBCO, NOAA, Earstar, CNES/Airbus, DigitalGlobe, NatGeo

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ BUOWSXtoPQ_BUOW_HabAsmtReport_Fig4.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment and Survey Results

Figure 4

- San Diego black-tailed jackrabbit
- coastal California gnatcatcher
- grasshopper sparrow
- Potentially suitable burrows
- Main Project Alignment
- Project Access Roads
- Project Footprint 500ft Buffer

Potential for Occurrence

- Excluded because of active construction
- Not Expected to Occur
- Potential to Occur; not yet Surveyed
- Potential to Occur

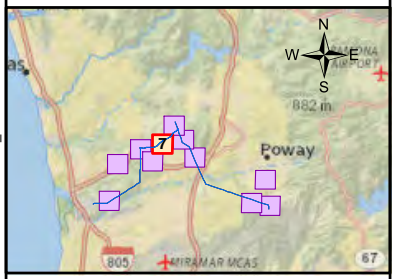
TRC

SDGE A Sempra Energy utility

12/8/2015

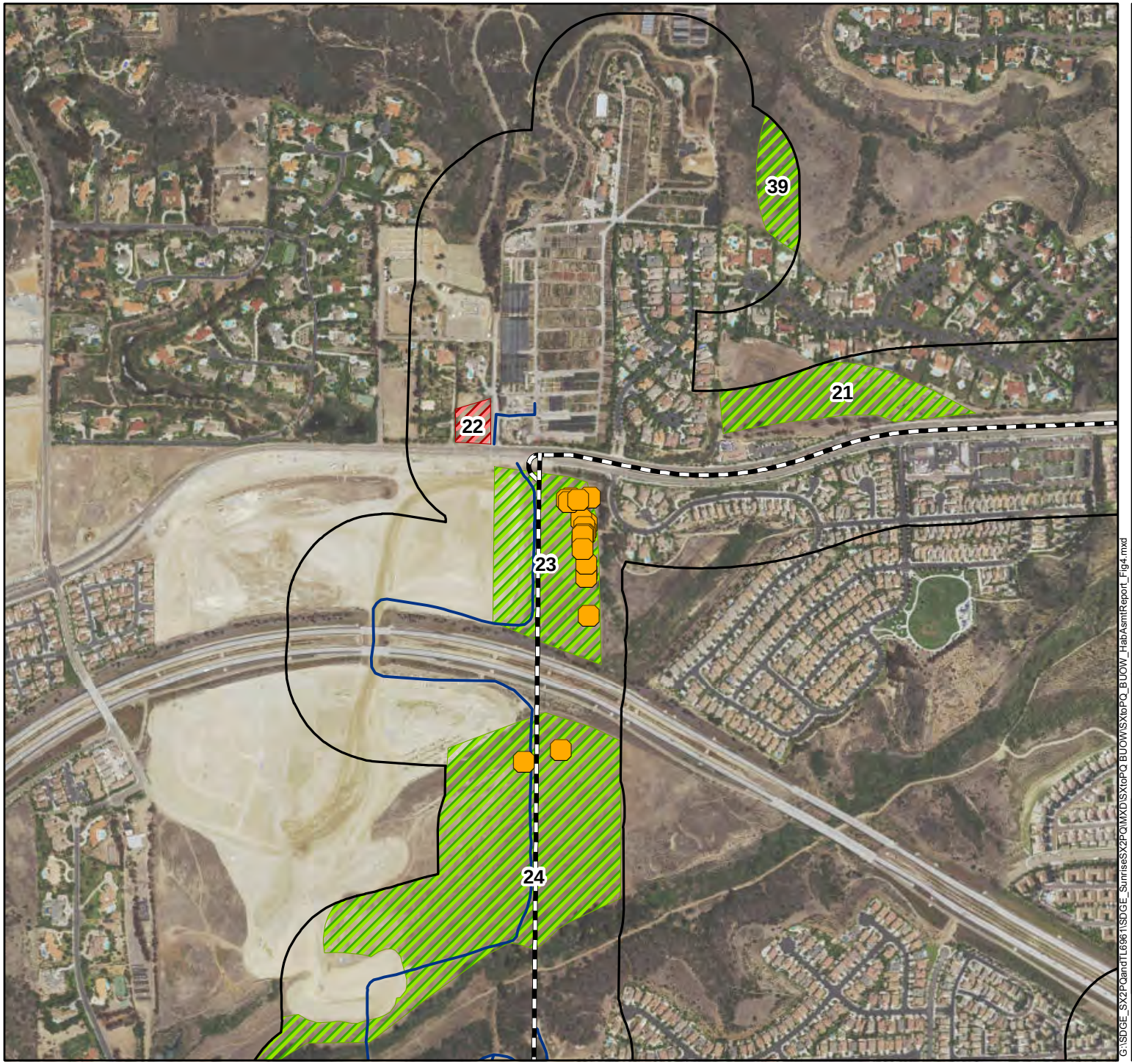
0 325 650 975 Feet

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.



Sources: TRC, 2015; Busby Biological Services, 2015; SDG&E, 2015; ESRI, Delorme, USDA, USGS, GeoEye, AEX, Getmapping, IGN, IGP, ICP, swisstopo, UNEP-WCMC, NASA, ESA, METI, NRCAN, GEBCO, NOAA, Earstar, CNES/Airbus, DigitalGlobe, NatGeo

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ BUOWSXtoPQ_BUOW_HabAsmtReport_Fig4.mxd



Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment and Survey Results

Figure 4

- San Diego black-tailed jackrabbit
- coastal California gnatcatcher
- grasshopper sparrow
- Potentially suitable burrows
- Main Project Alignment
- Project Access Roads
- Project Footprint 500ft Buffer

Potential for Occurrence

- Excluded because of active construction
- Not Expected to Occur
- Potential to Occur; not yet Surveyed
- Potential to Occur

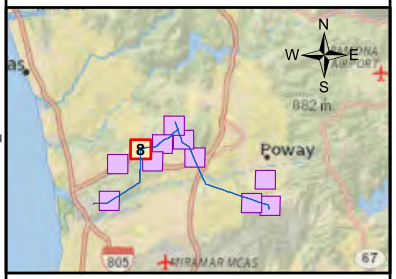
TRC

SDGE A Sempra Energy utility

12/8/2015

0 325 650 975 Feet

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.



Sources: TRC, 2015; Busby Biological Services, 2015; SDG&E, 2015; ESRI, Delorme, USDA, USGS, GeoEye, AEX, Getmapping, IGN, IGP, ICP, swisstopo, UNEP-WCMC, NASA, ESA, METI, NRCAN, GEBCO, NOAA, Earstar, CNES/Airbus, DigitalGlobe, NatGeo

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ BUOWSXtoPQ_BUOW_HabAsmtReport_Fig4.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment and Survey Results

Figure 4

- San Diego black-tailed jackrabbit
- coastal California gnatcatcher
- grasshopper sparrow
- Potentially suitable burrows
- Main Project Alignment
- Project Access Roads
- Project Footprint 500ft Buffer

Potential for Occurrence

- Excluded because of active construction
- Not Expected to Occur
- Potential to Occur; not yet Surveyed
- Potential to Occur

TRC

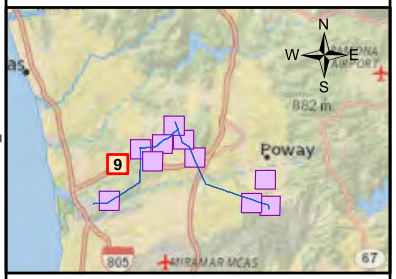
SDGE

A Sempra Energy utility

12/8/2015

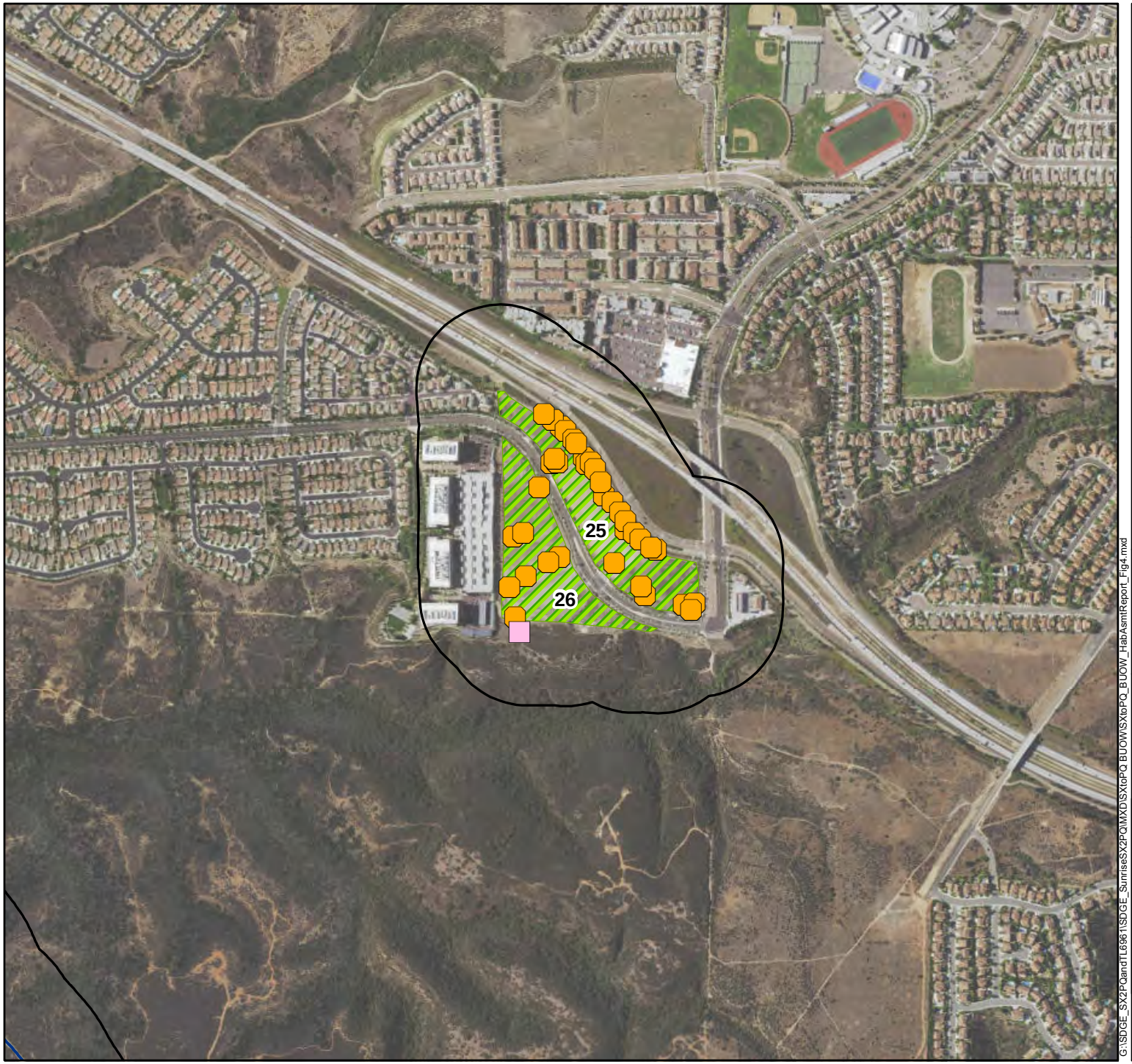
0 325 650 975 Feet

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.



Sources: TRC, 2015; Busby Biological Services, 2015; SDG&E, 2015; ESRI, Delorme, USDA, USGS, GeoEye, AEX, Getmapping, IGN, IGP, ICP, swisstopo, UNEP-WCMC, NASA, ESA, METI, NRCAN, GEBCO, NOAA, Earstar, CNES/Airbus, DigitalGlobe, NatGeo

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ BUOWSXtoPQ_BUOW_HabAsmtReport_Fig4.mxd



Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment and Survey Results

Figure 4

- San Diego black-tailed jackrabbit
- coastal California gnatcatcher
- grasshopper sparrow
- Potentially suitable burrows
- Main Project Alignment
- Project Access Roads
- Project Footprint 500ft Buffer

Potential for Occurrence

- Excluded because of active construction
- Not Expected to Occur
- Potential to Occur; not yet Surveyed
- Potential to Occur

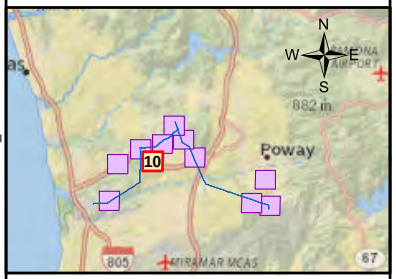
TRC

SDGE A Sempra Energy utility

12/8/2015

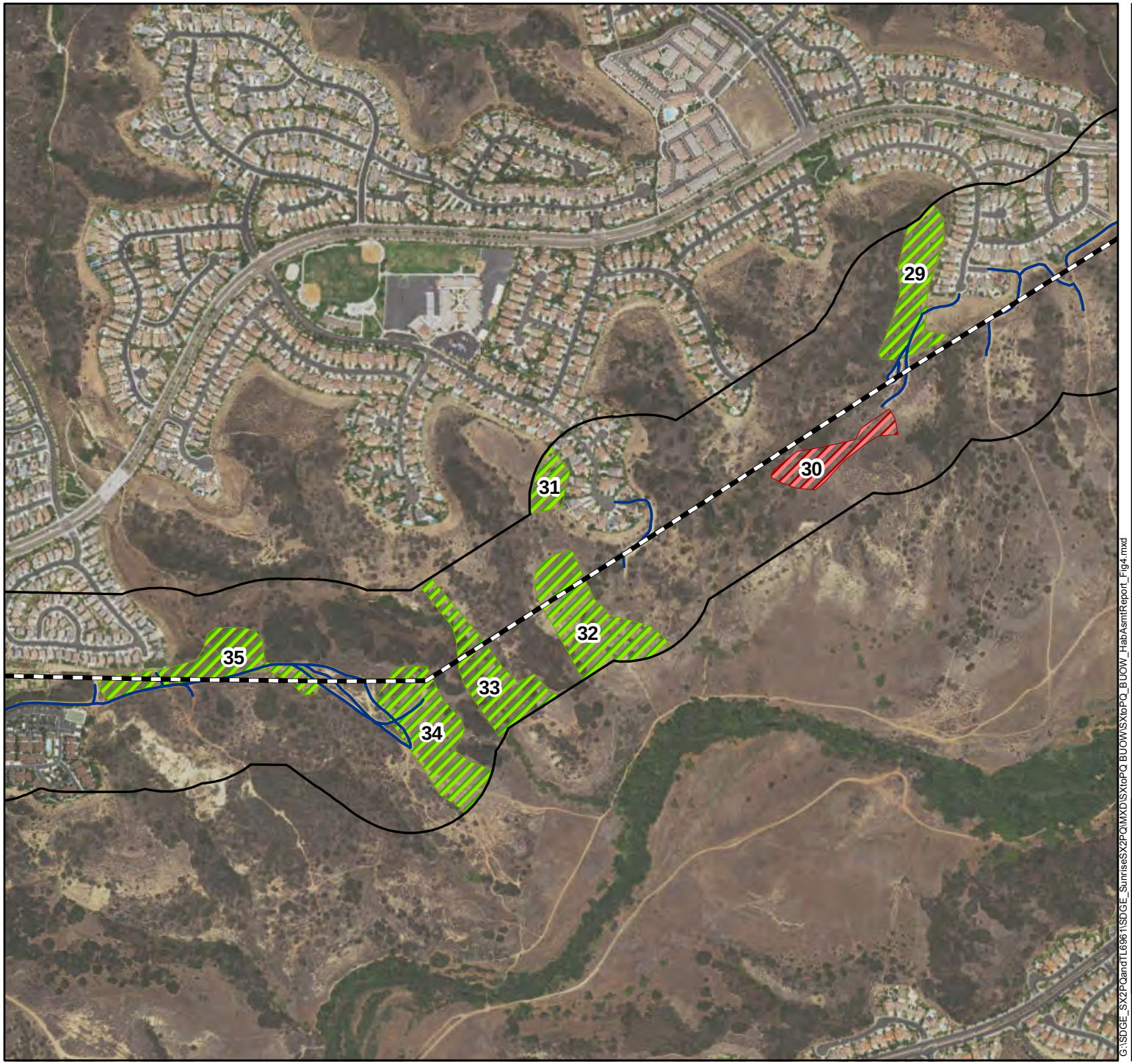
0 325 650 975 Feet

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.



Sources: TRC, 2015; Busby Biological Services, 2015; SDG&E, 2015; ESRI, Delorme, USDA, USGS, GeoEye, AEX, Getmapping, IGN, IGP, ICP, swisstopo, UNEP-WCMC, NASA, ESA, METI, NRCAN, GEBCO, NOAA, Earstar, CNES/Airbus, DigitalGlobe, NatGeo

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_BUOWSXtoPQ_BUOW_HabAsmtReport_Fig4.mxd



Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment and Survey Results

Figure 4

- San Diego black-tailed jackrabbit
- coastal California gnatcatcher
- grasshopper sparrow
- Potentially suitable burrows
- Main Project Alignment
- Project Access Roads
- Project Footprint 500ft Buffer

Potential for Occurrence

- Excluded because of active construction
- Not Expected to Occur
- Potential to Occur; not yet Surveyed
- Potential to Occur

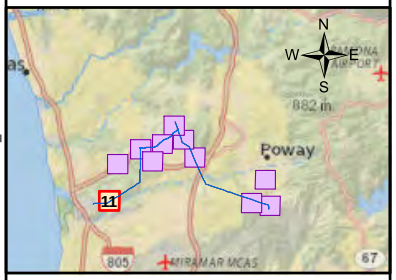
TRC

SDGE A Sempra Energy utility

12/8/2015

0 325 650 975 Feet

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.



Sources: TRC, 2015; Busby Biological Services, 2015; SDG&E, 2015; ESRI, Delorme, USDA, USGS, GeoEye, AEX, Getmapping, IGN, IGP, ICP, swisstopo, UNEP-WCMC, NASA, ESA, METI, NRCAN, GEBCO, NOAA, Earstar, CNES/Airbus, DigitalGlobe, NatGeo

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ BUOW\SXtoPQ_BUOW_HabAsmtReport_Fig4.mxd

ATTACHMENT 2 – Burrowing Owl Habitat Assessment Summary Table

Attachment 2 - Burrowing Owl Habitat Assessment Summary Table

Poly ID	Patch Size (ac.)	Dominant Vegetation and Land Use			Adjacent Foraging Habitat	Polygon Habitat Parameters				Polygon Burrow Features			Slope	Potential for Occurrence
		Within	Adjacent	Development Type and Proximity		Soils	Ave Veg Height (in.)	Max Veg Height (in.)	Shrub Density (%)	Small Mammal Burrows?	Burrow Complexes?	Burrowing Features		
1	4.4	DH	DL	Commercial, paved roads surrounding	None	Compact	<6	18	10	No	No	None	Level	Not expected. Polygon is surrounded by commercial development and paved roads; and contains compact soils, no small mammal burrows, and no adjacent open foraging or breeding habitat.
2	0.81	SMC-D	SMC, DL	Unpaved firebreak road within polygon; paved road adjacent	None	Compact, slightly friable	10	16	15	Yes, very few	No	Slopes	Slight	Not expected. Polygon is very small in size, isolated, and surrounded by tall and dense vegetation; and contains compact soils, few small mammal burrows, no burrow complexes, and no adjacent open foraging or breeding habitat.
3	1.5	BG	CSS, SMC, DL	Transmission tower within polygon; substation and paved and unpaved roads adjacent; residential within 1/2 mile	None	Compact	<3	60	5	No	No	None	Level	Not expected. Polygon is very small in size, isolated, and surrounded by tall and dense vegetation and development; and contains compact soils, no small mammal burrows, no burrow complexes, and no adjacent open foraging or breeding habitat.
4	4	CSS-D, DH	CSS, SMC, DL	Substation and paved and unpaved roads adjacent; residential within 1/4 mile	None	Compact	<4	<4	5	No	No	None	Level	Not expected. Polygon is isolated and surrounded by tall and dense vegetation and development; and contains compact soils, no small mammal burrows, no burrow complexes, and no adjacent open foraging or breeding habitat.
5	1.31	BG, CSS	DL, SMC, SWS	Residential, ranches, paved roads surrounding	None	Friable	2	0	0	Yes, very few	No	Slopes	Slight	Not expected. Polygon is very small in size and surrounded by residential development, ranches, and paved roads; polygon contains few small mammal burrows, no burrow complexes, and no adjacent open foraging or breeding habitat.

Attachment 2 - Burrowing Owl Habitat Assessment Summary Table

Poly ID	Patch Size (ac.)	Dominant Vegetation and Land Use			Adjacent Foraging Habitat	Polygon Habitat Parameters				Polygon Burrow Features			Slope	Potential for Occurrence
		Within	Adjacent	Development Type and Proximity		Soils	Ave Veg Height (in.)	Max Veg Height (in.)	Shrub Density (%)	Small Mammal Burrows?	Burrow Complexes?	Burrowing Features		
6	1.29	SMC-D	SMC, DL	Unpaved firebreak road within polygon; paved road adjacent; residential within 3/4 mile	None	Compact, slightly friable	10	16	15	Yes, very few	No	Slopes	Slight	Not expected. Polygon is very small in size, isolated, and surrounded by tall and dense vegetation; and contains compact soils, few small mammal burrows, and no adjacent open foraging or breeding habitat.
7	24.02	NNG, DH, CSS-D	DL, NNG	Unpaved roads and transmission tower within polygon; substation and paved roads adjacent; residential surrounding	Contiguous with adjacent NNG	Compact, friable	<6	108	15	Yes, many	Yes, many	Slopes, berms	Slight to moderate	Low. Polygon is large; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils and many burrows and burrow complexes.
8	3.09	NNG, DH	DL, CSS	Unpaved road within polygon; residential and paved roads surrounding	None	Compact, friable	12	36	60	Yes, very few	No	Slopes, berms, debris piles	Slight	Not expected. Polygon is surrounded by residential development and paved roads; is dominated by compact soil; and contains tall and dense vegetation, few small mammal burrows, no burrow complexes, and no adjacent open foraging or breeding habitat.
9	6.13	NG, CSS	DL, CSS	Paved roads within and adjacent; high school, residential, and paved roads adjacent	Contiguous with adjacent NG	Friable	<6	24	8	Yes, few to moderate	No	Slopes	Slight	Low. Polygon is moderate in size; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soil and a few to moderate number of burrows but no burrow complexes.
10	7.3	NG, CSS	DL, CSS	Unpaved roads and transmission tower within polygon; park and paved and unpaved roads adjacent; residential within 500 feet	Contiguous with adjacent NG	Friable	<6	24	20	Yes, few to moderate	No	Slopes	Moderate	Low. Polygon is moderate in size; supports suitable but moderate density vegetation; is located adjacent to suitable foraging habitat; and contains friable soil and a few to moderate number of burrows but no burrow complexes.
11	1.85	NNG	CSS, DL	Unpaved roads within and adjacent; residential and paved roads within 200 feet	None	Friable	<6	<6	60	Yes, many	No	Slopes	Moderate	Not expected. Polygon is very small in size, isolated, and surrounded by tall and dense vegetation; and contains adjacent residential development and no adjacent open foraging or breeding habitat.

Attachment 2 - Burrowing Owl Habitat Assessment Summary Table

Poly ID	Patch Size (ac.)	Dominant Vegetation and Land Use			Adjacent Foraging Habitat	Polygon Habitat Parameters				Polygon Burrow Features			Slope	Potential for Occurrence
		Within	Adjacent	Development Type and Proximity		Soils	Ave Veg Height (in.)	Max Veg Height (in.)	Shrub Density (%)	Small Mammal Burrows?	Burrow Complexes?	Burrowing Features		
12	1.49	NNG, CSS	CSS, DL	Unpaved roads adjacent; residential and paved roads within 200 feet	None	Friable	<6	36	10	Yes, few	No	Slopes	Slight	Not expected. Polygon is very small in size, isolated, and surrounded by tall and dense vegetation; and contains few small mammal burrows, no burrow complexes, adjacent residential development, and no adjacent open foraging or breeding habitat.
13	2.69	NG, CSS	DL, CSS	Paved and unpaved roads adjacent; residential within 1/4 mile	None	Friable	<6	36	10	Yes, few	No	Slopes	Slight to moderate	Not expected. Polygon is small in size, isolated, and surrounded by tall and dense vegetation; and contains few small mammal burrows, no burrow complexes, and no adjacent open foraging or breeding habitat.
14	4.46	NNG, CSS	DL, CSS	Residential and paved and unpaved roads surrounding	None	Friable	<6	36	10	Yes, few	No	Slopes	Slight	Not expected. Polygon is surrounded by residential development and paved and unpaved roads; polygon contains few small mammal burrows, no burrow complexes, adjacent residential development, and no adjacent open foraging or breeding habitat.
15	7.87	NNG, DH, CSS	NNG, DH, CSS, DL	Park and paved and unpaved roads adjacent; residential within 1/2 mile	Contiguous with adjacent DH	Compact, friable	12	18	30	Yes, few to moderate	No	Slopes, rock piles	Level	Low. Polygon is moderate in size; supports suitable but moderate density vegetation; is located adjacent to suitable foraging habitat; and contains friable soil and a few to moderate number of burrows but no burrow complexes.
16	61.59	DH, BG	DH, BG, DL	Unpaved roads and transmission tower within polygon; park, residential, and paved and unpaved roads adjacent	Contiguous with surrounding DH	Friable	0	6	2	Yes, few	Yes, few	Slopes, berms, rock piles	Slight to moderate	Low to moderate. Polygon is very large; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils, few burrows, and few burrow complexes.

Attachment 2 - Burrowing Owl Habitat Assessment Summary Table

Poly ID	Patch Size (ac.)	Dominant Vegetation and Land Use			Adjacent Foraging Habitat	Polygon Habitat Parameters				Polygon Burrow Features			Slope	Potential for Occurrence
		Within	Adjacent	Development Type and Proximity		Soils	Ave Veg Height (in.)	Max Veg Height (in.)	Shrub Density (%)	Small Mammal Burrows?	Burrow Complexes?	Burrowing Features		
17	44.37	NNG	NNG, CSS, DL	Unpaved roads within polygon; residential, and paved and unpaved roads adjacent	Contiguous with adjacent NNG	Compact, friable	10	48	10	Yes, few to moderate	Yes, few	Slopes, berms, drainage banks	Slight to moderate	Low. Polygon is very large in size; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils, few to moderate burrows, and few burrow complexes.
18	19.41	NNG	NNG, SWS, DL	Unpaved roads within polygon; paved and unpaved roads adjacent; residential within 500 feet	Contiguous with adjacent NNG	Compact, friable	8	48	5	Yes, moderate	Yes, few	Slopes, berms	Slight to moderate	Low. Polygon is large in size; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils, a moderate number of burrows, and few burrow complexes.
19	25.38	NNG	NNG, SWS, DL	Unpaved roads within polygon; residential and paved and unpaved roads adjacent	Contiguous with adjacent NNG	Compact, friable	<6	48	<5	Yes, moderate	Yes, few	Slopes, berms	Slight to moderate	Low. Polygon is large in size; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils, a moderate number of burrows, and few burrow complexes.
20	1.88	NNG	NNG, SWS, DL	Unpaved roads within polygon; residential and paved and unpaved roads adjacent	Contiguous with adjacent NNG	Compact, friable	8	48	5	Yes, moderate	Yes, few	Slopes, berms	Moderate	Low. Polygon is small in size; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils, a moderate number of burrows, and few burrow complexes.
21	8.37	NNG	NNG, DL	Unpaved roads within polygon; residential and commercial, and paved roads surrounding	None	Compact, friable	<6	18	5	Yes, many	No	Slopes, berms	Slight	Low. Polygon is moderate in size; supports suitable, low-density vegetation; and contains compact and friable soil and many burrows but no burrow complexes.
22	1.12	NNG, DH	NNG, DH, DL	Residential and commercial, and paved and unpaved roads surrounding; active construction adjacent	None	Compact, friable	<6	18	10	Yes, few	No	Slopes, berms	Slight	Not expected. Polygon is very small in size, is surrounded by residential and commercial development, and paved and unpaved roads, and is dominated by compact soils; polygon contains few small mammal burrows, no burrow complexes, and no adjacent open foraging or breeding habitat; active construction of a large development is occurring adjacent to polygon.

Attachment 2 - Burrowing Owl Habitat Assessment Summary Table

Poly ID	Patch Size (ac.)	Dominant Vegetation and Land Use			Adjacent Foraging Habitat	Polygon Habitat Parameters				Polygon Burrow Features			Slope	Potential for Occurrence
		Within	Adjacent	Development Type and Proximity		Soils	Ave Veg Height (in.)	Max Veg Height (in.)	Shrub Density (%)	Small Mammal Burrows?	Burrow Complexes?	Burrowing Features		
23	14.27	NNG, DH	NNG, DH, DL	Unpaved roads and transmission tower within polygon; residential and commercial, paved and unpaved roads, and active construction adjacent	None	Friable	6	18	5	Yes, many	Yes, many	Slopes, berms	Slight to moderate	Low to moderate. Polygon is moderate in size; supports suitable, low-density vegetation; and contains friable soil and a many burrows and burrow complexes.
24	40.68	NNG	NNG, CSS, SWS, DL	Unpaved roads and transmission tower within polygon; paved and unpaved roads, and active construction adjacent; residential within 1/4 mile	Contiguous with adjacent NNG	Compact, friable	6	18	10	Yes, very few	No	Slopes, berms	Slight to moderate	Low. Polygon is very large in size; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains both compact and friable soils, very few burrows, and no burrow complexes.
25	8.91	DH	DH, DL	Unpaved roads within polygon; residential and commercial, and paved roads adjacent	Adjacent DH in polygon 26	Compact, friable	6	12	30	Yes, many	Yes, many	Berms	Level	Low to moderate. Polygon is moderate in size; supports suitable but moderate density vegetation; is located adjacent to suitable foraging habitat; and contains both compact and friable soils, many burrows and burrow complexes.
26	8.9	DH	DH, DL	Unpaved roads within polygon; residential and commercial, and paved roads adjacent	Adjacent DH in polygon 25	Compact, friable	6	12	20	Yes, many	Yes, many	Berms	Level	Low to moderate. Polygon is moderate; supports suitable but moderate density vegetation; is located adjacent to suitable foraging habitat; and contains both compact and friable soils, many burrows and burrow complexes.
27	8.93	DH	DH, DL	Residential and commercial, and paved roads adjacent	Contiguous with adjacent DH	Compact, slightly friable	6	24	30	Yes, very few	No	Berms	Level	Low. Polygon is moderate in size; supports suitable but moderate density vegetation; is located adjacent to suitable foraging habitat; and contains both compact and slightly friable soils and very few burrows but no burrow complexes.

Attachment 2 - Burrowing Owl Habitat Assessment Summary Table

Poly ID	Patch Size (ac.)	Dominant Vegetation and Land Use			Adjacent Foraging Habitat	Polygon Habitat Parameters				Polygon Burrow Features			Slope	Potential for Occurrence
		Within	Adjacent	Development Type and Proximity		Soils	Ave Veg Height (in.)	Max Veg Height (in.)	Shrub Density (%)	Small Mammal Burrows?	Burrow Complexes?	Burrowing Features		
28	16.48	DH, NNG	NNG, DH, DL	Unpaved roads within polygon; residential and commercial, paved roads, and active construction adjacent	Adjacent DH in polygon 27	Compact, slightly friable	2	18	30	Yes, very few	No	Berms	Level	Low. Polygon is large in size; supports suitable but moderate density vegetation; is located adjacent to suitable foraging habitat; and contains both compact and slightly friable soil and very few burrows but no burrow complexes.
29	4.23	NNG, CSS	CSS, DL	Unpaved roads within polygon; residential development adjacent	Few scattered patches of NNG in vicinity	Friable	<12	36	5	Yes, few	No	Slopes	Moderate to steep	Low. Polygon is moderate in size; supports suitable, low density vegetation; is located adjacent to suitable foraging habitat; and contains friable soil and a few burrows but no burrow complexes.
30	2.54	CSS	CSS	Residential development within 300 feet	Few scattered patches of NNG in vicinity	Friable	36	72	60	Yes, few	No	Slopes	Slight to steep	Not expected. Polygon is small in size; and contains tall and dense habitat, steep topography, few small mammal burrows, no burrow complexes, and limited adjacent open foraging or breeding habitat.
31	1.36	NNG, CSS	CSS, DL	Residential development adjacent	Contiguous with adjacent NNG	Friable	<6	96	10	Yes, moderate	No	Slopes	Moderate	Low. Polygon is small in size; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils and a moderate number of burrows but no burrow complexes.
32	6.21	NNG, CSS	CSS, DL	Residential development within 150 feet	Few scattered patches of NNG in vicinity	Friable	<6	36	15	Yes, few	No	Slopes	Moderate to steep	Low. Polygon is moderate in size; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils and a few burrows but no burrow complexes.
33	4.71	CSS, NNG	CSS, NNG	Residential development within 1/4 mile	Contiguous with adjacent NNG	Friable	12	72	30	Yes, few	No	Slopes, drainage banks,	Moderate to Steep	Low. Polygon is moderate in size; supports suitable but moderately dense vegetation; contains friable soils; and few small mammal burrows but no burrow complexes.

Attachment 2 - Burrowing Owl Habitat Assessment Summary Table

Poly ID	Patch Size (ac.)	Dominant Vegetation and Land Use			Adjacent Foraging Habitat	Polygon Habitat Parameters				Polygon Burrow Features			Slope	Potential for Occurrence
		Within	Adjacent	Development Type and Proximity		Soils	Ave Veg Height (in.)	Max Veg Height (in.)	Shrub Density (%)	Small Mammal Burrows?	Burrow Complexes?	Burrowing Features		
34	6.18	NNG, NG, CSS	NNG, CSS	Unpaved roads and transmission tower within polygon; residential development within 1/4 mile	Contiguous with adjacent NNG	Friable	<6	36	5	Yes, moderate	No	Slopes, berms	Moderate	Low to moderate. Polygon is moderate in size; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils and a few burrows but no burrow complexes.
35	4.57	NNG, CSS	CSS, DH, DL	Unpaved roads and transmission tower within polygon; residential development adjacent	Few scattered patches of NNG in vicinity	Compact, friable	<6	36	10	Yes, moderate	No	Slopes, berms	Level	Low. Polygon is moderate in size; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains compact and friable soils and a few burrows but no burrow complexes.
36	Polygon no longer part of proposed project													
37	11.21	NNG	NNG, CSS, DL	Unpaved roads within polygon; residential, and paved and unpaved roads adjacent	Contiguous with adjacent NNG	Compact, friable	10	48	10	Yes, few to moderate	Yes, few	Slopes, berms, drainage banks	Slight to moderate	Low to moderate. Polygon is very large in size; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils, few to moderate burrows, and few burrow complexes.
38	27.24	NNG	NNG, SWS, DL	Unpaved roads within polygon; paved and unpaved roads adjacent	Contiguous with adjacent NNG	Compact, friable	8	48	5	Yes, moderate	Yes, few	Slopes, berms	Slight to moderate	Low. Polygon is large in size; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils, a moderate number of burrows, and few burrow complexes.
39	3.54	CSS-D, DH	CSS, DH, DL, ORN	Residential and commercial, and paved roads surrounding	Contiguous with adjacent NNG	Friable	<6	18	5	Yes, moderate	Yes, few	Slopes, drainages	Slight	Low. Polygon is small in size; supports suitable, low-density vegetation; and contains friable soil and a moderate number of burrows but no burrow complexes.

Legend

DL = Develeoped Land
DH = Disturbed Habitat
BG = Bare Ground

Attachment 2 - Burrowing Owl Habitat Assessment Summary Table

Poly ID	Patch Size (ac.)	Dominant Vegetation and Land Use			Adjacent Foraging Habitat	Polygon Habitat Parameters				Polygon Burrow Features			Slope	Potential for Occurrence
		Within	Adjacent	Development Type and Proximity		Soils	Ave Veg Height (in.)	Max Veg Height (in.)	Shrub Density (%)	Small Mammal Burrows?	Burrow Complexes?	Burrowing Features		

NNG	=	Nonnative Grassland
ORN	=	Ornamental
SMC	=	Southern Mixed Chaparral
SMC-D	=	Disturbed Southern Mixed Chaparral
CSS	=	Coastal Sage Scrub
CSS-D	=	Disturbed Coastal Sage Scrub
SWS	=	Southern Willow Scrub

ATTACHMENT 3 – Site Photographs

	Polygon 1. Burrowing owl are not expected to occur in this staging yard that is small in size and surrounded by commercial development and paved roads; and contains compact soils, no small mammal burrows, and no adjacent open foraging or breeding habitat (Facing south; November 18, 2014).
	Polygon 6. Burrowing owl are not expected to occur in this firebreak on MCAS Miramar that is isolated, small in size, and surrounded by tall and dense vegetation; and contains compact soils, few small mammal burrows, and no adjacent open foraging or breeding habitat (Facing south; November 18, 2014)
	Polygon 7. Burrowing owl have a low potential to occur in this staging yard that is large in size; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils and many burrows and burrow complexes (Facing east; November 18, 2014;).

	Polygon 9. Burrowing owl have a low to moderate potential to occur in this polygon that is moderate in size; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soil and a few to moderate number of burrows but no burrow complexes (Facing north; November 18, 2014).
	Polygon 14. Burrowing owl are not expected to occur in this polygon that is small in size and surrounded by residential development and paved and unpaved roads; and contains few small mammal burrows, no burrow complexes, adjacent residential development, and no adjacent open foraging or breeding habitat (Facing west; November 18, 2014).
	Polygon 17. Burrowing owl have a low to moderate potential to occur in this polygon that is very large in size; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils, few to moderate burrows, and few burrow complexes (Facing southwest; November 18, 2014).

	Polygon 22. Burrowing owl are not expected to occur in this polygon that is very small in size, is surrounded by residential and commercial development, and paved and unpaved roads, and is dominated by compact soils; polygon contains few small mammal burrows, no burrow complexes, and no adjacent open foraging or breeding habitat; active construction of a large development is occurring adjacent to polygon (Facing west; November 17, 2014).
	Polygon 23. One of many potentially suitable burrows within polygon. Burrowing owl have a low to moderate potential to occur in this polygon that is moderate in size; supports suitable, low-density vegetation; contains friable soils, and many burrows and burrow complexes (Facing north; November 17, 2014).
	Polygon 24. Burrowing owl have a low potential to occur in this polygon that is very large in size; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains both compact and friable soils, very few burrows, and no burrow complexes (Facing southwest; November 17, 2014).

	Polygon 25. One of many potentially suitable burrows within polygon. Burrowing owl have a low to moderate potential to occur in this staging yard that is moderate in size; supports suitable but moderate density vegetation; is located adjacent to suitable foraging habitat; and contains both compact and friable soil, and many burrows and burrow complexes (Facing northwest; November 17, 2014).
	Polygon 28. Burrowing owl have a low potential to occur in this staging yard that is large in size; supports suitable but moderate density vegetation; is located adjacent to suitable foraging habitat; and contains both compact and slightly friable soil and very few burrows but no burrow complexes (Facing northeast; November 17, 2014).
	Polygon 30. Burrowing owl are not expected to occur in this polygon that is small in size; and contains tall and dense habitat, steep topography, few small mammal burrows, no burrow complexes, and limited adjacent open foraging or breeding habitat (Facing northeast; November 17, 2014).

	Polygon 32. Burrowing owl have a low potential to occur in this polygon that is moderate in size; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils and a few burrows but no burrow complexes (Facing northwest; November 17, 2014).
	Polygon 33. Burrowing owl have a low potential to occur in this polygon that is moderate in size; supports suitable but moderate density vegetation; is located adjacent to suitable foraging habitat; and contains both compact and slightly friable soil and very few burrows but no burrow complexes (Facing north; November 17, 2014).

ATTACHMENT 4 – Survey Conditions

Attachment 4 – Survey Conditions

Survey #	Day #	Date	Time		Weather Conditions				Surveyors
					Temp (°F)	Wind (mph)	Clouds (%)	Precip	
1	1	03/23/15	Start	0630	56	0-1	0	N/A	D. Busby, K. Clark
			End	1000	62	2-5	40	N/A	
	2	03/24/15	Start	0615	58	0-1	0	N/A	K. Clark, B. Lohstroh, L. Gorman
			End	0950	66	0-2	2	N/A	
	3	03/25/15	Start	0630	58	0-1	0	N/A	D. Busby, B. Lohstroh
			End	1000	77	1-3	0	N/A	
	4	03/26/15	Start	0635	56	0-1	0	N/A	K. Clark
			End	0900	75	0-1	0	N/A	
2	1	4/20/15	Start	0610	61	0-1	100	N/A	D. Busby, B. Lohstroh
			End	0945	70	4-6	10	N/A	
	2	4/21/15	Start	0615	62	0-1	100	N/A	D. Busby, T. Cooper
			End	1000	66	1-3	100	N/A	
	3	4/22/15	Start	0610	64	0-1	100	N/A	D. Busby, T. Cooper
			End	1000	63	3-6	100	N/A	
	4	4/23/15	Start	0600	62	0-1	100	N/A	D. Busby
			End	1000	65	3-5	60	N/A	
	5	4/24/15	Start	0610	59	0-1	100	N/A	D. Busby
			End	0940	63	1-3	60	N/A	
3	1	5/11/15	Start	0610	56	0-1	100	N/A	D. Busby, T. Cooper
			End	0950	62	1-3	100	N/A	
	2	5/12/15	Start	0600	61	1-3	100	N/A	D. Busby, T. Cooper
			End	0945	67	1-3	10	N/A	
	3	5/13/15	Start	0600	59	1-3	95	N/A	T. Cooper, L. Gorman
			End	1000	71	1-4	20	N/A	
	4	5/14/15	Start	0600	58	0-1	85	N/A	T. Cooper, L. Gorman
			End	1000	66	0-4	25	N/A	
4	1	7/8/15	Start	0530	64	0-1	100	N/A	D. Busby
			End	1000	70	3-5	50	N/A	
	2	7/9/15	Start	0600	65	0-1	100	N/A	D. Busby
			End	1000	69	1-3	80	N/A	
	3	7/10/15	Start	0530	63	0	100	N/A	D. Busby
			End	1000	69	1-3	60	N/A	
	4	7/13/15	Start	0550	64	0-1	100	N/A	D. Busby
			End	1000	70	3-5	10	N/A	
	5	7/14/15	Start	0610	68	0-2	100	N/A	T. Cooper, L. Gorman
			End	1000	72	1-5	0	N/A	
	6	7/15/15	Start	0630	66	1-3	100	N/A	T. Cooper, L. Gorman
			End	1000	75	2-4	50	N/A	

ATTACHMENT 5 – Wildlife Species Detected

Attachment 5 - Wildlife Species Detected

VERTEBRATES		
Class: Sauropsida		**Reptiles**
Family Phrynosomatidae		**Spiny Lizards**
	Sceloporus occidentalis	Western Fence Lizard
	Uta stansburiana	Common Side-blotched Lizard
Class: Aves		**Birds**
Order Anseriformes		**Geese, Swans, and Ducks**
Family Anatidae		**Geese, Swans, and Ducks**
	Anas platyrhynchos	Mallard
Order Galliformes		**Gallinaceous Birds**
Family Odontophoridae		**New World Quail**
	Callipepla californica	California Quail
Family Cathartidae		**New World Vultures**
	Cathartes aura	Turkey Vulture
Family Accipitridae		**Hawks, Kites, Eagles, and Allies**
	Accipiter cooperii	Cooper's hawk
	Buteo jamaicensis	Red-tailed Hawk
Family Falconidae		**Falcons**
	Falco sparverius	American Kestrel
Family Laridae		**Gulls, Terns, and Skimmers**
	Larus occidentalis	Western Gull
Order Charadriiformes		**Shorebirds, Gulls, Auks, and Allies**
Family Charadriidae		**Plovers**
	Charadrius vociferous	Killdeer
Order Columbiformes		**Pigeons and Doves**
Family Columbidae		**Pigeons and Doves**
	Columba livia	Rock Pigeon
	Zenaida macroura	Mourning Dove
Family Cuculidae		**Cuckoos and Roadrunners**
	Geococcyx californianus	Greater Roadrunner
Order Apodiformes		**Swifts and Hummingbirds**
Family Apodidae		**Swifts**
	Aeronautes saxatalis	White-throated Swift
Family Trochilidae		**Hummingbirds**
	Calypte anna	Anna's Hummingbird
	Selasphorus sasin	Allen's Hummingbird
Order Piciformes		**Woodpeckers and Allies**
Family Picidae		**Woodpeckers**
	Picoides nuttallii	Nuttall's Woodpecker
Order Passeriformes		**Perching Birds**
Family Tyrannidae		**Tyrant Flycatchers**
	Empidonax difficilis	Pacific-slope Flycatcher
	Sayornis nigricans	Black Phoebe
	Sayornis saya	Say’s Phoebe
	Myiarchus cinerascens	Ash-throated Flycatcher

	Tyrannus vociferans	Cassin's Kingbird
	Tyrannus verticalis	Western Kingbird
Family Corvidae		**Crows and Jays**
	Aphelocoma californica	Western Scrub-Jay
	Corvus brachyrhynchos	American Crow
	Corvus corax	Common Raven
Family Alaudidae		**Larks**
	Eremophila alpestris actia	California horned lark
Family Hirundinidae		**Swallows**
	Stelgidopteryx serripennis	Northern Rough-winged Swallow
	Hirundo pyrrhonota	Cliff Swallow
Family Aegithalidae		**Bushtits**
	Psaltriparus minimus	Bushtit
Family Troglodytidae		**Wrens**
	Thryomanes bewickii	Bewick's Wren
	Troglodytes aedon	House Wren
Family Sylviidae		**Gnatcatchers**
	Polioptila caerulea	Blue-gray Gnatcatcher
	Polioptila californica	Coastal California Gnatcatcher
Family Turdidae		**Thrushes**
	Sialia mexicana	Western Bluebird
Family Timaliidae		**Babblers**
	Chamaea fasciata	Wrentit
Family Mimidae		**Mockingbirds and Thrashers**
	Mimus polyglottos	Northern Mockingbird
	Toxostoma redivivum	California Thrasher
Family Sturnidae		**Starlings**
	Sturnus vulgaris	European Starling
Family Motacillidae		**Wagtails and Pipits**
	Anthus rubescens	American Pipit
Family Bombycillidae		**Waxwings**
	Bombycilla cedrorum	Cedar Waxwing
Family Parulidae		**Wood-Warblers**
	Vermivora celata	Orange-crowned Warbler
	Dendroica coronata	Yellow-rumped Warbler
	Geothlypis trichas	Common Yellowthroat
	Wilsonia pusilla	Wilson’s Warbler
Family Emberizidae		**Embrezids**
	Pipilo maculatus	Spotted Towhee
	Pipilo crissalis	California Towhee
	Aimophila ruficeps	Rufous-crowned Sparrow
	Melospiza melodia	Song Sparrow
	Ammodramus savannarum	Grasshopper Sparrow
	Passerculus sandwichensis	Savannah Sparrow
	Zonotrichia leucophrys	White-crowned Sparrow
Family Cardinalidae		**Cardinals and Allies**
	Passerina amoena	Lazuli Bunting

	Pheucticus melanocephalus	Black-headed Grosbeak
	Passerina caerulea	Blue Grosbeak
Family Icteridae		**Blackbirds**
	Icterus cucullatus	Hooded Oriole
	Sturnella neglecta	Western Meadowlark
Family Fringillidae		**Fringilline and Cardueline Finches and Allies**
	Carpodacus mexicanus	House Finch
	Carduelis psaltria	Lesser Goldfinch
Family Passeridae		**Old World Sparrows**
	Passer domesticus	House Sparrow
Family Estrildidae		**Estrildid Finches**
	Lonchura puntulata	Scaly-breasted Munia
Class: Mammalia		**Mammals**
Order Lagomorpha		**Rabbits and Hares**
Family Leporidae		**Rabbits and Hares**
	Lepus californicus bennettii	San Diego black-tailed jackrabbit
	Sylvilagus audubonii	Desert Cottontail
Order Rodentia		**Rodents**
Family Sciuridae		**Squirrels and Chipmunks**
	Spermophilus beecheyi	California Ground Squirrel
Order Carnivora		**Carnivores**
Family Canidae		**Dogs and foxes**
	Canis familiaris	Domestic Dog
	Canis latrans	Coyote
Order Perissodactyla		**Odd-toed Ungulates**
Family Equidae		**Horses, Donkeys, and Zebras**
	Equus caballus	Domestic Horse
Order Artiodactyla		**Even-toed Ungulates**
Family Cervidae		**Deer and Elk**
	Odocoileus hemionus	Mule Deer

BUSBY
Biological Services

September 28, 2015

Ms. Stacey Love
Recovery Permits Coordinator
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

RE: 2015 LEAST BELL'S VIREO SURVEY SUMMARY REPORT FOR THE ENCINCA HUB PORTION OF THE PROPOSED SAN DIEGO GAS & ELECTRIC COMPANY SYCAMORE TO PEÑASQUITOS 230 kV TRANSMISSION LINE PROJECT, SAN DIEGO COUNTY, CALIFORNIA

Ms. Love:

This letter report summarizes the results of the 2015 focused, protocol-level, presence/absence surveys for the federally and state-listed endangered least Bell's vireo (*Vireo bellii pusillus*) for the Encina Hub portion of the proposed Sycamore to Peñasquitos 230 Kilovolt (kV) Transmission Line Project (Proposed Project). Busby Biological Services, Inc. (BBS) was contracted by Chambers Group, Inc. (Chambers) to conduct these surveys on behalf of the San Diego Gas & Electric Company (SDG&E) to evaluate the potential impacts of the Encina Hub portion of the Proposed Project in the City of Carlsbad, San Diego County, California (Appendix A: Figures 1 and 2).

BACKGROUND INFORMATION

A brief summary of the Proposed Project and least Bell's vireo are provided in this section.

Proposed Project Location and Description

The Encina Hub portion of the Proposed Project is in the southern portion of the U.S. Geological Survey (USGS) 7.5-minute San Luis Rey topographic quadrangle (USGS 1968) in the City of Carlsbad, San Diego County, California (Appendix A: Figures 1 and 2). The Encina Hub contains gently sloping to moderately sloping topography, with elevations ranging from approximately 240 feet above mean sea level (amsl) to 40 feet amsl. Land use within the Encina Hub consists primarily of undeveloped land and natural preserve lands. Adjacent land use includes a municipal golf course, hotels, agriculture, and additional undeveloped land and preserve lands. The Encina Hub is dominated by the following vegetation communities: Diegan coastal sage scrub, disturbed Diegan coastal sage scrub, disturbed habitat, and bare ground. Other vegetation communities present in smaller proportions include southern riparian scrub, southern willow scrub, mulefat scrub, nonnative grassland, native grassland, ornamental, and developed lands. An unnamed ephemeral drainage in the southwestern portion of Encina Hub runs north to connect with a riparian corridor in an unnamed canyon drainage within the northeastern portion of Encina Hub.

The Proposed Project includes construction of a new, approximately 16.7-mile 230 kV transmission line between the existing SDG&E Sycamore Canyon and Peñasquitos substations; the consolidation of two existing 69 kV power lines onto new double-circuit, steel structures that would replace existing, predominantly wood structures; and re-routing at the Encina and Mira Mesa Hubs. An existing San Luis Rey–Mission 230 kV transmission line would be removed from service at the Encina Hub to create an open position for the proposed new 230-kV transmission line. The following steps would occur to reconfigure the 230 kV transmission lines at Encina Hub portion of the Proposed Project:

- Remove jumpers between existing towers
- Transfer the existing conductor between towers
- Install jumpers from towers
- Install new conductor from tower between three existing towers
- Install dead ends assemblies, dampers and spacers on existing towers

All new transmission line facilities would be located within existing SDG&E Right-of-Way or within franchise position within existing public roadways, and the entire Proposed Project is located within San Diego County (Appendix A: Figures 1 and 2).

Brief Survey Area Explanation

Focused least Bell's vireo surveys were conducted for the Proposed Project within all suitable habitats within and adjacent to the current Proposed Project alignment. Because the Encina Hub portion of the Proposed Project is located in a geographically distinct location and is not within the immediate vicinity of the main alignment portion of the Proposed Project (Appendix A: Figure 1), two separate least Bell's vireo survey summary reports were prepared for the spring 2015 surveys, one for the least Bell's vireo surveys conducted at Encina Hub and one for the least Bell's vireo surveys conducted along the main alignment. This report focuses on the results of the focused least Bell's vireo surveys conducted at the Encina Hub portion of the Proposed Project.

Least Bell's Vireo Species Information

The least Bell's vireo is a small, olive-gray colored, migratory songbird that is federally and state-listed as endangered. One of four subspecies of Bell's Vireo, the least Bell's vireo is endemic to California and Baja California, Mexico. This highly migratory species arrives in California in mid-March and departs by late September to 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 [United States Fish and Wildlife Service (USFWS) 1998; Grinnell and Miller 1986].

The least Bell's vireo 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 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 least Bell's vireo was listed by the California Department of Fish and Wildlife (CDFW) in 1984 it had been extirpated from much of is 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 species' 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, California (Brown 1993, Kus 2002). San Diego County holds the largest breeding population of least Bell's vireo in the state, where it is a fairly common breeder in appropriate habitats, primarily in the coastal lowlands (Unitt 2004).

METHODS

A habitat assessment and focused, protocol-level, least Bell's vireo surveys were performed within suitable habitat located within the Encina Hub portion of the Proposed Project and within a 500-foot buffer of the Encina Hub (Appendix A: Figures 2 and 3). 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, least Bell's vireo surveys at the Encina Hub, a qualified biologist conducted a focused habitat assessment to identify locations of suitable habitat for the species both within and adjacent to the Encina Hub.

Initially, historical occurrence data for least Bell's vireo that have been reported from within 5 miles of the Encina Hub was evaluated prior to conducting the habitat assessment field survey for least Bell's vireo. A Geographic Information Systems (GIS) specialist generated a map from the most recent version of the CDFW *California Natural Diversity Database* (CNDDB; CDFW 2014) and other databases identifying reported least Bell's vireo detections within a 5-mile buffer of the Encina Hub to allow the qualified biologist to view the historic distribution of least Bell's vireo within the vicinity of the Encina Hub.

Next, a qualified biologist conducted a field habitat assessment within the Encina Hub and 500-foot buffer to identify potential least Bell's vireo habitat. The field habitat assessment was conducted by assessing the vegetation communities on foot 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 least Bell's vireo habitat was either added or eliminated from the survey area through closer investigation on foot during this first of eight of focused, protocol-level least Bell's vireo surveys.

Focused Least Bell's Vireo Survey Methods

Qualified BBS biologists conducted protocol-level surveys for the least Bell's vireo in accordance with the current USFWS survey protocol, titled *Least Bell's Vireo Survey Guidelines* (2001). Eight surveys were conducted at least 10 days apart between the protocol survey window of April 10 to July 31. All surveys were conducted between approximately dawn and 11:00 am 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 least Bell's vireo. Surveyors slowly walked throughout the suitable habitat within the survey area and used visual and auditory cues to detect the least Bell's vireo. Various routes were utilized to conduct an unbiased survey of the potentially suitable habitat within the survey area, while taking care not to disturb sensitive habitat or potential nest areas. No more than approximately 3 linear kilometers (50 hectares) of suitable habitat was surveyed per day.

For each least Bell's vireo 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 area. 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. Surveyors specifically recorded numbers and locations of parasitic brown-headed cowbirds and sensitive species within and adjacent to least Bell's vireo territories to report to USFWS.

RESULTS

The results of the habitat assessment and focused, protocol-level least Bell's vireo surveys are presented in this section.

Habitat Assessment Results

BBS biologist Laurie Gorman conducted a field habitat assessment for least Bell's vireo within and adjacent to the Encina Hub during fall 2014. The initial assessment of potentially suitable least Bell's vireo habitat within the Encina Hub and a 500-foot buffer was further refined by BBS biologist Darin Busby through closer investigation on foot during the first focused, protocol-level least Bell's vireo survey. A total of approximately 12.52 acres of potentially suitable least Bell's vireo habitat was surveyed within the 500-foot buffer adjacent to the Encina Hub (Appendix A: Figure 3).

Potentially suitable habitat for the least Bell's vireo that required surveys was present along an unnamed ephemeral drainage located in the 500-foot survey buffer north of the Proposed Project site. As part of the Agua Hedionda Watershed, this ephemeral drainage is tributary to Agua Hedionda Creek and is approximately 0.3 mile upstream of Agua Hedionda Lagoon. The potentially suitable habitat for the least Bell's vireo consisted of southern riparian scrub, southern willow scrub, and mulefat scrub. Within the survey area, the vegetation communities listed above have a closed canopy dominated by willows (*Salix* spp.) and/or mulefat (*Baccharis salicifolia*) ranging in height from approximately 5 to 15 feet and a dense shrub and herbaceous understory dominated by California bulrush (*Schoenoplectus californicus*), broadleaf cattail (*Typha latifolia*), and/or coyote brush (*Baccharis pilularis*).

Vegetation communities excluded from the focused, protocol-level least Bell's vireo surveys because they were determined through field reconnaissance not to contain suitable habitat for the species include various upland vegetation communities, such as coastal sage scrub, chaparral, grassland, bare ground, developed lands, ornamental vegetation, and disturbed habitat.

Focused Least Bell's Vireo Survey Results

A total of eight protocol-level focused least Bell's vireo surveys were conducted within approximately 12.52 acres of potentially suitable habitat between April 14 and July 10, 2015 (Appendix A: Figure 3). Each survey took one day to complete because the habitat was easily accessible and contiguous throughout the survey area. All surveys were conducted during appropriate weather conditions by qualified biologists Darin Busby (TE-115373-3) and Laurie Gorman (TE-233367-2). Appendix B provides a summary of survey conditions, including survey times, weather conditions, and name of surveyor.

No least Bell's vireos were detected during the 2015 focused, protocol-level least Bell's vireo surveys conducted at the Encina Hub.

A total of 64 wildlife species were detected either during the focused least Bell's vireo surveys or incidentally during access to and from the survey area (Appendix C). Of these 64 species, the coastal California gnatcatcher (*Polioptila californica californica*) is listed as federally threatened by the USFWS and as a Species of Special Concern by the CDFW, and the yellow-breasted chat (*Icteria virens*), yellow warbler (*Dendroica petechia*), and the Clark's marsh wren (*Cistothorus palustris clarkae*) are considered Species of Special Concern by the CDFW. Appendix D provides GPS locations of sensitive species detected during the focused surveys. In addition, four brown-headed cowbird detections were recorded during the focused surveys, including two male brown-headed cowbirds that were detected during the first survey and one male brown-headed cowbird that was detected during the fourth and fifth surveys. Table 1 below summarizes these detections.

Table 1. Summary of Brown-headed Cowbird Detections

BHCO* Detection #	Survey #	GPS Location (NAD 83, Zone 11S)	
		Northing	Easting
1	1	33.133938	-117.304673
2	1	33.137920	-117.307232
3	4	33.137283	-117.307923
4	5	33.134243	-117.305190

*BHCO: brown-headed cowbird

Detection locations of sensitive species and brown-headed cowbirds are depicted on an aerial map of the survey area in Figure 4 of Appendix A. It should be noted that the list of sensitive species presented in Appendix D and locations of sensitive species presented in Figure 4 of Appendix A were either detected during the focused least Bell's vireo surveys or incidentally during access to and from the survey area and may reflect repeated detections of the same individuals of a species from one survey to the next. Therefore, these Appendices are intended to show the type and general location of sensitive species detected, not quantity of individuals present.

SUMMARY

No least Bell's vireos were detected during the 2015 focused, protocol-level least Bell's vireo surveys conducted at the Encina Hub.

Please do not hesitate to contact Melissa Busby at melissa@busbybiological.com or 858.334.9507 or me at darin@busbybiological.com or 858.334.9508 if you have any questions.

Sincerely,

Darin Busby
Owner/Principal Biologist
Busby Biological Services, Inc.

cc: Paul Morrissey, Chambers
Joshua Taylor, TRC
Elisha Back, TRC
Robert Fletcher, SDG&E

APPENDICES

Appendix A: Figures
Appendix B: Survey Conditions
Appendix C: Wildlife Species Detected
Appendix D: Incidental Sensitive Species Detected

REFERENCES

Barbour, M. G., and J. Major eds.
1977 Terrestrial vegetation of California. John Wiley and Sons, New York.

Brown, B.T.
1993 Bell's Vireo (*Vireo bellii*). In *The Birds of North America*, No. 35 (A. Poole, P. Stettenheim, and F. Gill, Eds.). Philadelphia: The Academy of Natural Sciences; Washington, DC: The American Ornithologists' Union.

California Department of Fish and Wildlife (CDFW)
2014 Natural Diversity Data Base. Nongame-Heritage Program, California Department of Fish and Wildlife, Sacramento.

Garrett, K. and J. Dunn
1981 Birds of southern California: status and distribution. Los Angeles Audubon Soc., Los Angeles.

Grinnell, J., and A.H. Miller
1986 The Distribution of the Birds of California. *Pacific Coast Avifauna* No. 27, published 1944 and reprinted by Artimisa Press, Lee Vining, California.

Holland, R.F.
1986 *Preliminary Descriptions of the Terrestrial Natural Communities of California*. State of California, The Resources Agency, Department of Fish and Game, Natural Heritage Division, Sacramento, California.

Kus, B.
2002 Least Bell's vireo (*Vireo bellii pusillus*). In California Partners in Flight. The riparian bird conservation plan: a strategy for reversing the decline of riparian-associated birds in California. Available at: http://www.prbo.org/calpif/htmldocs/riparian_v-2.html.

U.S. Fish and Wildlife Service (USFWS)
1998 Draft Recovery Plan for the Least Bell's Vireo. U.S. Fish and Wildlife Service, Portland, OR. 139 pgs.

U.S. Geological Survey (USGS)
1968 7.5-minute San Luis Rey Topographic Quadrangle (Photorevised 1975)

Unitt, Philip
2004 San Diego County Bird Atlas. San Diego Natural History Museum. San Diego, CA.

PROJECT BIOLOGIST SIGNATURE PAGE

All biologists performing focused, protocol-level, least Bell's vireo (*Vireo bellii pusillus*) surveys for the Encina Hub portion of the proposed Sycamore to Peñasquitos Substation 230 kilovolt transmission line project (Proposed Project) were qualified to survey for this species. The undersigned Proposed Project biologists certify this report to be a complete and accurate account of the findings and conclusions of surveys for least Bell's vireo conducted for the Proposed Project during spring 2015.

Darin Busby
Owner/Principal Biologist
Busby Biological Services, Inc.
ESA Permit Number TE-115373-3

Laurie Gorman
Senior Biologist/Project Manager
Busby Biological Services, Inc.
ESA Permit Number TE-233367-2

APPENDIX A – Figures

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedLBVSurvey_070215\SXtoPQ_BusbyFocusedLBVSurvey_ProjectLocation_Fig1.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Project Location Map

Figure 1

- Proposed Project Route
- Staging Yards
- Encina Hub
- Mira Mesa Hub

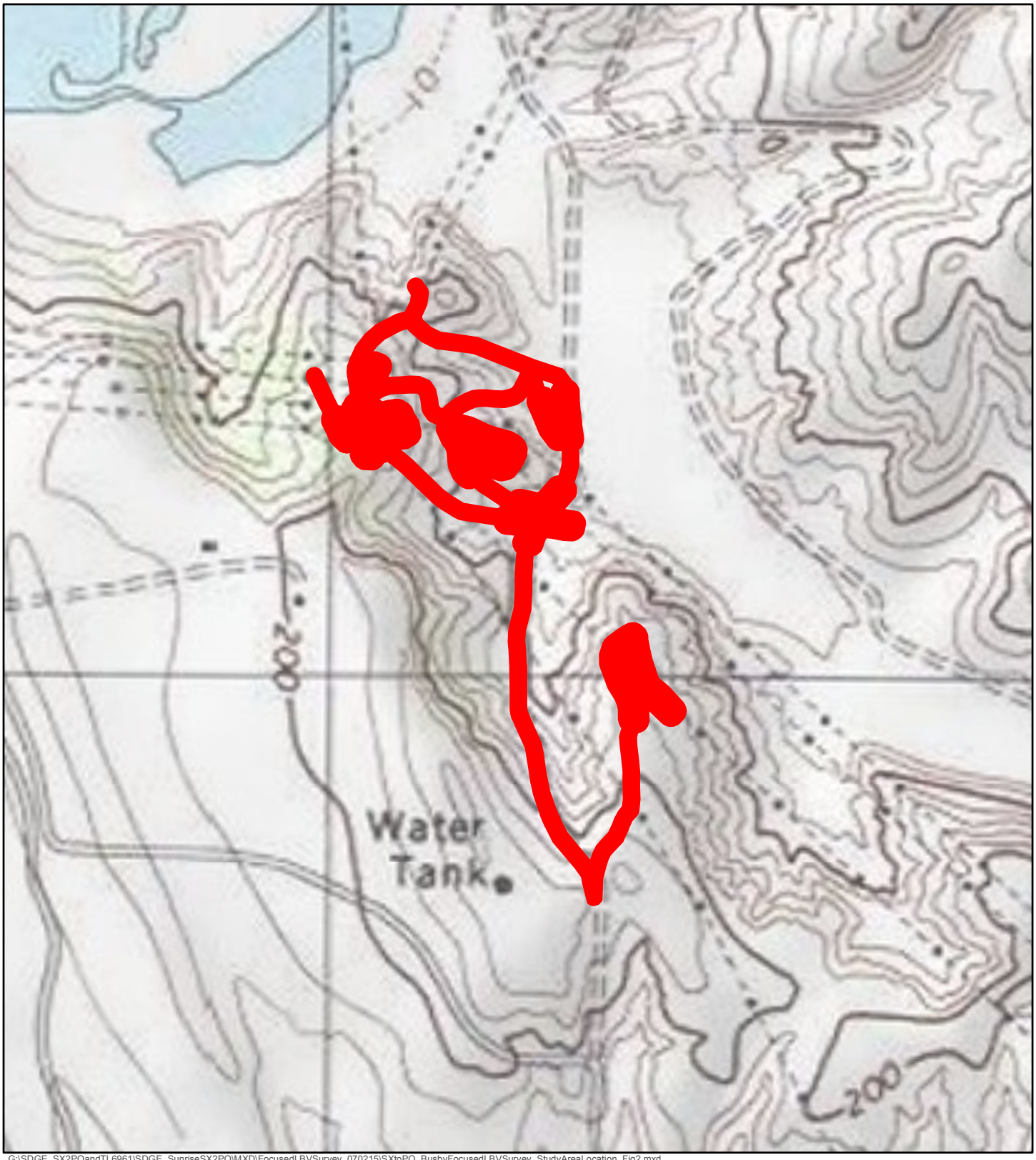
0 2 4 6 Miles

N W E S

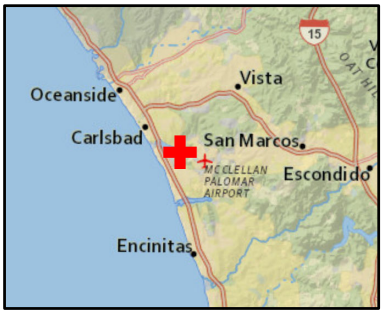
7/2/2015

TRC

SDGE A Sempra Energy utility



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedLBVSurvey_070215\SXtoPQ_BusbyFocusedLBVSurvey_StudyAreaLocation_Fig2.mxd



Sycamore to Peñasquitos 230 kV Transmission Line Project

Encina Hub Project Area

Figure 2

Encina Hub Project Area

N
W E
S

0 0.07 0.14 0.21 Miles

TRC

SDGE

7/2/2015

A Sempra Energy utility

Sources: SDG&E; Copyright:© 2013 National Geographic Society, i-cubed, Content may not reflect National Geographic's current map policy.

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedLBVSurvey_070215\SXtoPQ_BusbyFocusedLBVSurvey_SurveyAreaMap_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Survey Area Map - Encina Hub

Figure 3

Potential Least Bell's Vireo Habitat

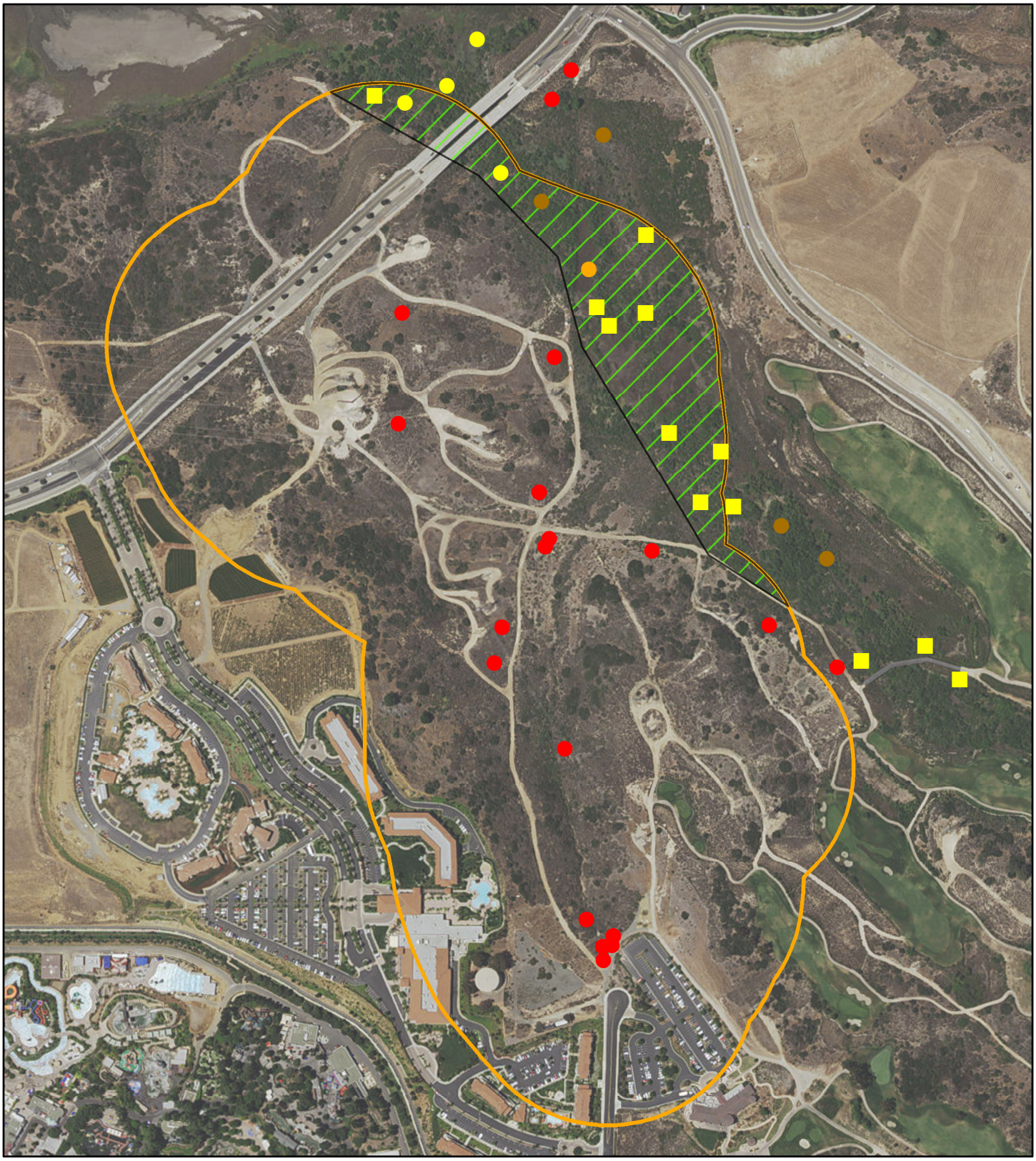
500ft Buffer

0 300 600 900 Feet

7/9/2015

TRC

SDGE Sempra Energy utility



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedLBVSurvey_070215\SXtoPQ_BushyFocusedLBVSurvey_SpeciesDetectionMap_Fig4.mxd

Species Detections

Brood Parasite

- Brown-headed Cowbird

Sensitive Species

- Clark's Marsh Wren
- Coastal California Gnatcatcher
- Yellow Warbler
- Yellow-breasted Chat
- Potential Least Bell's Vireo Habitat
- 500ft Buffer

0 300 600 900 Feet

Sycamore to Peñasquitos 230 kV Transmission Line Project

Species Detection Map - Encina Hub

Figure 4

TRC

SDGE A Sempra Energy utility

7/13/2015

APPENDIX B – Survey Conditions

Appendix B – Survey Conditions

Survey #	Date	Time		Weather				Surveyors
				Temp (°F)	Wind (mph)	Clouds (%)	Precip	
1	4/14/15	Start	0705	66	0-1	100	0	Darin Busby
		End	0900	71	0-3	10	0	
2	4/24/15	Start	0800	60	0-1	100	0	Laurie Gorman
		End	1100	61	0-1	100	0	
3	5/5/15	Start	0630	62	0-1	100	0	Laurie Gorman
		End	1100	67	0-3	100	0	
4	5/22/15	Start	0715	62	0-5	92	0	Laurie Gorman
		End	1055	69	0-4	30	0	
5	6/2/15	Start	0615	62	0-1	100	0	Laurie Gorman
		End	1100	70	0-4	10	0	
6	6/15/15	Start	0610	60	0-1	100	0	Darin Busby
		End	0930	65	1-3	50	0	
7	6/25/15	Start	0720	71	0-1	100	0	Laurie Gorman
		End	1100	79	1-5	10	0	
8	7/10/15	Start	0650	66	0-2	90	0	Laurie Gorman
		End	1055	71	1-5	65	0	

APPENDIX C – Wildlife Species Detected

Appendix C - Wildlife Species Detected

INVERTEBRATES		
Class: Insecta		**Insects**
Order: Lepidoptera		**Butterflies**
Family Papilionidae		**Parnassians and Swallowtails**
	Papilio eurymedon	Pale Swallowtail
Family Nymphalidae		**Brush-footed Butterflies**
	Danaus gilippus	Striated Queen
Class: Sauropsida		**Reptiles**
Order: Squamata		**Snakes and Lizards**
Family Phrynosomatidae		**Spiny Lizards**
	Uta stansburiana	Common Side-blotched Lizard
VERTEBRATES		
Class: Aves		**Birds**
Order Galliformes		**Gallinaceous Birds**
Family Odontophoridae		**New World Quail**
	Callipepla californica	California Quail
Order Ciconiiformes		**Herons, Ibises, Storks, American Vultures, and Allies**
Family Ardeidae		**Herons, Bitterns, and Allies**
	Ardea herodias	Great Blue Heron
	Ardea alba	Great Egret
	Butorides virescens	Green Heron
Family Accipitridae		**Hawks, Kites, Eagles, and Allies**
	Buteo jamaicensis	Red-tailed Hawk
Order Gruiformes		**Rails, Gallinules, and Coots**
Family Rallidae		**Rails, Gallinules, and Coots**
	Porzana Carolina	Sora
Order Charadriiformes		**Shorebirds, Gulls, Auks, and Allies**
Family Laridae		**Gulls, Terns, and Skimmers**
	Larus occidentalis	Western Gull
Order Columbiformes		**Pigeons and Doves**
Family Columbidae		**Pigeons and Doves**
	Zenaida macroura	Mourning Dove
Family Cuculidae		**Cuckoos and Roadrunners**
	Geococcyx californianus	Greater Roadrunner
Order Apodiformes		**Swifts and Hummingbirds**
Family Apodidae		**Swifts**
	Aeronautes saxatalis	White-throated Swift
Family Trochilidae		**Hummingbirds**
	Calypte anna	Anna's Hummingbird
	Calypte costae	Costa's Hummingbird
	Selasphorus sasin	Allen's Hummingbird

Appendix C - Wildlife Species Detected (Continued)

Order Piciformes		**Woodpeckers and Allies**
Family Picidae		**Woodpeckers**
	Picoides nuttallii	Nuttall's Woodpecker
	Colaptes auratus	Northern Flicker
Order Passeriformes		**Perching Birds**
Family Tyrannidae		**Tyrant Flycatchers**
	Contopus sordidulus	Western Wood-Pewee
	Empidonax difficilis	Pacific-slope Flycatcher
	Sayornis nigricans	Black Phoebe
	Tyrannus vociferans	Cassin's Kingbird
Family Vireonidae		**Vireos**
	Vireo huttoni	Hutton's Vireo
Family Corvidae		**Crows and Jays**
	Aphelocoma californica	Western Scrub-Jay
	Corvus brachyrhynchos	American Crow
	Corvus corax	Common Raven
Family Hirundinidae		**Swallows**
	Stelgidopteryx serripennis	Northern Rough-winged Swallow
	Hirundo pyrrhonota	Cliff Swallow
Family Aegithalidae		**Bushtits**
	Psaltriparus minimus	Bushtit
Family Troglodytidae		**Wrens**
	Thryomanes bewickii	Bewick's Wren
	Troglodytes aedon	House Wren
	Cistothorus palustris clarkae	Clark's Marsh Wren
Family Sylviidae		**Gnatcatchers**
	Polioptila caerulea	Blue-gray Gnatcatcher
	Polioptila californica	Coastal California Gnatcatcher
Family Turdidae		**Thrushes**
	Catharus guttatus	Hermit Thrush
Family Timaliidae		**Babblers**
	Chamaea fasciata	Wrentit
Family Mimidae		**Mockingbirds and Thrashers**
	Mimus polyglottos	Northern Mockingbird
	Toxostoma redivivum	California Thrasher
Family Sturnidae		**Starlings**
	Sturnus vulgaris	European Starling
Family Ptilogonatidae		**Silky-flycatchers**
	Phainopepla nitens	Phainopepla
Family Parulidae		**Wood-Warblers**
	Vermivora celata	Orange-crowned Warbler
	Dendroica petechia	Yellow Warbler
	Geothlypis trichas	Common Yellowthroat
	Wilsonia pusilla	Wilson's Warbler
	Icteria virens	Yellow-breasted Chat

Appendix C - Wildlife Species Detected (Continued)

Family Emberizidae		**Emberizids**
	Pipilo maculatus	Spotted Towhee
	Pipilo crissalis	California Towhee
	Aimophila ruficeps	Rufous-crowned Sparrow
	Melospiza melodia	Song Sparrow
Family Cardinalidae		**Cardinals and Allies**
	Pheucticus melanocephalus	Black-headed Grosbeak
	Passerina caerulea	Blue Grosbeak
	Passerina amoena	Lazuli Bunting
Family Icteridae		**Blackbirds**
	Agelaius phoeniceus	Red-winged Blackbird
	Molothrus ater	Brown-headed Cowbird
Family Fringillidae		**Fringilline and Cardueline Finches and Allies**
	Carpodacus mexicanus	House Finch
	Carduelis psaltria	Lesser Goldfinch
Family Estrildidae		**Estrildid Finches**
	Lonchura puntulata	Scaly-breasted Munia
Class: Mammalia		**Mammals**
Order Lagomorpha		**Rabbits, Hares, and Pikas**
Family Leporidae		**Rabbits and Hares**
	Sylvilagus audubonii	Desert Cottontail
Order Rodentia		**Rodents**
Family Sciuridae		**Squirrels and Chipmunks**
	Spermophilus beecheyi	California Ground Squirrel
Family Muridae		**Mice, Rats, and Voles**
	Neotoma lepida	Desert Woodrat
Order Carnivora		**Carnivores**
Family Canidae		**Dogs and foxes**
	Canis familiaris	Domestic Dog
	Canis latrans	Coyote
Family Procyonidae		**Raccoons and Relatives**
	Procyon lotor	Raccoon
Order Artiodactyla		**Even-toed Ungulates**
Family Cervidae		**Deer and Elk**
	Odocoileus hemionus	Mule Deer

APPENDIX D – Incidental Sensitive Species Detected

Appendix D – Incidental Sensitive Species Detected

Survey #	Date	Species Type*	Status**	# of Individuals	GPS Location (Decimal Degrees)	
					Northing	Easting
1	4/14/15	YBCH	SSC	1	33.134938	-117.305875
1	4/14/15	YBCH	SSC	3	33.136984	-117.306744
1	4/14/15	YEWA	SSC	1	33.137551	-117.308385
1	4/14/15	YBCH	SSC	1	33.138271	-117.309812
2	4/24/15	CAGN	FT, SSC	5	33.135170	-117.309507
2	4/24/15	YBCH	SSC	1	33.136291	-117.307291
2	4/24/15	YBCH	SSC	1	33.136120	-117.307146
2	4/24/15	CAGN	FT, SSC	5	33.130345	-117.307028
2	4/24/15	CMWR	SSC	1	33.136646	-117.307382
3	5/05/15	YBCH	SSC	1	33.134420	-117.305730
3	5/05/15	YEWA	SSC	1	33.138210	-117.309470
4	5/22/15	CAGN	FT, SSC	5	33.130242	-117.307146
4	5/22/15	CAGN	FT, SSC	1	33.132916	-117.308401
4	5/22/15	CAGN	FT, SSC	1	33.134098	-117.307795
4	5/22/15	YBCH	SSC	1	33.133121	-117.303557
4	5/22/15	YBCH	SSC	1	33.132804	-117.303166
4	5/22/15	CAGN	FT, SSC	1	33.133996	-117.306642
4	5/22/15	CAGN	FT, SSC	2	33.138538	-117.307602
4	5/22/15	YEWA	SSC	1	33.138818	-117.308664
5	6/02/15	YBCH	SSC	1	33.136246	-117.306738
5	6/02/15	CAGN	FT, SSC	1	33.134026	-117.307838
5	6/02/15	CAGN	FT, SSC	1	33.130113	-117.307141
5	6/02/15	CAGN	FT, SSC	1	33.136222	-117.309474
5	6/02/15	CAGN	FT, SSC	1	33.135812	-117.307758
5	6/02/15	YBCH	SSC	1	33.135112	-117.306460
5	6/02/15	YEWA	SSC	1	33.138377	-117.308997
6	6/15/15	YBCH	SSC	1	33.135112	-117.306460
6	6/15/15	YEWA	SSC	1	33.138377	-117.308997
6	6/15/15	CAGN	FT, SSC	1	33.135812	-117.307758
7	6/25/15	CAGN	FT, SSC	1	33.130257	-117.307043
7	6/25/15	CAGN	FT, SSC	1	33.133258	-117.308316
7	6/25/15	CAGN	FT, SSC	1	33.132110	-117.307597
7	6/25/15	YBCH	SSC	1	33.132968	-117.304276
7	6/25/15	CAGN	FT, SSC	2	33.132906	-117.304544
8	7/10/15	CAGN	FT, SSC	2	33.133302	-117.305312
8	7/10/15	CAGN	FT, SSC	2	33.134535	-117.307913
8	7/10/15	YBCH	SSC	1	33.134460	-117.306100
8	7/10/15	CAGN	FT, SSC	2	33.130499	-117.307334
8	7/10/15	CAGN	FT, SSC	2	33.138254	-117.307817

*Species Codes:

YBCH = yellow-breasted chat (*Icteria virens*)
YEWA = yellow warbler (*Dendroica petechia*)
CAGN = coastal California gnatcatcher (*Polioptila californica californica*)
CMWR = Clark's marsh wren (*Cistothorus palustris clarkae*)

**Status:

SSC = Species of Special Concern (CDFW)
FT = Federally Threatened (USFWS)

BUSBY
Biological Services

September 28, 2015

Ms. Stacey Love
Recovery Permits Coordinator
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

RE: 2015 LEAST BELL'S VIREO SURVEY SUMMARY REPORT FOR THE MAIN ALIGNMENT OF THE PROPOSED SAN DIEGO GAS & ELECTRIC COMPANY SYCAMORE TO PEÑASQUITOS 230 kV TRANSMISSION LINE PROJECT, SAN DIEGO COUNTY, CALIFORNIA

Ms. Love:

This letter report summarizes the results of the 2015 focused, protocol-level, presence/absence surveys for the federally and state-listed endangered least Bell's vireo (*Vireo bellii pusillus*) for the main alignment of the proposed Sycamore to Peñasquitos 230 Kilovolt (kV) Transmission Line Project (Proposed Project). Busby Biological Services, Inc. (BBS) was contracted by Chambers Group, Inc. (Chambers) to conduct these surveys on behalf of the San Diego Gas & Electric Company (SDG&E) to evaluate the potential impacts of the Proposed Project, which is located in the City of Carlsbad, City of San Diego, and City of Poway, San Diego County, California (Attachment 1: Figure 1).

BACKGROUND INFORMATION

A brief summary of the Proposed Project, survey area, and least Bell's vireo are provided in this section.

Proposed Project Description and Location

The Proposed Project includes construction of a new, approximately 16.7-mile 230 kV transmission line between the existing SDG&E Sycamore Canyon and Peñasquitos substations; the consolidation of two existing 69 kV power lines onto new double-circuit, steel structures that would replace existing, predominantly wood structures; and re-routing at the Encina and Mira Mesa Hubs.

The main alignment of the Proposed Project is located in the U.S. Geological Survey (USGS) 7.5-minute Poway, Del Mar, and La Jolla topographic quadrangles (USGS 1967a, 1967b, 1967c) in the City of San Diego and the City of Poway, San Diego County, California (Attachment 1: Figures 1 and 2). Elevations along the main Proposed Project alignment range from approximately 1,000 feet above mean sea level (amsl) at Sycamore Canyon Substation in the eastern portion of the main Proposed Project alignment 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 main Proposed Project alignment (Attachment 1: Figure 2). The main Proposed Project alignment crosses through a network of roads and highways, mixed-use development, parks, and undeveloped open space. Topography along the main Proposed Project alignment varies from relatively flat developed and undeveloped areas, to steep and rolling hills and ridges, to wide and narrow drainages and canyons. The main Proposed Project alignment crosses several unnamed and named drainages and canyons, including Peñasquitos Canyon, McGonigle Canyon, and Deer Canyon.

All new transmission line facilities would be located within existing SDG&E Right-of-Way or within franchise position within existing public roadways, and the entire Proposed Project is located within San Diego County (Attachment 1: Figures 1 through 3).

Brief Survey Area Explanation

Focused least Bell's vireo surveys were conducted for the Proposed Project within all suitable habitats within the current Proposed Project footprint and a 500-foot buffer. Because the Encina Hub portion of the Proposed Project is located in a geographically distinct location and is not within the immediate vicinity of the main Proposed Project alignment (Attachment 1: Figure 1), two separate least Bell's vireo survey summary reports were prepared for the spring 2015 surveys, one for the least Bell's vireo surveys conducted at Encina Hub and one for the least Bell's vireo surveys conducted along the main Proposed Project alignment. This report focuses on the results of the focused least Bell's vireo surveys conducted along the main Proposed Project alignment. The results of the focused least Bell's vireo surveys conducted for the Encina Hub portion of the Proposed Project are contained in a separate report (BBS 2015).

Least Bell's Vireo Species Information

The least Bell's vireo is a small, olive-gray colored, migratory songbird that is federally and state-listed as endangered. One of four subspecies of Bell's Vireo, the least Bell's vireo is endemic to California and Baja California, Mexico. This highly migratory species arrives in California in mid-March and departs by late September to 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 (United States Fish and Wildlife Service [USFWS] 1998; Grinnell and Miller 1986).

The least Bell's vireo 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 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 least Bell's vireo was listed by the California Department of Fish and Wildlife (CDFW) in 1984 it had been extirpated from much of is 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 species' 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, California (Brown 1993, Kus 2002). San Diego County holds the largest breeding population of least Bell's vireo in the state, where it is a fairly common breeder in appropriate habitats, primarily in the coastal lowlands (Unitt 2004).

METHODS

A habitat assessment and focused, protocol-level, least Bell's vireo surveys were performed within suitable habitat located within the main Proposed Project alignment and within a 500-foot buffer (Attachment 1: Figures 2 and 3). 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, least Bell's vireo surveys along the main Proposed Project alignment, a qualified biologist conducted a focused habitat assessment to identify locations of suitable habitat for the species within the Proposed Project footprint and a 500-foot buffer.

Initially, historical occurrence data for least Bell's vireo that have been reported from within 5 miles of the main Proposed Project alignment was evaluated prior to conducting the least Bell's vireo habitat assessment field survey. A Geographic Information Systems (GIS) specialist generated a map from the most recent version of the CDFW *California Natural Diversity Database* (CNDDB; CDFW 2014) and other databases identifying reported least Bell's vireo detections within a 5-mile buffer of the main Proposed Project alignment to allow the qualified biologist to view the historical distribution of least Bell's vireo within the vicinity of the main Proposed Project alignment.

Next, a qualified biologist conducted a field habitat assessment within the main Proposed Project alignment and 500-foot buffer to identify potential least Bell's vireo habitat. The field habitat assessment was conducted by assessing the vegetation communities on foot 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 least Bell's vireo habitat was either added or eliminated from the survey area through closer investigation on foot during this first of eight of focused, protocol-level least Bell's vireo surveys.

Focused Least Bell's Vireo Survey Methods

Qualified BBS biologists conducted focused, protocol-level surveys for the least Bell's vireo in accordance with the current USFWS survey protocol, titled *Least Bell's Vireo Survey Guidelines* (USFWS 2001). Eight surveys were conducted at least 10 days apart between the protocol survey window of April 10 to July 31. All surveys were conducted between approximately dawn and 11:00 am 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 least Bell's vireo. Surveyors slowly walked throughout the suitable habitat within the survey area and used visual and auditory cues to detect the least Bell's vireo. Various routes were utilized to conduct an unbiased survey of the potentially suitable habitat within the survey area, while taking care not to disturb sensitive habitat or potential nest areas. No more than approximately 3 linear kilometers (50 hectares) of suitable habitat was surveyed per day.

When least Bell's vireo are detected during a survey, surveyors record 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 area. Surveyors also estimate the age, sex, and number of individuals detected and include notes about each detection. In addition, during all surveys, surveyors record other wildlife species observed directly or detected indirectly by sign, including scat, tracks, calls, and other evidence. Surveyors specifically record numbers and locations of parasitic brown-headed cowbirds and other special-status species detected within and adjacent to least Bell's vireo territories to report to USFWS.

RESULTS

The results of the habitat assessment and focused, protocol-level least Bell's vireo surveys are presented in this section.

Habitat Assessment Results

On March 23, 2015, BBS biologist Darin Busby conducted a focused habitat assessment of the potentially suitable least Bell's vireo located within the main Proposed Project alignment and a 500-foot buffer. BBS coordinated with TRC Solutions, Inc. (TRC) to digitize the suitable habitat polygons that were drawn by hand onto the aerial imagery during the habitat assessment. Based on the GIS data, there are approximately 2.9 miles of suitable least Bell's vireo habitat distributed in 17 different polygons along the main Proposed Project alignment (Attachment 1: Figure 3).

Potentially suitable habitat for the least Bell's vireo that required surveys was present along several drainages located in the 500-foot survey buffer. The potentially suitable habitat for the least Bell's vireo within the main Proposed Project alignment consists of southern coast live oak riparian forest, southern riparian scrub, southern willow scrub, mulefat scrub, tamarisk scrub, and Eucalyptus woodland with a varying overstory and understory height, density, structure, and composition. Brief descriptions of these vegetation communities within the main Proposed Project alignment that were surveyed for least Bell's vireo are described below.

Southern coast live oak riparian forest is a community found in one large drainage within and adjacent to the main Proposed Project alignment (i.e., Los Peñasquitos Creek) that is dominated by an overstory of coast live oak (*Quercus agrifolia*), Fremont cottonwood (*Populus fremontii*), and western sycamore (*Platanus racemosa*), with an understory of other riparian species such as willow (*Salix* spp.), mulefat (*Baccharis salicifolia*), black elderberry (*Sambucus nigra*), poison oak (*Toxicodendron diversilobum*), California bulrush (*Schoenoplectus californicus*), broadleaf cattail (*Typha latifolia*), and/or coyote brush (*Baccharis pilularis*).

Southern riparian scrub is a community typically found in the moderate to large size drainages within and adjacent to the main Proposed Project alignment. These areas are typically dominated by willow and mulefat, and sometimes contain an understory of California bulrush, broadleaf cattail, poison oak, and/or coyote brush.

Southern willow scrub is a community typically found in the small to moderate size drainages subject to frequent flooding within and adjacent to the main Proposed Project alignment. These areas are typically dominated by dense thickets of willow, sometimes with scattered emergent Fremont cottonwood and/or western sycamore, and an understory of mulefat, California bulrush, broadleaf cattail, poison oak, and/or coyote brush.

Mulefat scrub is a community typically found in the small ephemeral drainages subject to frequent flooding within and adjacent to the main Proposed Project alignment. These areas are typically dominated by dense mulefat with little to no understory.

Tamarisk scrub is a community typically found in the small to moderate size drainages subject to frequent flooding and with alkaline soils within and adjacent to the main Proposed Project alignment. These areas are typically dominated by the nonnative, invasive tamarisk (*Tamarix* spp.), with little to no understory.

Eucalyptus woodland is a nonnative plant community found in uplands and some drainages within and adjacent to the main Proposed Project alignment. The drainages dominated by gum trees (*Eucalyptus* spp.) within and adjacent to the main Proposed Project alignment typically have a relatively open understory composed of scattered willow, mulefat, black elderberry, poison oak, and/or coyote brush.

Focused Least Bell's Vireo Survey Results

A total of eight protocol-level focused least Bell's vireo surveys were conducted within the 17 polygons of potentially suitable habitat (Attachment 1: Figure 3) between April 14 and July 27, 2015. Each survey round took 3 days to complete because the habitat was not contiguous and was distributed along the main Proposed Project alignment. All surveys were conducted during appropriate weather conditions by qualified biologists Darin Busby (TE-115373-3) and Laurie Gorman (TE-233367-2). Attachment 2 provides a summary of survey conditions, including survey times, weather conditions, and name of surveyor.

No least Bell's vireos were detected during the 2015 focused, protocol-level least Bell's vireo surveys conducted along the main Proposed Project alignment.

A total of 70 wildlife species were detected either during the focused least Bell's vireo surveys or incidentally during access to and from the survey area (Attachment 3). Of these 70 species, three are considered special-status species - the coastal California gnatcatcher (*Polioptila californica californica*) is a federally listed threatened species and a CDFW Species of Special Concern; the yellow-breasted chat (*Icteria virens*) and yellow warbler (*Dendroica petechia*) are considered CDFW Species of Special Concern (Attachment 1: Figures 4, 4a, and 4b). Attachment 4 provides GPS locations of special-status species detected during the focused surveys. In addition, nine brown-headed cowbird detections were recorded during the focused surveys. Table 1, below, summarizes these detections.

Table 1. Summary of Brown-headed Cowbird Detections

BHCO* Detection #	Survey #	Date	GPS Location (NAD 83, Zone 11S)	
			Northing	Easting
1	1	4/14/15	32.961892	-117.169431
2	1	4/15/15	32.945556	-117.105705
3	1	4/15/15	32.944135	-117.103907
4	1	4/17/15	32.968375	-117.165419
5	2	4/27/15	32.944536	-117.103872
6	2	4/27/15	32.945295	-117.104409
7	4	5/26/15	32.959761	-117.175114
8	6	6/16/15	32.959948	-117.174545
9	7	7/2/15	32.970388	-117.152949

*BHCO: brown-headed cowbird

Detection locations of special-status species and brown-headed cowbirds are depicted on an aerial map of the survey area in Attachment 1: Figures 4, 4a, and 4b. It should be noted that the list of special-status species presented in Attachment 4 and locations of special-status species presented in Attachment 1: Figures 4, 4a, and 4b were either detected during the focused least Bell's vireo surveys or incidentally during access to and from the survey area and may reflect repeated detections of the same individuals of a species from one survey to the next. Therefore, these attachments are intended to show the type and general location of special-status species detected, not quantity of individuals present.

SUMMARY

No least Bell's vireos were detected during the 2015 focused, protocol-level least Bell's vireo surveys conducted along the main Proposed Project alignment.

Please do not hesitate to contact Melissa Busby at melissa@busbybiological.com or 858.334.9507 or me at darin@busbybiological.com or 858.334.9508 if you have any questions.

Sincerely,

Darin Busby
Owner/Principal Biologist
Busby Biological Services, Inc.

ATTACHMENTS

Attachment 1: Figures
Attachment 2: Survey Conditions
Attachment 3: Wildlife Species Detected
Attachment 4: Incidental Special-Status Species Detected

REFERENCES

Barbour, M. G., and J. Major eds.
1977 Terrestrial vegetation of California. John Wiley and Sons, New York.

Brown, B.T.
1993 Bell's Vireo (*Vireo bellii*). In *The Birds of North America*, No. 35 (A. Poole, P. Stettenheim, and F. Gill, Eds.). Philadelphia: The Academy of Natural Sciences; Washington, DC: The American Ornithologists' Union.

Busby Biological Services, Inc. (BBS)
2014 *Biological Technical Report for Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project*, City of San Diego, San Diego County, California. March 2014.
2015 *2015 Least Bell's Vireo Survey Summary Report for the Encina Hub Portion of the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project*, San Diego County, California. July 17.

California Department of Fish and Wildlife (CDFW)
2014 Natural Diversity Data Base. Nongame-Heritage Program, California Department of Fish and Wildlife, Sacramento.

Garrett, K. and J. Dunn
1981 Birds of southern California: status and distribution. Los Angeles Audubon Soc., Los Angeles.

Grinnell, J., and A.H. Miller
1986 The Distribution of the Birds of California. *Pacific Coast Avifauna* No. 27, published 1944 and reprinted by Artimisa Press, Lee Vining, California.

Holland, R.F.
1986 *Preliminary Descriptions of the Terrestrial Natural Communities of California*. State of California, The Resources Agency, Department of Fish and Game, Natural Heritage Division, Sacramento, California.

Kus, B.
2002 Least Bell's vireo (*Vireo bellii pusillus*). In California Partners in Flight. The riparian bird conservation plan: a strategy for reversing the decline of riparian-associated birds in California. Available at: http://www.prbo.org/calpif/htmldocs/riparian_v-2.html.

U.S. Fish and Wildlife Service (USFWS)
1998 Draft Recovery Plan for the Least Bell's Vireo. U.S. Fish and Wildlife Service, Portland, OR. 139 pgs.

U.S. Geological Survey (USGS)
1967a 7.5-minute Poway Topographic Quadrangle (Photorevised 1975)
1967b 7.5-minute Del Mar Topographic Quadrangle (Photorevised 1975)
1967c 7.5-minute La Jolla Topographic Quadrangle (Photorevised 1975)

Unitt, Philip
2004 San Diego County Bird Atlas. San Diego Natural History Museum. San Diego, CA.

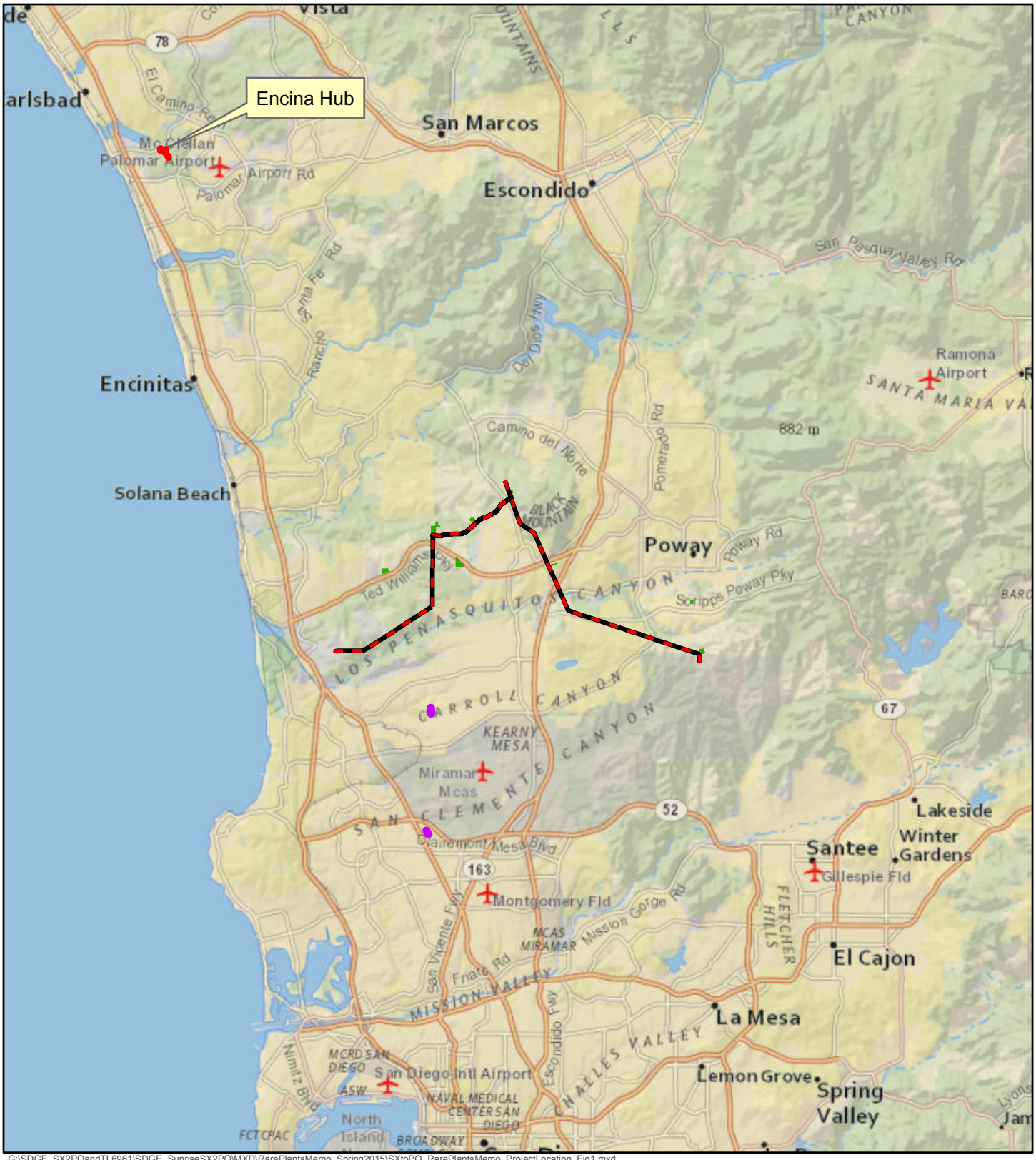
PROJECT BIOLOGIST SIGNATURE PAGE

All biologists performing focused, protocol-level, least Bell's vireo (*Vireo bellii pusillus*) surveys for the main alignment portion of the proposed Sycamore to Peñasquitos Substation 230 kilovolt transmission line project (Proposed Project) were qualified to survey for this species. The undersigned Proposed Project biologists certify this report to be a complete and accurate account of the findings and conclusions of surveys for least Bell's vireo conducted for the Proposed Project during spring 2015.

Darin Busby
Owner/Principal Biologist
Busby Biological Services, Inc.
ESA Permit Number TE-115373-3

Laurie Gorman
Senior Biologist/Project Manager
Busby Biological Services, Inc.
ESA Permit Number TE-233367-2

ATTACHMENT 1 – Figures



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_ProjectLocation_Fig1.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Project Location Map

Figure 1

- Proposed Project Route
- Staging Yards
- Encina Hub
- Mira Mesa Hub

4/22/2015

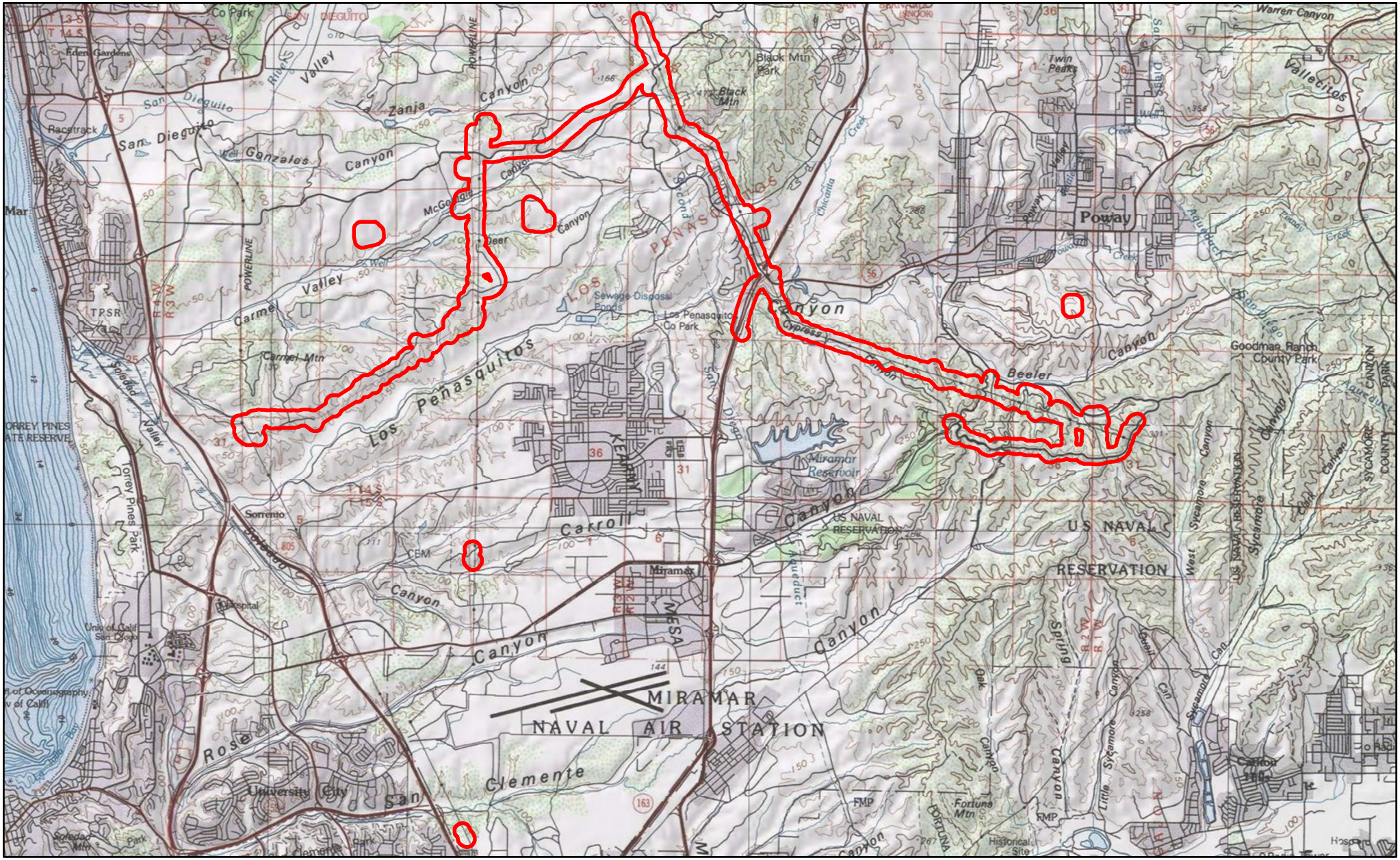
0 2 4 6 Miles

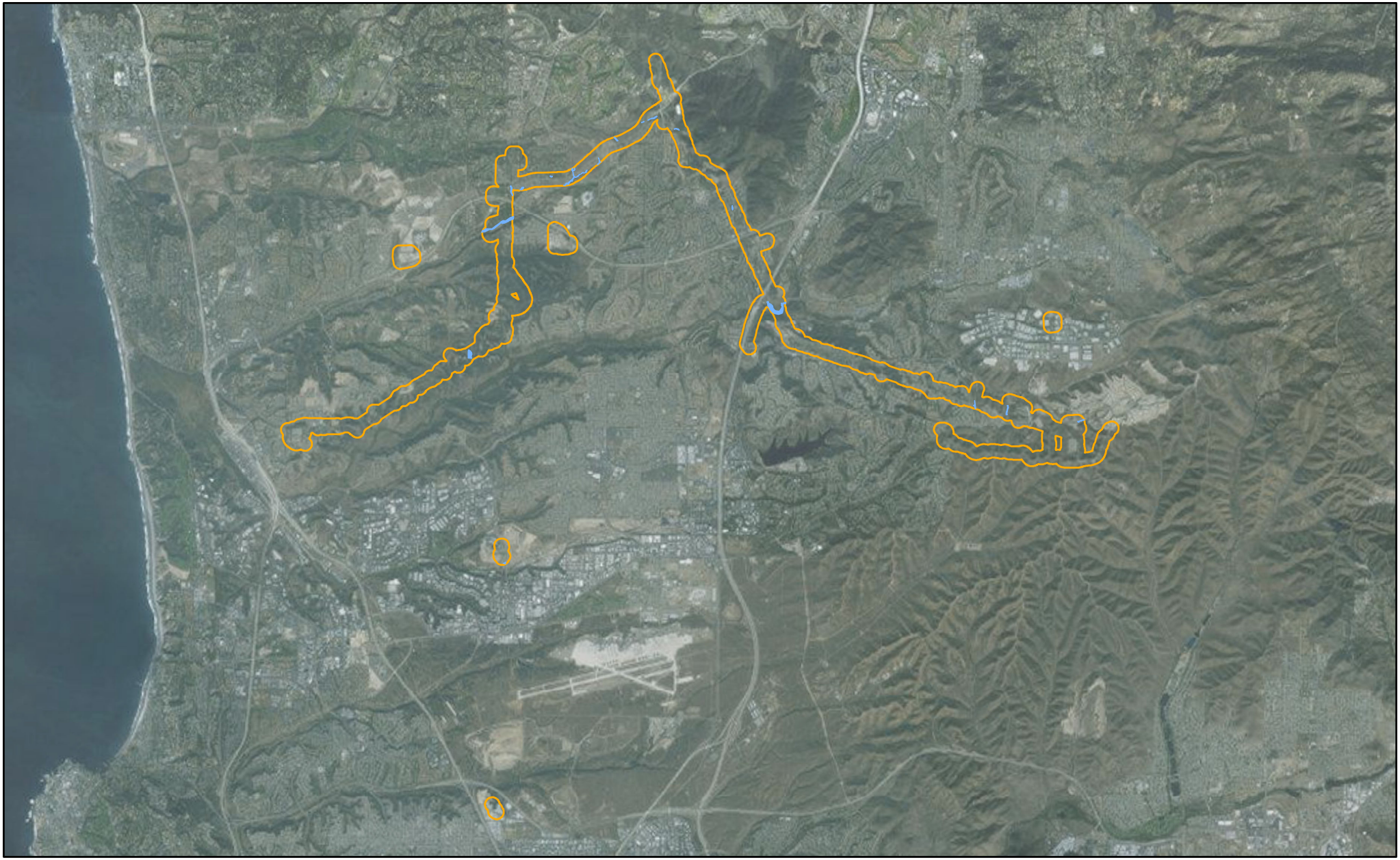
N W E S

TRC

SDGE

A Sempra Energy utility


Poway
Miramar Reservoir
MIRAMAR
NAVAL AIR STATION
US NAVAL RESERVATION
Los Peñasquitos
Carroll Canyon
Black Mtn Park
Goodman Ranch County Park
Sewage Disposal Ponds
Los Penasquitos Co Park
Torrey Pines Park
University City
Sorrento
Carmel Mtn
Fortuna Mtn
Historical Site
Warren Canyon
Twin Peaks
Valle Crtos
Eden Gardens
Racetrack
San Dieguito
Zanja
Gonzales
McGonigle
Deer
Carmel Valley
Beeler
Cypress
Aqueduct
Clairemont
Sycamore
Spring
Oak
Little Sycamore
Rose
Clemente
Soledad
Nobel
Miramar
Hospital
Park
Historical Site
Sycamore Canyon County Park
US NAVAL RESERVATION
TPSR
POWERLINE
R4W
R3W
R2W
R1W
T14S
T15S
Mar
ORREY PINES ATE RESERVE
Co Park
Valley
Canyon
Creek
Aqueduct
Trunnel
Cowley
Cuyamaca
Chicarita
Second
Pipeline
Los Penasquitos
San Diego
Miramar
Carroll
Nobel



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedLBVSurvey_Main_071716\SXtoPQ_BusbyFocusedLBVSurvey_Main_SurveyAreaMap_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Survey Area Map - Main Alignment

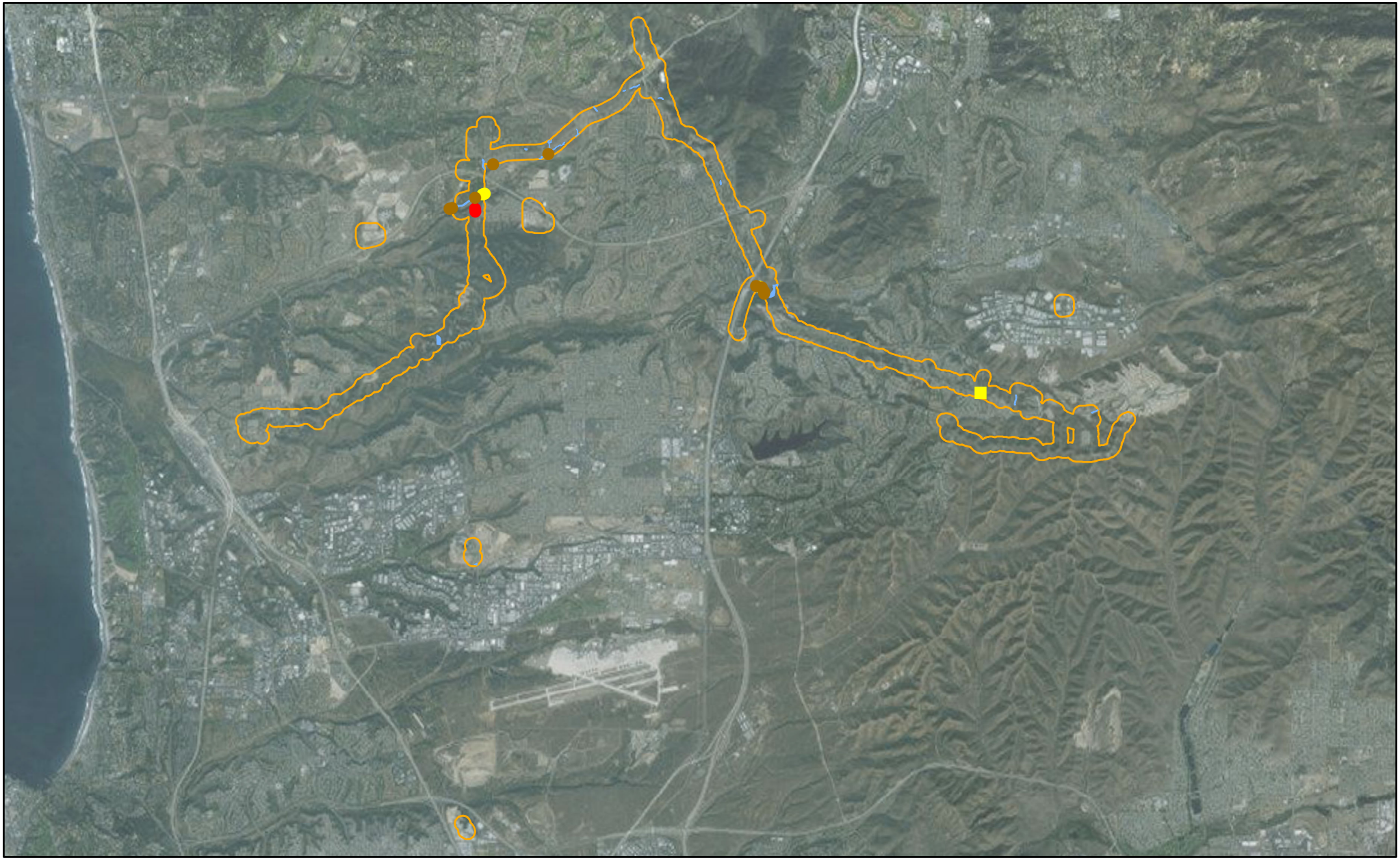
Figure 3

Potential Least Bell's Vireo Habitat

BSA 500ft Buffer

0 1 2 3 Miles

8/5/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedLBVSurvey_Main_071716\SXtoPQ_BusbyFocusedLBVSurvey_Main_SpeciesDetectionMap_Fig4.mxd

Species Detections

Brood Parasite

- Brown-headed Cowbird

Sensitive Species

- Coastal California Gnatcatcher
- Yellow Warbler
- Yellow-breasted Chat

- Potential Least Bell's Vireo Habitat
- BSA 500ft Buffer

Sycamore to Peñasquitos 230 kV Transmission Line Project

Species Detection Overview Map - Main Alignment

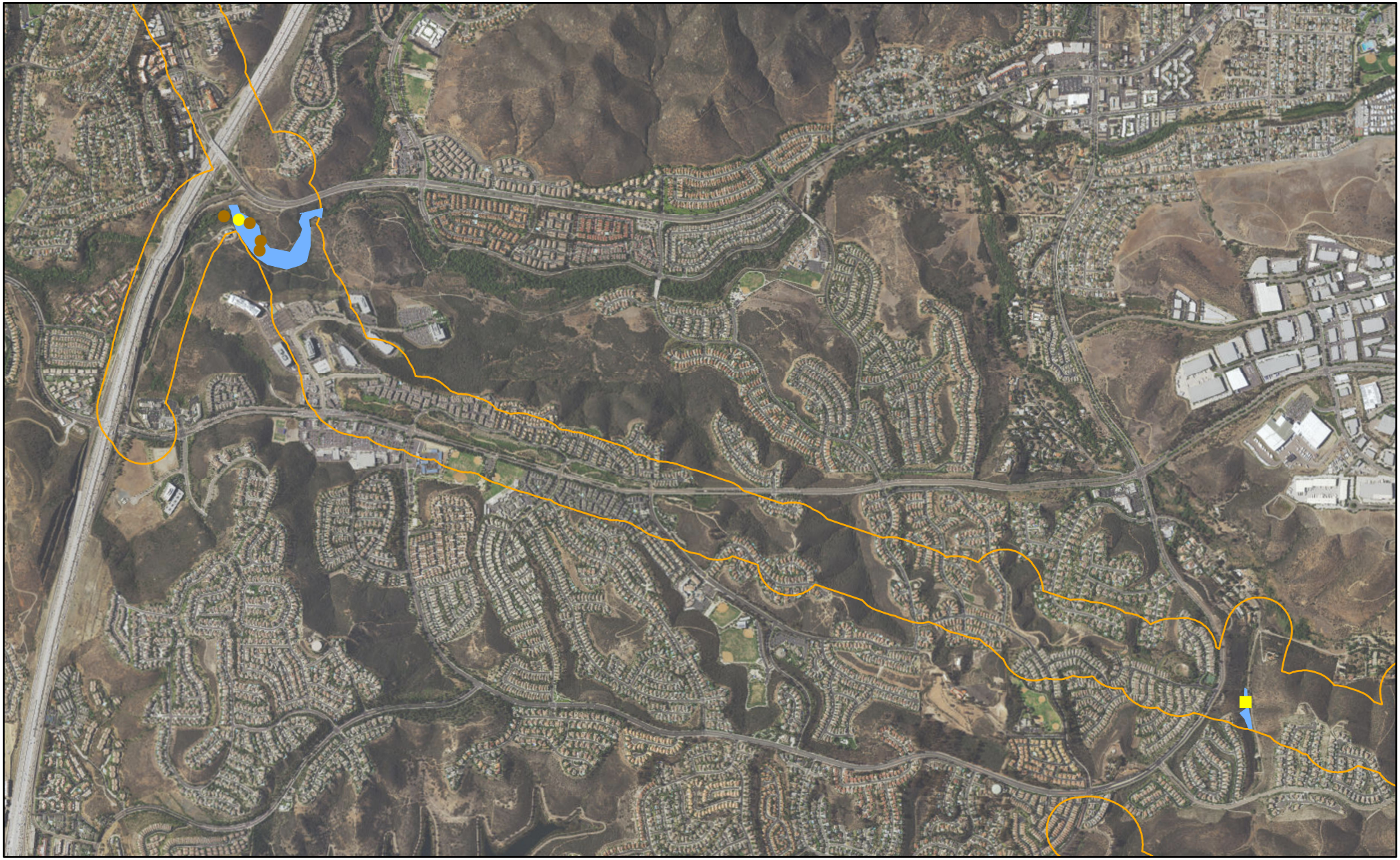
Figure 4

0 1 2 3 Miles

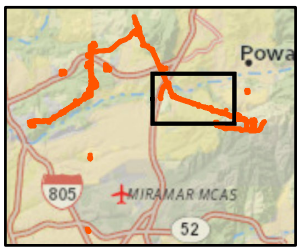
8/5/2015

TRC

SDGE A Sempra Energy utility



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedLBVSurvey_Main_071716\SXtoPQ_BusbyFocusedLBVSurvey_Main_SpeciesDetectionMap_Fig4a.mxd



Species Detections

Brood Parasite

- Brown-headed Cowbird

Sensitive Species

- Coastal California Gnatcatcher
- Yellow Warbler
- Yellow-breasted Chat

- Potential Least Bell's Vireo Habitat
- BSA 500ft Buffer

0 0.2 0.4 0.6 Miles

Sycamore to Peñasquitos 230 kV Transmission Line Project

Species Detection Map - Main Alignment

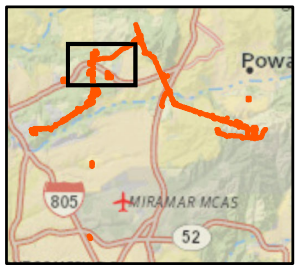
Figure 4a

7/21/2015

TRC

SDGE A Sempra Energy utility

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedLBVSurvey_Main_071716\SXtoPQ_BusbyFocusedLBVSurvey_Main_SpeciesDetectionMap_Fig4b.mxd



Species Detections

Brood Parasite

- Brown-headed Cowbird

Sensitive Species

- Coastal California Gnatcatcher
- Yellow Warbler
- Yellow-breasted Chat

- Potential Least Bell's Vireo Habitat
- BSA 500ft Buffer

0 0.2 0.4 0.6 Miles

Sycamore to Peñasquitos 230 kV Transmission Line Project

Species Detection Map - Main Alignment

Figure 4b

8/5/2015

TRC

SDGE A Sempra Energy utility

ATTACHMENT 2 – Survey Conditions

Attachment 2 – Survey Conditions

Survey Round #	Day #	Date	Time		Weather			Precip	Surveyors
					Temp (°F)	Wind (mph)	Clouds (%)		
1	1	4/14/15	Start	0720	64	0-2	70	0	Darin Busby & Laurie Gorman
			End	1100	72	2-5	0	0	
	2	4/15/15	Start	0615	51	0-2	0	0	
			End	1100	75	0-2	0	0	
	3	4/17/15	Start	0600	52	0-1	0	0	
			End	1100	74	0-2	0	0	
2	1	4/27/15	Start	0600	53	0-1	0	0	Darin Busby
			End	1100	76	3-5	0	0	
	2	4/28/15	Start	0600	55	0-1	0	0	
			End	1040	79	3-5	0	0	
	3	4/29/15	Start	0610	52	0-1	10	0	
			End	1100	78	3-7	0	0	
3	1	5/8/15	Start	0600	52	0-1	100	0	Darin Busby
			End	0845	51	0-2	100	0	
	2	5/11/15	Start	0600	57	0-1	100	0	
			End	1100	71	0-3	20	0	
	3	5/12/15	Start	0545	58	0-1	100	0	
			End	1100	73	0-2	15	0	
4	1	5/21/15	Start	0600	59	0-1	100	0	Darin Busby & Laurie Gorman
			End	1100	65	1-4	100	0	
	2	5/22/15	Start	0600	60	3-5	80	0	
			End	1100	68	3-8	80	0	
	3	5/26/15	Start	0545	62	0-1	100	0	
			End	1100	70	0-1	100	0	
5	1	6/2/15	Start	0615	62	0-1	100	0	Darin Busby
			End	1045	75	3-7	0	0	
	2	6/3/15	Start	0545	61	0-1	100	0	
			End	1045	72	3-5	30	0	
	3	6/9/15	Start	0600	68	2-3	100	0	
			End	1015	75	3-5	50	0	
6	1	6/15/15	Start	0615	66	0-1	100	0	Laurie Gorman
			End	1100	68	3-6	100	0	
	2	6/16/15	Start	0610	65	0-2	100	0	
			End	1100	73	1-5	2	0	
	3	6/24/15	Start	0600	66	0-1	100	0	
			End	1100	75	1-4	0	0	

Attachment 2 – Survey Conditions (Continued)

Survey Round #	Day #	Date	Time		Weather				Surveyors
					Temp (°F)	Wind (mph)	Clouds (%)	Precip	
7	1	7/1/15	Start	0550	69	0-1	95	0	Laurie Gorman
			End	1100	81	0-2	85	0	
	2	7/2/15	Start	0615	68	0-1	100	0	
			End	1100	73	0-2	100	0	
	3	7/8/15	Start	0645	67	0-1	100	0	
			End	1100	71	0-3	50	0	
8	1	7/23/15	Start	0615	69	0-1	100	0	Darin Busby
			End	1100	78	3-7	25	0	
	2	7/24/15	Start	0600	66	0	100	0	
			End	1030	77	3-5	0	0	
	3	7/27/15	Start	0630	67	0-1	100	0	
			End	1100	76	3-8	10	0	

ATTACHMENT 3 – Wildlife Species Detected

Attachment 3 - Wildlife Species Detected

INVERTEBRATES		
Class Insecta		**Insects**
Order Lepidoptera		**Butterflies**
Family Danaidae		**Milkweed Butterflies**
	Danaus plexippus	Monarch Butterfly
Family Hesperiidae		**Firetips and Skippers**
	Pyrgus communis	Common Checkered-skipper
Family Lycaenidae		**Harvesters, Coppers, Hairstreaks, and Blues**
	Plebejus acmon	Acmon Blue
Family Pieridae		**White Butterflies**
	Anthocharis sara	Sara's Orangetip
	Pieris rapae	Cabbage White
Family Riodinidae		**Metalmarks**
	Apodemia virgulti	Behr's Metalmark
Class Sauropsida		**Reptiles**
Order Squamata		**Snakes and Lizards**
Family Phrynosomatidae		**Spiny Lizards**
	Uta stansburiana	Common Side-blotched Lizard
VERTEBRATES		
Class Aves		**Birds**
Order Galliformes		**Gallinaceous Birds**
Family Odontophoridae		**New World Quail**
	Callipepla californica	California Quail
Family Accipitridae		**Hawks, Kites, Eagles, and Allies**
	Accipiter cooperii	Cooper's Hawk
	Buteo jamaicensis	Red-tailed Hawk
Order Charadriiformes		**Shorebirds, Gulls, Auks, and Allies**
Family Charadriidae		**Plovers**
	Charadrius vociferous	Killdeer
Order Columbiformes		**Pigeons and Doves**
Family Columbidae		**Pigeons and Doves**
	Columba livia	Rock Pigeon
	Zenaida macroura	Mourning Dove
Order Apodiformes		**Swifts and Hummingbirds**
Family Apodidae		**Swifts**
	Aeronautes saxatalis	White-throated Swift
Family Trochilidae		**Hummingbirds**
	Calypte anna	Anna's Hummingbird
	Calypte costae	Costa's Hummingbird
	Selasphorus sasin	Allen's Hummingbird
Order Piciformes		**Woodpeckers and Allies**
Family Picidae		**Woodpeckers**
	Melanerpes formicivorus	Acorn Woodpecker
	Picoides nuttallii	Nuttall's Woodpecker

Attachment 3 - Wildlife Species Detected (Continued)

Order Passeriformes		**Perching Birds**
Family Tyrannidae		**Tyrant Flycatchers**
	Contopus sordidulus	Western Wood-Pewee
	Empidonax difficilis	Pacific-slope Flycatcher
	Sayornis nigricans	Black Phoebe
	Sayornis saya	Say's Phoebe
	Myiarchus cinerascens	Ash-throated Flycatcher
	Tyrannus vociferans	Cassin's Kingbird
Family Vireonidae		**Vireos**
	Vireo gilvus	Warbling Vireo
Family Corvidae		**Crows and Jays**
	Aphelocoma californica	Western Scrub-Jay
Family Alaudidae		**Larks**
	Eremophila alpestris actia	California horned lark
	Corvus brachyrhynchos	American Crow
	Corvus corax	Common Raven
Family Hirundinidae		**Swallows**
	Stelgidopteryx serripennis	Northern Rough-winged Swallow
	Hirundo pyrrhonota	Cliff Swallow
Family Paridae		**Chickadees and Titmice**
	Baeolophus inornatus	Oak Titmouse
Family Aegithalidae		**Bushtits**
	Psaltriparus minimus	Bushtit
Family Troglodytidae		**Wrens**
	Thryomanes bewickii	Bewick's Wren
	Troglodytes aedon	House Wren
Family Regulidae		**Kinglets**
	Regulus calendula	Ruby-crowned Kinglet
Family Sylviidae		**Gnatcatchers**
	Polioptila caerulea	Blue-gray Gnatcatcher
	Polioptila californica	Coastal California Gnatcatcher
Family Timaliidae		**Babblers**
	Chamaea fasciata	Wrentit
Family Mimidae		**Mockingbirds and Thrashers**
	Mimus polyglottos	Northern Mockingbird
	Toxostoma redivivum	California Thrasher
Family Sturnidae		**Starlings**
	Sturnus vulgaris	European Starling
Family Parulidae		**Wood-Warblers**
	Vermivora celata	Orange-crowned Warbler
	Dendroica petechia	Yellow Warbler
	Dendroica coronata	Yellow-rumped Warbler
	Geothlypis trichas	Common Yellowthroat
	Wilsonia pusilla	Wilson's Warbler
	Icteria virens	Yellow-breasted Chat

Attachment 3 - Wildlife Species Detected (Continued)

Family Emberizidae		**Emberizids**
	Pipilo maculatus	Spotted Towhee
	Pipilo crissalis	California Towhee
	Aimophila ruficeps	Rufous-crowned Sparrow
	Melospiza melodia	Song Sparrow
Family Cardinalidae		**Cardinals and Allies**
	Pheucticus melanocephalus	Black-headed Grosbeak
	Passerina caerulea	Blue Grosbeak
Family Icteridae		**Blackbirds**
	Agelaius phoeniceus	Red-winged Blackbird
	Molothrus ater	Brown-headed Cowbird
	Icterus cucullatus	Hooded Oriole
Family Fringillidae		**Fringilline and Cardueline Finches and Allies**
	Carpodacus mexicanus	House Finch
	Carduelis psaltria	Lesser Goldfinch
Family Passeridae		**Old World Sparrows**
	Passer domesticus	House Sparrow
Family Estrildidae		**Estrildid Finches**
	Lonchura puntulata	Scaly-breasted Munia
Class: Mammalia		**Mammals**
Order Lagomorpha		**Rabbits, Hares, and Pikas**
Family Leporidae		**Rabbits and Hares**
	Sylvilagus audubonii	Desert Cottontail
Order Rodentia		**Rodents**
Family Sciuridae		**Squirrels and Chipmunks**
	Spermophilus beecheyi	California Ground Squirrel
Order Carnivora		**Carnivores**
Family Canidae		**Dogs and foxes**
	Canis familiaris	Domestic Dog
	Canis latrans	Coyote
Family Procyonidae		**Raccoons and Relatives**
	Procyon lotor	Raccoon
Family Felidae		**Cats**
	Felis rufus	Bobcat
Order Perissodactyla		**Odd-toed Ungulates**
Family Equidae		**Horses, Donkeys, and Zebras**
	Equus caballus	Domestic Horse
Order Artiodactyla		**Even-toed Ungulates**
Family Cervidae		**Deer and Elk**
	Odocoileus hemionus	Mule Deer

ATTACHMENT 4 – Incidental Special-Status Species Detected

Attachment 4 – Incidental Special-Status Species Detected

Survey #	Date	Species Type*	Status**	# of Individuals	GPS Location (Decimal Degrees)	
					Northing	Easting
1	4/14/15	YEWA	SSC	1	32.962612	-117.167205
3	5/8/15	YBCH	SSC	1	32.925586	-117.054804
4	5/22/15	YEWA	SSC	1	32.962538	-117.167683
6	6/15/15	CAGN	FT; SSC	1	32.959788	-117.169334
7	7/2/15	CAGN	FT; SSC	1	32.959354	-117.169291
7	7/2/15	YEWA	SSC	1	32.945424	-117.104945

*Species Codes: YBCH = yellow-breasted chat (*Icteria virens*); YEWA = yellow warbler (*Dendroica petechia*); CAGN = coastal California gnatcatcher (*Polioptila californica californica*)

**Status: SSC = California Department of Fish and Wildlife California - Species of Special Concern; FT = United States Fish and Wildlife Service - Federally Threatened

BUSBY
Biological Services

September 28, 2015

Ms. Stacey Love
Recovery Permits Coordinator
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

RE: 2015 SOUTHWESTERN WILLOW FLYCATCHER SURVEY SUMMARY REPORT FOR THE ENCINA HUB PORTION OF THE PROPOSED SAN DIEGO GAS & ELECTRIC COMPANY SYCAMORE TO PEÑASQUITOS 230 kV TRANSMISSION LINE PROJECT, SAN DIEGO COUNTY, CALIFORNIA

Ms. Love:

This letter report summarizes the results of the 2015 focused, protocol-level, presence/absence surveys for the federally and state-listed endangered southwestern willow flycatcher (*Empidonax traillii extimus*) for the Encina Hub portion of the proposed Sycamore to Peñasquitos 230 Kilovolt (kV) Transmission Line Project (Proposed Project). Busby Biological Services, Inc. (BBS) was contracted by Chambers Group, Inc. (Chambers) to conduct these surveys on behalf of the San Diego Gas & Electric Company (SDG&E) to evaluate the potential impacts of the Encina Hub portion of the Proposed Project in the City of Carlsbad, San Diego County, California (Appendix A: Figures 1 and 2).

BACKGROUND INFORMATION

A brief summary of the Proposed Project and southwestern willow flycatcher are provided in this section.

Proposed Project Location and Description

The Encina Hub portion of the Proposed Project is in the southern portion of the U.S. Geological Survey (USGS) 7.5-minute San Luis Rey topographic quadrangle (USGS 1968) in the City of Carlsbad, San Diego County, California (Appendix A: Figures 1 and 2). The Encina Hub contains gently sloping to moderately sloping topography, with elevations ranging from approximately 240 feet above mean sea level (amsl) to 40 feet amsl. Land use within the Encina Hub consists primarily of undeveloped land and natural preserve lands. Adjacent land use includes a municipal golf course, hotels, agriculture, and additional undeveloped land and preserve lands. The Encina Hub is dominated by the following vegetation communities: Diegan coastal sage scrub, disturbed Diegan coastal sage scrub, disturbed habitat, and bare ground. Other vegetation communities present in smaller proportions include southern riparian scrub, southern willow scrub, mulefat scrub, nonnative grassland, native grassland, ornamental, and developed lands. An unnamed ephemeral drainage in the southwestern portion of Encina Hub runs north to connect with a

riparian corridor in an unnamed canyon drainage within the northeastern portion of Encina Hub.

The Proposed Project includes construction of a new, approximately 16.7-mile 230 kV transmission line between the existing SDG&E Sycamore Canyon and Peñasquitos substations; the consolidation of two existing 69 kV power lines onto new double-circuit, steel structures that would replace existing, predominantly wood structures; and re-routing at the Encina and Mira Mesa Hubs. An existing San Luis Rey–Mission 230 kV transmission line would be removed from service at the Encina Hub to create an open position for the proposed new 230-kV transmission line. The following steps would occur to reconfigure the 230 kV transmission lines at Encina Hub portion of the Proposed Project:

- Remove jumpers between existing towers
- Transfer the existing conductor between towers
- Install jumpers from towers
- Install new conductor from tower between three existing towers
- Install dead ends assemblies, dampers and spacers on existing towers

All new transmission line facilities would be located within existing SDG&E Right-of-Way or within franchise position within existing public roadways, and the entire Proposed Project is located within San Diego County (Appendix A: Figures 1 and 2).

Brief Survey Area Explanation

Focused southwestern willow flycatcher surveys were conducted for the Proposed Project within all suitable habitats within and adjacent to the current Proposed Project alignment. Because the Encina Hub portion of the Proposed Project is located in a geographically distinct location and is not within the immediate vicinity of the main alignment portion of the Proposed Project (Appendix A: Figure 1), two separate southwestern willow flycatcher survey summary reports were prepared for the spring 2015 surveys, one for the southwestern willow flycatcher surveys conducted at Encina Hub and one for the southwestern willow flycatcher surveys conducted along the main alignment. This report focuses on the results of the focused southwestern willow flycatcher surveys conducted at the Encina Hub portion of the Proposed Project.

Southwestern Willow Flycatcher Species Information

The southwestern willow flycatcher is a small, olive-colored, migratory songbird that is federally and state-listed as endangered. One of four subspecies of willow flycatcher it is distinguished by breeding distribution, song, call and plumage. The southwestern willow flycatcher is a neotropic migrant that is endemic to the Americas and is a summer breeding resident in the southwestern U.S., specifically within Arizona, New Mexico, southern California, southern portions of Nevada and Utah, southwestern Colorado, far western Texas, and extreme northwestern Mexico [U.S. Fish and Wildlife Service (USFWS) 2002]. It is the only race of willow flycatcher that is known to breed in southern California, ranging from Kern County to San Diego County. This species arrives on breeding territories by late April to early May and migrates southward again to wintering areas in southern Mexico, Central America, and northern South America in August and September. The two other subspecies of willow flycatcher (e.g., *E. t. brewsteri* and *E. t. adastus*) migrate through

southern California in the spring and fall to and from their breeding grounds in northern California.

The southwestern willow flycatcher typically breeds in patchy to dense, well-developed riparian woodlands along streams, rivers, lakes, or other wetlands, less that 8,000 feet in elevation, that provide surface water and/or saturated soil during mid-summer (Sedgwick 2000; Sogge et al. 1997; USFWS 2002). Typical breeding habitat for southwestern willow flycatcher is composed of native riparian species such as willows (*Salix* spp.) and mulefat (*Baccharis salicifolia*) in patches at least two acres or greater in extent, with linear-shaped habitats at least 10 meters (33 feet) wide (Sogge et al. 1997); however, the species has also been observed successfully breeding in riparian communities dominated by extensive patches of non-native species such as tamarisk (*Tamarix ramosissima*) and Russian olive (*Eleagnus angustifolia*) (USFWS 2002).

Once a common species in southern California, in the early 20th century the southwestern willow flycatcher population collapsed from the combined effects of habitat loss and nest parasitism by brown-headed cowbird (*Molothrus ater*) (Craig and Williams 1998; Garret and Dunn 1981; Sedgwick 2000; Unitt 2004; USFWS 2002). Currently, in southern California it breeds locally at 75 known sites within 18 drainages from San Diego to Santa Barbara and Kern counties and the Owens Valley, most notably within the San Luis Rey, Santa Ana, Santa Ynez, Owens, and Kern rivers which support approximately 70 percent of known territories (Sogge et. al. 2003). Currently, of the estimated 200 breeding pairs in southern California nearly half of them occur in San Diego County, primarily along the upper San Luis Rey River (Unitt 2004).

METHODS

A habitat assessment and focused, protocol-level, southwestern willow flycatcher surveys were performed within suitable habitat located within the Encina Hub portion of the Proposed Project and within a 500-foot buffer of the Encina Hub. 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 southwestern willow flycatcher surveys at the Encina Hub, a USFWS-permitted biologist conducted a focused habitat assessment to identify locations of suitable habitat for the species both within and adjacent to the Encina Hub.

Initially, historical occurrence data for southwestern willow flycatcher that have been reported from within 5 miles of the Encina Hub were evaluated prior to conducting the habitat assessment field survey for southwestern willow flycatcher. A Geographic Information Systems (GIS) specialist generated a map from the most recent version of the CDFW *California Natural Diversity Database* (CNDDB; CDFW 2014) and other databases identifying reported southwestern willow flycatcher detections within a 5-mile buffer of the Encina Hub to allow the USFWS-permitted biologist to view the historic distribution of southwestern willow flycatcher within the vicinity of the Encina Hub.

Next, a USFWS-permitted biologist conducted a field habitat assessment within the Encina Hub and 500-foot buffer to identify potential southwestern willow flycatcher habitat. The

field habitat assessment was conducted by assessing the vegetation communities on foot 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 southwestern willow flycatcher habitat was either added or eliminated from the survey area through closer investigation on foot during this first of five focused, protocol-level southwestern willow flycatcher surveys.

Focused Southwestern Willow Flycatcher Survey Methods

A USFWS-permitted biologist from BBS conducted protocol-level surveys for the southwestern willow flycatcher in accordance with the current USFWS survey protocol, titled *A Natural History Summary and Survey Protocol for the Southwestern Willow Flycatcher* (2010). The survey protocol entails intensive surveys of suitable habitat as well as detailed datasheets documenting detections, habitat, and other information about the southwestern willow flycatcher.

Five surveys were conducted during the three survey periods, including one survey conducted during the first period (May 15 to June 1), two surveys conducted during the second period (June 1 to June 24), and two surveys conducted during the third period (June 24 to July 17). All surveys were conducted between approximately 5:30am and 10:30am 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 southwestern willow flycatcher.

Surveyors slowly walked throughout the suitable habitat within the survey area and used visual and auditory cues to detect the southwestern willow flycatcher. Various routes were utilized to conduct an unbiased survey of the potentially suitable habitat within the survey area. Pre-recorded southwestern willow flycatcher vocalization playbacks were used only to elicit initial calls from the southwestern willow flycatcher and were not used frequently or to elicit further behaviors. Pre-recorded vocalizations were played for a period of 10 to 15 seconds and were generally repeated approximately every 70 to 100 feet within the surveyed habitat. No more than approximately 0.6 mile of suitable habitat was surveyed per day by the USFWS-permitted biologist.

The Willow Flycatcher Survey and Detection Form was completed during each survey. For each willow flycatcher 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 area. 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. Surveyors specifically recorded numbers and locations of parasitic brown-headed cowbirds and sensitive species within and adjacent to the survey area.

RESULTS

The results of the habitat assessment and focused, protocol-level southwestern willow flycatcher surveys are presented in this section.

Habitat Assessment Results

A USFWS-permitted BBS biologist, Laurie Gorman, conducted a field habitat assessment for southwestern willow flycatcher within and adjacent to the Encina Hub during fall 2014. The initial assessment of potentially suitable southwestern willow flycatcher habitat within the Encina Hub and a 500-foot buffer was further refined by Ms. Gorman through closer investigation on foot during the first focused, protocol-level southwestern willow flycatcher survey. A total of approximately 12.52 acres of potentially suitable southwestern willow flycatcher habitat was surveyed within the 500-foot buffer adjacent to the Encina Hub (Appendix A: Figure 3).

Potentially suitable habitat for the southwestern willow flycatcher that required surveys was present along an unnamed ephemeral drainage located in the 500-foot survey buffer north of the Proposed Project site. As part of the Agua Hedionda Watershed, this ephemeral drainage is tributary to Agua Hedionda Creek and is approximately 0.3 mile upstream of Agua Hedionda Lagoon. The potentially suitable habitat for southwestern willow flycatcher consisted of southern riparian scrub and southern willow scrub, with mulefat scrub intermixed. Within the survey area, the vegetation communities listed above have a closed canopy dominated by willows (*Salix* spp.) and/or mulefat (*Baccharis salicifolia*) ranging in height from approximately 5 to 15 feet and a dense shrub and herbaceous understory dominated by California bulrush (*Schoenoplectus californicus*), broadleaf cattail (*Typha latifolia*), and/or coyote brush (*Baccharis pilularis*).

Vegetation communities excluded from the focused, protocol-level southwestern willow flycatcher surveys because they were determined through field reconnaissance not to contain suitable habitat for the species include various upland vegetation communities, such as coastal sage scrub, chaparral, grassland, bare ground, developed lands, ornamental vegetation, and disturbed habitat.

Focused Southwestern Willow Flycatcher Survey Results

A total of five protocol-level southwestern willow flycatcher surveys were conducted within approximately 12.52 acres of potentially suitable habitat between May 19 and July 9, 2015 (Appendix A: Figure 3). Each survey took one day to complete because the habitat was easily accessible and contiguous throughout the survey area. All surveys were conducted during appropriate weather conditions by USFWS-permitted BBS biologist Laurie Gorman (TE-233367-2). Appendix B provides a summary of survey conditions, including survey times, weather conditions, and name of surveyor. Appendix C contains photographs of the southwestern willow flycatcher survey area.

A total of two willow flycatchers were detected during the focused surveys. Both of these individuals were detected during the second focused survey on June 3, 2015, approximately 0.25 mile apart from each other (see Table 1, below; Appendix A: Figures 4 and 5). These individuals were observed foraging and heard making “whit” and “fitz-bew” vocalizations in response to the pre-recorded vocalization playbacks. No willow flycatchers

were detected during the subsequent three surveys. Therefore, the two willow flycatchers detected were determined to be migrating individuals, likely of the little willow flycatcher subspecies (*Empidonax traillii brewsteri*), which have a peak migration in San Diego County during early June (Unitt 2004). The breeding range of the little willow flycatcher is found further north than the southwestern willow flycatcher, extending from Tulare County, California into Vancouver Island, Canada (Craig et al. 1998, Sogge et al. 2010). No breeding southwestern willow flycatchers were detected during the surveys. Appendix D contains the Willow Flycatcher Survey and Detection Form that was completed during each survey and that contains details on the two willow flycatcher detections.

Table 1. Summary of Willow Flycatcher Detections

WIFL* Detection #	Survey #	Survey Date	GPS Location (NAD 83, Zone 11S)		Notes
			Northing	Easting	
1	2	6/03/15	33.13280	-117.30374	One willow flycatcher observed foraging. Heard making "whit" and "fitz-bew" vocalizations in response to playback tape. Otherwise only made an occasional shy "whit."
2	2	6/03/15	33.13531	-117.30695	One willow flycatcher observed foraging. Heard making "whit" and "fitz-bew" vocalizations in response to playback tape. Otherwise only made an occasional shy "whit."

*WIFL: willow flycatcher

In addition to the willow flycatcher, 54 other wildlife species were detected during the focused southwestern willow flycatcher surveys or incidentally during access to and from the survey area (Appendix E). Of these 54 species, the coastal California gnatcatcher (*Polioptila californica californica*) is listed as federally threatened by the USFWS and as a Species of Special Concern by the CDFW, and the yellow-breasted chat (*Icteria virens*), yellow warbler (*Dendroica petechia*), and the Clark's marsh wren (*Cistothorus palustris clarkae*) are considered Species of Special Concern by the CDFW. Appendix F provides GPS locations of sensitive species detected during the focused surveys. In addition, one male brown-headed cowbird was detected calling east of the survey area during the first focused survey on May 19, 2015, at GPS location (NAD83) 33.133565 degrees North, -117.304547 degrees West.

Detection locations of sensitive species and brown-headed cowbirds are depicted on an aerial map of the survey area in Figure 4 of Appendix A. Figure 5 of Appendix A displays the locations of willow flycatcher detections on a USGS quadrangle map. It should be noted that the list of sensitive species presented in Appendix F and locations of sensitive species presented in Figures 4 and 5 of Appendix A were either detected during the focused southwestern willow flycatcher surveys or incidentally during access to and from the survey area and may reflect repeated detections of the same individuals of a species from one survey to the next. Therefore, these Appendices are intended to show the type and general location of sensitive species detected, not quantity of individuals present.

SUMMARY

No southwestern willow flycatcher were detected during the 2015 focused, protocol-level southwestern willow flycatcher surveys conducted at the Encina Hub.

Please do not hesitate to contact Melissa Busby at melissa@busbybiological.com or 858.334.9507 or me at darin@busbybiological.com or 858.334.9508 if you have any questions.

Sincerely,

Darin Busby
Owner/Principal Biologist
Busby Biological Services, Inc.

APPENDICES

Appendix A: Figures
Appendix B: Survey Conditions
Appendix C: Photographs
Appendix D: Willow Flycatcher Survey and Detection Form
Appendix E: Wildlife Species Detected
Appendix F: Incidental Sensitive Species Detected

REFERENCES

Barbour, M. G., and J. Major eds.
1977 Terrestrial vegetation of California. John Wiley and Sons, New York.

California Department of Fish and Wildlife (CDFW)
2013 Natural Diversity Data Base. Nongame-Heritage Program, California Department of Fish and Wildlife, Sacramento.

Craig, D. and P. L. Williams
1998 Willow Flycatcher (*Empidonax traillii*). *In* The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. http://www.prbo.org/calpif/htmldocs/riparian_v-2.html.

Garrett, K. and J. Dunn
1981 Birds of southern California: status and distribution. Los Angeles Audubon Soc., Los Angeles.

Holland, R.F.
1986 *Preliminary Descriptions of the Terrestrial Natural Communities of California*. State of California, The Resources Agency, Department of Fish and Game, Natural Heritage Division, Sacramento, California.

Patten, M. A., McCaskie, G., Unitt, P.
2003 Birds of the Salton Sea. Univ. of California Press, Los Angeles.

Rosenberg, K. V., R. D. Ohmart, W. C. Hunter and B. W. Anderson
1991 Birds of the lower Colorado River valley. Univ. of Arizona Press, Tucson.

Sogge, M.K., R.M. Marshall, S.J. Sferra, and T.J. Tibbitts
1997 A Southwestern Willow Flycatcher Natural History Summary and Survey Protocol. Technical Report NPS/NAUCPRS/NRTR-97/12. USGS Colorado Plateau Research Station, Northern Arizona University, Flagstaff, Arizona.

Sogge, M. K., Sferra, S. J., McCarthey, T. D., Williams, S. O., and Kus, B. E.
2003 Distribution and characteristics of Southwestern Willow Flycatcher breeding sites and territories: 1993-2001. Studies in Avian Biology No. 26:5–11. Colorado River valley. Univ. of Arizona Press, Tucson.

Sogge, M.K., Ahlers, Darrell, and Sferra, S.J.,
2010 *A Natural History Summary and Survey Protocol for the Southwestern Willow Flycatcher.* U.S. Geological Survey Techniques and Methods*.* 2A-10, 38 p.

Sedgwick, James A.
2000 Willow Flycatcher (*Empidonax traillii*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/533.

U.S. Fish and Wildlife Service (USFWS)
2002 Final Recovery Plan Southwestern Willow Flycatcher (*Empidonax traillii extimus*). Prepared By Southwestern Willow Flycatcher Recovery Team Technical Subgroup. August 2002.

U.S. Geological Survey (USGS)
1968 7.5-minute San Luis Rey Topographic Quadrangle (Photorevised 1975)

Unitt, Philip
2004 San Diego County Bird Atlas. San Diego Natural History Museum. San Diego, CA.

PROJECT BIOLOGIST SIGNATURE PAGE

All biologists performing focused, protocol-level, southwestern willow flycatcher (*Empidonax traillii extimus*) surveys for the Encina Hub portion of 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 Proposed Project biologist certifies this report to be a complete and accurate account of the findings and conclusions of surveys for southwestern willow flycatcher conducted for the Proposed Project during spring 2015.

_____

Laurie Gorman
Senior Biologist/Project Manager
Busby Biological Services, Inc.
ESA Permit Number TE-233367-2

APPENDIX A – Figures

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedLBVSurvey_070215\SXtoPQ_BusbyFocusedLBVSurvey_ProjectLocation_Fig1.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Project Location Map

Figure 1

- Proposed Project Route
- Staging Yards
- Encina Hub
- Mira Mesa Hub

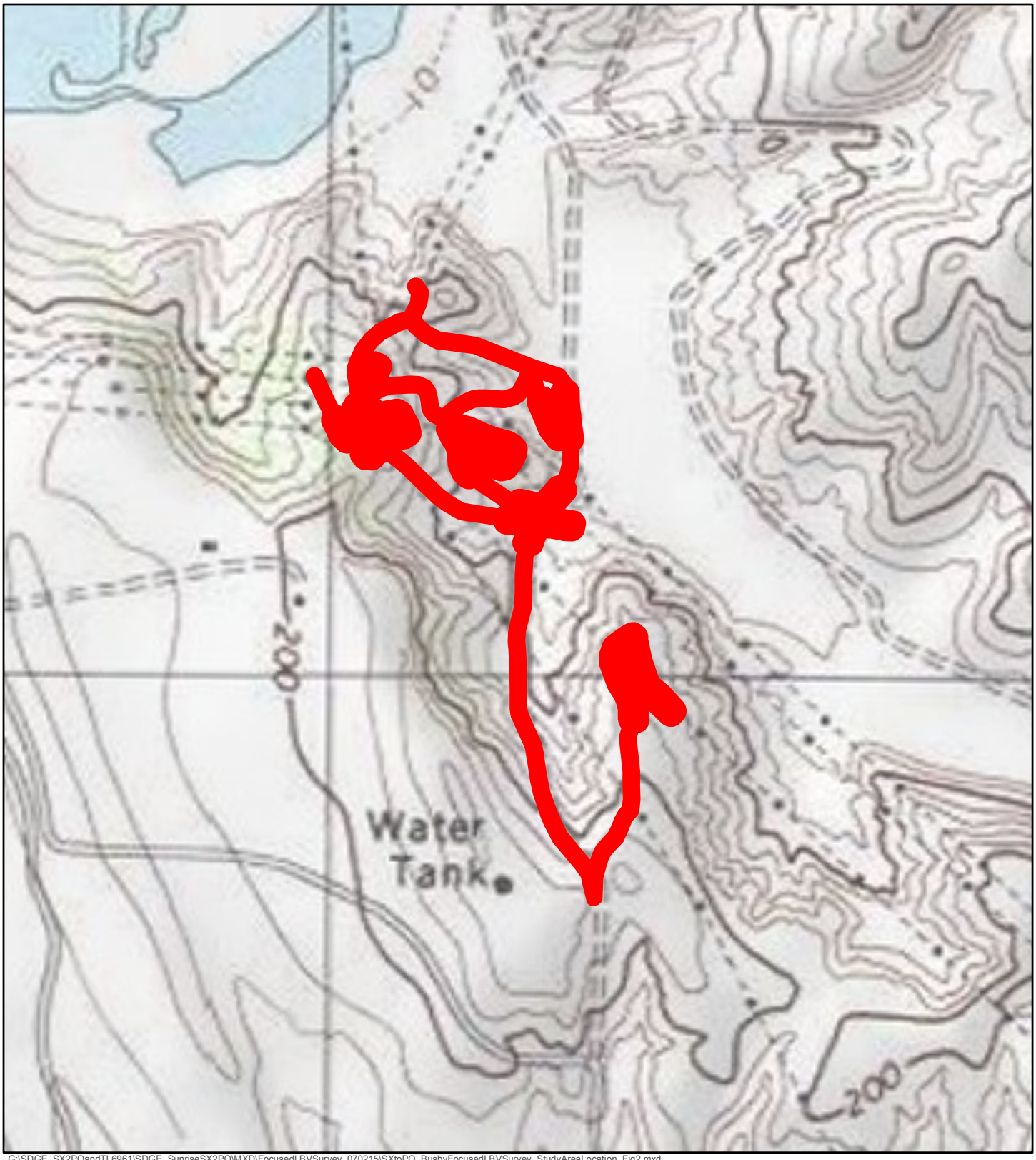
0 2 4 6 Miles

N W E S

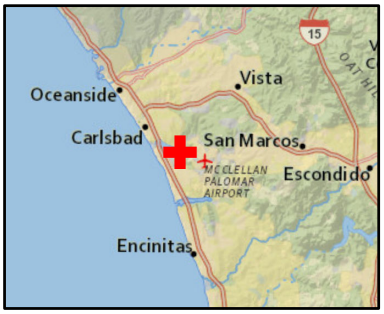
7/2/2015

TRC

SDGE A Sempra Energy utility



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedLBVSurvey_070215\SXtoPQ_BusbyFocusedLBVSurvey_StudyAreaLocation_Fig2.mxd



Sycamore to Peñasquitos 230 kV Transmission Line Project

Encina Hub Project Area

Figure 2

Encina Hub Project Area

N
W E
S

0 0.07 0.14 0.21 Miles

TRC

SDGE

7/2/2015

A Sempra Energy utility

Sources: SDG&E; Copyright:© 2013 National Geographic Society, i-cubed, Content may not reflect National Geographic's current map policy.

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedSWFLSurvey_070215\SXtoPQ_BusbyFocusedSWFLSurvey_SurveyAreaMap_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Survey Area Map - Encina Hub

Figure 3

Potential Southwestern Willow Flycatcher Habitat

Encina Hub 500ft Buffer

0 300 600 900 Feet

7/9/2015

TRC

SDGE

A Sempra Energy utility

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedSWFLSurvey_070215\SXtoPQ_BusbyFocusedSWFLSurvey_SpeciesDetectionMap_Fig4.mxd

Species Detections

Brood Parasite

- Brown-headed Cowbird

Sensitive Species

- Clark's Marsh Wren
- Coastal California Gnatcatcher
- Willow Flycatcher
- Yellow Warbler
- Yellow-breasted Chat

- Potential Southwestern Willow Flycatcher Habitat
- Encina Hub 500ft Buffer

0 300 600 900 Feet

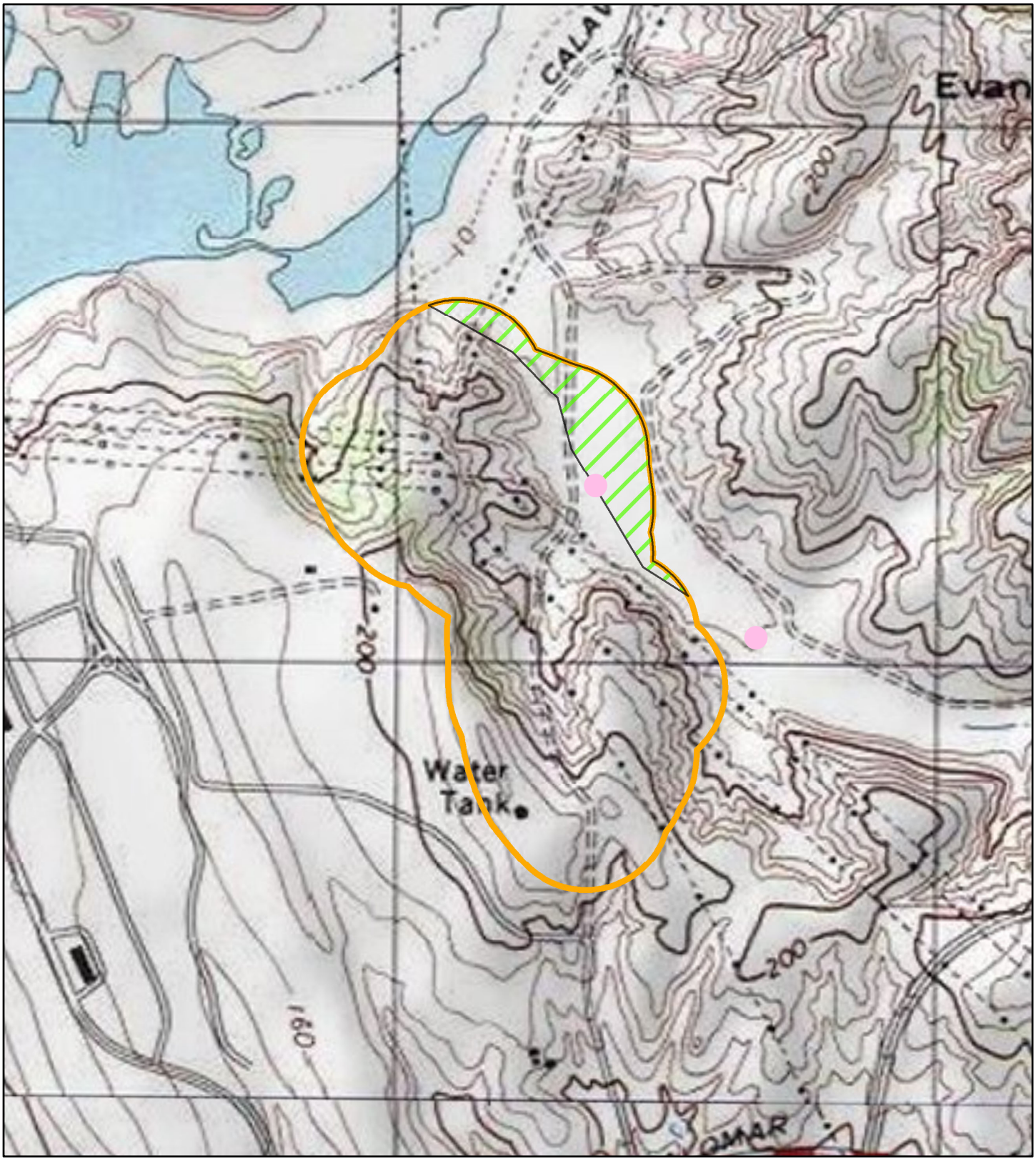
Sycamore to Peñasquitos 230 kV Transmission Line Project

Species Detection Map - Encina Hub

Figure 4

TRC SDGE Sempra Energy utility

7/13/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedSWFLSurvey_070215\SXtoPQ_BusbyFocusedSWFLSurvey_QuadMap_Fig5.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Willow Flycatcher Detections Quad Map - Encina Hub

Figure 5

Willow flycatcher Detections

- Willow Flycatcher Detection Site
- Potential Southwestern Willow Flycatcher Habitat
- Encina Hub 500ft Buffer

0 400 800 1,200 Feet

7/9/2015

APPENDIX B – Survey Conditions

Appendix B – Survey Conditions

Survey #	Date	Time		Weather				Surveyors
				Temp (°F)	Wind (mph)	Clouds (%)	Precip	
1	5/19/15	Start	0535	55	0-1	30	0	Laurie Gorman
		End	1000	67	1-5	25	0	
2	6/3/15	Start	0600	63	0-1	100	0	Laurie Gorman
		End	1045	70	2-6	50	0	
3	6/11/15	Start	0600	62	0-1	100	0	Laurie Gorman
		End	1030	68	0-3	100	0	
4	6/27/15	Start	0645	67	0-1	100	0	Laurie Gorman
		End	1040	74	1-5	70	0	
5	7/9/15	Start	0630	65	0-2	95	0	Laurie Gorman
		End	1035	72	0-4	50	0	

APPENDIX C – Photographs

Appendix C – Photographs

Photograph 1: Overview of riparian habitat within the southwestern willow flycatcher survey area. As part of the Agua Hedionda Watershed, this un-named ephemeral drainage is tributary to Agua Hedionda Creek and feeds into the Agua Hedionda Lagoon. Note dense habitat with varying canopy height. View facing southwest from under Cannon Road bridge on June 3, 2015.	
Photograph 2: Southern riparian scrub habitat where the first of two migrating willow flycatchers was detected on June 3, 2015. View facing east on June 3, 2015.	
Photograph 3: Southern willow scrub habitat where the second of two migrating willow flycatchers was detected on June 3, 2015. View facing southwest on June 3, 2015.	

APPENDIX D – Willow Flycatcher Survey and Detection Form

Appendix 1. Willow Flycatcher Survey and Detection Form

Always check the U.S. Fish and Wildlife Service Arizona Ecological Services Field Office web site (http://www.fws.gov/southwest/es/arizona/) for the most up-to-date version.

Willow Flycatcher (WIFL) Survey and Detection Form (revised April 2010)

Site Name Encina Hub State CA County San Diego
USGS Quad Name San Luis Rey Elevation 30 ft (9.1 meters) (meters)
Creek, River, Wetland, or Lake Name Tributary to Agua Hedionda Creek
Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? Yes X No ___

Survey Coordinates: Start: E 471541.77 N 3666126.12 UTM Datum NAD83 (See instructions)
Stop: E 471057.39 N 3666663.02 UTM Zone 11S
If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.
** *Fill in additional site information on back of this page* **

Survey # / Observer(s) (Full Name)	Date (m/d/y) Survey time	Number of Adult WIFLs	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N If Yes, number of nests	Comments (e.g., bird behavior; evidence of pairs or breeding; potential threats [livestock, cowbirds, *Diorhabda* spp.]). If *Diorhabda* found, contact USFWS and State WIFL coordinator	GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary.			
Survey # 1 Observer(s) Laurie Gorman	Date 5/19/15 Start 0535 Stop 1000 Total hrs 4.5	0	0	0	N	one brown-headed cowbird detected E of survey area @GPS NAD 83 11S 471593 mE 3666135 mN	# Birds	Sex	UTM E	UTM N
								N/A		
Survey # 2 Observer(s) L. Gorman	Date 6/3/15 Start 0600 Stop 1045 Total hrs 4.75	2	0	0	N	Both individuals vocalizing "whit" and "fitz-bew" in response to tape but otherwise not vocal. foraging and moving about habitat	# Birds	Sex	UTM E	UTM N
							1	Unk	471668	3666050
							1	Unk	471370	3666330
Survey # 3 Observer(s) L. Gorman	Date 6/11/15 Start 0600 Stop 1030 Total hrs 4.5	0	0	0	N	N/A	# Birds	Sex	UTM E	UTM N
								N/A		
Survey # 4 Observer(s) L. Gorman	Date 6/27/15 Start 0645 Stop 1040 Total hrs 4	0	0	0	N	N/A	# Birds	Sex	UTM E	UTM N
								N/A		
Survey # 5 Observer(s) L. Gorman	Date 7/9/15 Start 0630 Stop 1035 Total hrs 4	0	0	0	N	N/A	# Birds	Sex	UTM E	UTM N
								N/A		

Overall Site Summary Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings. Be careful not to double count individuals. Total Survey Hrs	Total Adult Residents	Total Pairs	Total Territories	Total Nests	Were any Willow Flycatchers color-banded? Yes ___ No X If yes, report color combination(s) in the comments section on back of form and report to USFWS.
	0	0	0	0	

Reporting Individual Laurie Gorman Date Report Completed 7/9/15
US Fish and Wildlife Service Permit # TE-233367-2 State Wildlife Agency Permit # SC-8778
***Submit** form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.*

Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.

Reporting Individual Laurie Gorman Phone # 949-933-9432
Affiliation Busby Biological Services, Inc. E-mail laurie@busbybiological.com
Site Name Encina Hub Date Report Completed 7-9-15

Did you verify that this site name is consistent with that used in previous years? Yes ___ No ___ Not Applicable X
If site name is different, what name(s) was used in the past? N/A
If site was surveyed last year, did you survey the same general area this year? Yes ___ No ___ If no, summarize below.
Did you survey the same general area during each visit to this site this year? Yes X No ___ If no, summarize below.

Management Authority for Survey Area : Federal ___ Municipal/County X State ___ Tribal ___ Private ___
Name of Management Entity or Owner (e.g., Tonto National Forest) City of Carlsbad

Length of area surveyed: 724 (meters)

Vegetation Characteristics: Mark the category that best describes the predominant tree/shrub foliar layer at this site (check one):

X Native broadleaf plants (entirely or almost entirely, > 90% native, includes high-elevation willow)

___ Mixed native and exotic plants (mostly native, 50 - 90% native)

___ Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)

___ Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name.
Salix sp., Baccharis salicifolia

Average height of canopy (Do not include a range): 3.66 (12 feet) (meters)

Attach copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections.
Attach sketch or aerial photo showing site location, patch shape, survey route, location of any WIFLs or WIFL nests detected.
Attach photos of the interior of the patch, exterior of the patch, and overall site; describe any unique habitat features.

Comments (attach additional sheets if necessary)
The 2 willow flycatcher detections were 2 foraging individuals during survey #2 that were approx. 0.25 mile apart. No willow flycatchers were detected in subsequent surveys. Therefore, the willow flycatchers detected in the second survey were determined to be migrating individuals.

Territory Summary Table. Provide the following information for each verified territory at your site.

Territory Number	All Dates Detected	UTM N	UTM E	Pair Confirmed? Y or N	Nest Found? Y or N	Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior)
N/A						

Attach additional sheets if necessary

APPENDIX E – Wildlife Species Detected

Appendix E - Wildlife Species Detected

INVERTEBRATES		
Class: Insecta		**Insects**
Order: Lepidoptera		**Butterflies**
Family Papilionidae		**Parnassians and Swallowtails**
	Papilio eurymedon	Pale Swallowtail
Family Nymphalidae		**Brush-footed Butterflies**
	Danaus plexippus	Monarch
Class: Sauropsida		**Reptiles**
Order: Squamata		**Snakes and Lizards**
Family Phrynosomatidae		**Spiny Lizards**
	Uta stansburiana	Common Side-blotched Lizard
VERTEBRATES		
Class: Aves		**Birds**
Order Galliformes		**Gallinaceous Birds**
Family Odontophoridae		**New World Quail**
	Callipepla californica	California Quail
Order Ciconiiformes		**Herons, Ibises, Storks, American Vultures, and Allies**
Family Accipitridae		**Hawks, Kites, Eagles, and Allies**
	Pandion haliaetus	Osprey
	Buteo jamaicensis	Red-tailed Hawk
Order Columbiformes		**Pigeons and Doves**
Family Columbidae		**Pigeons and Doves**
	Zenaida macroura	Mourning Dove
Order Apodiformes		**Swifts and Hummingbirds**
Family Apodidae		**Swifts**
	Aeronautes saxatalis	White-throated Swift
Family Trochilidae		**Hummingbirds**
	Calypte anna	Anna's Hummingbird
	Calypte costae	Costa's Hummingbird
	Selasphorus sasin	Allen's Hummingbird
Order Piciformes		**Woodpeckers and Allies**
Family Picidae		**Woodpeckers**
	Picoides nuttallii	Nuttall's Woodpecker
	Colaptes auratus	Northern Flicker
Order Passeriformes		**Perching Birds**
Family Tyrannidae		**Tyrant Flycatchers**
	Contopus sordidulus	Western Wood-Pewee
	Empidonax traillii	Willow Flycatcher
	Empidonax difficilis	Pacific-slope Flycatcher
	Sayornis nigricans	Black Phoebe
	Tyrannus vociferans	Cassin's Kingbird
Family Corvidae		**Crows and Jays**
	Aphelocoma californica	Western Scrub-Jay

Appendix E - Wildlife Species Detected (Continued)

	Corvus brachyrhynchos	American Crow
	Corvus corax	Common Raven
Family Hirundinidae		**Swallows**
	Stelgidopteryx serripennis	Northern Rough-winged Swallow
	Hirundo pyrrhonota	Cliff Swallow
Family Aegithalidae		**Bushtits**
	Psaltriparus minimus	Bushtit
Family Troglodytidae		**Wrens**
	Thryomanes bewickii	Bewick's Wren
	Troglodytes aedon	House Wren
	Cistothorus palustris clarkae	Clark's Marsh Wren
Family Sylviidae		**Gnatcatchers**
	Polioptila caerulea	Blue-gray Gnatcatcher
	Polioptila californica	Coastal California Gnatcatcher
Family Timaliidae		**Babblers**
	Chamaea fasciata	Wrentit
Family Mimidae		**Mockingbirds and Thrashers**
	Mimus polyglottos	Northern Mockingbird
	Toxostoma redivivum	California Thrasher
Family Sturnidae		**Starlings**
	Sturnus vulgaris	European Starling
Family Ptilogonatidae		**Silky-flycatchers**
	Phainopepla nitens	Phainopepla
Family Parulidae		**Wood-Warblers**
	Vermivora celata	Orange-crowned Warbler
	Dendroica petechia	Yellow Warbler
	Geothlypis trichas	Common Yellowthroat
	Icteria virens	Yellow-breasted Chat
Family Emberizidae		**Emberizids**
	Pipilo maculatus	Spotted Towhee
	Pipilo crissalis	California Towhee
	Melospiza melodia	Song Sparrow
Family Cardinalidae		**Cardinals and Allies**
	Pheucticus melanocephalus	Black-headed Grosbeak
Family Icteridae		**Blackbirds**
	Agelaius phoeniceus	Red-winged Blackbird
	Molothrus ater	Brown-headed Cowbird
Family Fringillidae		**Fringilline and Cardueline Finches and Allies**
	Carpodacus mexicanus	House Finch
	Carduelis psaltria	Lesser Goldfinch

Appendix E - Wildlife Species Detected (Continued)

Family Estrildidae		**Estrildid Finches**
	Lonchura puntulata	Scaly-breasted Munia
Class: Mammalia		**Mammals**
Order Lagomorpha		**Rabbits, Hares, and Pikas**
Family Leporidae		**Rabbits and Hares**
	Sylvilagus audubonii	Desert Cottontail
Order Rodentia		**Rodents**
Family Sciuridae		**Squirrels and Chipmunks**
	Spermophilus beecheyi	California Ground Squirrel
Family Muridae		**Mice, Rats, and Voles**
	Neotoma lepida	Desert Woodrat
Order Carnivora		**Carnivores**
Family Canidae		**Dogs and foxes**
	Canis familiaris	Domestic Dog
	Canis latrans	Coyote
Family Procyonidae		**Raccoons and Relatives**
	Procyon lotor	Raccoon
Order Artiodactyla		**Even-toed Ungulates**
Family Cervidae		**Deer and Elk**
	Odocoileus hemionus	Mule Deer

APPENDIX F – Incidental Sensitive Species Detected

Appendix F – Incidental Sensitive Species Detected

Survey #	Date	Species Type*	Status**	# of Individuals	GPS Location (Decimal Degrees)	
					Northing	Easting
1	5/19/15	CAGN	FT, SSC	1	33.136045	-117.309608
1	5/19/15	CAGN	FT, SSC	2	33.138372	-117.307792
1	5/19/15	YBCH	SSC	1	33.138196	-117.307726
1	5/19/15	YEWA	SSC	1	33.138486	-117.308418
1	5/19/15	CAGN	FT, SSC	2	33.135843	-117.312189
1	5/19/15	CMWR	SSC	1	33.136605	-117.307447
2	6/03/15	YEWA	SSC	1	33.133521	-117.304732
2	6/03/15	YBCH	SSC	1	33.133159	-117.303767
2	6/03/15	YEWA	SSC	1	33.135146	-117.306363
2	6/03/15	CAGN	FT, SSC	1	33.133968	-117.307876
3	6/11/15	CAGN	FT, SSC	2	33.132674	-117.304550
3	6/11/15	YBCH	SSC	2	33.133210	-117.304464
3	6/11/15	YBCH	SSC	1	33.134504	-117.306095
3	6/11/15	YEWA	SSC	1	33.135201	-117.306728
3	6/11/15	YBCH	SSC	1	33.138080	-117.309281
4	6/26/15	CAGN	FT, SSC	1	33.135993	-117.308552
4	6/26/15	CAGN	FT, SSC	5	33.134655	-117.308101
4	6/26/15	CAGN	FT, SSC	1	33.133535	-117.308257
5	7/09/15	CAGN	FT, SSC	1	33.135788	-117.307704
5	7/09/15	CAGN	FT, SSC	1	33.133094	-117.305167
5	7/09/15	CAGN	FT, SSC	1	33.133869	-117.306384
5	7/09/15	CAGN	FT, SSC	2	33.134081	-117.308182
5	7/09/15	YBCH	SSC	1	33.133275	-117.304625

*Species Codes:

CAGN = coastal California gnatcatcher (*Polioptila californica californica*)
YBCH = yellow-breasted chat (*Icteria virens*)
YEWA = yellow warbler (*Dendroica petechia*)
CMWR = Clark's marsh wren (*Cistothorus palustris clarkae*)

**Status:

FT = Federally Threatened (USFWS)
SSC = Species of Special Concern (CDFW)

BUSBY
Biological Services

September 28, 2015

Ms. Stacey Love
Recovery Permits Coordinator
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

RE: 2015 SOUTHWESTERN WILLOW FLYCATCHER SURVEY SUMMARY REPORT FOR THE MAIN ALIGNMENT OF THE PROPOSED SAN DIEGO GAS & ELECTRIC COMPANY SYCAMORE TO PEÑASQUITOS 230 kV TRANSMISSION LINE PROJECT, SAN DIEGO COUNTY, CALIFORNIA

Ms. Love:

This letter report summarizes the results of the 2015 focused, protocol-level, presence/absence surveys for the federally and state-listed endangered southwestern willow flycatcher (*Empidonax traillii extimus*) for the main alignment of the proposed Sycamore to Peñasquitos 230 Kilovolt (kV) Transmission Line Project (Proposed Project). Busby Biological Services, Inc. (BBS) was contracted by Chambers Group, Inc. (Chambers) to conduct these surveys on behalf of the San Diego Gas & Electric Company (SDG&E) to evaluate the potential impacts of the Proposed Project, which is located in the cities of Carlsbad, San Diego, and Poway in San Diego County, California (Attachment 1: Figure 1).

BACKGROUND INFORMATION

A brief summary of the Proposed Project, survey area, and southwestern willow flycatcher are provided in this section.

Proposed Project Description and Location

The Proposed Project includes construction of a new, approximately 16.7-mile 230 kV transmission line between the existing SDG&E Sycamore Canyon and Peñasquitos substations; the consolidation of two existing 69 kV power lines onto new double-circuit, steel structures that would replace existing, predominantly wood structures; and re-routing at the Encina and Mira Mesa Hubs.

The main Proposed Project alignment is located in the U.S. Geological Survey (USGS) 7.5-minute Poway, Del Mar, and La Jolla topographic quadrangles (USGS 1967a, 1967b, 1967c) in the cities of San Diego and Poway in San Diego County, California (Attachment 1: Figures 1 and 2). Elevations along the main Proposed Project alignment range from approximately 1,000 feet above mean sea level (amsl) at Sycamore Canyon Substation in the eastern portion of the main Proposed Project alignment 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 main Proposed Project alignment (Attachment 1: Figure 2). The main Proposed Project alignment crosses through a network of roads and highways, mixed-use development, parks, and undeveloped open space. Topography along the main Proposed Project alignment varies from relatively flat developed and undeveloped areas, to steep and rolling hills and ridges, to wide and narrow drainages and canyons. The main Proposed Project alignment crosses several unnamed and named drainages and canyons, including Peñasquitos Canyon, McGonigle Canyon, and Deer Canyon.

All new transmission line facilities would be located within existing SDG&E Right-of-Way or within franchise position within existing public roadways, and the entire Proposed Project is located within San Diego County (Attachment 1: Figures 1 through 3).

Brief Survey Area Explanation

Focused southwestern willow flycatcher surveys were conducted for the Proposed Project within all suitable habitats within the current Proposed Project footprint and a 500-foot buffer. Because the Encina Hub portion of the Proposed Project is located in a geographically distinct location and is not within the immediate vicinity of the main Proposed Project alignment (Attachment 1: Figure 1), two separate southwestern willow flycatcher survey summary reports were prepared for the spring 2015 surveys, one for the southwestern willow flycatcher surveys conducted at Encina Hub, and one for the southwestern willow flycatcher surveys conducted along the main Proposed Project alignment. This report focuses on the results of the focused southwestern willow flycatcher surveys conducted along the main Proposed Project alignment. The results of the focused southwestern willow flycatcher surveys conducted for the Encina Hub portion of the Proposed Project are contained in a separate report (BBS 2015).

Southwestern Willow Flycatcher Species Information

The southwestern willow flycatcher is a small, olive-colored, migratory songbird that is federally and state-listed as endangered. One of four subspecies of willow flycatcher, it is distinguished by breeding distribution, song, call and plumage. The southwestern willow flycatcher is a neotropic migrant that is endemic to the Americas and is a summer breeding resident in the southwestern U.S., specifically within Arizona, New Mexico, southern California, southern portions of Nevada and Utah, southwestern Colorado, far western Texas, and extreme northwestern Mexico (U.S. Fish and Wildlife Service [USFWS] 2002). It is the only race of willow flycatcher that is known to breed in southern California, ranging from Kern County to San Diego County. This species arrives on breeding territories by late April to early May and migrates southward again to wintering areas in southern Mexico, Central America, and northern South America in August and September. The two other subspecies of willow flycatcher (e.g., *E. t. brewsteri* and *E. t. adastus*) migrate through southern California in the spring and fall to and from their breeding grounds in northern California.

The southwestern willow flycatcher typically breeds in patchy to dense, well-developed riparian woodlands along streams, rivers, lakes, or other wetlands, less that 8,000 feet in elevation, that provide surface water and/or saturated soil during mid-summer (Sedgwick 2000; Sogge et al. 1997; USFWS 2002). Typical breeding habitat for southwestern willow flycatcher is composed of native riparian species such as willows (*Salix* spp.) and mulefat

(*Baccharis salicifolia*) in patches at least two acres or greater in extent, with linear-shaped habitats at least 10 meters (33 feet) wide (Sogge et al. 1997); however, the species has also been observed successfully breeding in riparian communities dominated by extensive patches of non-native species such as tamarisk (*Tamarix ramosissima*) and Russian olive (*Elaeagnus angustifolia*) (USFWS 2002).

Once a common species in southern California, in the early 20th century the southwestern willow flycatcher population collapsed from the combined effects of habitat loss and nest parasitism by brown-headed cowbird (*Molothrus ater*) (Craig and Williams 1998; Garret and Dunn 1981; Sedgwick 2000; Unitt 2004; USFWS 2002). Currently, in southern California it breeds locally at 75 known sites within 18 drainages from San Diego to Santa Barbara and Kern counties and the Owens Valley, most notably within the San Luis Rey, Santa Ana, Santa Ynez, Owens, and Kern rivers which support approximately 70 percent of known territories (Sogge et. al. 2003). Currently, of the estimated 200 breeding pairs in southern California, nearly half of them occur in San Diego County, primarily along the upper San Luis Rey River (Unitt 2004).

METHODS

A habitat assessment and focused, protocol-level, southwestern willow flycatcher surveys were performed within suitable habitat located within Biological Survey Area (BSA) which is comprised of the main Proposed Project alignment and a 500-foot buffer (Attachment 1: Figures 2 and 3). 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, southwestern willow flycatcher surveys along the main Proposed Project alignment, a qualified biologist conducted a focused habitat assessment to identify locations of suitable habitat for the species within the Proposed Project footprint and a 500-foot buffer (Attachment 1: Figures 2 and 3).

Initially, historical occurrence data for southwestern willow flycatcher that have been reported from within 5 miles of the main Proposed Project alignment was evaluated prior to conducting the southwestern willow flycatcher habitat assessment field survey. A Geographic Information Systems (GIS) specialist generated a map from the most recent version of the CDFW *California Natural Diversity Database* (CNDDB; CDFW 2014) and other databases identifying reported southwestern willow flycatcher detections within a 5-mile buffer of the main Proposed Project alignment to allow the qualified biologist to view the historical distribution of southwestern willow flycatcher within the vicinity of the main Proposed Project alignment.

Next, a qualified biologist conducted a field habitat assessment within the main Proposed Project alignment and 500-foot buffer to identify potential southwestern willow flycatcher habitat. The field habitat assessment was conducted by assessing the vegetation communities on foot 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 southwestern willow flycatcher habitat was either added or eliminated from the survey area through closer investigation on foot during this first of eight of focused, protocol-level southwestern willow flycatcher surveys.

Focused Southwestern Willow Flycatcher Survey Methods

A BBS USFWS-permitted biologist conducted protocol-level surveys for the southwestern willow flycatcher in accordance with the current USGS survey protocol, titled *A Natural History Summary and Survey Protocol for the Southwestern Willow Flycatcher* (Sogge et. al. 2010). The survey protocol entails intensive surveys of suitable habitat as well as detailed datasheets documenting detections, habitat, and other information about the southwestern willow flycatcher.

Five surveys were conducted during the three survey periods, including one survey conducted during the first period (May 15 to June 1), two surveys conducted during the second period (June 1 to June 24), and two surveys conducted during the third period (June 24 to July 17). All surveys were conducted between approximately 5:30am and 10:30am 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 southwestern willow flycatcher.

Surveyors slowly walked throughout the suitable habitat within the survey area and used visual and auditory cues to detect the southwestern willow flycatcher. Various routes were utilized to conduct an unbiased survey of the potentially suitable habitat within the survey area. Pre-recorded southwestern willow flycatcher vocalization playbacks were used only to elicit initial calls from the southwestern willow flycatcher and were not used frequently or to elicit further behaviors. Pre-recorded vocalizations were played for a period of 10 to 15 seconds and were generally repeated approximately every 70 to 100 feet within the surveyed habitat. No more than approximately 0.6 mile of suitable habitat was surveyed per day by the USFWS-permitted biologist.

The Willow Flycatcher Survey and Detection Form was completed during each survey. When southwestern willow flycatcher are detected during a focused survey, surveyors record 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 area. Surveyors also estimate the age, sex, and number of individuals detected and include notes about each detection. In addition, surveyors record other wildlife species observed directly or detected indirectly by sign, including scat, tracks, calls, and other evidence. Surveyors specifically record numbers and locations of parasitic brown-headed cowbirds and other special-status species detected within and adjacent to southwestern willow flycatcher territories to report to USFWS.

RESULTS

The results of the habitat assessment and focused, protocol-level southwestern willow flycatcher surveys are presented in this section.

Habitat Assessment Results

On March 23, 2015, BBS biologist Darin Busby conducted a focused habitat assessment of the potentially suitable southwestern willow flycatcher located within the main Proposed Project alignment and a 500-foot buffer. BBS coordinated with TRC Solutions, Inc. (TRC) to digitize the suitable habitat polygons that were drawn by hand onto the aerial imagery during the habitat assessment. Based on the GIS data, there is approximately 1 mile of suitable southwestern willow flycatcher habitat distributed in three different polygons along the main Proposed Project alignment (Attachment 1: Figure 3).

Potentially suitable habitat for the southwestern willow flycatcher that required surveys was present along three drainages located in the 500-foot survey buffer. The potentially suitable habitat for the southwestern willow flycatcher within and adjacent to the main Proposed Project alignment consists of large and/or wide patches of southern coast live oak riparian forest, southern riparian scrub, southern willow scrub, and Eucalyptus woodland with surface water and/or saturated soils present. Brief descriptions of these vegetation communities that were surveyed for southwestern willow flycatcher within and adjacent to the main Proposed Project alignment are described below.

One potentially suitable patch of southern coast live oak riparian forest occurs in Los Peñasquitos Creek within and adjacent to the main Proposed Project alignment. This area contains a large, wide swath of habitat with surface water and is dominated by an overstory of coast live oak (*Quercus agrifolia*), Fremont cottonwood (*Populus fremontii*), and western sycamore (*Platanus racemosa*), with an understory of other riparian species such as willow (*Salix* spp.), mulefat (*Baccharis salicifolia*), black elderberry (*Sambucus nigra*), poison oak (*Toxicodendron diversilobum*), California bulrush (*Schoenoplectus californicus*), broadleaf cattail (*Typha latifolia*), and/or coyote brush (*Baccharis pilularis*).

Two potentially suitable patches of southern riparian scrub occur in Los Peñasquitos Creek and McGonigle Canyon within and adjacent to the main Proposed Project alignment. These areas contain large, wide swaths of habitat with surface water and/or saturated soil and are dominated by a dense overstory of willow (*Salix* spp.) and mulefat, with an understory of California bulrush, broadleaf cattail, black elderberry, poison oak, and/or coyote brush.

One potentially suitable patch of southern willow scrub occurs in an unnamed tributary to Los Peñasquitos Creek within and adjacent to the main Proposed Project alignment. This area contains a relatively large patch of habitat with surface water and saturated soil and is dominated by a dense overstory of willow and scattered Fremont cottonwood, and a dense understory of mulefat, California bulrush, broadleaf cattail, poison oak, and/or coyote brush.

Eucalyptus woodland is a nonnative plant community found in uplands and some drainages within and adjacent to the main Proposed Project alignment. One potentially suitable patch of Eucalyptus woodland occurs in McGonigle Canyon within and adjacent to the main Proposed Project alignment. This area contains a relatively large, wide patch of habitat containing standing water and saturated soil and is dominated by a dense overstory of gum trees (*Eucalyptus* spp.) and a relatively open understory composed of scattered willow, mulefat, black elderberry, poison oak, and coyote brush.

Focused Southwestern Willow Flycatcher Survey Results

A total of five protocol-level southwestern willow flycatcher surveys were conducted within the three polygons of potentially suitable habitat between May 29 and July 16, 2015 (Attachment 1: Figure 3). Despite the habitat being noncontiguous, each survey took one day to complete because the habitat was easily accessible throughout the survey area. All surveys were conducted during appropriate weather conditions by USFWS-permitted BBS biologist Laurie Gorman (TE-233367-2). Attachment 2 provides a summary of survey conditions, including survey times, weather conditions, and name of surveyor.

No southwestern willow flycatchers or willow flycatchers were detected during the 2015 focused, protocol-level southwestern willow flycatcher surveys conducted along the main Proposed Project alignment (Attachment 1: Figures 4, 4a, 4b, and 5).

A total of 53 wildlife species were detected either during the focused southwestern willow flycatcher surveys or incidentally during access to and from the survey area (Attachment 3). Of these 53 species, two are considered special-status species - the coastal California gnatcatcher (*Polioptila californica californica*) is listed as federally threatened by the USFWS and as a Species of Special Concern by the CDFW, and the yellow warbler (*Dendroica petechia*) is considered a Species of Special Concern by the CDFW (Attachment 1: Figures 4, 4a, 4b, and 5). Attachment 4 provides GPS locations of special-status species detected during the focused surveys. In addition, three brown-headed cowbird detections were recorded during the focused surveys. Table 1, below, summarizes these detections.

Table 1. Summary of Brown-headed Cowbird Detections

BHCO* Detection #	Survey #	Date	GPS Location (NAD 83, Zone 11S)	
			Northing	Easting
1	1	5/29/15	32.944574	-117.104274
2	2	6/10/15	32.959842	-117.174664
3	3	6/20/15	32.959836	-117.174338

*BHCO: brown-headed cowbird

Detection locations of special-status species and brown-headed cowbirds are depicted on an aerial map of the survey area in Attachment 1: Figures 4, 4a, 4b, and 5. It should be noted that the list of special-status species presented in Attachment 5 and locations of special-status species presented in Attachment 1: Figures 4, 4a, 4b, and 5 were either detected during the focused southwestern willow flycatcher surveys or incidentally during access to and from the survey area and may reflect repeated detections of the same individuals of a species from one survey to the next. Therefore, these attachments are intended to show the type and general location of special-status species detected, not quantity of individuals present.

SUMMARY

No southwestern willow flycatchers were detected during the 2015 focused, protocol-level southwestern willow flycatcher surveys conducted along the main Proposed Project alignment.

Please do not hesitate to contact Melissa Busby at melissa@busbybiological.com or 858.334.9507 or me at darin@busbybiological.com or 858.334.9508 if you have any questions.

Sincerely,

Darin Busby
Owner/Principal Biologist
Busby Biological Services, Inc.

ATTACHMENTS

Attachment 1: Figures
Attachment 2: Survey Conditions
Attachment 3: Wildlife Species Detected
Attachment 4: Incidental Special-Status Species Detected
Attachment 5: Willow Flycatcher Survey and Detection Form

REFERENCES

Barbour, M. G., and J. Major eds.
1977 Terrestrial vegetation of California. John Wiley and Sons, New York.

Busby Biological Services, Inc. (BBS)
2015 2015 Southwestern Willow Flycatcher Survey Summary Report for the Encina Hub Portion of the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 kV Transmission Line Project, San Diego County, California. August 13, 2015.

California Department of Fish and Wildlife (CDFW)
2014 Natural Diversity Data Base. Nongame-Heritage Program, California Department of Fish and Wildlife, Sacramento.

Craig, D. and P. L. Williams
1998 Willow Flycatcher (*Empidonax traillii*). *In* The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. http://www.prbo.org/calpif/htmldocs/riparian_v-2.html.

Garrett, K. and J. Dunn
1981 Birds of southern California: status and distribution. Los Angeles Audubon Soc., Los Angeles.

Holland, R.F.
1986 Preliminary Descriptions of the Terrestrial Natural Communities of California. State of California, The Resources Agency, Department of Fish and Game, Natural Heritage Division, Sacramento, California.

Patten, M. A., McCaskie, G., Unitt, P.
2003 Birds of the Salton Sea. Univ. of California Press, Los Angeles.

Rosenberg, K. V., R. D. Ohmart, W. C. Hunter and B. W. Anderson
1991 Birds of the lower Colorado River valley. Univ. of Arizona Press, Tucson.

Sogge, M.K., R.M. Marshall, S.J. Sferra, and T.J. Tibbitts
1997 A Southwestern Willow Flycatcher Natural History Summary and Survey Protocol. Technical Report NPS/NAUCPRS/NRTR-97/12. USGS Colorado Plateau Research Station, Northern Arizona University, Flagstaff, Arizona.

Sogge, M. K., Sferra, S. J., McCarthey, T. D., Williams, S. O., and Kus, B. E.
2003 Distribution and characteristics of Southwestern Willow Flycatcher breeding sites and territories: 1993-2001. Studies in Avian Biology No. 26:5–11. Colorado River valley. Univ. of Arizona Press, Tucson.

Sogge, M.K., Ahlers, Darrell, and Sferra, S.J.,
2010 A Natural History Summary and Survey Protocol for the Southwestern Willow Flycatcher. U.S. Geological Survey Techniques and Methods. 2A-10, 38 p.

Sedgwick, James A.
2000 Willow Flycatcher (*Empidonax traillii*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/533.

U.S. Fish and Wildlife Service (USFWS)
2002 Final Recovery Plan Southwestern Willow Flycatcher (*Empidonax traillii extimus*). Prepared By Southwestern Willow Flycatcher Recovery Team Technical Subgroup. August 2002.

U.S. Geological Survey (USGS)
1967a 7.5-minute Poway Topographic Quadrangle (Photorevised 1975)
1967b 7.5-minute Del Mar Topographic Quadrangle (Photorevised 1975)
1967c 7.5-minute La Jolla Topographic Quadrangle (Photorevised 1975)

Unitt, Philip
2004 San Diego County Bird Atlas. San Diego Natural History Museum. San Diego, CA.

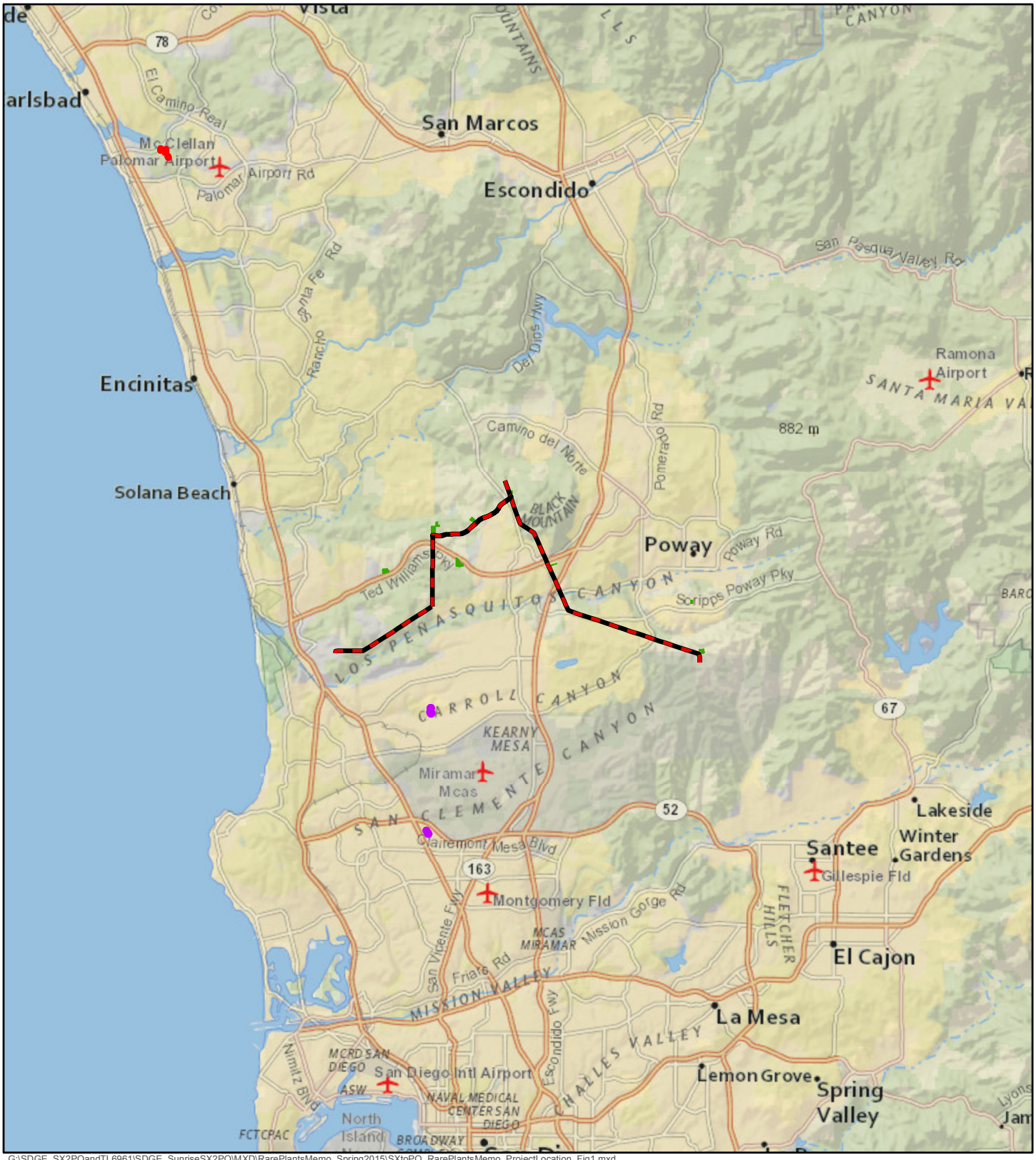
PROJECT BIOLOGIST SIGNATURE PAGE

All biologists performing focused, protocol-level, southwestern willow flycatcher (*Empidonax traillii extimus*) surveys for the main alignment portion of 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 Proposed Project biologist certifies this report to be a complete and accurate account of the findings and conclusions of surveys for southwestern willow flycatcher conducted for the Proposed Project during spring 2015.

_____

Laurie Gorman
Senior Biologist/Project Manager
Busby Biological Services, Inc.
ESA Permit Number TE-233367-2

ATTACHMENT 1 – Figures



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_ProjectLocation_Fig1.mxd

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE

Sycamore to Peñasquitos 230 kV Transmission Line Project

Project Location Map

Figure 1

- Staging Yards
- Encina Hub
- Mira Mesa Hub
- Proposed Project Route

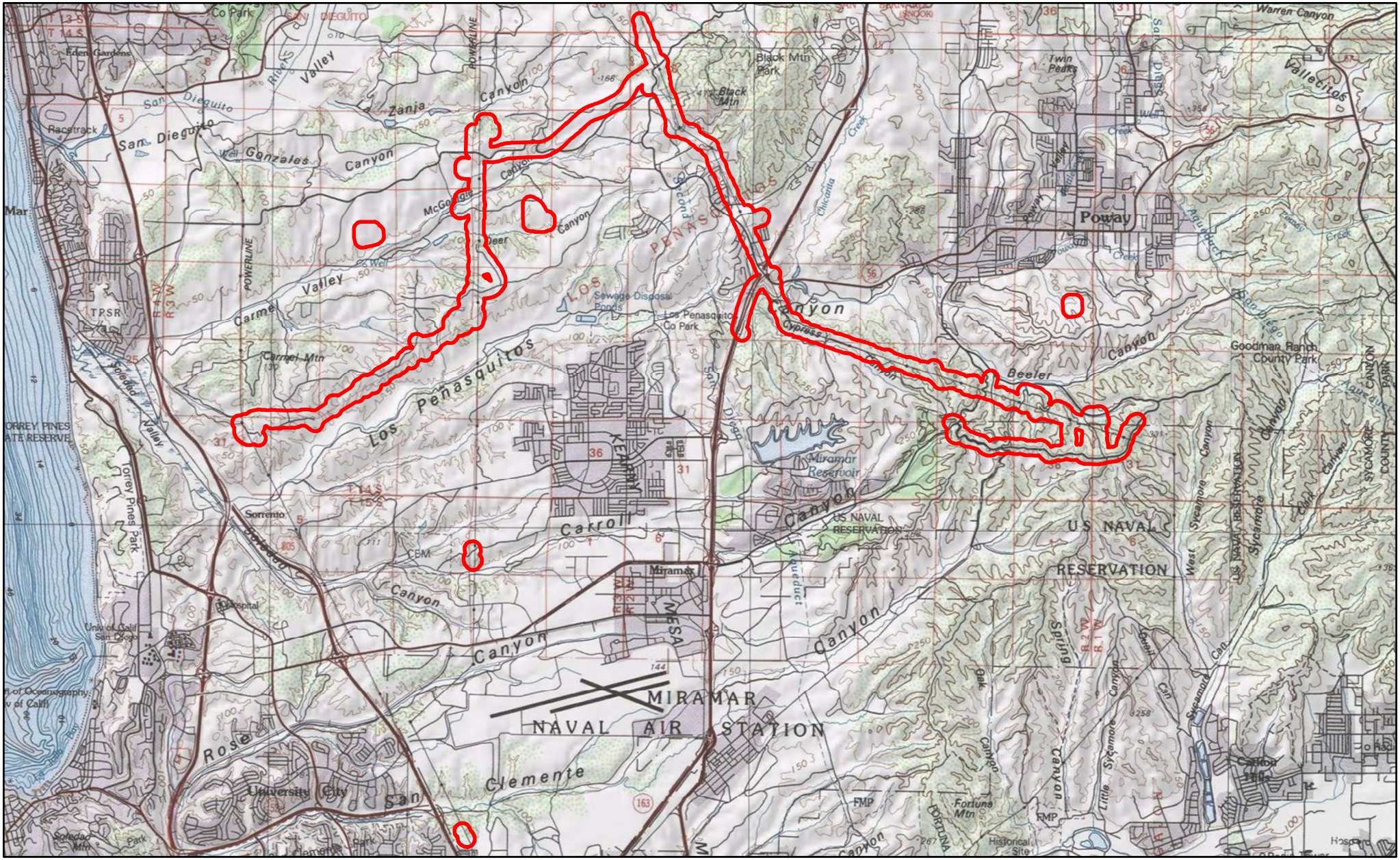
8/18/2015

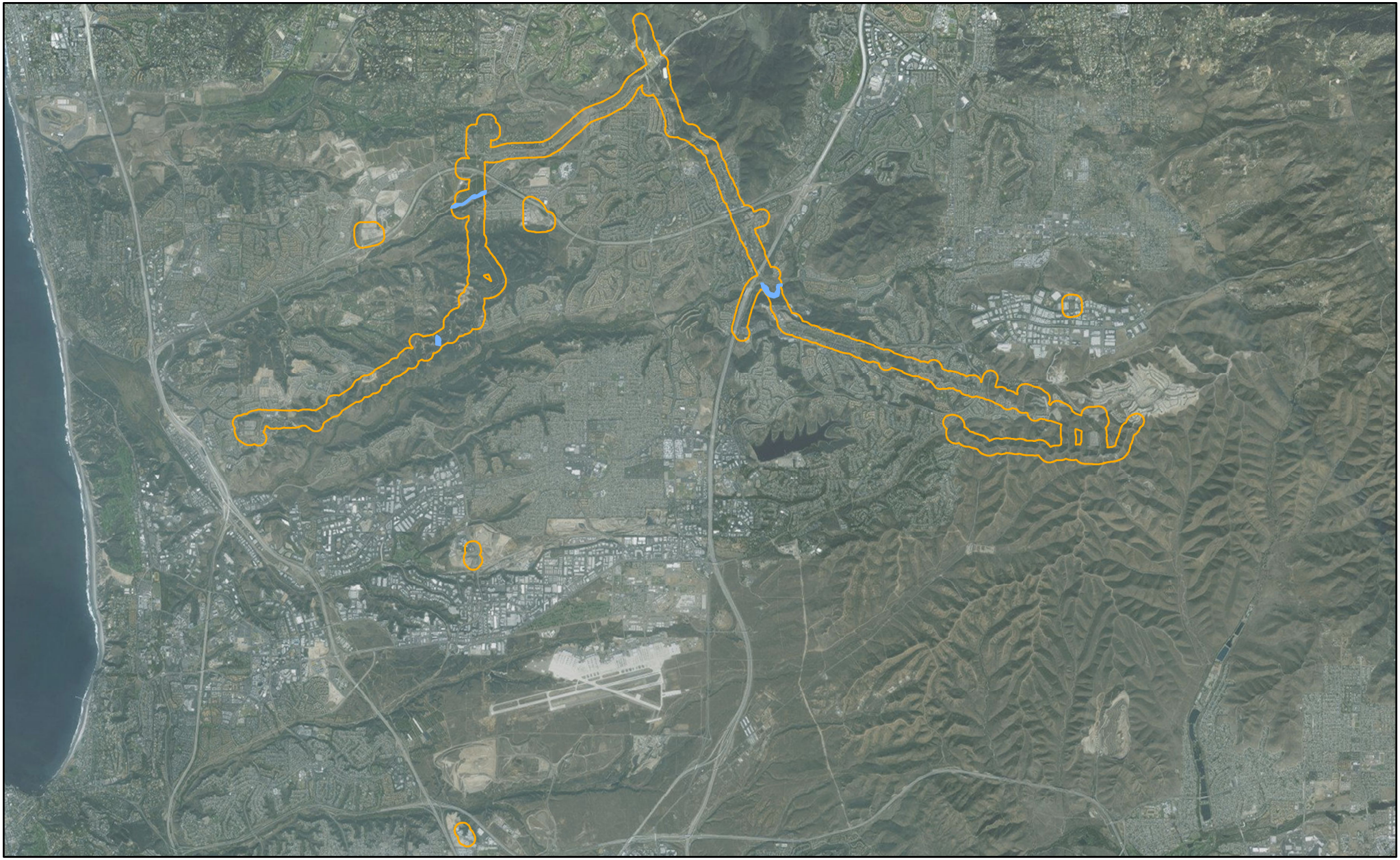
0 2 4 6 Miles

N W E S

TRC

SDGE A Sempra Energy utility


Poway
Miramar Reservoir
MIRAMAR
NAVAL AIR STATION
US NAVAL RESERVATION
Los Peñasquitos
Carroll Canyon
Black Mtn Park
Goodman Ranch County Park
Sewage Disposal Ponds
Los Penasquitos Co Park
Torrey Pines Park
University City
Sorrento
Carmel Mtn
Fortuna Mtn
Historical Site
Warren Canyon
Twin Peaks
Valle Crtos
Eden Gardens
Racetrack
San Dieguito
Zanja
Gonzales
McGonigle
Deer
Carmel Valley
Beeler
Cypress
Aqueduct
Clairemont
Sycamore
Spring
Oak
Little Sycamore
Rose
Clemente
Soledad
Nobel
Miramar
Hospital
Park
Historical Site
Sycamore Canyon County Park
US NAVAL RESERVATION
TPSR
POWERLINE
R4W
R3W
R2W
R1W
T14S
T15S
Mar
ORREY PINES ATE RESERVE
Co Park
Valley
Canyon
Creek
Aqueduct
Trunnel
Cowley
Cuyamaca
Chicarita
Second
Pipeline
Los Penasquitos
San Diego
Miramar
Carroll
Nobel



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedSWFLSurvey_Main_071715\SXtoPQ_BusbyFocusedSWFLSurvey_Main_SurveyAreaMap_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Survey Area Map - Main Alignment

Figure 3

Potential Southwestern Willow Flycatcher Habitat

BSA 500ft Buffer

0 1 2 3 Miles

7/21/2015

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedSWFLSurvey_Main_071715\SXtoPQ_BusbyFocusedSWFLSurvey_Main_SpeciesDetectionMap_Fig4.mxd

Species Detections

Brood Parasite

- Brown-headed Cowbird

Sensitive Species

- Coastal California Gnatcatcher
- Yellow Warbler

Potential Southwestern Willow Flycatcher Habitat

BSA 500ft Buffer

0 1 2 3 Miles

Sycamore to Peñasquitos 230 kV Transmission Line Project

Species Detection Overview Map - Main Alignment

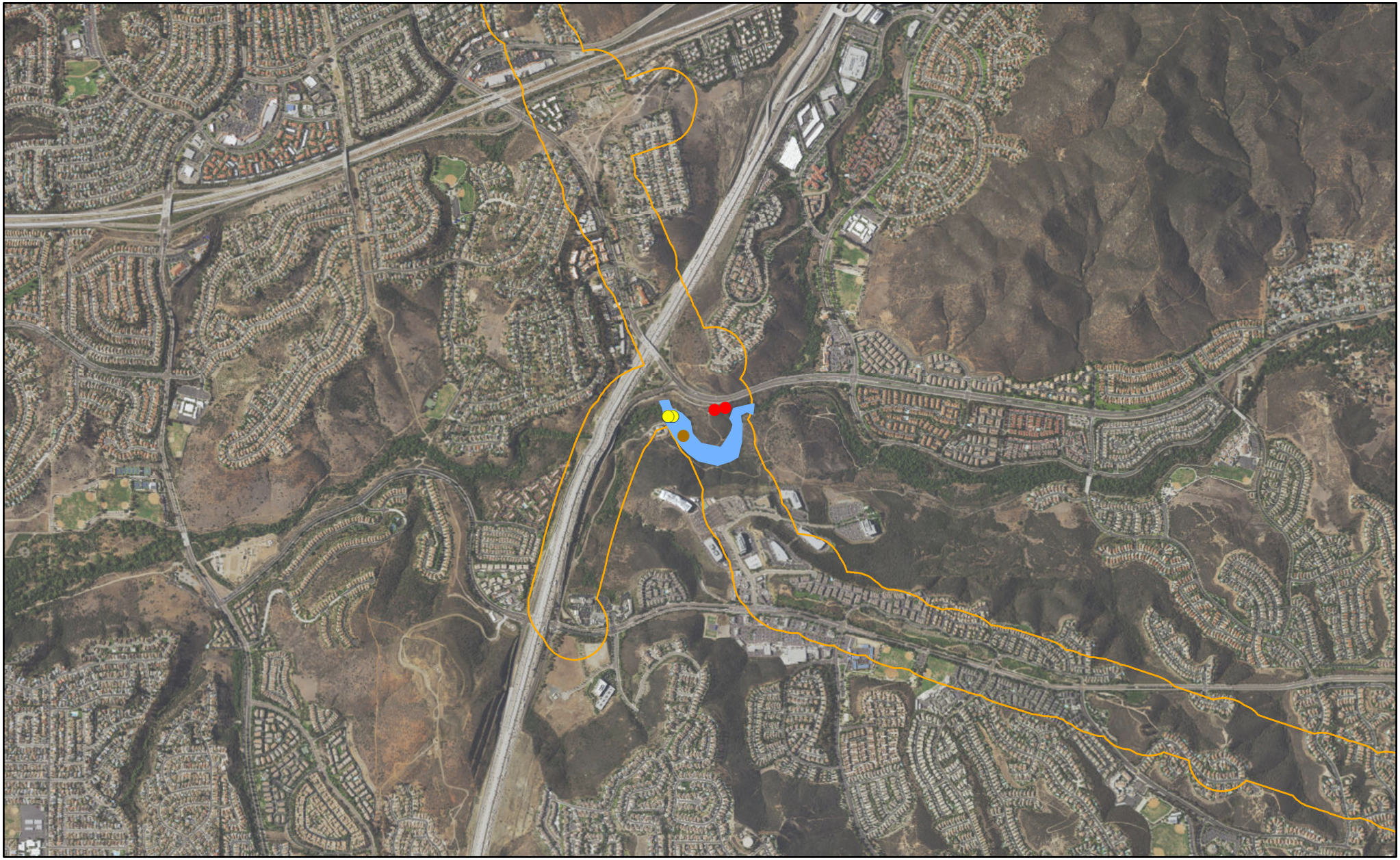
Figure 4

TRC

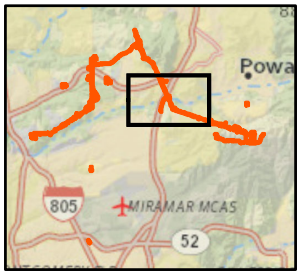
SDGE

7/21/2015

A Sempra Energy utility



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedSWFLSurvey_Main_071715\SXtoPQ_BusbyFocusedSWFLSurvey_Main_SpeciesDetectionMap_Fig4a.mxd



Species Detections

Brood Parasite

- Brown-headed Cowbird

Sensitive Species

- Coastal California Gnatcatcher
- Yellow Warbler

Potential Southwestern Willow Flycatcher Habitat

BSA 500ft Buffer

0 0.2 0.4 0.6 Miles

Sycamore to Peñasquitos 230 kV Transmission Line Project

Species Detection Map - Main Alignment

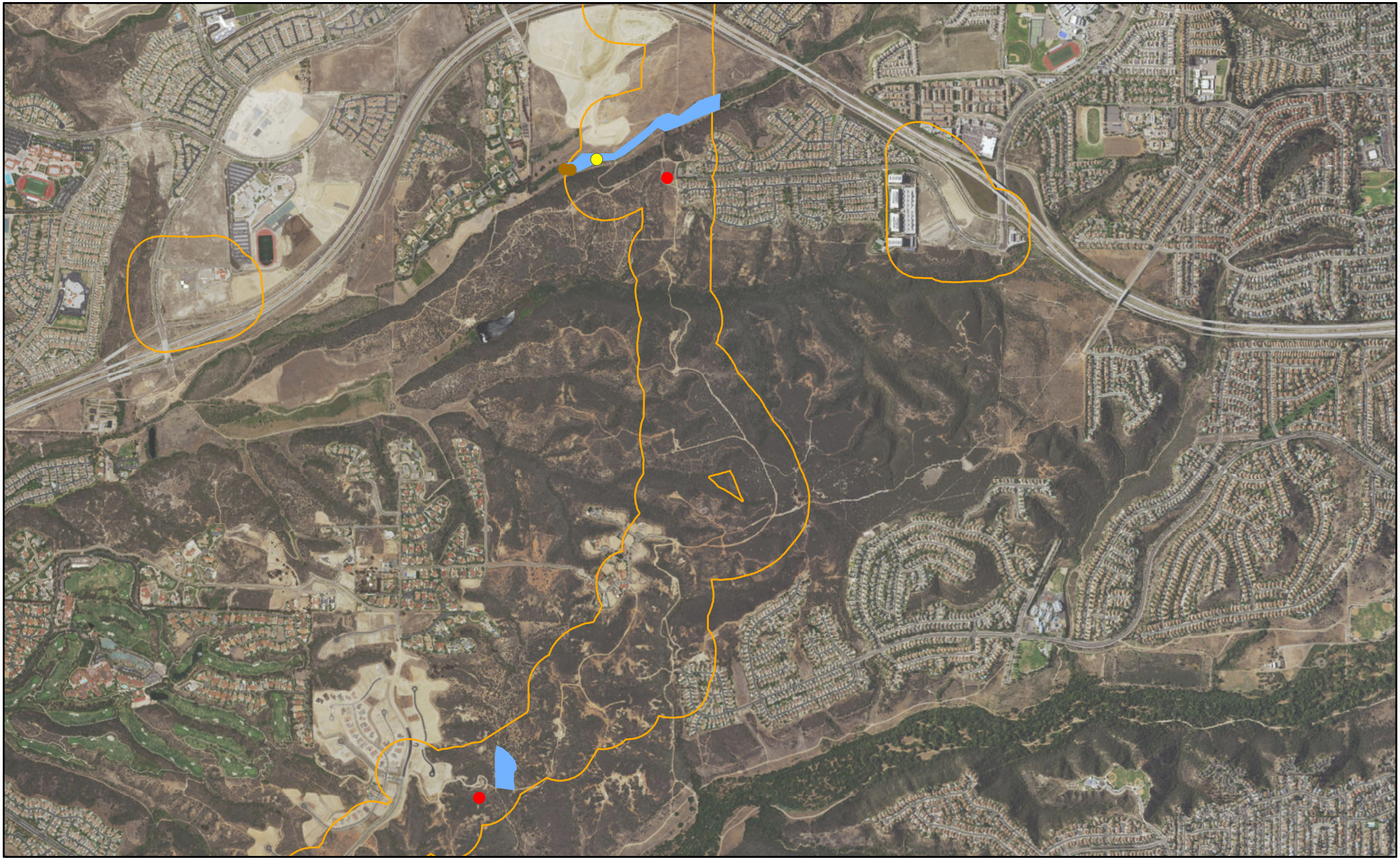
Figure 4a

TRC

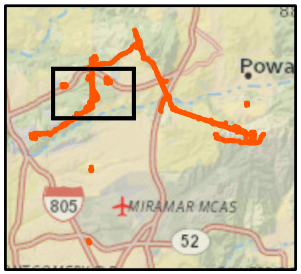
SDGE

7/21/2015

A Sempra Energy utility



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedSWFLSurvey_Main_071715\SXtoPQ_BusbyFocusedSWFLSurvey_Main_SpeciesDetectionMap_Fig4b.mxd



Species Detections

Brood Parasite

- Brown-headed Cowbird

Sensitive Species

- Coastal California Gnatcatcher
- Yellow Warbler

Potential Southwestern Willow Flycatcher Habitat

BSA 500ft Buffer

0 0.2 0.4 0.6 Miles

Sycamore to Peñasquitos 230 kV Transmission Line Project

Species Detection Map - Main Alignment

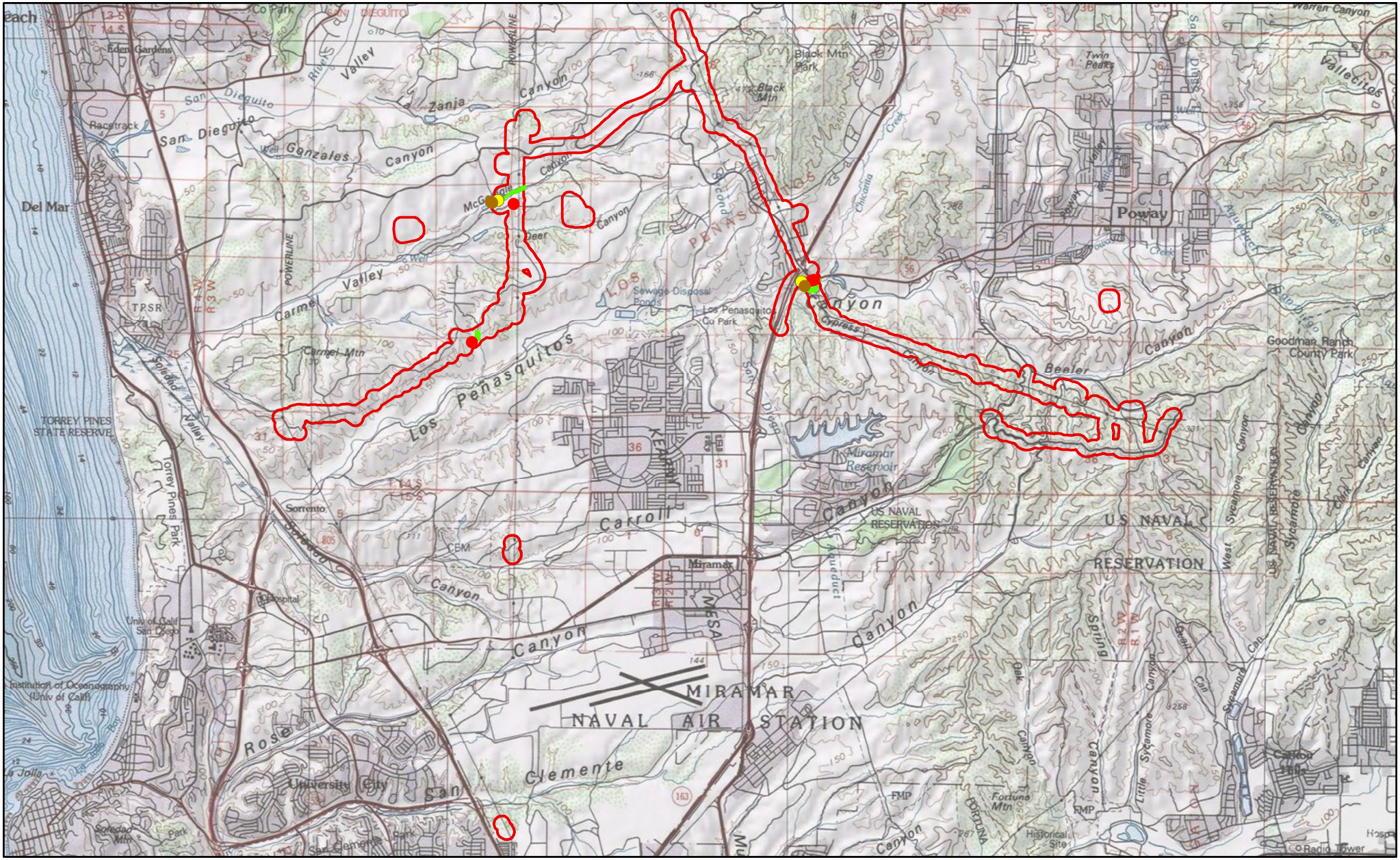
Figure 4b

TRC

SDGE

7/21/2015

A Sempra Energy utility



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedSWFLSurvey_Main_071715\SXtoPQ_BusbyFocusedSWFLSurvey_Main_QuadMap_Fig5.mxd

Species Detections

Brood Parasite

- Brown-headed Cowbird

Sensitive Species

- Coastal California Gnatcatcher
- Yellow Warbler

Potential Southwestern Willow Flycatcher Habitat

Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Species Detection Overview Map (USGS Topo) - Main Alignment

Figure 5

0 0.5 1 1.5 Miles

TRC

SDGE A Sempra Energy utility

8/18/2015

ATTACHMENT 2 – Survey Conditions

Attachment 2 – Survey Conditions

Survey #	Date	Time		Weather				Surveyors
				Temp (°F)	Wind (mph)	Clouds (%)	Precip	
1	5/29/15	Start	0530	62	0-1	100	0	Laurie Gorman
		End	1030	64	0-3	90	0	
2	6/10/15	Start	0545	66	0-1	100	0	Laurie Gorman
		End	1035	72	1-6	65	0	
3	6/20/15	Start	0630	66	0-1	100	0	Laurie Gorman
		End	1035	77	0-4	0	0	
4	6/30/15	Start	0610	64	0-1	100	0	Laurie Gorman
		End	1035	78	1-5	25	0	
5	7/16/15	Start	0545	65	0-1	100	0	Laurie Gorman
		End	1030	73	1-4	0	0	

ATTACHMENT 3 – Wildlife Species Detected

Attachment 3 - Wildlife Species Detected

INVERTEBRATES		
Class Insecta		**Insects**
Order Lepidoptera		**Butterflies**
Family Lycaenidae		**Harvesters, Coppers, Hairstreaks, and Blues**
	Leptotes marina	Marine Blue
Family Papilionidae		**Parnassians and Swallowtails**
	Papilio eurymedon	Pale Swallowtail
	Papilio rutulus	Western Tiger Swallowtail
Family Pieridae		**White Butterflies**
	Pieris rapae	Cabbage White
Family Nymphalidae		**Brush-footed Butterflies**
	Adelpha californica	California sister
Family Riodinidae		**Metalmarks**
	Apodemia virgulti	Behr's Metalmark
VERTEBRATES		
Class Actinopterygii		**Ray-finned Fishes**
Order Perciformes		**Perch-like Fishes**
Family Centrarchidae		**Sunfish**
	Lepomis macrochirus	Bluegill
	Micropterus salmoides	Largemouth Bass
Class Aves		**Birds**
Order Galliformes		**Gallinaceous Birds**
Family Odontophoridae		**New World Quail**
	Callipepla californica	California Quail
Order Ciconiiformes		**Herons, Ibises, Storks, American Vultures, and Allies**
Family Accipitridae		**Hawks, Kites, Eagles, and Allies**
	Buteo jamaicensis	Red-tailed Hawk
Order Charadriiformes		**Shorebirds, Gulls, Auks, and Allies**
Family Charadriidae		**Plovers**
	Charadrius vociferous	Killdeer
Order Columbiformes		**Pigeons and Doves**
Family Columbidae		**Pigeons and Doves**
	Zenaida macroura	Mourning Dove
Order Apodiformes		**Swifts and Hummingbirds**
Family Apodidae		**Swifts**
	Aeronautes saxatalis	White-throated Swift
Family Trochilidae		**Hummingbirds**
	Calypte anna	Anna's Hummingbird
Family Picidae		**Woodpeckers**
	Picoides nuttallii	Nuttall's Woodpecker

Attachment 3 - Wildlife Species Detected (Continued)

Order Passeriformes		**Perching Birds**
Family Tyrannidae		**Tyrant Flycatchers**
	Empidonax difficilis	Pacific-slope Flycatcher
	Myiarchus cinerascens	Ash-throated Flycatcher
	Tyrannus vociferans	Cassin's Kingbird
Family Corvidae		**Crows and Jays**
	Aphelocoma californica	Western Scrub-Jay
Family Alaudidae		**Larks**
	Eremophila alpestris actia	California horned lark
	Corvus brachyrhynchos	American Crow
	Corvus corax	Common Raven
Family Hirundinidae		**Swallows**
	Stelgidopteryx serripennis	Northern Rough-winged Swallow
Family Aegithalidae		**Bushtits**
	Psaltriparus minimus	Bushtit
Family Troglodytidae		**Wrens**
	Thryomanes bewickii	Bewick's Wren
	Troglodytes aedon	House Wren
Family Regulidae		**Kinglets**
	Regulus calendula	Ruby-crowned Kinglet
Family Sylviidae		**Gnatcatchers**
	Polioptila caerulea	Blue-gray Gnatcatcher
	Polioptila californica	Coastal California Gnatcatcher
Family Timaliidae		**Babblers**
	Chamaea fasciata	Wrentit
Family Mimidae		**Mockingbirds and Thrashers**
	Mimus polyglottos	Northern Mockingbird
	Toxostoma redivivum	California Thrasher
Family Sturnidae		**Starlings**
	Sturnus vulgaris	European Starling
Family Parulidae		**Wood-Warblers**
	Vermivora celata	Orange-crowned Warbler
	Dendroica petechia	Yellow Warbler
	Geothlypis trichas	Common Yellowthroat
Family Emberizidae		**Emberizids**
	Pipilo maculatus	Spotted Towhee
	Pipilo crissalis	California Towhee
	Melospiza melodia	Song Sparrow
Family Cardinalidae		**Cardinals and Allies**
	Pheucticus melanocephalus	Black-headed Grosbeak

Attachment 3 - Wildlife Species Detected (Continued)

Family Icteridae		**Blackbirds**
	Molothrus ater	Brown-headed Cowbird
	Icterus cucullatus	Hooded Oriole
	Icterus bullockii	Bullock's Oriole
Family Fringillidae		**Fringilline and Cardueline Finches and Allies**
	Carpodacus mexicanus	House Finch
	Carduelis psaltria	Lesser Goldfinch
Family Estrildidae		**Estrildid Finches**
	Lonchura puntulata	Scaly-breasted Munia
Class Mammalia		**Mammals**
Order Lagomorpha		**Rabbits, Hares, and Pikas**
Family Leporidae		**Rabbits and Hares**
	Sylvilagus audubonii	Desert Cottontail
Order Rodentia		**Rodents**
Family Sciuridae		**Squirrels and Chipmunks**
	Spermophilus beecheyi	California Ground Squirrel
Order Carnivora		**Carnivores**
Family Canidae		**Dogs and foxes**
	Canis familiaris	Domestic Dog
	Canis latrans	Coyote
Family Procyonidae		**Raccoons and Relatives**
	Procyon lotor	Raccoon
Order Perissodactyla		**Odd-toed Ungulates**
Family Equidae		**Horses, Donkeys, and Zebras**
	Equus caballus	Domestic Horse
Order Artiodactyla		**Even-toed Ungulates**
Family Cervidae		**Deer and Elk**
	Odocoileus hemionus	Mule Deer

ATTACHMENT 4 – Incidental Special-Status Species Detected

Attachment 4 – Incidental Special-Status Species Detected

Survey #	Date	Species Type*	Status**	# of Individuals	GPS Location (Decimal Degrees)	
					Northing	Easting
1	5/29/15	YEWA	SSC	1	32.960263	-117.173052
1	5/29/15	CAGN	FT; SSC	1	32.933523	-117.178604
2	6/10/15	YEWA	SSC	1	32.945390	-117.104816
2	6/10/15	CAGN	FT; SSC	1	32.945766	-117.102209
4	6/30/15	CAGN	FT; SSC	1	32.945677	-117.102740
5	7/16/15	CAGN	FT; SSC	1	32.959525	-117.169544
5	7/16/15	YEWA	SSC	1	32.945400	-117.105058

*Species Codes: YEWA = yellow warbler (*Dendroica petechia*); CAGN = coastal California gnatcatcher (*Polioptila californica californica*)

**Status: SSC = California Department of Fish and Wildlife: California - Species of Special Concern; FT = United States Fish and Wildlife Service - Federally Threatened

ATTACHMENT 5 – Willow Flycatcher Survey and Detection Form

Appendix 1. Willow Flycatcher Survey and Detection Form

Always check the U.S. Fish and Wildlife Service Arizona Ecological Services Field Office web site (http://www.fws.gov/southwest/es/arizona/) for the most up-to-date version.

Willow Flycatcher (WIFL) Survey and Detection Form (revised April 2010)

Site Name Sycamore to Penasquitas Substations State CA County San Diego
USGS Quad Name Del Mar & Poway Elevation ~50-100 (meters)
Creek, River, Wetland, or Lake Name: Duck Pond @ Del Mar Mesa Preserve; McGonicle Creek; Peñasquitos Creek
Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? Yes X No ___

Survey Coordinates: Start: E 483378 N 3643981 UTM Datum NAD83 (See instructions)
Stop: E 490577 N 3645295 UTM Zone 11S
If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.
** *Fill in additional site information on back of this page* **

Survey # / Observer(s) (Full Name)	Date (m/d/y) Survey time	Number of Adult WIFLs	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N / If Yes, number of nests	Comments (e.g., bird behavior; evidence of pairs or breeding; potential threats [livestock, cowbirds, *Diorhabda* spp.]). If *Diorhabda* found, contact USFWS and State WIFL coordinator	GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary. # Birds / Sex / UTM E / UTM N
Survey # 1 Observer(s) Laurie Gorman	Date 5/29/15 Start 0530 Stop 1030 Total hrs 5	0	0	0	N	BHCO (1 ♂ calling) 490253 mE 3645147 mN NAD 83 / 11S zone	N/A
Survey # 2 Observer(s) L. Gorman	Date 6/10/15 Start 0545 Stop 1035 Total hrs 5	0	0	0	N	BHCO (1 ♂ calling) 483676 mE 3646848 mN NAD83 / 11S zone	N/A
Survey # 3 Observer(s) L. Gorman	Date 6/20/15 Start 0630 Stop 1035 Total hrs 4	0	0	0	N	BHCO (♂ calling) 483706 mE 3646848 mN NAD83 / 11S zone	N/A
Survey # 4 Observer(s) L. Gorman	Date 6/30/15 Start 0610 Stop 1035 Total hrs 4.5	0	0	0	N	N/A	N/A
Survey # 5 Observer(s) L. Gorman	Date 7/16/15 Start 0545 Stop 1030 Total hrs 4.75	0	0	0	N	N/A	N/A
Overall Site Summary. Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings. Be careful not to double count individuals. Total Survey Hrs		Total Adult Residents: 0	Total Pairs: 0	Total Territories: 0	Total Nests: 0	Were any Willow Flycatchers color-banded? Yes ___ No X. If yes, report color combination(s) in the comments section on back of form and report to USFWS.	

Reporting Individual Laurie Gorman Date Report Completed 7/16/15
US Fish and Wildlife Service Permit # TE-233367-2 State Wildlife Agency Permit # SC-8778
***Submit** form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.*

Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.

Reporting Individual Laurie Gorman Phone # 949-933-9432
Affiliation Busby Biological Services E-mail Laurie@busbybiological.com
Site Name Sycamore to Penasquitos Substations Date Report Completed 7-16-15

Did you verify that this site name is consistent with that used in previous years? Yes ____ No ____ Not Applicable X
If site name is different, what name(s) was used in the past? N/A
If site was surveyed last year, did you survey the same general area this year? Yes ____ No ____ If no, summarize below.
Did you survey the same general area during each visit to this site this year? Yes ____ No ____ If no, summarize below.

Management Authority for Survey Area : Federal____ Municipal/County X State ____ Tribal ____ Private ____
Name of Management Entity or Owner (e.g., Tonto National Forest) City of San Diego, SDG+E ROW

Length of area surveyed: ~1500 (meters)

Vegetation Characteristics: Mark the category that best describes the predominant tree/shrub foliar layer at this site (check one):

X Native broadleaf plants (entirely or almost entirely, > 90% native, includes high-elevation willow)

____ Mixed native and exotic plants (mostly native, 50 - 90% native)

____ Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)

____ Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific name.
Willow (Salix sp. including goodingii, lasiolepis); mulefat (Baccharis salicifolia)

Average height of canopy (Do not include a range): 3 (meters)

Attach copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections.
Attach sketch or aerial photo showing site location, patch shape, survey route, location of any WIFLs or WIFL nests detected.
Attach photos of the interior of the patch, exterior of the patch, and overall site; describe any unique habitat features.

Comments (attach additional sheets if necessary)
No willow flycatchers were detected during the survey. The survey area consisted of suitable riparian habitat at Duck Pond at the Del Mar Mesa Preserve, McGonicle Creek and Penasquitos Creek within 500 feet of the Sycamore to Penasquitos Substation 230 kV transmission line Project in San Diego County.

Territory Summary Table. Provide the following information for each verified territory at your site.

Territory Number	All Dates Detected	UTM N	UTM E	Pair Confirmed? Y or N	Nest Found? Y or N	Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior)
N/A						

Attach additional sheets if necessary

BUSBY
Biological Services

September 28, 2015

Ms. Esther Burkett
California Department of Fish and Wildlife
Wildlife Branch - Nongame Wildlife
1812 9th Street
Sacramento, CA 95811

RE: BURROWING OWL SURVEY SUMMARY REPORT FOR THE ENCINCA HUB PORTION OF THE PROPOSED SAN DIEGO GAS & ELECTRIC COMPANY SYCAMORE TO PEÑASQUITOS 230 KILOVOLT TRANSMISSION LINE PROJECT, SAN DIEGO COUNTY, CALIFORNIA

Ms. Burkett:

Busby Biological Services, Inc. (BBS) was contracted by Chambers Group, Inc. (Chambers) to conduct a focused habitat assessment and focused surveys for burrowing owl (*Athena cunicularia*) on behalf of San Diego Gas & Electric Company (SDG&E) for the Encina Hub portion of the proposed Sycamore to Peñasquitos 230 Kilovolt (kV) Transmission Line Project (Proposed Project) in the City of Carlsbad, San Diego County, California (Appendix A: Figures 1 and 2). This survey summary report provides brief project background information, burrowing owl species and historical occurrence information, methods, and results/discussion.

1.0 PROJECT BACKGROUND INFORMATION

A brief summary of the Proposed Project and burrowing owl surveys are provided in this section.

1.1 Proposed Project Location and Description

The Encina Hub portion of the Proposed Project is in the southern portion of the U.S. Geological Survey (USGS) 7.5-minute San Luis Rey topographic quadrangle (USGS 1968) in the City of Carlsbad, San Diego County, California (Appendix A: Figures 1 and 2). The Encina Hub contains gently sloping to moderately sloping topography, with elevations ranging from approximately 240 feet above mean sea level (amsl) to 40 feet amsl. Land use within the Encina Hub consists primarily of undeveloped land and natural preserve lands. Adjacent land use includes a municipal golf course, hotels, agriculture, and additional undeveloped land and preserve lands. The Encina Hub is dominated by the following vegetation communities: Diegan coastal sage scrub, disturbed Diegan coastal sage scrub, disturbed habitat, and bare ground. Other vegetation communities present in smaller proportions include southern riparian scrub, southern willow scrub, mulefat scrub, nonnative grassland, native grassland, ornamental, and developed lands.

The Proposed Project includes construction of a new, approximately 16.7-mile 230 kV transmission line between the existing SDG&E Sycamore Canyon and Peñasquitos

substations; the consolidation of two existing 69 kV power lines onto new double-circuit, steel structures that would replace existing, predominantly wood structures; and re-routing at the Encina and Mira Mesa Hubs. An existing San Luis Rey–Mission 230 kV transmission line would be removed from service at the Encina Hub to create an open position for the proposed new 230 kV transmission line. The following steps would occur to reconfigure the 230 kV transmission lines at Encina Hub portion of the Proposed Project:

- Remove jumpers between existing towers
- Transfer the existing conductor between towers
- Install jumpers from towers
- Install new conductor from tower between three existing towers
- Install dead ends assemblies, dampers and spacers on existing towers

All new transmission line facilities would be located within existing SDG&E Right-of-Way or within franchise position within existing public roadways, and the entire Proposed Project is located within San Diego County (Appendix A: Figures 1 and 2).

1.2 Brief Survey Area Explanation

Focused burrowing owl surveys were conducted for the Proposed Project within all suitable habitats within and adjacent to the current Proposed Project alignment. Because the Encina Hub is located in a geographically distinct location and is not within the immediate vicinity of the main Proposed Project alignment (Appendix A: Figure 1), two separate survey summary reports were prepared for the spring 2015 surveys: one for the burrowing owl surveys conducted at Encina Hub, and one for the surveys that were conducted along the main Proposed Project alignment. This report focuses on the results of the focused burrowing owl surveys conducted at the Encina Hub. The results of the spring 2015 burrowing owl surveys conducted within the main Proposed Project alignment will be contained in a separate report.

2.0 BURROWING OWL SPECIES & HISTORICAL OCCURRENCE INFORMATION

The burrowing owl is a California Department of Fish and Wildlife (CDFW) species of special concern and a *SDG&E Subregional Natural Community Conservation Plan* (NCCP)-covered, narrow endemic species. This section provides species-specific information about the burrowing owl range and migration patterns, habitat, breeding information, and population threats.

2.1 Burrowing Owl Range & Migration Patterns

The burrowing owl ranges from southwestern Canada and the western United States, south through Central America, and into the northernmost portion of South America as well as the southern half of South America. It can also be found on coastal islands off of Florida and Baja California, Mexico (Haug et. al. 1993). The northernmost populations of this species are almost completely migratory, and wintering birds can be found south to southern Mexico.

The western subspecies of burrowing owl (*A. c. hypugaea*) includes the populations that occur in southern Alberta, Canada, and within the western United States. In California, the western burrowing owl is found throughout the state, with the exception of the northern

coast and eastern Sierra Nevada Mountains (Shuford and Gardali 2008). This subspecies remains fairly common in the Imperial Valley, which is home to nearly 70 percent of the entire California population; however, this species is rapidly declining in the remainder of the California populations (Unitt 2004). While the northern populations are often migratory, southern California burrowing owls are only partially migratory as evidenced by reduced population sizes in winter, with some birds remaining on territories throughout the year.

The burrowing owl has disappeared and/or populations have declined in several southern California and San Francisco Bay area counties and in coastal areas throughout California, as they have in other regions throughout the United States and Canada (DeSante et al. 1997, Klute et al. 2003). During the late 1800's and early 1900's, the burrowing owl was widespread and common in San Diego County, primarily along the coast and into the grassy interior; however, by the 1970's, the burrowing owl was considered uncommon and declining in these areas (Unitt 2004; Bent 1961). The burrowing owl currently occupies some historical sites in San Diego County (e.g., Naval Air Station North Island, south San Diego coastal area, and Otay Mesa) in much reduced numbers and is believed to be absent from many developed areas that it formerly occupied (e.g., north-central San Diego County, coastal areas, and the area around the City of San Diego) (Unitt 2004; Lincer and Bloom 2007). Currently, an estimated 41 to 46 pairs breed and 148 to 168 local individuals winter within San Diego County (Lincer and Bloom 2007). During the winter, local wintering burrowing owls are joined by migratory wintering burrowing owls to form a total estimated wintering population of approximately 300 to 370 individuals (Lincer and Bloom 2007).

2.2 Burrowing Owl Habitat

The burrowing owl is a ground-dwelling raptor that requires open, relatively flat terrain with burrows for nesting, roosting, and cover (CDFW 2012). This species can be found in a variety of habitat types that contain suitable burrowing and foraging habitat, including – but not limited to – native and non-native grassland, shrub steppe, shrubland with low density shrub cover, desert, agricultural, golf courses, drainage ditches, earthen berms, pasturelands, fallow fields, and even ruderal areas and vacant lots (Gervais et al 2008, CDFW 2012, TLMA 2006). The burrowing owl is typically associated with areas containing well-drained, friable soils inhabited by fossorial mammals (Haug et al. 1993, CDFW 2012).

In California, the burrowing owl prefers habitat with short, sparse vegetation and few shrubs, level to gentle topography, and well-drained soils (Haug et al. 1993). In San Diego County, the burrowing owl typically inhabits coastal lowlands in grasslands, agricultural areas, and coastal dunes (Unitt 2004).

In addition to burrowing habitat, the burrowing owl requires ample foraging habitat surrounding its burrows. This species concentrates it foraging within approximately 2,000 feet of its burrow, which equates to an area of up to approximately 300 acres (Haug and Oliphant 1990, Rosenberg and Haley 2004); however, the burrowing owl is known to use much smaller patch sizes, especially when they are located adjacent to suitable breeding and/or foraging habitat. Preferred foraging habitat consists of dry, open, relatively flat expanses with short grasses and sparse shrub cover (Ehrlich et al. 1988).

Although the burrowing owl may dig its own burrows (Thomsen 1971, Barclay 2007), this opportunistic species usually modifies or enlarges existing burrows that were previously used by mammals. In California, the burrowing owl frequently uses burrows of California

ground squirrel (*Spermophilus beecheyi*) and round-tailed ground squirrel (*Citellus tereticaudus*), but it may also use dens or holes dug by American badger (*Taxidea taxus*), coyote (*Canis latrans*), and fox (*Vulpes* spp.; Ronan 2002, CDFW 2012). In addition to earthen burrows, the burrowing owl may also use natural rock cavities, debris piles, culverts, openings beneath cement or asphalt pavement, and pipes (Rosenberg et al. 1998) as well as artificial burrows (Smith and Belthoff 2003) for nesting, roosting, and cover (CDFW 2012).

2.3 Burrowing Owl Breeding Information

Burrowing owl breeding behaviors include a wide range of activities associated with site selection by males; breeding pair formation; actual copulation; egg laying, incubation, and hatching; and care of the young during fledging and post-fledging. In California, the burrowing owl breeding season typically occurs between February 1 and August 31; however, breeding outside of this window has been documented under appropriate environmental conditions (CDFW 2012). The peak of the breeding season, when most burrowing owls have active nests, typically occurs between April 15 and July 15. In addition to its nest burrow, the burrowing owl may use satellite burrows to reduce predation and parasite infestation, particularly while caring for nestlings (CDFW 2012).

2.4 Burrowing Owl Population Threats

In California, the burrowing owl is threatened by a variety of factors, including habitat loss, control of burrowing rodents, and direct mortality. Population declines have been attributed to habitat loss, degradation, and fragmentation resulting most often from conversion of suitable habitat as a result of urbanization (Gervais et al. 2008). Burrowing rodent control programs, especially those targeting the California ground squirrel, threaten burrowing owl populations because ground squirrel burrows are the burrows most often utilized by burrowing owl for nesting and cover. Thus, elimination of burrowing rodents has lead to both recent and historical declines of burrowing owl populations in California and nationwide (Klute et al. 2003). Direct mortality from vehicle collisions (Haug et al. 1993, Gervais et al. 2008), agricultural drain/ditch maintenance, discing in fallow fields (Rosenberg and Haley 2004, Catlin and Rosenberg 2006), and wind turbine collisions (Thelander et al. 2003) as well as exposure to pesticides (Klute et al. 2003, Gervais et al. 2008) have all added to the decline of the burrowing owl in California. In areas of remaining open habitat close to or surrounded by developed areas, disturbance from human activity (e.g., walking, jogging, off-road activity, dog walking) and loose and feral pets are likely factors deterring the burrowing owl from these areas (Wesemann and Rowe 1985, Millsap and Bear 2000).

3.0 METHODS

A focused burrowing owl habitat assessment was performed within the Encina Hub footprint and within a 500-foot buffer of the Encina Hub, and focused burrowing owl surveys were conducted in all suitable habitat identified during the habitat assessment. The methods used for the habitat assessment and focused surveys are presented in this section.

3.1 Habitat Assessment Methods

Prior to initiating the focused burrowing owl surveys at the Encina Hub, a qualified biologist conducted a focused habitat assessment in winter 2015 to identify locations of suitable habitat for the species both within the Encina Hub and within a 500-foot buffer of all Encina Hub work areas. The habitat assessment consisted of an analysis of historical occurrence data, a desktop evaluation of available site data and aerial imagery, and a field evaluation to further investigate and map suitable burrowing owl habitat. The following sections provide detail on the habitat assessment methods.

3.1.1 Historical Occurrence Data

BBS obtained historical burrowing owl occurrence data for the Encina Hub and an approximately 5-mile buffer from the SanBIOS database (County of San Diego 2014) and CDFW *California Natural Diversity Database* (CNDDB; CDFW 2014a). BBS also reviewed other sensitive species resources, including the CDFW Special Animals list (CDFW 2014b); Proceedings of the California Burrowing Owl Symposium (Barclay et al. 2007); San Diego County Breeding Bird Atlas (Unit 2004); North American Breeding Bird Survey, Results Analysis 1966-2012 (Sauer et al. 2014); eBIRD (http://ebird.org); Gervais et al. (2008); the San Diego Natural History Museum (SDNHM) Bird Atlas Project (SDNHM 2014); and other regional and site-specific relevant information, data, and literature.

3.1.2 Focused Field Evaluation

BBS used the results of the historical occurrence database search along with other background research, in conjunction with a field survey, to evaluate the potentially suitable burrowing owl habitat within the burrowing owl habitat assessment area. BBS thoroughly evaluated the potentially suitable burrowing owl habitat located within the Encina Hub work areas and a 500-foot buffer of these work areas on foot to determine which polygons have the potential to support burrowing owl and, therefore, required focused burrowing owl surveys.

Areas of suitable burrowing owl habitat were drawn as polygons onto the map by hand in the field. In addition, photographs were taken of each polygon evaluated in the burrowing owl habitat assessment area.

To consistently and systematically evaluate each patch of potentially suitable habitat within the burrowing owl habitat assessment area for the potential to support the burrowing owl, BBS recorded data on the following criteria:

- polygon patch size
- dominant vegetation and land use within and adjacent to the polygon
- presence of adjacent foraging habitat
- vegetation height and shrub density within the polygon
- presence of friable soils within the polygon
- presence and quantity of burrows and burrow complexes within the polygon
- other evidence of fossorial animal use and burrow features within the polygon
- slope steepness within the polygon

BBS used this data to assess the overall potential of each potentially suitable burrowing owl habitat polygon to support the burrowing owl, taking into consideration the historical occurrence data and the evaluation criteria. Each habitat patch was either determined as not expected to support burrowing owl, or as having a low, moderate, or high potential to support burrowing owl.

3.2 Focused Burrowing Owl Survey Methods

Qualified BBS biologists conducted focused surveys for the burrowing owl in accordance with the current CDFW survey protocol, titled *Staff Report on Burrowing Owl Mitigation* (CDFW 2012).

A total of four protocol-level surveys, spaced at least three weeks apart, were conducted between February 15 and July 15: one survey was conducted within the survey window of February 15 and April 15, and three more were conducted within the survey window of April 15 and July 15, with at least one survey after June 15. The surveys were conducted between civil twilight and 10:00 am. Surveys were not conducted during adverse weather conditions (i.e. wind speeds greater than 20 kilometers per hour, rain, or dense fog). Surveyors walked straight-line transects spaced approximately 7 to 20 meters apart throughout the suitable habitat, based on the vegetation height and density. Surveyors scanned for burrowing owl every 100 meters with the aid of binoculars; watched for burrows, sign, and owls; and listened for burrowing owl calls. Surveyors took care not to flush burrowing owls.

If burrowing owl was detected, 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 collected data on the number of burrowing owl or nesting pairs at each location (by nestlings, juveniles, adults, and those of an unknown age), number of active burrows, burrowing owl sign at burrows, burrowing owl behavior, possible burrowing owl predators present and any evidence of predation on burrowing owl. In addition, surveyors recorded other wildlife species observed directly or detected indirectly by sign, including scat, tracks, calls, and other evidence.

4.0 RESULTS & DISCUSSION

The results of the habitat assessment and focused surveys for burrowing owl for the Encina Hub portion of the Proposed Project are presented in this section.

4.1 Habitat Assessment Results

This section provides a summary of the results of the historical occurrence data analysis as well as a result of the focused field evaluation.

4.1.1 Historical Burrowing Owl Occurrence within Vicinity of the Proposed Project

While a CNDDB (CDFW 2014a) database search did not result in any historical burrowing owl occurrences within a 5-mile radius of the Encina Hub, several historical burrowing owl occurrences were found in the SanBIOS (County of San Diego 2014) database search. These data did not have any specific location or data attributes to them, so the exact location, date, and observational data associated with these points is not known. Therefore,

these points could be from breeding and/or wintering burrowing owls. Although breeding burrowing owls have very specific habitat requirements, migrant wintering burrowing owl can utilize a variety of habitats typically not suitable for breeding individuals.

4.1.2 Field Evaluation Results

On January 22, 2015, BBS biologist Laurie Gorman evaluated six polygons (approximately 7.04 acres) of potentially suitable burrowing owl habitat located within the Encina Hub and a 500-foot buffer of all proposed work areas (Appendix A: Figure 3: Polygons 1 through 6). Of the six polygons evaluated, four of the polygons (Appendix A: Figure 3: Polygons 1, 2, 4, and 5) – totaling approximately 2.99 acres – do not provide suitable burrowing owl habitat, and two of the polygons (Appendix A: Figure 3: Polygons 3 and 6) – totaling approximately 4.05 acres – provide potentially suitable burrowing owl habitat.

No burrowing owls or burrowing owl sign were observed during the focused habitat assessments conducted within the Encina Hub burrowing owl habitat assessment area. Brief descriptions of both the unsuitable and potentially suitable habitat polygons identified within the Encina Hub burrowing owl habitat assessment area are provided in this section. Appendix C contains representative photographs of both unsuitable and suitable burrowing owl habitat within the Encina Hub burrowing owl habitat assessment area.

Unsuitable Burrowing Owl Habitat Polygons

The four polygons that do not provide suitable burrowing owl habitat are described in this section. Because these polygons do not provide suitable habitat, the burrowing owl is not expected to occur in these polygons.

Polygon 1 is approximately 1.4 acres (Appendix A: Figure 3). The dominant vegetation within Polygon 1 consists of disturbed habitat, with revegetated coastal sage scrub, nonnative grassland, Diegan coastal sage scrub, and developed land immediately adjacent to the polygon. Polygon 1 contains compact soils with no small mammal burrows or burrow complexes and is contiguous with only a small patch of nonnative grassland foraging habitat. Polygon 1 was classified as unsuitable for burrowing owl because of the small polygon size, compact soils, and absence of burrows and burrow complexes.

Polygon 2 is approximately 0.46 acre (Appendix A: Figure 3; Appendix C: Photograph 1). The dominant vegetation within Polygon 2 consists of disturbed habitat, with active agriculture (tall and dense crops), southern mixed chaparral, Diegan coastal sage scrub, and developed land immediately adjacent to the polygon. Polygon 2 contains friable soils with a few small mammal burrows and a few burrow complexes, but there is no adjacent foraging habitat. Polygon 2 was classified as unsuitable for burrowing owl because of the small polygon size, high level of disturbance resulting from the adjacent active agricultural practices that do not support suitable burrowing owl foraging crops, and continued active development within the immediate vicinity.

Polygon 4 is approximately 0.78 acre and is located within an existing golf course (Appendix A: Figure 3; Appendix C: Photograph 2). The dominant vegetation within Polygon 4 consists of short, ornamental grasses associated with the golf course landscaping, with Diegan coastal sage scrub immediately adjacent to the polygon. Polygon 4 contains compact soils that are matted with ornamental grasses, and it does not support

any small mammal burrows or burrow complexes. The golf course provides adjacent foraging habitat. Polygon 4 was classified as unsuitable for burrowing owl because of the small polygon size, compact soils, absence of burrows and burrow complexes, and a high level of human activity associated with the golf course.

Polygon 5 is approximately 0.35 acre and is located within the same existing golf course as Polygon 4, above (Appendix A: Figure 3). The dominant vegetation within Polygon 5 consists of short, ornamental grasses associated with the golf course landscaping, with Diegan coastal sage scrub and mulefat scrub immediately adjacent to the polygon. Polygon 5 contains compact soils that are matted with ornamental grasses, and it does not support any small mammal burrows or burrow complexes. The golf course provides adjacent foraging habitat. Polygon 5 was classified as unsuitable for burrowing owl because of the small polygon size, compact soils, absence of burrows and burrow complexes, and a high level of human activity associated with the golf course.

Suitable Burrowing Owl Habitat Polygons

The two polygons that provide suitable burrowing owl habitat along with the potential for occurrence for the burrowing owl within the polygon are described in this section.

Polygon 3 is approximately 2.24 acres (Appendix A: Figure 3; Appendix C: Photograph 3). The dominant vegetation within Polygon 3 consists of nonnative grassland and Diegan coastal sage scrub, with Diegan coastal sage scrub, southern mixed chaparral, disturbed habitat, bare ground, and developed land immediately adjacent to the polygon. Polygon 3 contains friable soils with a low number of small mammal burrows and no small mammal burrow complexes. It is adjacent to a golf course and nonnative grassland that provide suitable foraging habitat. Based on the site conditions, BBS determined that there is a low potential for occurrence for burrowing owl within this polygon.

Polygon 6 is approximately 1.81 acres (Appendix A: Figure 3; Appendix C: Photograph 4). The dominant vegetation within Polygon 3 consists of nonnative grassland and disturbed coastal sage scrub, with Diegan coastal sage scrub, southern mixed chaparral, and nonnative grassland immediately adjacent to the polygon. Polygon 6 contains friable soils that have been compacted in some areas and also supports a low number of small mammal burrows and no small mammal burrow complexes. Openings in adjacent coastal sage scrub provide suitable foraging habitat. Based on the site conditions, BBS determined that there is a low potential for occurrence for burrowing owl within this polygon.

4.2 Focused Burrowing Owl Survey Results

Between March 17 and June 25, 2015, a total of four focused burrowing owl surveys were conducted within a total of approximately 4.05 acres in Polygons 3 and 6, identified as potentially suitable burrowing owl habitat during the focused habitat assessment (Appendix A: Figure 3). All surveys were conducted during appropriate weather conditions by BBS biologist Laurie Gorman. Appendix B provides a summary of survey conditions, including survey times and weather conditions. Appendix C contains representative photographs of both unsuitable and suitable burrowing owl habitat within the Encina Hub portion of the Proposed Project.

No burrowing owls or burrowing owl sign were detected during the 2015 focused burrowing owl surveys conducted at the Encina Hub. During the surveys, Laurie Gorman searched for suitable small mammal burrows and burrow complexes that were at least ground squirrel size or larger. Although several small mammal burrows were observed throughout Polygons 3 and 6, none of these burrows were of the appropriate size or structure to support burrowing owl during the time of the survey. In addition, most of the small mammal burrows were inactive, as indicated either by being caved in just past the opening or by the presence of spiders, spider webs, and other debris (e.g., vegetation, garbage) around the opening.

A total of 26 wildlife species were detected during the focused burrowing owl surveys. One of these 26 species, the coastal California gnatcatcher (*Polioptila californica californica*), is listed as federally threatened by the U.S. Fish and Wildlife Services and as a Species of Special Concern by CDFW. Because each of these individual coastal California gnatcatchers were also detected either during focused surveys for least Bell's vireo (*Vireo bellii pusillus*) or during access to and from the survey area during these surveys, the GPS locations of this incidentally-detected sensitive species is included in a separate report titled *Least Bell's Vireo Survey Summary Report for the Encina Hub Portion of the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 kV Transmission Line Project, San Diego County, California* (BBS 2015). Appendix D provides a complete list of all wildlife species detected during the focused burrowing owl surveys.

SUMMARY

No burrowing owls were detected during the 2015 focused burrowing owl surveys conducted within the Encina Hub portion of the Proposed Project.

Please do not hesitate to contact Melissa Busby at melissa@busbybiological.com or 858.334.9507 or Darin Busby at darin@busbybiological.com or 858.334.9508 if you have any questions.

Sincerely,

Melissa Busby
Owner/Principal Biologist
Busby Biological Services, Inc.

Darin Busby
Owner/Principal Biologist
Busby Biological Services, Inc.

cc: Paul Morrissey, Chambers
Joshua Taylor, TRC
Elisha Back, TRC
Robert Fletcher, SDG&E

REFERENCES

Barclay, J.H., K.W. Hunting, J.L. Lincer, J. Linthicum, and T.A. Roberts, editors
2007 Proceedings of the California Burrowing Owl Symposium, 11-12 November 2003, Sacramento, California, USA. Bird Populations Monographs No. 1. The Institute for Bird Populations and Albion Environmental, Inc., Point Reyes Station, CA.

Bent, A.C.
1961 Life histories of North American birds of prey. Part 2. U.S. Natl. Mus. Bull. No. 170. Dover Publications, New York.

Busby Biological Services, Inc. (BBS)
2014 *Biological Technical Report for Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project*, City of San Diego, San Diego County, California. March 2014.
2015 *Least Bell's Vireo Survey Summary Report for the Encinca Hub Portion of the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 Kv Transmission Line Project, San Diego County, California*

California Department of Fish and Wildlife (CDFW)
2012 Staff Report on Burrowing Owl Mitigation. State of California. Natural Resources Agency, Department of Fish and Game. March 2012.
2014a Natural Diversity Data Base. Nongame-Heritage Program, California Department of Fish and Wildlife, Sacramento.
2014b CDFW Biogeographic Data Branch, California Natural Diversity Database. Special Animals List. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/spanimals.pdf. January 2011. Accessed October 2014.

Catlin, D.H. and D.K. Rosenberg
2006 Nest destruction increases mortality and dispersal of Burrowing Owls in the Imperial Valley, California. Southwest Naturalist 51: 406–409.

County of San Diego
2014 SanBIOS GIS Database. Created in 2009. Available at: http://www.sangis.org/. Accessed October 2014.

Desante, D.F., E.D. Ruhlen, S.L. Adamany, K.M. Burton, and S. Amin
1997 A census of Burrowing Owls in Central California in 1991. Pages 38-48 in Lincer, J. L. and K. Steenhof [EDS]. 1997. The Burrowing Owl, Its Biology and Management: Including the Proceedings of the First International Burrowing Owl Symposium. Raptor Research Report Number 9.

Ehrlich, P.R., D.S. Dobkin, and D. Wheye
1988 The Birder's Hanbook; A Field Guide to the Natural History of North American Birds. Simon and Schuster Inc. New York.

Garrett, K. and J. Dunn
1981 Birds of southern California: status and distribution. Los Angeles Audubon Soc., Los Angeles.

Gervais, J.A., D.K. Rosenberg, and L.A. Comrack
2008 Burrowing Owl (Athene cunicularia) *in* California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento, California, USA.

Grinnell, J., and A.H. Miller
1986 The Distribution of the Birds of California. *Pacific Coast Avifauna* No. 27, published 1944 and reprinted by Artimisa Press, Lee Vining, California.

Haug, E.A., B.A. Millsap, and M.S. Martell
1993 Burrowing owl (Speotyto cunicularia), *in* A. Poole and F. Gill, editors, The Birds of North America, The Academy of Natural Sciences, Philadelphia, Pennsylvania, and The American Ornithologists' Union, Washington, D.C., USA.

Haug, E.A. and L.W. Oliphant
1990 Movements, activity patterns, and habitat use of burrowing owls in Saskatchewan. Journal of Wildlife Management 54: 27-35.

Klute, D.S., L.W. Ayers, M.T. Green, W.H. Howe, S.L. Jones, J.A. Shaffer, S.R. Sheffield, and T.S. Zimmerman
2003 Status Assessment and Conservation Plan for the Western Burrowing Owl in the United States. U.S. Department of Interior, Fish and Wildlife Service, Biological Technical Publication FWS/BTP-R6001-2003, Washington, D.C.

Lincer, J.L. and P.H. Bloom
2007 The Status of the Burrowing Owl in San Diego County, California. Proceedings of the California Burrowing Owl Symposium 90-102 © The Institute for Bird Populations

Millsap, B.A. and C. Bear
2000 Density and reproduction of Burrowing Owls along an urban development gradient. Journal of Wildlife Management 64:33-41.

Ronan, N.A.
2002 Habitat selection, reproductive success, and site fidelity of burrowing owls in a grassland ecosystem. Thesis, Oregon State University, Corvallis, Oregon, US

Rosenberg, D.K., J.A. Gervais, H. Ober, and D.F. DeSante
1998 An adaptive management plan for the burrowing owl population at Naval Air Station Lemoore, California, USA. Publication 95, Institute for Bird Populations, P.O. Box 1346, Pt. Reyes Station, CA 94956.

Rosenberg, D.K., and K.L. Haley
2004 The ecology of burrowing owls in the agroecosystem of the Imperial Valley, California. Studies in Avian Biology 27:120-135.

Sauer, J.R., J.E. Hines, J.E. Fallon, K.L. Pardieck, D.J. Ziolkowski, Jr., and W.A. Link

2014 *The North American Breeding Bird Survey, Results and Analysis 1966 - 2012.* Version 02.19.2014 USGS Patuxent Wildlife Research Center, Laurel, MD.

San Diego Natural History Museum (SDNHM)
2014 http://www.sdnhm.org/science/birds-and-mammals/projects/san-diego-county-bird-atlas/. Bird Atlas Project. Accessed October 2014.

Shuford, W.D. and T. Gardali
2008 California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Smith, B.W. and J.R. Belthoff
2003 Patterns of artificial burrow occupancy and reuse by burrowing owls in Idaho. Wildlife Society Bulletin 31:1-7.

Thomsen, L.
1971 Behavior and ecology of burrowing owls on the Oakland Municipal Airport Condor 73: 177-192.

U.S. Geological Survey (USGS)
1968 7.5-minute San Luis Rey Topographic Quadrangle (Photorevised 1975)

Unitt, Philip
2004 San Diego County Bird Atlas. San Diego Natural History Museum. San Diego, CA.

Wesemann, T. and M. Rowe.
1985 Factors influencing the distribution and abundance of Burrowing Owls in Cape Coral, Florida. Pages 129-137 in Adams and Leedy, EDS. Integrating Man and Nature in the Metropolitan Environment. Proc. Natl. Symp. on Urban Wildlife.

PROJECT BIOLOGIST SIGNATURE PAGE

All biologists performing focused, protocol-level, burrowing owl (*Athene cunicularia*) surveys for the Encina Hub portion of the proposed Sycamore to Peñasquitos Substation 230 kilovolt transmission line project (Proposed Project) were qualified to survey for this species. The undersigned project biologists certify this report to be a complete and accurate account of the findings and conclusions of surveys for burrowing owl conducted for the Proposed Project during spring 2015.

Laurie Gorman
Senior Biologist/Project Manager

APPENDIX A – Figures

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedLBVSurvey_070215\SXtoPQ_BusbyFocusedLBVSurvey_ProjectLocation_Fig1.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Project Location Map

Figure 1

- Proposed Project Route
- Staging Yards
- Encina Hub
- Mira Mesa Hub

0 2 4 6 Miles

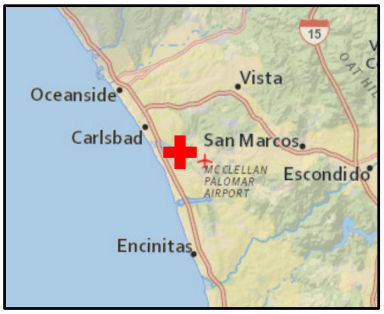
N W E S

7/2/2015

TRC

SDGE A Sempra Energy utility

Text



Sycamore to Peñasquitos 230 kV Transmission Line Project

Encina Hub Project Area

Figure 2

Encina Hub Project Area

N W E S

0 1,400 2,800 4,200 Feet

7/23/2015

TRC SDGE A Sempra Energy utility

Sources: SDG&E; Copyright:© 2013 National Geographic Society, i-cubed, Content may not reflect National Geographic's current map policy.

Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment and Survey Results

Figure 3

- Project Access Roads
- Encina Hub Work Areas
- 500-foot Buffer from Work Areas

Potential for Occurrence

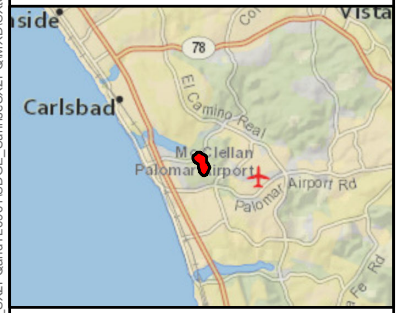
- Not Expected to Occur within Polygon
- Potential to Occur within Polygon

TRC

SDGE A Sempra Energy utility

8/13/2015

0 420 840 1,260 Feet



Sources: TRC, 2015; SDG&E, 2015; ESRI, HERE, DeLorme, USGS, NRCAN, METI, ICP, GeoBase, GetMappping, GEBCO, NatGeo, UNEP-WCMC

G:\SDGE_SX2POandT_6961\SDGE_SunriseSX2PO\MXD\SXtoPO_BUOWISurveyReport_Fig3.mxd

APPENDIX B – Survey Conditions

Appendix B – Survey Conditions

Survey #	Date	Time		Weather				Surveyor(s)
				Temp (°F)	Wind (mph)	Clouds (%)	Precip	
1	3/17/15	Start	0905	70	1-3	60	0	Laurie Gorman
		End	1000	72	1-4	60	0	
2	4/24/15	Start	0615	59	0-2	100	0	Laurie Gorman
		End	0800	60	0-1	100	0	
3	5/22/15	Start	0610	58	0-3	95	0	Laurie Gorman
		End	0700	61	1-4	92	0	
4	6/25/15	Start	0600	67	0-1	100	0	Laurie Gorman
		End	0720	71	0-1	100	0	

APPENDIX C – Site Photographs

Photograph 1. View of Polygon 2 on January 22, 2015. Classified as unsuitable for burrowing owl based on small polygon size, high level of disturbance resulting from the adjacent active agricultural practices, and continued active development within the immediate vicinity.

Photograph 2. View of Polygon 4 on January 22, 2015. Classified as unsuitable for burrowing owl based on small polygon size, compact soils, absence of small mammal burrows and burrow complexes, and a high level of human activity associated with the golf course.

Photograph 3. View of Polygon 3 on January 22, 2015. Classified as a low potential for burrowing owl based on presence of friable soils, low number of small mammal burrows, and suitable foraging habitat within and adjacent to polygon.

Photograph 4. View of Polygon 6 on January 22, 2015. Classified as a low potential for burrowing owl based on presence of friable soils, low number of small mammal burrows, and suitable foraging habitat within and adjacent to polygon.

APPENDIX D – Wildlife Species Detected

Appendix D - Wildlife Species Detected

INVERTEBRATES		
Class: Aves		**Birds**
Order Galliformes		**Gallinaceous Birds**
Family Odontophoridae		**New World Quail**
	Callipepla californica	California Quail
Order Ciconiiformes		**Herons, Ibises, Storks, American Vultures, and Allies**
Family Accipitridae		**Hawks, Kites, Eagles, and Allies**
	Buteo jamaicensis	Red-tailed Hawk
Order Apodiformes		**Swifts and Hummingbirds**
Family Apodidae		**Swifts**
	Aeronautes saxatalis	White-throated Swift
Family Trochilidae		**Hummingbirds**
	Calypte anna	Anna's Hummingbird
Order Passeriformes		**Perching Birds**
Family Tyrannidae		**Tyrant Flycatchers**
	Sayornis nigricans	Black Phoebe
	Tyrannus vociferans	Cassin's Kingbird
Family Corvidae		**Crows and Jays**
	Aphelocoma californica	Western Scrub-Jay
	Corvus brachyrhynchos	American Crow
	Corvus corax	Common Raven
Family Aegithalidae		**Bushtits**
	Psaltriparus minimus	Bushtit
Family Troglodytidae		**Wrens**
	Thryomanes bewickii	Bewick's Wren
Family Sylviidae		**Gnatcatchers**
	Polioptila californica californica	Coastal California Gnatcatcher
Family Timaliidae		**Babblers**
	Chamaea fasciata	Wrentit
Family Mimidae		**Mockingbirds and Thrashers**
	Mimus polyglottos	Northern Mockingbird
	Toxostoma redivivum	California Thrasher
Family Emberizidae		**Emberizids**
	Pipilo maculatus	Spotted Towhee
	Pipilo crissalis	California Towhee
	Melospiza melodia	Song Sparrow
	Zonotrichia leucophrys	White-crowned Sparrow
Family Fringillidae		**Fringilline and Cardueline Finches and Allies**
	Carpodacus mexicanus	House Finch
	Carduelis psaltria	Lesser Goldfinch

Appendix D - Wildlife Species Detected (Continued)

Class: Mammalia		**Mammals**
Order Lagomorpha		**Rabbits, Hares, and Pikas**
Family Leporidae		**Rabbits and Hares**
	Sylvilagus audubonii	Desert Cottontail
Order Rodentia		**Rodents**
Family Sciuridae		**Squirrels and Chipmunks**
	Spermophilus beecheyi	California Ground Squirrel
Order Carnivora		**Carnivores**
Family Canidae		**Dogs and foxes**
	Canis familiaris	Domestic Dog
	Canis latrans	Coyote
Family Procyonidae		**Raccoons and Relatives**
	Procyon lotor	Raccoon

BUSBY
Biological Services

May 1, 2015

Ms. Stacey Love
Recovery Permits Coordinator
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

RE: COASTAL CALIFORNIA GNATCATCHER SURVEY SUMMARY REPORT FOR AREAS NOT PREVIOUSLY SURVEYED FOR THE PROPOSED SAN DIEGO GAS & ELECTRIC COMPANY SYCAMORE TO PEÑASQUITOS 230 kV TRANSMISSION LINE PROJECT, SAN DIEGO COUNTY, CALIFORNIA

Ms. Love:

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 portions of the proposed Sycamore to Peñasquitos 230 Kilovolt (kV) Transmission Line Project (Proposed Project) that were not previously surveyed for the Proposed Project because they were added after the initial focused coastal California gnatcatcher surveys were conducted in fall 2013. Busby Biological Services, Inc. (BBS) was contracted by Chambers Group, Inc. (Chambers) to conduct these surveys on behalf of San Diego Gas & Electric Company (SDG&E) to evaluate the potential impacts of the Proposed Project.

This survey summary report focuses on the methods and results used to evaluate areas along the main alignment that were not previously surveyed for the Proposed Project. A separate report was prepared to summarize the methods and results for the surveys performed for the Encina Hub portion of the Proposed Project. This report is titled *Coastal California Gnatcatcher Survey Summary Report for the Encina Hub Portion of the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 kV Transmission Line Project, San Diego County, California* and dated April 28, 2015.

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 includes construction of a new, approximately 16.7-mile 230 kV transmission line between the existing SDG&E Sycamore Canyon and Peñasquitos substations; the consolidation of two existing 69 kV power lines onto new double-circuit, steel structures that would replace existing, predominantly wood structures; and re-routing at the Encina and Mira Mesa Hubs. All new transmission line facilities would be located within existing SDG&E Right-of-Way (ROW) or within franchise position within existing

public roadways, and the entire Proposed Project is located within San Diego County (Appendix A: Figure 1).

Brief Survey Area Explanation

Focused coastal California gnatcatcher surveys were conducted for the Proposed Project within all suitable habitats within and adjacent to the current Proposed Project alignment.

During fall 2013, focused, protocol-level, non-breeding season coastal California gnatcatcher surveys were conducted within the original Biological Survey Area (BSA), which included a 500-foot-wide survey corridor along the approximately 16.7-mile Proposed Project alignment, the Sycamore Canyon and Peñasquitos Substations, and the proposed Sycamore and Stowe construction yards (Appendix A: Figures 1 through 3). The results of the fall 2013 coastal California gnatcatcher surveys conducted within the original BSA were summarized previously in a separate survey summary report, titled *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* and dated January 14, 2014.

During Spring 2015, subsequent focused, protocol-level, breeding season coastal California gnatcatcher surveys were conducted within and adjacent to the portions of the current BSA that were added after the original BSA had already been surveyed, including access roads, staging yards, the Encina Hub, the Mira Mesa Hub, and all other associated work areas (Appendix A: Figures 1 through 4).

Because the Encina Hub is located in a geographically distinct location and is not within the immediate vicinity of the main Proposed Project alignment (Appendix A: Figure 1), two separate survey summary reports were prepared for the spring 2015 surveys, one for the coastal California gnatcatcher surveys conducted at Encina Hub and one for the surveys that were conducted along the main Proposed Project alignment. This report focuses on the results of the focused coastal California gnatcatcher surveys conducted that were conducted in the suitable habitat along the main Proposed Project alignment that was not surveyed previously.

The results of the focused coastal California gnatcatcher surveys in the original BSA, new areas along the main alignment, and the Encina Hub will be compiled so that all survey results are utilized to inform future Proposed Project planning efforts.

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).

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, breeding season coastal California gnatcatcher surveys were performed within suitable habitat located in or within 300 feet of areas that have been added to the Proposed Project since the initial coastal California gnatcatcher surveys were conducted within the original BSA in fall 2013 (Appendix A: Figures 2 through 4). 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, breeding coastal California gnatcatcher surveys for the Proposed Project, a focused habitat assessment was conducted by U.S. Fish and Wildlife Service (USFWS) permitted biologists to identify locations of suitable coastal California gnatcatcher habitat located in or within 300 feet of areas that have been added to the Proposed Project since the initial coastal California gnatcatcher surveys were conducted in fall 2013 (Appendix A: Figures 2 through 4). 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 Proposed Project 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* (CNDDB; CDFW 2014) 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 Proposed Project.

Next, USFWS-permitted biologists conducted a field habitat assessment for potential coastal California gnatcatcher habitat within the areas that were added to the Proposed Project after the initial focused coastal California gnatcatcher surveys were conducted in

fall 2013 (Appendix A: Figures 2 and 3). The field habitat assessment was conducted by driving to strategic vantage points within the Proposed Project area 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 coastal California gnatcatcher survey area through closer investigation on foot during the first round of focused, protocol-level, breeding 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.

Three 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 and adjacent to the Proposed Project 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 survey area.

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/or 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 Laurie Gorman, conducted the field habitat assessment for coastal California gnatcatcher within and adjacent to the portions of the Proposed Project that were added after the initial coastal California gnatcatcher surveys were conducted (Appendix A: Figures 2 and 3). The habitat assessment was conducted during various field visits during fall 2014 and winter 2014/2015 as these new areas were added to the Proposed Project.

The initial assessment of potentially suitable coastal California gnatcatcher habitat was further refined by BBS biologist, Laurie Gorman, through closer investigation on foot during the first round of focused, protocol-level coastal California gnatcatcher surveys. A total of approximately 149.21 acres of potentially suitable coastal California gnatcatcher habitat that had not previously been surveyed was surveyed during the spring 2015 surveys (Appendix A: Figure 4).

Potentially suitable habitat for the coastal California gnatcatcher that required surveys included Diegan coastal sage scrub and its various sub-associations, including disturbed Diegan coastal sage scrub and revegetated coastal sage scrub (Appendix A: Figure 4). Additionally, the following vegetation communities within the survey area 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, disturbed chamise chaparral, 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.

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 Biological Survey Area (BSA) for the Proposed Project, this vegetation community is dominated by a variable mix of California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), black

sage (*Salvia melifera*), laurel sumac (*Malosma laurina*), deerweed (*Acmispon glaber*), broom baccharis (*Baccharis sarathroides*), coyote brush (*Baccharis pilularis*), California sunflower (*Encelia californica*), and occasionally live-forevers (*Dudleya* spp.) and coast barrel cactus (*Ferocactus viridescens*).

Variations of this vegetation community within and adjacent to the Proposed Project alignment include disturbed Diegan coastal sage scrub and revegetated coastal sage scrub. Disturbed Diegan coastal sage scrub 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. Revegetated coastal sage scrub 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 and adjacent to the Proposed Project alignment that were determined to contain suitable habitat for the species and that had not been previously surveyed in fall 2013. 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 (*Adenostoma fasciculatum*), 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 and adjacent to the Proposed Project alignment 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 and adjacent to the Proposed Project alignment 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 and adjacent to the Proposed Project alignment 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 and adjacent to the Proposed Project alignment 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 and adjacent to the Proposed Project alignment 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 and adjacent to the Proposed Project alignment 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 three focused, protocol-level, breeding season coastal California gnatcatcher survey rounds were conducted within approximately 149.21 acres of potentially suitable habitat between February 27 and April 7, 2015 (Appendix A: Figure 4). Each survey round took 3 days to complete because of the small, patchy distribution of suitable habitat within and adjacent to the Proposed Project alignment. All surveys were conducted during appropriate weather conditions by USFWS-permitted biologist Laurie Gorman (TE-233367-1). Appendix B provides a summary of survey conditions, including survey times, weather conditions, and name of surveyor.

During these coastal California gnatcatcher surveys, the number of coastal California gnatcatcher detections ranged from 13 individuals during survey rounds 1 and 3 to 17 individuals during survey round 2 (Table 1; Appendix A: Figures 5a and 5b-1 through 5b-7).

Table 1. Summary of Individuals Detected per Survey Round

Survey Round	Dates	Number of Individuals
Round 1	2/27/15 – 3/4/15	13
Round 2	3/11/15 – 3/13/15	17
Round 3	4/1/15 – 4/7/15	13

After reviewing the location of all detections during all three surveys, the total number of individual coastal California gnatcatcher within and adjacent to the Proposed Project in the areas that were not previously surveyed is estimated to be approximately 16 individuals. The estimated total number of individual coastal California gnatcatcher in this survey area is greater than the total number of individuals detected during two of the survey rounds because not all individuals were detected during each survey round. In addition, a range of detected individuals 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 nesting adult pairs to solitary adult male and female individuals. Appendix C provides a more detailed breakdown of each detection, including the number of individuals, GPS coordinates, and brief notes about the detection.

The majority of coastal California gnatcatcher detections were within Diegan coastal sage scrub. During the breeding season, it is typical for coastal California gnatcatcher to remain in territories within higher quality habitats. 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.

In addition to the coastal California gnatcatcher, 50 other wildlife species were detected during the focused coastal California gnatcatcher surveys. Appendix D provides a complete list of all wildlife species detected during the focused coastal California gnatcatcher surveys.

SUMMARY

Based on the results of these spring 2015 surveys, approximately 16 individual coastal California gnatcatchers are estimated within and adjacent to the portions of the main alignment of the Proposed Project that were not previously surveyed in fall 2013. Coastal California gnatcatchers were detected within a variety of vegetation communities, including Diegan coastal sage scrub, disturbed Diegan coastal sage scrub, revegetated coastal sage scrub, coastal sage-chaparral scrub, and southern mixed chaparral.

Please do not hesitate to contact Melissa Busby at melissa@busbybiological.com or 858.334.9507 or Darin Busby at darin@busbybiological.com or 858.334.9508 if you have any questions.

Sincerely,

Melissa Busby
Owner/Principal Biologist
Busby Biological Services, Inc.

Darin Busby
Owner/Principal Biologist
Busby Biological Services, Inc.

cc: Paul Morrissey, Chambers
Joshua Taylor, TRC
Elisha Back, TRC
Robert Fletcher, SDG&E

REFERENCES

Atwood, J.
1990 Status review of the California gnatcatcher (*Polioptila californica*). Manomet Bird Observatory, Manomet, Massachusetts.

Atwood, J. L. and J. S. Bolsinger
1991 Elevational distribution of California gnatcatchers in the United States. Journal of Field Ornithology 63(2):159-168.

Barbour, M. G., and J. Major eds.
1977 Terrestrial vegetation of California. John Wiley and Sons, New York.

Bontrager, D. R.
1991 Habitat requirements, home range and breeding biology of the California gnatcatcher (*Polioptila californica*) in South Orange County, California. Prepared for Santa Margarita Company, Rancho Santa Margarita, California.

Braden, G. T., R. L. McKernan, and S. M. Powell.
1997 Association of within-territory vegetation characteristics and fitness components of California Gnatcatchers. The Auk 114:601-609.

California Department of Fish and Wildlife (CDFW)
2013 Natural Diversity Data Base. Nongame-Heritage Program, California Department of Fish and Wildlife, Sacramento.

Campbell, K. F., R. A. Erickson, W. E. Haas, and M. A. Patten
1998 California Gnatcatcher use of habitats other than coastal sage scrub: conservation and management implications. Western Birds 29: 421-433.

Grishaver, M. A., P. J. Mock, and K. L. Preston
1998 Breeding behavior of the California Gnatcatcher in southwestern San Diego County, California. Western Birds 29: 299-322.

Kirkpatrick, J. B. and C. F. Hutchinson
1977 The Community Composition of Californian Coastal Sage Scrub. Vegetation vol. 35, 1:21 33.

Mock, P. J., B. L. Jones, and J. Konecny
1990 California Gnatcatcher Survey Guidelines. Unpublished Report Prepared by Environmental and Energy Services Company, San Diego, California.

O'Leary, J. F.
1990 Californian coastal sage scrub: general characteristics and considerations for biological conservation. Pages 24-41 in Schoenherr, A. A, (ed.), Endangered plant communities of southern California. Southern California Botanists Special Publication No. 3.

Preston, K. L., P. J. Mock, M. A. Grishaver, E. A. Bailey, and D. F. King
1998 California gnatcatcher territorial behavior. Western Birds 29(4):242-257.

United States Fish and Wildlife Service
1997 Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Guidelines – February 28, 1997.

2007 Critical Habitat for the Coastal California Gnatcatcher (Polioptila californica californica), Final Rule. Department of the Interior. Federal Register: December 19, 2007 (Volume 72, Number 243), 50 CFR Part 17.

2010 Coastal California gnatcatcher (*Polioptila californica californica*) 5-year Review: Summary and Evaluation. Carlsbad Fish and Wildlife Office, Carlsbad, California. 51 pp.

Weaver, K. L.
1998 A new site of sympatry of the California and Black-tailed Gnatcatchers in the United States. Western Birds 29(4):476-479.

Westman, W.
1981a Diversity relations and succession in California coastal sage scrub. Ecology 62:170-184.
1981b Factors influencing the distribution of species of California coastal sage scrub. Ecology 62:439-45

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 spring 2015.

_____

Laurie Gorman
Senior Biologist/Project Manager
Busby Biological Services, Inc.
ESA Permit Number TE-233367-1

APPENDIX A – Figures

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedCAGNSurvey\SXtoPQ_BusbyFocusedCAGNSurvey_ProjectLocation_Fig1.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Project Location Map

Figure 1

- Proposed Project Route
- Staging Yards
- Encina Hub
- Mira Mesa Hub

0 2 4 6 Miles

4/28/2015

TRC

SDGE A Sempra Energy utility

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedCAGNSurvey\SXtoPQ_BusbyFocusedCAGNSurvey_StudyAreaLocationMain_Fig2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Location Map

Figure 2

CAGN Habitat Assessment and Survey Area (2013)

CAGN Habitat Assessment and Survey Area (2014-2015)

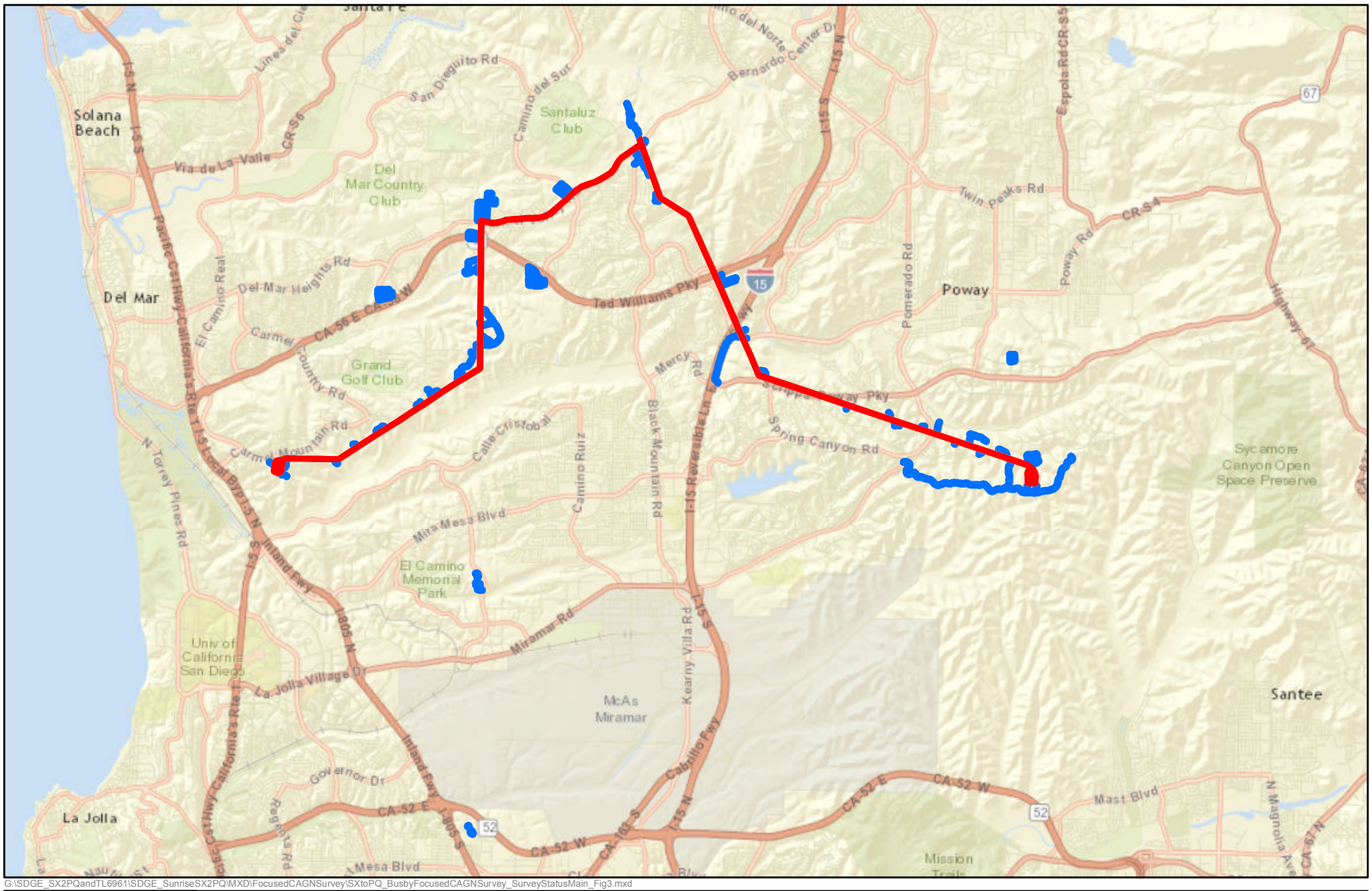
N W E S

0 1 2 3 Miles

4/28/2015

TRC SDGE A Sempra Energy utility

Sources: SDG&E; Copyright:© 2013 National Geographic Society, i-cubed, Content may not reflect National Geographic's current map policy.



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedCAGNSurvey\SXtoPQ_BusbyFocusedCAGNSurvey_SurveyStatusMain_Fig3.mxd

CAGN Habitat Assessment and Survey Area (2013)

CAGN Habitat Assessment and Survey Area (2014-2015)

Sycamore to Peñasquitos 230kV Transmission Line Project

CAGN Habitat Assessment and Survey Area (2013-2015)

Figure 3

4/28/2015

0 1 2 3 Miles

TRC

SDGE A Sempra Energy utility

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedCAGNSurvey\SXtoPQ_BusbyFocusedCAGNSurvey_SurveyAreaMapMain_Fig4.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

CAGN Habitat Assessment and Survey Areas

Figure 4

CAGN Habitat Assessment Areas (Fall 2013)

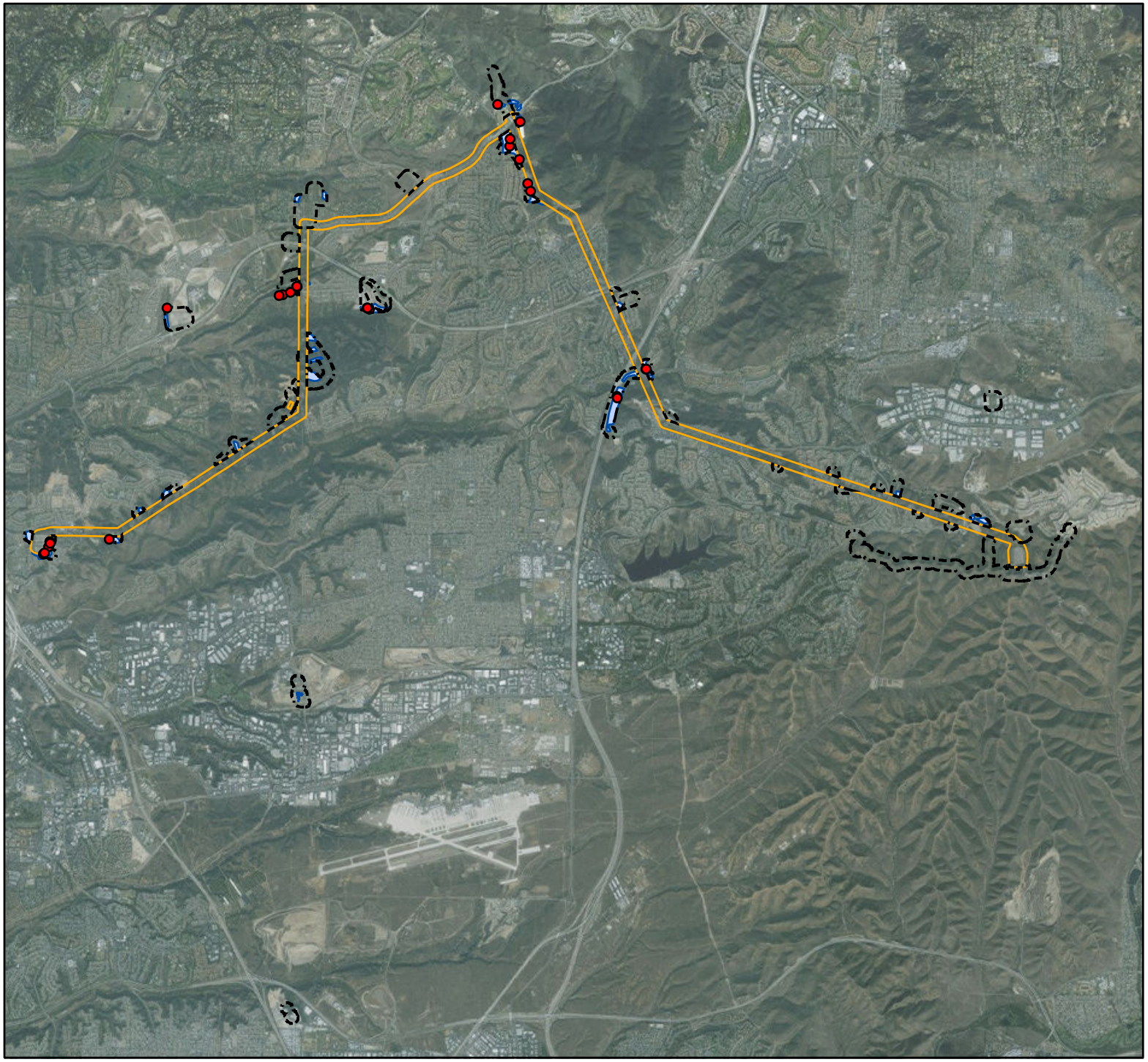
CAGN Potential Habitat and Survey Area (Spring 2015)

0 1 2 3 Miles

4/28/2015

TRC

SDGE A Sempra Energy utility



Sycamore to Peñasquitos 230kV Transmission Line Project

CAGN Survey Results (Spring 2015)

Figure 5a

Overview Map

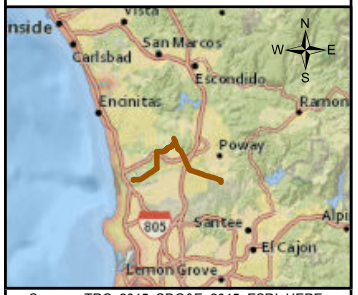
CAGN Detections
CAGN Habitat Assessment Areas (Fall 2014)
CAGN Habitat Assessment and Survey Area (2013)
CAGN Potential Habitat and Survey Area (Spring 2015)

4/28/2015

TRC

SDGE Sempra Energy utility

0 0.55 1.1 1.65 Miles



Sources: TRC, 2015; SDG&E, 2015; ESRI, HERE, DeLorme, USGS, Intermap, iPC, NRCAN, ESRI Japan, MEI, NatGeo

Sycamore to Peñasquitos 230kV Transmission Line Project

2015 CAGN Detections

Figure 5b-1

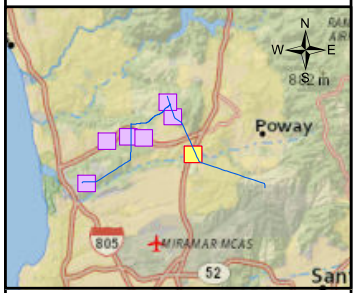
- CAGN Detections Survey 1
- CAGN Detections Survey 2
- CAGN Detections Survey 3
- CAGN Habiat Assessment Area
- CAGN Potential Habitat and Survey Area (Spring 2015)

4/28/2015

TRC

SDGE Sempra Energy utility

0 300 600 900 Feet



Sources: TRC, 2015; SDG&E, 2015; ESRI, HERE, DeLorme, USGS, Intermap, iPC, NRCAN, ESRI Japan, MEI, NatGeo

Sycamore to Peñasquitos 230kV Transmission Line Project

2015 CAGN Detections

Figure 5b-2

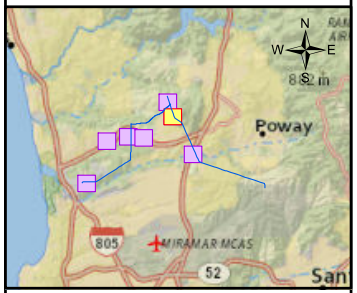
CAGN Detections Survey 1
CAGN Detections Survey 2
CAGN Detections Survey 3
CAGN Habiat Assessment Area
CAGN Potential Habitat and Survey Area (Spring 2015)

4/28/2015

TRC

SDGE
Sempra Energy utility

0 300 600 900 Feet



Sources: TRC, 2015; SDG&E, 2015; ESRI, HERE, DeLorme, USGS, Intermap, iPC, NRCAN, ESRI Japan, MEI, NatGeo

Sycamore to Peñasquitos 230kV Transmission Line Project

2015 CAGN Detections

Figure 5b-3

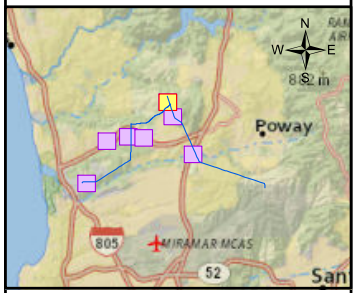
CAGN Detections Survey 1
CAGN Detections Survey 2
CAGN Detections Survey 3
CAGN Habiat Assessment Area
CAGN Potential Habitat and Survey Area (Spring 2015)

4/28/2015

TRC

SDGE
A Sempra Energy utility

0 300 600 900
Feet



Sources: TRC, 2015; SDG&E, 2015; ESRI, HERE, DeLorme, USGS, Intermap, iPC, NRCAN, ESRI Japan, MEI, NatGeo

Sycamore to Peñasquitos 230kV Transmission Line Project

2015 CAGN Detections

Figure 5b-4

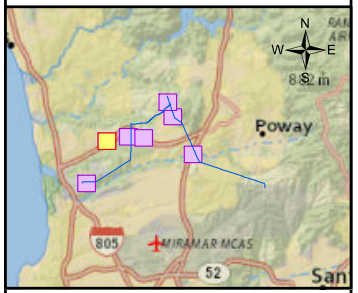
CAGN Detections Survey 1
CAGN Detections Survey 2
CAGN Detections Survey 3
CAGN Habiat Assessment Area
CAGN Potential Habitat and Survey Area (Spring 2015)

4/28/2015

TRC

SDGE
Sempra Energy utility

0 300 600 900
Feet



Sources: TRC, 2015; SDG&E, 2015; ESRI, HERE, DeLorme, USGS, Intermap, iPC, NRCAN, ESRI Japan, MEI, NatGeo

Sycamore to Peñasquitos 230kV Transmission Line Project

2015 CAGN Detections

Figure 5b-5

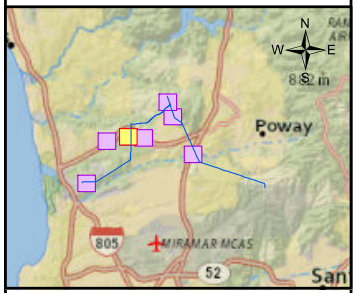
- CAGN Detections Survey 1
- CAGN Detections Survey 2
- CAGN Detections Survey 3
- CAGN Habiat Assessment Area
- CAGN Potential Habitat and Survey Area (Spring 2015)

4/28/2015

TRC

SDGE
A Sempra Energy utility

0 300 600 900 Feet



Sources: TRC, 2015; SDG&E, 2015; ESRI, HERE, DeLorme, USGS, Intermap, iPC, NRCAN, ESRI Japan, MEI, NatGeo

Sycamore to Peñasquitos 230kV Transmission Line Project

2015 CAGN Detections

Figure 5b-6

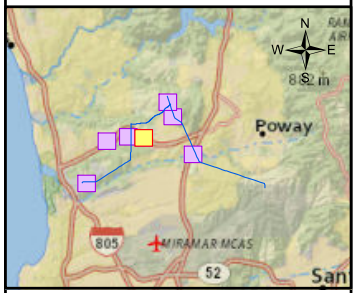
CAGN Detections Survey 1
CAGN Detections Survey 2
CAGN Detections Survey 3
CAGN Habiat Assessment Area
CAGN Potential Habitat and Survey Area (Spring 2015)

4/28/2015

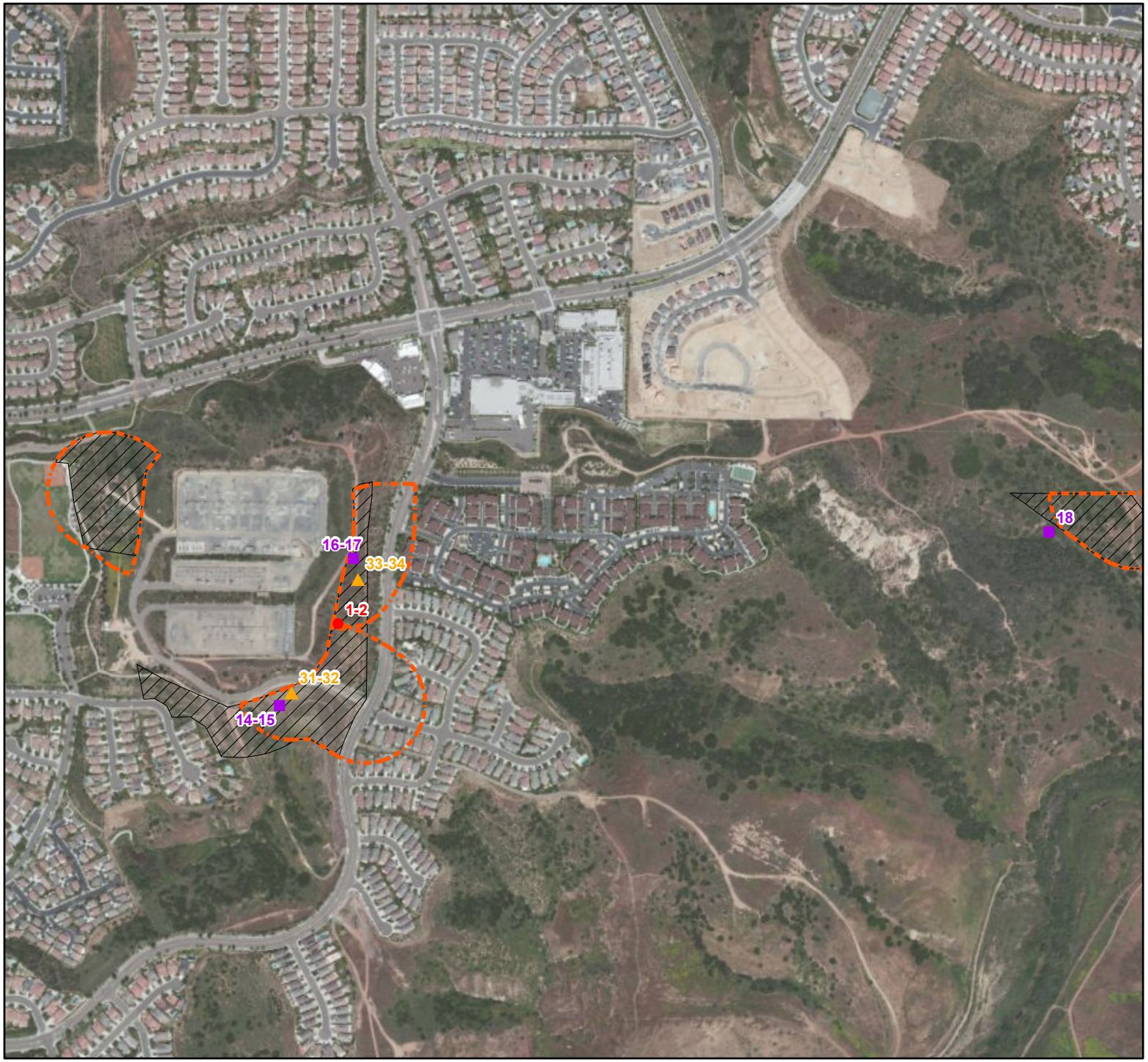
TRC

SDGE
A Sempra Energy utility

0 300 600 900
Feet



Sources: TRC, 2015; SDG&E, 2015; ESRI, HERE, DeLorme, USGS, Intermap, iPC, NRCAN, ESRI Japan, MEI, NatGeo



Sycamore to Peñasquitos 230kV Transmission Line Project

2015 CAGN Detections

Figure 5b-7

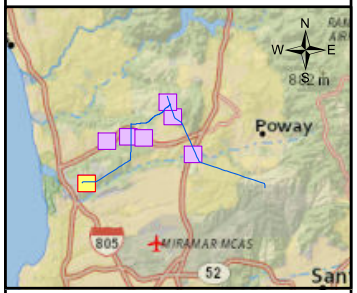
CAGN Detections Survey 1
CAGN Detections Survey 2
CAGN Detections Survey 3
CAGN Habiat Assessment Area
CAGN Potential Habitat and Survey Area (Spring 2015)

4/28/2015

TRC

SDGE
A Sempra Energy utility

0 300 600 900
Feet



Sources: TRC, 2015; SDG&E, 2015; ESRI, HERE, DeLorme, USGS, Intermap, iPC, NRCAN, ESRI Japan, MEI, NatGeo

APPENDIX B – Survey Conditions

Appendix B – Survey Conditions

Survey #	Day #	Date	Time		Weather				Surveyors
					Temp (°F)	Wind (mph)	Clouds (%)	Precip	
1	1	2/27/15	Start	0635	53	0-1	50	0	Laurie Gorman
			End	1215	70	1-7	0	0	
	2	3/3/15	Start	0630	48	0-1	10	0	
			End	1215	65	1-4	25	0	
	3	3/4/15	Start	0630	45	0-1	0	0	
			End	1255	68	1-5	2	0	
2	1	3/11/15	Start	0650	54	0-1	50	0	Laurie Gorman
			End	1140	74	1-6	90	0	
	2	3/12/14	Start	0700	57	0-2	0	0	
			End	1255	75	0-4	0	0	
	3	3/13/15	Start	0650	56	0-3	0	0	
			End	1300	89	1-6	0	0	
3	1	4/1/15	Start	0635	61	0-1	90	0	Laurie Gorman
			End	1220	73	0-2	20	0	
	2	4/3/15	Start	0615	56	0-1	0	0	
			End	1230	78	2-7	20	0	
	3	4/7/15	Start	0615	47	0-1	15	0	
			End	1220	68	2-5	30	0	

APPENDIX C – Survey Results

Appendix C – Survey Results

CAGN # on Map	Survey #	Date	GPS Location		Notes
			Northing	Easting	
1-2	1	2/27/15	32.91716	-117.21755	Male CAGN scolding softly. No other vocalization until 5 minutes later when he countercalled with female CAGN.
3	1	2/27/15	32.95614	-117.19516	Lone male CAGN foraging, calling and scolding
4-5	1	3/3/15	32.95983	-117.17015	CAGN pair. Female CAGN appeared first, no vocalization, then male CAGN appeared and called boldly. Female countercalled.
6-7	1	3/3/15	32.95850	-117.17292	CAGN pair countercalling.
8-9	1	3/3/15	32.95626	-117.15621	CAGN pair traveling closely together, countercalling and approaching in response to PB.
10	1	3/3/15	32.98967	-117.13184	Male CAGN calling aggressively in response to PB tape, then flew southwest. Territory likely encompassing polygon and habitat to the southwest.
11-12	1	3/4/15	32.94690	-117.10285	CAGN pair foraging and calling.
13	1	3/4/15	32.98079	-117.12759	One female CAGN observed foraging without vocalizing, then scolded briefly.
14-15	2	3/11/15	32.91602	-117.21851	CAGN pair. Male CAGN observed calling and approaching in response to playback tape, female CAGN countercalling from across drainage. Then I saw male CAGN bring nesting material to this GPS location.
16-17	2	3/11/15	32.91807	-117.21731	CAGN pair. Male calling in response to playback tape, female flew up from lower adjacent slope and countercalled. Male and female flew together in upper flat area by GPS point.
18	2	3/11/15	32.91852	-117.20589	CAGN calling across canyon.
19-20	2	3/12/15	32.95890	-117.17148	CAGN pair, male calling and fighting with BGGN pair and an ANHU.
21-22	2	3/12/15	32.95837	-117.17359	CAGN pair. Male came into polygon briefly without vocalizing, then called as he flew back out to GPS point and met with female.
23-24	2	3/12/15	32.95644	-117.15667	CAGN pair. Male CAGN defensive; female did not vocalize.
25	2	3/12/15	32.98689	-117.12745	Territorial male CAGN calling and scolding in response to playback tape. This individual flew in from outside polygon to the southeast.
26-27	2	3/13/15	32.94245	-117.10838	CAGN pair observed, male calling rapidly in response to playback tape.
28	2	3/13/15	32.97687	-117.12588	Male CAGN calling and scolding.
29-30	2	3/13/15	32.98294	-117.12948	Pair of CAGN approached, male calling.

Appendix C – Survey Results (Con't)

CAGN # on Map	Survey #	Date	GPS Location		Notes
			Northing	Easting	
31-32	3	4/1/15	32.91619	-117.21831	CAGN pair. Male called and approached in response to playback tape, flew down into shrub and exchanged contact call with female.
33-34	3	4/1/15	32.91777	-117.21723	CAGN pair. Female responded first, flew into *Artemisia californica*, then male appeared, and the pair flew east. Male returned, calling defensively.
35-36	3	4/3/15	32.95988	-117.17023	CAGN pair. Male scolded harshly and approached in response to playback tape. Female appeared but did not vocalize.
37	3	4/3/15	32.95646	-117.15654	Uncapped, likely female CAGN of pair found in this territory during previous surveys. Male not detected.
38-39	3	4/7/15	32.94216	-117.10834	CAGN pair. Male calling, female countercalling softly.
40-41	3	4/7/15	32.94690	-117.10279	CAGN pair with a nest with 3 nestlings in *Encelia californica*. Nestlings approximately one week old.
42	3	4/7/15	32.97561	-117.12537	Territorial male CAGN calling and approaching in response to playback tape.
43	3	4/7/15	32.98411	-117.12941	Territorial male CAGN observed fighting with a northern mockingbird.

APPENDIX D – Wildlife Species Detected

Appendix D - Wildlife Species Detected

INVERTEBRATES		
Class: Insecta		**Insects**
Order: Lepidoptera		**Butterflies**
	Vanessa atalanta	Red Admiral
Family Hesperiidae		**Skippers**
	Erynnis funeralis	Funereal Duskywing
Family Lycaenidae		**Blues**
	Leptotes marina	Marine Blue
Family Pipilionidae		**Swallowtails**
	Papilio zelicaon	Anise Swallowtail
Family Riodinidae		**Metalmarks**
	Apodemia virgulti	Behr's metalmark
VERTEBRATES		
Class: Sauropsida		**Reptiles**
Family Phrynosomatidae		**Spiny Lizards**
	Sceloporus occidentalis	Western Fence Lizard
	Uta stansburiana	Common Side-blotched Lizard
Class: Aves		**Birds**
Order Anseriformes		**Geese, Swans, and Ducks**
Family Anatidae		**Geese, Swans, and Ducks**
	Anas platyrhynchos	Mallard
Order Galliformes		**Gallinaceous Birds**
Family Odontophoridae		**New World Quail**
	Callipepla californica	California Quail
Family Cathartidae		**New World Vultures**
	Cathartes aura	Turkey Vulture
Family Accipitridae		**Hawks, Kites, Eagles, and Allies**
	Accipiter cooperii	Cooper's hawk
	Buteo jamaicensis	Red-tailed Hawk
Family Laridae		**Gulls, Terns, and Skimmers**
	Larus occidentalis	Western Gull
Order Columbiformes		**Pigeons and Doves**
Family Columbidae		**Pigeons and Doves**
	Zenaida macroura	Mourning Dove
Order Apodiformes		**Swifts and Hummingbirds**
Family Trochilidae		**Hummingbirds**
	Calypte anna	Anna's Hummingbird
	Selasphorus sasin	Allen's Hummingbird
Order Piciformes		**Woodpeckers and Allies**
Family Picidae		**Woodpeckers**
	Picoides nuttallii	Nuttall's Woodpecker

Appendix D - Wildlife Species Detected (Con't)

Order Passeriformes		**Perching Birds**
Family Tyrannidae		**Tyrant Flycatchers**
	Empidonax difficilis	Pacific-slope Flycatcher
	Sayornis nigricans	Black Phoebe
	Tyrannus vociferans	Cassin's Kingbird
	Tyrannus verticalis	Western Kingbird
Family Corvidae		**Crows and Jays**
	Aphelocoma californica	Western Scrub-Jay
	Corvus brachyrhynchos	American Crow
	Corvus corax	Common Raven
Family Aegithalidae		**Bushtits**
	Psaltriparus minimus	Bushtit
Family Troglodytidae		**Wrens**
	Thryomanes bewickii	Bewick's Wren
	Troglodytes aedon	House Wren
Family Regulidae		**Kinglets**
	Regulus calendula	Ruby-crowned Kinglet
Family Sylviidae		**Gnatcatchers**
	Polioptila caerulea	Blue-gray Gnatcatcher
	Polioptila californica	Coastal California Gnatcatcher
Family Turdidae		**Thrushes**
	Catharus guttatus	Hermit Thrush
Family Timaliidae		**Babblers**
	Chamaea fasciata	Wrentit
Family Mimidae		**Mockingbirds and Thrashers**
	Mimus polyglottos	Northern Mockingbird
	Toxostoma redivivum	California Thrasher
Family Sturnidae		**Starlings**
	Sturnus vulgaris	European Starling
Family Parulidae		**Wood-Warblers**
	Vermivora celata	Orange-crowned Warbler
	Dendroica coronata	Yellow-rumped Warbler
	Geothlypis trichas	Common Yellowthroat
Family Emberizidae		**Embrezids**
	Pipilo maculatus	Spotted Towhee
	Pipilo crissalis	California Towhee
	Aimophila ruficeps	Rufous-crowned Sparrow
	Melospiza melodia	Song Sparrow
	Zonotrichia leucophrys	White-crowned Sparrow
Family Icteridae		**Blackbirds**
	Sturnella neglecta	Western Meadowlark

Appendix D - Wildlife Species Detected (Con't)

Family Fringillidae		**Fringilline and Cardueline Finches and Allies**
	Carpodacus mexicanus	House Finch
	Carduelis psaltria	Lesser Goldfinch
Class: Mammalia		**Mammals**
Order Lagomorpha		**Rabbits and Hares**
Family Leporidae		**Rabbits and Hares**
	Sylvilagus audubonii	Desert Cottontail
Order Carnivora		**Carnivores**
Family Canidae		**Dogs and foxes**
	Canis familiaris	Domestic Dog
	Canis latrans	Coyote
Order Perissodactyla		**Odd-toed Ungulates**
	Equus caballus	Domestic Horse

BUSBY
Biological Services

May 1, 2015

Ms. Stacey Love
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 ENCINCA HUB PORTION OF THE PROPOSED SAN DIEGO GAS & ELECTRIC COMPANY SYCAMORE TO PEÑASQUITOS 230 kV TRANSMISSION LINE PROJECT, SAN DIEGO COUNTY, CALIFORNIA

Ms. Love:

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 Encina Hub portion of the proposed Sycamore to Peñasquitos 230 Kilovolt (kV) Transmission Line Project (Proposed Project). Busby Biological Services, Inc. (BBS) was contracted by Chambers Group, Inc. (Chambers) to conduct these surveys on behalf of San Diego Gas & Electric Company (SDG&E) to evaluate the potential impacts of the Encina Hub portion of the Proposed Project. The Encina Hub portion of the Proposed Project was added after the initial coastal California gnatcatcher surveys were performed in fall 2013.

This survey summary report focuses on the methods and results used to evaluate areas within the Encina Hub. A separate report was prepared to summarize the methods and results for the surveys performed in areas of the main alignment that were not previously surveyed for the Proposed Project. This report is titled *Coastal California Gnatcatcher Survey Summary Report for Areas Not Previously Surveyed for the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 kV Transmission Line Project, San Diego County, California* and dated April 28, 2015.

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 includes construction of a new, approximately 16.7-mile 230 kV transmission line between the existing SDG&E Sycamore Canyon and Peñasquitos substations; the consolidation of two existing 69 kV power lines onto new double-circuit, steel structures that would replace existing, predominantly wood structures; and re-routing at the Encina and Mira Mesa Hubs.

This survey summary report focuses on the portion of the Proposed Project that is proposed at the Encina Hub. An existing San Luis Rey–Mission 230 kV transmission line would be removed from service at the Encina Hub to create an open position for the proposed new 230-kV transmission line. The following steps would occur to reconfigure the 230 kV transmission lines at Encina Hub:

- Remove jumpers between existing towers
- Transfer the existing conductor between towers
- Install jumpers from towers
- Install new conductor from tower between three existing towers
- Install dead ends assemblies, dampers and spacers on existing towers

All new transmission line facilities would be located within existing SDG&E Right-of-Way (ROW) or within franchise position within existing public roadways, and the entire Proposed Project is located within San Diego County (Appendix A: Figures 1 and 2).

Brief Survey Area Explanation

Focused coastal California gnatcatcher surveys were conducted for the Proposed Project within all suitable habitats within and adjacent to the current Proposed Project alignment.

During fall 2013, focused, protocol-level, non-breeding season coastal California gnatcatcher surveys were conducted within the original Biological Survey Area (BSA), which included a 500-foot-wide survey corridor along the approximately 16.7-mile Proposed Project alignment, the Sycamore Canyon and Peñasquitos Substations, and the proposed Sycamore and Stowe construction yards (Appendix A: Figures 1, 2, and 3). The results of the fall 2013 coastal California gnatcatcher surveys conducted within the original BSA were summarized previously in a separate survey summary report, titled *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* and dated January 14, 2014.

During Spring 2015, subsequent focused, protocol-level, breeding season coastal California gnatcatcher surveys were conducted within and adjacent to the portions of the current BSA that were added after the original BSA had already been surveyed, including access roads, staging yards, the Encina Hub, the Mira Mesa Hub, and all other associated work areas (Appendix A: Figures 1, 2, and 3).

Because the Encina Hub is located in a geographically distinct location and is not within the immediate vicinity of the main Proposed Project alignment (Appendix A: Figure 1), two separate survey summary reports were prepared for the spring 2015 surveys, one for the coastal California gnatcatcher surveys conducted at Encina Hub and one for the surveys that were conducted along the main Proposed Project alignment. This report focuses on the results of the focused coastal California gnatcatcher surveys conducted at the Encina Hub.

The results of the focused coastal California gnatcatcher surveys in the original BSA, new areas along the main alignment, and the Encina Hub will be compiled so that all survey results are utilized to inform future Proposed Project planning efforts.

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).

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, breeding coastal California gnatcatcher surveys were performed within suitable habitat located within the Encina Hub footprint and within a 300-foot buffer of the Encina Hub. 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, breeding coastal California gnatcatcher surveys at the Encina Hub, a focused habitat assessment was conducted in fall 2014 by U.S. Fish and Wildlife Service (USFWS) permitted biologists to identify locations of suitable habitat for the species both within and adjacent to the Encina Hub.

Initially, historical occurrence data for coastal California gnatcatcher that have been reported from within 5 miles of the Encina Hub 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* (CNDDB; CDFW 2013) and other databases

identifying reported coastal California gnatcatcher detections within a 5-mile buffer of the Encina Hub to allow USFWS-permitted biologists to view the historic distribution of coastal California gnatcatcher within the vicinity of the Encina Hub.

Next, USFWS-permitted biologists conducted a field habitat assessment within the Encina Hub and 300-foot buffer to identify potential coastal California gnatcatcher habitat. The field habitat assessment was conducted by assessing the vegetation communities on foot 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 survey area through closer investigation on foot during this first round of focused, protocol-level, breeding 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.

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 and adjacent to the Encina Hub 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.

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/or 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 biologist, Laurie Gorman, conducted a field habitat assessment for coastal California gnatcatcher within and adjacent to the Encina Hub during fall 2014. The initial assessment of potentially suitable coastal California gnatcatcher habitat within the Encina Hub and a 300-foot buffer was further refined by BBS biologist, Charles Vettes, through closer investigation on foot during the first round of focused, protocol-level coastal California gnatcatcher surveys. A total of approximately 49.60 acres of potentially suitable coastal California gnatcatcher habitat was surveyed within and adjacent to the Encina Hub (Appendix A: Figure 3).

Potentially suitable habitat for the coastal California gnatcatcher that required surveys included Diegan coastal sage scrub, disturbed Diegan coastal sage scrub, and some of the disturbed habitat (Appendix A: Figure 3). 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 include southern riparian scrub, mulefat scrub, bare ground, native grassland, nonnative grassland, developed lands, and ornamental vegetation.

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/Disturbed 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 and adjacent to Encina Hub, this vegetation community is dominated by a variable mix of California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), coast goldenbush (*Isocoma menziesii),* deerweed (*Acmispon glaber*), coyote brush (*Baccharis pilularis*), California sunflower (*Encelia californica*), and occasional black sage (*Salvia melifera*) and coast pricklypear (*Opuntia littoralis*).

Disturbed Diegan coastal sage scrub 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.

At the Encina Hub, coastal California gnatcatcher surveys were conducted in the Diegan coastal sage scrub and disturbed Diegan coastal sage scrub located within and adjacent to Encina Hub.

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.

At the Encina Hub, coastal California gnatcatcher surveys were conducted in the disturbed habitat that was associated with the Diegan coastal sage scrub and disturbed Diegan coastal sage scrub, when the disturbed habitat had a potential to support coastal California gnatcatcher breeding or foraging.

Focused Coastal California Gnatcatcher Survey Results

A total of three, NCCP protocol-level, breeding focused coastal California gnatcatcher survey rounds were conducted within approximately 49.60 acres of potentially suitable habitat between February 24 and March 17, 2015 (Appendix A: Figure 3). Each survey round took 1 day to complete because the habitat was easily accessible and contiguous throughout the survey area. All surveys were conducted during appropriate weather conditions by USFWS-permitted biologists Charles Vettes (TE-20160B-0) and Laurie Gorman (TE-233367-1). Appendix B provides a summary of survey conditions, including survey times, weather conditions, and name of surveyor.

During the coastal California gnatcatcher surveys, the number of coastal California gnatcatcher detections ranged from 13 individuals during survey rounds 1 and 2 to 12 individuals during survey round 3 (Table 1; Appendix A: Figures 4a and 4b).

Table 1. Summary of Individuals Detected per Survey Round

Survey Round	Date	Number of Individuals
Round 1	2/24/15	13
Round 2	3/7/15	13
Round 3	3/17/15	12

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 12 and 13 individuals.

Coastal California gnatcatcher detections during these surveys ranged from nesting adults pairs to solitary adult male and female individuals. Appendix C provides a more detailed breakdown of each detection, including the number of individuals, GPS coordinates, and brief notes about the detection.

The majority of coastal California gnatcatcher detections were within Diegan coastal sage scrub. During the breeding season, it is typical for coastal California gnatcatcher to remain in territories within higher quality habitats. 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.

In addition to the coastal California gnatcatcher, 38 other wildlife species were detected during the focused coastal California gnatcatcher surveys. Appendix D provides a complete list of all wildlife species detected during the focused coastal California gnatcatcher surveys.

SUMMARY

Based on the results of these spring 2015 surveys, approximately 12 to 13 individual coastal California gnatcatchers are estimated within and adjacent to the Encina Hub. Coastal California gnatcatchers were detected primarily in Diegan coastal sage scrub and disturbed Diegan coastal sage scrub.

Please do not hesitate to contact Melissa Busby at melissa@busbybiological.com or 858.334.9507 or Darin Busby at darin@busbybiological.com or 858.334.9508 if you have any questions.

Sincerely,

Melissa Busby
Owner/Principal Biologist
Busby Biological Services, Inc.

Darin Busby
Owner/Principal Biologist
Busby Biological Services, Inc.

cc: Paul Morrissey, Chambers
Joshua Taylor, TRC
Elisha Back, TRC
Robert Fletcher, SDG&E

REFERENCES

Atwood, J.
1990 Status review of the California gnatcatcher (*Polioptila californica*). Manomet Bird Observatory, Manomet, Massachusetts.

Atwood, J. L. and J. S. Bolsinger
1991 Elevational distribution of California gnatcatchers in the United States. Journal of Field Ornithology 63(2):159-168.

Barbour, M. G., and J. Major eds.
1977 Terrestrial vegetation of California. John Wiley and Sons, New York.

Bontrager, D. R.
1991 Habitat requirements, home range and breeding biology of the California gnatcatcher (*Polioptila californica*) in South Orange County, California. Prepared for Santa Margarita Company, Rancho Santa Margarita, California.

Braden, G. T., R. L. McKernan, and S. M. Powell.
1997 Association of within-territory vegetation characteristics and fitness components of California Gnatcatchers. The Auk 114:601-609.

California Department of Fish and Wildlife (CDFW)
2013 Natural Diversity Data Base. Nongame-Heritage Program, California Department of Fish and Wildlife, Sacramento.

Campbell, K. F., R. A. Erickson, W. E. Haas, and M. A. Patten
1998 California Gnatcatcher use of habitats other than coastal sage scrub: conservation and management implications. Western Birds 29: 421-433.

Grishaver, M. A., P. J. Mock, and K. L. Preston
1998 Breeding behavior of the California Gnatcatcher in southwestern San Diego County, California. Western Birds 29: 299-322.

Kirkpatrick, J. B. and C. F. Hutchinson
1977 The Community Composition of Californian Coastal Sage Scrub. Vegetation vol. 35, 1:21 33.

Mock, P. J., B. L. Jones, and J. Konecny
1990 California Gnatcatcher Survey Guidelines. Unpublished Report Prepared by Environmental and Energy Services Company, San Diego, California.

O'Leary, J. F.
1990 Californian coastal sage scrub: general characteristics and considerations for biological conservation. Pages 24-41 in Schoenherr, A. A, (ed.), Endangered plant communities of southern California. Southern California Botanists Special Publication No. 3.

Preston, K. L., P. J. Mock, M. A. Grishaver, E. A. Bailey, and D. F. King
1998 California gnatcatcher territorial behavior. Western Birds 29(4):242-257.

United States Fish and Wildlife Service

1997 Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Guidelines – February 28, 1997.

2007 Critical Habitat for the Coastal California Gnatcatcher (Polioptila californica californica), Final Rule. Department of the Interior. Federal Register: December 19, 2007 (Volume 72, Number 243), 50 CFR Part 17.

2010 Coastal California gnatcatcher (*Polioptila californica californica*) 5-year Review: Summary and Evaluation. Carlsbad Fish and Wildlife Office, Carlsbad, California. 51 pp.

Weaver, K. L.

1998 A new site of sympatry of the California and Black-tailed Gnatcatchers in the United States. Western Birds 29(4):476-479.

Westman, W.

1981a Diversity relations and succession in California coastal sage scrub. Ecology 62:170-184.

1981b Factors influencing the distribution of species of California coastal sage scrub. Ecology 62:439-455

PROJECT BIOLOGIST SIGNATURE PAGE

All biologists performing focused, protocol-level, coastal California gnatcatcher (*Polioptila californica californica*) surveys for the Encina Hub portion of 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 spring 2015.

Charles Vettes
Biologist
Busby Biological Services, Inc.
ESA Permit Number TE-233367-1

Laurie Gorman
Senior Biologist/Project Manager
Busby Biological Services, Inc.
ESA Permit Number TE-233367-1

APPENDIX A – Figures

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedCAGNSurvey\SXtoPQ_BusbyFocusedCAGNSurvey_ProjectLocation_Fig1.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Project Location Map

Figure 1

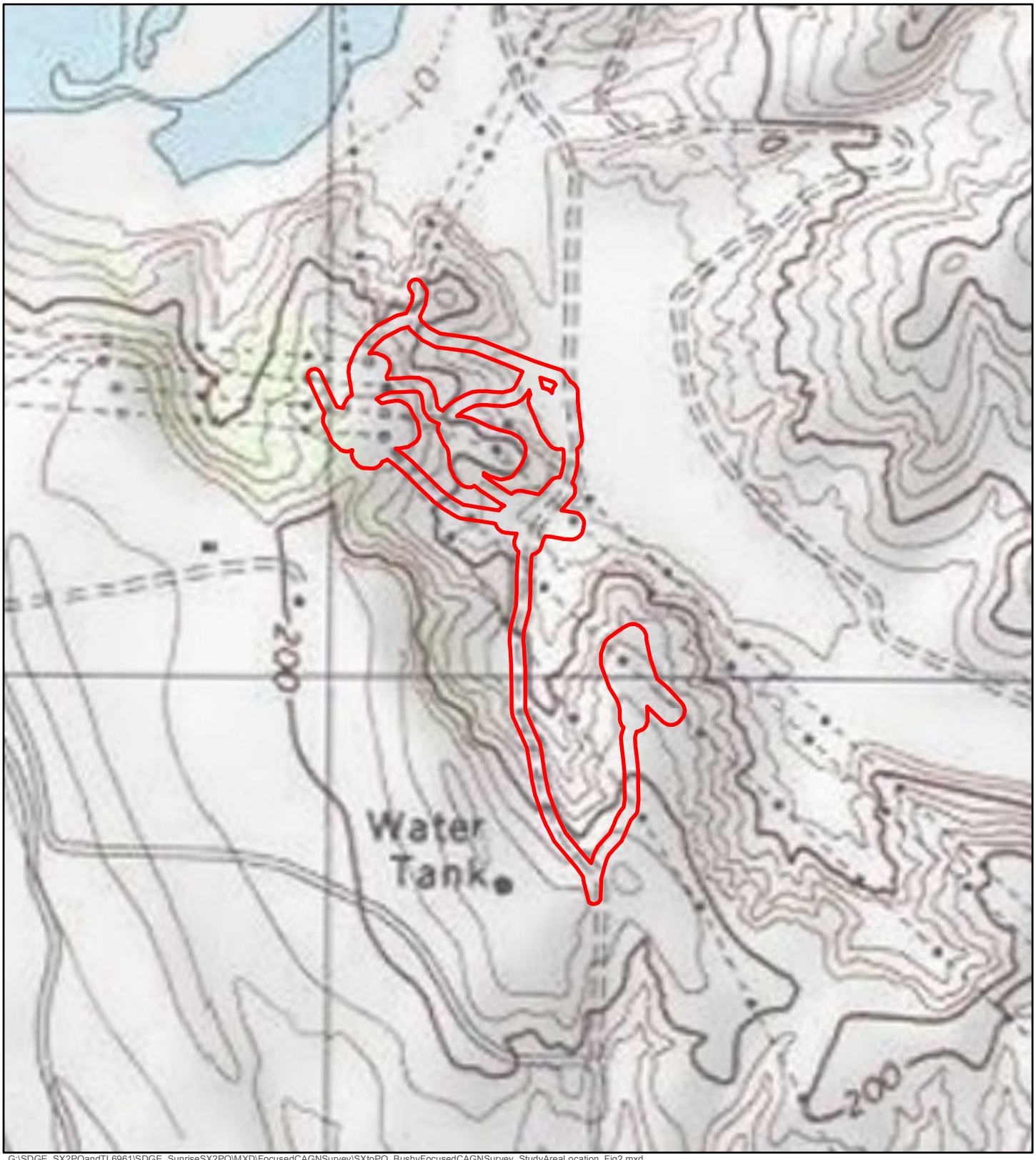
- Proposed Project Route
- Staging Yards
- Encina Hub
- Mira Mesa Hub

0 2 4 6 Miles

4/28/2015

TRC

SDGE A Sempra Energy utility



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedCAGNSurvey\SXtoPQ_BusbyFocusedCAGNSurvey_StudyAreaLocation_Fig2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Location Map - Encina Hub

Figure 2

Encina Hub Survey Area

N
W E
S

0 0.07 0.14 0.21 Miles

TRC

SDGE

4/28/2015

A Sempra Energy utility

Sources: SDG&E; Copyright:© 2013 National Geographic Society, i-cubed, Content may not reflect National Geographic's current map policy.

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedCAGNSurvey\SXtoPQ_BusbyFocusedCAGNSurvey_SurveyAreaMap_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Survey Area Map - Encina Hub

Figure 3

300ft Buffer

Potential Coastal California Gnatcatcher Habitat

0 300 600 900 Feet

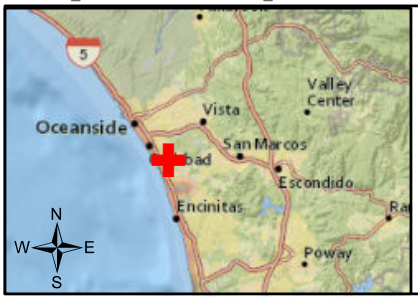
3/20/2015

TRC

SDGE

A Sempra Energy utility

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedCAGNSurvey\SXtoPQ_BusbyFocusedCAGNSurvey_DetectionOverview_Fig4a.mxd



Sycamore to Peñasquitos 230 kV Transmission Line Project

CAGN Detections Overview map - Encina Hub

Figure 4a

300ft Buffer

CAGN Detection

0 180 360 540 Feet

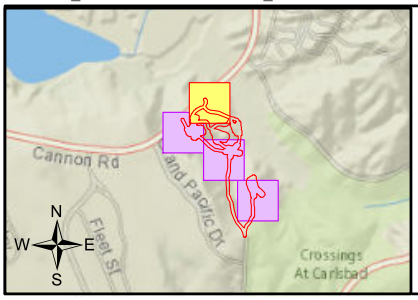
4/28/2015

TRC

SDGE

A Sempra Energy utility

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedCAGNSurvey\SXtoPQ_BusbyFocusedCAGNSurvey_DetectionMapBook_Fig4b.mxd



Sycamore to Peñasquitos 230 kV Transmission Line Project

CAGN Detections - Encina Hub

Figure 4b-1

- CAGN Detections Survey 1
- CAGN Detections Survey 2
- CAGN Detections Survey 3
- 300ft Buffer

0 60 120 180 Feet

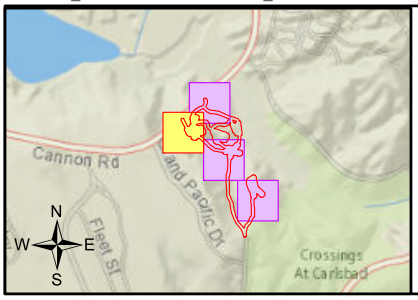
4/28/2015

TRC

SDGE

A Sempra Energy utility

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedCAGNSurvey\SXtoPQ_BusbyFocusedCAGNSurvey_DetectionMapBook_Fig4b.mxd



Sycamore to Peñasquitos 230 kV Transmission Line Project

CAGN Detections - Encina Hub

Figure 4b-2

- CAGN Detections Survey 1
- CAGN Detections Survey 2
- CAGN Detections Survey 3
- 300ft Buffer

0 60 120 180 Feet

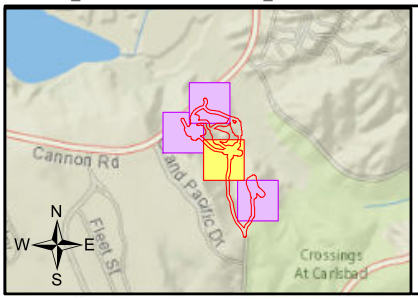
4/28/2015

TRC

SDGE

A Sempra Energy utility

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedCAGNSurvey\SXtoPQ_BusbyFocusedCAGNSurvey_DetectionMapBook_Fig4b.mxd



Sycamore to Peñasquitos 230 kV Transmission Line Project

CAGN Detections - Encina Hub

Figure 4b-3

- CAGN Detections Survey 1
- CAGN Detections Survey 2
- CAGN Detections Survey 3
- 300ft Buffer

0 60 120 180 Feet

4/28/2015

TRC

SDGE

A Sempra Energy utility

APPENDIX B – Survey Conditions

Appendix B – Survey Conditions

Survey #	Date	Time		Weather				Surveyors
				Temp (°F)	Wind (mph)	Clouds (%)	Precip	
1	2/24/15	Start	600	52	0-2	0	0	Charles Vettes
		End	1200	67	2-6	5	0	
2	3/7/15	Start	615	47	0-1	0	0	Laurie Gorman
		End	1230	69	0-3	65	0	
3	3/17/15	Start	645	60	0-1	70	0	Laurie Gorman
		End	1200	75	2-5	50	0	

APPENDIX C – Survey Results

Appendix C – Survey Results

CAGN # On Map	Survey #	Date	GPS Location		Notes
			Northing	Easting	
1	1	2/24/15	33.13229	-117.30717	Single CAGN responds to playback. Not seen.
2-3	1	2/24/15	33.13201	-117.30541	Pair of CAGN foraging closely together and counter calling. Male in breeding plumage.
4	1	2/24/15	33.13079	-117.30695	Male CAGN in breeding plumage singing from multiple high perches (territorial/mate seeking).
5	1	2/24/15	33.13311	-117.30905	Male CAGN in breeding plumage singing from multiple high perches (territorial/mate seeking).
6	1	2/24/15	33.13655	-117.30905	Singing territorial male CAGN in breeding plumage.
7-8	1	2/24/15	33.13395	-117.30769	Two male CAGN in breeding plumage having a territorial dispute. Male giving off alarm call.
9-10	1	2/24/15	33.13436	-117.31010	Pair of CAGN foraging together and counter calling.
11-12	1	2/24/15	33.13560	-117.31224	Pair of CAGN making agitated calls. Territorial. Male giving off alarm call.
13	1	2/24/15	33.13721	-117.31034	Territorial male CAGN singing and foraging.
14-15	2	3/7/15	33.13104	-117.30682	Pair of CAGN popped up from same location, both calling and scolding. Male observed with nesting material and then saw nest approx 70% complete in California sagebrush.
16-17	2	3/7/15	33.13223	-117.30686	Pair of CAGN. Female CAGN observed flying and calling. Then male CAGN observed popping up from habitat without vocalizing. CAGN nest observed almost complete in Russian thistle.
18-19	2	3/7/15	33.13611	-117.31191	Pair of CAGN. Male CAGN observed scolding, female CAGN countercalling.
20	2	3/7/15	33.13720	-117.31045	Territorial male CAGN calling in response to playback tape.
21	2	3/7/15	33.13691	-117.30858	CAGN individual scolding in response to playback tape.
22-23	2	3/7/15	33.13485	-117.30955	Pair of CAGN. One male CAGN scolding. Then female CAGN appeared and I noticed male is carrying nesting material. Pair flew north along slope side while male still holding nesting material and scolding.
24	2	3/7/15	33.13401	-117.30747	Territorial male CAGN calling harshly in response to playback tape. Foraging.
25	2	3/7/15	33.13148	-117.30510	Territorial male CAGN observed scolding and foraging. Just outside of project boundary.
26	2	3/7/15	33.13147	-117.30580	Male CAGN calling. Scolded at male LGCAGNI16.

Appendix C – Survey Results (Con't)

CAGN # On Map	Survey #	Date	GPS Location		Notes
			Northing	Easting	
27-28	3	3/17/15	33.13196	-117.30700	Pair of CAGN responded to playback tape with approach, male calling and then scolding.
29-30	3	3/17/15	33.13106	-117.30685	Pair of CAGN. Male scolding at Bushtits and fighting them away from near nest found last survey in Russian thistle.
31	3	3/17/15	33.13146	-117.30575	Male CAGN calling and foraging. No female CAGN observed after approx. 15 mins of observation.
32-33	3	3/17/15	33.13400	-117.30767	Pair of CAGN. Male scolding, female CAGN following closely behind.
34-35	3	3/17/15	33.13593	-117.31190	Territorial male CAGN calling, and second CAGN heard countercalling along drainage approx. 200 feet north.
36	3	3/17/15	33.13714	-117.31044	Territorial male CAGN calling and foraging, acting aggressive and bold.
37	3	3/17/15	33.13476	-117.30944	Territorial male CAGN calling. No female detected.
38	3	3/17/15	33.13477	-117.31012	Male CAGN heard calling in response to playback tape, then approached.

APPENDIX D – Wildlife Species Detected

Appendix D - Wildlife Species Detected

INVERTEBRATES		
Class: Insecta		**Insects**
Order: Lepidoptera		**Butterflies**
	Vanessa cardui	Painted Lady
VERTEBRATES		
Class: Aves		**Birds**
Order Galliformes		**Gallinaceous Birds**
Family Odontophoridae		**New World Quail**
	Callipepla californica	California Quail
Order Ciconiiformes		**Herons, Ibises, Storks, American Vultures, and Allies**
Family Accipitridae		**Hawks, Kites, Eagles, and Allies**
	Buteo jamaicensis	Red-tailed Hawk
Order Columbiformes		**Pigeons and Doves**
Family Columbidae		**Pigeons and Doves**
	Zenaida macroura	Mourning Dove
Family Cuculidae		**Cuckoos and Roadrunners**
	Geococcyx californianus	Greater Roadrunner
Order Apodiformes		**Swifts and Hummingbirds**
Family Trochilidae		**Hummingbirds**
	Calypte anna	Anna's Hummingbird
	Selasphorus sasin	Allen's Hummingbird
Order Piciformes		**Woodpeckers and Allies**
Family Picidae		**Woodpeckers**
	Picoides nuttallii	Nuttall's Woodpecker
	Colaptes auratus	Northern Flicker
Order Passeriformes		**Perching Birds**
Family Tyrannidae		**Tyrant Flycatchers**
	Sayornis nigricans	Black Phoebe
	Sayornis saya	Say's Phoebe
	Tyrannus vociferans	Cassin's Kingbird
Family Corvidae		**Crows and Jays**
	Aphelocoma californica	Western Scrub-Jay
	Corvus brachyrhynchos	American Crow
	Corvus corax	Common Raven
Family Aegithalidae		**Bushtits**
	Psaltriparus minimus	Bushtit
Family Troglodytidae		**Wrens**
	Thryomanes bewickii	Bewick's Wren
	Troglodytes aedon	House Wren

Appendix D - Wildlife Species Detected (Con't)

Family Sylviidae		**Gnatcatchers**
	Polioptila caerulea	Blue-gray Gnatcatcher
	Polioptila californica	Coastal California Gnatcatcher
Family Turdidae		**Thrushes**
	Catharus guttatus	Hermit Thrush
Family Timaliidae		**Babblers**
	Chamaea fasciata	Wrentit
Family Mimidae		**Mockingbirds and Thrashers**
	Mimus polyglottos	Northern Mockingbird
	Toxostoma redivivum	California Thrasher
Family Sturnidae		**Starlings**
	Sturnus vulgaris	European Starling
Family Parulidae		**Wood-Warblers**
	Vermivora celata	Orange-crowned Warbler
	Dendroica coronata	Yellow-rumped Warbler
	Geothlypis trichas	Common Yellowthroat
Family Emberizidae		**Embrezids**
	Pipilo maculatus	Spotted Towhee
	Pipilo crissalis	California Towhee
	Aimophila ruficeps	Rufous-crowned Sparrow
	Melospiza melodia	Song Sparrow
	Zonotrichia leucophrys	White-crowned Sparrow
Family Fringillidae		**Fringilline and Cardueline Finches and Allies**
	Carpodacus mexicanus	House Finch
	Carduelis psaltria	Lesser Goldfinch
Class: Mammalia		**Mammals**
Order Rodentia		**Rodents**
Family Sciuridae		**Squirrels and Chipmunks**
	Spermophilus beecheyi	California Ground Squirrel
Order Carnivora		**Carnivores**
Family Canidae		**Dogs and foxes**
	Canis familiaris	Domestic Dog
	Canis latrans	Coyote

MEMORANDUM

TO: Debbie Collins, San Diego Gas & Electric
Tamara Spear, San Diego Gas & Electric

FROM: Darin Busby, Busby Biological Services, Inc.

DATE: April 30, 2015

RE: Final Supplemental Jurisdictional Delineation Memorandum for the New Survey Areas within the Proposed Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, San Diego County, California

---

On behalf of Chambers Group, Inc. and San Diego Gas & Electric Company (SDG&E), Busby Biological Services, Inc. (BBS) conducted a supplemental jurisdictional delineation for SDG&E's proposed Sycamore to Peñasquitos 230 kilovolt (kV) Transmission Line Project (Proposed Project) located in San Diego County, California (Appendix A: Figure 1). Environmental Intelligence, LLC (EI) conducted a jurisdictional delineation within the original 500-foot wide Biological Survey Area (BSA) for the main Proposed Project alignment (EI 2014). This supplemental jurisdictional delineation was conducted to identify and delineate all jurisdictional resources within newly added areas (new survey areas) along the main Proposed Project alignment (Appendix A: Figure 2) that are potentially under the jurisdiction of the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), California Department of Fish and Wildlife (CDFW), and/or the California Coastal Commission (CCC).

This memorandum provides a brief description of the Proposed Project, regulatory setting, methods, and results of the jurisdictional delineation. This information is intended to supplement the information provided in the *Jurisdictional Delineation of SDG&E's Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project* (EI 2014) for the original BSA as well as the jurisdictional delineation memorandum that was prepared by BBS for the Encina Hub (BBS 2015). Please refer to the EI jurisdictional delineation report for more detailed information on the Proposed Project, regulatory framework, and methods. For additional information pertaining to the biological resources associated with the Proposed Project, please refer to the Biological Technical Report (BTR; BBS 2014).

1.0 PROPOSED PROJECT LOCATION AND BACKGROUND INFORMATION

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. To satisfy the need for this new 230 kV transmission line, 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 (Appendix A: Figure 1). 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 or within franchise position within existing public roadways.

During the initial planning phases of the Proposed Project, a 500-foot wide BSA was designated, and all biological studies associated with the Proposed Project were conducted within the BSA, including the original jurisdictional delineation conducted by EI and summarized in the *Jurisdictional Delineation of SDG&E's Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project* (EI 2014).

Since the initial biological studies were conducted within the original BSA, several new areas have been added to the Proposed Project, including the Encina Hub, Mira Mesa Hub, several staging yards and stringing sites, various access roads, and other work areas. Additional biological surveys, including a jurisdictional delineation, are required within the areas that were not included in the original BSA to adequately assess potential impacts associated with the implementation of the Proposed Project. These additional biological surveys are being conducted in 2015 and will be summarized in various technical reports once these surveys have been completed.

This memorandum focuses on the regulatory setting, methods, and results for the focused jurisdictional delineation that was performed for the newly added areas along the main Proposed Project alignment (Appendix A: Figures 1 through 4). This memorandum does not include the results of the jurisdictional delineation conducted at the Encina Hub, which were summarized in a separate supplemental jurisdictional delineation memorandum (BBS 2015). The jurisdictional delineation survey area for the newly added areas (new survey area) along the main Proposed Project alignment that are addressed in this memorandum are composed of the Proposed Project access roads with 20-foot survey buffers and the Proposed Project work areas with 50-foot survey buffers (Appendix A: Figures 2 through 4).

2.0 REGULATORY FRAMEWORK

A brief description of the regulatory framework of the USACE, RWQCB, CDFW, and the CCC is provided below.

2.1 U.S. Army Corps of Engineers

USACE regulates the discharge of dredged and/or fill material, both temporary and permanent, into waters of the U.S. and wetland waters of the U.S., pursuant to Section 404 of the Clean Water Act (CWA). USACE waters of the U.S. are delineated by the

lateral and upstream/downstream extent of the ordinary high watermark (OHWM). USACE wetland waters of the U.S. are defined using three parameters including wetland hydrology, hydric soils, and hydrophytic vegetation**.**

It should be noted that vernal pools are classified as "problem areas" because one or more of the three wetland parameters may be lacking due to the seasonal filling and drying that is characteristic of vernal pools (USACE 1987). USACE takes jurisdiction over vernal pools when a hydrologic connection to a downstream Traditional Navigable Waters (TNW) is demonstrated.

2.2 Regional Water Quality Control Board

RWQCB regulates discharge of dredged and/or fill material into waters of the State and wetland waters of the State pursuant to Section 401 of the CWA and/or Section 13000 *et. seq.* of the California Water Code under the Porter-Cologne Water Quality Control Act. RWQCB waters of the State and wetland waters of the State regulated under Section 401 of the CWA are all areas defined as USACE waters of the U.S. and wetland waters of the U.S. If a potential vernal pool meets the USACE wetland criteria, but is considered an isolated water by the USACE, the RWQCB asserts jurisdiction under the Porter Cologne Act.

2.3 California Department of Fish and Wildlife

CDFW regulates activities that would substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake, pursuant to Section 1600 *et. seq.* of the California Fish and Game Code. CDFW typically extends its jurisdictional limit to the top of a stream, the bank of a lake, or the outer edge of the riparian vegetation, whichever is wider. In addition, 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

CCC regulates the drilling, filling, or dredging of wetlands within the coastal zone, pursuant to Section 30000 *et. seq.* of the California Public Resource Code under the California Coastal Act. CCC takes jurisdiction over wetlands within the Coastal Zone with only one criterion (i.e., wetland hydrology, hydric soils, or hydrophytic vegetation) required to be present for jurisdiction to be asserted.

3.0 METHODS

BBS performed background research, field work associated with the jurisdictional delineation, and a focused basin assessment to identify all potentially jurisdictional areas that are located in the new portions of the Proposed Project. The methods used are summarized, below.

3.1 Background Research

Prior to conducting the field survey, BBS conducted a desktop assessment for drainages and other aquatic resources. This desktop review consisted of a review of the *Jurisdictional Delineation of San Diego Gas & Electric's Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project* (EI 2014), U.S. Geological Survey 7.5-minute Del Mar and Poway topographic quadrangles containing the site, the U.S. Fish and Wildlife Service National Wetlands Inventory maps, and the U.S. Department of Agriculture Natural Resources Conservation Service Web Soil Survey and National List of Hydric Soils.

3.2 Jurisdictional Delineation

The field surveys were conducted using comparable techniques outlined in the EI jurisdictional delineation report (EI 2014) and the technical guidelines in the USACE *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0; USACE 2008). In addition, other potential jurisdictional features were identified pursuant to criteria outlined in Section 1600 *et. seq.* of the California Fish and Game Code for CDFW jurisdictional areas and pursuant to the California Code of Regulations Title 14 for CCC wetlands. All USACE data sheets are included in Appendix B.

3.3 Basin Assessment

BBS also conducted a separate, focused basin assessment of the new survey areas that are outside of the "No Drive Zone", and within all vernal pools, road ruts, and unclassified basins that were previously identified by EI (2014) and during Scott McMillan's County-wide vernal pool mapping (2009, 2010, 2011). In addition, BBS also assessed basins identified incidentally while assessing the known basins within the original BSA; however, BBS did not conduct a comprehensive survey for basins within the entire original BSA because these areas had already been surveyed by EI (2014) and contained data from Scott McMillan's County-wide vernal pool mapping (2009, 2010, 2011).

The basin assessment was conducted to identify all depressions within or immediately adjacent to the Proposed Project impact area that were inundated or appeared to have the potential to stay inundated under wet conditions based on microtopography, surface soil cracking, changes in vegetation, and/or presence of vernal pool obligate species. All of the depressions identified by BBS during this assessment were mapped and labeled as "basins". In addition, all vernal pools, road ruts, and unclassified basins that were previously identified by EI (2014) and Scott McMillan's County-wide vernal pool mapping (2009, 2010, 2011) were added to this data set and also labeled as "basins".

All of the basins included in this data set were visited following a March 2015 rain event. The intent of this visit was to verify the location of these basins and collect preliminary data on these basins within the alignment, such as estimated maximum depths, widths, and lengths; habitat conditions; disturbance types and amounts; aquatic species and fairy shrimp species detected.

Because the jurisdictional delineation, focused basin assessment in the new survey area, and the initial visit to all basins were conducted before many vernal pool obligate species would have emerged, these basins could not be classified as vernal pools or road ruts at the time of these surveys. Therefore, focused vernal pool indicator plant surveys of these basins are currently being conducted during spring 2015. The intent of the focused spring 2015 vernal pool indicator plant surveys is to classify the plants within each basin and identify vernal pool indicator species within these basins. The data collected during these surveys will be used to classify the basins as vernal pools, road ruts, or detention basins.

The results of the focused basin assessment and vernal pool indicator plant surveys, including boundary and jurisdictional maps of all positively identified vernal pools, will be provided in a separate report once the vernal pool indicator plant surveys have been completed. In addition, focused, protocol-level fairy shrimp surveys may be conducted within these basins to determine if they support listed fairy shrimp species to determine appropriate jurisdiction.

4.0 RESULTS

BBS biologist Darin Busby and Trestles Environmental Corporation biologist Julie Fontaine conducted the jurisdictional delineation of the new survey areas on February 16 and 20, 2015. The jurisdictional delineation focused on the new survey areas that encompass the new Proposed Project access roads with 20-foot survey buffers and the new Proposed Project work areas with 50-foot survey buffers (Appendix A: Figures 2 through 3). The results of this jurisidctional delineation are provided, below.

In March 2015, a focused basin assessment was conducted to identify and assess basins within the new survey areas as well as to locate and assess all known vernal pools, road ruts, and unclassified basins that were previously detected and mapped within the original BSA (EI 2014; McMillan 2009, 2010, 2011). In addition, BBS assessed basins identified incidentally while assessing the known basins within the original BSA; however, BBS did not conduct a comprehensive survey for basins within the entire original BSA because these areas had already been surveyed by EI (2014) and contained data from Scott McMillan's County-wide vernal pool mapping (2009, 2010, 2011). BBS also did not conduct a basin assessment within the "No Drive Zone" (see Appendix A: Figure 3, Pages 11 and 12) portion of Del Mar Mesa Preserve, despite the presence of numerous vernal pools and road ruts in this area.

In April 2015, early spring vernal pool indicator plant surveys were conducted to classify the plants within each basin and identify vernal pool indicator species within these basins. An additional late spring vernal pool indicator plant surveys will be collected to identify any other vernal pool indicator plant species in these basins that weren't identified during the first survey. The results of the basin assessment and vernal pool indicator plant surveys will be provided in a separate report, once the second round of vernal pool indicator plant surveys are completed in late spring 2015.

A general description of the land use and vegetation, topography and hydrology, and soils within the new survey area is provided in Section 4.1. A more detailed discussion of each jurisdictional feature, including a summary of the vegetation, soils, and hydrology data is provided in Sections 4.2. Section 4.3 provides a general description of the potential vernal pools, road ruts, and unclassified basins, with the jurisdictional status of these features to be provided in a separate report at a later date once the final vernal pool indicator plant survey has been conducted and the results have been analyzed. Section 4.4 describes the exempt non-jurisdictional erosional features and concrete v-ditches within the new survey area. Section 4.5 provides a summary of the jurisdictional features within the new survey area.

4.1 General Description of New Survey Area

This section provides a general description of the land use and vegetation, topography and hydrology, and soils within the new survey area.

Land Use and Vegetation

Land use within the new survey area consists primarily of undeveloped land, residential communities, and natural preserve lands. The new survey area is dominated by the following vegetation communities and land cover types: Diegan coastal sage scrub, disturbed Diegan coastal sage scrub, revegetated coastal sage scrub, chamise chaparral, southern mixed chaparral, scrub oak chaparral, nonnative grassland, developed lands, ornamental, and bare ground. Other vegetation communities and land cover types present in smaller proportions throughout the new survey area include, but are not limited to, southern riparian scrub, southern willow scrub, southern coast live oak riparian forest, mulefat scrub, tamarisk scrub, eucalyptus woodland, revegetated alkali marsh, freshwater marsh, open water, San Diego mesa vernal pool, native grassland, coastal sage – chaparral scrub, disturbed chamise chaparral, disturbed southern mixed chaparral, and disturbed habitat (Appendix A: Figure 3).

Topography and Hydrology

Elevations with the new survey area range from approximately 1,000 feet above mean sea level (amsl) at Sycamore Canyon Substation in the eastern portion of the original 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 original BSA (Appendix A: Figure 2). The new survey area crosses through a network of roads and highways, mixed-use development, parks, and undeveloped open space. Topography along the new survey area varies from relatively flat developed and undeveloped areas, to steep and rolling hills and ridges, to wide and narrow drainages and canyons. The new survey area crosses through and/or adjacent to several unnamed and named drainages and canyons, including three named blue-line drainages as depicted on the USGS topographic maps, including Peñasquitos Canyon, McGonigle Canyon, and Deer Canyon (Appendix A: Figure 2).

The new survey area crosses through a variety of habitats and land uses, from undeveloped natural areas where drainage hydrology is relatively intact and undisturbed, to urbanized areas where local hydrology and drainage patterns have been significantly altered. Surface water runoff within the new survey area appears to be captured predominantly by perennial creeks and underground storm water systems associated with the urban developments.

Soils

A full list and description of the soil types found in the original BSA is provided in Appendix B in the jurisdictional delineation report that was prepared by EI for the original BSA (EI 2014). Seven soil types occur within the new survey area, including Redding cobbly loam, dissected, 15 to 50 percent slopes; Redding gravelly loam, 2 to 9 percent slopes; Auld stony clay, 9 to 30 percent slopes; San Miguel-Exchequer rocky silt loams, 9 to 70 percent slopes; Terrace escarpments; Olivenhain cobbly loam, 2 to 9 percent slopes; and Riverwash (NRCS 2015a). Only one of these soil types, Riverwash, is listed as a hydric soil by the Natural Resources Conservation Services (NRCS 2015b).

The basins within the original BSA and new survey areas occur within a variety of soil types, some of which are known to historically support vernal pools. Vernal pools in cismontane San Diego County are confined primarily to low-slope phases of seven soil series, including Carlsbad, Chesterton, Huerhuero, Olivenhain, Placentia, Redding and Stockpen (Bauder and McMillan 1998). Of these seven soil series, 41 of the 65 (i.e., Basins 14 through 54) identified basins within the original BSA and new survey areas occur within and adjacent to two of these soil types (i.e., Redding gravelly loam, 2 to 9 percent slopes, and Olivenhain cobbly loam, 9 to 30 percent slopes), which occur within the vicinity of the Del Mar Mesa Preserve area in the western portion of the Proposed Project alignment (Appendix A: Figure 3, Pages 4 through 13).

4.2 Description of Jurisdictional Features

A total of ten new jurisdictional features occur within the new survey area. The majority of the jurisdictional features identified during the jurisdictional delineation were continuations of jurisdictional features previously identified by EI during their

jurisdictional delineation within the original 500-foot wide BSA for the main Proposed Project alignment (EI 2014). Because these jurisdictional features have already been described in the corresponding Jurisdictional Delineation of San Diego Gas & Electric's Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project (EI 2014), these features will only be briefly described in the sections below. The boundaries and jurisdictions of these jurisdictional features are depicted in Figure 3 (Appendix A), the detailed USACE data forms for Sample Points 1 and 2 are provided in Appendix B (USACE Data Forms), and photographs of the features are provided in Appendix C (Site Photographs).

Feature 7: Tributary To Peñasquitos Creek 6

Feature 7 is an unnamed ephemeral drainage that originates at a culvert adjacent to the dirt access road and travels south to connect to Los Peñasquitos Creek, a blue-line drainage depicted on USGS topographic maps that eventually connects to Los Peñasquitos Lagoon and the Pacific Ocean (Appendix A: Figure 3, Page 9). This feature was dry at the time of the survey but apears to receive infrequent moderate to high velocities flows during and directly after storm events, as evident by the presence hard sands and cobbles, shelving, and/or scouring at the OHWM. This feature is dominated by upland vegetation and contains Redding gravelly loam, 2 to 9 percent slopes. Downstream and contiguous portions of Feature 7 were previously identified during the jurisdictional delineation conducted by EI; therefore, a detailed description of vegetation, soils, and hydrology within Feature 7 is provided in Section 4.4.7 of the *Jurisdictional Delineation of SDG&E's Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project* (EI 2014).

Feature 7 contains a total of approximately <0.01 acre of USACE waters of the U.S. and RWQCB waters of the State and approximately <0.01 acre of CDFW unvegetated streambed (Table 1). The location and jurisdictional boundaries of this feature are provided in Appendix A (Figure 3, Page 9) and a photograph of this feature is provided in Appendix C (Photograph 1).

Feature 10: Tributary To Peñasquitos Creek 9

Feature 10 is composed of two unnamed ephemeral drainages that originate west of the dirt access road, cross the dirt access road, and then connect into one unnamed ephemeral drainage that travels south to connect to Los Peñasquitos Creek, a blue-line drainage depicted on USGS topographic maps that eventually connects to Los Peñasquitos Lagoon and the Pacific Ocean (Appendix A: Figure 3, Page 11). This feature was dry at the time of the survey but apears to receive infrequent moderate to high velocities flows during and directly after storm events, as evident by the presence of hard sands and cobbles, shelving, sediment sorting, deposition and/or scour at the OHWM. This feature is dominated by dense, upland vegetation and contains terrace escarpments soils. Downstream and contiguous portions of Feature 10 were previously

Table 1. Summary of Total Jurisdiction by Feature Number and Regulatory Agency

Feature Number	USACE				CDFW				RWQCB				CCC Wetland	
	Wetland WoUS		WoUS		Riparian		US		Wetland WoS		WoS			
	acre*	linear feet	acre*	linear feet	acre*	linear feet	acre*	linear feet	acre*	linear feet	acre	linear feet	acre	linear feet
7	-	-	<0.01	10.00	-	-	<0.01	10.00	-	-	<0.01	10.00	-	-
10	-	-	0.01	132.00	-	-	0.01	132.00	-	-	0.01	132.00	-	-
11	-	-	<0.01	15.00	-	-	<0.01	15.00	-	-	<0.01	15.00	-	-
15	0.07	165.76	0.01	51.00	0.14	339.90	-	-	0.07	165.76	0.01	51.00	-	-
18	-	-	<0.01	24.10	-	-	<0.01	24.10	-	-	<0.01	24.10	-	-
21	-	-	0.01	180.00	-	-	0.01	180.00	-	-	0.01	180.00	-	-
22	-	-	0.01	97.50	-	-	0.01	97.50	-	-	0.01	97.50	-	-
27	-	-	-	-	0.10	215.34	-	-	-	-	-	-	-	-
28	0.05	165.40	-	-	0.12	413.25	-	-	0.05	165.40	-	-	-	-
32	-	-	0.04	289.26	0.04	163.00	0.04	289.26	-	-	0.04	289.26	-	-
Total**	**0.13**	**331.16**	**0.08**	**798.86**	**0.40**	**1,131.49**	**0.07**	**747.86**	**0.13**	**331.16**	**0.08**	**798.86**	**-**	**-**

*Acreages are approximate and rounded to the nearest hundredth of an acre.
**Totals represent actual totals without rounding error.

Wetland WoUS = Wetland waters of the U.S.
WoUS = Waters of the U.S.
Wetland WoS = Wetland waters of the State
WoS = Waters of the State
US = Unvegetated Streambed

identified during the jurisdictional delineation conducted by EI; therefore, a detailed description of vegetation, soils, and hydrology within Feature 10 is provided in Section 4.4.10 of the *Jurisdictional Delineation of SDG&E's Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project* (EI 2014).

Feature 10 contains a total of approximately 0.01 acre of USACE waters of the U.S. and RWQCB waters of the State and approximately 0.01 acre of CDFW unvegetated streambed (Table 1). The location and jurisdictional boundaries of this feature are provided in Appendix A (Figure 3, Page 11) and photographs of this feature are provided in Appendix C (Photographs 2 – 3).

Feature 11: Tributary To Deer Canyon 1

Feature 11 is an unnamed ephemeral drainage that originates adjacent to the dirt access road and travels northwest to eventually connect to Deer Canyon Creek, McGonigle Canyon Creek, and Carmel Creek, all of which are blue-line drainages depicted on USGS topographic maps that connect to Los Peñasquitos Lagoon and the Pacific Ocean (Appendix A: Figure 3, Page 11). This feature was dry at the time of the survey but apears to receive infrequent moderate velocities flows during and directly after storm events, as evident by the presence of hard sands and cobbles, a defined bed and bank, shelving, and/or scour at the OHWM. This feature is dominated by dense, upland vegetation and contains Redding gravelly loam, 2 to 9 percent slopes. Downstream and contiguous portions of Feature 11 were previously identified during the jurisdictional delineation conducted by EI; therefore, a detailed description of vegetation, soils, and hydrology within Feature 11 is provided in Section 4.4.11 of the *Jurisdictional Delineation of SDG&E's Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project* (EI 2014).

Feature 11 contains a total of approximately <0.01 acre of USACE waters of the U.S. and RWQCB waters of the State and approximately <0.01 acre of CDFW unvegetated streambed (Table 1). The location and jurisdictional boundaries of this feature are provided in Appendix A (Figure 3, Page 11) and a photograph of this feature is provided in Appendix C (Photograph 4).

Feature 15: McGonigle Canyon Creek

Feature 15 is part of a braided, low-gradient riparian drainage that is dominated by southern willow scrub, mulefat scrub, and eucalyptus woodland (Appendix A: Figure 3, Page 13). This feaure is part of McGonigle Canyon Creek which originates from the east and connects to Carmel Creek offisite to the west, both of which are blue-line drainages depicted on USGS topographic maps that connect to Los Peñasquitos Lagoon and the Pacific Ocean. Although this drainage was dry at the time of the survey, the drainge appears to receive intermittent high-velocity flows, as evident by sediment deposits, shelving, scour, vegetation destruction, drainage patterns, water marks, and/or disturbed leaf litter at the OHWM. An existing dirt access road occurs

within and adjacent to this feature. The dirt access road travels directly through a braided offshoot section of the main drainage and over the main drainage, where flows are conveyed through three culverts beneath the access road. Salinas clay loam, 2 to 9 percent slopes, is the dominant soil type present within Feature 15 and McGonigle Canyon Creek.

Upstream and contiguous portions of Feature 15 were previously identified during the jurisdictional delineation conducted by EI; therefore, a detailed description of vegetation, soils, and hydrology within Feature 15 is provided in Section 4.4.15 of the *Jurisdictional Delineation of SDG&E's Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project* (EI 2014). However, it should be noted that upstream portions of Feature 15 within and adjacent to the areas previously delineated by EI do not satisfy the hydrophytic vegetation or hydric soils criterion. These upstream areas are dominated by bluegum eucalyptus (*Eucalyptus globulus*, UPL), with patches arroyo willow, mule fat, and sugar bush, and contain substrates dominated by upland soils with a restrictive layer of dense cobbles and packed sand.

Feature 15 contains a total of approximately 0.07 acre of USACE wetland waters of the U.S. and RWQCB wetland waters of the State, approximately 0.01 acre of USACE waters of the U.S. and RWQCB waters of the State, and approximately 0.14 acre of CDFW riparian (Table 1). The location and jurisdictional boundaries of this feature are provided in Appendix A (Figure 3, Page 13), and the detailed USACE data form for Sample Point 1 is provided in Appendix B (USACE Data Forms), and photographs of this feature are provided in Appendix C (Photographs 5 – 6).

Feature 18: Tributary to McGonigle Canyon Creek 3

Feature 18 is composed of six narrow erosional features that originate within the proposed Camino Del Sur Yard, drain into one unnamed ephemeral drainage onsite, which then travels offsite to the west (Appendix A: Figure 3, Page 15). This unnamed ephemeral drainage eventually connect to McGonigle Canyon Creek and Carmel Creek, both of which are blue-line drainages depicted on USGS topographic maps that connect to Los Peñasquitos Lagoon and the Pacific Ocean. This feature was dry at the time of the survey but apears to receive infrequent moderate to high velocities flows during and directly after storm events, as evident by the presence hard sands and cobbles, shelving, and/or scouring at the OHWM. This feature is dominated by upland vegetation and contains Olivenhain cobbly loam, 2 to 9 percent slopes. Downstream and contiguous portions of Feature 18 were previously identified during the jurisdictional delineation conducted by EI; therefore, a detailed description of vegetation, soils, and hydrology within Feature 18 is provided in Section 4.4.18 of the *Jurisdictional Delineation of SDG&E's Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project* (EI 2014).

Feature 18 contains a total of approximately <0.01 acre of USACE waters of the U.S. and RWQCB waters of the State and approximately <0.01 acre of CDFW unvegetated

streambed (Table 1). The location and jurisdictional boundaries of this feature are provided in Appendix A (Figure 3, Page 15) and a photograph of this feature is provided in Appendix C (Photograph 7).

Feature 21: Tributary to La Zanja Canyon 2

Feature 21 is an unnamed ephemeral drainage that originates east of the dirt access road. The drainage travels under the dirt access roads through a series of culverts, and then travels west to eventually connect to La Zanja Canyon and San Dieguito River, both of which are blue-line drainages depicted on USGS topographic maps that connect to San Dieguito Lagoon and the Pacific Ocean (Appendix A: Figure 3, Page 18). This feature was dry at the time of the survey but apears to receive infrequent moderate to high velocities flows during and directly after storm events, as evident by the presence hard sands and cobbles, shelving, eroded bank, and/or scouring at the OHWM. This feature is dominated by dense, upland vegetation and contains San Miguel-Exchequer rocky silt loams, 9 to 70 percent slopes. Upstream and contiguous portions of Feature 21 were previously identified during the jurisdictional delineation conducted by EI; therefore, a detailed description of vegetation, soils, and hydrology within Feature 21 is provided in Section 4.4.21 of the *Jurisdictional Delineation of SDG&E's Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project* (EI 2014).

Feature 21 contains a total of approximately 0.01 acre of USACE waters of the U.S. and RWQCB waters of the State and approximately 0.01 acre of CDFW unvegetated streambed (Table 1). The location and jurisdictional boundaries of this feature are provided in Appendix A (Figure 3, Page 18) and a photograph of this feature is provided in Appendix C (Photograph 8).

Feature 22: McGonigle Canyon Creek 5

Feature 22 is at the confluence of two unnamed ephemeral drainages that originate east of a dirt access road. The drainage continues across the road to the west using an Arizona crossing and then enters a culvert in a narrow basin off site to the west where it eventually connect to McGonigle Canyon Creek and Carmel Creek, both of which are blue-line drainages depicted on USGS topographic maps that connect to Los Peñasquitos Lagoon and the Pacific Ocean (Appendix A: Figure 3, Page 19). This feature was dry at the time of the survey and appears to receive infrequent moderate to high water velocities flows only during and directly after storm events as evident by the presence of hard sands and cobbles and a defined bed and bank at the OHWM. This feature is dominated by dense, upland vegetation and contains Auld stony clay, 9 to 30 percent slopes. Upstream and contiguous portions of Feature 22 were previously identified during the jurisdictional delineation conducted by EI; therefore, a detailed description of vegetation, soils, and hydrology within Feature 22 is provided in Section 4.4.22 of the *Jurisdictional Delineation of SDG&E's Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project* (EI 2014).

Feature 22 contains a total of approximately 0.01 acre of USACE waters of the U.S. and RWQCB waters of the State and approximately 0.01 acre of CDFW unvegetated streambed (Table 1). The location and jurisdictional boundaries of this feature are provided in Appendix A (Figure 3, Page 19) and a photograph of this feature is provided in Appendix C (Photograph 9).

Feature 27: Tributary to Peñasquitos Creek 10

Feature 27 is an unnamed intermittent drainage dominated by southern willow scrub that originates southeast of the paved access road, travels north beneath the access roads through a large concrete culvert offsite, parallels the east side of the paved access road, and eventually connect to Los Peñasquitos Creek. In addtion, a concrete spillway along the access road channels nuissance flows into this drainage. The unnamed intermittent drainage and Los Peñasquitos Creek are both blue-line drainages depicted on USGS topographic maps that connect to Los Peñasquitos Lagoon and the Pacific Ocean (Appendix A: Figure 3, Page 24). USACE data sheets were not completed and soil pits were not excavated within this feature because the new survey area occurs only beaneath the outer edges of the riparian canopy, outside of the drainage bottom and the OHWM where hydrophytic vegetation (i.e., *Salix* sp., etc.) and hydrology (i.e., vegetation destruction, disturbed leaf litter, shelving, scour, and sediment sorting at the OHWM) are present. The presence of hydrophytic vegetation and hydrology in the drainage bottom outside of the survey area indicate that hydric soils, and USACE wetland waters of the U.S. and RWQCB wetland waters of the State, may also be present in this area. San Miguel-Exchequer rocky silt loams, 9 to 70 percent slopes (non-hydric) is the dominant soil type mapped within Feature 27. Upstream and contiguous portions of Feature 27 were previously identified during the jurisdictional delineation conducted by EI; therefore, a detailed description of vegetation, soils, and hydrology within Feature 27 is provided in Section 4.4.27 of the *Jurisdictional Delineation of SDG&E's Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project* (EI 2014).

Feature 27 contains a total of approximately 0.10 acre of CDFW riparian (Table 1). The location and jurisdictional boundaries of this feature are provided in Appendix A (Figure 3, Page 24) and a photograph of this feature is provided in Appendix C (Photograph 10).

Feature 28: Los Peñasquitos Creek

Feature 28 is a braided riparian drainage that is dominated by southern riparian scrub, southern coast live oak riparian forest, mulefat scrub, and fresh water marsh (Appendix A: Figure 3, Page 22). This feaure is part of Los Peñasquitos Creek, a blue-line drainage depicted on USGS topographic maps that connects to Los Peñasquitos Lagoon and the Pacific Ocean. This feature contained flowing water at the time of the survey and showed strong evidence of high-velocity flows (i.e., sediment deposits, shelving, scouring, debris jams, vegetation destruction, and disturbed leaf litter at the

OHWM). Upstream and contiguous portions of Feature 28 were previously identified during the jurisdictional delineation conducted by EI; therefore, a detailed description of vegetation, soils, and hydrology within Feature 28 is provided in Section 4.4.28 of the *Jurisdictional Delineation of SDG&E's Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project* (EI 2014).

Feature 28 contains a total of approximately 0.05 acre of USACE wetland waters of the U.S. and RWQCB wetland waters of the State and approximately 0.12 acre of CDFW riparian (Table 1). The location and jurisdictional boundaries of this feature are provided in Appendix A (Figure 3, Page 22), the detailed USACE data form for Sample Point 2 is provided in Appendix B (USACE Data Forms), and a photograph of this feature is provided in Appendix C (Photograph 11). A USACE data sheet was completed for this feature but soil pits were not excavated within this feature because the new survey area consists of a proposed access road along a bridge that spans the entire width of this feature within Los Peñasquitos Creek; therefore, no impacts to this feature are anticipated from the proposed project.

Feature 32: Tributary to Beeler Creek 1

Feature 32 is composed of two unnamed intermittent drainages and one unnamed ephemeral drainage. The unnamed drainages travel north to eventually connect to Beeler Creek and Los Peñasquitos Creek, all of which are blue-line drainages depicted on USGS topographic maps that eventually connect to Los Peñasquitos Lagoon and the Pacific Ocean (Appendix A: Figure 3, Pages 27 and 28). This feature was dry at the time of the survey and it appears to receive infrequent moderate to high water velocities flows only during and directly after storm events as evident by the presence of hard sands and cobbles, a defined bed and bank, scouring, shelving, and/or erosion at the OHWM. The drainages within this feature are dominated by dense, upland vegetation and contain Redding cobbly loam, dissected, 15 to 50 percent slopes. Upstream and contiguous portions of Feature 32 were previously identified during the jurisdictional delineation conducted by EI; therefore, a detailed description of vegetation, soils, and hydrology within Feature 32 is provided in Section 4.4.32 of the *Jurisdictional Delineation of SDG&E's Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project* (EI 2014).

Feature 32 contains a total of approximately 0.04 acre of USACE waters of the U.S. and RWQCB waters of the State, approximately 0.04 acre of CDFW unvegetated streambed, and approximately 0.04 acre of CDFW riparian (Table 1). The location and jurisdictional boundaries of this feature are provided in Appendix A (Figure 3, Pages 27 and 28) and a photograph of this feature is provided in Appendix C (Photographs 12 – 14).

4.3 Description of Potential Vernal Pools, Road Ruts, and Unclassified Basins

Sixty-five basins were identified within the original BSA and new survey area, with the exception of the "No Drive Zone". All depressions in access roads that were inundated or appeared to have the potential to stay inundated under wet conditions based on microtopography, surface soil cracking, compacted sand and/or clay substrates, changes in vegetation, biotic crust, and/or presence of vernal pool obligate species were labeled as "basins". The basins are filled or appear to be filled from direct precipitation and/or overland sheetflow from adjacent uplands. Data from the focused basin surveys and data collected on vernal pool indicator plant species during the focused vernal pool indicator plant surveys will be used to classify the basins as vernal pools, road ruts, and/or fairy shrimp habitat. The jurisdictional status of these basins will be presented in a separate report at a later date once the final focused vernal pool indicator plant survey is performed and the results are analyzed.

A portion of these 65 vernal pools, road ruts, and unclassified basins were identified during the jurisdictional delineation conducted by EI and a description of these are provided in Section 4.5 of the *Jurisdictional Delineation of SDG&E's Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project* (EI 2014). However, several more basins were identified by BBS during the focused basin assessment, some of which had been previoulsy identified by Scott McMillan (2009, 2010, 2011). Twelve of the 65 basins identified during the focused basin assessment were inundated at the time of the assessment. These basins were located throughout the alignment. Seven of the 12 inundated basins (i.e., Basins 15, 19, 28, 35, 36, 39, and 54) are located adjacent to known vernal pool complexes within the vicinity of the Del Mar Mesa Preserve area in the western portion of the Proposed Project alignment (Appendix A: Figure 3, Pages 4, 5, 8, 9, 10, and 12). A detailed description and jurisdictional determination of these basins will be provided in a separate report once the results of the second focused vernal pool indicator plant survey are analyzed. Several photographs of these basins are provided in Appendix C (Photographs 15 – 19) and the location and of these basins are provided on various pages in Appendix A (Figure 3).

4.4 Description of Exempt, Non-jurisdictional Features

A total of approximately 8,913 linear feet of exempt, non-jurisdictional concrete v-ditches are present within the new survey area (Appendix A: Figure 3). The USACE and other regulatory agencies generally do not assert jurisdiction over concrete v-ditches, which are considered municipal separate storm sewer systems (MS4) erosion control features. The concrete v-ditches within the survey area have been built in uplands to capture erosional runoff from the surrounding dirt access roads and power line tower pads and transmit it to the municipal storm sewer system. A representative photograph of a v-ditch is provided in Appendix C (Photograph 20).

In addition, several exempt, non-jurisdictional detention basins, swales, ditches, and erosional features occur within the new survey area. The the USACE and other regulatory agencies generally do not assert jurisdiction over naturally occuring or man made erosional features, non-tidal drainage ditches, gullies, small washes, and swales that are characterized by low volume and infrequent or short duration flows. Riprap, waterbars, and fiber rolls have been placed in some portions of these erosional features to provide erosion control support. A photograph of a riprap-lined swale is provided in Appendix C (Photograph 21).

4.5 Summary of Jurisdictional Features

A summary of the acreage, itemized by regulatory agency and vegetation community, is provided in Table 2.

USACE Jurisdiction

A total of nine features that are under the jurisdiction of USACE were identified within the survey area. Of these nine features, two features have a total of approximately 0.12 acre (approximately 331.16 linear feet) of USACE wetland waters of the U.S., and seven features have a total of approximately 0.08 acre (approximately 798.86 linear feet) of USACE waters of the U.S.

RWQCB Jurisdiction

A total of nine features that are under the jurisdiction of RWQCB were identified within the survey area. Of these nine features, two features have a total of approximately 0.12 acre (approximately 331.16 linear feet) of RWQCB wetland waters of the State, and seven features have a total of approximately 0.08 acre (approximately 798.86 linear feet) of RWQCB waters of the State.

CDFW Jurisdiction

A total of ten features that are under the jurisdiction of CDFW were identified within the new survey area. Of these ten features, four features have a total of approximately 0.40 acre (approximately 1,131.49 linear feet) of CDFW riparian and seven features have a total of approximately 0.37 acre (approximately 845.56 linear feet) of CDFW unvegetated streambed.

CCC Jurisdiction

None of the features are under the jurisdiction of the CCC since all features within the new survey area are outside of the coastal zone. The jurisdictional status of Basins 20 through 34 within the coastal zone will be presented in a separate report at a later date once the final focused vernal pool indicator plant survey is performed and the results are analyzed.

Table 2. Summary of Total Jurisdiction by Regulatory Agency and Vegetation Community

Regulatory Agency	Total Acres*	Total Linear Feet	Dominant Vegetation Type (acre*)												
			Bare Ground	Chamise Chaparral	Coastal Sage Scrub - Revegetated	Diegan Coastal Sage Scrub	Diegan Coastal Sage Scrub - Disturbed	Developed Land	Disturbed Habitat	Mulefat Scrub	Nonnative Grassland	Southern Coast Live Oak Riparian Forest	Southern Mixed Chaparral	Scrub Oak Chaparral	Southern Riparian Scrub
USACE															
Wetland WoUS	0.12	331.16	0.01	-	-	-	-	-	-	0.06	-	-	-	-	0.05
WoUS	0.08	798.86	0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	-	-	0.04	<0.01	<0.01	0.01
Total USACE**	0.20	1,130.02	0.02	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.06	-	0.04	<0.01	<0.01	0.06
RWQCB															
Wetland WoS	0.12	331.16	0.01	-	-	-	-	-	-	0.06	-	-	-	-	0.05
WoS	0.08	798.86	0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	-	-	0.04	<0.01	<0.01	0.01
Total RWQCB**	0.20	1,130.02	0.02	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.06	-	0.04	<0.01	<0.01	0.06
CDFW															
Riparian	0.40	1,139.49	0.01	-	-	-	-	-	-	0.15	-	-	-	-	0.24
US	0.37	845.56	0.01	0.01	<0.01	0.01	<0.01	<0.01	<0.01	-	-	0.33	<0.01	<0.01	-
Total CDFW**	0.77	1,985.05	0.02	0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.15	-	0.33	<0.01	<0.01	0.24
CCC															
Total CCC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Acreages are approximate and rounded to the nearest hundredth of an acre.
**Totals represent actual totals without rounding error.

Wetland WoUS = Wetland waters of the U.S.
WoUS = Waters of the U.S.
Wetland WoS = Wetland waters of the State
WoS = Waters of the State
US = Unvegetated Streambed

5.0 CONCLUSION/DISCUSSION

Any anticipated Proposed Project impacts to the jurisdictional features presented in this memorandum would require the appropriate permit authorizations from the corresponding regulatory agency.

Because the jurisdictional delineation, focused basin assessment, and the initial visit to all basins were conducted before many vernal pool indicator species would have emerged, these basins could not be classified as vernal pools or road ruts at the time of these surveys, and therefore, their jurisdictional status could not be determined. Therefore, focused vernal pool indicator plant surveys of all basins are currently being conducted during spring 2015 and the results of all the data collected during the basin assessment and vernal pool indicator plant surveys will be used to classify the basins, as well as make a determination on their jurisdictional status. The basin assessment report will also provide other data, such as estimated maximum depths, widths, and lengths; habitat conditions; disturbance types and amounts; aquatic species and fairy shrimp species detected; vernal pool indicator plant species detected; and boundary and jurisdictional maps of all positively identified vernal pools.

6.0 REFERENECES

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors.

2012 *The Jepson manual: vascular plants of California, second edition*. University of California Press, Berkeley.

E.T. Bauder and McMillan, Scott.

1998 Current Distribution and Historical Extent of Vernal Pools in Southern California and Northern Baja California, Mexico. Pages 56-70 in: C.W. Witham, E.T. Bauder, D. Belk, W.R. Ferren Jr., and R. Ornduff (Editors). Ecology, Conservation, and Management of Vernal Pool Ecosystems – Proceedings from a 1996 Conference. California Native Plant Society, Sacramento, CA.

Busby Biological Services, Inc. (BBS)

2014 *Biological Technical Report for the Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project*, City of San Diego, San Diego County, California. March 2014.

2015 Final *Supplemental Jurisdictional Delineation Memorandum for the Encina Portion of the Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project*, San Diego County, California.

Environmental Intelligence, LLC (EI)

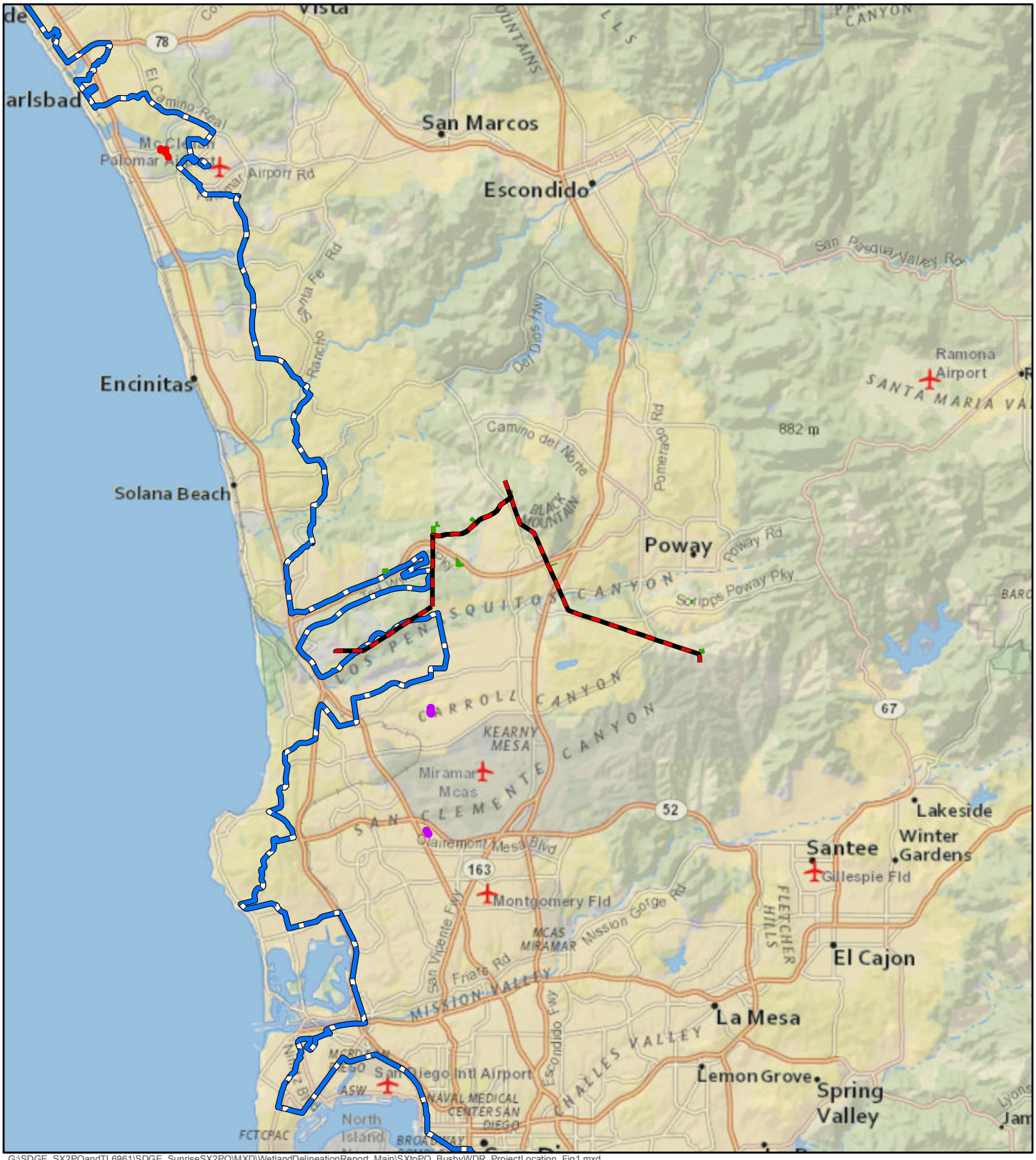
2014 *Jurisdictional Delineation of San Diego Gas & Electric's Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project*, San Diego County, California. March 2014.

McMillan, Scott
2009, 2010, 2011 San Diego County-wide Vernal Pool Mapping Data.

Rebman, J.P. and M.G. Simpson
2006 *Checklist of the Vascular Plants of San Diego County*, 4th Edition. San Diego. Natural History Museum, San Diego, California.

United States Army Corps of Engineers (USACE)
1987 *U.S. Army Corps of Engineers Wetlands Delineation Manual*, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.
2008 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.*

APPENDIX A: FIGURES



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ProjectLocation_Fig1.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Project Location Map

Figure 1

- Proposed Project Route
- Staging Yards
- Encina Hub
- Mira Mesa Hub
- California Coastal Zone Boundary

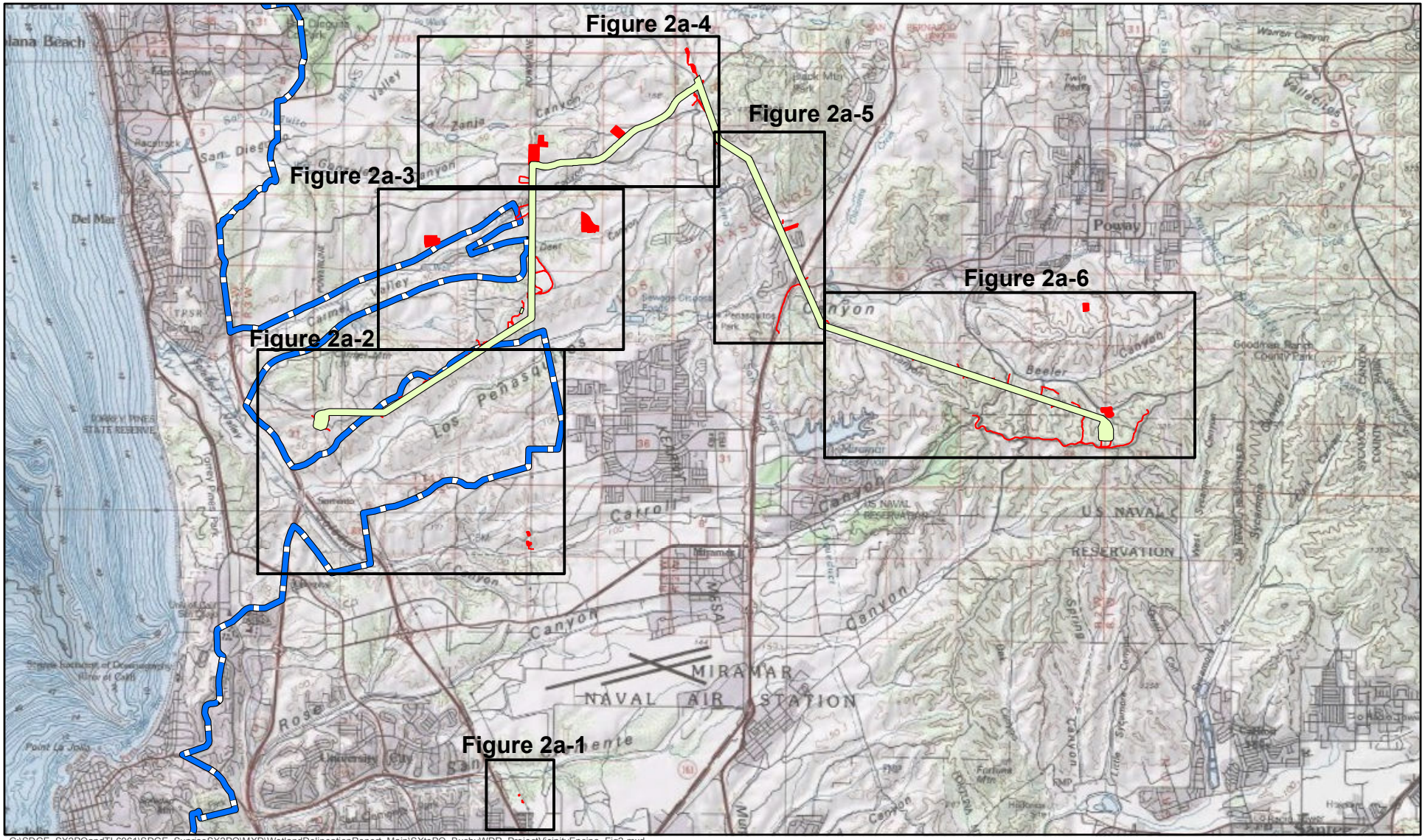
4/17/2015

0 2 4 6 Miles

TRC

SDGE

A Sempra Energy utility



Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Vicinity Map

Figure 2

Original BSA

New Survey Area

California Coastal Zone Boundary

Sources: TRC, 2015; SDG&E, 2015, NatGeo, ESRI, DeLorme, HERE, UNEP-WCMC, USGS, NSA, ESA, METI, NOAA, iPC

N W E S

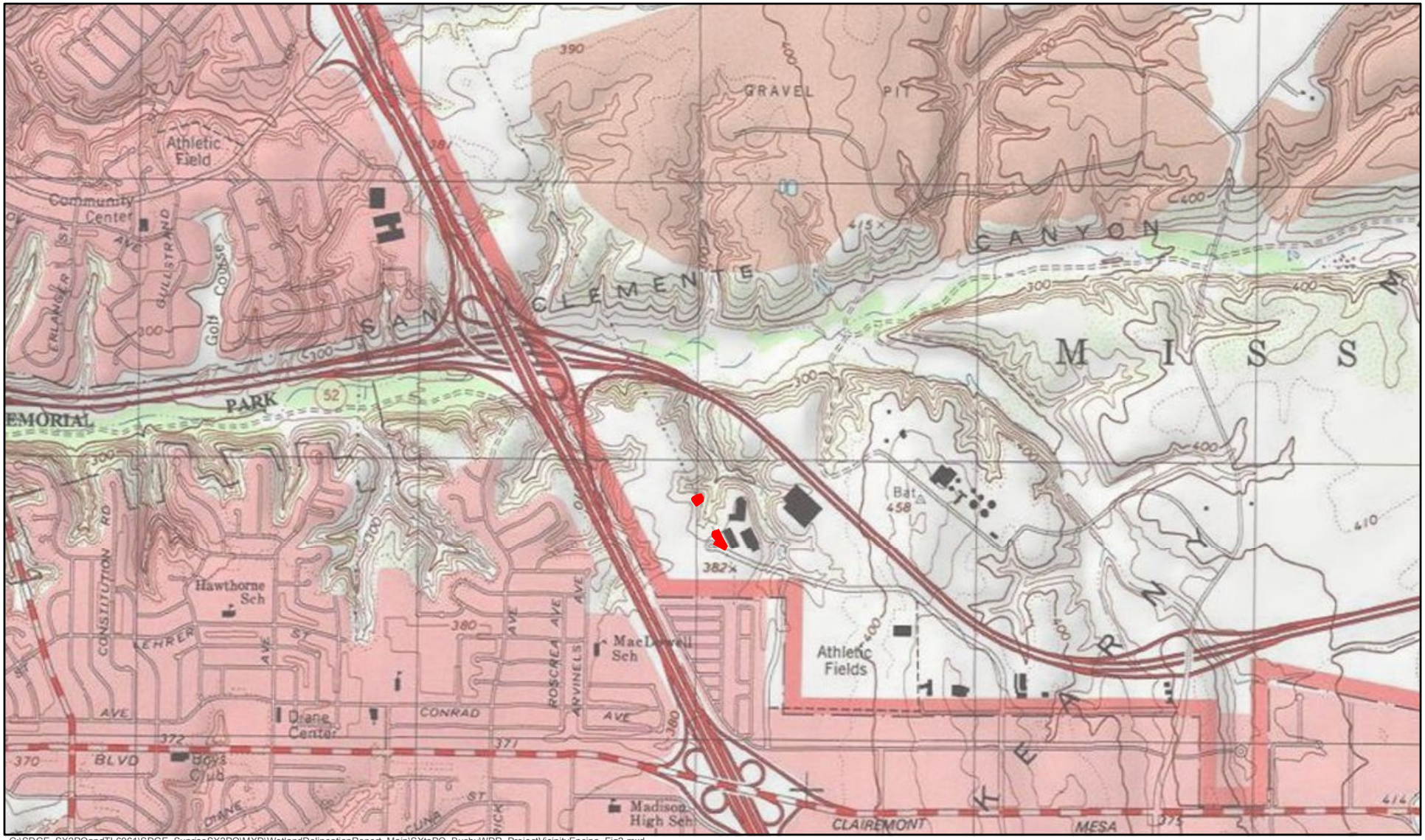
0 1 2 3 Miles

4/17/2015

TRC

SDGE

A Sempra Energy utility



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ProjectVicinityEncina_Fig2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Vicinity Map

Figure 2a-1

Original BSA

New Survey Area

California Coastal Zone Boundary

Sources: TRC, 2015; SDG&E, 2015, NatGeo, ESRI, DeLorme, HERE, UNEP-WCMC, USGS, NSA, ESA, METI, NOAA, iPC

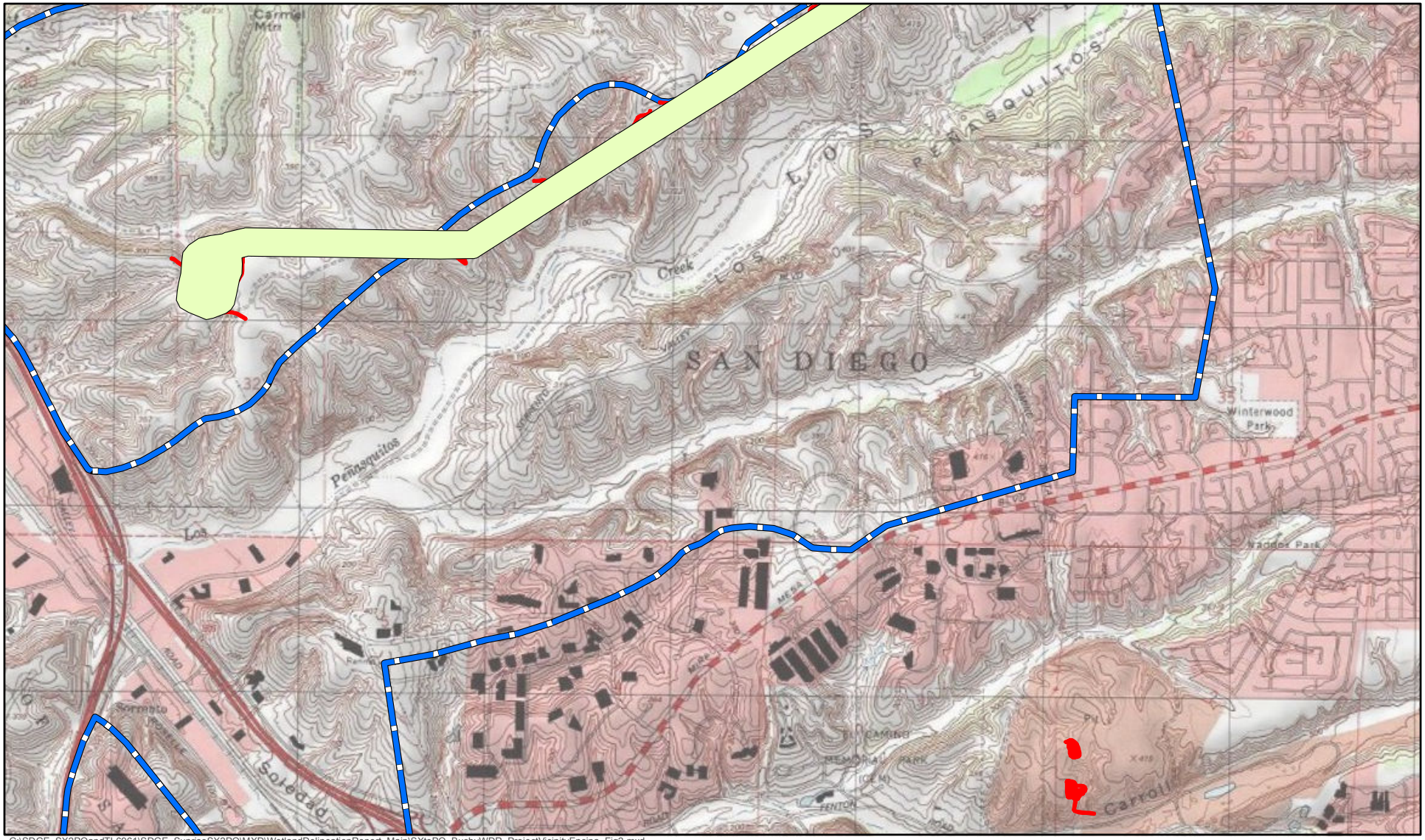
N W E S

0 0.15 0.3 0.45 Miles

4/17/2015

TRC

SDGE A Sempra Energy utility



Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Vicinity Map

Figure 2a-2

Original BSA

New Survey Area

California Coastal Zone Boundary

Sources: TRC, 2015; SDG&E, 2015, NatGeo, ESRI, DeLorme, HERE, UNEP-WCMC, USGS, NSA, ESA, METI, NOAA, iPC

N W E S

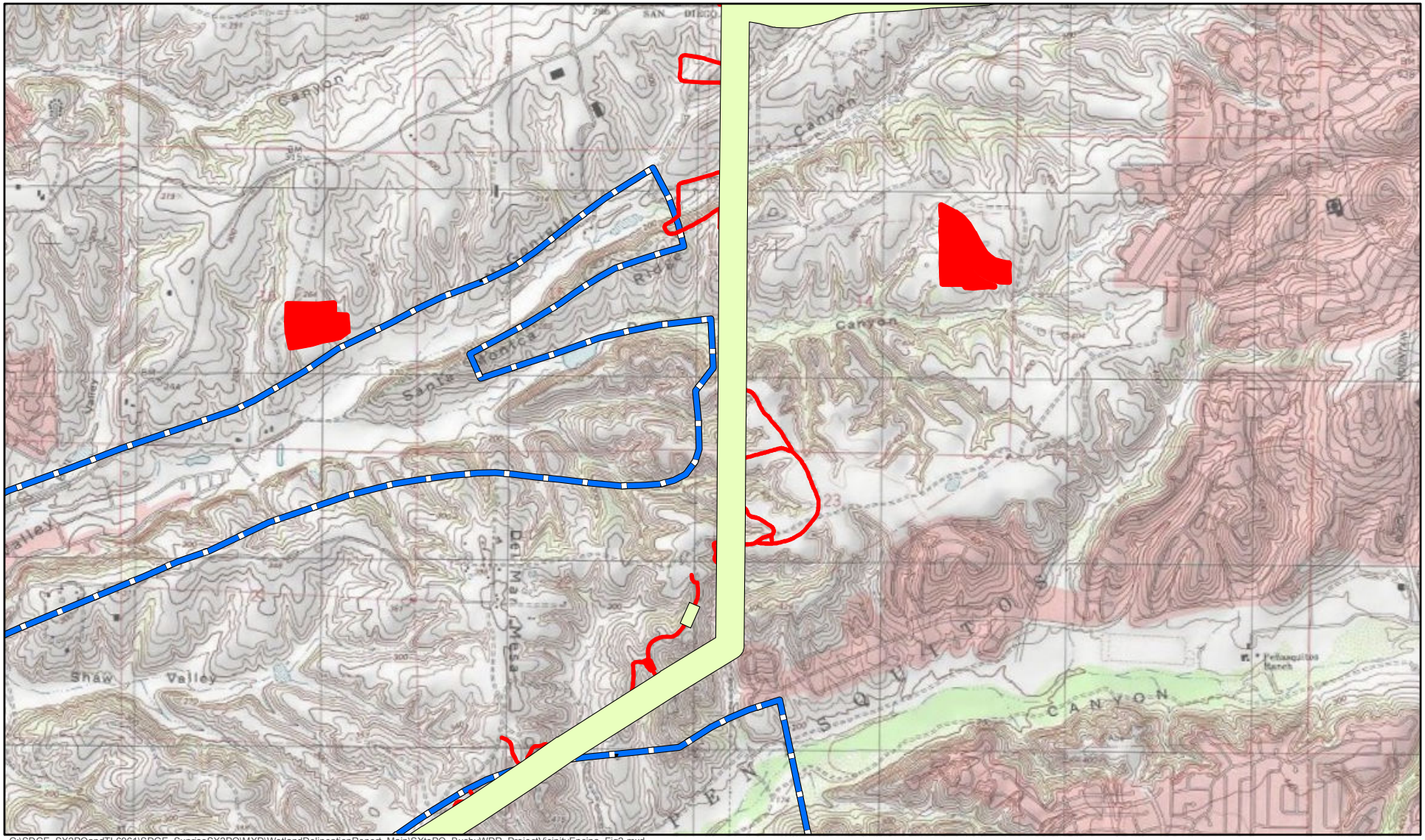
0 0.2 0.4 0.6 Miles

TRC

4/17/2015

SDGE

A Sempra Energy utility



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ProjectVicinityEncina_Fig2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Vicinity Map

Figure 2a-3

- Original BSA
- New Survey Area
- California Coastal Zone Boundary

Sources: TRC, 2015; SDG&E, 2015, NatGeo, ESRI, DeLorme, HERE, UNEP-WCMC, USGS, NSA, ESA, METI, NOAA, iPC

N W E S

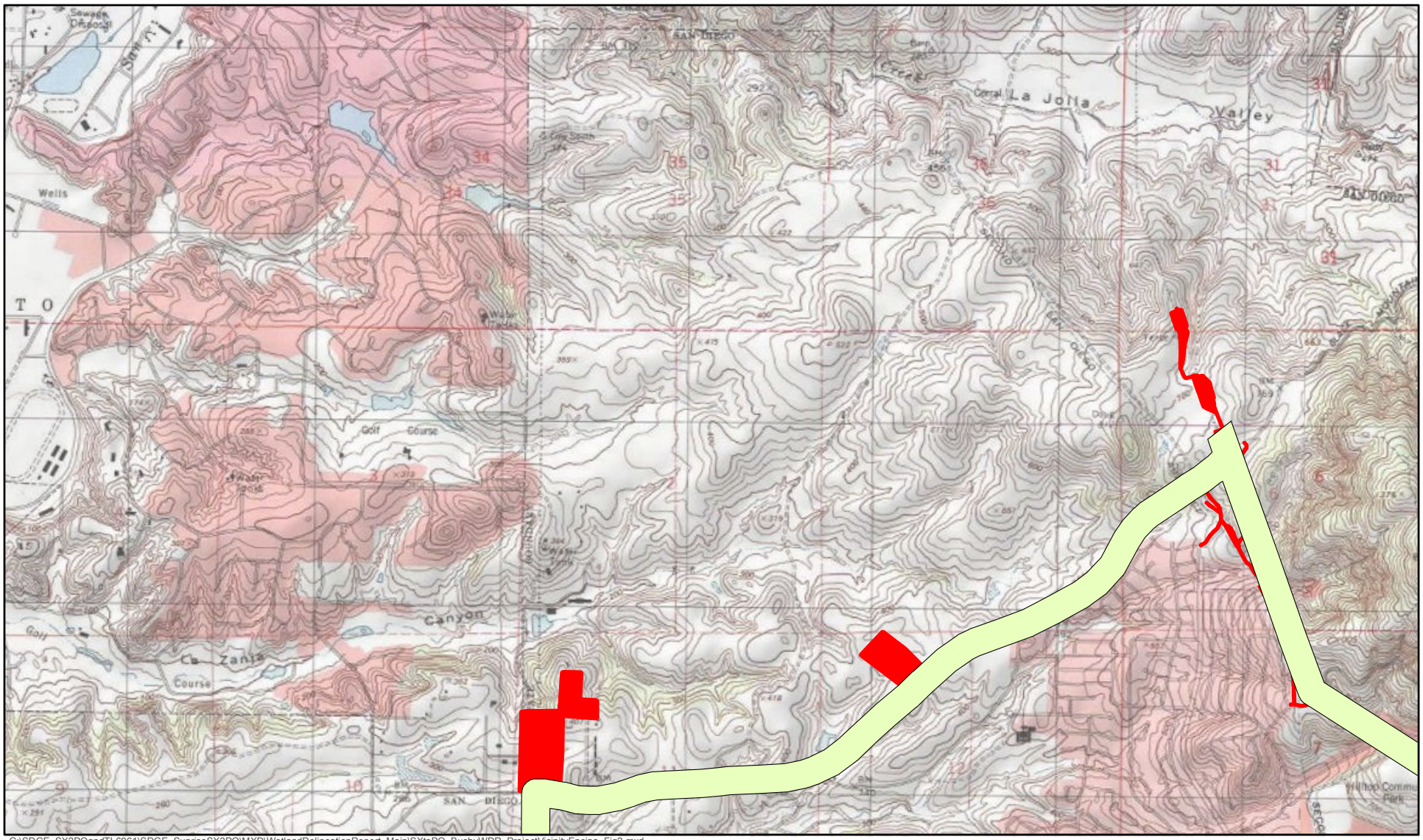
0 0.2 0.4 0.6 Miles

TRC

4/17/2015

SDGE

A Sempra Energy utility



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ProjectVicinityEncina_Fig2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Vicinity Map

Figure 2a-4

Original BSA

New Survey Area

California Coastal Zone Boundary

Sources: TRC, 2015; SDG&E, 2015, NatGeo, ESRI, DeLorme, HERE, UNEP-WCMC, USGS, NSA, ESA, METI, NOAA, iPC

N W E S

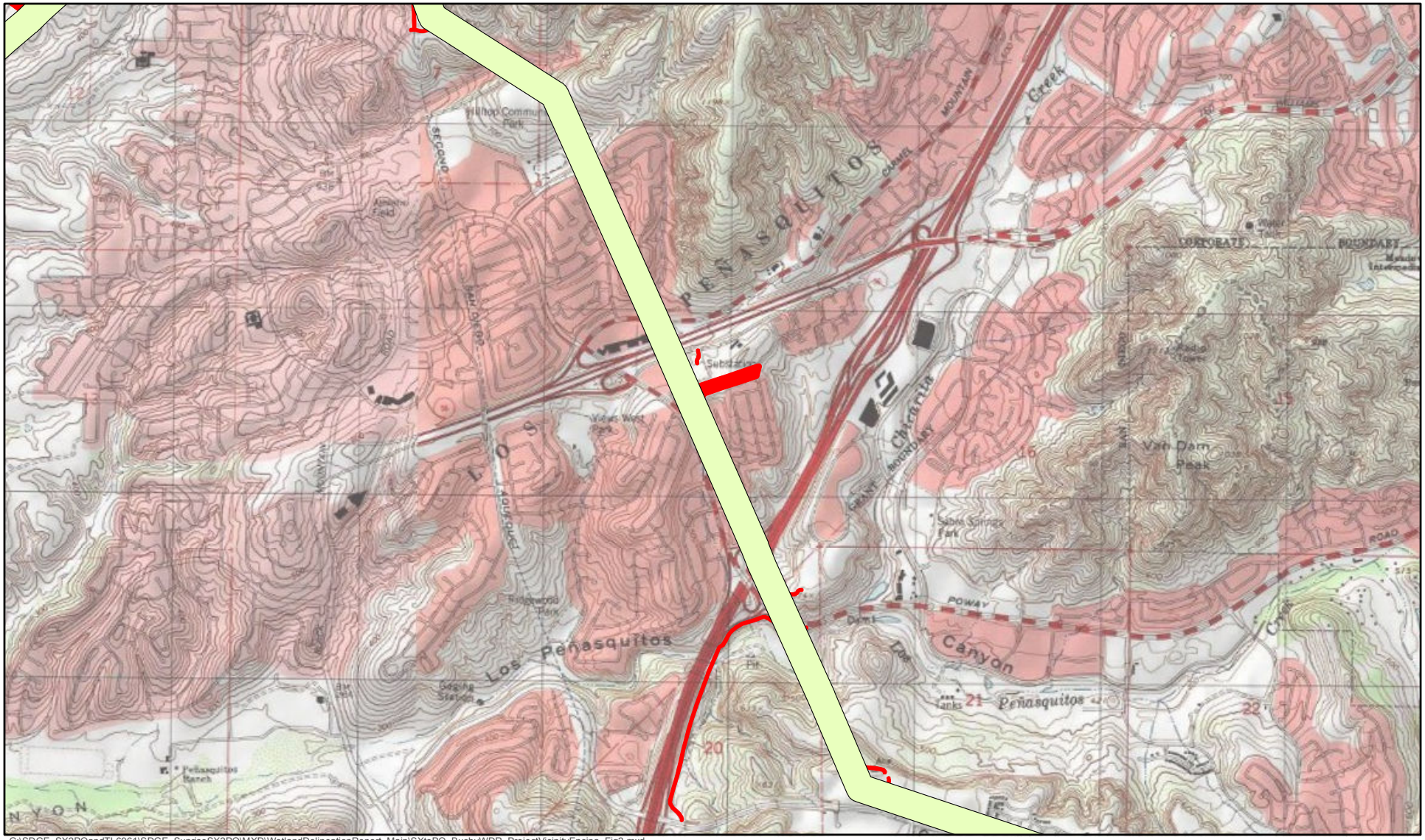
0 0.2 0.4 0.6 Miles

TRC

4/17/2015

SDGE

A Sempra Energy® utility



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ProjectVicinityEncina_Fig2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Vicinity Map

Figure 2a-5

- Original BSA
- New Survey Area
- California Coastal Zone Boundary

Sources: TRC, 2015; SDG&E, 2015, NatGeo, ESRI, DeLorme, HERE, UNEP-WCMC, USGS, NSA, ESA, METI, NOAA, iPC

N W E S

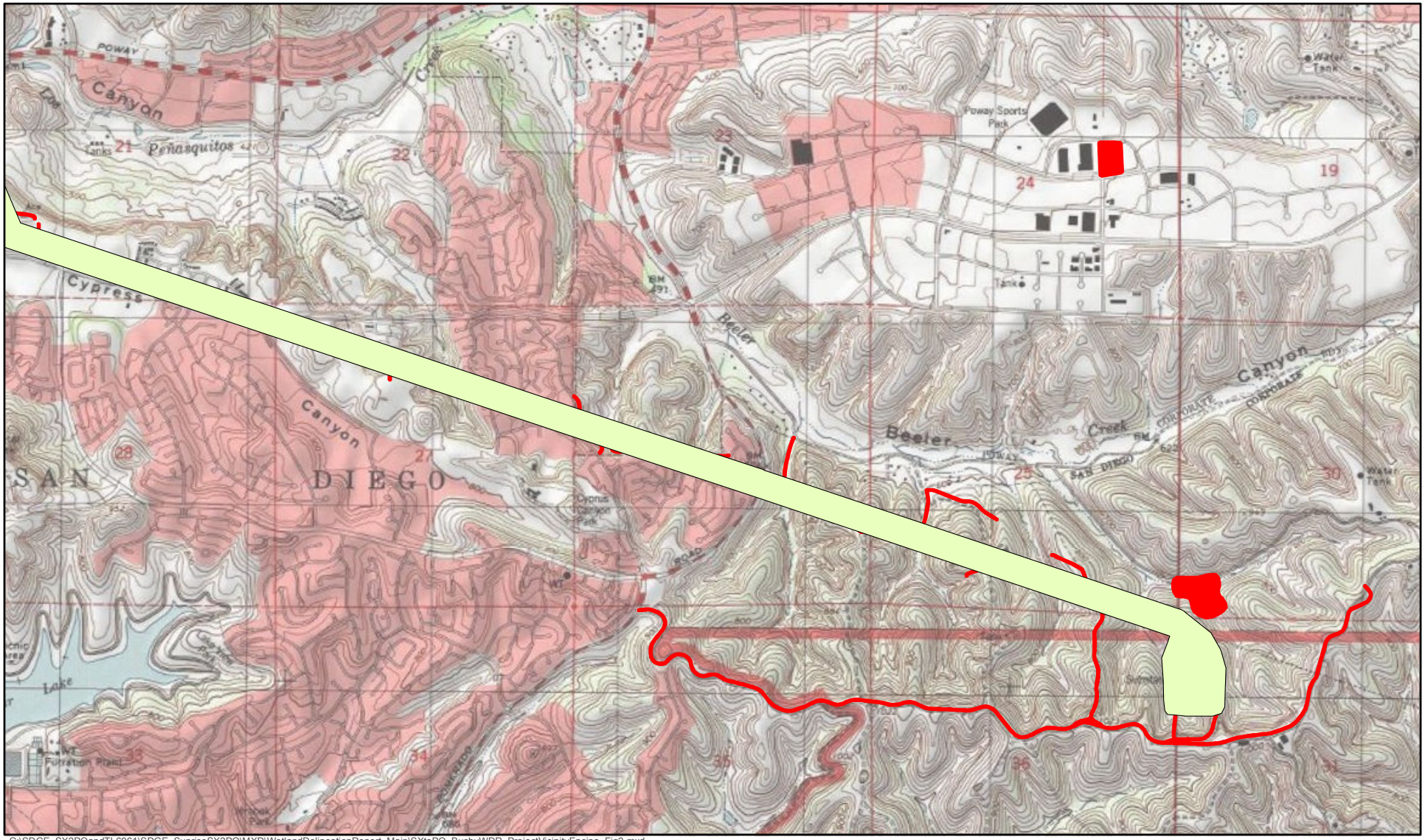
0 0.2 0.4 0.6 Miles

TRC

4/17/2015

SDGE

A Sempra Energy utility



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ProjectVicinityEncina_Fig2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Vicinity Map

Figure 2a-6

- Original BSA
- New Survey Area
- California Coastal Zone Boundary

Sources: TRC, 2015; SDG&E, 2015, NatGeo, ESRI, DeLorme, HERE, UNEP-WCMC, USGS, NSA, ESA, METI, NOAA, iPC

N W E S

0 0.2 0.4 0.6 Miles

TRC

4/17/2015

SDGE

A Sempra Energy utility

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

Page 1 of 32

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

1 inch = 200 feet

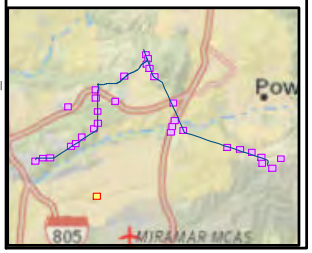
0 80 160 240

Feet

TRC

SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

Page 2 of 32

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

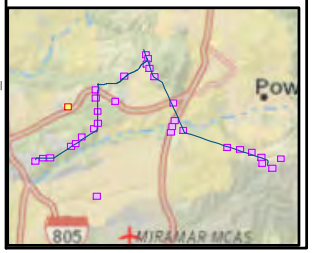
1 inch = 200 feet

0 80 160 240

Feet

TRC SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

Page 3 of 32

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- EI - 2014
- Busby - 2015
- EI -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

1 inch = 200 feet

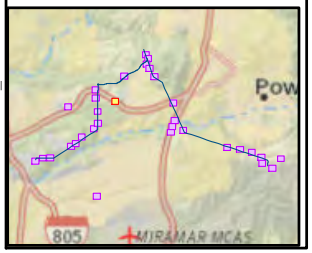
0 80 160 240

Feet

TRC

SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_MainSXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

Page 4 of 32

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

1 inch = 200 feet

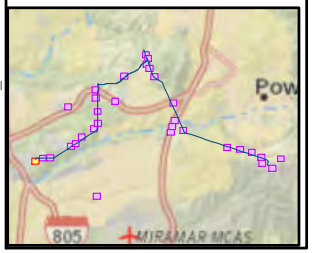
0 80 160 240

Feet

TRC

SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

Page 5 of 32

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

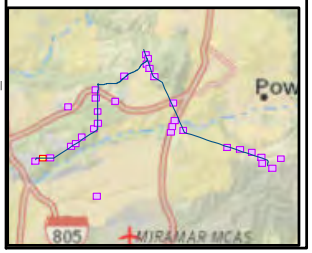
1 inch = 200 feet

0 80 160 240

Feet

TRC SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

1 inch = 200 feet

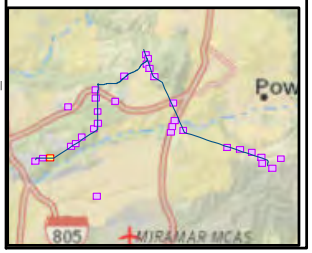
0 80 160 240

Feet

TRC

SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

Page 7 of 32

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

1 inch = 200 feet

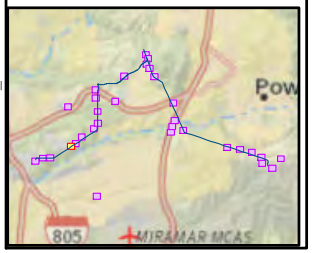
0 80 160 240

Feet

TRC

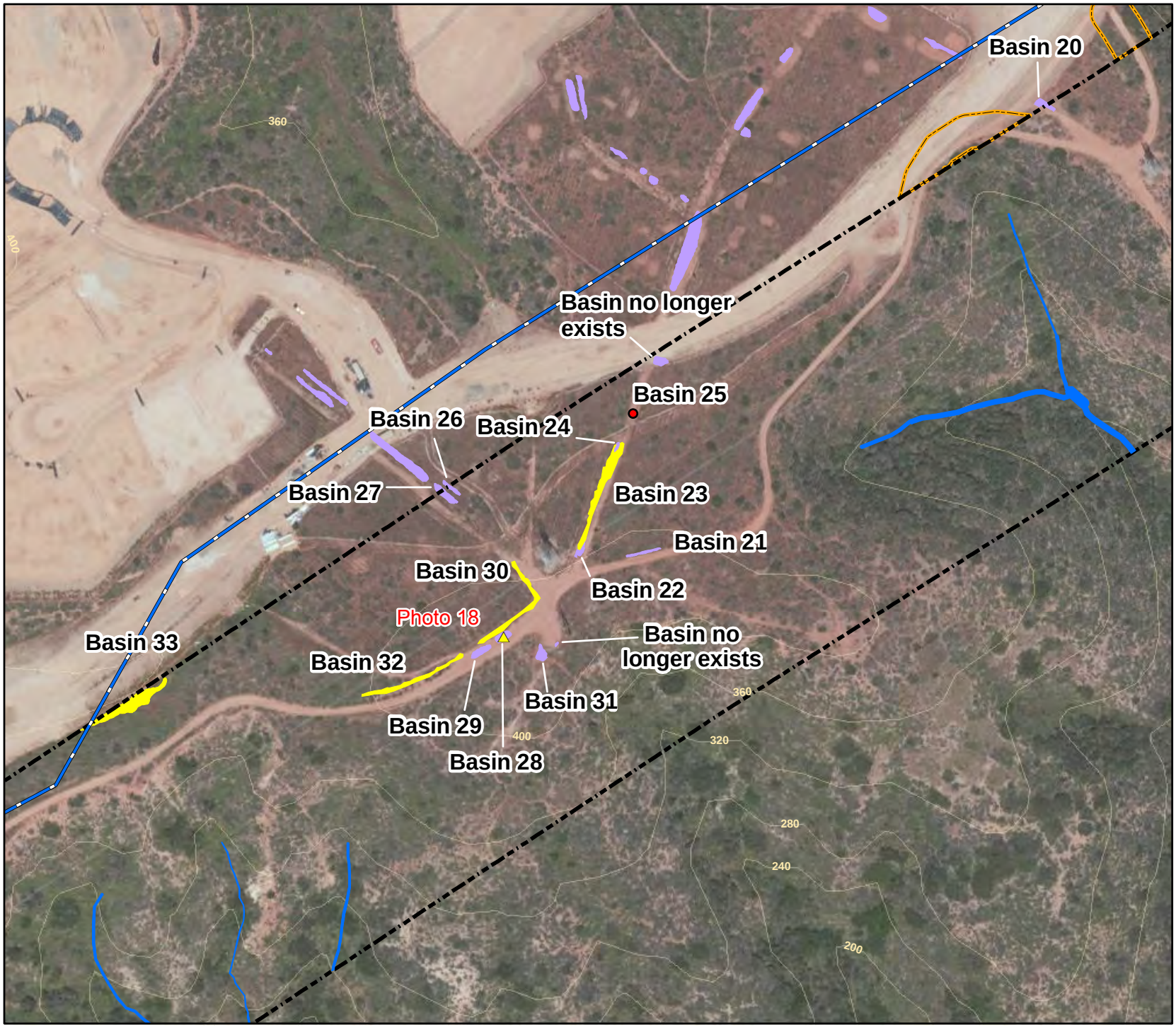
SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_MainSXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC



Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins
- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions
- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions
- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction
- RWQCB Waters of the State

1 inch = 200 feet

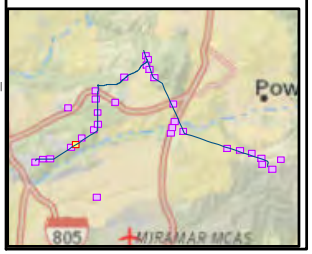
0 80 160 240

Feet

TRC

SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

1 inch = 200 feet

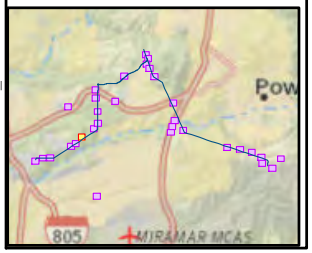
0 80 160 240

Feet

TRC

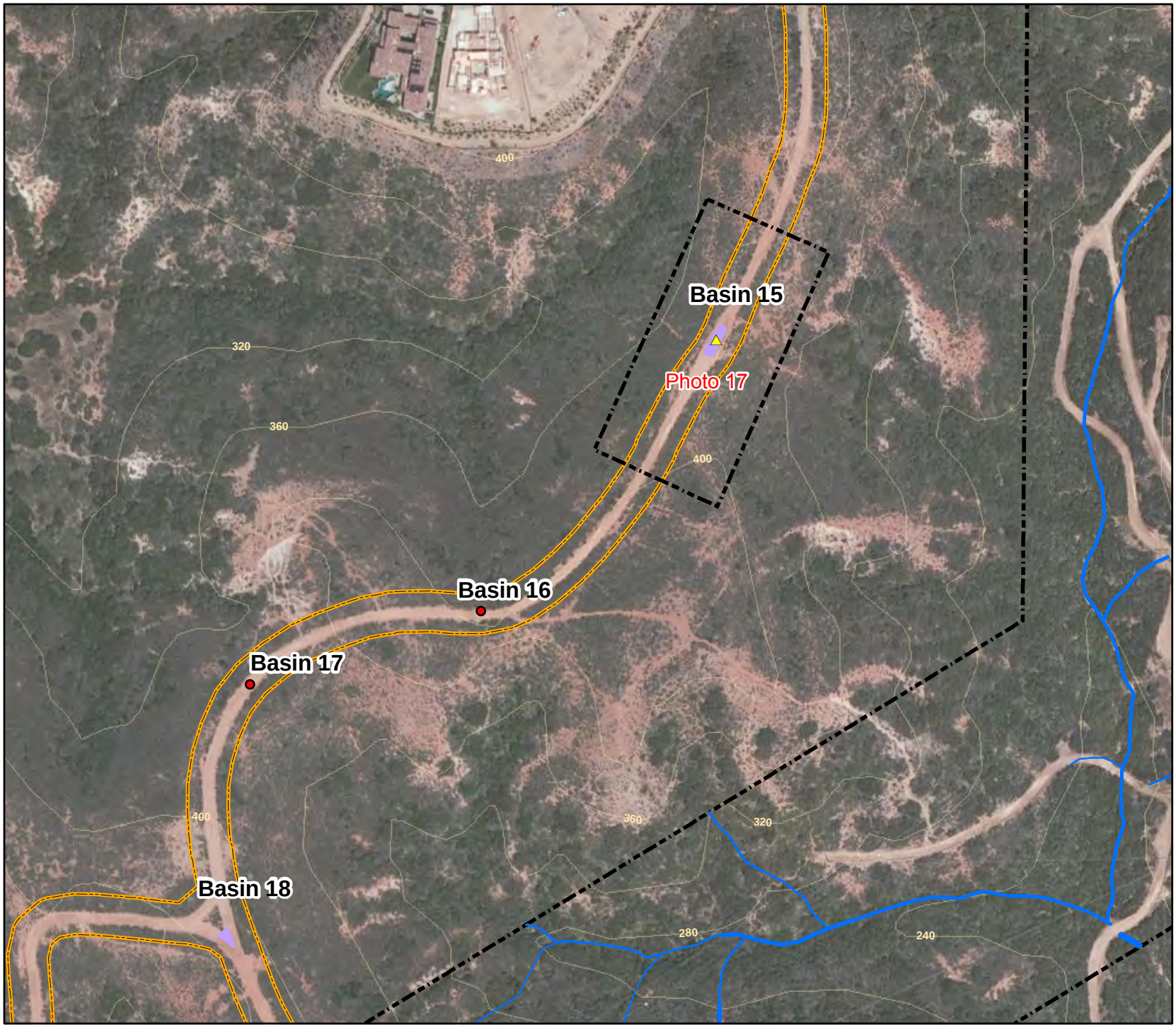
SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC



Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- EI - 2014
- Busby - 2015
- EI -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

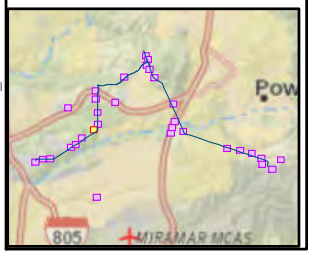
- RWQCB Waters of the State

1 inch = 200 feet

0 80 160 240

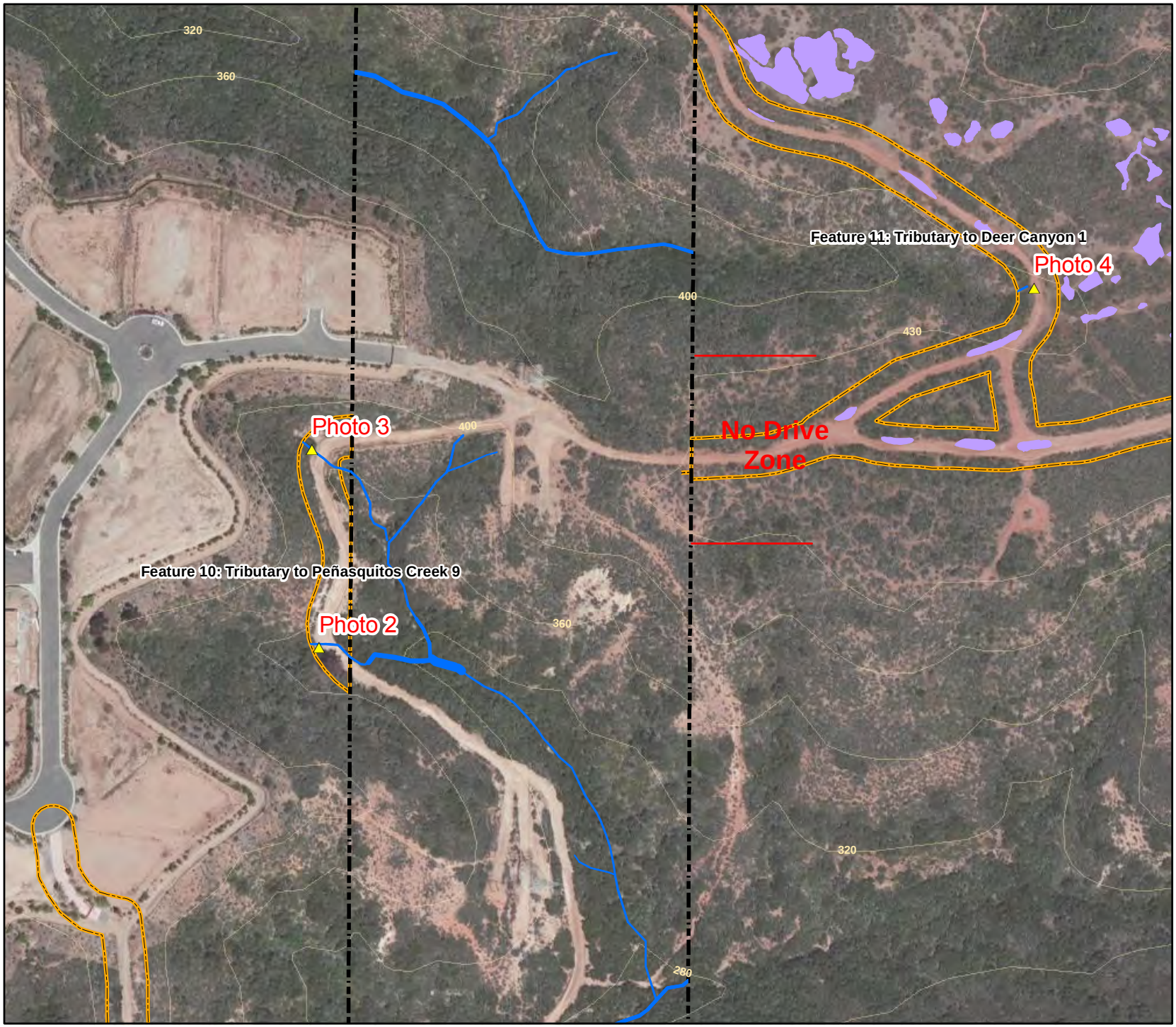
Feet

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC



Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins
- Busby - 2015
- EI - 2014
- Busby - 2015
- EI -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions
- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions
- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction
- RWQCB Waters of the State

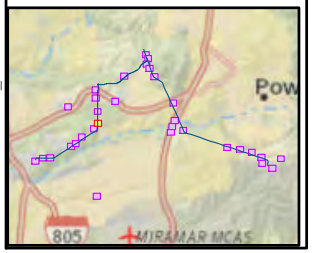
1 inch = 200 feet

0 80 160 240

Feet

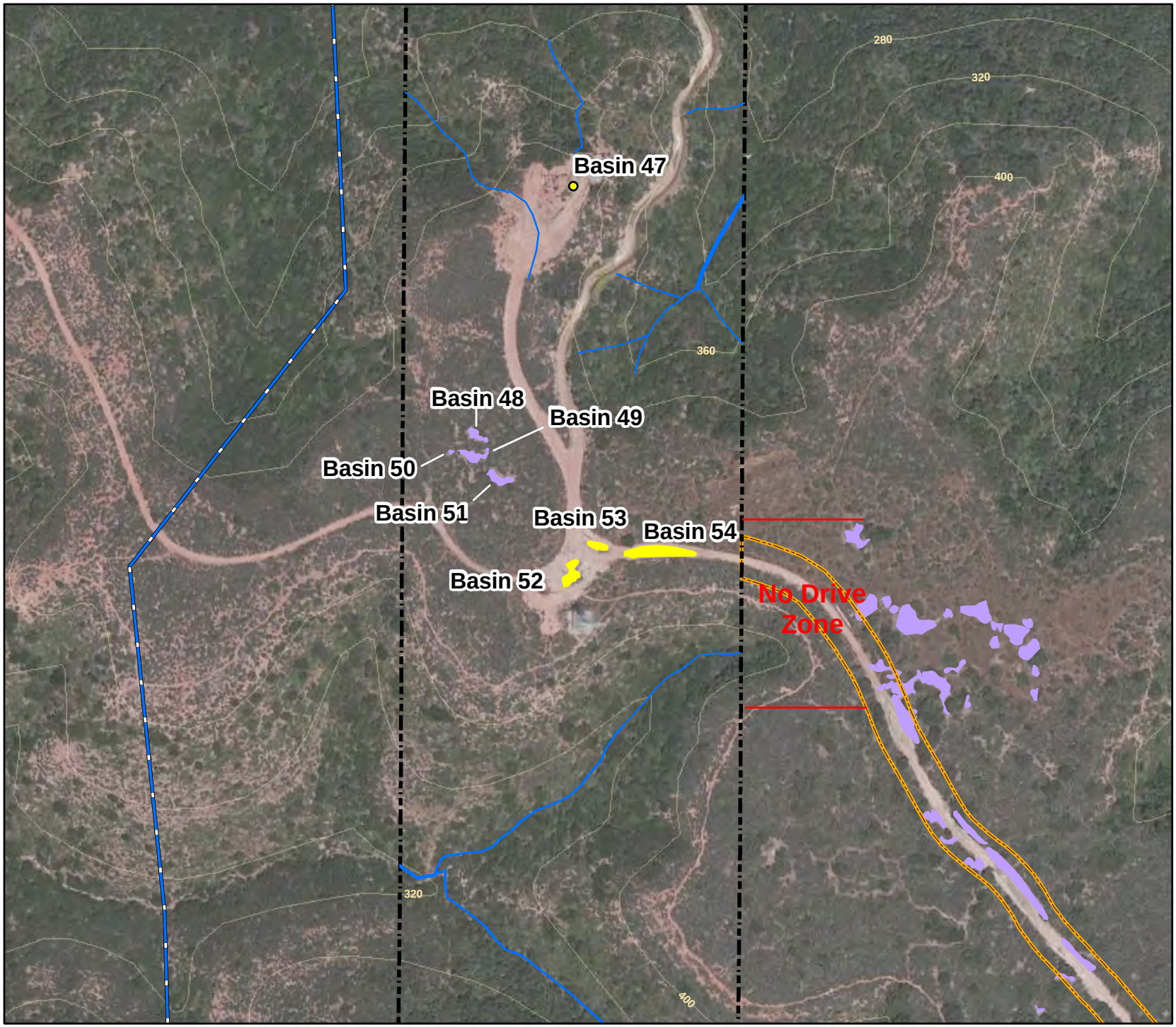
TRC SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC



Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins
- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions
- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions
- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction
- RWQCB Waters of the State

1 inch = 200 feet

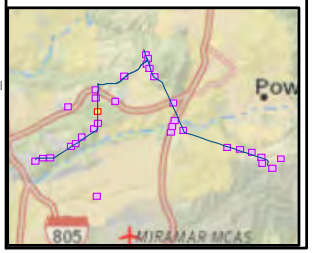
0 80 160 240

Feet

TRC

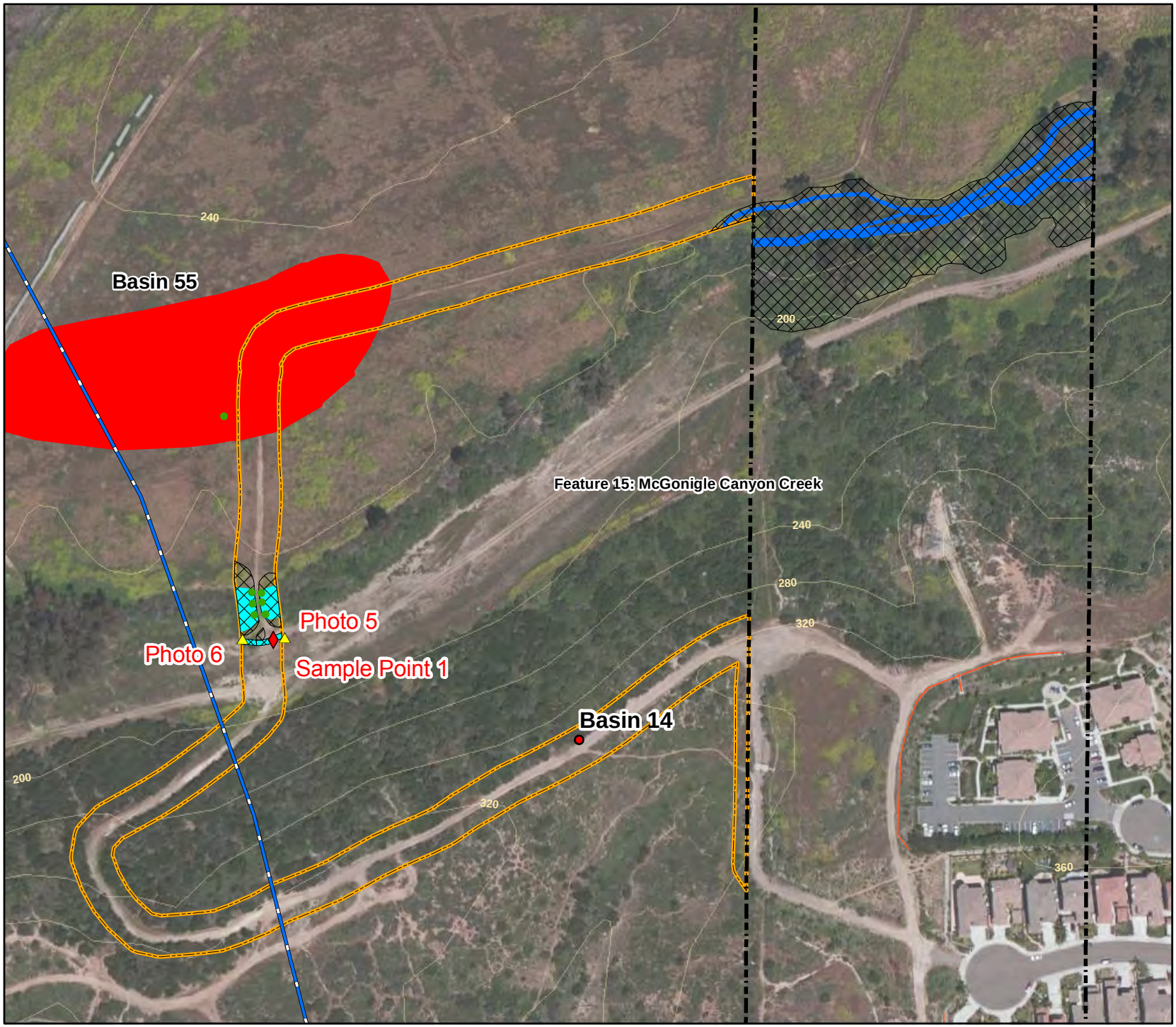
SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_MainSXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC



Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

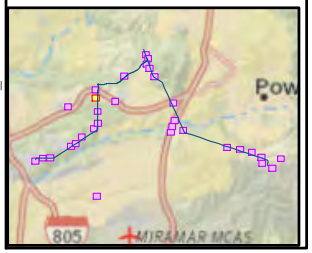
1 inch = 200 feet

0 80 160 240

Feet

TRC SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_MainSXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

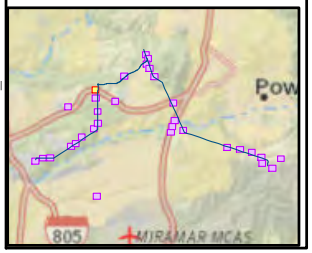
- RWQCB Waters of the State

1 inch = 200 feet

0 80 160 240

Feet

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

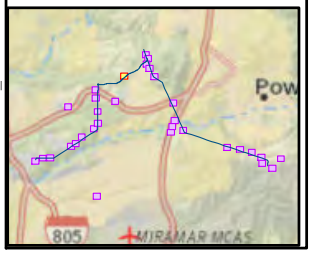
1 inch = 200 feet

0 80 160 240

Feet

TRC SDGE Sempra Energy

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

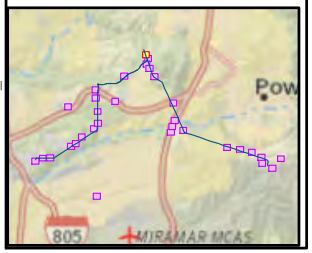
- RWQCB Waters of the State

1 inch = 200 feet

0 80 160 240

Feet

4/30/2015



Sources: 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, GEBCO, NOAA, iPC

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

1 inch = 200 feet

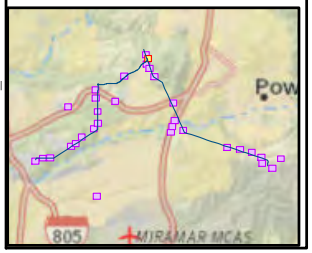
0 80 160 240

Feet

TRC

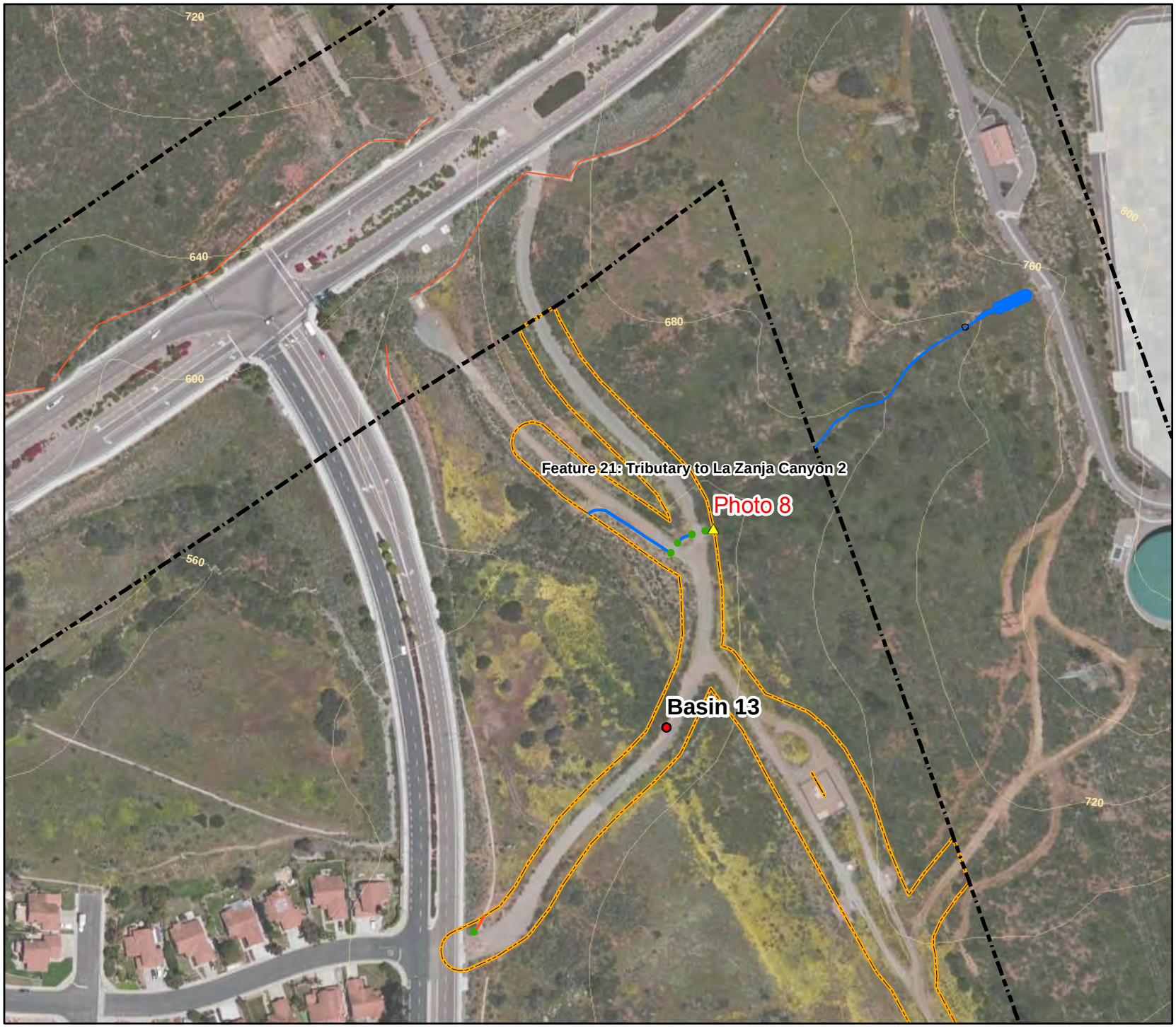
SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_MainSXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC



Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

1 inch = 200 feet

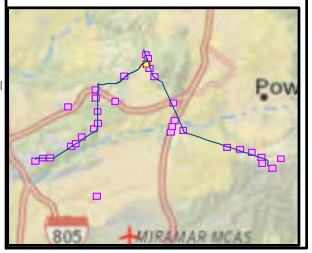
0 80 160 240

Feet

TRC

SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

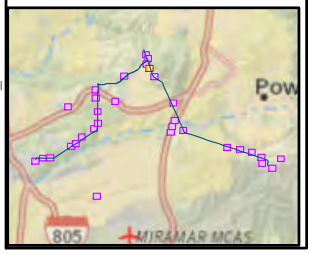
1 inch = 200 feet

0 80 160 240

Feet

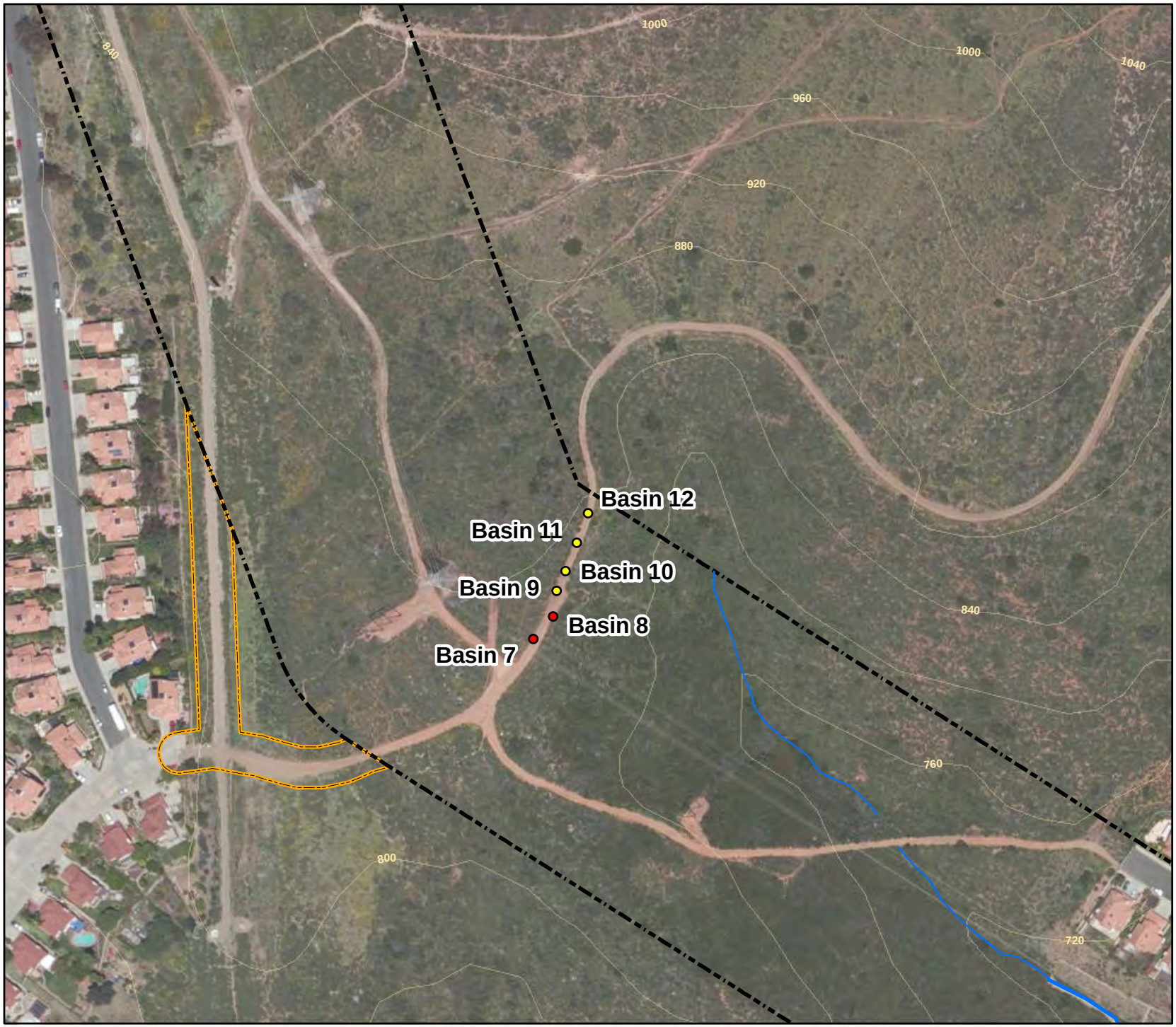
TRC SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC



Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- EI - 2014
- Busby - 2015
- EI -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

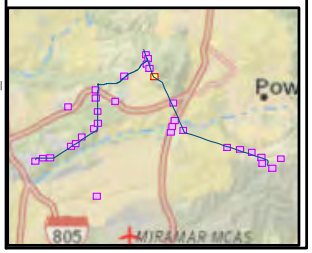
- RWQCB Waters of the State

1 inch = 200 feet

0 80 160 240

Feet

4/30/2015



Sources: 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, GEBCO, NOAA, iPC

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_MainlSXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

1 inch = 200 feet

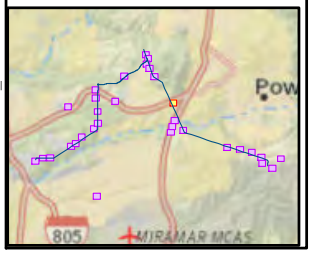
0 80 160 240

Feet

TRC

SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_MainSXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

Page 22 of 32

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- EI - 2014
- Busby - 2015
- EI -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

1 inch = 200 feet

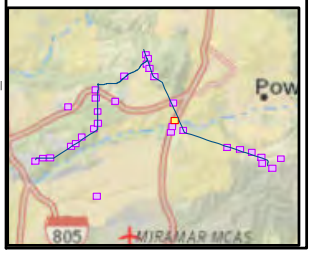
0 80 160 240

Feet

TRC

SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_MainSXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

1 inch = 200 feet

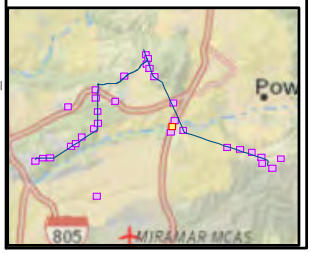
0 80 160 240

Feet

TRC

SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_MainSXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

Page 24 of 32

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

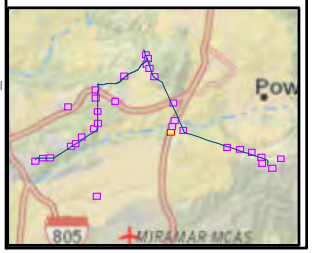
1 inch = 200 feet

0 80 160 240

Feet

TRC SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

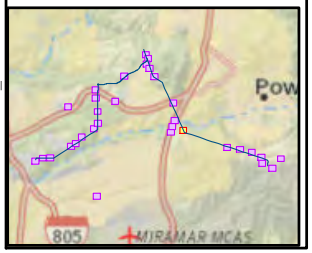
1 inch = 200 feet

0 80 160 240

Feet

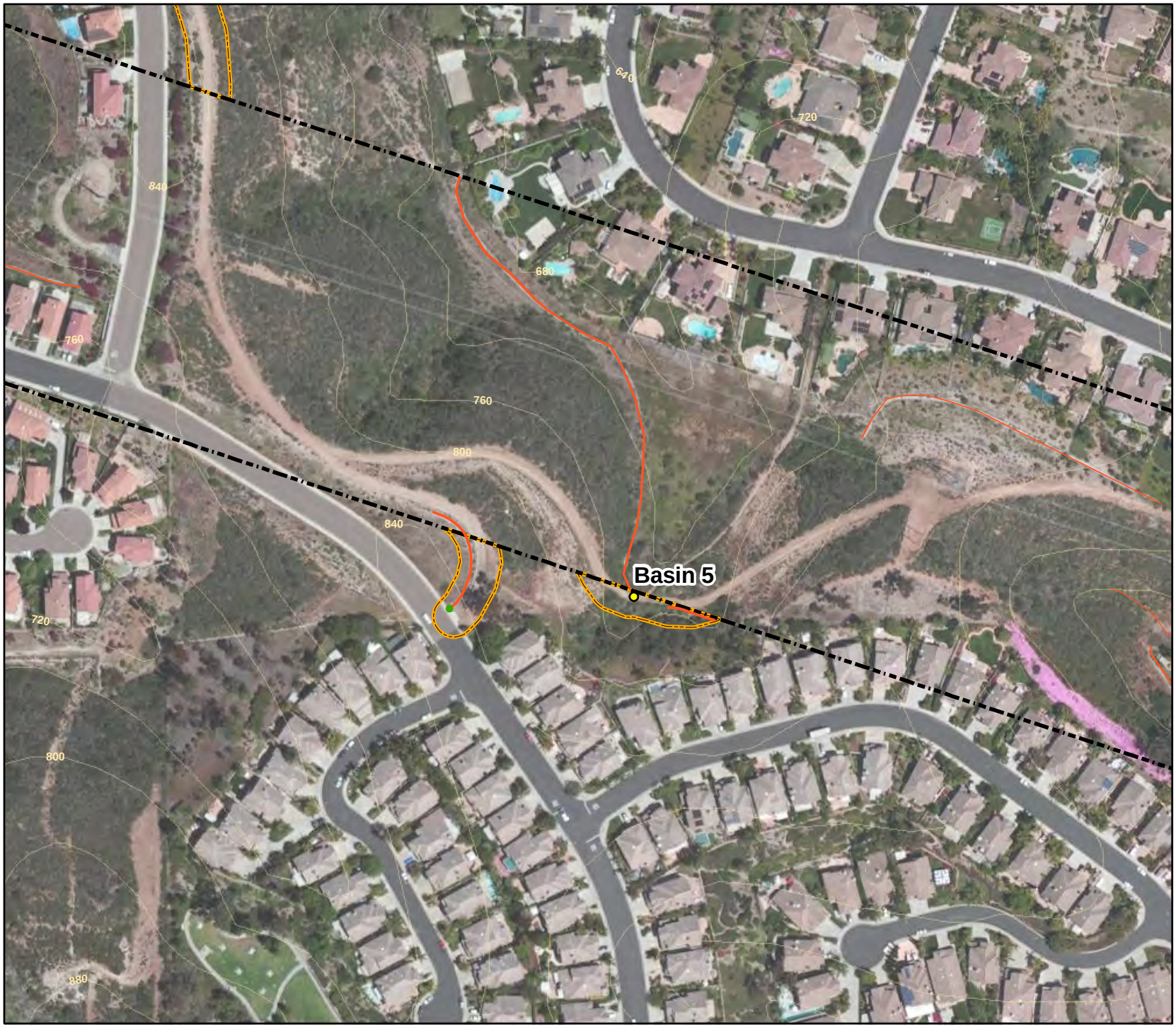
TRC SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC



Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

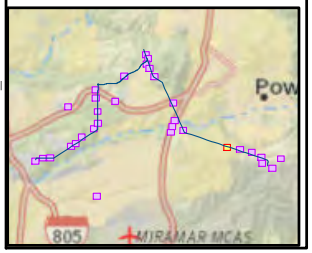
1 inch = 200 feet

0 80 160 240

Feet

TRC SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_MainSXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

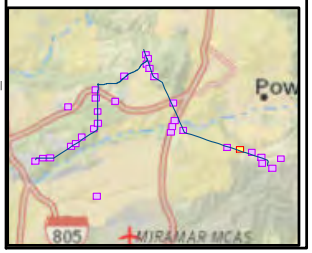
1 inch = 200 feet

0 80 160 240

Feet

TRC SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

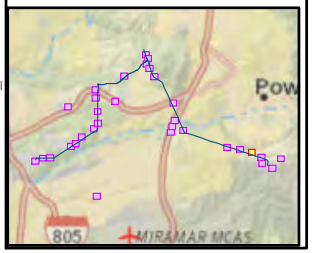
1 inch = 200 feet

0 80 160 240

Feet

TRC SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

1 inch = 200 feet

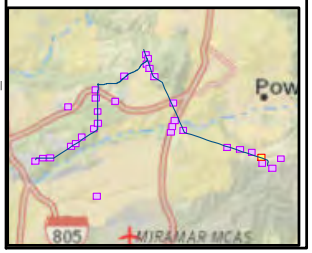
0 80 160 240

Feet

TRC

SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_MainSXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

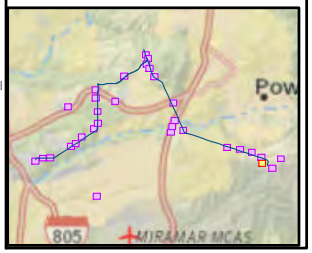
- RWQCB Waters of the State

1 inch = 200 feet

0 80 160 240

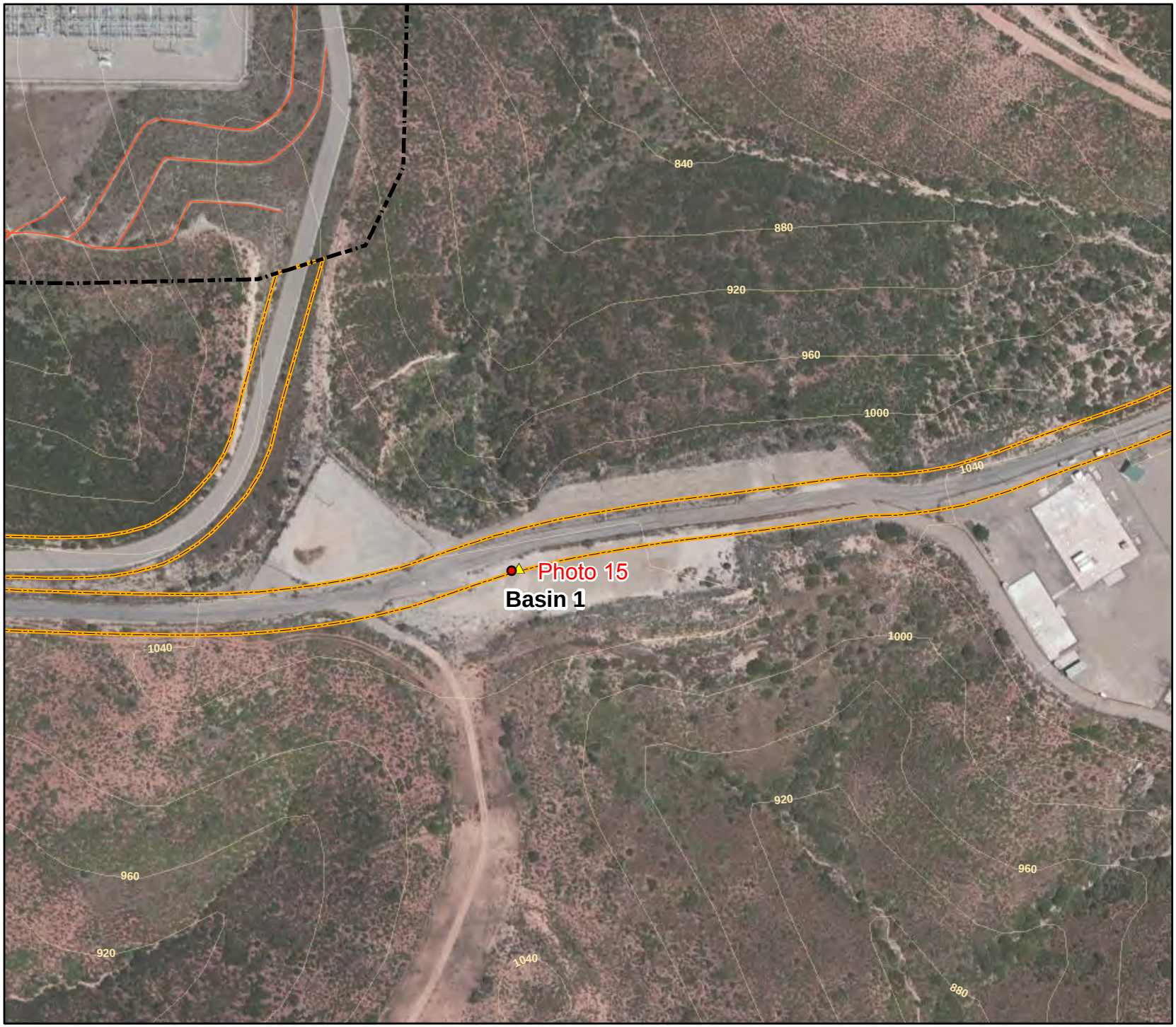
Feet

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_Main\SXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC



Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

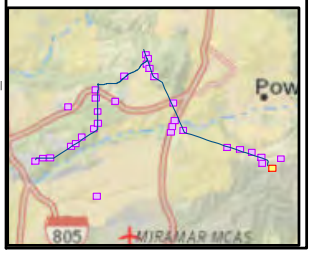
- RWQCB Waters of the State

1 inch = 200 feet

0 80 160 240

Feet

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_MainSXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC

Sycamore to Peñasquitos 230kV Transmission Line Project

Wetlands Field Map

Fig 3

- Culvert
- Photo
- Sample Point
- V-ditch (exempt)
- California Coastal Zone Boundary
- Original BSA
- New Survey Area

Basins

- Busby - 2015
- El - 2014
- Busby - 2015
- El -2014
- McMillan - 2009, 2010, 2011

CDFW Jurisdictions

- CDFW Riparian
- CDFW Unvegetated Streambed

USACE and RWQCB Jurisdictions

- Waters of U.S. and State
- Wetland Waters of U.S. and State

RWQCB Only Jurisdiction

- RWQCB Waters of the State

1 inch = 200 feet

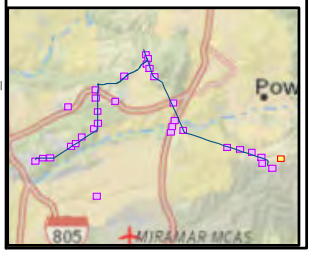
0 80 160 240

Feet

TRC

SDGE

4/30/2015



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelineationReport_MainSXtoPQ_BusbyWDR_ResultsMap_Fig3.mxd

Sources: 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, GEBCO, NOAA, iPC

APPENDIX B: USACE DATA FORMS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Sycamore to Penasquitos 230KV City/County: San Diego Sampling Date: 2/20/15

Applicant/Owner: SDGE State: CA Sampling Point: 1

Investigator(s): Darin Busby, Julie Fontaine Section, Township, Range: _____

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

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

Soil Map Unit Name: Olivenhain Series. Clayey-skeletal, kaolinitic Ultic Palexeralfs NWI classification: _____

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

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

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

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

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

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepsis	10%	N	FACW
2.			
3.			
4.			
Total Cover:	10%		
Sapling/Shrub Stratum			
1. Baccharis salicifolia	70	Y	FACW
2.			
3.			
4.			
5.			
Total Cover:	70%		
Herb Stratum			
1. Ambrosia psilostachya	5%	N	FAC
2. Picris echioides	2%	N	UPL
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	7%		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 1 (B)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes x No _____

Remarks:

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	2.5Y 5/3				C	RC	ClayLoam	Few, Fine, Prominent features
4-12+	10 YR 3/2	80%	10 YR 5/8	20%	C	PL	Clay Loam	Many, Fine, Distinct features

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

F6 Hydric Soil Criteria Met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Sycamore to Penasquitos 230KV City/County: San Diego Sampling Date: 2/20/15

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

Investigator(s): Darin Busby, Julie Fontaine Section, Township, Range: _____

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

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

Soil Map Unit Name: Riverwash soils NWI classification: _____

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

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

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

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

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

Remarks:

Project is situated on a bridge overpass over this jurisdictional feature.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix goodingii	20%	Y	FACW
2.			
3.			
4.			
Total Cover:	10%		
Sapling/Shrub Stratum			
1. Baccharis salicifolia	20	Y	FACW
2.			
3.			
4.			
5.			
Total Cover:	20%		
Herb Stratum			
1. Typha latifolia	20%	Y	OBL
2. Scirpus americanus	20%	Y	OBL
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	40%		
Woody Vine Stratum			
1.			
2.			
Total Cover:	70		

% Bare Ground in Herb Stratum 30% open water % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes x No _____

Remarks:

SOIL

Sampling Point: 2

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

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

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Riverwash soils with OBL wetland vegetation. Riverwash is a hydric soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- X 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)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- X Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No _____

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

Remarks:

Also observed shelving, scouring, debris jams, vegetation destruction, and disturbed leaf litter at the OHWM. Hydrology criteria met.

APPENDIX C: SITE PHOTOGRAPHS

Photograph 1. Feature 7: Tributary To Peñasquitos Creek 6 - USACE waters of the U.S., RWQCB waters of the State, CDFW unvegetated streambed.

Photograph 2. Feature 10: Tributary To Peñasquitos Creek 9 - USACE waters of the U.S., RWQCB waters of the State, CDFW unvegetated streambed.

Photograph 3. Feature 10: Tributary To Peñasquitos Creek 9 - USACE waters of the U.S., RWQCB waters of the State, CDFW unvegetated streambed.

Photograph 4. Feature 11: Tributary To Deer Canyon 1 - USACE waters of the U.S., RWQCB waters of the State, CDFW unvegetated streambed.

Photograph 5. Feature 15: McGonigle Canyon Creek - USACE wetland waters of the U.S., RWQCB wetland waters of the State, and CDFW riparian

Photograph 6. Feature 15: McGonigle Canyon Creek - USACE wetland waters of the U.S., RWQCB wetland waters of the State, and CDFW riparian

Photograph 7. Feature 18: Tributary to McGonigle Canyon Creek 3 – Erosional features joining into USACE waters of the U.S., RWQCB waters of the State, CDFW unvegetated streambed.

Photograph 8. Feature 21: Tributary to La Zanja Canyon 2 - USACE waters of the U.S., RWQCB waters of the State, CDFW unvegetated streambed.

Photograph 9. Feature 22: McGonigle Canyon Creek 5 - USACE waters of the U.S., RWQCB waters of the State, CDFW unvegetated streambed.

Photograph 10. Feature 27: Tributary to Peñasquitos Creek 10 - CDFW riparian.

Photograph 11. Feature 28: Los Peñasquitos Creek - USACE wetland waters of the U.S., RWQCB wetland waters of the State, and CDFW riparian.

Photograph 12. Feature 32: Tributary to Beeler Creek 1 - USACE waters of the U.S., RWQCB waters of the State, CDFW unvegetated streambed.

Photograph 13. Feature 32: Tributary to Beeler Creek 1 - CDFW Riparian

Photograph 14. Feature 32: Tributary to Beeler Creek 1 - USACE waters of the U.S., RWQCB waters of the State, CDFW unvegetated streambed.

Photograph 15. Basin 1 within dirt road edge.

Photograph 16. Basin 3 within dirt access road.

Photograph 17. Basin 15 within dirt access road.

Photograph 18. Basin 28 within dirt access road edge.

Photograph 19. Basin 41 east of dirt access road.

Photograph 20. Exempt, non-jurisdictional v-ditches.

Photograph 21. Exempt, non-jurisdictional riprap-lined swale from constructed detention basin.

MEMORANDUM

TO: Debbie Collins, San Diego Gas & Electric
Tamara Spear, San Diego Gas & Electric

FROM: Darin Busby, Busby Biological Services, Inc.

DATE: April 15, 2015

RE: Final Supplemental Jurisdictional Delineation Memorandum for the Encina Hub Portion of the Proposed Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, San Diego County, California

---

On behalf of Chambers Group, Inc. and San Diego Gas & Electric Company (SDG&E), Busby Biological Services, Inc. (BBS) conducted a supplemental jurisdictional delineation for SDG&E's Sycamore to Peñasquitos 230 kilovolt (kV) Transmission Line Project (Proposed Project) located in San Diego County, California (Appendix A: Figure 1). Environmental Intelligence, LLC (EI) conducted the jurisdictional delineation within the original 500-foot wide Biological Survey Area (BSA) for the Proposed Project (EI 2014). This supplemental jurisdictional delineation was conducted to identify and delineate all jurisdictional wetland resources within a newly added portion of the Proposed Project, referred to as the Encina Hub (Appendix A: Figure 2), that are potentially under the jurisdiction of the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), California Department of Fish and Wildlife (CDFW), and/or the California Coastal Commission (CCC).

This memorandum provides a brief description of Proposed Project, regulatory setting, methods, and results. This information is intended to supplement the information provided in the Jurisdictional Delineation of SDG&E's Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project (EI 2014). Please refer to the EI jurisdictional delineation report for more detailed information on the Proposed Project, regulatory framework, and methods. For additional information pertaining to the biological resources associated with the Proposed Project, please refer to the Biological Technical Report (BTR; BBS 2014).

1.0 PROPOSED PROJECT LOCATION AND BACKGROUND INFORMATION

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-

Busby Biological Services, Inc. | 4629 Cass Street #192 | San Diego, CA 92109

driven need for a new 230 kV transmission line to connect the existing SDG&E Sycamore Canyon and Peñasquitos Substations. To satisfy the need 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 (Appendix A: Figure 1). 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 or within franchise position within existing public roadways.

During the initial planning phases of the Proposed Project, a 500-foot wide BSA was designated, and all biological studies associated with the Proposed Project were conducted within the BSA, including the original jurisdictional delineation conducted by EI and summarized in the Jurisdictional Delineation of SDG&E's Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project (EI 2014).

Since the initial biological studies were conducted within the BSA, several new areas have been added to the Proposed Project, including the Encina Hub. Additional biological surveys, including a jurisdictional delineation, are required within the areas that were not included in the original BSA. These additional biological surveys are being conducted in 2015 and will be summarized in various technical reports once these surveys have been completed.

This memorandum focuses on the regulatory setting, methods, and results for the focused jurisdictional delineation that was performed for the Encina Hub (Appendix A: Figures 1 through 4). The jurisdictional delineation survey area (survey area) for the Encina Hub is composed of the Proposed Project access roads with a 20-foot survey buffer and the Proposed Project work areas with 50-foot survey buffers (Appendix A: Figures 2 through 4). This memorandum is intended to supplement the information provided in the jurisdictional delineation report that was prepared by EI for the original BSA (EI 2014).

2.0 REGULATORY FRAMEWORK

A brief description of the regulatory framework of the USACE, RWQCB, CDFW, and the CCC is provided below.

2.1 U.S. Army Corps of Engineers

USACE regulates the discharge of dredged and/or fill material, both temporary and permanent, into waters of the U.S. and wetland waters of the U.S., pursuant to Section 404 of the Clean Water Act (CWA). USACE waters of the U.S. are delineated by the lateral and upstream/downstream extent of the ordinary high watermark (OHWM). USACE wetland waters of the U.S. are areas that contain wetland hydrology, hydric soils, and hydrophytic vegetation**.**

2.2 Regional Water Quality Control Board

RWQCB regulates discharge of dredged and/or fill material into waters of the State and wetland waters of the State, including isolated waters such as vernal pools and other waters showing lack of connectivity to a Traditional Navigable Waters (TNW), pursuant to Section 404 of the CWA and/or Section 13000 *et. seq.* of the California Water Code under the Porter-Cologne Water Quality Control Act. RWQCB waters of the State and wetland waters of the State regulated under Section 404 of the CWA are all areas defined as USACE waters of the U.S. and wetland waters of the U.S.

2.3 California Department of Fish and Wildlife

CDFW regulates activities that would substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake, pursuant to Section 1600 *et. seq.* of the California Fish and Game Code. CDFW typically extends its jurisdictional limit to the top of a stream, the bank of a lake, or the outer edge of the riparian vegetation, whichever is wider. In addition, 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

CCC regulates the drilling, filling, or dredging of wetlands within the coastal zone, pursuant to Section 30000 *et. seq.* of the California Public Resource Code under the California Coastal Act. CCC takes jurisdiction over wetlands within the Coastal Zone with only one criterion (i.e., wetland hydrology, hydric soils, or hydrophytic vegetation) required to be present in order for jurisdiction to be asserted.

3.0 METHODS

Prior to conducting the field survey, BBS conducted a desktop assessment for drainages and other aquatic resources. This desktop review consisted of a review of the Jurisdictional Delineation of San Diego Gas & Electric's Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project (EI 2014), U.S. Geological Survey 7.5- minute San Luis Rey topographic quadrangle containing the site, the U.S. Fish and Wildlife Service National Wetlands Inventory maps, and the U.S. Department of Agriculture Natural Resources Conservation Service Web Soil Survey and National List of Hydric Soils.

The field surveys were conducted using comparable techniques outlined in the EI jurisdictional delineation report (EI 2014) and the technical guidelines in the USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0; USACE 2008). In addition, other aquatic features were identified pursuant to criteria outlined in Section 1600 *et. seq.* of the California Fish and Game Code for CDFW jurisdictional areas and pursuant to the California Code of

Regulations Title 14 for CCC wetlands. All USACE data Pages are included in Appendix B.

4.0 RESULTS

BBS biologist Darin Busby and Trestles Environmental Corporation biologist Julie Fontaine conducted the majority of the jurisdictional delineation on January 28, 2015. The remaining portion of the jurisdictional delineation was completed by Mr. Busby on February 17, 2015. The survey area is composed of the Proposed Project access roads with a 20-foot survey buffer and the Proposed Project work areas with 50-foot survey buffers (Appendix A: Figures 2 through 4).

Five jurisdictional features occur within the survey area. A general description of the land use and vegetation, topography and hydrology, and soils within the survey area are provided in Section 4.1. A more detailed discussion of each jurisdictional feature is described in Section 4.2. In addition, Section 4.3 describes the exempt non-jurisdictional erosional features, swales, and concrete v-ditches within the survey area. A summary of the jurisdictional features is provided in Section 4.4. The boundaries and jurisdictions of these jurisdictional features are depicted in Appendix A (Figure 4, Pages 1 through 4), and detailed USACE data forms and photographs of the Sample Points are provided in Appendix B (USACE Data Forms) and Appendix C (Site Photographs).

4.1 General Description of Survey Area

This section provides a general description of the land use and vegetation, topography and hydrology, and soils within the survey area.

Land Use and Vegetation

Land use within the survey area consists primarily of undeveloped land and natural preserve lands. Adjacent land use includes a municipal golf course, hotels, agriculture, and additional undeveloped land and preserve lands. The survey area is dominated by the following vegetation communities: Diegan coastal sage scrub, disturbed Diegan coastal sage scrub, disturbed habitat, and bare ground. Other vegetation communities present in smaller proportions include southern riparian scrub, mulefat scrub, nonnative grassland, native grassland, ornamental, and developed lands (Appendix A: Figure 3).

Topography and Hydrology

The survey area contains gently sloping to moderately sloping topography, with elevations ranging from 240 feet above mean sea level (amsl) in the southern portion of the survey area to 40 feet amsl in the northeastern portion of the survey area. An un-named ephemeral drainage in the southwestern portion of the site runs north to connect with a riparian corridor in an unnamed canyon drainage within the northeastern portion of the survey area that provides intermittent to perennial surface

flows. These unnamed drainages eventually connect to Agua Hedionda Lagoon approximately 1,000 feet northwest of the survey area and the Pacific Ocean approximately 2 miles northwest of the survey area, both of which are TNWs.

Soils

The survey area contains the following soil types: Las Flores loamy fine sand, 15 to 30 percent slopes (LeE), Las Flores loamy fine sand, 2 to 9 percent slopes (LeC), and Salinas clay loam, 2 to 9 percent slopes (SbC) (NRCS 2015a). None of these soils are listed as a hydric soil by the Natural Resources Conservation Services (NRCS 2015b).

4.2 Description of Jurisdictional Features

This section provides a detailed description of each of the five jurisdictional drainage features that were identified within the survey area. A summary of the jurisdictional acreage of each feature is provided in Table 1.

Feature 1

Feature 1 occurs within a riparian corridor in the northeastern edge of the survey area (Appendix A: Figure 4, Page 2). This wetland feature is adjacent to and west of a braided channel dominated by southern riparian scrub, mulefat scrub, and fresh water marsh. The braided channel showed strong evidence of moderate to high-velocity flows (i.e., sediment deposits, debris jams, vegetation destruction, and disturbed leaf litter at the OHWM) and is an unnamed tributary to Agua Hedionda Creek, which connects to Agua Hedionda Lagoon and the Pacific Ocean.

Feature 1 is approximately 0.05 acre (approximately 160.72 linear feet) of USACE adjacent wetland waters of the U.S. and RWQCB wetland waters of the State, approximately 0.12 acre (approximately 200.78 linear feet) of CDFW Riparian and CCC Wetland (Table 1). The detailed USACE data forms and photographs of Sample Points 1 through 3 are provided in Appendix B (USACE Data Forms) and Appendix C (Site Photographs).

Feature 2

Feature 2 is located west of Feature 1 at the bottom of a swale in the northeastern edge of the survey area (Appendix A: Figure 4, Page 2). Feature 2 is dominated by mulefat scrub and has no OHWM or hydrological connection to Feature 1 or the main drainage channel that is just east of Feature 1 and outside the survey area. Feature 2 occurs over 100 feet west of the main drainage channel and is separated from Feature 1 by upland vegetation and a dirt access road that has formed a berm along the eastern edge of Feature 2. The high clay content of the soils in this area, combined with the berm formed by the road, has resulted in an isolated patch of mulefat scrub.

Table 1. Summary of Total Jurisdiction by Feature Number and Regulatory Agency

Feature Number	USACE				CDFW				RWQCB				CCC Wetland	
	Wetland W.O.U.S		W.O.U.S		Riparian		U.S.		Wetland W.O.S		W.O.S			
	acres	linear feet	acres	linear feet	acres	linear feet	acres	linear feet	acres	linear feet	acres	linear feet	acres	linear feet
1	0.05	160.72	--	--	0.12	200.78	--	--	0.05	160.72	--	--	0.12	200.78
2	--	--	--	--	--	--	--	--	--	--	--	--	0.08	136.69
3	--	--	0.01	107.23	--	--	0.01	107.23	--	--	0.01	107.23	0.01	107.23
4	--	--	0.01	137.45	--	--	0.01	137.45	--	--	0.01	137.45	0.01	137.45
5	--	--	0.00*	29.22	--	--	0.00*	29.22	--	--	0.00*	29.22	0.00	29.22
Total	0.05	160.72	0.02**	273.90	0.12	200.78	0.02**	273.90	0.05	160.72	0.02**	273.90	0.23**	611.37

*Acreages are approximate and rounded to the nearest hundredth of an acre.
**Totals represent actual totals without rounding error.

Wetland W.O.U.S = Wetland waters of the U.S.
W.O.U.S = Waters of the U.S.
Wetland W.O.S = Wetland waters of the State
W.O.S = Waters of the State
U.S. = Unvegetated Streambed

Feature 2 contains a total of approximately 0.08 acre (approximately 136.69 linear feet) of CCC Wetland (Table 1). The detailed wetland data forms and photographs of Sample Points 4 and 5 are provided in Appendix B (USACE Data Forms) and Appendix C (Site Photographs).

Feature 3

Feature 3 is an unnamed ephemeral drainage that runs from the southern to central portion of the survey area, eventually connecting offsite to the unnamed wetland associated with Feature 1, which connects to Agua Hedionda Creek, Agua Hedionda Lagoon, and the Pacific Ocean (Appendix A: Figure 4, Page 3). Feature 3 contains an OHWM and is moderately incised with hard sands and cobbles which are associated with high water velocities during and directly after storm events. This feature is approximately 4 feet wide and 3 feet deep below the surrounding uplands. The surrounding vegetation above the OHWM at the top of the bank contains disturbed Diegan coastal sage scrub.

Feature 3 contains a total of approximately 0.01 acre (approximately 107.23 linear feet) of USACE waters of the U.S., RWQCB waters of the State, CDFW unvegetated streambed, and CCC Wetland (Table 1). The location of Feature 3 and the boundaries of these jurisdictions are provided in Page 3 of Figure 4 (Appendix A). The detailed USACE data form and photograph of Sample Points 6 is provided in Appendix B (USACE Data Forms) and Appendix C (Site Photographs).

Feature 4

Feature 4 is an unnamed ephemeral drainage that runs offsite to the northeast from the central portion of the survey area, eventually connecting offsite to the unnamed wetland associated with Feature 1, which connects to Agua Hedionda Creek, Agua Hedionda Lagoon, and the Pacific Ocean (Appendix A: Figure 4, Page 3). Feature 4 contains an OHWM and is moderately incised with hard sands and cobbles which are associated with high water velocities during and directly after storm events. This feature is approximately 2 to 4 feet wide and 1 to 2 feet deep below the surrounding uplands. The surrounding vegetation above the OHWM at the top of the bank contains disturbed Diegan coastal sage scrub.

Feature 4 contains a total of approximately 0.01 acre (approximately 137.45 linear feet) of USACE waters of the U.S., RWQCB waters of the State, CDFW unvegetated streambed, and CCC Wetland (Table 1). The location of Feature 4 and the boundaries of these jurisdictions are provided in Page 3 of Figure 4 (Appendix A). The detailed wetland data form and photograph of Sample Points 7 is provided in Appendix B (Wetland Data Forms) and Appendix C (Site Photographs).

Feature 5

Feature 5 is an unnamed ephemeral drainage that begins at the base of an eroded, filled slope associated with an adjacent dirt access road. The drainage runs offsite to the east from the southeastern portion of the survey area, eventually connecting offsite to the unnamed wetland associated with Feature 1, which connects to Agua Hedionda Creek, Agua Hedionda Lagoon, and the Pacific Ocean (Appendix A: Figure 4, Page 5).

Feature 5 contains an OHWM and is moderately incised with hard sands and cobbles which are associated with high water velocities during and directly after storm events. This feature is approximately 4 feet wide and 3 feet deep below the surrounding uplands. The surrounding vegetation above the OHWM at the top of the bank contains disturbed Diegan coastal sage scrub.

Feature 5 contains less than 0.01 acre (approximately 29.22 linear feet) of USACE waters of the U.S., RWQCB waters of the State, CDFW unvegetated streambed, and CCC Wetland (Table 1). The location of Feature 5 and the boundaries of these jurisdictions are provided in Page 5 of Figure 4 (Appendix A). The detailed USACE data form and photograph of Sample Points 8 is provided in Appendix B (USACE Data Forms) and Appendix C (Site Photographs).

4.3 Description of Exempt, Non-jurisdictional Swales, Erosional Features and Concrete V-Ditches

A total of approximately 462 linear feet of exempt, non-jurisdictional concrete v-ditches are present within the survey area (Appendix A: Figure 4, Pages 1 and 2). The USACE and other regulatory agencies generally do not assert jurisdiction over concrete v-ditches, which are considered municipal separate storm sewer systems (MS4) erosion control features. The concrete v-ditches within the survey area have been built in uplands to capture erosional runoff from the surrounding dirt access roads and power line tower pads and transmit it to the municipal storm sewer system.

In addition, several swales and erosional features occur within and adjacent to the dirt access roads and power line tower pads within the survey area. The USACE and other regulatory agencies generally do not assert jurisdiction over erosional features, such as gullies, small washes, and swales that are characterized by low volume and infrequent or short duration flows. Riprap, waterbars, and fiber rolls have been placed in some portions of these erosional features to provide erosion control support.

4.4 Summary of Jurisdictional Features

A summary of the acreage, itemized by regulatory agency and vegetation community, is provided in Table 2 and summarized below.

Table 2. Summary of Total Jurisdiction by Regulatory Agency and Vegetation Community

Regulatory Agency	Total Acres	Total Linear Feet	Dominant Vegetation Type (acre)				
			Bare Ground	Diegan Coastal Sage Scrub	Diegan Coastal Sage Scrub - Disturbed	Mulefat Scrub	Southern Riparian Scrub
USACE (Total)	0.07**	434.62	0.00*	0.01	0.01	0.00	0.05
Wetland W.O.U.S	0.05	160.72	0.00	0.00	0.00	0.00	0.05
W.O.U.S	0.02**	273.90	0.00*	0.01	0.01	0.00	0.00
RWQCB (Total)	0.07**	434.62	0.00*	0.01	0.01	0.00	0.05
Wetland W.O.S	0.05	160.72	0.00	0.00	0.00	0.00	0.05
W.O.S	0.02**	273.90	0.00*	0.01	0.01	0.00	0.00
CDFW (Total)	0.15**	474.68	0.00*	0.01	0.01	0.00	0.13
Riparian	0.13	200.78	0.00	0.00	0.00	0.00	0.13
U.S.	0.02**	273.90	0.00*	0.01	0.01	0.00	0.00
CCC (Total)	0.23**	611.37	0.00*	0.01	0.01	0.08	0.12

*Acreages are approximate and rounded to the nearest hundredth of an acre.
**Totals represent actual totals without rounding error.

Wetland W.O.U.S = Wetland waters of the U.S.
W.O.U.S = Waters of the U.S.
Wetland W.O.S = Wetland waters of the State
W.O.S = Waters of the State
U.S. = Unvegetated Streambed

USACE Jurisdiction

A total of four features that are under the jurisdiction of USACE were identified within the survey area. Of these four features, one feature (Feature 1; Appendix A: Figure 4, Page 2) has a total of approximately 0.05 acre (approximately 160.72 linear feet) of USACE wetland waters of the U.S., and the other three features (Features 3 through 5; Appendix A: Figure 4, Pages 3 and 4) have a total of approximately 0.02 acre (approximately 273.90 linear feet) of USACE waters of the U.S.

RWQCB Jurisdiction

A total of four features that are under the jurisdiction of RWQCB were identified within the survey area. Of these four features, one feature (Feature 1; Appendix A: Figure 4, Page 2) has a total of approximately 0.05 acre (approximately 160.72 linear feet) of RWQCB wetland waters of the State, and the other three features (Features 3 through 5; Appendix A: Figure 4, Pages 3 and 4) have a total of approximately 0.02 acre (approximately 273.90 linear feet) of RWQCB waters of the State.

CDFW Jurisdiction

A total of four features that are under the jurisdiction of CDFW were identified within the survey area. Of these four features, one feature (Feature 1; Appendix A: Figure 4, Page 2) has a total of approximately 0.13 acre (approximately 200.78 linear feet) of CDFW riparian and the other three features (Features 3 through 5; Appendix A: Figure 4, Pages 3 and 4) have a total of approximately 0.02 acre (approximately 273.90 linear feet) of CDFW unvegetated streambed.

CCC Jurisdiction

A total of five features that are under the jurisdiction of CCC were identified within the survey area. CCC jurisdiction totals approximately 0.23 acre (approximately 611.37 linear feet) of CCC wetland within Features 1 through 5 (Appendix A: Figure 4, Pages 2 through 4).

5.0 CONCLUSION

Any anticipated Proposed Project impacts to these features would require the appropriate permit authorizations from the corresponding regulatory agency.

6.0 REFERENCES

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors.
2012 *The Jepson manual: vascular plants of California, second edition*. University of California Press, Berkeley.

Busby Biological Services, Inc. (BBS)
2014 *Biological Technical Report for the Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project*, City of San Diego, San Diego County, California. March 2014.

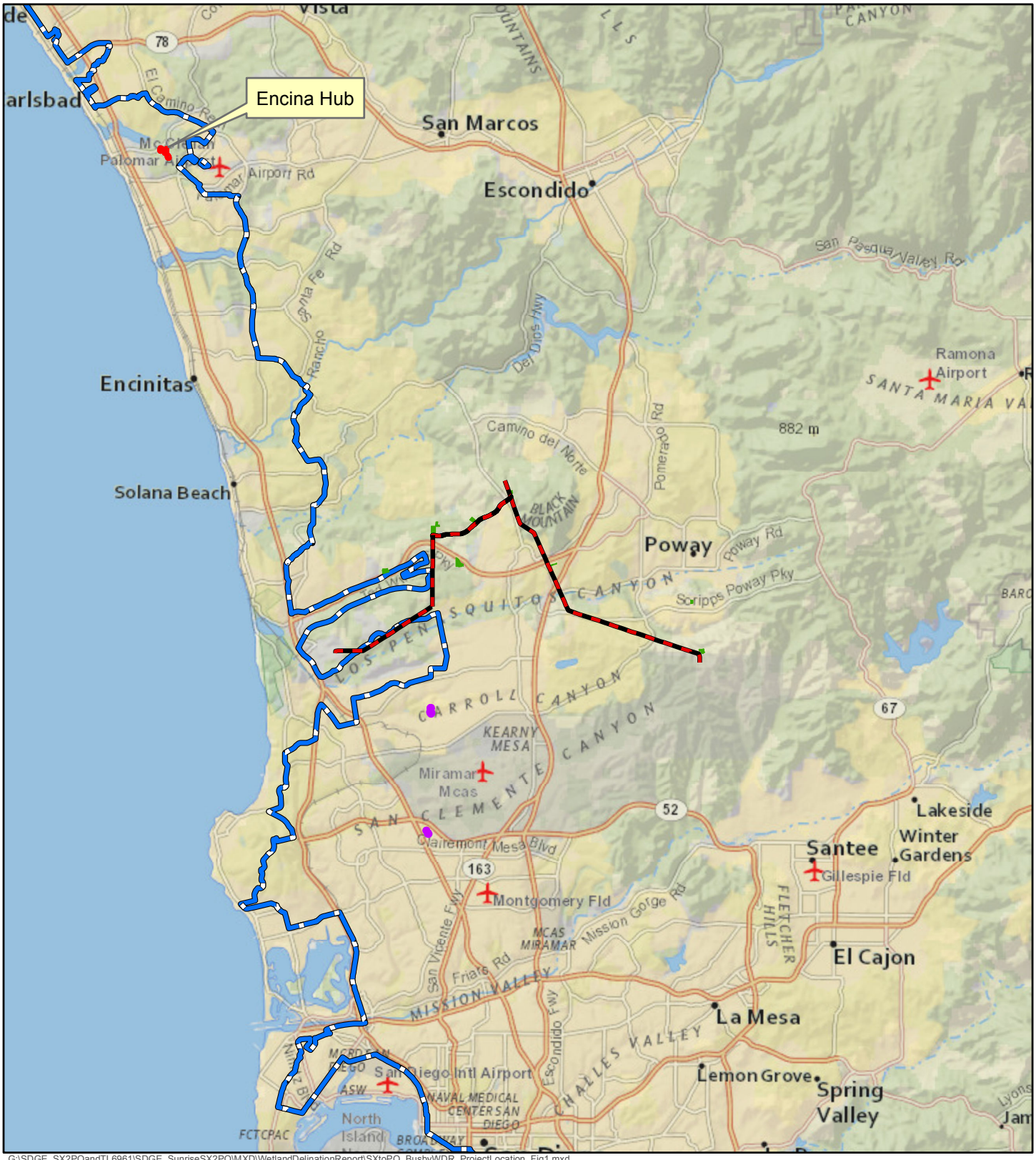
Environmental Intelligence, LLC (EI)
2014 *Jurisdictional Delineation of San Diego Gas & Electric's Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project*, San Diego County, California. March 2014.

Natural Resources Conservation Service (NRCS)
2015a *Web Soil Survey*. Online. http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.
2015b *National List of Hydric Soils*. Online. http://soils.usda.gov/use/hydric/.

Rebman, J.P. and M.G. Simpson
2006 *Checklist of the Vascular Plants of San Diego County*, 4th Edition. San Diego. Natural History Museum, San Diego, California.

United States Army Corps of Engineers (USACE)
1987 *U.S. Army Corps of Engineers Wetlands Delineation Manual*, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.
2008 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.*

APPENDIX A: FIGURES



Sycamore to Peñasquitos 230 kV Transmission Line Project

Project Location Map

Figure 1

- Proposed Project Route
- Staging Yards
- Encina Hub
- Mira Mesa Hub
- California Coastal Zone Boundary

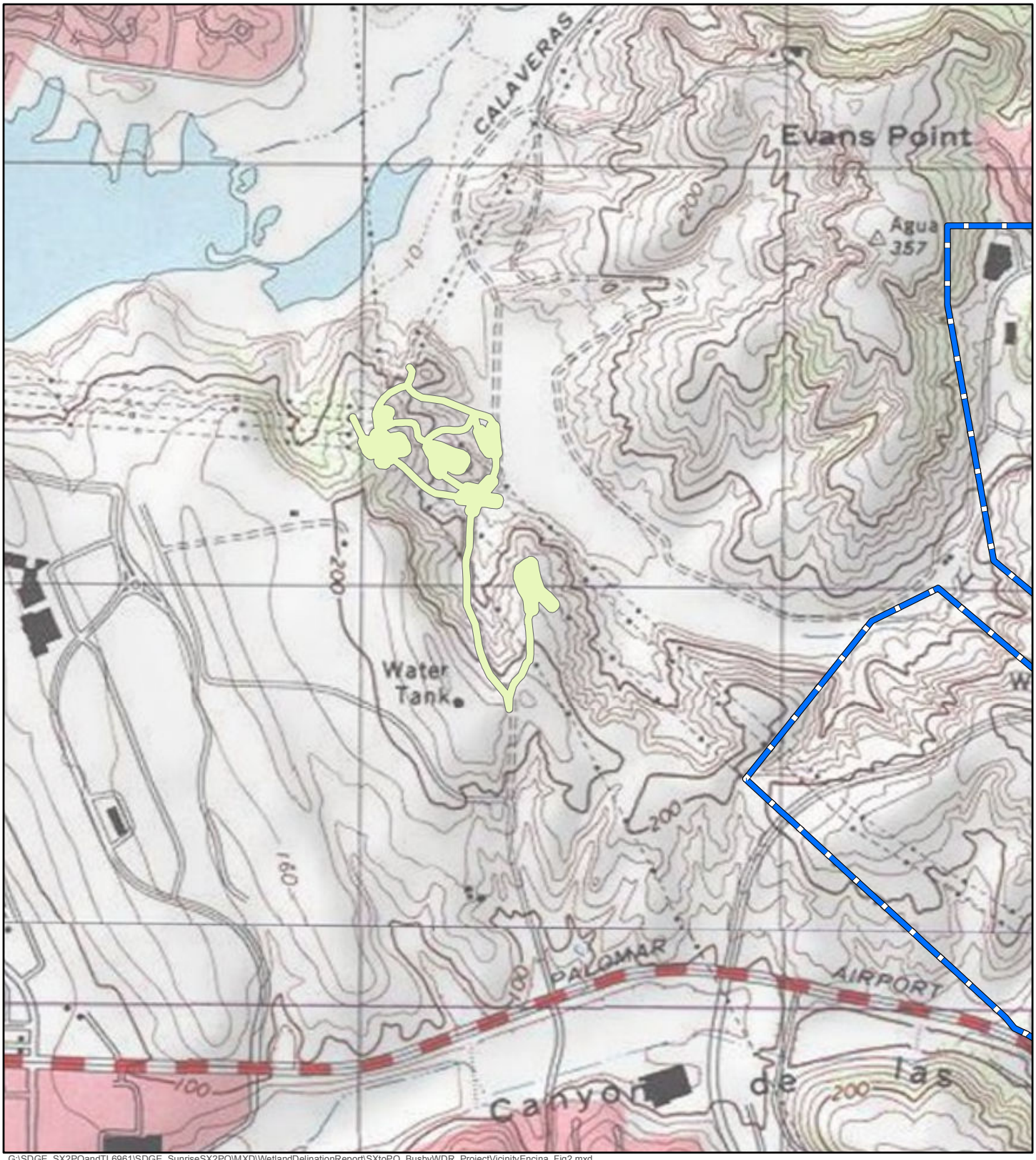
4/6/2015

0 2 4 6 Miles

TRC

SDGE

A Sempra Energy utility



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelinationReport\SXtoPQ_BusbyWDR_ProjectVicinityEncina_Fig2.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Project Vincinity Map - Encina Hub

Figure 2

California Coastal Zone Boundary

Encina Hub Survey Area

N
W E
S

0 0.1 0.2 0.3 Miles

TRC

SDGE

4/15/2015

A Sempra Energy utility

Sources: SDG&E; Copyright:© 2013 National Geographic Society, i-cubed, Content may not reflect National Geographic's current map policy.

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelinationReport\SXtoPQ_BusbyWDR_VegMapEncina_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Vegetation Map - Encina Hub

Figure 3

- Encina Hub Survey Areas
- Diegan Coastal Sage Scrub
- Diegan Coastal Sage Scrub - Disturbed
- Southern Riparian Scrub
- Mulefat Scrub
- Nonnative Grassland
- Native Grassland
- Bare Ground
- Developed Lands
- Ornamental
- Disturbed Habitat

0 120 240 360 Feet

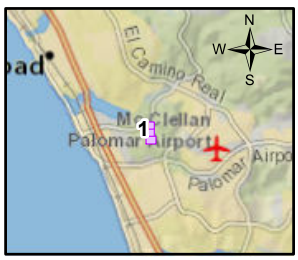
4/6/2015

TRC

SDGE A Sempra Energy utility

Sources: TRC, 2015; SDGE, 2015; Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelinationReport\SXtoPQ_BusbyWDR_WetlandDelinationResults_Fig4.mxd



- Culvert
- Sample Point and/or Photo Location
- V-ditch (exempt)
- CCC Wetland
- CDFW Riparian, CCC Wetland
- USACE W.O.U.S, CDFW U.S, RWQCB W.O.S, CCC Wetland
- USACE Wetland W.O.U.S, CDFW Riparian, RWQCB Wetland W.O.S, CCC Wetland
- Encina Hub Survey Areas

Sycamore to Peñasquitos 230 kV Transmission Line Project

Wetland Delineation Results - Encina Hub

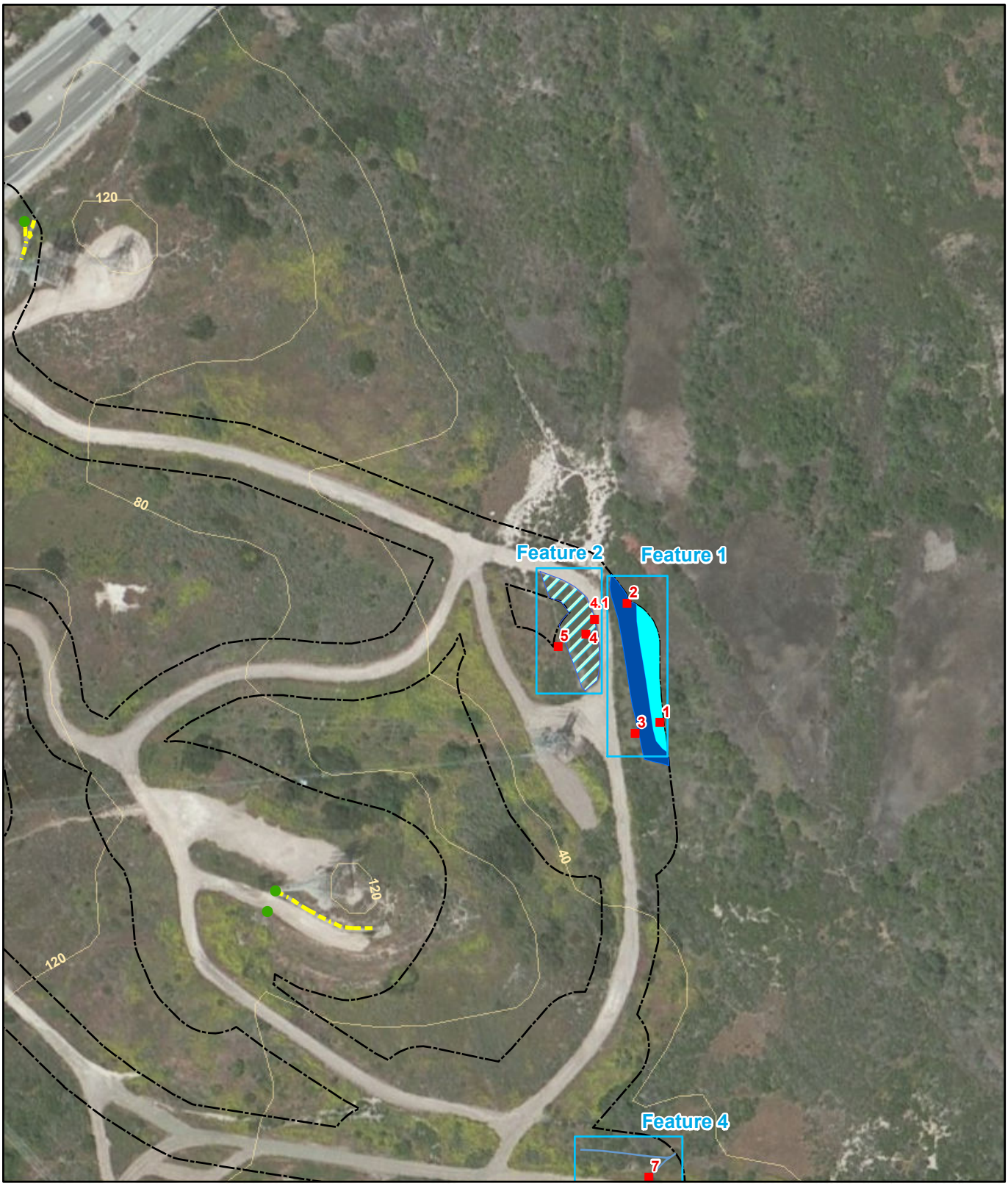
Figure 4

1 inch = 150 feet

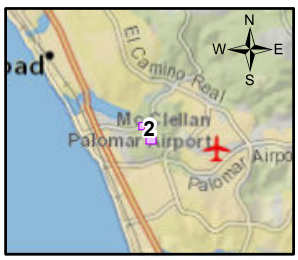
4/15/2015 0 50 100 150 Feet

TRC

SDGE A Sempra Energy utility



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelinationReport\SXtoPQ_BusbyWDR_WetlandDelinationResults_Fig4.mxd



- Culvert
- Sample Point and/or Photo Location
- V-ditch (exempt)
- CCC Wetland
- CDFW Riparian, CCC Wetland
- USACE W.O.U.S, CDFW U.S, RWQCB W.O.S, CCC Wetland
- USACE Wetland W.O.U.S, CDFW Riparian, RWQCB Wetland W.O.S, CCC Wetland
- Encina Hub Survey Areas

Sycamore to Peñasquitos 230 kV Transmission Line Project

Wetland Delineation Results - Encina Hub

Figure 4

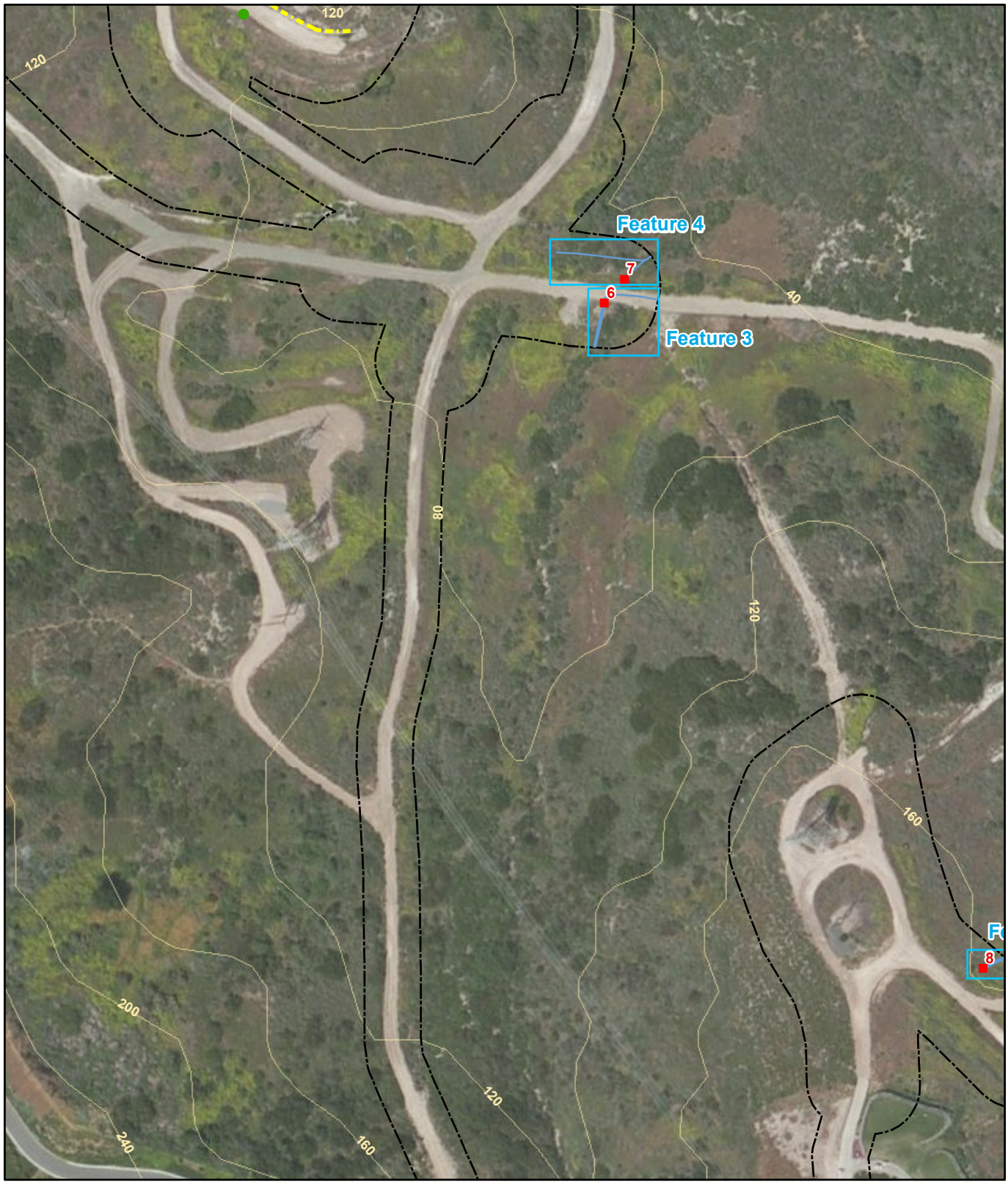
1 inch = 150 feet

4/15/2015

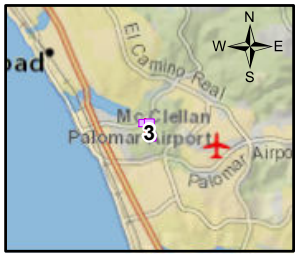
0 50 100 150 Feet

TRC

SDGE A Sempra Energy utility



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelinationReport\SXtoPQ_BusbyWDR_WetlandDelinationResults_Fig4.mxd



- Culvert
- Sample Point and/or Photo Location
- V-ditch (exempt)
- CCC Wetland
- CDFW Riparian, CCC Wetland
- USACE W.O.U.S, CDFW U.S, RWQCB W.O.S, CCC Wetland
- USACE Wetland W.O.U.S, CDFW Riparian, RWQCB Wetland W.O.S, CCC Wetland
- Encina Hub Survey Areas

Sycamore to Peñasquitos 230 kV Transmission Line Project

Wetland Delineation Results - Encina Hub

Figure 4

1 inch = 150 feet

4/15/2015

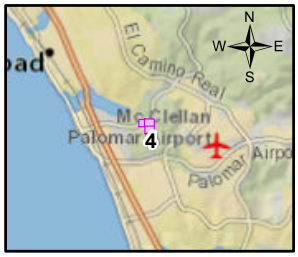
0 50 100 150 Feet

TRC

SDGE

A Sempra Energy utility

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\WetlandDelinationReport\SXtoPQ_BusbyWDR_WetlandDelinationResults_Fig4.mxd



- Culvert
- Sample Point and/or Photo Location
- V-ditch (exempt)
- CCC Wetland
- CDFW Riparian, CCC Wetland
- USACE W.O.U.S, CDFW U.S, RWQCB W.O.S, CCC Wetland
- USACE Wetland W.O.U.S, CDFW Riparian, RWQCB Wetland W.O.S, CCC Wetland
- Encina Hub Survey Areas

Sycamore to Peñasquitos 230 kV Transmission Line Project

Wetland Delineation Results - Encina Hub

Figure 4

1 inch = 150 feet

4/15/2015

0 50 100 150 Feet

TRC

SDGE

A Sempra Energy utility

APPENDIX B: USACE DATA FORMS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SDG&E Encina Hub City/County: Carlsbad, San Diego Sampling Date: 1/28/15

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

Investigator(s): J.Fontaine, D.Busby Section, Township, Range: _____

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

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

Soil Map Unit Name: Salinas clay loam, two to nine percent slopes (SbC) NWI classification: _____

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

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

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

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

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

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix goodingii	50	Y	FACW
2.			
3.			
4.			
Total Cover:	50		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Salicornia virginica	20	Y	OBL
2. Apiastrum angustifolium	5	N	FACU
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	25		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10 YR 3/2	100					Sandy clay loam	
3-13	2.5 Y 4/2	80	1.5 YR 4/8	20%	Redox conc.	PL	Loamy Sand	Redox is distinct, prominant
			Gley 2.5/N		Depletion	M		

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _X_ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes _X_ No _____ Depth (inches): 6"

Wetland Hydrology Present? Yes _X_ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SDG&E Encina Hub City/County: Carlsbad, San Diego Sampling Date: 1/28/15

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

Investigator(s): J.Fontaine, D.Busby Section, Township, Range: _____

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

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

Soil Map Unit Name: Salinas clay loam, two to nine percent slopes (SbC) NWI classification: _____

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

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

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

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

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

Remarks:
USACE Waters of the U.S.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. Baccharis salicifolia	50	Y	FAC
2.			
3.			
4.			
5.			
Total Cover:	50		
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 1 (B)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15	5Y 6/3	98	2.5 Y 4/3	2	C	PL	Loamy sand	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SDG&E Encina Hub City/County: Carlsbad, San Diego Sampling Date: 1/28/15

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

Investigator(s): J.Fontaine, D.Busby Section, Township, Range: _____

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

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

Soil Map Unit Name: Salinas clay loam, two to nine percent slopes (SbC) NWI classification: _____

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

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

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

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

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

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. Baccharis pilularis	50	Y	FAC
2.			
3.			
4.			
5.			
Total Cover:	50		
Herb Stratum			
1. Distichlis spicata	10	N	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	10		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 1 (B)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

x Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes x No _____

Remarks:

SOIL

Sampling Point: Non-Wetland Pt 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15	5Y 6/3	98	2.5 Y 4/3	2	C	PL	Loamy sand	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SDG&E Encina Hub City/County: Carlsbad, San Diego Sampling Date: 2/17/15

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

Investigator(s): D.Busby Section, Township, Range: _____

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

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

Soil Map Unit Name: Salinas clay loam, two to nine percent slopes (SbC), smectitic NWI classification: _____

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

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

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

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

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

Remarks:
Naturally high clay content soils combined with soil disturbance (artificial dam) results in an atypical situation. No streambed present. Satisfies one criteria for CCC jurisdiction.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. Baccharis salicifolia	75%	Y	FAC
2.			
3.			
4.			
5.			
Total Cover: 75			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 25% % Cover of Biotic Crust _____

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 1 (B)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

The artificial dam and the high clay content of this soils has resulted in the ponding of water that allows for this community to persist.

SOIL

Sampling Point: 4

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	7.5 YR 4/1	100	--				loamy clay	no redox
3-8	2.5 YR 4/1	75%	2.5 YR 4/8	40%	C	PL	clay loam	prominant concentrations
	2.5 Y 6/2	30%	2.5 YR 4/8	30%	C	PL	sandy clay	distinct concentration
8-16	10 YR 4/3	90%	7.5 YR 4/8	10%	C	M	sand	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Hydric soil criteria not met. F3 indicator requires 6" of dark surface with redox. Soil profile only has 5".
F6 criteria also not met due to the lack of depth of redox features.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

Surface cracks are present but are a result of the high clay content soil and the shrink-swell properties of the smectitic soil in the area that was ponded. No stream or bed and bank is present in this area.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SDG&E Encina Hub City/County: Carlsbad, San Diego Sampling Date: 2/17/15

Applicant/Owner: State: CA Sampling Point: 5

Investigator(s): D.Busby Section, Township, Range:

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

Subregion (LRR): Lat: Long: Datum:

Soil Map Unit Name: Salinas clay loam, two to nine percent slopes (SbC), smectitic NWI classification:

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

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

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

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

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

Remarks:

Formation of hydrophytic vegetation results in natural high clay content of soils and artificial damming. Site does not contain high water table or hydrology. Soils are upland and lack hydric indicators.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. Isocoma menziesii	75%	Y	FAC
2. Baccharis pilularis	25%	N	FAC
3.			
4.			
5.			
Total Cover:	60%		
Herb Stratum			
1. Nonnative grasses	50%	Y	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	50%		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 10% % Cover of Biotic Crust

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species 3	x 3 =	9
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: 3 (A)		3 (B)

Prevalence Index = B/A = 1

Hydrophytic Vegetation Indicators:

- x Dominance Test is >50%
- Prevalence Index is ≤3.0[1]
- Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes No x

Remarks:

Atypical situation exists causing the establishment of hydrophytic vegetation which are FAC, and mainly upland in nature. Soils are high in clay content allowing for persistence of soil moisture.

SOIL

Sampling Point: 5

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	7.5 YR 4/1	100	--				Sandy clay loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Hydric soil criterion not met due to lack of hydric indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

Surface cracks are present but are a result of the high clay content soil and the shrink-swell properties of the smectitic soil in the area that was ponded. No stream or bed and bank is present in this area.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SDG&E Encina Hub City/County: Carlsbad, San Diego Sampling Date: 1/28/15

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

Investigator(s): J.Fontaine, D.Busby Section, Township, Range: _____

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

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

Soil Map Unit Name: LeE – upland soil NWI classification: no

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

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

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

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

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

Remarks:

VEGETATION

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

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

Channel is unvegetated.

SOIL

Sampling Point: 6

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

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

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

No soils pits were dug due to lack of hydrophytic vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No _____

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

Remarks:

Drainage has a defined channel.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SDG&E Encina Hub City/County: Carlsbad, San Diego Sampling Date: 1/28/15

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

Investigator(s): J.Fontaine, D.Busby Section, Township, Range: _____

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

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

Soil Map Unit Name: LeE – upland soil NWI classification: no

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

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

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

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

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

Remarks:

VEGETATION

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

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

Channel is unvegetated.

SOIL

Sampling Point: 7

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

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

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

No soils pits were dug due to lack of hydrophytic vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No _____

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

Remarks:

Drainage has a defined channel.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SDG&E Encina Hub City/County: Carlsbad, San Diego Sampling Date: 1/28/15

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

Investigator(s): J.Fontaine, D.Busby Section, Township, Range: _____

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

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

Soil Map Unit Name: LeE - upland soil NWI classification: no

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

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

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

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

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

Remarks:

VEGETATION

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

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No x

Remarks:

Channel is unvegetated.

SOIL

Sampling Point: 8

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

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

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

No soils pits were dug due to lack of hydrophytic vegetation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No _____

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

Remarks:

Drainage has a defined channel.

APPENDIX C: SITE PHOTOGRAPHS

Sample Point 1 / Photo Point 1. View of Feature 1 - USACE wetland waters of the U.S., RWQCB wetland waters of the State, CDFW Riparian, and CCC Wetland.

Sample Point 2 / Photo Point 2. View of Feature 1 - CDFW Riparian and CCC Wetland.

Sample Point 3 / Photo Point 3. View of area outside and west of Feature 1 - non-jurisdictional.

Sample Point 4 / Photo Point 4. View of Feature 2 - CCC Wetland.

Photo Point 4.1. View of edge of Feature 2 where soil disturbance along the road has formed a berm that has resulted in an atypical situation creating conditions that unnaturally support hydrophytic vegetation.

Sample Point 5 / Photo Point 5. View of area outside and west of Feature 2 - non-jurisdictional.

Sample Point 6 / Photo Point 6. View of Feature 3 - USACE waters of the U.S., RWQCB waters of the State, CDFW unvegetated streambed, and CCC Wetland.

Sample Point 7 / Photo Point 7. View of Feature 4 - USACE waters of the U.S., RWQCB waters of the State, CDFW unvegetated streambed, and CCC Wetland.

Sample Point 8 / Photo Point 8. View of Feature 5 - USACE waters of the U.S., RWQCB waters of the State, CDFW unvegetated streambed, and CCC Wetland.

BUSBY
Biological Services

January 27, 2015

Mr. Robert Fletcher
Environmental Specialist-Biologist
San Diego Gas & Electric
2315 Century Park Court, CP21E
San Diego, California 92123

RE: FOCUSED BURROWING OWL (*ATHENA CUNICULARIA*) HABITAT ASSESSMENT REPORT FOR THE PROPOSED SAN DIEGO GAS & ELECTRIC COMPANY SYCAMORE TO PEÑASQUITOS 230 KILOVOLT TRANSMISSION LINE PROJECT, SAN DIEGO COUNTY, CALIFORNIA

Mr. Fletcher:

Busby Biological Services, Inc. (BBS) was contracted by Chambers Group, Inc. (Chambers) to conduct a focused burrowing owl (*Athena cunicularia*) habitat assessment on behalf of San Diego Gas & Electric Company (SDG&E) for the proposed Sycamore to Peñasquitos 230 Kilovolt (kV) Transmission Line Project (Proposed Project).

The approximately 1,215-acre Proposed Project is located entirely within San Diego County, California. More specifically, portions of the Proposed Project occur within the City of Carlsbad, the City of San Diego, the City of Poway, and the extreme northern portion of Marine Corps Air Station (MCAS) Miramar (Attachment 1: Figures 1 through 3). The main alignment for 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 also includes several staging areas as well as the Encina Hub and Mira Mesa Hub (Attachment 1: Figures 1 through 3).

A focused burrowing owl habitat assessment was conducted within the burrowing owl habitat assessment area, which includes the Proposed Project impact footprint and a 500-foot buffer of this impact area. The Encina Hub is not included in this report because a focused burrowing owl habitat assessment will be conducted for the independent Biological Technical Report that will be prepared for that portion of the Proposed Project. This letter report provides a description of the Proposed Project, background information about the burrowing owl, and a summary of the methods and results of the habitat assessment performed for the Proposed Project.

PROPOSED PROJECT DESCRIPTION

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 (Attachment 1: Figures 1 through 3). 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.

Planning for the Proposed Project is still underway. As such, the details about the construction of the Proposed Project, including the work periods, daily work schedules, equipment, and construction activities, are still being determined. Please refer to the Biological Technical Report for the Proposed Project for additional project details and information (BBS 2014).

Elevations within the main Proposed Project alignment, where the potentially suitable burrowing owl habitat occurs, range from approximately 1,000 feet above mean sea level (amsl) at Sycamore Canyon Substation in the eastern portion of the Proposed Project area 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 Proposed Project area (Attachment 1: Figure 3). Topography along the Proposed Project alignment varies from relatively flat developed and undeveloped areas, to steep and rolling hills and ridges, to wide and narrow drainages and canyons. The Proposed Project area crosses several unnamed and named drainages and canyons, including Peñasquitos Canyon, McGonigle Canyon, and Deer Canyon (Attachment 1: Figure 3). While the Proposed Project area crosses through both residential and commercial development, including a network of roads and highways and mixed-use development, the majority of the Proposed Project alignment is located in undeveloped areas that includes parks and other undeveloped open space that have the potential to support sensitive biological resources, including the burrowing owl.

BURROWING OWL SPECIES & HISTORICAL OCCURRENCE INFORMATION

The burrowing owl is a California Department of Fish and Wildlife (CDFW) species of special concern at its burrow sites and at some wintering sites, and it is covered under the *SDG&E's Subregional Natural Community Conservation Plan* (NCCP). This section provides species-specific information about the burrowing owl range and migration patterns, habitat, breeding information, and population threats.

Burrowing Owl Range & Migration Patterns

The burrowing owl ranges from southwestern Canada and the western United States, south through Central America, and into the northernmost portion of South America as well as the southern half of South America. It can also be found on coastal islands off of Florida and Baja California, Mexico (Haug et. al. 1993). The northernmost populations of this species are almost completely migratory, and wintering birds can be found south to southern Mexico.

The western subspecies of burrowing owl (*A. c. hypugaea*) includes the populations that occur in southern Alberta, Canada, and within the western United States. In California, the western burrowing owl is found throughout the state, with the exception of the northern coast and eastern Sierra Nevada Mountains (Shuford and Gardali 2008). This subspecies remains fairly common in the Imperial Valley, which is home to nearly 70 percent of the entire California population; however, this species is rapidly declining in the remainder of the California populations (Unitt 2004). While the northern populations are often migratory, southern California burrowing owls are only partially migratory as evidenced by reduced population sizes in winter, with some birds remaining on territories throughout the year.

The burrowing owl has disappeared and/or populations have declined in several southern California and San Francisco Bay area counties and in coastal areas throughout California, as they have in other regions throughout the United States and Canada (DeSante et al. 1997, Klute et al. 2003). During the late 1800's and early 1900's, the burrowing owl was widespread and

common in San Diego County, primarily along the coast and into the grassy interior; however, by the 1970's, the burrowing owl was considered uncommon and declining in these areas (Unitt 2004; Bent 1961). The burrowing owl currently occupies some historical sites in San Diego County (e.g., Naval Air Station North Island, south San Diego coastal area, and Otay Mesa) in much reduced numbers and is believed to be absent from many developed areas that it formerly occupied (e.g., north-central San Diego County, coastal areas, and the area around the City of San Diego) (Unitt 2004; Lincer and Bloom 2007). Currently, an estimated 41 to 46 pairs breed and 148 to 168 local individuals winter within San Diego County (Lincer and Bloom 2007). During the winter, local wintering burrowing owls are joined by migratory wintering burrowing owls to form a total estimated wintering population of approximately 300 to 370 individuals (Lincer and Bloom 2007).

Burrowing Owl Habitat

The burrowing owl is a ground-dwelling raptor that requires open, relatively flat terrain with burrows for nesting, roosting, and cover (CDFW 2012). This species can be found in a variety of habitat types that contain suitable burrowing and foraging habitat, including – but not limited to – native and non-native grassland, shrub steppe, shrubland with low density shrub cover, desert, agricultural, golf courses, drainage ditches, earthen berms, pasturelands, fallow fields, and even ruderal areas and vacant lots (Gervais et al 2008, CDFW 2012, TLMA 2006). The burrowing owl is typically associated with areas containing well-drained, friable soils inhabited by fossorial mammals (Haug et al. 1993, CDFW 2012).

In California, the burrowing owl prefers habitat with short, sparse vegetation and few shrubs, level to gentle topography, and well-drained soils (Haug et al. 1993). In San Diego County, the burrowing owl typically inhabits coastal lowlands in grasslands, agricultural areas, and coastal dunes (Unitt 2004).

In addition to burrowing habitat, the burrowing owl requires ample foraging habitat surrounding its burrows. This species concentrates it foraging within approximately 2,000 feet of its burrow, which equates to an area of up to approximately 300 acres (Haug and Oliphant 1990, Rosenberg and Haley 2004); however, the burrowing owl is known to use much smaller patch sizes, especially when they are located adjacent to suitable breeding and/or foraging habitat. Preferred foraging habitat consists of dry, open, relatively flat expanses with short grasses and sparse shrub cover (Ehrlich et al. 1988).

Although the burrowing owl may dig its own burrows (Thomsen 1971, Barclay 2007), this opportunistic species usually modifies or enlarges existing burrows that were previously used by mammals. In California, the burrowing owl frequently uses burrows of California ground squirrel (*Spermophilus beecheyi*) and round-tailed ground squirrel (*Citellus tereticaudus*), but may also use dens or holes dug by American badger (*Taxidea taxus*), coyote (*Canis latrans*), and fox (*Vulpes* sp.; Ronan 2002, CDFW 2012). In addition to earthen burrows, the burrowing owl may also use natural rock cavities, debris piles, culverts, openings beneath cement or asphalt pavement, and pipes (Rosenberg et al. 1998) as well as artificial burrows (Smith and Belthoff 2003) for nesting, roosting, and cover (CDFW 2012).

Burrowing Owl Breeding Information

Burrowing owl breeding behaviors include a wide range of activities associated with site selection by males; breeding pair formation; actual copulation; egg laying, incubation, and

hatching; and care of the young during fledging and post-fledging. In California, the burrowing owl breeding season typically occurs between February 1 and August 31; however, breeding outside of this window has been documented under appropriate environmental conditions (CDFW 2012). The peak of the breeding season, when most burrowing owls have active nests, typically occurs between April 15 and July 15.

In addition to its nest burrow, the burrowing owl may use satellite burrows to reduce predation and parasite infestation, particularly while caring for nestlings (CDFW 2012).

Burrowing Owl Population Threats

In California, the burrowing owl is threatened by a variety of factors, including habitat loss, control of burrowing rodents, and direct mortality. Population declines have been attributed to habitat loss, degradation, and fragmentation resulting most often from conversion of suitable habitat as a result of urbanization (Gervais et al. 2008). Burrowing rodent control programs, especially those targeting the California ground squirrel, threaten burrowing owl populations because ground squirrel burrows are the burrows most often utilized by burrowing owl for nesting and cover. Thus, elimination of burrowing rodents has lead to both recent and historical declines of burrowing owl populations in California and nationwide (Klute et al. 2003). Direct mortality from vehicle collisions (Haug et al. 1993, Gervais et al. 2008), agricultural drain/ditch maintenance, discing in fallow fields (Rosenberg and Haley 2004, Catlin and Rosenberg 2006), and wind turbine collisions (Thelander et al. 2003) as well as exposure to pesticides (Klute et al. 2003, Gervais et al. 2008) have all added to the decline of the burrowing owl in California. In areas of remaining open habitat close to or surrounded by developed areas, disturbance from human activity (e.g., walking, jogging, off-road activity, dog walking) and loose and feral pets are likely factors deterring the burrowing owl from these areas (Wesemann and Rowe 1985, Millsap and Bear 2000).

HABITAT ASSESSMENT METHODS

BBS conducted a focused burrowing owl habitat assessment within the burrowing owl habitat assessment area, which included the Proposed Project impact footprint and a 500-foot buffer of this impact area. The Encina Hub is not included in this report because a focused burrowing owl habitat assessment will be conducted for the independent Biological Technical Report that will be prepared for that portion of the Proposed Project. The habitat assessment consisted of an analysis of historical occurrence data, desktop evaluation of available site data and aerial imagery, and a field evaluation to further investigate and map suitable burrowing owl habitat. The following paragraphs provide detail on the habitat assessment methods.

<u>Historical Occurrence Data</u>

BBS obtained historical burrowing owl occurrence data for the burrowing owl habitat assessment areas and an approximately 5-mile buffer from the SanBIOS database (County of San Diego 2014); and CDFW *California Natural Diversity Database* (CNDDB; CDFW 2014a). BBS also reviewed other sensitive species resources, including the CDFW Special Animals (CDFW 2014b); Proceedings of the California Burrowing Owl Symposium (Barclay et al. 2007); San Diego County Breeding Bird Atlas (Unit 2004); North American Breeding Bird Survey, Results Analysis 1966-2012 (Sauer et al. 2014); eBIRD (http://ebird.org); Gervais et al. (2008); the San Diego Natural History Museum (SDNHM) Bird Atlas Project (SDNHM 2014); and other regional and site-specific relevant information, data, and literature.

Desktop Evaluation

BBS obtained aerial imagery of the burrowing owl habitat assessment area and prepared a draft map of potentially suitable burrowing owl habitat. Patches of open habitat that could potentially support burrowing owl breeding and/or foraging habitat were identified on the maps, while portions of the burrowing owl habitat assessment areas that were fully developed, covered by dense vegetation, or otherwise appeared to be unsuitable based on the aerial imagery were identified as potentially excludable. All of these were later evaluated during the focused field evaluation, described below.

Focused Field Evaluation

BBS used the results of the background research along with the draft map of potentially suitable burrowing owl habitat as guidance during the field evaluation conducted within the burrowing owl habitat assessment area. BBS assessed the entire burrowing owl habitat assessment area during the field evaluation. The areas that were excluded during the desktop evaluation were visited to verify that these areas did not support suitable burrowing owl habitat and could be excluded. In addition, the patches of potentially suitable habitat identified on the draft map were field-truthed and refined. Additional areas of suitable habitat that were not identified during the desktop evaluation were drawn onto the map by hand in the field. BBS used binoculars to view portions of the burrowing owl habitat assessment area where lawful access could not be achieved. In addition, photographs were taken of each polygon evaluated in the burrowing owl habitat assessment area.

To consistently and systematically evaluate each patch of potentially suitable habitat within the burrowing owl habitat assessment area for the potential to support the burrowing owl, BBS recorded data on the following criteria:

- polygon patch size
- dominant vegetation and land use within and adjacent to the polygon
- presence of adjacent foraging habitat
- vegetation height and shrub density within the polygon
- presence of friable soils within the polygon
- presence and quantity of burrows and burrow complexes within the polygon
- other evidence of fossorial animal use and burrow features within the polygon
- slope steepness within the polygon

BBS used this data to assess the overall potential of each potentially suitable burrowing owl habitat polygon to support the burrowing owl, taking into consideration the historical occurrence data and the evaluation criteria. Each habitat patch was either determined as not expected to support burrowing owl, or as having a low, moderate, or high potential to support burrowing owl.

HABITAT ASSESSMENT RESULTS & DISCUSSION

This section provides a summary of the results of the historical occurrence data analysis as well as a result of the focused field evaluation.

Historical Burrowing Owl Occurrence within Vicinity of the Proposed Project

A search of the SanBIOS database (County of San Diego 2014) and CDFW *California Natural Diversity Database* (CNDDB; CDFW 2014a) did not result in any historical burrowing owl occurrence data within the burrowing owl habitat assessment areas and an approximately 5-mile buffer. According to current literature, breeding burrowing owls are believed to be absent from the Proposed Project area and vicinity (Unitt 2004; Lincer and Bloom 2007). Currently, the closest known breeding occurrences are at Naval Air Station North Island, south San Diego coastal areas, and Otay Mesa (Unitt 2004; Lincer and Bloom 2007). Migrant wintering burrowing owl can utilize a variety of habitats not suitable for breeding individuals; therefore, migrant wintering burrowing owls have a potential to occur throughout the Proposed Project alignment. Migrant wintering owls were last document in the vicinity of the Proposed Project area along ridgetops in the northeastern corner of MCAS Miramar during the winter of 1996-1997 (Unitt 2004).

Desktop & Field Evaluation Results

During the desktop evaluation of the burrowing owl habitat assessment area, BBS identified approximately 380 acres of potentially suitable burrowing owl habitat based on our understanding of the existing conditions onsite along with an interpretation of the aerial imagery available for the burrowing owl habitat assessment area. BBS biologists conducted the field evaluation of the burrowing owl habitat assessment area on November 17 and 18, 2014, to (1) verify that areas that were potentially excluded during the desktop evaluation did not support suitable burrowing owl habitat and (2) evaluate the potentially suitable burrowing owl habitat polygons to determine if the existing habitat within these polygons has a potential to support burrowing owl.

Based on the field assessment revisions to the potentially suitable habitat, BBS evaluated approximately 338 acres of potentially suitable habitat distributed within 35 polygons within the burrowing owl habitat assessment area (Attachment 1: Figure 4). A summary of the data collected for each polygon as well as the potential for burrowing owl to occur in each polygon is presented in Attachment 2: Burrowing Owl Habitat Assessment Summary Table. In addition, representative photographs of the polygons evaluated in the burrowing owl habitat assessment area are included in Attachment 3: Burrowing Owl Habitat Assessment Photographs.

Of the 35 polygons evaluated, 14 of the polygons did not provide potentially suitable habitat for breeding and resident burrowing owl (Attachment 1: Figure 4) because they had at least three, and usually more, of the following characteristics:

- small polygon size
- vegetation community and/or density within the polygon not suitable for burrowing owl
- polygon surrounded by unsuitable burrowing owl habitat, such as development or tall, dense vegetation
- compact soils
- few to no small mammal burrows and/or burrow complexes
- no adjacent open foraging or breeding habitat

The remaining 21 polygons provide potentially suitable habitat for breeding and resident burrowing owl (Attachment 1: Figure 4). These polygons had at least four, and sometimes more, of the following characteristics:

- adequate polygon size
- vegetation community and/or density within the polygon suitable for burrowing owl

- friable soils
- small mammal burrows and/or burrow complexes present within the polygon
- adjacent open foraging or breeding habitat

Burrowing Owl & Sign Observations

No burrowing owls or burrowing owl sign was observed during the focused burrowing owl habitat assessment conducted in winter 2014.

SUMMARY & RECOMMENDATIONS

Approximately 303 acres of potentially suitable habitat for breeding and resident burrowing owl burrowing owl was identified in 21 polygons within the burrowing owl habitat assessment area (Attachment 1: Figure 4). Focused burrowing owl surveys within these potentially suitable habitat polygons are recommended to be completed during the spring 2015 breeding season to assess the presence/absence of the burrowing owl within and adjacent to the Proposed Project area and to allow potential impacts to this species to be evaluated adequately.

During the focused burrowing owl surveys, the suitable habitat polygon boundaries should be refined, and more detailed vegetation data along with other relevant site information should be collected to provide as much information as possible about the Proposed Project area and its potential to support the burrowing owl.

Please do not hesitate to contact Melissa Busby at melissa@busbybiological.com or 858.334.9507 or Darin Busby at darin@busbybiological.com or 858.334.9508 if you have any questions.

Sincerely,

Melissa Busby
Owner/Principal Biologist
Busby Biological Services, Inc.

Darin Busby
Owner/Principal Biologist
Busby Biological Services, Inc.

cc: Mike McEntee, Chambers
Elisha Back, TRC

REFERENCES

Barclay, J.H., K.W. Hunting, J.L. Lincer, J. Linthicum, and T.A. Roberts, editors
2007 Proceedings of the California Burrowing Owl Symposium, 11-12 November 2003, Sacramento, California, USA. Bird Populations Monographs No. 1. The Institute for Bird Populations and Albion Environmental, Inc., Point Reyes Station, CA.

Bent, A.C.
1961 Life histories of North American birds of prey. Part 2. U.S. Natl. Mus. Bull. No. 170. Dover Publications, New York.

Busby Biological Services, Inc. (BBS)
2014 Biological Technical Report, Sycamore To Peñasquitos 230 Kilovolt Transmission Line Project, City Of San Diego, San Diego County, California. March.

California Department of Fish and Wildlife (CDFW)
2012 Staff Report on Burrowing Owl Mitigation. State of California. Natural Resources Agency, Department of Fish and Game. March 2012.
2014a Natural Diversity Data Base. Nongame-Heritage Program, California Department of Fish and Wildlife, Sacramento.
2014b CDFW Biogeographic Data Branch, California Natural Diversity Database. Special Animals List. Available at: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/spanimals.pdf. January 2011. Accessed October 2014.

Catlin, D.H. and D.K. Rosenberg
2006 Nest destruction increases mortality and dispersal of Burrowing Owls in the Imperial Valley, California. Southwest Naturalist 51: 406–409.

County of San Diego
2014 SanBIOS GIS Database. Created in 2009. Available at: http://www.sangis.org/. Accessed October 2014.

Desante, D.F., E.D. Ruhlen, S.L. Adamany, K.M. Burton, and S. Amin
1997 A census of Burrowing Owls in Central California in 1991. Pages 38-48 in Lincer, J. L. and K. Steenhof [EDS]. 1997. The Burrowing Owl, Its Biology and Management: Including the Proceedings of the First International Burrowing Owl Symposium. Raptor Research Report Number 9.

Ehrlich, P.R., D.S. Dobkin, and D. Wheye
1988 The Birder's Handbook; A Field Guide to the Natural History of North American Birds. Simon and Schuster Inc. New York.

Gervais, J.A., D.K. Rosenberg, and L.A. Comrack
2008 Burrowing Owl (Athene cunicularia) *in* California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies

of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento, California, USA.

Haug, E.A., B.A. Millsap, and M.S. Martell
1993 Burrowing owl (Speotyto cunicularia), *in* A. Poole and F. Gill, editors, The Birds of North America, The Academy of Natural Sciences, Philadelphia, Pennsylvania, and The American Ornithologists' Union, Washington, D.C., USA.

Haug, E.A. and L.W. Oliphant
1990 Movements, activity patterns, and habitat use of burrowing owls in Saskatchewan. Journal of Wildlife Management 54: 27-35.

Klute, D.S., L.W. Ayers, M.T. Green, W.H. Howe, S.L. Jones, J.A. Shaffer, S.R. Sheffield, and T.S. Zimmerman
2003 Status Assessment and Conservation Plan for the Western Burrowing Owl in the United States. U.S. Department of Interior, Fish and Wildlife Service, Biological Technical Publication FWS/BTP-R6001-2003, Washington, D.C.

Lincer, J.L. and P.H. Bloom
2007 The Status of the Burrowing Owl in San Diego County, California. Proceedings of the California Burrowing Owl Symposium 90-102 © The Institute for Bird Populations

Millsap, B.A. and C. Bear
2000 Density and reproduction of Burrowing Owls along an urban development gradient. Journal of Wildlife Management 64:33-41.

Ronan, N.A.
2002 Habitat selection, reproductive success, and site fidelity of burrowing owls in a grassland ecosystem. Thesis, Oregon State University, Corvallis, Oregon, US

Rosenberg, D.K., J.A. Gervais, H. Ober, and D.F. DeSante
1998 An adaptive management plan for the burrowing owl population at Naval Air Station Lemoore, California, USA. Publication 95, Institute for Bird Populations, P.O. Box 1346, Pt. Reyes Station, CA 94956.

Rosenberg, D.K., and K.L. Haley
2004 The ecology of burrowing owls in the agroecosystem of the Imperial Valley, California. Studies in Avian Biology 27:120-135.

Sauer, J.R., J.E. Hines, J.E. Fallon, K.L. Pardieck, D.J. Ziolkowski, Jr., and W.A. Link
2014 *The North American Breeding Bird Survey, Results and Analysis 1966 - 2012.* Version 02.19.2014 USGS Patuxent Wildlife Research Center, Laurel, MD.

San Diego Natural History Museum (SDNHM)
2014 http://www.sdnhm.org/science/birds-and-mammals/projects/san-diego-county-bird-atlas/. Bird Atlas Project. Accessed October 2014.

Shuford, W.D. and T. Gardali
2008 California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Smith, B.W. and J.R. Belthoff
2003 Patterns of artificial burrow occupancy and reuse by burrowing owls in Idaho. Wildlife Society Bulletin 31:1-7.

Thomsen, L.
1971 Behavior and ecology of burrowing owls on the Oakland Municipal Airport Condor 73: 177-192.

Unitt, P.A.
2004 San Diego County Bird Atlas. San Diego Natural History Museum. San Diego, CA.

Wesemann, T. and M. Rowe.
1985 Factors influencing the distribution and abundance of Burrowing Owls in Cape Coral, Florida. Pages 129-137 in Adams and Leedy, EDS. Integrating Man and Nature in the Metropolitan Environment. Proc. Natl. Symp. on Urban Wildlife.

ATTACHMENT 1 – Figures

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_BusbyRegionalSetting.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Regional Setting

Figure 1

Project Alignment

Additional Project Areas

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

N W E S

0 10 20 30 Miles

12/23/2014

TRC

SDGE

A Sempra Energy utility

Sources: SDG&E; Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE,

Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment Area

Figure 2

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

SDGE
A Sempra Energy utility

TRC

0 4,400 8,800 13,200

Feet

Source: CA Dept Fish and Wildlife, CNDDB Nov2014. SanBIOS, Nov 2014; Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ BUOWSXtoPQ_BurrowingOwlAssmtArea.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment Area

Figure 3

- Project Alignment
- Access Roads
- Staging Yards
- Project Footprint 500ft Buffer

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

SDGE A Sempra Energy utility

TRC

0 4,400 8,800 13,200

Feet

Source: CA Dept Fish and Wildlife, CNDDB Nov2014. SanBIOS, Nov 2014; Copyright:© 2013 National Geographic Society, i-cubed

G:\SDGE_SX2POandTL6961\SDGE_SunriseSX2POMXD\SXtoPQ BUOWSXtoPQ_BurrowingOwlAssmtArea.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

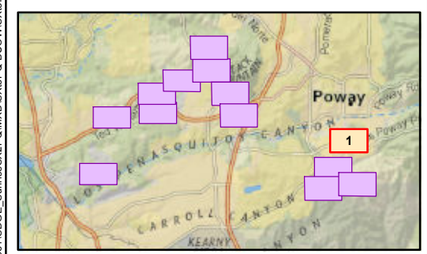
Burrowing Owl Habitat Assessment Results

Figure 4

- Project Alignment
- Project Access Roads
- Project Footprint 500ft Buffer

Potential for Occurrence

- Not Expected to Occur
- Potential to Occur



0 500 1,000 1,500

Feet

Source: CA Dept Fish and Wildlife, CNDDB Nov2014. SanBIOS, Nov 2014; Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Content may not reflect National Geographic's current map policy.

G:\SDGE_SX2POandTL6961\SDGE_SunriseSX2PO\MXD\SXtoPQ BUOWlSXtoPQ_BurrowingOwlHabitatResults.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment Results

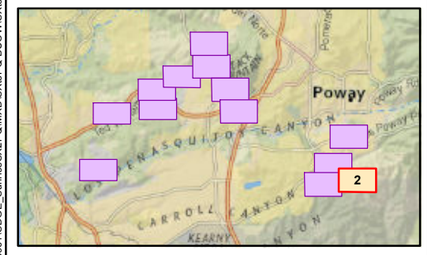
Figure 4

Project Alignment
Project Access Roads
Project Footprint 500ft Buffer

Potential for Occurrence

Not Expected to Occur
Potential to Occur

4
3
2



0 500 1,000 1,500

Feet

Source: CA Dept Fish and Wildlife, CNDDB Nov2014. SanBIOS, Nov 2014; Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Content may not reflect National Geographic's current map policy.

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_BUOWSXtoPQ_BurrowingOwlHabitatResults.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment Results

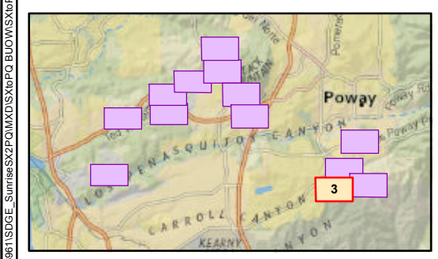
Figure 4

6

- Project Alignment
- Project Access Roads
- Project Footprint 500ft Buffer

Potential for Occurrence

- Not Expected to Occur
- Potential to Occur



0 500 1,000 1,500

Feet

Source: CA Dept Fish and Wildlife, CNDDB Nov2014. SanBIOS, Nov 2014; Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Content may not reflect National Geographic's current map policy.

G:\SDGE_SX2PQandTL69611SDGE_SunriseSX2PQ\MXD\SXtoPQ BUOWlSXtoPQ_BurrowingOwlHabitatResults.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

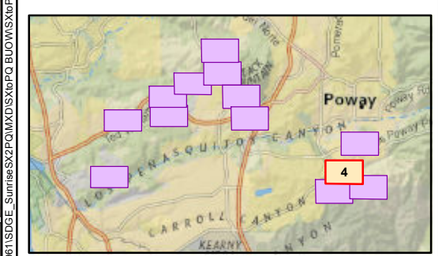
Burrowing Owl Habitat Assessment Results

Figure 4

- Project Alignment
- Project Access Roads
- Project Footprint 500ft Buffer

Potential for Occurrence

- Not Expected to Occur
- Potential to Occur



0 500 1,000 1,500

Feet

Source: CA Dept Fish and Wildlife, CNDDB Nov2014. SanBIOS, Nov 2014; Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Content may not reflect National Geographic's current map policy.

G:\SDGE_SX2PQan\TL69611SDGE_SunriseSX2PQ\MXD\SXtoPO BUOWlSXtoPQ_BurrowingOwlHabitatResults.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

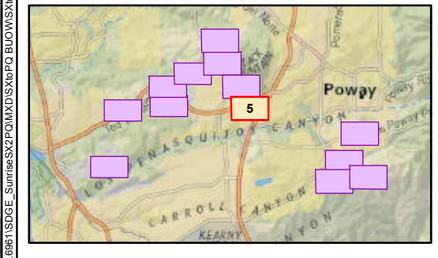
Burrowing Owl Habitat Assessment Results

Figure 4

Project Alignment
Project Access Roads
Project Footprint 500ft Buffer

Potential for Occurrence

Not Expected to Occur
Potential to Occur



0 500 1,000 1,500

Feet

Source: CA Dept Fish and Wildlife, CNDDB Nov2014. SanBIOS, Nov 2014; Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Content may not reflect National Geographic's current map policy.

G:\SDGE_SX2POandTL6961\SDGE_SunriseSX2PO\MXD\SXtoPQ BUOWSXtoPQ_BurrowingOwlHabitatResults.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment Results

Figure 4

10

9

8

Project Alignment

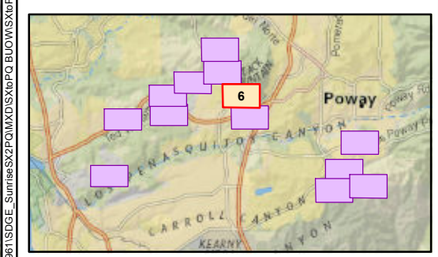
Project Access Roads

Project Footprint 500ft Buffer

Potential for Occurrence

Not Expected to Occur

Potential to Occur



0 500 1,000 1,500

Feet

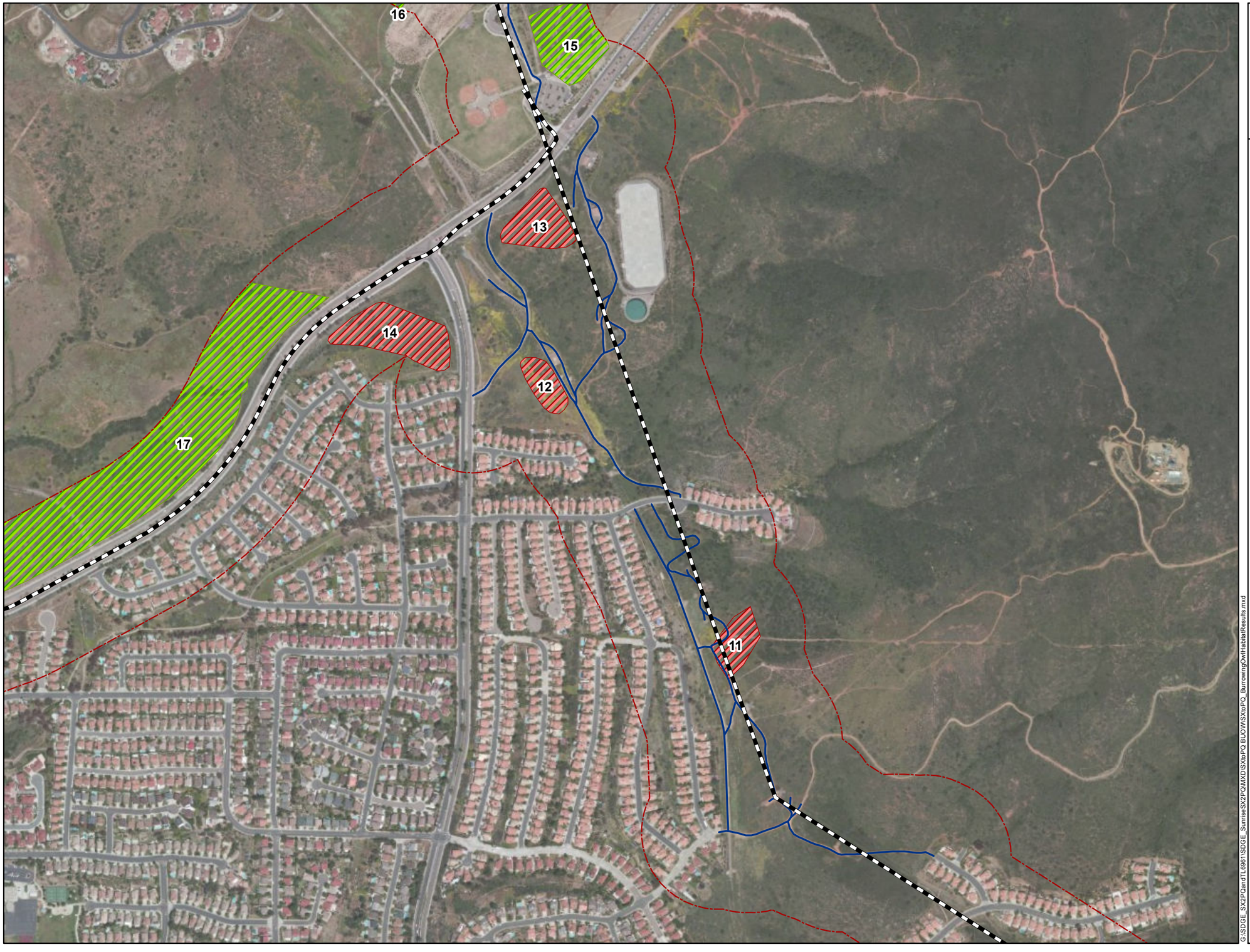
Source: CA Dept Fish and Wildlife, CNDDB Nov2014. SanBIOS, Nov 2014; Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Content may not reflect National Geographic's current map policy.

G:\SDGE_SX2POandT\L0861\SDGE_SunriseSX2PO\MXD\SXtoPQ BUOWSXtoPQ_BurrowingOwlHabitatResults.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment Results

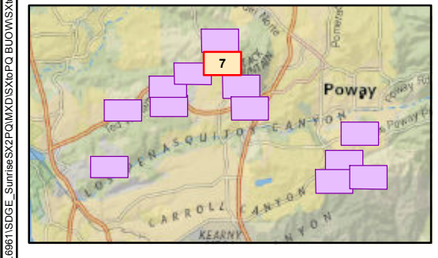
Figure 4



- Project Alignment
- Project Access Roads
- Project Footprint 500ft Buffer

Potential for Occurrence

- Not Expected to Occur
- Potential to Occur



0 500 1,000 1,500

Feet

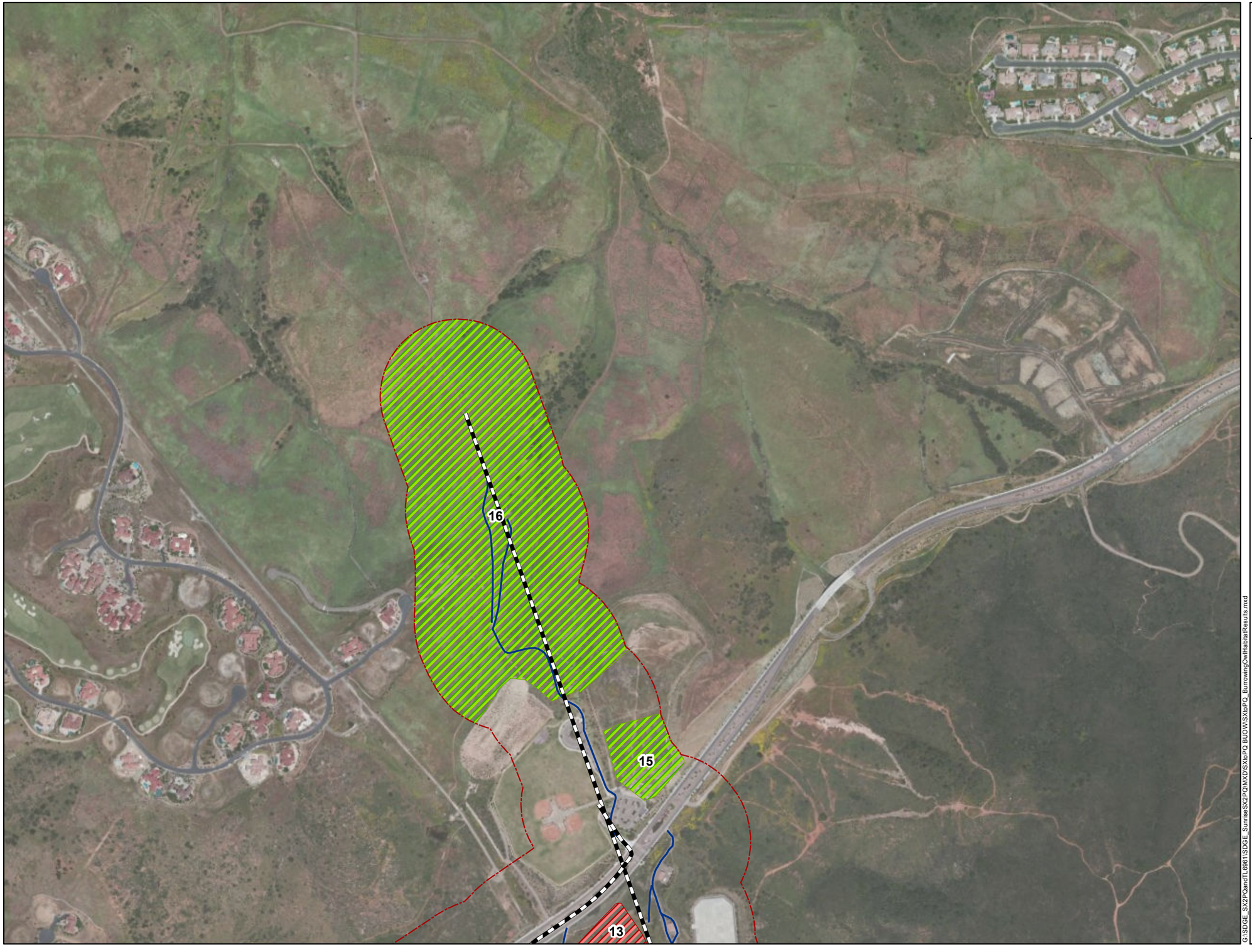
Source: CA Dept Fish and Wildlife, CNDDB Nov2014. SanBIOS, Nov 2014; Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Content may not reflect National Geographic's current map policy.

G:\SDGE_SX2POandTL6961\SDGE_SunriseSX2PO\MXD\SXtoPQ BUOW\SXtoPQ_BurrowingOwlHabitatResults.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment Results

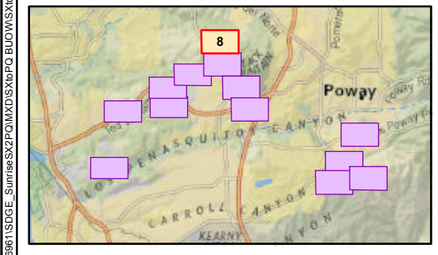
Figure 4



- Project Alignment
- Project Access Roads
- Project Footprint 500ft Buffer

Potential for Occurrence

- Not Expected to Occur
- Potential to Occur



0 500 1,000 1,500

Feet

Source: CA Dept Fish and Wildlife, CNDDB Nov2014. SanBIOS, Nov 2014; Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Content may not reflect National Geographic's current map policy.

G:\SDGE_SX2PQandT1\6961SDGE_SunriseSX2PQ\MXD\SXtoPQ BUOWSXtoPQ_BurrowingOwlHabitatResults.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment Results

Figure 4

17

18

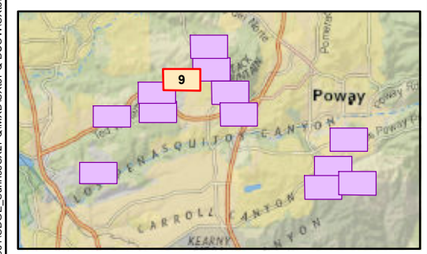
19

20

- Project Alignment
- Project Access Roads
- Project Footprint 500ft Buffer

Potential for Occurrence

- Not Expected to Occur
- Potential to Occur



0 500 1,000 1,500

Feet

Source: CA Dept Fish and Wildlife, CNDDB Nov2014. SanBIOS, Nov 2014; Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Content may not reflect National Geographic's current map policy.

G:\SDGE_SX2PQandTL6981\SDGE_SunriseSX2PQ\MXD\SXtoPQ BUOWSXtoPQ_BurrowingOwlHabitatResults.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

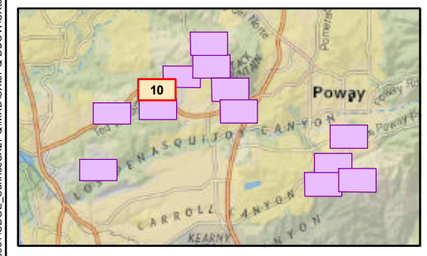
Burrowing Owl Habitat Assessment Results

Figure 4

- Project Alignment
- Project Access Roads
- Project Footprint 500ft Buffer

Potential for Occurrence

- Not Expected to Occur
- Potential to Occur



0 500 1,000 1,500

Feet

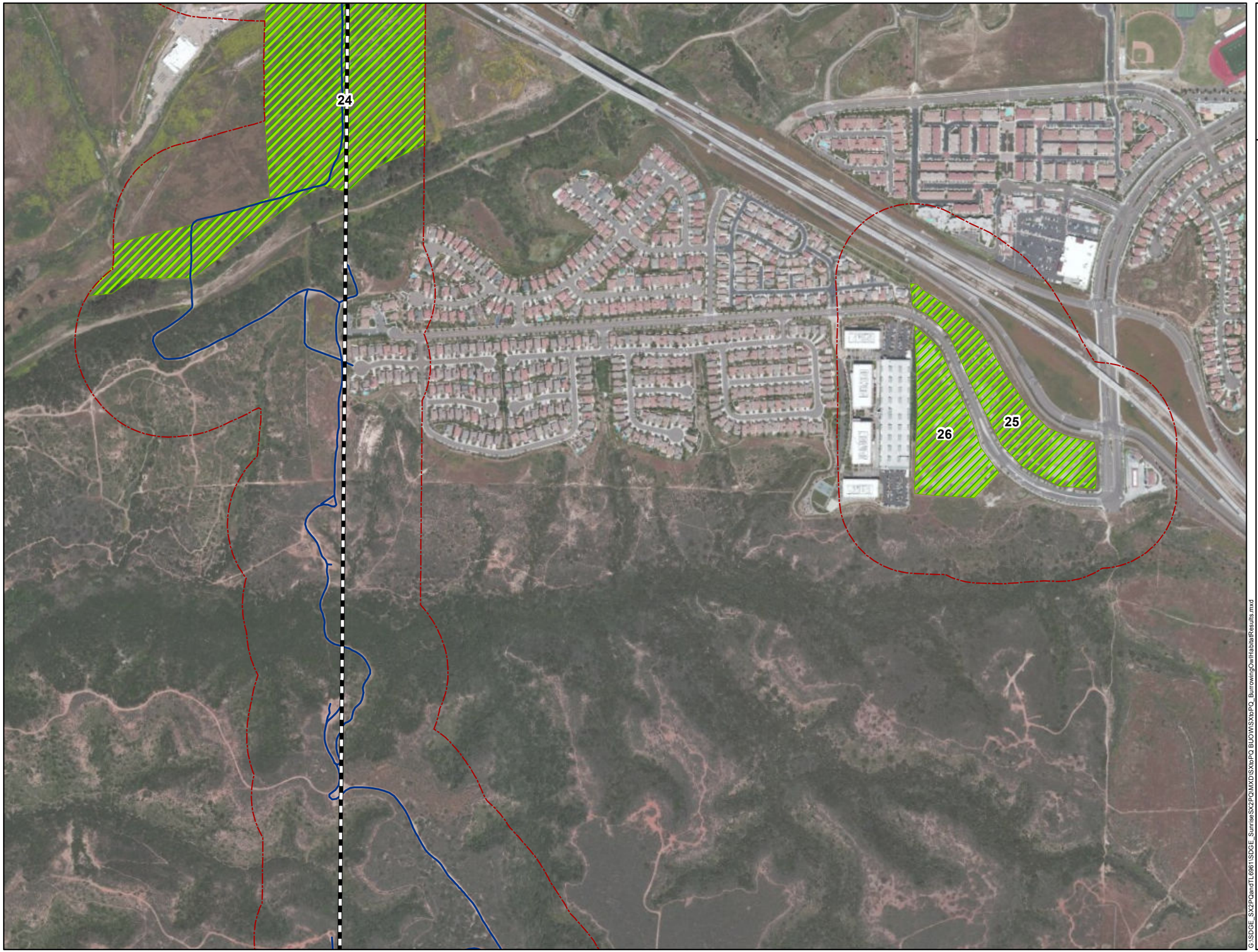
Source: CA Dept Fish and Wildlife, CNDDB Nov2014. SanBIOS, Nov 2014; Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Content may not reflect National Geographic's current map policy.

G:\SDGE_SX2PQ\and\TL69811SDGE_SunriseSX2PQ\MXD\SXtoPQ BUOWSXtoPQ_BurrowingOwlHabitatResults.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment Results

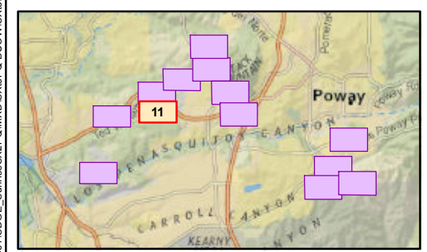
Figure 4



- Project Alignment
- Project Access Roads
- Project Footprint 500ft Buffer

Potential for Occurrence

- Not Expected to Occur
- Potential to Occur



0 500 1,000 1,500

Feet

Source: CA Dept Fish and Wildlife, CNDDB Nov2014. SanBIOS, Nov 2014; Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Content may not reflect National Geographic's current map policy.

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SX to PQ BUOWSX to PQ_BurrowingOwlHabitatResults.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment Results

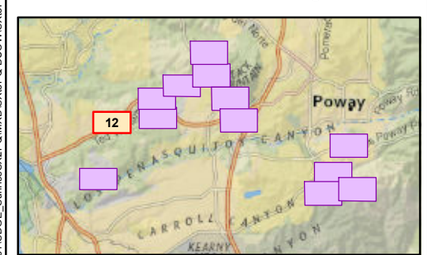
Figure 4

Project Alignment
Project Access Roads
Project Footprint 500ft Buffer

Potential for Occurrence

Not Expected to Occur
Potential to Occur

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQMXD\SXtoPQ BUOWlSXtoPQ_BurrowingOwlHabitatResults.mxd



0 500 1,000 1,500

Feet

Source: CA Dept Fish and Wildlife, CNDDB Nov2014. SanBIOS, Nov 2014; Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Content may not reflect National Geographic's current map policy.

Sycamore to Peñasquitos 230 kV Transmission Line Project

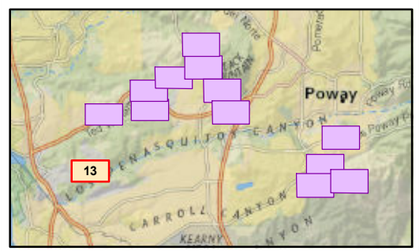
Burrowing Owl Habitat Assessment Results

Figure 4

Project Alignment
Project Access Roads
Project Footprint 500ft Buffer

Potential for Occurrence

Not Expected to Occur
Potential to Occur



0 500 1,000 1,500

Feet

Source: CA Dept Fish and Wildlife, CNDDB Nov2014. SanBIOS, Nov 2014; Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Content may not reflect National Geographic's current map policy.

G:\SDGE_SX2POandTL6981\SDGE_SunriseSX2PO\MXD\SXtoPQ BUOW\SXtoPQ_BurrowingOwlHabitatResults.mxd

ATTACHMENT 2 – Burrowing Owl Habitat Assessment Summary Table

ATTACHMENT 2 –Burrowing Owl Habitat Assessment Summary Table

Poly ID	Patch Size (ac.)	Dominant Vegetation and Land Use			Adjacent Foraging Habitat	Polygon Habitat Parameters				Polygon Burrow Features			Slope	Potential for Occurrence
		Within	Adjacent	Development Type and Proximity		Soils	Ave Veg Height (in.)	Max Veg Height (in.)	Shrub Density (%)	Small Mammal Burrows ?	Burrow Complexes ?	Burrowing Features		
1	4.40	DH	DL	Commercial, paved roads surrounding	None	Compact	<6	18	10	No	No	None	Level	Not expected. Polygon is surrounded by commercial development and paved roads; and contains compact soils, no small mammal burrows, and no adjacent open foraging or breeding habitat.
2	0.81	SMC-D	SMC, DL	Unpaved firebreak road within polygon; paved road adjacent	None	Compact, slightly friable	10	16	15	Yes, very few	No	Slopes	Slight	Not expected. Polygon is very small, isolated, and surrounded by tall and dense vegetation; and contains compact soils, few small mammal burrows, no burrow complexes, and no adjacent open foraging or breeding habitat.
3	1.50	BG	CSS, SMC, DL	Transmission tower within polygon; substation and paved and unpaved roads adjacent; residential within 1/2 mile	None	Compact	<3	60	5	No	No	None	Level	Not expected. Polygon is very small, isolated, and surrounded by tall and dense vegetation and development; and contains compact soils, no small mammal burrows, no burrow complexes, and no adjacent open foraging or breeding habitat.
4	4.00	DCSS-D, DH	CSS, SMC, DL	Substation and paved and unpaved roads adjacent; residential within 1/4 mile	None	Compact	<4	<4	5	No	No	None	Level	Not expected. Polygon is isolated and surrounded by tall and dense vegetation and development; and contains compact soils, no small mammal burrows, no burrow complexes, and no adjacent open foraging or breeding habitat.
5	1.31	BG, CSS	DL, SMC, SWS	Residential, ranches, paved roads surrounding	None	Friable	2	0	0	Yes, very few	No	Slopes	Slight	Not expected. Polygon is very small and surrounded by residential development, ranches, and paved roads; polygon contains few small mammal burrows, no burrow complexes, and no adjacent open foraging or breeding habitat.
6	1.29	SMC-D	SMC, DL	Unpaved firebreak road within polygon; paved road adjacent; residential within 3/4 mile	None	Compact, slightly friable	10	16	15	Yes, very few	No	Slopes	Slight	Not expected. Polygon is very small, isolated, and surrounded by tall and dense vegetation; and contains compact soils, few small mammal burrows, and no adjacent open foraging or breeding habitat.
7	17.37	NNG, DH, DCSS-D	DL, NNG	Unpaved roads and transmission tower within polygon; substation and paved roads adjacent; residential surrounding	Contiguous with adjacent NNG	Friable	<6	108	15	Yes, many	Yes, many	Slopes, berms	Slight to moderate	Low. Polygon is large; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils and many burrows and burrow complexes.
8	3.09	NNG, DH	DL, CSS	Unpaved road within polygon; residential and paved roads surrounding	None	Compact, friable	12	36	60	Yes, very few	No	Slopes, berms, debris piles	Slight	Not expected. Polygon is surrounded by residential development and paved roads; is dominated by compact soil; and contains tall and dense vegetation, few small mammal burrows, no burrow complexes, and no adjacent open foraging or breeding habitat.
9	6.00	NG, CSS	DL, CSS	Paved roads within and adjacent; high school, residential, and paved roads adjacent	Contiguous with adjacent NG	Friable	<6	24	8	Yes, few to moderate	No	Slopes	Slight	Low to moderate. Polygon is medium; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soil and a few to moderate number of burrows but no burrow complexes.
10	6.59	NG, CSS	DL, CSS	Unpaved roads and transmission tower within polygon; park and paved and unpaved roads adjacent; residential within 500 feet	Contiguous with adjacent NG	Friable	<6	24	20	Yes, few to moderate	No	Slopes	Moderate	Low. Polygon is medium; supports suitable but moderate density vegetation; is located adjacent to suitable foraging habitat; and contains friable soil and a few to moderate number of burrows but no burrow complexes.
11	1.85	NNG	CSS, DL	Unpaved roads within and adjacent; residential and paved roads within 200 feet	None	Friable	<6	<6	60	Yes, many	No	Slopes	Moderate	Not expected. Polygon is very small, isolated, and surrounded by tall and dense vegetation; and contains adjacent residential development and no adjacent open foraging or breeding habitat.

ATTACHMENT 2 –Burrowing Owl Habitat Assessment Summary Table

Poly ID	Patch Size (ac.)	Dominant Vegetation and Land Use			Adjacent Foraging Habitat	Polygon Habitat Parameters				Polygon Burrow Features			Slope	Potential for Occurrence
		Within	Adjacent	Development Type and Proximity		Soils	Ave Veg Height (in.)	Max Veg Height (in.)	Shrub Density (%)	Small Mammal Burrows ?	Burrow Complexes ?	Burrowing Features		
12	1.49	NNG, CSS	CSS, DL	Unpaved roads adjacent; residential and paved roads within 200 feet	None	Friable	<6	36	10	Yes, few	No	Slopes	Slight	Not expected. Polygon is very small, isolated, and surrounded by tall and dense vegetation; and contains few small mammal burrows, no burrow complexes, adjacent residential development, and no adjacent open foraging or breeding habitat.
13	2.69	NG, CSS	DL, CSS	Paved and unpaved roads adjacent; residential within 1/4 mile	None	Friable	<6	36	10	Yes, few	No	Slopes	Slight to moderate	Not expected. Polygon is small, isolated, and surrounded by tall and dense vegetation; and contains few small mammal burrows, no burrow complexes, and no adjacent open foraging or breeding habitat.
14	4.46	NNG, CSS	DL, CSS	Residential and paved and unpaved roads surrounding	None	Friable	<6	36	10	Yes, few	No	Slopes	Slight	Not expected. Polygon is surrounded by residential development and paved and unpaved roads; polygon contains few small mammal burrows, no burrow complexes, adjacent residential development, and no adjacent open foraging or breeding habitat.
15	4.24	NNG, DH, CSS	NNG, DH, CSS, DL	Park and paved and unpaved roads adjacent; residential within 1/2 mile	Contiguous with adjacent DH	Friable	12	18	30	Yes, few to moderate	No	Slopes, rock piles	Level	Low. Polygon is small; supports suitable but moderate density vegetation; is located adjacent to suitable foraging habitat; and contains friable soil and a few to moderate number of burrows but no burrow complexes.
16	59.61	DH, BG	DH, BG, DL	Unpaved roads and transmission tower within polygon; park, residential, and paved and unpaved roads adjacent	Contiguous with surrounding DH	Friable	0	6	2	Yes, few	Yes, few	Slopes, berms, rock piles	Slight to moderate	Low to moderate. Polygon is very large; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils, few burrows, and few burrow complexes.
17	42.40	NNG	NNG, CSS, DL	Unpaved roads within polygon; residential, and paved and unpaved roads adjacent	Contiguous with adjacent NNG	Friable	10	48	10	Yes, few to moderate	Yes, few	Slopes, berms, drainage banks	Slight to moderate	Low to moderate. Polygon is very large; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils, few to moderate burrows, and few burrow complexes.
18	19.41	NNG	NNG, SWS, DL	Unpaved roads within polygon; paved and unpaved roads adjacent; residential within 500 feet	Contiguous with adjacent NNG	Friable	8	48	5	Yes, moderate	Yes, few	Slopes, berms	Slight to moderate	Low to moderate. Polygon is large; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils, a moderate number of burrows, and few burrow complexes.
19	25.38	NNG	NNG, SWS, DL	Unpaved roads within polygon; residential and paved and unpaved roads adjacent	Contiguous with adjacent NNG	Friable	<6	48	<5	Yes, moderate	Yes, few	Slopes, berms	Slight to moderate	Low to moderate. Polygon is large; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils, a moderate number of burrows, and few burrow complexes.
20	1.60	NNG	NNG, SWS, DL	Unpaved roads within polygon; residential and paved and unpaved roads adjacent	Contiguous with adjacent NNG	Friable	8	48	5	Yes, moderate	Yes, few	Slopes, berms	Moderate	Low to moderate. Polygon is small; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils, a moderate number of burrows, and few burrow complexes.
21	8.37	NNG	NNG, DL	Unpaved roads within polygon; residential and commercial, and paved roads surrounding	None	Friable	<6	18	5	Yes, many	No	Slopes, berms	Slight	Low. Polygon is medium; supports suitable, low-density vegetation; and contains friable soil and many burrows but no burrow complexes.
22	1.12	NNG, DH	NNG, DH, DL	Residential and commercial, and paved and unpaved roads surrounding; active construction adjacent	None	Compact, friable	<6	18	10	Yes, few	No	Slopes, berms	Slight	Not expected. Polygon is very small, is surrounded by residential and commercial development, and paved and unpaved roads, and is dominated by compact soils; polygon contains few small mammal burrows, no burrow complexes, and no adjacent open foraging or breeding habitat; active construction of a large development is occurring adjacent to polygon.

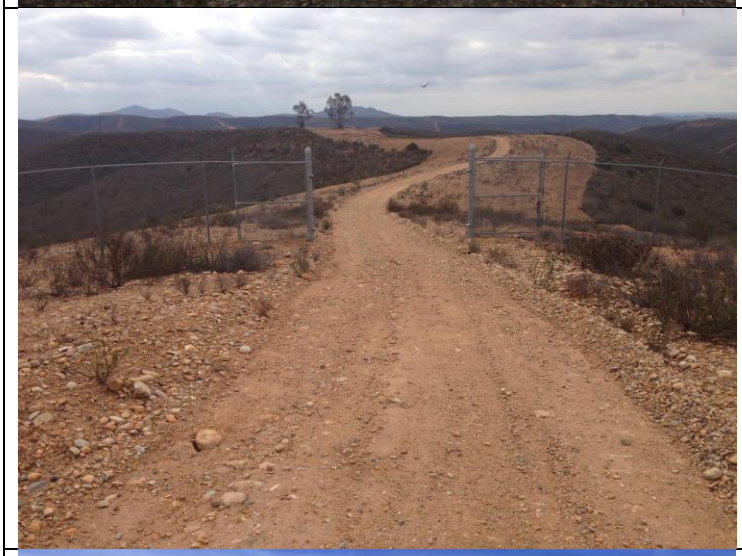
ATTACHMENT 2 –Burrowing Owl Habitat Assessment Summary Table

Poly ID	Patch Size (ac.)	Dominant Vegetation and Land Use			Adjacent Foraging Habitat	Polygon Habitat Parameters				Polygon Burrow Features			Slope	Potential for Occurrence
		Within	Adjacent	Development Type and Proximity		Soils	Ave Veg Height (in.)	Max Veg Height (in.)	Shrub Density (%)	Small Mammal Burrows ?	Burrow Complexes ?	Burrowing Features		
23	14.27	NNG, DH	NNG, DH, DL	Unpaved roads and transmission tower within polygon; residential and commercial, paved and unpaved roads, and active construction adjacent	None	Friable	6	18	5	Yes, few	Yes, few	Slopes, berms	Slight to moderate	Low. Polygon is medium; supports suitable, low-density vegetation; and contains friable soil and a few burrows and burrow complexes.
24	35.92	NNG	NNG, CSS, SWS, DL	Unpaved roads and transmission tower within polygon; paved and unpaved roads, and active construction adjacent; residential within 1/4 mile	Contiguous with adjacent NNG	Compact, friable	6	18	10	Yes, very few	No	Slopes, berms	Slight to moderate	Low. Polygon is very large; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains both compact and friable soils, very few burrows, and no burrow complexes.
25	8.91	DH	DH, DL	Unpaved roads within polygon; residential and commercial, and paved roads adjacent	Adjacent DH in polygon 26	Compact, friable	6	12	30	Yes, many	Yes, few	Berms	Level	Low to moderate. Polygon is medium; supports suitable but moderate density vegetation; is located adjacent to suitable foraging habitat; and contains both compact and friable soils, many burrows, and few burrow complexes.
26	7.86	DH	DH, DL	Unpaved roads within polygon; residential and commercial, and paved roads adjacent	Adjacent DH in polygon 25	Compact, friable	6	12	20	Yes, many	Yes, few	Berms	Level	Low to moderate. Polygon is medium; supports suitable but moderate density vegetation; is located adjacent to suitable foraging habitat; and contains both compact and friable soils, many burrows, and few burrow complexes.
27	8.93	DH	DH, DL	Residential and commercial, and paved roads adjacent	Contiguous with adjacent DH	Compact, slightly friable	6	24	30	Yes, very few	No	Berms	Level	Low. Polygon is medium; supports suitable but moderate density vegetation; is located adjacent to suitable foraging habitat; and contains both compact and slightly friable soils and very few burrows but no burrow complexes.
28	16.48	DH, NNG	NNG, DH, DL	Unpaved roads within polygon; residential and commercial, paved roads, and active construction adjacent	Adjacent DH in polygon 27	Compact, slightly friable	2	18	30	Yes, very few	No	Berms	Level	Low. Polygon is large; supports suitable but moderate density vegetation; is located adjacent to suitable foraging habitat; and contains both compact and slightly friable soil and very few burrows but no burrow complexes.
29	4.23	NNG, CSS	CSS, DL	Unpaved roads within polygon; residential development adjacent	Few scattered patches of NNG in vicinity	Friable	<12	36	5	Yes, few	No	Slopes	Moderate to steep	Low. Polygon is medium; supports suitable, low density vegetation; is located adjacent to suitable foraging habitat; and contains friable soil and a few burrows but no burrow complexes.
30	2.54	CSS	CSS	Residential development within 300 feet	Few scattered patches of NNG in vicinity	Friable	36	72	60	Yes, few	No	Slopes	Slight to steep	Not expected. Polygon is small; and contains tall and dense habitat, steep topography, few small mammal burrows, no burrow complexes, and limited adjacent open foraging or breeding habitat.
31	1.36	NNG, CSS	CSS, DL	Residential development adjacent	Contiguous with adjacent NNG	Friable	<6	96	10	Yes, moderate	No	Slopes	Moderate	Low. Polygon is small; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils and a moderate number of burrows but no burrow complexes.
32	4.19	NNG, CSS	CSS, DL	Residential development within 150 feet	Few scattered patches of NNG in vicinity	Friable	<6	36	15	Yes, few	No	Slopes	Moderate to steep	Low. Polygon is medium; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils and a few burrows but no burrow complexes.

ATTACHMENT 2 –Burrowing Owl Habitat Assessment Summary Table

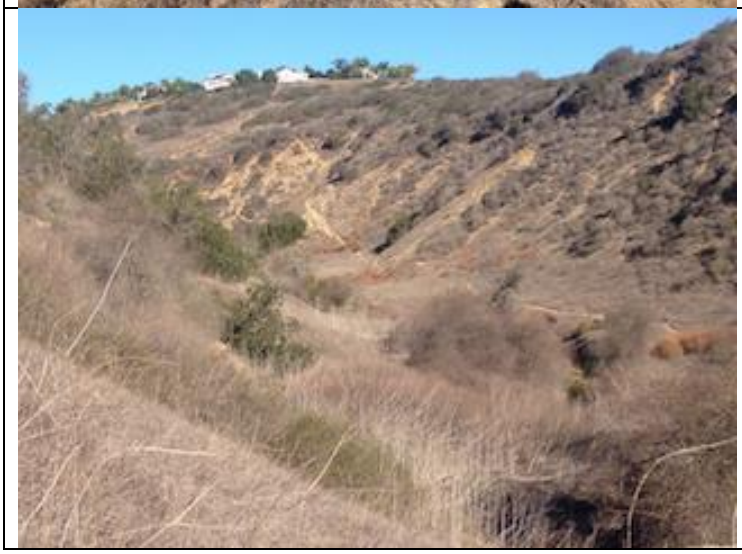
Poly ID	Patch Size (ac.)	Dominant Vegetation and Land Use			Adjacent Foraging Habitat	Polygon Habitat Parameters				Polygon Burrow Features			Slope	Potential for Occurrence
		Within	Adjacent	Development Type and Proximity		Soils	Ave Veg Height (in.)	Max Veg Height (in.)	Shrub Density (%)	Small Mammal Burrows ?	Burrow Complexes ?	Burrowing Features		
33	4.71	CSS, NNG	CSS, NNG	Residential development within 1/4 mile	Contiguous with adjacent NNG	Friable	36	72	60	Yes, few	No	Slopes, drainage banks,	Steep	Not expected. Polygon contains tall and dense habitat, steep topography, few small mammal burrows, and no burrow complexes.
34	5.35	NNG, NG, CSS	NNG, CSS	Unpaved roads and transmission tower within polygon; residential development within 1/4 mile	Contiguous with adjacent NNG	Friable	<6	36	5	Yes, moderate	No	Slopes, berms	Moderate	Low to moderate. Polygon is medium; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils and a few burrows but no burrow complexes.
35	4.57	NNG, CSS	CSS, DH, DL	Unpaved roads and transmission tower within polygon; residential development adjacent	Few scattered patches of NNG in vicinity	Friable	<6	36	10	Yes, moderate	No	Slopes, berms	Level	Low. Polygon is medium; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils and a few burrows but no burrow complexes.

ATTACHMENT 3 – Burrowing Owl Habitat Assessment Photographs

	Polygon 1. Burrowing owl are not expected to occur in this staging yard that is surrounded by commercial development and paved roads; and contains compact soils, no small mammal burrows, and no adjacent open foraging or breeding habitat (Facing south; November 18, 2014).
	**Polygon 6.** Burrowing owl are not expected to occur in this firebreak on MCAS Miramar that is isolated and surrounded by tall and dense vegetation; and contains compact soils, few small mammal burrows, and no adjacent open foraging or breeding habitat (Facing south; November 18, 2014)
	Polygon 7. Burrowing owl have a low potential to occur in this staging yard that is large; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils and many burrows and burrow complexes (Facing east; November 18, 2014;).

	Polygon 9. Burrowing owl have a low to moderate potential to occur in this polygon that is medium in size; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soil and a few to moderate number of burrows but no burrow complexes (Facing north; November 18, 2014).
	Polygon 14. Burrowing owl are not expected to occur in this polygon that is surrounded by residential development and paved and unpaved roads; contains few small mammal burrows, no burrow complexes, adjacent residential development, and no adjacent open foraging or breeding habitat (Facing west; November 18, 2014).
	Polygon 17. Burrowing owl have a low to moderate potential to occur in this polygon that is very large; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils, few to moderate burrows, and few burrow complexes (Facing southwest; November 18, 2014).

	Polygon 22. Burrowing owl are not expected to occur in this polygon that is very small, is surrounded by residential and commercial development, and paved and unpaved roads, and is dominated by compact soils; polygon contains few small mammal burrows, no burrow complexes, and no adjacent open foraging or breeding habitat; active construction of a large development is occurring adjacent to polygon (facing west; November 17, 2014).
	Polygon 24. Burrowing owl have a low potential to occur in this polygon that is very large; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains both compact and friable soils, very few burrows, and no burrow complexes (Facing southwest; November 17, 2014).
	Polygon 28. Burrowing owl have a low potential to occur in this staging yard that is large; supports suitable but moderate density vegetation; is located adjacent to suitable foraging habitat; and contains both compact and slightly friable soil and very few burrows but no burrow complexes (Facing northeast; November 17, 2014).

	Polygon 30. Burrowing owl are not expected to occur in this polygon that is small; and contains tall and dense habitat, steep topography, few small mammal burrows, no burrow complexes, and limited adjacent open foraging or breeding habitat (Facing northeast; November 17, 2014).
	Polygon 32. Burrowing owl have a low potential to occur in this polygon that is medium in size; supports suitable, low-density vegetation; is located adjacent to suitable foraging habitat; and contains friable soils and a few burrows but no burrow complexes (Facing northwest; November 17, 2014).
	**Polygon 33.** Burrowing owl are not expected to occur in this polygon that contains tall and dense habitat, steep topography, few small mammal burrows, and no burrow complexes (Facing north; November 17, 2014).

MEMORANDUM

TO: Robert Fletcher, San Diego Gas & Electric

FROM: Melissa Busby, Busby Biological Services, Inc.

DATE: January 29, 2015

RE: Response to Data Request #5, Question 5

The California Public Utilities Commission (CPUC) has identified data needs for the proposed San Diego Gas & Electric Company (SDG&E) Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project (Proposed Project), Application No. 14-04-011. This memorandum provides a response to Data Request #5, Question 5 by providing information pertaining to the two new proposed staging yards that are located within and adjacent to the existing Proposed Project alignment.

Busby Biological Services, Inc. (BBS) conducted general biological surveys (i.e., vegetation mapping and habitat assessments) within the portions of the two new proposed staging yards that were not included in the previous Biological Survey Area (BSA). These surveys included approximately 3.97 acres of the proposed Black Mountain staging yard plus a 50-foot buffer (approximately 1.87 acres) and approximately 25.62 acres of the proposed Evergreen Nursery staging yard plus a 50-foot buffer (approximately 6.82 acres).

This memorandum provides a description of the methods and results used for the general biological surveys at these two new proposed staging yards. This information is intended to supplement the information provided in the Biological Technical Report (BTR) prepared for the Proposed Project (BBS 2014a). For additional information pertaining to the biological resources associated with the Proposed Project, please refer to the BTR.

METHODS

The methods used for the vegetation mapping and habitat assessments at the two new proposed staging yards are described, below.

Vegetation Mapping Methods

Vegetation communities and land cover types within the two new proposed staging yards were delineated by hand in the field using color aerial imagery. Surveys included a 50-foot buffer around the potential impact area.

Biologists mapped the vegetation communities and land cover types by walking through the two new proposed staging yards and documented the dominant plant species within each of the vegetation communities and land cover types. After the field mapping was completed, biologists reviewed each map for consistency or errors, and the hand drawn vegetation community and land cover type boundaries were digitized in the office using Geographic Information Systems (GIS) software.

Vegetation community classifications are consistent with, or similar to, Holland (1986) and plant names largely follow Rebman and Simpson (2006), but updated names are included where applicable (Baldwin et. al 2012). Vegetation communities are identified according to the estimated percent cover of the combination of dominant plant species observed. Vegetation community classifications are based on a dominant species comprising approximately 50 percent or more of the total cover within the mapped unit relative to the list of dominant species for a given Holland vegetation community (e.g., grasslands must have approximately 50 percent cover of dominant grassland species to be mapped as that particular community). Mixed communities are identified where species comprising a second vegetation community are present at approximately 35 percent or higher percent cover 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 disturbed 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.

Habitat Assessments Methods

In addition to the vegetation mapping, BBS also conducted habitat assessments within the two new proposed staging yards and associated buffers. These habitat assessments were intended to determine if the potential for occurrence of any of the previously discussed special-status species needed to be updated, if additional special-status species needed to be added to the lists of special-status species with a potential to occur within the BSA, and/or if additional focused special-status species surveys may be required to assess potential impacts that are anticipated to occur from implementation of the Proposed Project.

RESULTS

The results of the vegetation mapping and habitat assessments are described, below.

Vegetation Mapping Results

Biologists mapped vegetation communities and land cover types in the two new proposed staging yards on Monday, January 26, 2015. A summary of the vegetation communities and land cover types identified within each proposed staging yard and the survey buffer that are outside of the original BSA are presented in Table 1, below.

Table 1. Vegetation Communities and Land Cover Types at the Two New Proposed Staging Yards

Veg/Land Cover	EVERGREEN NURSERY STAGING YARD		BLACK MOUNTAIN STAGING YARD		TOTAL
	Approx. Acreage Within Yard	Approx. Acreage Within Buffer	Approx. Acreage Within Yard	Approx. Acreage Within Buffer	
Bare Ground	0.06	0.18	--	--	**0.24**
Coastal Sage Scrub – Revegetated	--	--	--	0.84	**0.84**
Southern Mixed Chaparral	0.49	0.80	--	--	**1.29**
Eucalyptus Woodland*	--	0.37	--	--	**0.37**
Developed Lands*	25.05	3.97	--	--	**29.02**
Ornamental*	--	1.31	--	--	**1.31**
Disturbed Habitat*	0.02	0.19	3.97	1.03	**5.21**
TOTAL	**25.62****	**6.82****	**3.97****	**1.87****	**38.51****
	32.44		**5.84**		

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

No additional vegetation communities or land cover types were identified within the two new proposed staging yards that were not already covered in the BTR, and the descriptions of the vegetation communities and land cover types remain consistent with those presented in the BTR (BBS 2014a).

With the addition of the two new proposed staging yards, the BSA is now approximately 1,253.29 acres. This includes the original BSA that is presented in the BTR (BBS 2014a); the staging yards, access roads, Encina Hub, Mira Mesa Hub, and other work areas and their associated survey buffers (i.e., 20 feet for roads and 50 feet for other types of work areas) that were surveyed previously; and the two new proposed staging yards and associated buffer.

Table 2, below, provides a breakdown of this acreage into the 25 different vegetation community and land cover type categories. For a detailed description of each vegetation community, please refer to the BTR that was prepared for the original BSA (BBS 2014).

Table 2. 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	188.39
	Diegan Coastal Sage Scrub – Disturbed	42.39
	Coastal Sage Scrub – Revegetated	64.47
Coastal Sage/Chaparral Mix	Coastal Sage – Chaparral Scrub	11.19
Chaparral	Chamise Chaparral	79.42
	Chamise Chaparral - Disturbed	5.74
	Southern Mixed Chaparral	101.90
	Southern Mixed Chaparral – Disturbed	13.63
	Scrub Oak Chaparral	81.54
Grassland	Native Grassland	10.97
	Nonnative Grassland	91.71
Alkali Marsh	Alkali Marsh – Revegetated	0.29
Freshwater Marsh	Freshwater Marsh	0.49
Inland Water	San Diego Mesa Vernal Pool	0.10
	Open Water*	0.92
Riparian Scrub	Southern Riparian Scrub	1.72
	Mulefat Scrub	1.77
	Southern Willow Scrub	3.41
	Tamarisk Scrub	0.40
Coast Live Oak Riparian Forest	Southern Coast Live Oak Riparian Forest	2.86
Eucalyptus Forest	Eucalyptus Woodland*	5.50
Disturbed Habitat	Disturbed Habitat*	61.83
N/A	Developed Lands*	319.88
	Ornamental*	95.35
	Bare Ground*	67.44
	TOTAL	1,253.29**

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

Habitat Assessments Results

The habitat assessments conducted in the two new proposed staging yards and the associated buffer areas indicate that additional special-status species surveys may be required to assess potential impacts that are anticipated to occur from implementation of the Proposed Project. Suitable habitat for both special-status plant species and special-status wildlife species was identified during these surveys. However, no additional special-status species that were not covered in the BTR have the potential to occur within the BSA, and the potential for occurrence for all of the special-status species did not change based on the habitat assessments in these areas (BBS 2014a and BBS 2014b).

DISCUSSION

No focused special-status species surveys were conducted in the two new proposed staging yards and buffer areas that were surveyed and assessed as part of the general biological surveys described above. Based on the results of the vegetation mapping and habitat assessments conducted in these areas, we anticipate that focused special-status plant species surveys, coastal California gnatcatcher surveys, and burrowing owl surveys will be required. In addition, a focused wetland assessment/delineation should be performed at these locations. These surveys should be conducted in 2015, concurrent with the other surveys planned for the Proposed Project, and the results should be presented in survey summary memorandums/reports for each individual task. No other focused special-status species surveys are anticipated for the Proposed Project.

REFERENECES

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors.

2012 *The Jepson manual: vascular plants of California, second edition*. University of California Press, Berkeley.

Busby Biological Services, Inc. (BBS)

2014a Biological Technical Report for Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, City of San Diego, San Diego County, California. March 2014.

2014b Special-Status Plant Survey Summary Report for the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, San Diego County, California. June 2014.

Rebman, J.P. and M.G. Simpson

2006 *Checklist of the Vascular Plants of San Diego County*, 4th Edition. San Diego. Natural History Museum, San Diego, California.

MEMORANDUM

TO: Robert Fletcher, San Diego Gas & Electric

FROM: Melissa Busby, Busby Biological Services, Inc.

DATE: March 27, 2015

RE: Response to Data Request #9, Issue 4: Provide a Technical Memo Documenting the Burrowing Owl Habitat Assessment Methodology and Results for the Encina Hub

---

The California Public Utilities Commission (CPUC) has identified data needs for the proposed San Diego Gas & Electric Company (SDG&E) Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project (Proposed Project), Application No. 14-04-011. Data Request #9, Issue 4 states the following:

> ***"Provide a technical memo documenting the burrowing owl habitat assessment methodology and results for the Evergreen Nursery staging yard, the Black Mountain Ranch Community Park staging yard, and the Encina Hub work area. SDG&E provided burrowing owl GIS data in response to Data Request #7 with no accompanying technical assessment.***
>
> *In the assessment, explain why there is a polygon of unlabeled area surrounded by labeled burrowing owl suitable habitat at the Black Mountain Ranch Community Park between potential habitat areas 15 and 16. Based on aerial imagery, this polygon appears to also be suitable habitat. Refer to Attachment A for the specific location in question."*

Busby Biological Services, Inc. (BBS) conducted a focused burrowing owl (*Athene cunicularia*) habitat assessment within the Biological Survey Area (BSA) in November 2014. Since the burrowing owl habitat assessment was conducted, several new areas – the Evergreen Nursery staging yard, the Black Mountain Ranch Community Park staging yard, the Camino Del Sur staging yard, and the Encina Hub work area – have been added to the BSA that require a focused burrowing owl habitat assessment.

BBS conducted general biological surveys (i.e., vegetation mapping and habitat assessments) within the Black Mountain Ranch Community Park staging yard, Evergreen Nursery staging yard, and the Encina Hub work area. BBS also conducted the general

biological surveys at the newly added Camino Del Sur staging yard. In addition to the general surveys, BBS conducted a focused burrowing owl habitat assessment in all of these areas.

This memorandum provides a description of the methods and results used for the focused burrowing owl habitat assessment conducted at the Encina Hub work area (Figure 1). The methods and results of the focused burrowing owl habitat assessment conducted at the Camino Del Sur staging yard and the Evergreen Nursery staging yard is covered in a separate memorandum. The Black Mountain Community Park staging yard is no longer part of the Proposed Project. As such, it is not discussed in a memorandum.

The information in this memorandum is intended to supplement the information provided in the letter survey summary report for the November 2014 burrowing owl habitat assessment, titled *Focused Burrowing Owl* (Athena cunicularia*) Habitat Assessment Report for the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, San Diego County, California* and dated January 14, 2015. This letter documents the focused burrowing owl habitat assessment that was performed and provides the Proposed Project description, burrowing owl species and historical occurrence information, the habitat assessment methods, and the results of these surveys.

For additional information pertaining to the Proposed Project description, regulatory setting, and biological resources associated with the Proposed Project, please refer to the Biological Technical Report (BTR) prepared for the Proposed Project (BBS 2014).

METHODS

This section briefly describes the background research and field evaluation methods used for the focused burrowing owl habitat assessment at the Encina Hub work area.

Historical Burrowing Owl Occurrence Data

BBS obtained historical burrowing owl occurrence data for the Encina Hub work area and an approximately 5-mile buffer from the SanBIOS database (County of San Diego 2014) and CDFW *California Natural Diversity Database* (CNDDB; CDFW 2014a). BBS also reviewed other sensitive species resources, including the CDFW Special Animals (CDFW 2014b); Proceedings of the California Burrowing Owl Symposium (Barclay et al. 2007); San Diego County Breeding Bird Atlas (Unit 2004); North American Breeding Bird Survey, Results Analysis 1966-2012 (Sauer et al. 2014); eBIRD (http://ebird.org); Gervais et al. (2008); the San Diego Natural History Museum (SDNHM) Bird Atlas Project (SDNHM 2014); and other regional and site-specific relevant information, data, and literature.

Focused Field Evaluation

BBS used the results of the historical occurrence database search along with other background research to evaluate the potentially suitable burrowing owl habitat in the field. BBS thoroughly evaluated the potentially suitable burrowing owl habitat located within the Encina Hub work area and a 500-foot buffer on foot to determine which polygons have the potential to support burrowing owl and require focused burrowing owl surveys.

Areas of suitable burrowing owl habitat were drawn onto the map by hand in the field. In addition, photographs were taken of each polygon evaluated in the burrowing owl habitat assessment area.

To consistently and systematically evaluate each patch of potentially suitable habitat within the burrowing owl habitat assessment area for the potential to support the burrowing owl, BBS recorded data on the following criteria:

- polygon patch size
- dominant vegetation and land use within and adjacent to the polygon
- presence of adjacent foraging habitat
- vegetation height and shrub density within the polygon
- presence of friable soils within the polygon
- presence and quantity of burrows and burrow complexes within the polygon
- other evidence of fossorial animal use and burrow features within the polygon
- slope steepness within the polygon

BBS used this data to assess the overall potential of each potentially suitable burrowing owl habitat polygon to support the burrowing owl, taking into consideration the historical occurrence data and the evaluation criteria. Each habitat patch was either determined as not expected to support burrowing owl, or as having a low, moderate, or high potential to support burrowing owl.

RESULTS

This section briefly describes the results of the background research and field evaluation for the focused burrowing owl habitat assessment at the Encina Hub work area.

Historical Burrowing Owl Occurrence Data

While the CNDDB search did not result in any historical burrowing owl occurrences within a 5-mile radius of the Encina Hub work area, several historical burrowing owl occurrences were found in the SanBIOS database search. These data did not have any specific location attributes to them, so the exact location of these points is not known. However, they do indicate that burrowing owl is known to occur historically within the vicinity of the Encina Hub work area.

Focused Field Evaluation

No burrowing owls or burrowing owl sign were observed during the focused habitat assessments conducted at the Encina Hub work area.

On January 22, 2015, BBS evaluated six polygons (approximately 7.04 acres) of potentially suitable habitat located within the Encina Hub work area and a 500-foot buffer (Figure 2; Polygons 1 through 6). Of the six polygons evaluated, four of the polygons (Figure 2; Polygons 1, 2, 4, and 5) – totaling approximately 4.99 acres – do not provide suitable burrowing owl habitat, and two of the polygons (Figure 2; Polygons 3 and 6) – totaling approximately 4.05 acres – provide suitable burrowing owl habitat.

Brief descriptions of both the unsuitable and suitable habitat polygons identified at the Encina Hub work area are provided in this section. The data associated with these polygons are summarized in this memorandum and will be added to the habitat assessment table and included in the final burrowing owl survey summary report.

Unsuitable Burrowing Owl Habitat Polygons

The four polygons that do not provide suitable burrowing owl habitat are described in this section. Because these polygons do not provide suitable habitat, the burrowing owl is not expected to occur in these polygons.

Polygon 1 is approximately 1.41 acres. The dominant vegetation within Polygon 1 consists of disturbed habitat, with revegetated coastal sage scrub, nonnative grassland, Diegan coastal sage scrub, and developed land immediately adjacent to the polygon. Polygon 1 contains compact soils with no small mammal burrows or burrow complexes and is contiguous with only a small patch of nonnative grassland foraging habitat. Polygon 1 was classified as unsuitable for burrowing owl because of the small polygon size, compact soils, and absence of burrows and burrow complexes.

Polygon 2 is approximately 0.46 acre. The dominant vegetation within Polygon 2 consists of disturbed habitat, with active agriculture (tall and dense crops), southern mixed chaparral, Diegan coastal sage scrub, and developed land immediately adjacent to the polygon. Polygon 2 contains friable soils with a few small mammal burrows and a few burrow complexes, but there is no adjacent foraging habitat. Polygon 2 was classified as unsuitable for burrowing owl because of the small polygon size, high level of disturbance resulting from the adjacent active agricultural practices that do not support suitable burrowing owl foraging crops, and continued active development within the immediate vicinity.

Polygon 4 is approximately 0.78 acre and is located within an existing golf course. The dominant vegetation within Polygon 4 consists of short, ornamental grasses associated

with the golf course landscaping, with Diegan coastal sage scrub immediately adjacent to the polygon. Polygon 4 contains compact soils that are matted with ornamental grasses, and it does not support any small mammal burrows or burrow complexes. The golf course provides adjacent foraging habitat. Polygon 4 was classified as unsuitable for burrowing owl because of the small polygon size, compact soils, absence of burrows and burrow complexes, and a high level of human activity associated with the golf course.

Polygon 5 is approximately 0.35 acre and is located within the same existing golf course as Polygon 4, above. The dominant vegetation within Polygon 5 consists of short, ornamental grasses associated with the golf course landscaping, with Diegan coastal sage scrub and mulefat scrub immediately adjacent to the polygon. Polygon 5 contains compact soils that are matted with ornamental grasses, and it does not support any small mammal burrows or burrow complexes. The golf course provides adjacent foraging habitat. Polygon 5 was classified as unsuitable for burrowing owl because of the small polygon size, compact soils, absence of burrows and burrow complexes, and a high level of human activity associated with the golf course.

Suitable Burrowing Owl Habitat Polygons

The two polygons that provide suitable burrowing owl habitat along with the potential for occurrence for the burrowing owl within the polygon are described in this section.

Polygon 3 is approximately 2.24 acres. The dominant vegetation within Polygon 3 consists of nonnative grassland and Diegan coastal sage scrub, with Diegan coastal sage scrub, southern mixed chaparral, disturbed habitat, bare ground, and developed land immediately adjacent to the polygon. Polygon 3 contains friable soils with a few small mammal burrows, but no burrow complexes. It is adjacent to a golf course and nonnative grassland that provide suitable foraging habitat. Based on the site conditions, BBS determined that there is a low potential for occurrence for burrowing owl within this polygon.

Polygon 6 is approximately 1.81 acres. The dominant vegetation within Polygon 3 consists of nonnative grassland and disturbed coastal sage scrub, with Diegan coastal sage scrub, southern mixed chaparral, and nonnative grassland immediately adjacent to the polygon. Polygon 6 contains friable soils that have been compacted in some areas and also supports a moderate number of small mammal burrows and a few burrow complexes. Openings in adjacent coastal sage scrub provide suitable foraging habitat. Based on the site conditions, BBS determined that there is a low potential for occurrence for burrowing owl within this polygon.

DISCUSSION

No burrowing owls or burrowing owl sign were observed during the focused habitat assessments conducted to date for the Proposed Project.

Focused burrowing owl surveys are required in all suitable habitat that is located within the Proposed Project area and a 500-foot buffer of the Proposed Project area, including the suitable habitat identified at the Encina Hub work area.

One round of focused burrowing owl surveys was conducted on March 17, 2015 and included all suitable burrowing owl habitat identified within the Encina Hub work area footprint and the 500-foot buffer, including the suitable habitat discussed in this memorandum. During this first round of surveys, the boundaries of the suitable habitat polygons were refined.

No burrowing owls or burrowing owl sign were observed during the first round of surveys.

Additional focused surveys are planned for spring and summer 2015, following the most recent California Department of Fish and Wildlife protocol (CDFW 2012). The results of the focused habitat assessment and the focused surveys will be summarized in a survey summary report once the surveys have been completed.

REFERENECES

Busby Biological Services, Inc. (BBS)

2014 *Biological Technical Report for Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project*, City of San Diego, San Diego County, California. March 2014.

2015 *Focused Burrowing Owl* (Athena cunicularia*) Habitat Assessment Report for the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project,* San Diego County, California. January 14.

California Department of Fish and Wildlife (CDFW)

2012 *Staff Report on Burrowing Owl Mitigation*. State of California. Natural Resources Agency, Department of Fish and Game. March 2012.

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_BusbyRegionalLocation(CCGS).mxd

CONFIDENTIAL - PROPERTY OF SDG&E. FOR INTERNAL USE ONLY, UNAUTHORIZED DISSEMINATION PROHIBITED. THIS DOCUMENT SHALL BE TREATED AS CONFIDENTIAL PURSUANT TO Public Utilities Code Section 583, General Order 66-C, any applicable non-disclosure agreement, and/or the North American Electric Reliability Corporation's Rules of Procedure, Section 1500 et seq. and any other applicable federal and state laws and regulations. THIS MAP IS NOT SURVEY GRADE, and SDG&E makes no representations or warranties, expressed or implied, as to its accuracy, correctness, defensibility, completeness or any other standard or measure of quality or adequacy, or as to its fitness for use or intended use for any particular purpose. SDG&E disclaims all liability for your selection or use of this map or any consequences therefrom. "Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved."

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Location

Figure 1

Project Location

StagingYards_Feb2015

Proposed Project

N W E S

0 10 20 30 Miles

TRC

3/26/2015

SDGE

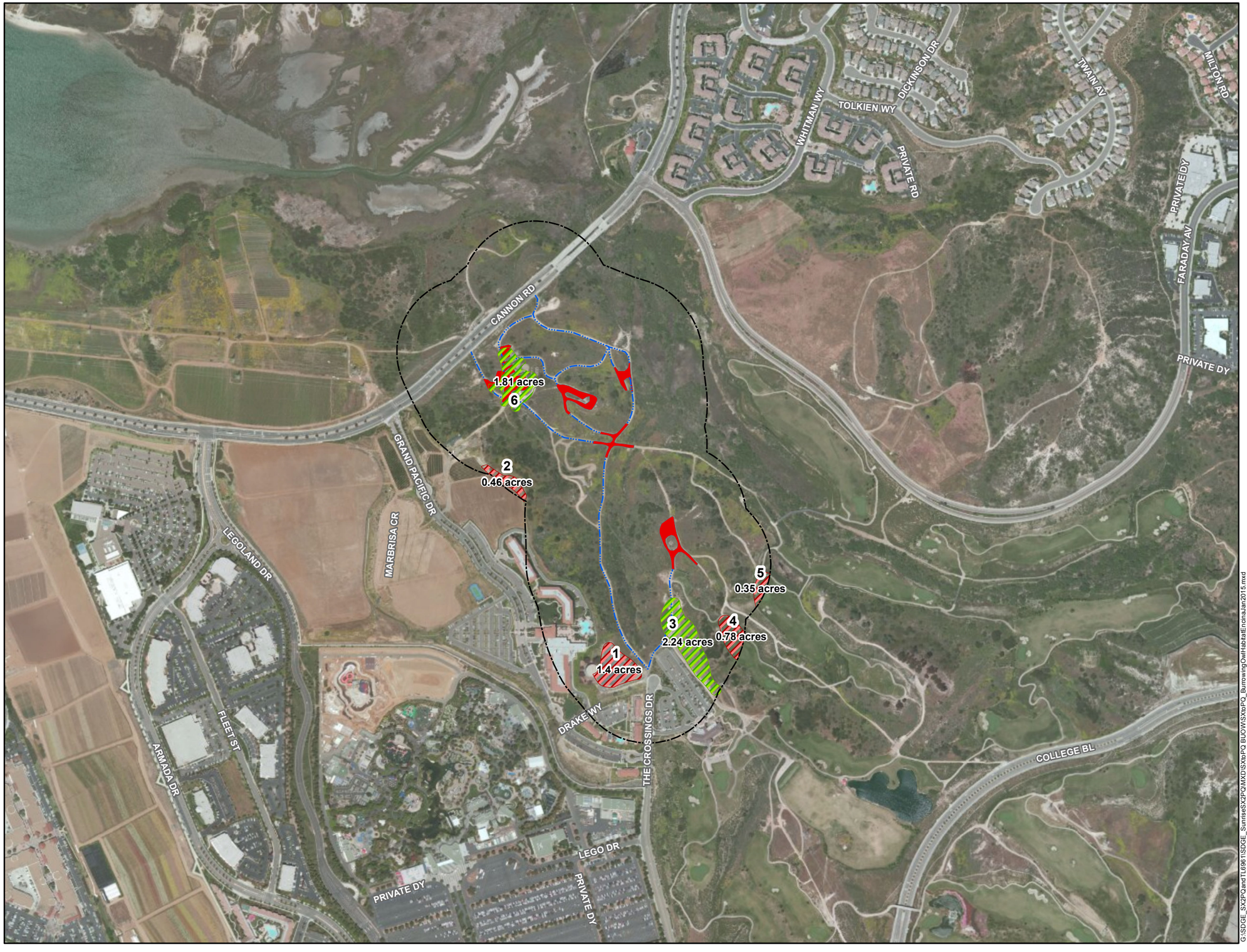
A Sempra Energy utility

Sources: SDG&E; Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE,

Sycamore to Peñasquitos 230 kV Transmission Line Project

Burrowing Owl Habitat Assessment Results

Figure 2



- Project Access Roads
- Encina Hub Work Areas
- BurrowingOwl_EncinaHub
- Burrowing Owl Survey Area

Potential for Occurrence

- Not Expected to Occur
- Potential to Occur

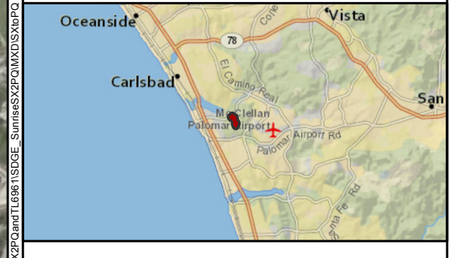
CONFIDENTIAL - PROPERTY OF SDG&E. FOR INTERNAL USE ONLY, UNAUTHORIZED DISSEMINATION PROHIBITED. THIS DOCUMENT SHALL BE TREATED AS CONFIDENTIAL PURSUANT TO Public Utilities Code Section 583, General Order 66-C, any applicable non-disclosure agreement, and/or the North American Electric Reliability Corporation's Rules of Procedure, Section 1500 et seq. and any other applicable federal and state laws and regulations. THIS MAP IS NOT SURVEY GRADE, and SDG&E makes no representations or warranties, expressed or implied, as to its accuracy, correctness, defensibility, completeness or any other standard or measure of quality or adequacy, or as to its fitness for use or intended use for any particular purpose. SDG&E disclaims all liability for your selection or use of this map or any consequences therefrom. "Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved."

TRC

SDGE
A Sempra Energy utility

3/25/2015

0 500 1,000 1,500
Feet



Source: CA Dept Fish and Wildlife, CNDDB Nov2014. SanBIOS, Nov 2014; Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Content may not reflect National Geographic's current map policy. Sources: National

G:\SDGE_SX2PO\and\TL6981\SDGE_SunriseSX2PO\MXD\SXtoPQ BUOWSXtoPQ_BurrowingOwlHabitatEncinaJan2015.mxd

MEMORANDUM

TO: Robert Fletcher, San Diego Gas & Electric

FROM: Melissa Busby, Busby Biological Services, Inc.

DATE: March 26, 2015

RE: Response to Data Request #9, Issue 4: Provide a Technical Memo Documenting the Burrowing Owl Habitat Assessment Methodology and Results for the Evergreen Staging Yard (and the Camino Del Sur Staging Yard)

The California Public Utilities Commission (CPUC) has identified data needs for the proposed San Diego Gas & Electric Company (SDG&E) Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project (Proposed Project), Application No. 14-04-011. Data Request #9, Issue 4 states the following:

> ***"Provide a technical memo documenting the burrowing owl habitat assessment methodology and results for the Evergreen Nursery staging yard, the Black Mountain Ranch Community Park staging yard, and the Encina Hub work area. SDG&E provided burrowing owl GIS data in response to Data Request #7 with no accompanying technical assessment.***
>
> *In the assessment, explain why there is a polygon of unlabeled area surrounded by labeled burrowing owl suitable habitat at the Black Mountain Ranch Community Park between potential habitat areas 15 and 16. Based on aerial imagery, this polygon appears to also be suitable habitat. Refer to Attachment A for the specific location in question."*

Busby Biological Services, Inc. (BBS) conducted a focused burrowing owl (*Athene cunicularia*) habitat assessment within the Biological Survey Area (BSA) in November 2014. Since the burrowing owl habitat assessment was conducted, several new areas – the Evergreen Nursery staging yard, the Black Mountain Ranch Community Park staging yard, the Camino Del Sur staging yard, and the Encina Hub work area – have been added to the BSA that require a focused burrowing owl habitat assessment.

BBS conducted general biological surveys (i.e., vegetation mapping and habitat assessments) within the Black Mountain Ranch Community Park staging yard, Evergreen

Nursery staging yard, and the Encina Hub work area. BBS also conducted the general biological surveys at the newly added Camino Del Sur staging yard. In addition to the general surveys, BBS conducted a focused burrowing owl habitat assessment in all of these areas.

The Black Mountain Community Park staging yard is no longer part of the Proposed Project. As such, it will not be discussed further in this memorandum.

This memorandum provides a description of the methods and results used for the focused burrowing owl habitat assessment conducted at the Camino Del Sur staging yard and the Evergreen Nursery staging yard (Figure 1). The methods and results of the focused burrowing owl habitat assessment conducted at the Encina Hub work area is covered in a separate memorandum.

The information in this memorandum is intended to supplement the information provided in the letter survey summary report for the November 2014 burrowing owl habitat assessment, titled *Focused Burrowing Owl* (Athena cunicularia*) Habitat Assessment Report for the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, San Diego County, California* and dated January 14, 2015. This letter documents the focused burrowing owl habitat assessment that was performed and provides the Proposed Project description, burrowing owl species and historical occurrence information, the habitat assessment methods, and the results of these surveys.

For additional information pertaining to the Proposed Project description, regulatory setting, and biological resources associated with the Proposed Project, please refer to the Biological Technical Report (BTR) prepared for the Proposed Project (BBS 2014).

METHODS

This section briefly describes the background research and field evaluation methods used for the focused burrowing owl habitat assessment at the Camino Del Sur staging yard and the Evergreen Nursery staging yard.

Historical Burrowing Owl Occurrence Data

Because the Camino Del Sur staging yard and the Evergreen Nursery staging yard are along the main alignment and adjacent to the previous BSA, BBS utilized the historical burrowing owl occurrence data obtained for the November 2014 burrowing owl habitat assessment to inform the focused burrowing owl habitat assessment at these newly added staging yards.

Focused Field Evaluation

BBS used the results of the historical occurrence database search along with other background research to evaluate the potentially suitable burrowing owl habitat in the field. Following the general biological surveys that were conducted at the Camino Del Sur staging yard and the Evergreen Nursery staging yard, BBS thoroughly evaluated the potentially suitable burrowing owl habitat on foot to determine which polygons have the potential to support burrowing owl and require focused burrowing owl surveys.

Areas of suitable burrowing owl habitat were drawn onto the map by hand in the field. In addition, photographs were taken of each polygon evaluated in the burrowing owl habitat assessment area.

To consistently and systematically evaluate each patch of potentially suitable habitat within the burrowing owl habitat assessment area for the potential to support the burrowing owl, BBS recorded data on the following criteria:

- polygon patch size
- dominant vegetation and land use within and adjacent to the polygon
- presence of adjacent foraging habitat
- vegetation height and shrub density within the polygon
- presence of friable soils within the polygon
- presence and quantity of burrows and burrow complexes within the polygon
- other evidence of fossorial animal use and burrow features within the polygon
- slope steepness within the polygon

BBS used this data to assess the overall potential of each potentially suitable burrowing owl habitat polygon to support the burrowing owl, taking into consideration the historical occurrence data and the evaluation criteria. Each habitat patch was either determined as not expected to support burrowing owl, or as having a low, moderate, or high potential to support burrowing owl.

RESULTS

This section briefly describes the results of the background research and field evaluation for the focused burrowing owl habitat assessment at the Camino Del Sur staging yard and the Evergreen Nursery staging yard.

Historical Burrowing Owl Occurrence Data

No historical burrowing owl occurrences are known within a 5-mile radius of the Proposed Project. In addition, current literature also indicates that the burrowing owl is not anticipated to occur within the Proposed Project vicinity (BBS 2015).

Focused Field Evaluation

No burrowing owls or burrowing owl sign were observed during the focused habitat assessments conducted at the Camino Del Sur staging yard and Evergreen Nursery staging yard.

BBS evaluated three polygons (approximately 37.98 acres) of potentially suitable burrowing owl habitat, two polygons (approximately 27.38 acres) at the Camino Del Sur staging yard and one polygon (approximately 3.54 acres) at the Evergreen Nursery staging yard. All three of these polygons provide suitable burrowing owl habitat.

Brief descriptions of the suitable habitat polygons identified at the Camino Del Sur staging yard and the Evergreen Nursery staging yard are provided in this section. The data associated with these polygons are summarized in this memorandum and will be added to the habitat assessment table and included in the final burrowing owl survey summary report.

Camino Del Sur Staging Yard

The focused burrowing owl habitat assessment at the Camino Del Sur staging yard was conducted on February 18, 2015. In addition to the suitable burrowing owl habitat polygons that were identified during the November 2014 burrowing owl habitat assessment (Figure 2; Polygons 17, 18, and 19), two polygons (Polygons 37 and 38) of suitable burrowing owl habitat were identified within and immediately surrounding the Camino Del Sur yard. These polygons are contiguous with the suitable habitat previously identified in the BSA (Figure 2).

Polygon 37 is approximately 7.06 acres. The dominant vegetation within Polygon 37 consists of sparse, nonnative grassland, with coastal sage scrub, nonnative grassland, and developed land immediately adjacent to the polygon. Polygon 37 contains friable soils with a few to moderate amount of small mammal burrows, a few burrow complexes, and other burrowing features (i.e., slopes, berms, drainage banks) and is contiguous with nonnative grassland foraging habitat. Based on the site conditions, BBS determined that there is a low to moderate potential for occurrence for burrowing owl within this polygon.

Polygon 38 is approximately 27.38 acres. The dominant vegetation within Polygon 38 consists of sparse, nonnative grassland, with southern willow scrub, nonnative grassland, and developed land immediately adjacent to the polygon. Polygon 38 contains friable soils with a moderate amount of small mammal burrows, a few burrow complexes, and other burrowing features (i.e., slopes, berms) and is contiguous with nonnative grassland foraging habitat. Based on the site conditions, BBS determined that there is a low to moderate potential for occurrence for burrowing owl within this polygon.

Evergreen Nursery Staging Yard

The focused burrowing owl habitat assessment at the Evergreen Nursery staging yard was conducted on January 26, 2015. In addition to the potential suitable burrowing owl habitat polygons that were assessed during the November 2014 burrowing owl habitat assessment (Figure 3; Polygons 22 and 23), one small polygon (Polygon 39) of suitable burrowing owl habitat was identified to the northeast of the Evergreen Nursery staging yard and is adjacent to but not contiguous with the original BSA (Figure 3).

Polygon 39 is approximately 3.54 acres. The dominant vegetation within Polygon 39 consists of sparse, disturbed coastal sage scrub and disturbed habitat, with Diegan coastal sage scrub, disturbed habitat, ornamental vegetation and developed land immediately adjacent to the polygon. Polygon 39 contains friable soils with a few small mammal burrows, burrow complexes, other burrowing features (i.e., slopes, drainages) and is adjacent to a moderate amount of patchy foraging habitat, including disturbed habitat and openings within disturbed coastal sage scrub. Based on the site conditions, BBS determined that there is a low potential for occurrence for burrowing owl within this polygon.

DISCUSSION

No burrowing owls or burrowing owl sign were observed during the focused habitat assessments conducted to date for the Proposed Project.

Focused burrowing owl surveys are required in all suitable habitat that is located within the Proposed Project area and a 500-foot buffer of the Proposed Project area, including the suitable habitat identified at the Camino Del Sur staging yard and Evergreen Nursery staging yards.

One round of focused burrowing owl surveys was conducted during the week of March 22, 2015 and included all suitable burrowing owl habitat identified within the Proposed Project footprint and the 500-foot buffer, including the suitable habitat discussed in this memorandum. During this first round of surveys, the boundaries of the suitable habitat polygons were refined.

No burrowing owls or burrowing owl sign were observed during the first round of surveys.

Additional focused surveys are planned for spring and summer 2015, following the most recent California Department of Fish and Wildlife protocol (CDFW 2012). The results of the focused habitat assessment and the focused surveys will be summarized in a survey summary report once the surveys have been completed.

REFERENECES

Busby Biological Services, Inc. (BBS)

2014 *Biological Technical Report for Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project*, City of San Diego, San Diego County, California. March 2014.

2015 *Focused Burrowing Owl* (Athena cunicularia*) Habitat Assessment Report for the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project,* San Diego County, California. January 14.

California Department of Fish and Wildlife (CDFW)

2012 *Staff Report on Burrowing Owl Mitigation*. State of California. Natural Resources Agency, Department of Fish and Game. March 2012.

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_BusbyRegionalLocation(CCGS).mxd

CONFIDENTIAL - PROPERTY OF SDG&E. FOR INTERNAL USE ONLY, UNAUTHORIZED DISSEMINATION PROHIBITED. THIS DOCUMENT SHALL BE TREATED AS CONFIDENTIAL PURSUANT TO Public Utilities Code Section 583, General Order 66-C, any applicable non-disclosure agreement, and/or the North American Electric Reliability Corporation's Rules of Procedure, Section 1500 et seq. and any other applicable federal and state laws and regulations. THIS MAP IS NOT SURVEY GRADE, and SDG&E makes no representations or warranties, expressed or implied, as to its accuracy, correctness, defensibility, completeness or any other standard or measure of quality or adequacy, or as to its fitness for use or intended use for any particular purpose. SDG&E disclaims all liability for your selection or use of this map or any consequences therefrom. "Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved."

Sycamore to Peñasquitos 230 kV Transmission Line Project

Proposed Project Location

Figure 1

Project Location

StagingYards_Feb2015

Proposed Project

N W E S

0 10 20 30 Miles

TRC

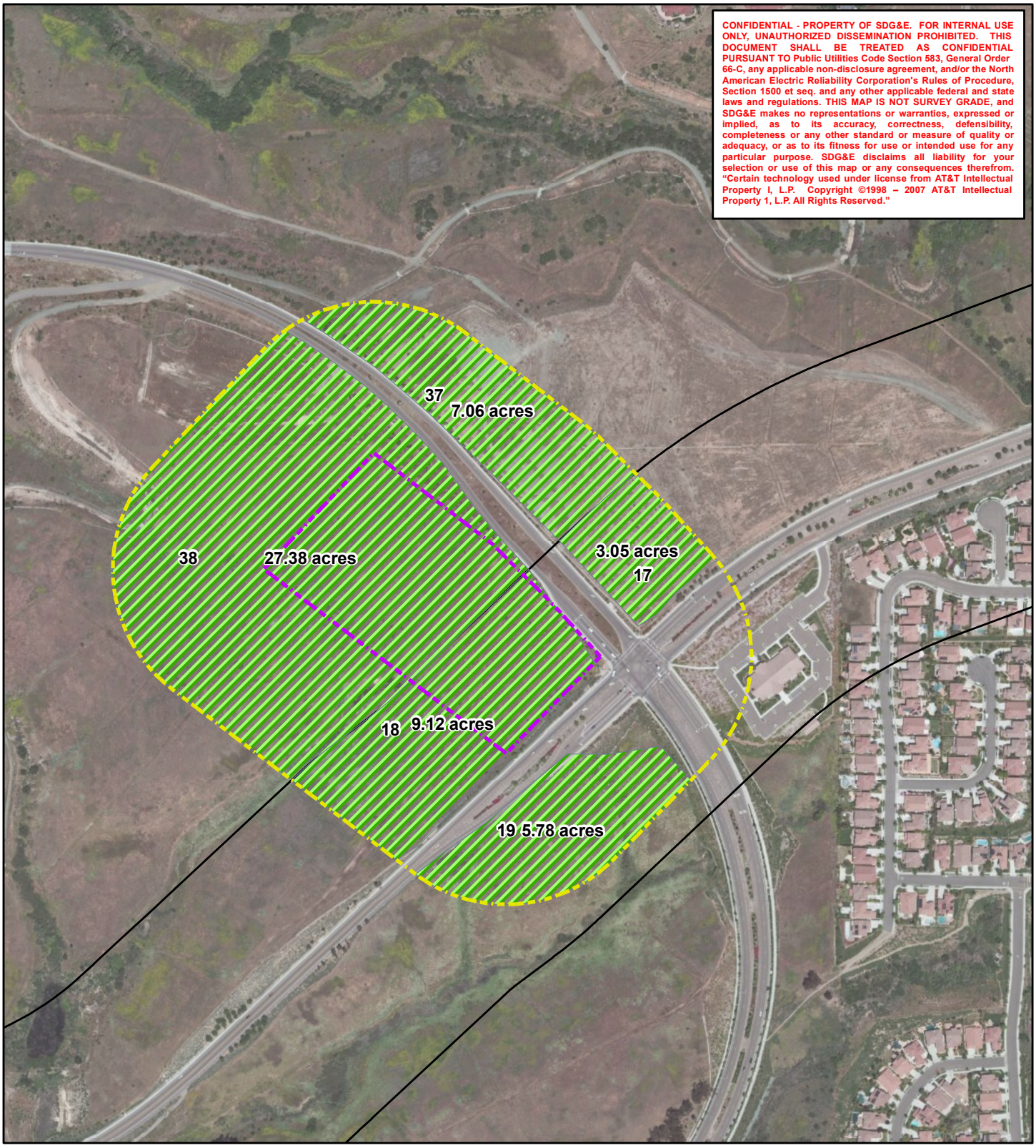
3/26/2015

SDGE

A Sempra Energy utility

Sources: SDG&E; Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE,

CONFIDENTIAL - PROPERTY OF SDG&E. FOR INTERNAL USE ONLY, UNAUTHORIZED DISSEMINATION PROHIBITED. THIS DOCUMENT SHALL BE TREATED AS CONFIDENTIAL PURSUANT TO Public Utilities Code Section 583, General Order 66-C, any applicable non-disclosure agreement, and/or the North American Electric Reliability Corporation's Rules of Procedure, Section 1500 et seq. and any other applicable federal and state laws and regulations. THIS MAP IS NOT SURVEY GRADE, and SDG&E makes no representations or warranties, expressed or implied, as to its accuracy, correctness, defensibility, completeness or any other standard or measure of quality or adequacy, or as to its fitness for use or intended use for any particular purpose. SDG&E disclaims all liability for your selection or use of this map or any consequences therefrom. "Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved."



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_BUOWHabitat_ForBusbyMemo.mxd

Staging Yard
500ft Buffer
BurrowingOwlHabitatSurveyArea2

Potential for Occurrence

Not Expected
Suitable

0 280 560 840 Feet

N
W E
S

3/26/2015

Sycamore to Peñasquitos 230kV Transmission Line Project

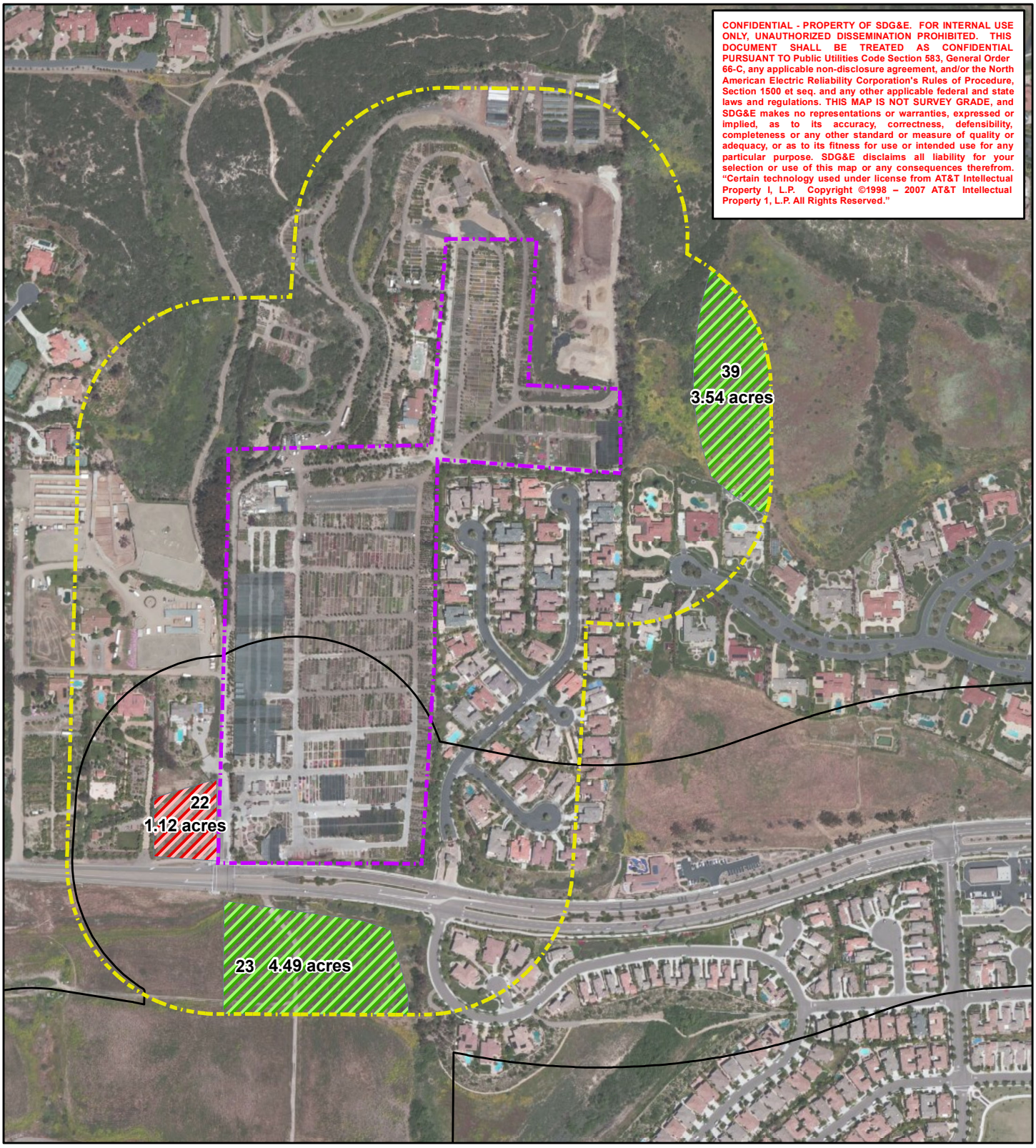
Camino Del Sur Staging Yard Burrowing Owl Habitat Assessment Results

Figure 2

TRC

SDGE
A Sempra Energy utility

CONFIDENTIAL - PROPERTY OF SDG&E. FOR INTERNAL USE ONLY, UNAUTHORIZED DISSEMINATION PROHIBITED. THIS DOCUMENT SHALL BE TREATED AS CONFIDENTIAL PURSUANT TO Public Utilities Code Section 583, General Order 66-C, any applicable non-disclosure agreement, and/or the North American Electric Reliability Corporation's Rules of Procedure, Section 1500 et seq. and any other applicable federal and state laws and regulations. THIS MAP IS NOT SURVEY GRADE, and SDG&E makes no representations or warranties, expressed or implied, as to its accuracy, correctness, defensibility, completeness or any other standard or measure of quality or adequacy, or as to its fitness for use or intended use for any particular purpose. SDG&E disclaims all liability for your selection or use of this map or any consequences therefrom. "Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved."



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_BUOWHabitat_ForBusbyMemo.mxd

Staging Yard
500ft Buffer
BurrowingOwlHabitatSurveyArea2

Potential for Occurrence

Not Expected
Suitable

0 280 560 840 Feet

N
W E
S

Sycamore to Peñasquitos 230kV Transmission Line Project

Evergreen Nursery Staging Yard Burrowing Owl Habitat Assessment Results

Figure 3

TRC

SDGE
A Sempra Energy utility

3/26/2015

MEMORANDUM

TO: Robert Fletcher, San Diego Gas & Electric

FROM: Melissa Busby, Busby Biological Services, Inc.

DATE: April 24, 2015

RE: Response to Data Request #11, Question 2: Provide rare plant survey data and identify areas where surveys will still be ongoing as of April 30, 2015

The California Public Utilities Commission (CPUC) has identified data needs for the proposed San Diego Gas & Electric Company (SDG&E) Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project (Proposed Project), Application No. 14-04-011. Data Request #11, Issue 2 states the following:

> ***"Provide a list of all rare plant species and identify project locations for which rare plant surveys are ongoing and where the results of which will not be available to the CPUC by April 30, 2015.***
>
> *For any project area where the results of rare plant surveys are not provided by April 30th, the CPUC will need to presume presence of the individual plant species and require impact avoidance as mitigation in order to meet the schedule for release of the Draft EIR. Alternatively, if desired by SDG&E, the release date of the draft EIR can be delayed until project planning surveys are completed."*

Focused special-status plant surveys have been or are being conducted for the Proposed Project within all suitable habitats within the current Biological Survey Area (BSA). This memorandum provides a description of the methods and results of the focused special-status plant species surveys that were completed in 2013/2014 within the original BSA and those that are ongoing in 2015 within the portions of the current BSA that weren't surveyed in 2013/2014. This information is intended to supplement the information provided in the Biological Technical Report (BTR; BBS 2014a) and special-status plant survey summary report (BBS 2014b) prepared for the Proposed Project. For additional information pertaining to the biological resources associated with the Proposed Project, please refer to the BTR and other technical reports/memoranda prepared for the Proposed Project.

BRIEF SURVEY AREA EXPLANATION

Focused special-status plant surveys have been or are being conducted for the Proposed Project within all suitable habitats within the current Biological Survey Area (BSA). Initially, focused special-status plants surveys were conducted within the original BSA, which included a 500-foot-wide survey corridor along the approximately 16.5-mile Proposed Project alignment, the Sycamore Canyon and Peñasquitos Substations, and the proposed Sycamore and Stowe construction yards (Figures 1 and 2). Currently, subsequent focused special-status plant surveys are being conducted within the portions of the current BSA that were added after the original BSA had already been surveyed, including access roads, staging yards, the Encina Hub, the Mira Mesa Hub, and all other associated work areas (Figures 1 and 2).

Because the Encina Hub is located in a geographically distinct location and is not within the immediate vicinity of the main Proposed Project alignment (Figure 1), the site has the potential to support different special-status plant species than those with a potential for occurrence within the main Proposed Project alignment. As such, the Encina Hub has been analyzed separately for the species occurrence potentials, but it has been surveyed in conjunction with the rest of the Proposed Project.

METHODS

A list of special-status plant survey target species was developed for the Proposed Project by reviewing the results of various database searches for special-status plant species reported within 1, 3, and 5 miles of the main Proposed Project alignment and the Encina Hub. The target species included species that are federally and/or state-listed as well as species that have California Rare Plant Rank (CRPR) ratings of 1B, 2B, 3, or 4 (with the appropriate added CRPR threat ranks of 0.1, 0.2, or 0.3).

Focused special-status plant field surveys were conducted by walking meandering transects throughout the BSA during the appropriate survey windows to maximize detection of the special-status species with a potential for occurrence within the BSA. 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 and incorporated into the Geographic Information System (GIS) database.

Plant names used herein follow the *Checklist of the Vascular Plants of San Diego County, 5th edition* (*Checklist*; Rebman and Simpson 2014). Additional plant references used included *The Jepson manual: vascular plants of California, Second Edition* (*Jepson Manual*; Baldwin et al. 2012), the Consortium of California Herbarium voucher data, and the

San Diego Plant Atlas. If the *Jepson Manual* and the *Checklist* differ in plant taxonomic treatments, such as recognition or lumping of a variety, then the taxonomy of the *Checklist* and the taxonomic opinion of Dr. Jon Rebman (personal communication 2014), Curator of Botany at the SDNHM, took precedence.

RESULTS

The focused special-status plant surveys have been completed within the original BSA and are ongoing in the areas that have been added to the original BSA. Within the original BSA, three rounds of special-status plant surveys were conducted: round 1 occurred between September 25 and October 2, 2013; round 2 occurred between April 2 and April 15, 2014; and round 3 occurred between May 12 and May 29, 2014. Within the portions of the current BSA that were not surveyed as part of the original BSA, three rounds of surveys will be conducted in 2015. The first round of surveys was completed between March 30 and April 14, 2015. The second round of surveys is planned for early to mid May 2015, and the third round of surveys is planned for late July 2015.

Twenty-two special-status plant species, including three listed plant species – thread-leaved brodiaea (*Brodiaea filifolia*; FT, SE), Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE), San Diego button-celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE) – have been observed to date within the current BSA during focused special-status plant surveys conducted for the Proposed Project (Figure 3). Table 1 summarizes the species observed to date, including the species name, sensitivity status, and the observation location.

Table 1. Summary of Special-Status Plant Survey Results through April 2015

Species Name		Status	Observation Location	
Scientific Name	Common Name		Main Alignment	Encina Hub
Adolphia californica	spineshrub	CRPR 2B.1	X	
Arctostaphylos glandulosa ssp. *crassifolia*	Del Mar manzanita	FE CRPR 1B.1	X	
Artemisia palmeri	Palmer's sagewort	CRPR 4.2	X	
Bahiopsis laciniata	San Diego sunflower	CRPR 4.2	X	
Brodiaea filifolia	thread-leaved brodiaea	FT SE CRPR 1B.1	X	
Ceanothus verrucosus	wart-stemmed ceanothus	CRPR 2B.2	X	
Chorizanthe polygoinoides var. *longispina*	knotweed spineflower	CRPR 1B.2	X	
Cistanthe maritima	seaside cistanthe	CRPR 4.2	X	
Comarostaphylis diversifolia ssp. *diversifolia*	summer-holly	CRPR 1B.2	X	
Convolvulus simulans	small-flowered morning-glory	CRPR 4.2	X	
Corethrogyne filaginifolia var. *linifolia*	Del Mar Mesa sand aster	CRPR 1B.1	X	

Species Name		Status	Observation Location	
Scientific Name	Common Name		Main Alignment	Encina Hub
Dichondra occidentalis	western dichondra	CRPR 4.2	X	X
Eryngium aristulatum ssp. parishii	San Diego button-celery	FE SE CRPR 1B.1	X	
Ferocactus viridescens var. *viridescens*	coast barrel cactus	CRPR 2B.1	X	
Harpagonella palmeri	Palmer's grapplinghook	CRPR 4.2	X	
Holocarpha virgata ssp. *elongata*	graceful tarplant	CRPR 4.2	X	
Isocoma menziesii var. *decumbens*	decumbent goldenbush	CRPR 1B.2	X	
Iva hayesiana	San Diego marsh-elder	CRPR 2B.2	X	
Juncus acutus ssp. *leopoldii*	southwestern spiny rush	CRPR 4.2	X	
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	CRPR 4.3	X	
Pinus torreyana	Torrey pine	CRPR 1B.2	X as planted individuals	
Quercus dumosa	Nuttall's scrub oak	CRPR 1B.1	X	

FE = federally listed endangered
FT = federally listed threatened
SE = state-listed endangered
CRPR 1B.1 = rare, threatened, and endangered in California and elsewhere AND seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
CRPR 1B.2 = rare, threatened, and endangered in California and elsewhere AND moderately threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat)
CRPR 2B.1 = rare, threatened, or endangered in California but more common elsewhere AND seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
CRPR 2B.2 = rare, threatened, or endangered in California but more common elsewhere AND moderately threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat)
CRPR 4.2 = limited distribution AND moderately threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat)
CRPR 4.3 = limited distribution AND not very threatened in California (<20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

DISCUSSION

Focused special-status plant species surveys were conducted in fall 2013 and spring 2014 within the original BSA. After those surveys were completed, additional areas were added to the BSA. Focused special-status plant surveys within the portions of the current BSA that were not previously surveyed are being conducted in spring 2015.

Three rounds of surveys will be conducted in 2015. The first round of 2015 surveys was completed between March 30 and April 14, 2015. This memorandum includes the special-status plant species observation data collected during those surveys.

The second round of 2015 surveys is planned for early to mid May 2015. An updated memorandum that includes the results of the second round of 2015 surveys will be submitted to the CPUC by June 1, 2015.

The third round of surveys is planned for late July 2015. A final special-status plant survey summary report will be prepared following completion of the July 2015 surveys. This report will provide additional detail in the methods and results of the entire special-status plant survey effort conducted for the Proposed Project. We anticipate that this final special-status plant survey summary report will be submitted to the CPUC by August 14, 2015.

REFERENECES

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors.

2012 *The Jepson manual: vascular plants of California, second edition*. University of California Press, Berkeley.

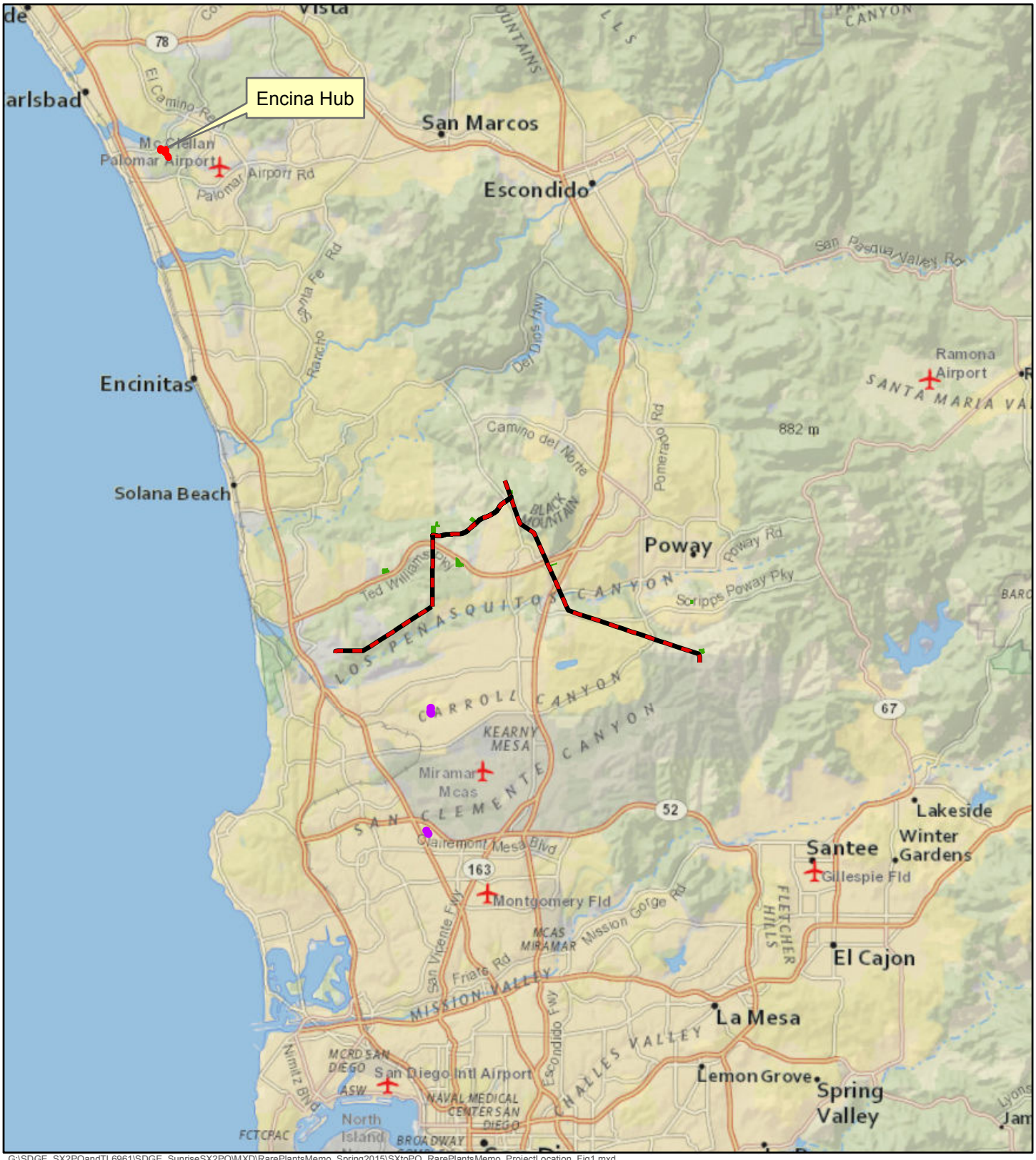
Busby Biological Services, Inc. (BBS)

2014a Biological Technical Report for Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, City of San Diego, San Diego County, California. March 2014.

2014b Special-Status Plant Survey Summary Report for the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, San Diego County, California. June 2014.

Rebman, J.P. and M.G. Simpson

2014 *Checklist of the Vascular Plants of San Diego County*, 5th Edition. San Diego. Natural History Museum and San Diego State University, San Diego, California.



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_ProjectLocation_Fig1.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Project Location Map

Figure 1

- Proposed Project Route
- Staging Yards
- Encina Hub
- Mira Mesa Hub

4/22/2015

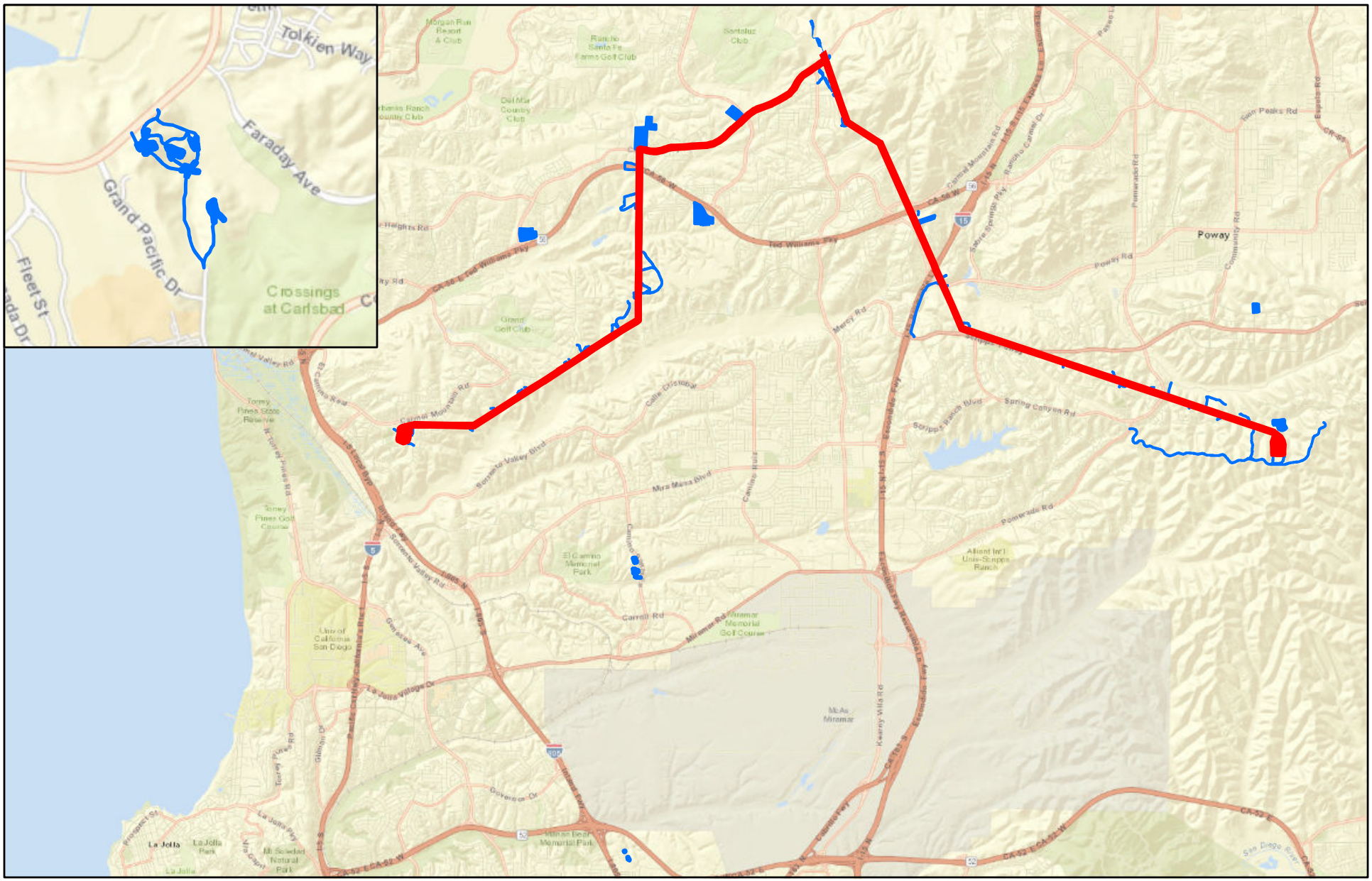
0 2 4 6 Miles

N W E S

TRC

SDGE

A Sempra Energy utility



Surveys Completed in Fall 2013/Spring 2014

Ongoing 2015 Surveys

Sycamore to Peñasquitos 230kV Transmission Line Project

Special-Status Plant Survey Areas & Status

Figure 2

4/23/2015

0 1 2 3 Miles

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

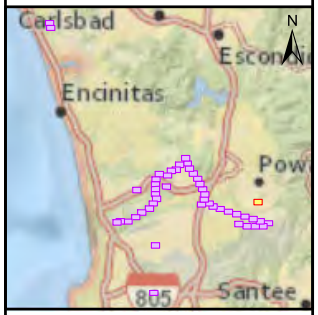
Figure 3

TRC SDGE

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

TRC

SDGE
A Sempra Energy utility

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE

Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

2013/2014 Survey Area
2015 Survey Area

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

TRC

SDGE
A Sempra Energy utility

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE

Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

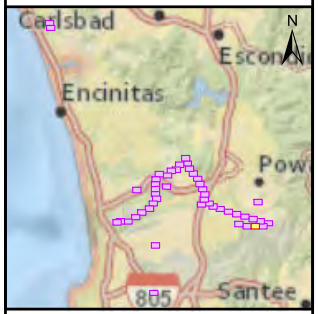
TRC

SDGE
A Sempra Energy utility

4/27/2015

0 150 300 450
Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

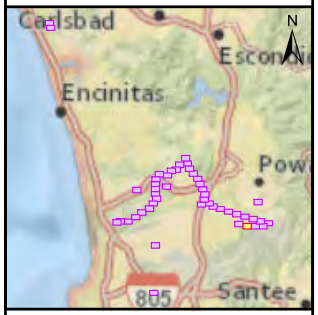
Figure 3

TRC SDGE

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE

Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

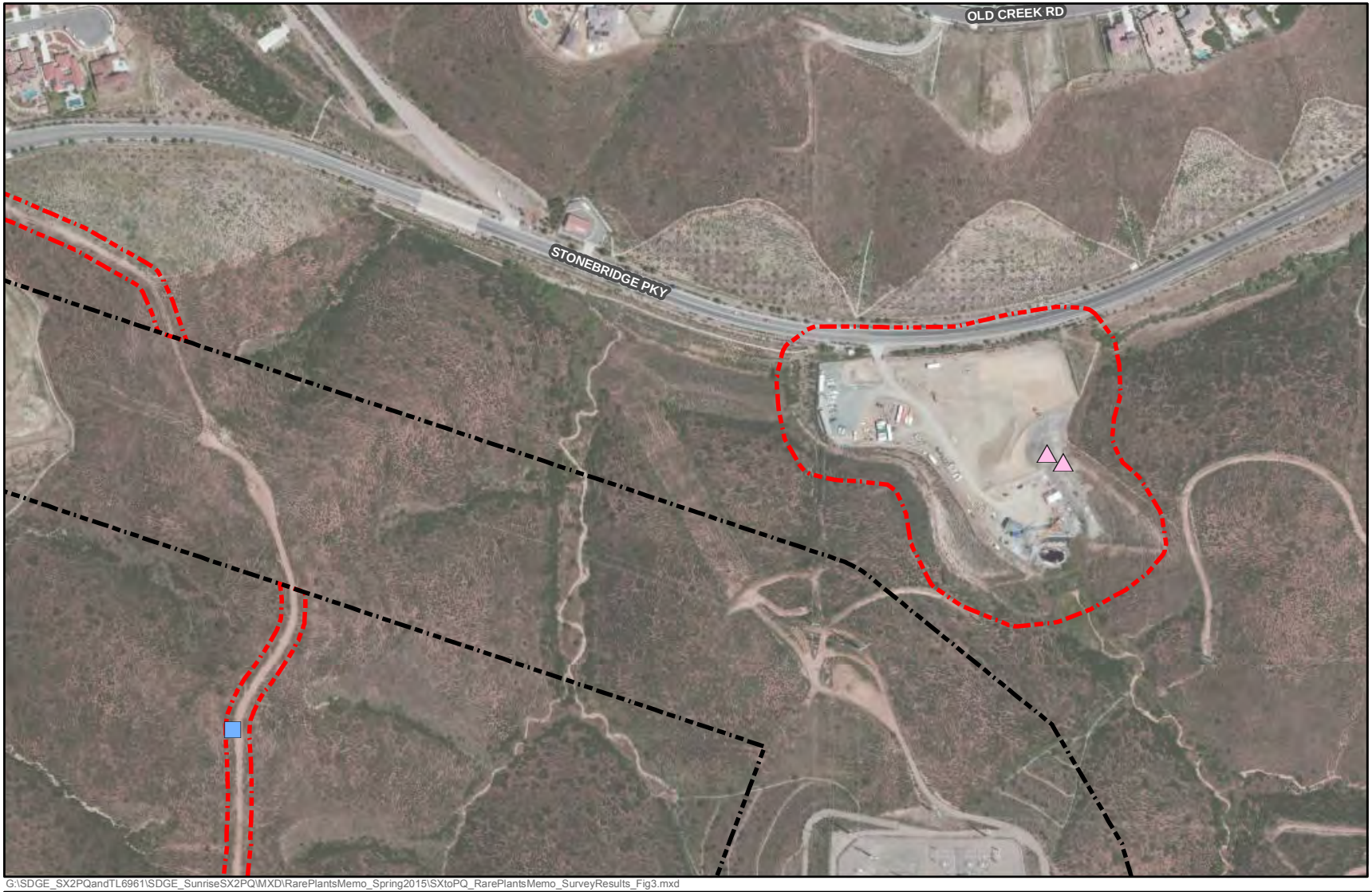
FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

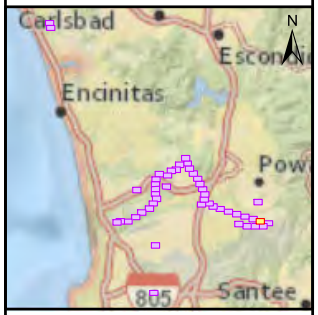
Figure 3

TRC SDGE

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

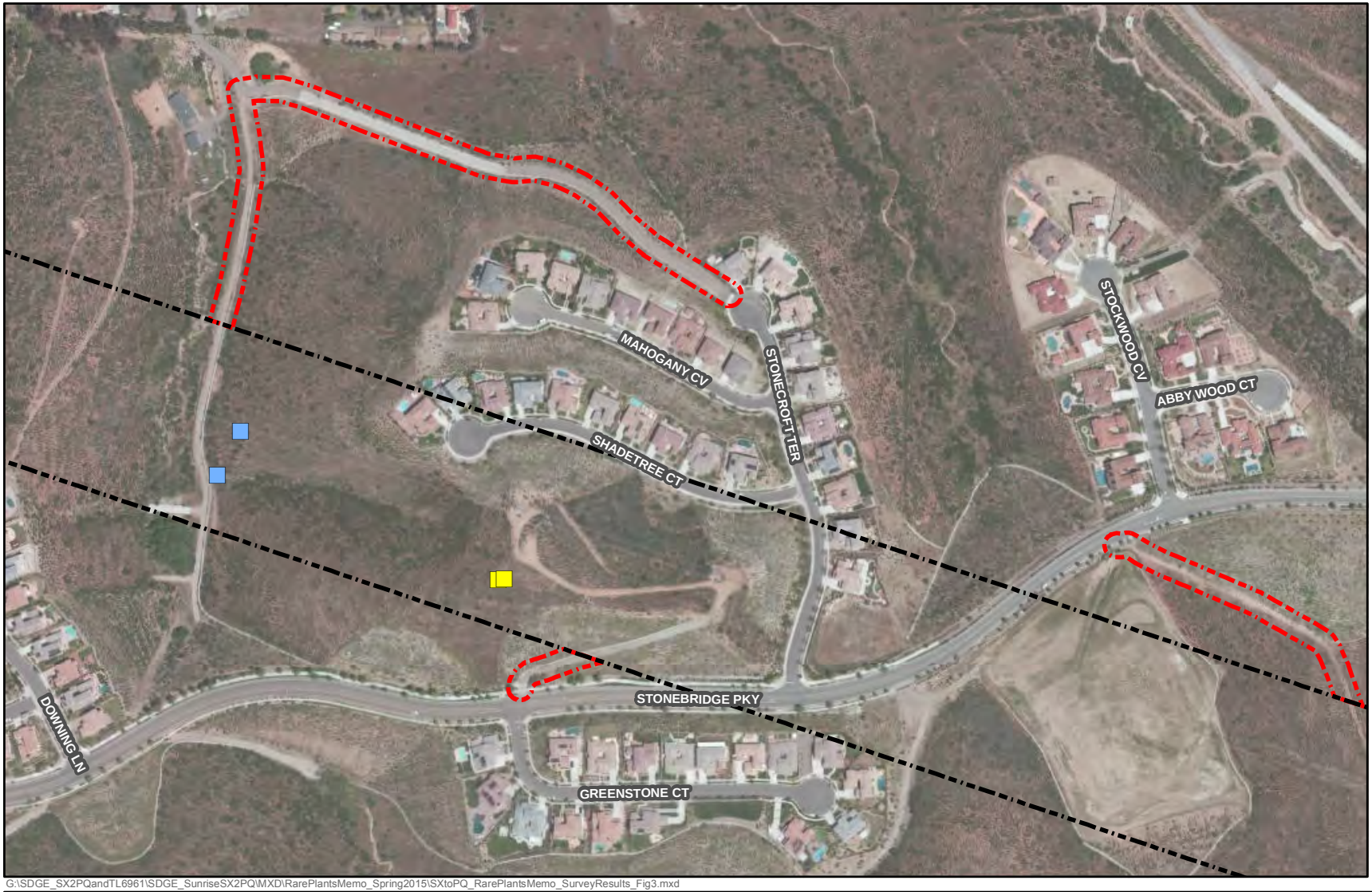
FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

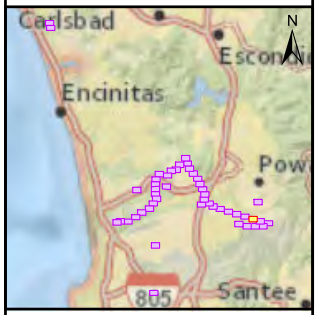
Figure 3

TRC SDGE

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

2013/2014 Survey Area
2015 Survey Area

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

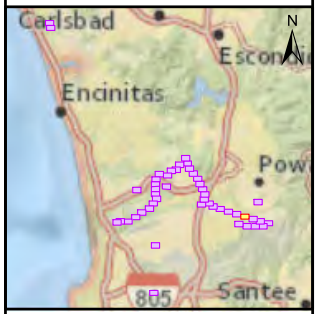
TRC

SDGE
A Sempra Energy utility

4/27/2015

0 150 300 450
Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

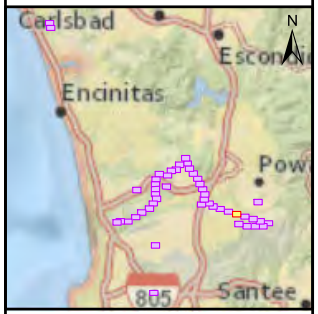
Results of Special-Status Plant Surveys Completed to Date

Figure 3

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

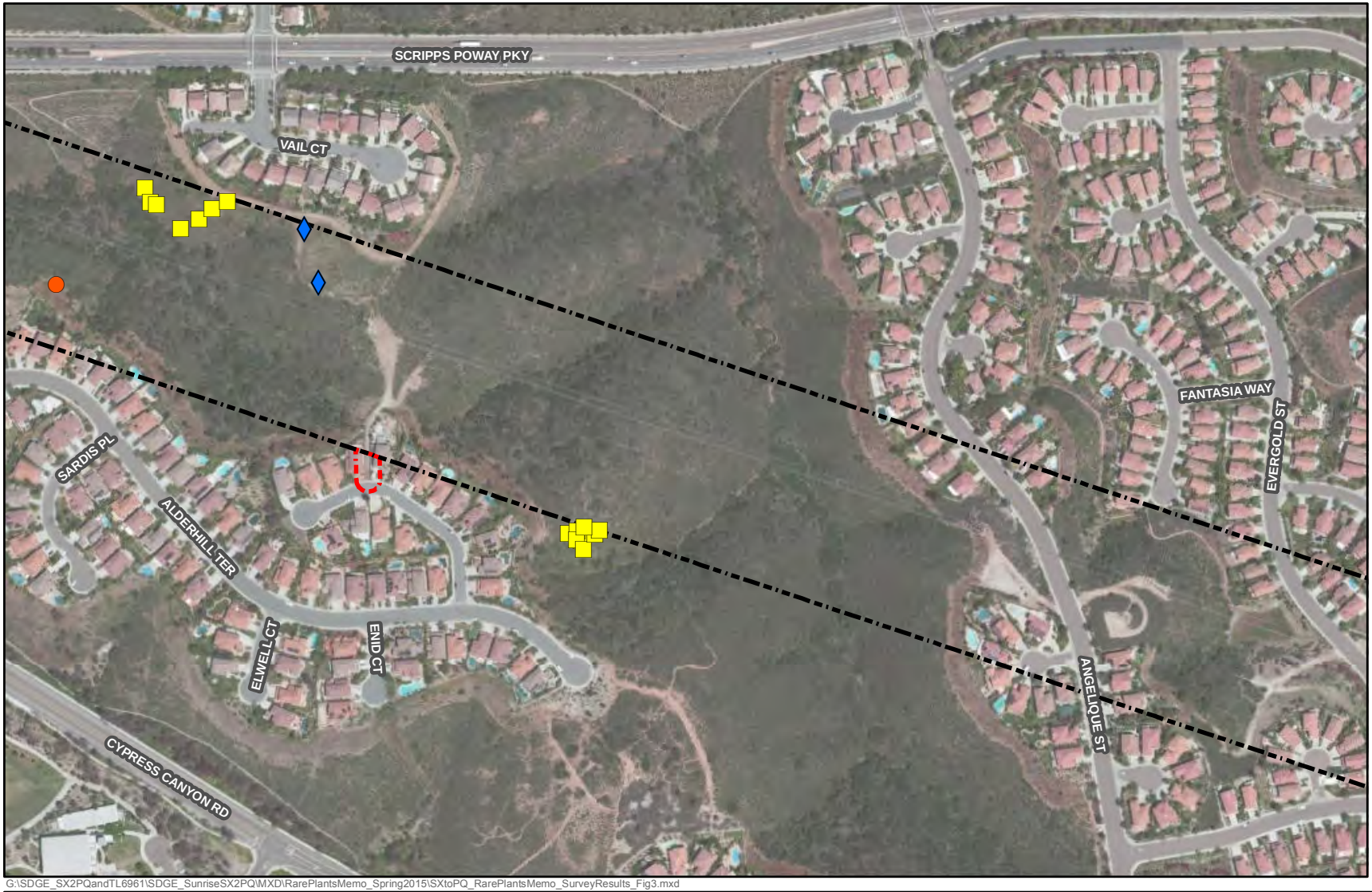
FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

TRC

SDGE
A Sempra Energy utility

4/27/2015

0 150 300 450
Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE

Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

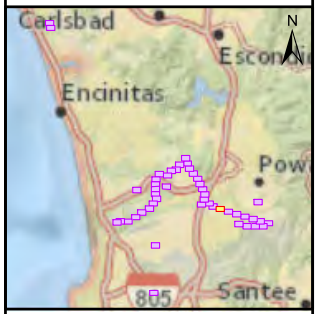
TRC

SDGE
A Sempra Energy utility

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

2013/2014 Survey Area
2015 Survey Area

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE

Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

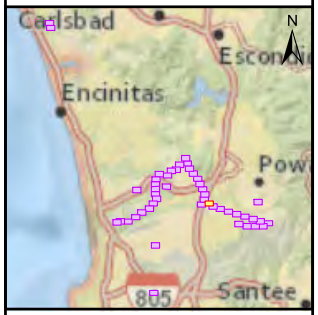
TRC

SDGE
A Sempra Energy utility

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

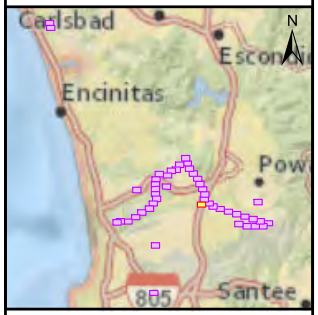
TRC

SDGE
A Sempra Energy utility

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

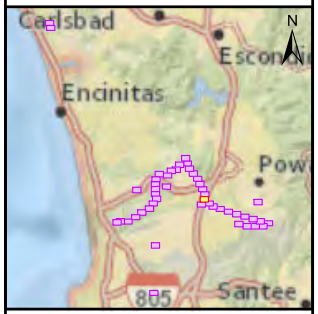
Figure 3

TRC SDGE

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

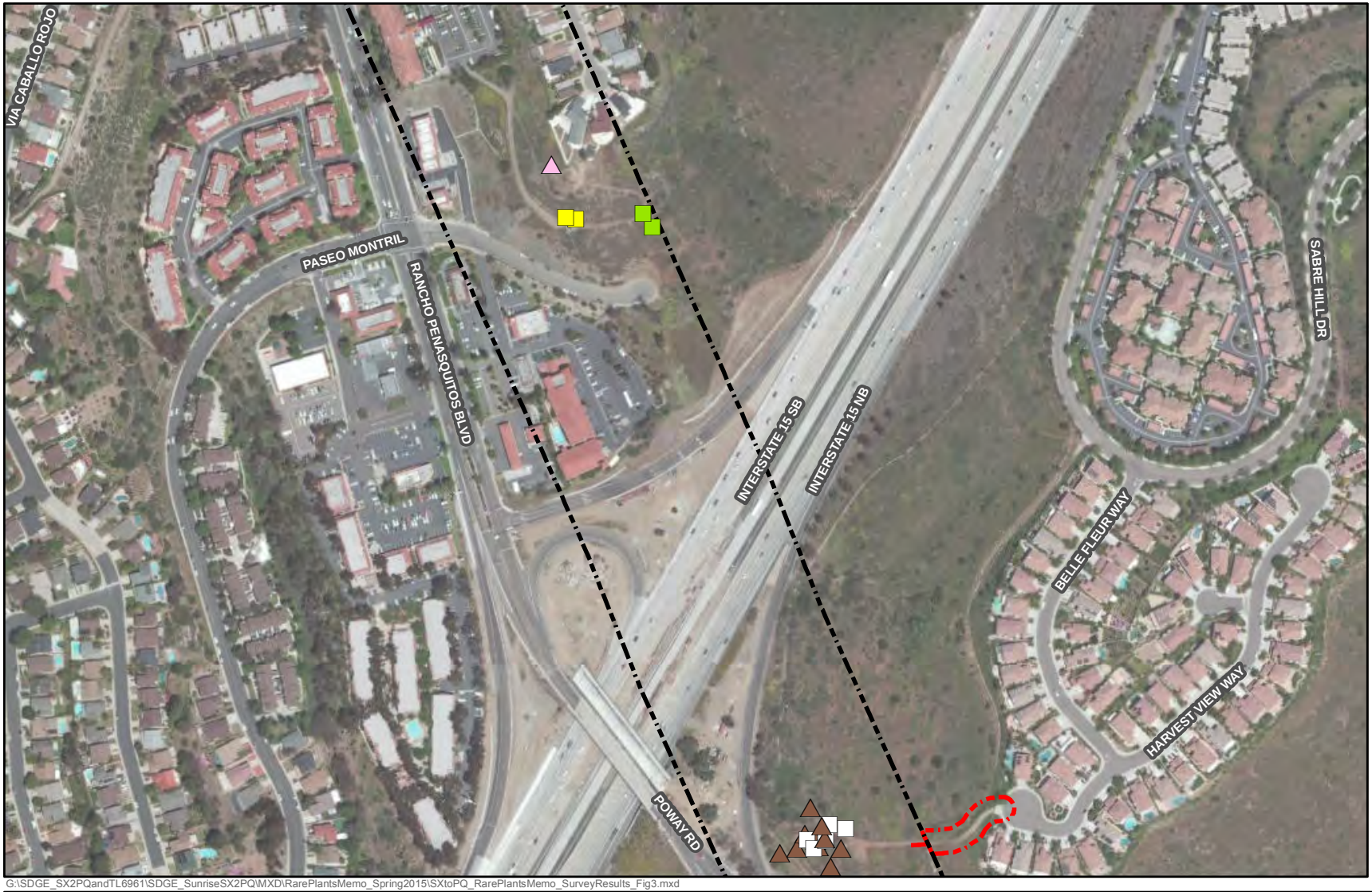
FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

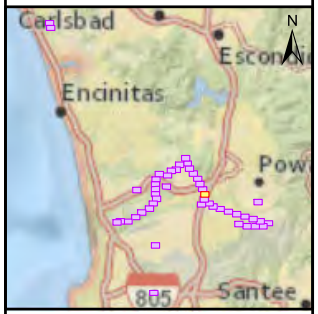
TRC

SDGE

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

2013/2014 Survey Area
2015 Survey Area

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

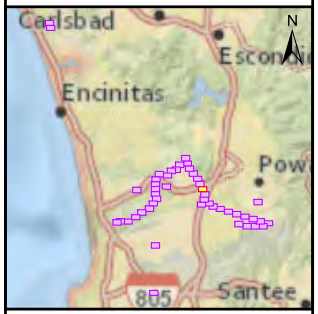
Figure 3

TRC SDGE

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

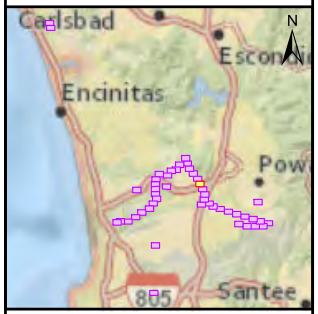
Results of Special-Status Plant Surveys Completed to Date

Figure 3

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

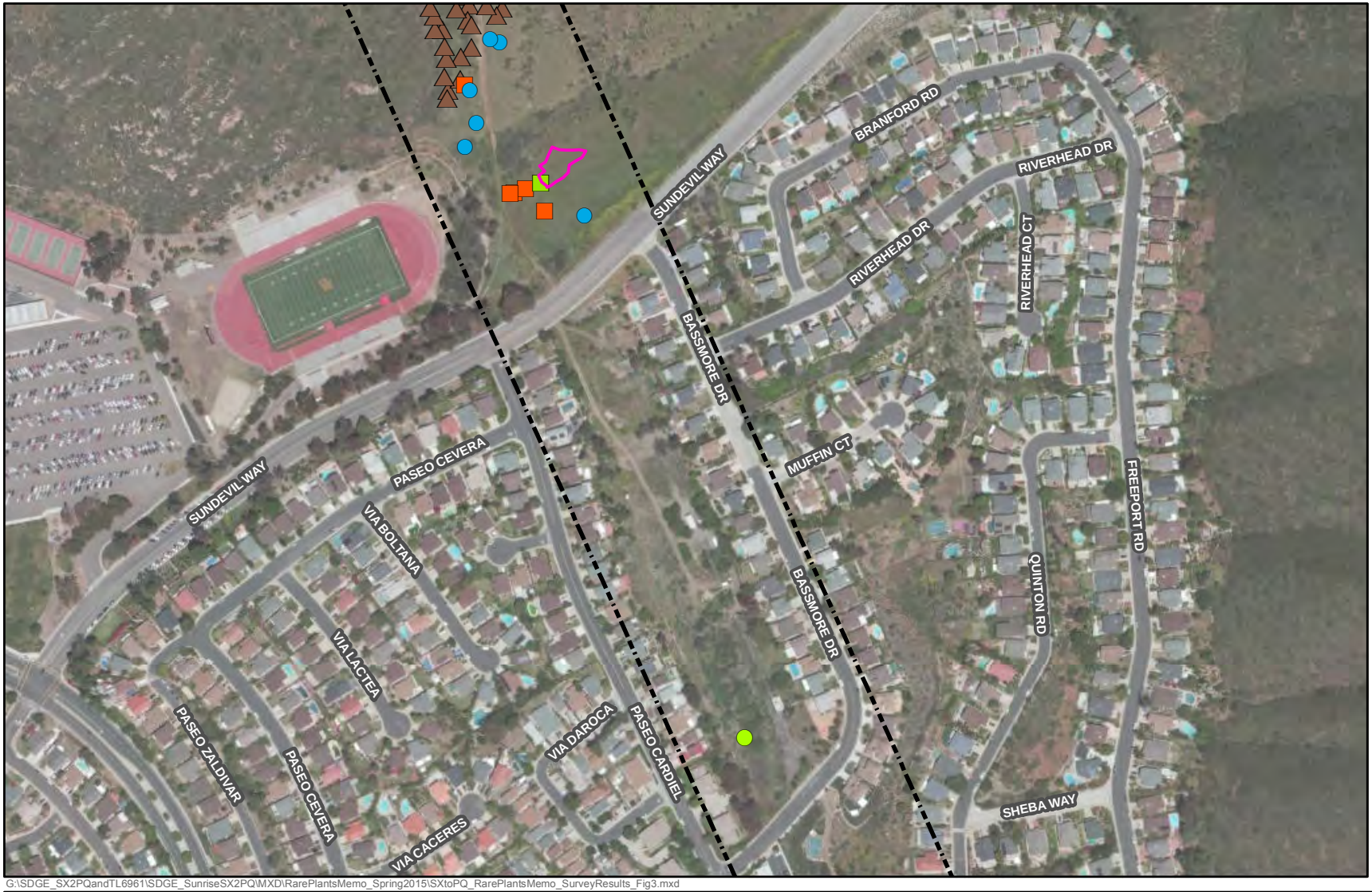
FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

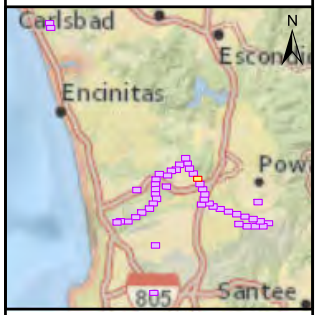
Figure 3

TRC SDGE

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

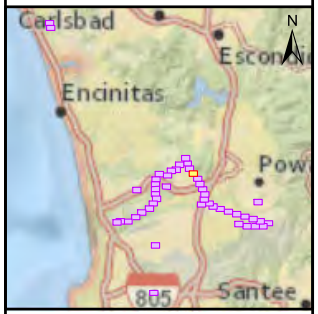
Figure 3

TRC SDGE

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

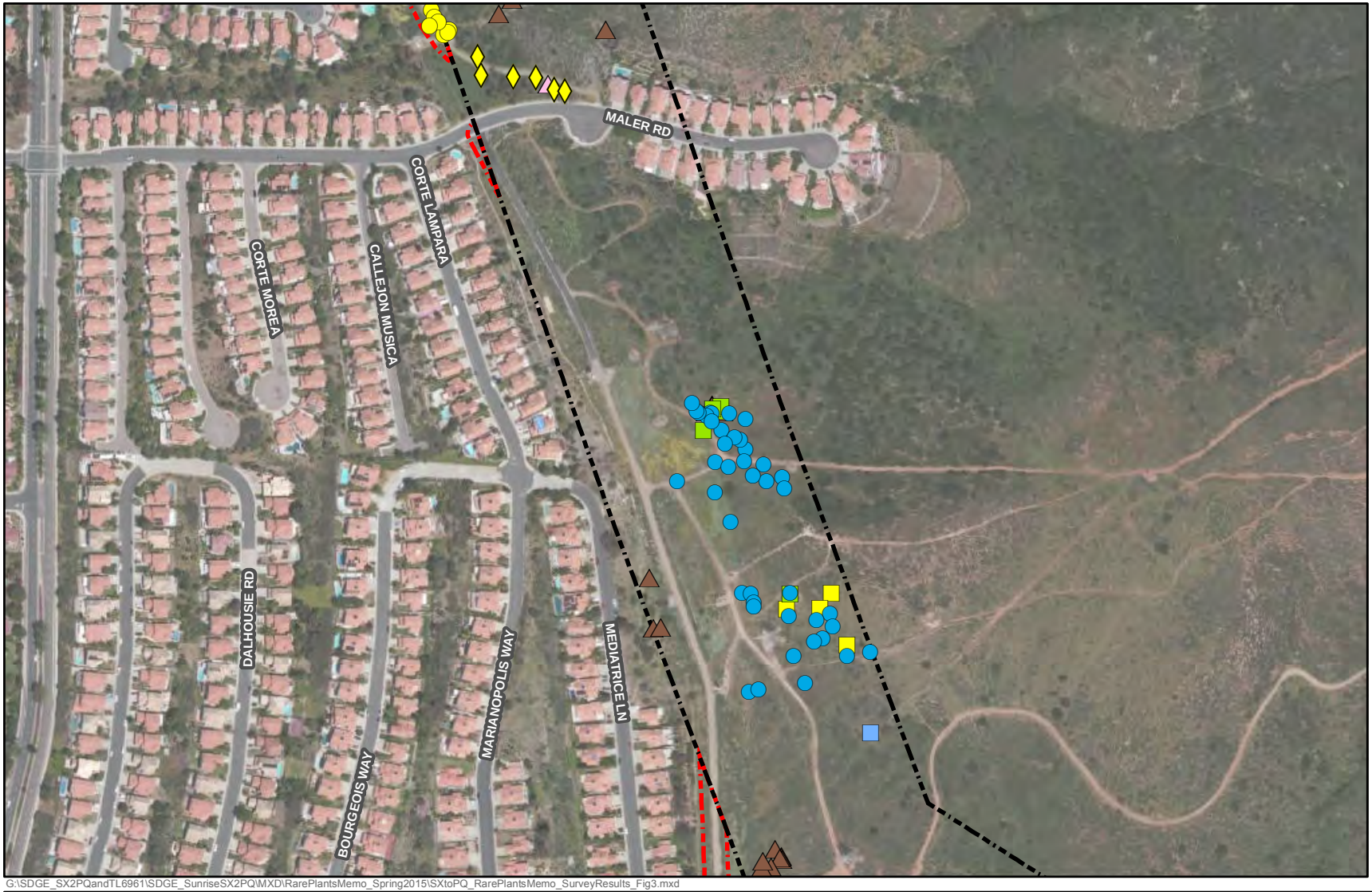
FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

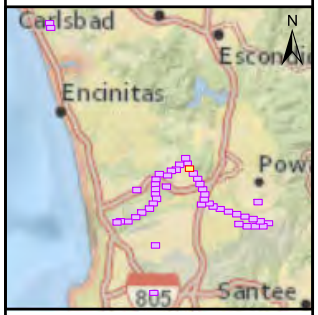
Figure 3

TRC SDGE

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

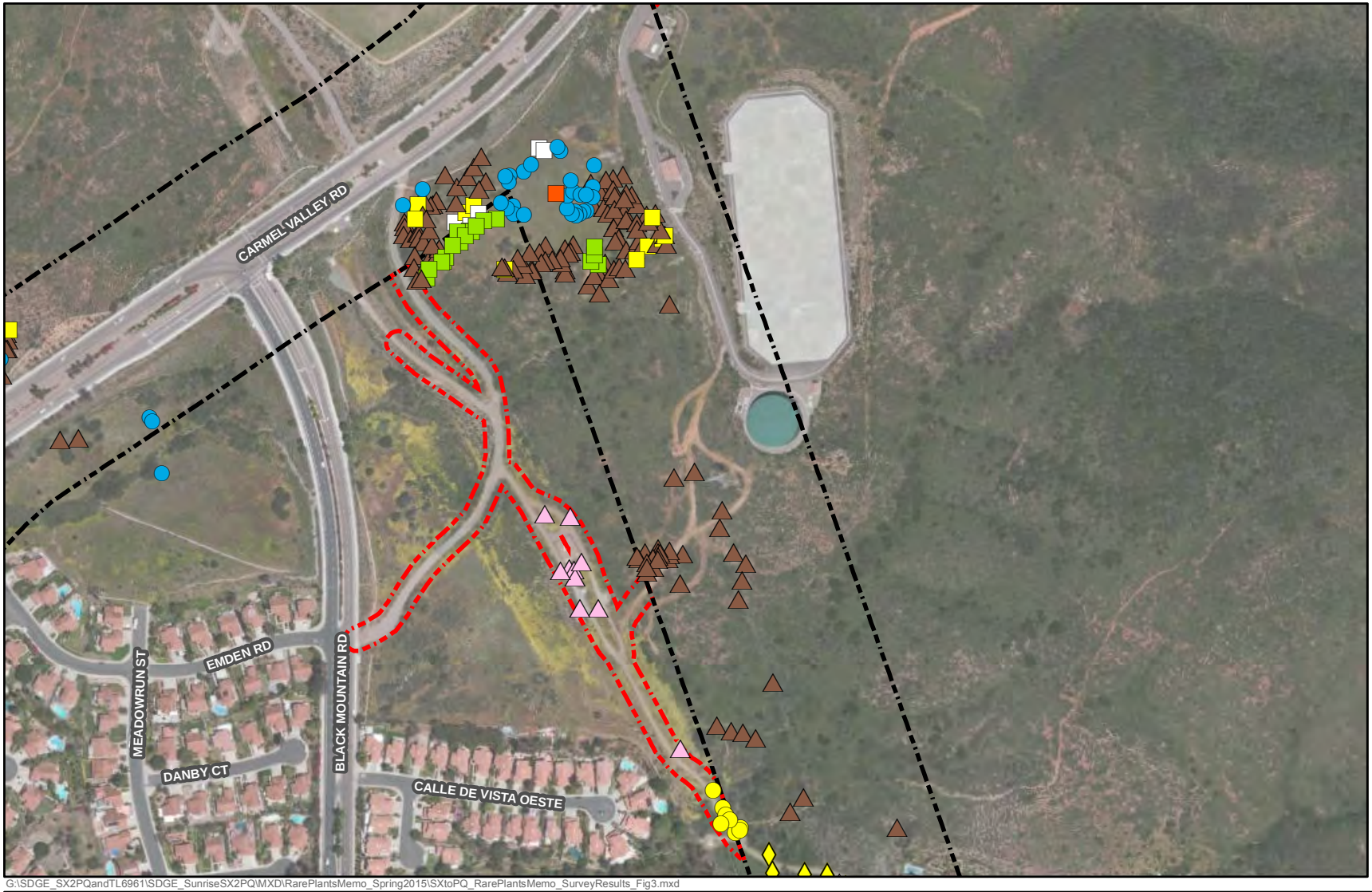
FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

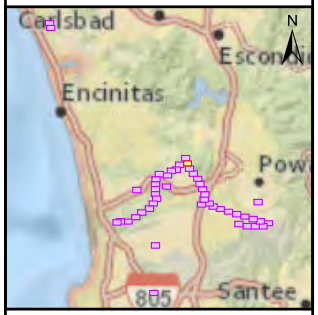
Figure 3

TRC SDGE

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

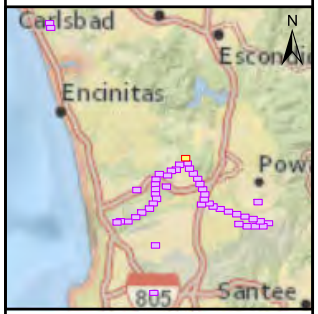
Results of Special-Status Plant Surveys Completed to Date

Figure 3

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

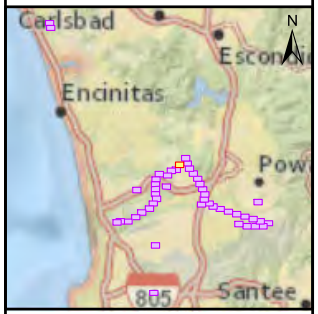
Results of Special-Status Plant Surveys Completed to Date

Figure 3

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

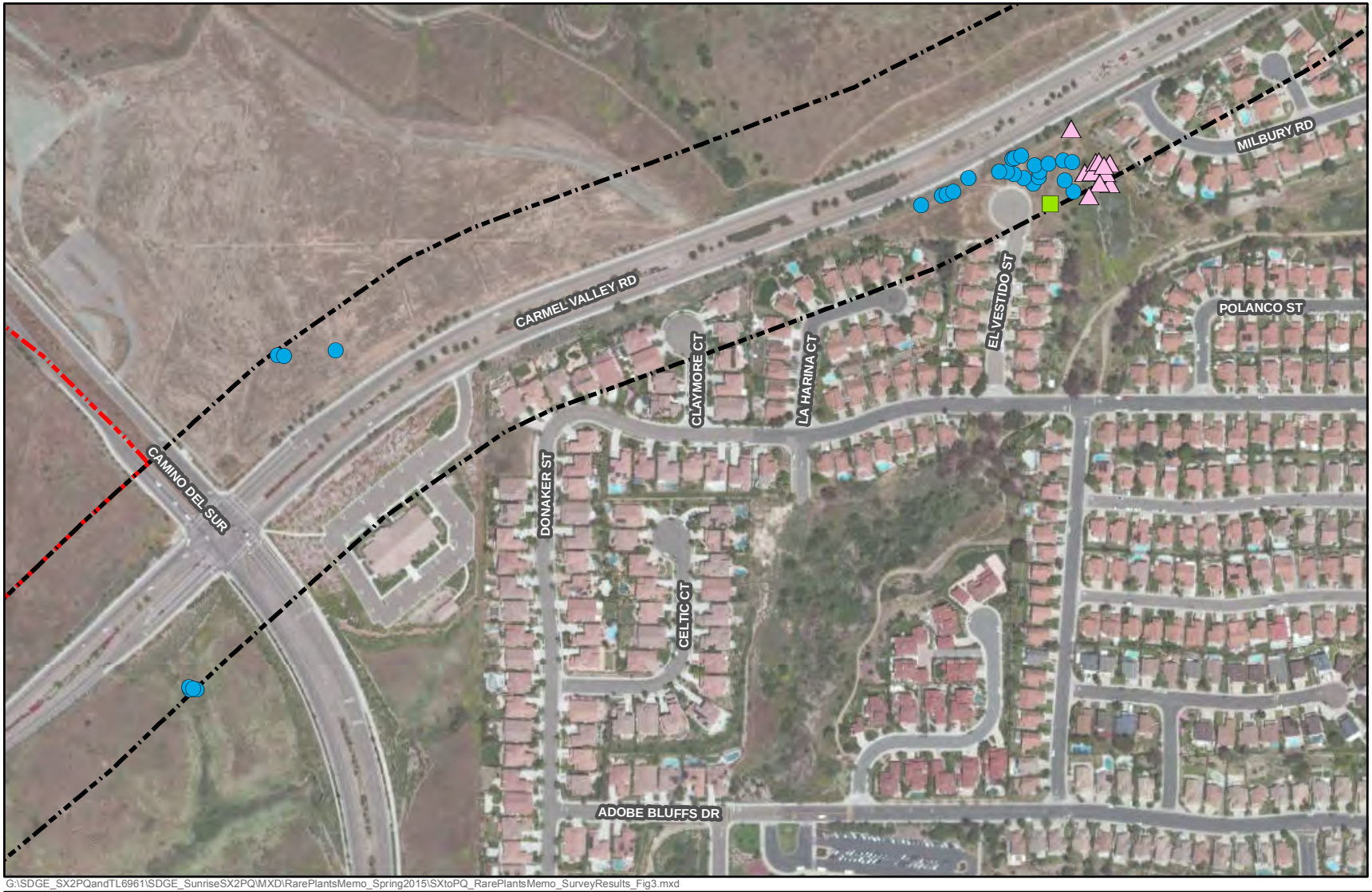
FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area



Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

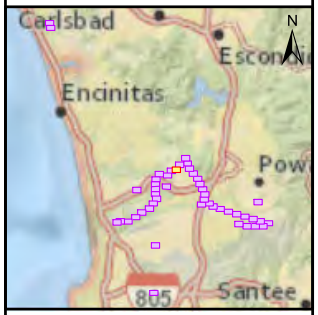
TRC

SDGE
A Sempra Energy utility

4/27/2015

0 150 300 450
Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

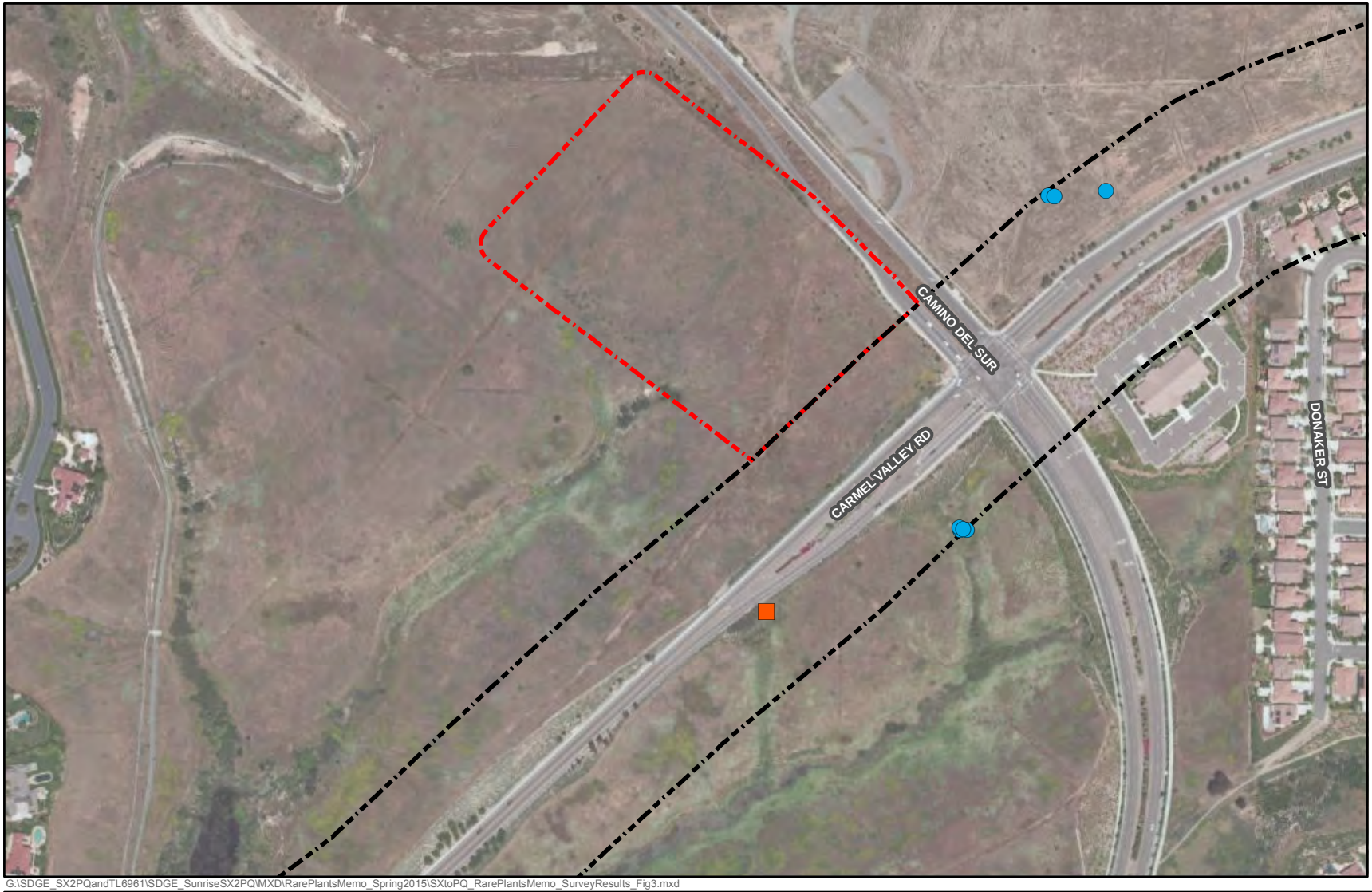
Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

2013/2014 Survey Area
2015 Survey Area



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

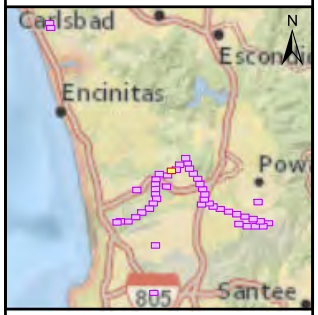
TRC

SDGE
A Sempra Energy utility

4/27/2015

0 150 300 450
Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

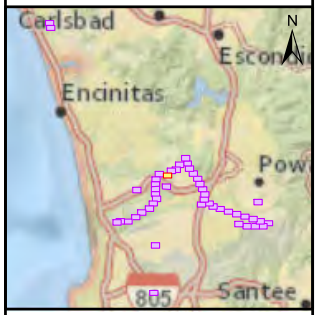
TRC

SDGE
A Sempra Energy utility

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

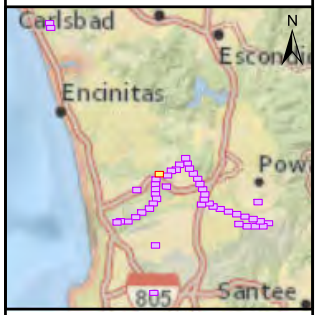
TRC

SDGE
A Sempra Energy utility

4/27/2015

0 150 300 450
Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

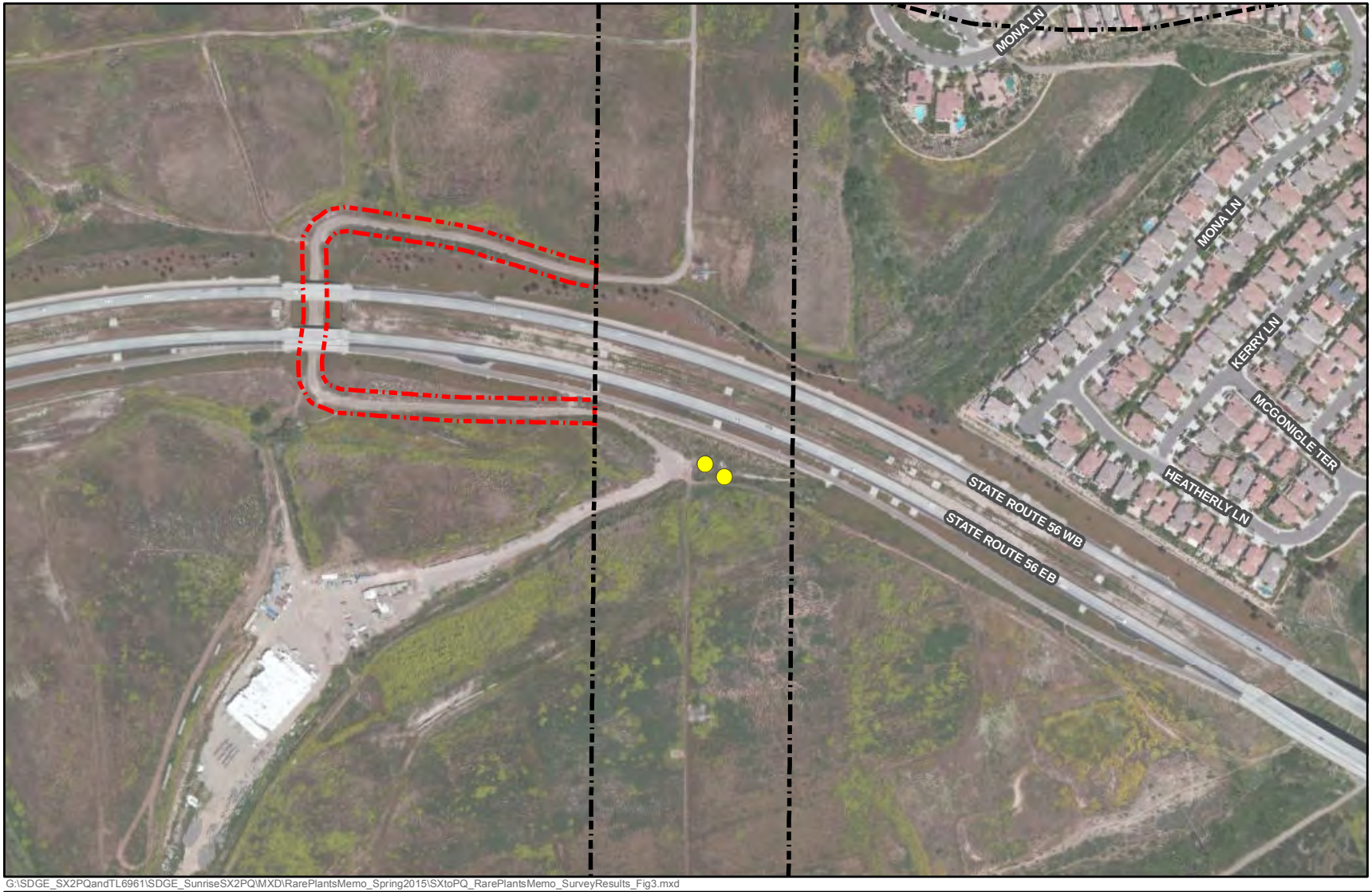
Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)

2013/2014 Survey Area
2015 Survey Area



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

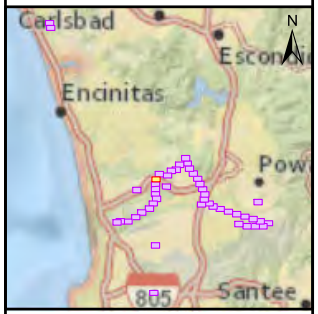
TRC

SDGE
A Sempra Energy utility

4/27/2015

0 150 300 450
Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

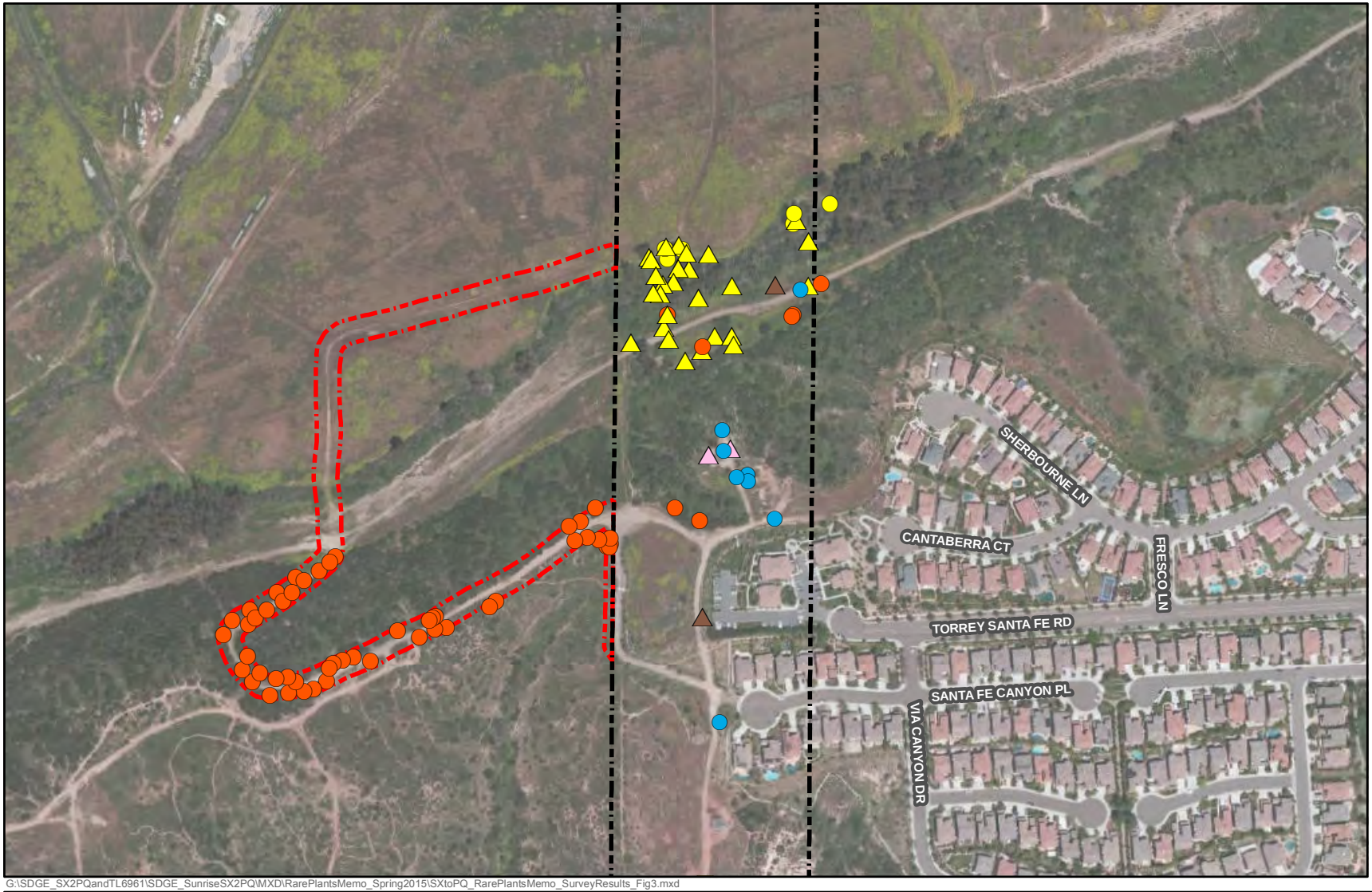
FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

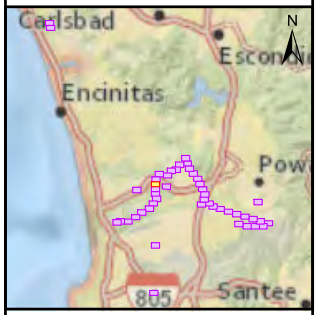
Figure 3

TRC SDGE

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

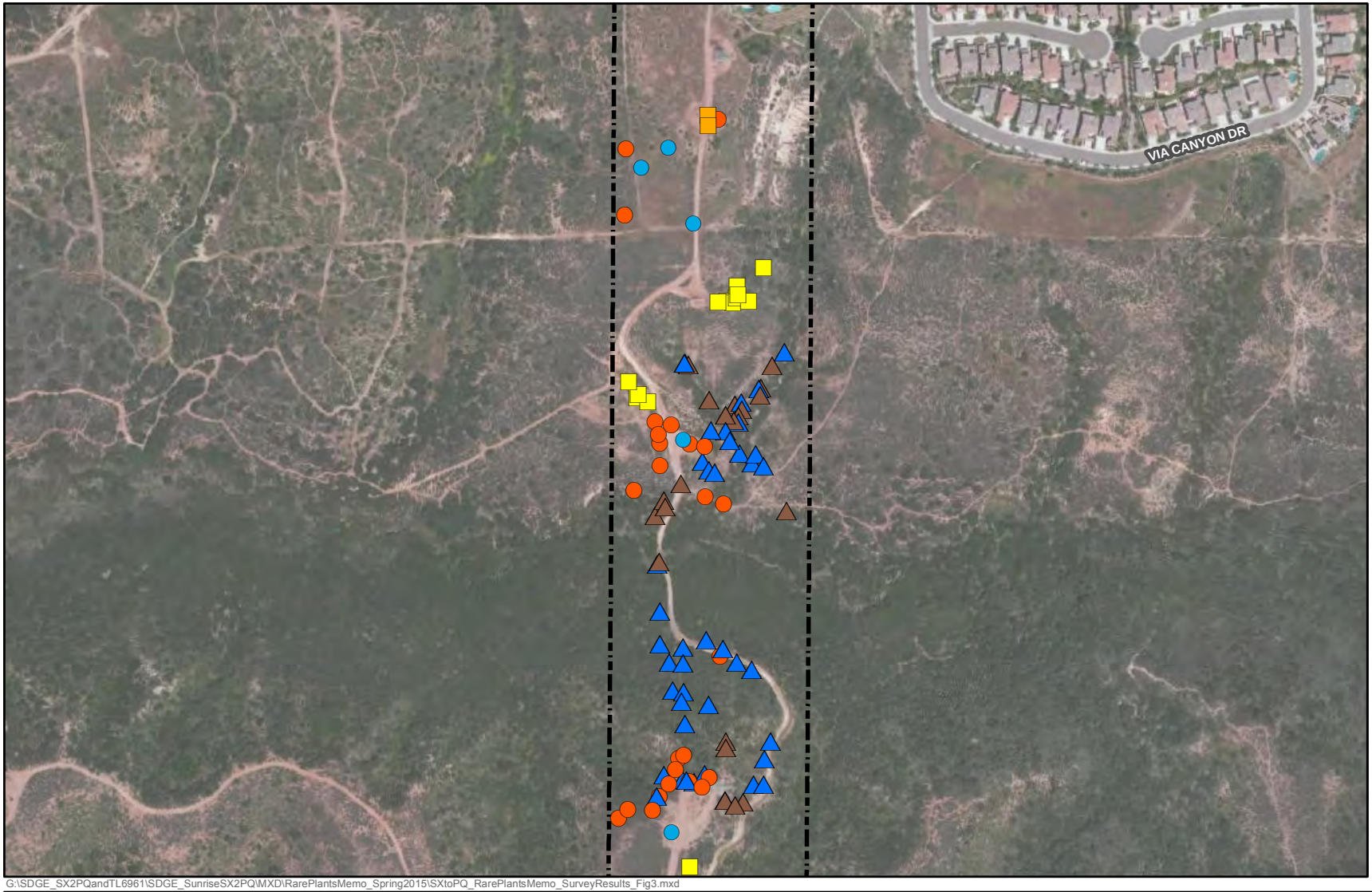
FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

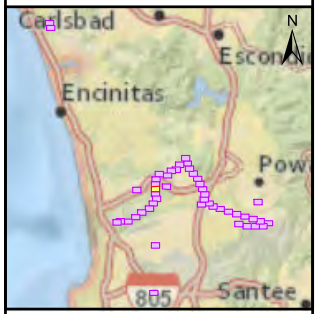
Results of Special-Status Plant Surveys Completed to Date

Figure 3

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

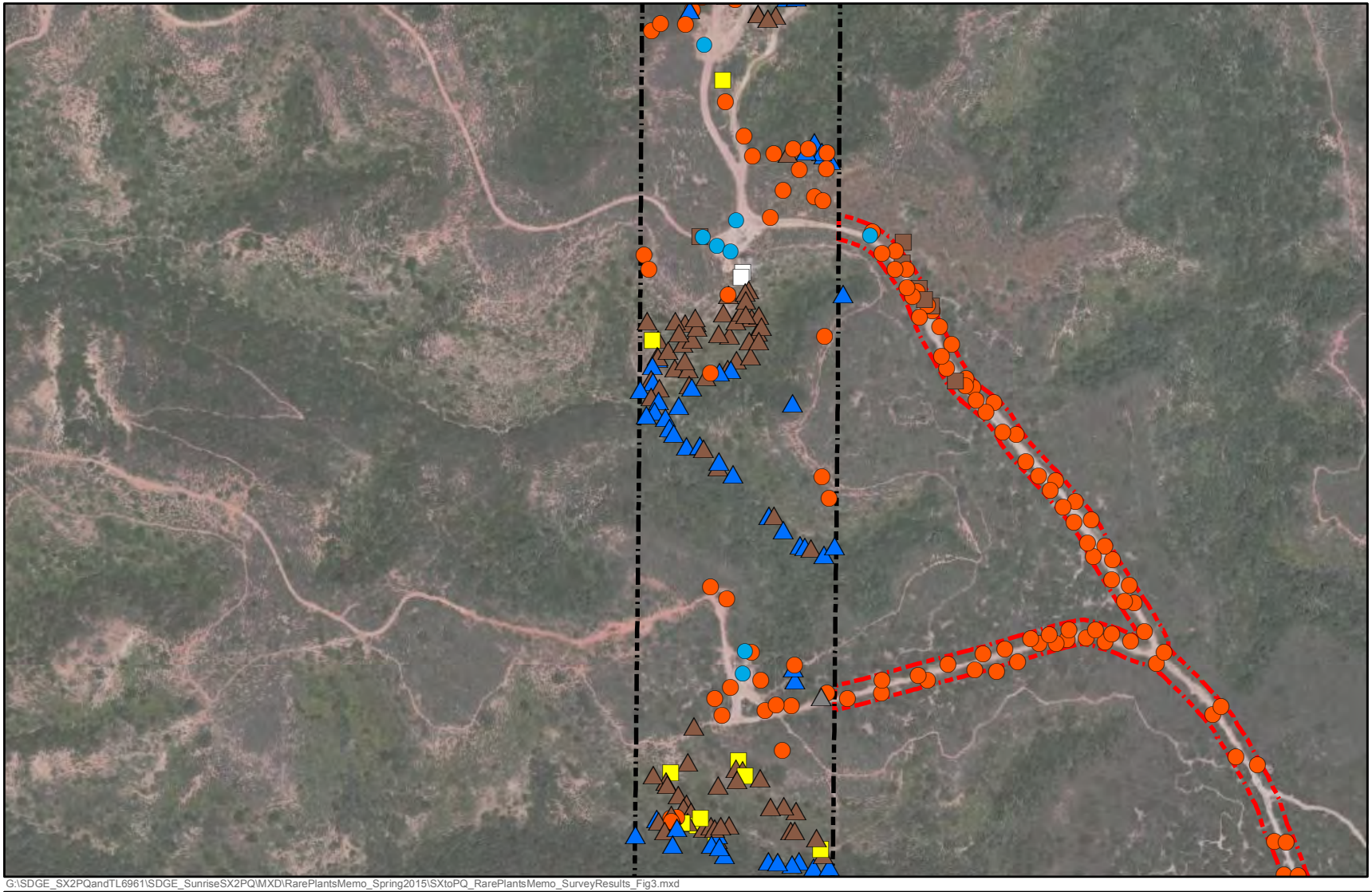
FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area



Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

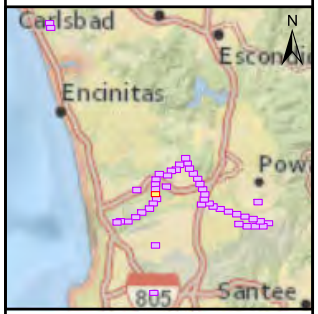
TRC

SDGE
A Sempra Energy utility

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

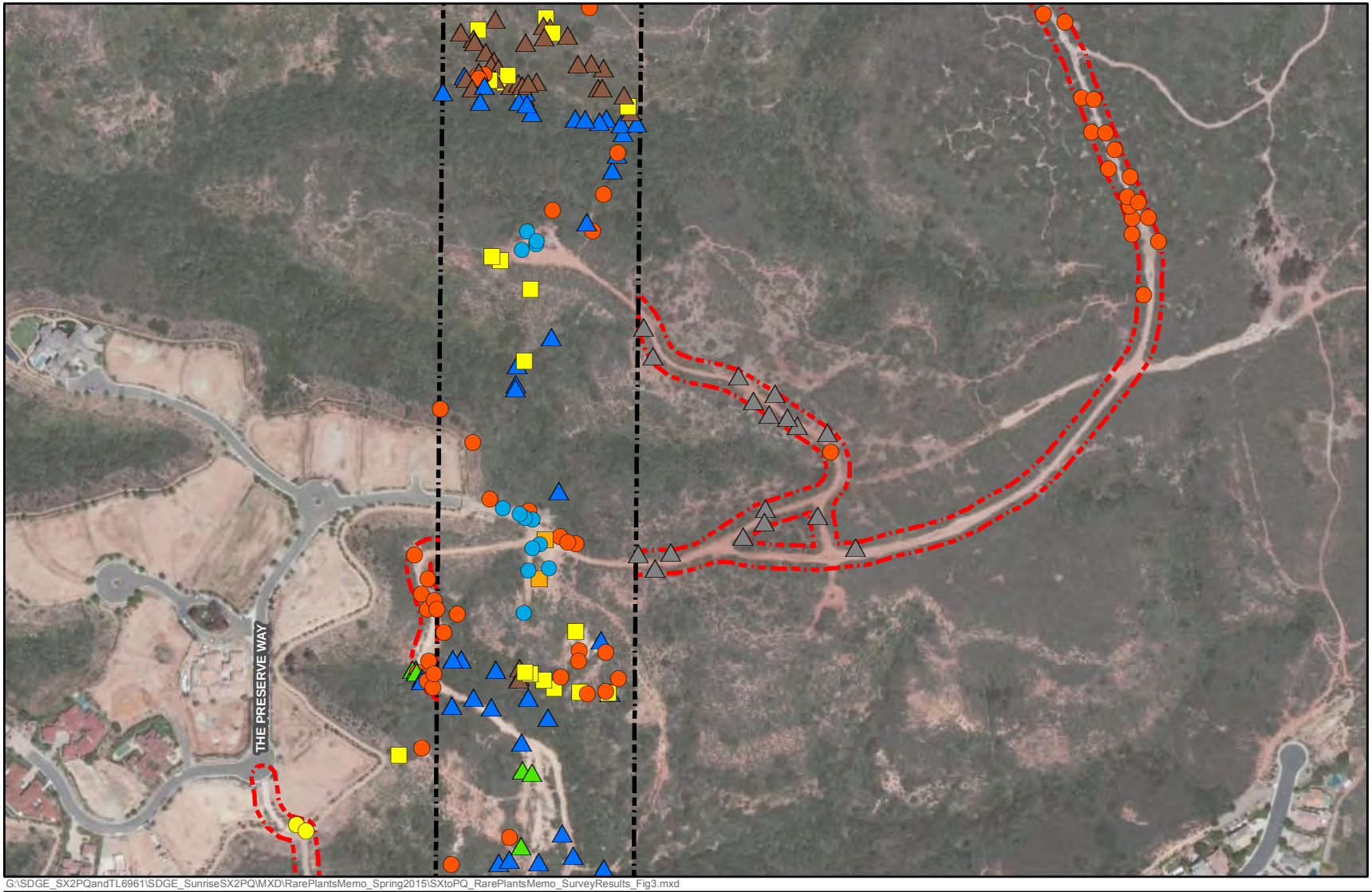
G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

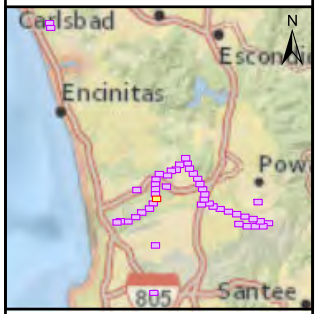
Results of Special-Status Plant Surveys Completed to Date

Figure 3

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

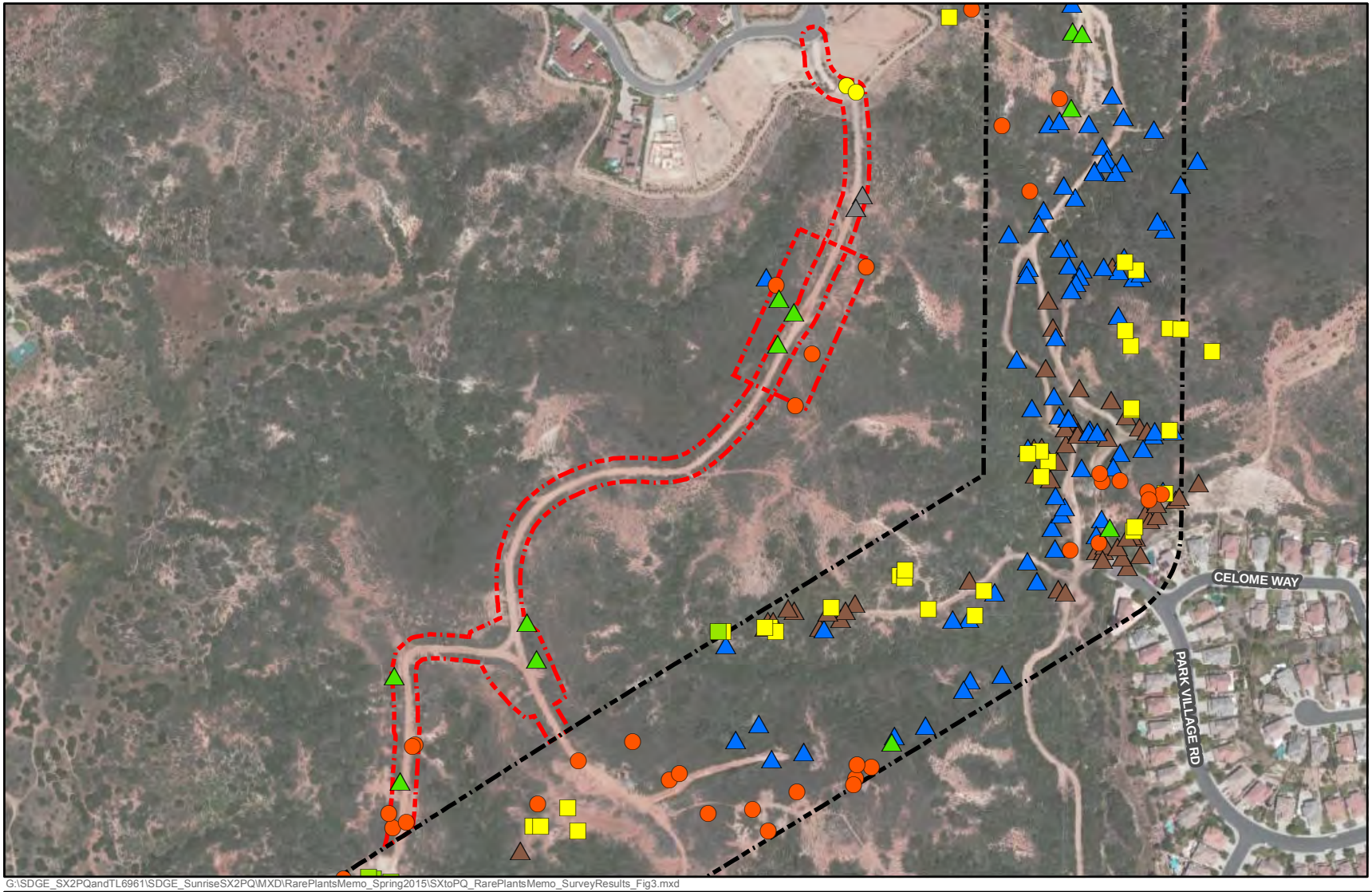
FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

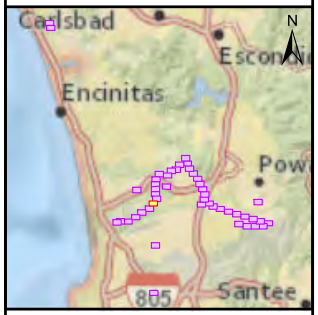
Figure 3

TRC SDGE

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

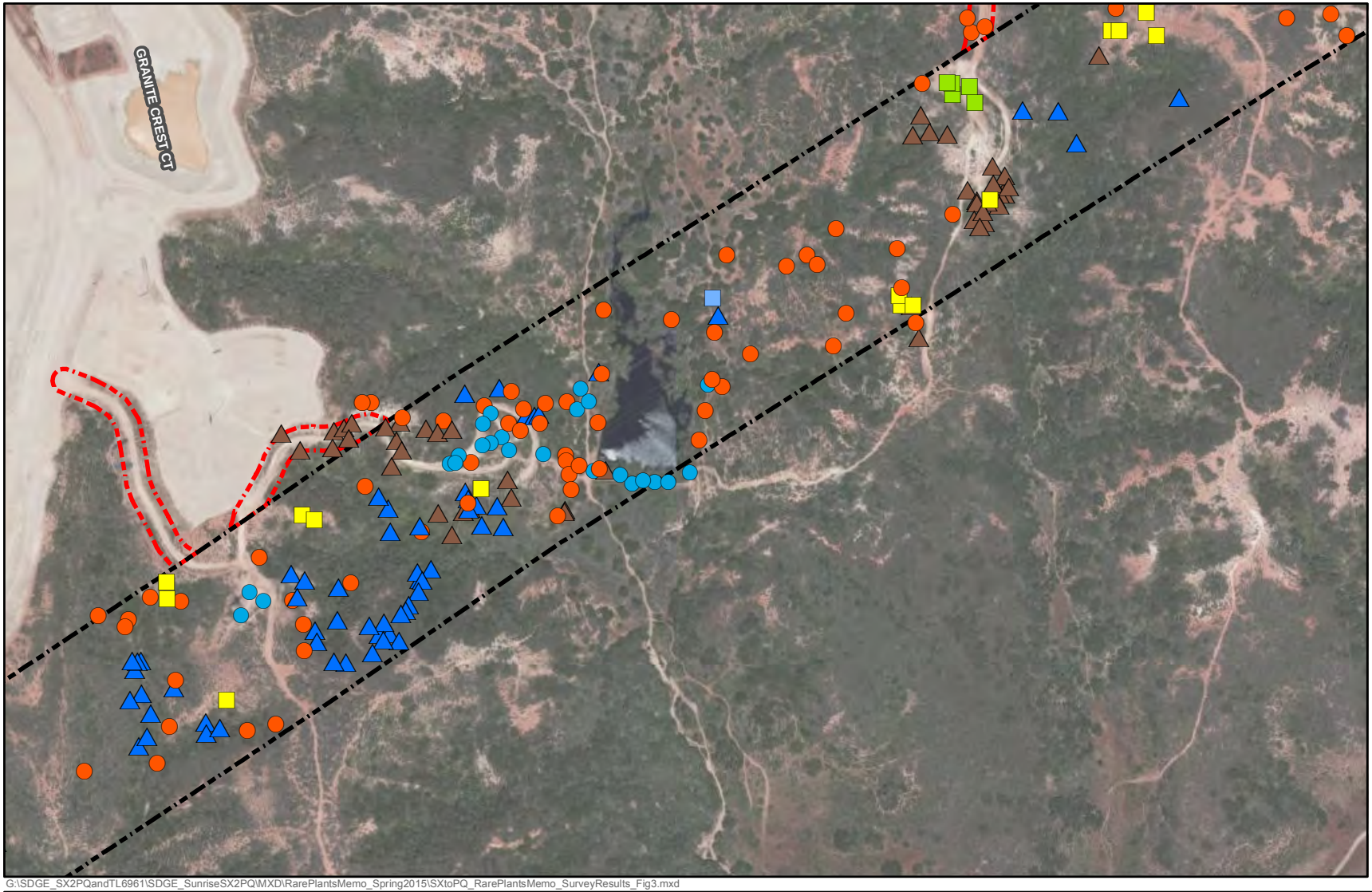
FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

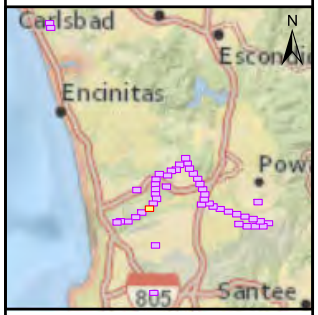
Figure 3

TRC SDGE

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

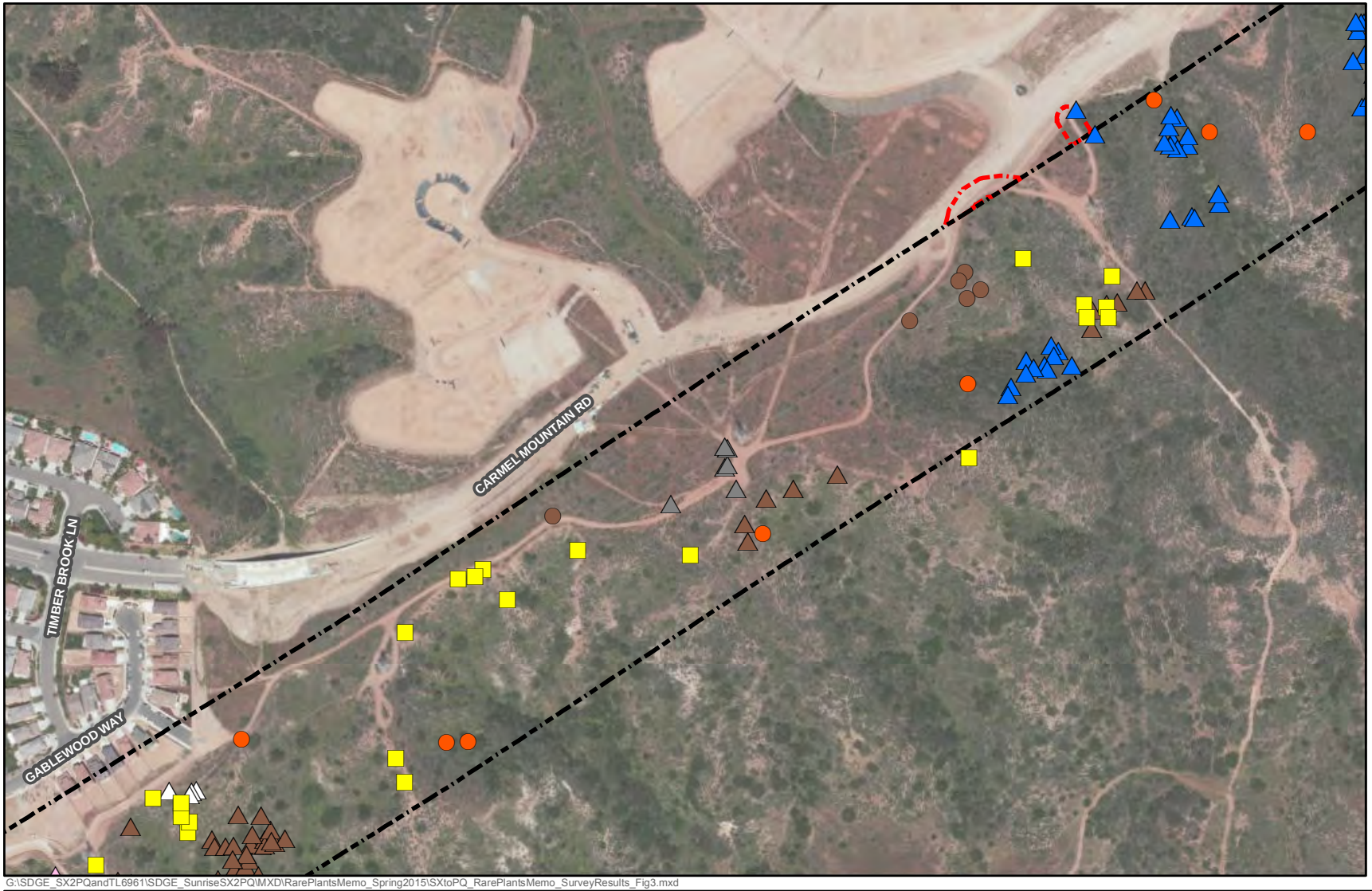
FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

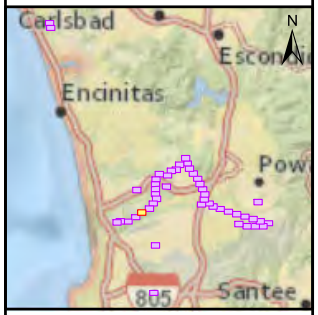
Figure 3

TRC SDGE

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

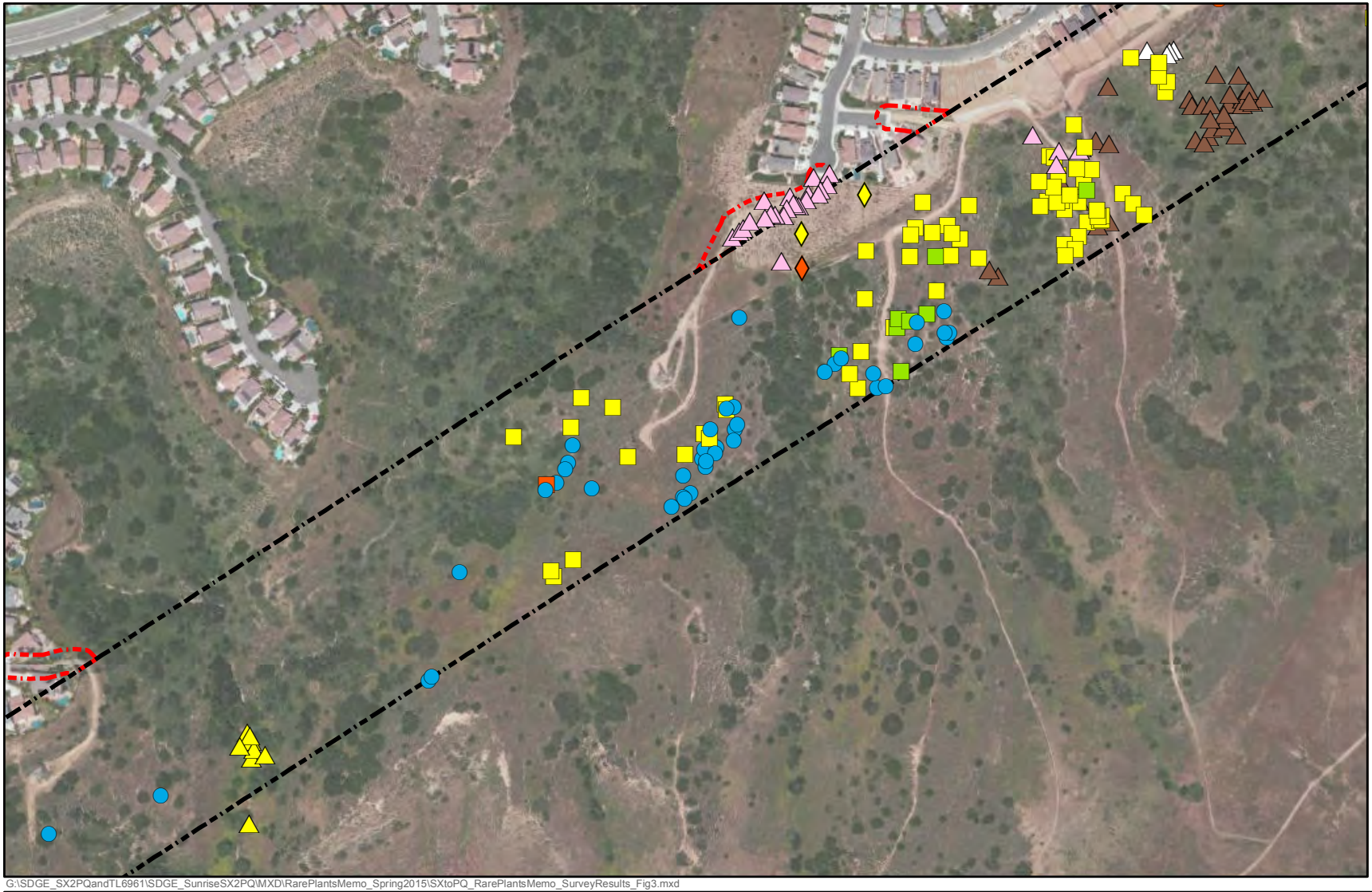
FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area



Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

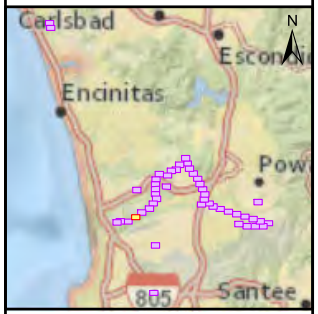
TRC

SDGE
A Sempra Energy utility

4/27/2015

0 150 300 450
Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

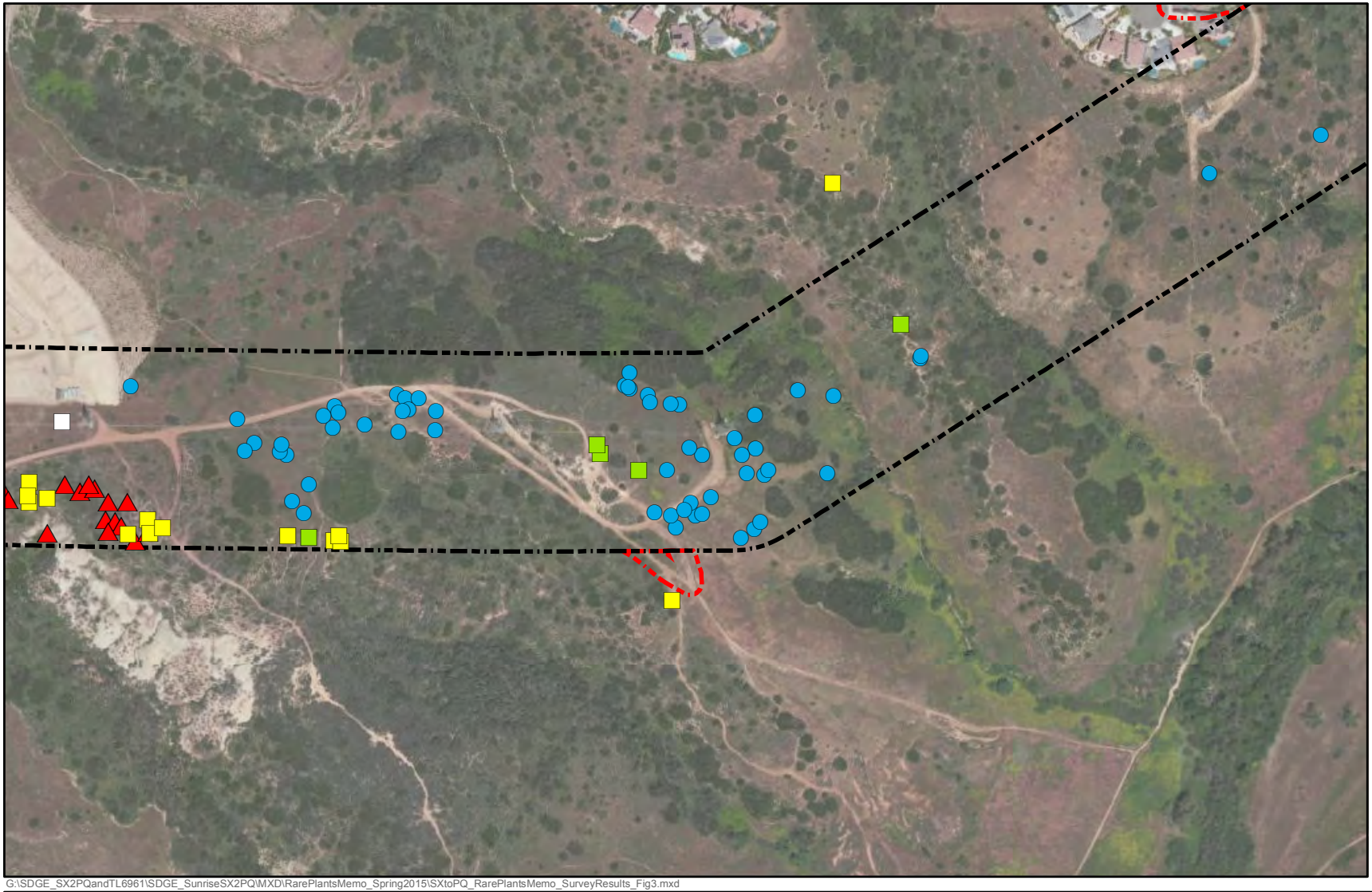
G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area



Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

TRC SDGE

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE

Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE

Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

TRC SDGE

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE

Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

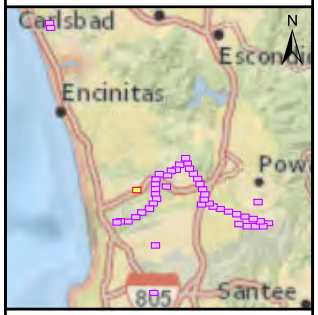
TRC

SDGE
A Sempra Energy utility

4/27/2015

0 150 300 450
Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

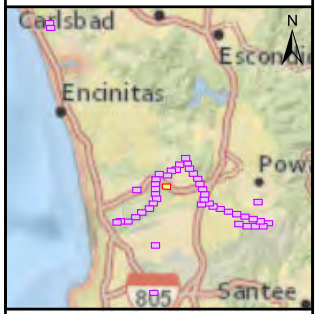
TRC

SDGE
A Sempra Energy utility

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

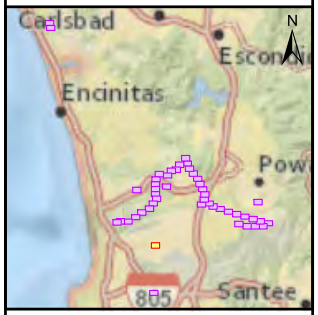
TRC

SDGE
A Sempra Energy utility

4/27/2015

0 150 300 450
Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

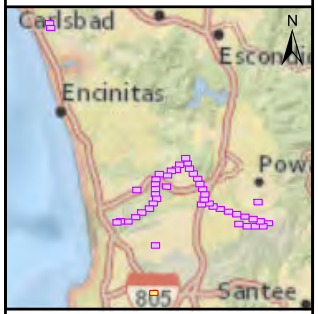
Results of Special-Status Plant Surveys Completed to Date

Figure 3

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE



Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

TRC

SDGE
A Sempra Energy utility

4/27/2015

0 150 300 450
Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE

Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

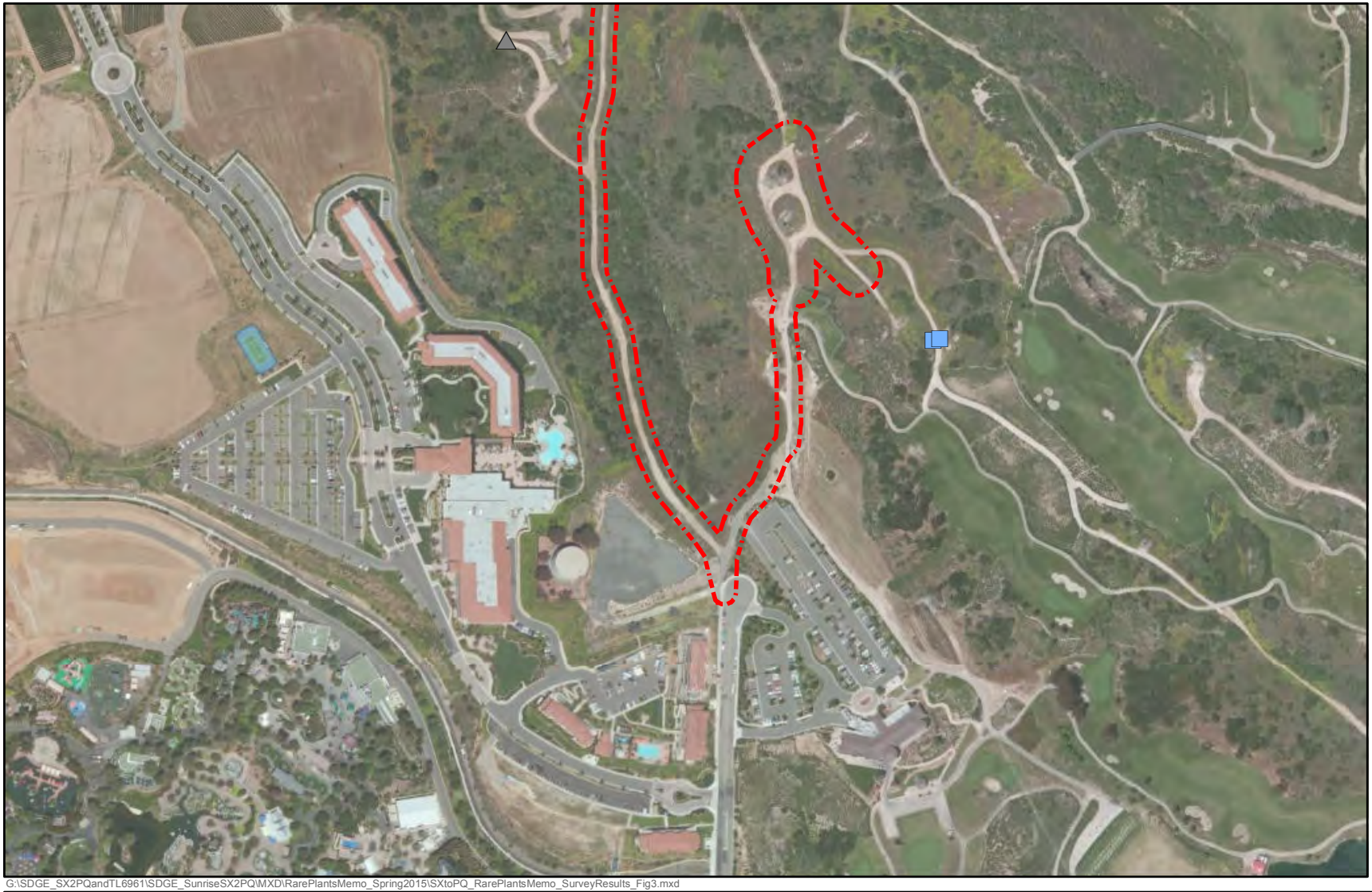
FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\RarePlantsMemo_Spring2015\SXtoPQ_RarePlantsMemo_SurveyResults_Fig3.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Results of Special-Status Plant Surveys Completed to Date

Figure 3

4/27/2015

0 150 300 450 Feet

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT THE MAP IS NOT SURVEY GRADE

Sources: 2013 Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; NatGeo DeLorme, NAVTEQ,UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

Key to Threat Categories

FE = Federally Listed Endangered Species
FT = Federally Listed Threatened Species
SE = State-Listed Endangered Species
CRPR = California Rare Plant Rank

Special-Status Plants Observed

- Spineshrub (*Adolphia californica*; CRPR 2B.1)
- Ashy Spikemoss (*Selaginella cinerascens*; CRPR 4.1)
- Del Mar Manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; FE, CRPR 1B.1)
- Palmer's Sagewort (*Artemisia palmeri*; CRPR 4.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Summer-Holly (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Seaside Cistanthe (*Cistanthe maritima*; CRPR 4.2)
- Small-Flowered Morning-Glory (*Convolvulus simulans*; CRPR 4.2)
- Del Mar Mesa Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*; 1B.1)
- Western Dichondra (*Dichondra occidentalis*; CRPR 4.2)
- Long-Spined Spineflower (*Chorizanthe polygonoides* var. *longispina*; 1B.2)
- San Diego Button-Celery (*Eryngium aristulatum* ssp. *parishii*; FE, SE, CRPR 1B.1)
- Coast Barrel Cactus (*Ferocactus viridescens*; CRPR 2B.1)
- Palmer's Grapplinghook (*Harpagonella palmeri*; CRPR 4.2)
- Graceful Tarplant (*Holocarpha virgata* ssp. *elongata*; CRPR 4.2)
- Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3)
- Nuttall's Scrub Oak (*Quercus dumosa*; CRPR 1B.1)
- Thread-Leaved Brodiaea (*Brodiaea filifolia*; FT, SE, CRPR 1B.1)

Special-Status Plants Observed in Revegetated Areas

- San Diego Marsh-Elder (*Iva hayesiana*; CRPR 2B.2)
- San Diego Sunflower (*Bahiopsis laciniata*; CRPR 4.2)
- Wart-Stemmed Ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)
- Spiny Rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2)
- Torrey Pine (*Pinus torreyana*; CRPR 1B.2)
- 2013/2014 Survey Area
- 2015 Survey Area

MEMORANDUM

TO: Robert Fletcher, San Diego Gas & Electric

FROM: Melissa Busby, Busby Biological Services, Inc.

DATE: December 7, 2015

RE: Results of Focused Light-Footed Ridgway's Rail (*Rallus obsoletus levipes*) Surveys Performed for the Proposed Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project

Busby Biological Services, Inc. (BBS) contracted with Konecny Biological Services (KBS) to conduct focused light-footed Ridgway's rail (*Rallus obsoletus levipes*) surveys for the proposed San Diego Gas & Electric Company (SDG&E) Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project (Proposed Project; Attachment 1: Figure 1). The only suitable light-footed Ridgway's rail habitat is located adjacent to the Encina Hub portion of the Proposed Project (Attachment 1: Figures 1 through 4).

KBS' survey summary report is included as Attachment 2 to this memorandum. The report provides a brief summary of the Proposed Project, a description of the light-footed Ridgway's rail survey area, methods used for these surveys, the results of the surveys, and a brief discussion of the historical location data for the species.

KBS did not detect any light-footed Ridgway's rails during the 2015 focused surveys conducted for the Proposed Project. In addition, KBS indicates that no light-footed Ridgway's rails have been documented south of Cannon Road based on historical data for the region combined with personal knowledge of the historical occurrence of this species.

Please see the attached figures and survey summary report for the survey details.

ATTACHMENT 1
FIGURES

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\FocusedCAGNSurvey\SXtoPQ_BusbyFocusedCAGNSurvey_ProjectLocation_Fig1.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

CONFIDENTIAL

Project Location Map

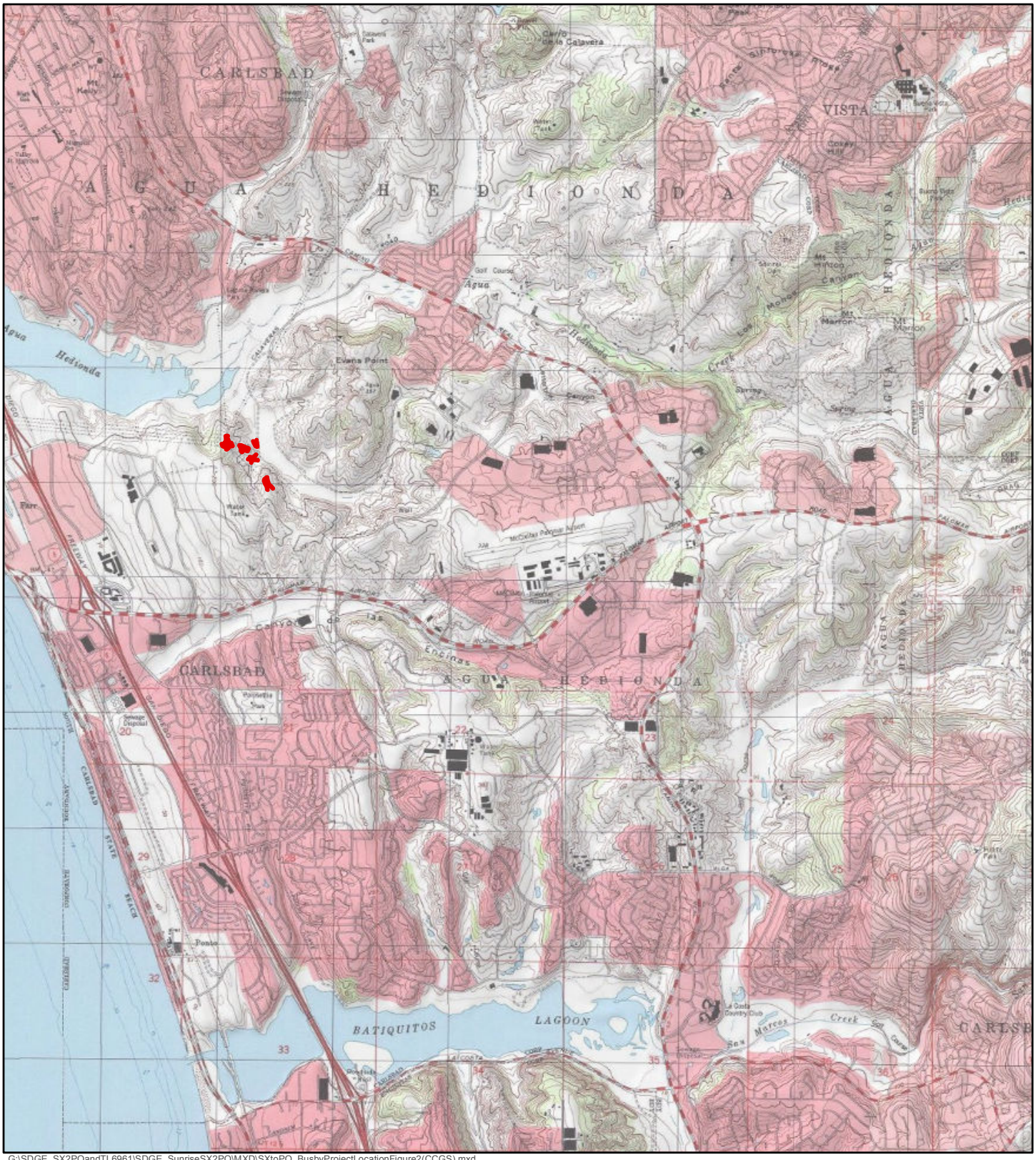
Figure 1

- Proposed Project Route
- Staging Yards
- Encina Hub
- Mira Mesa Hub

TRC

3/19/2015

SDGE
A Sempra Energy utility



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_BusbyProjectLocationFigure2(CCGS).mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Encina Hub Location Map

Figure 2

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

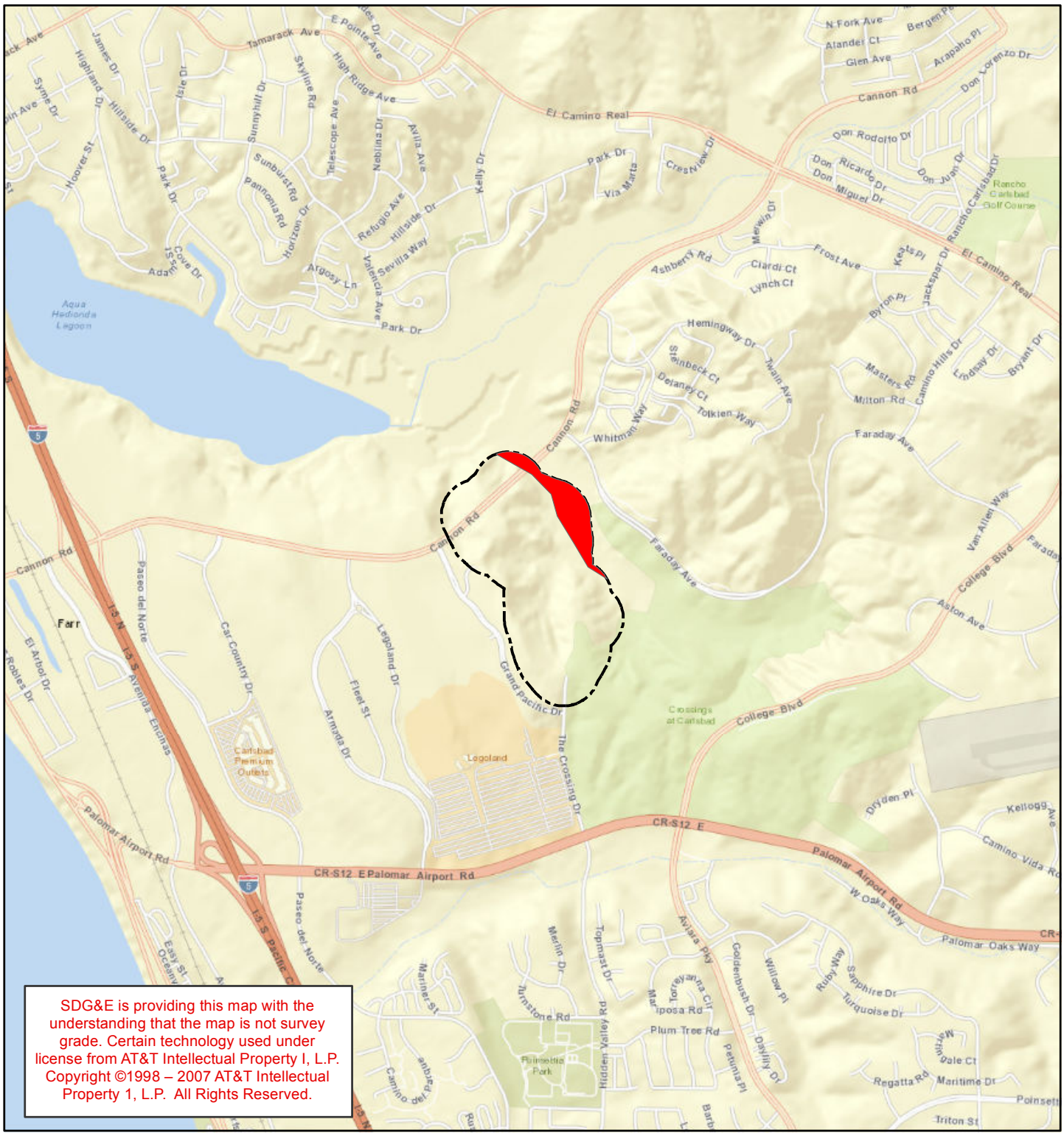
Sources: SDG&E; Copyright:© 2013 National Geographic Society, i-cubed

TRC

4/15/2015

SDGE

A Sempra Energy utility



SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ BUOW\SXtoPQ_BUOW_NotificationLetterFig3b.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Ridgeway's Rail Suitable Habitat

Figure 3

Ridgeway Rail Habitat

Biological Survey Area

0 1,500 3,000 4,500 Feet

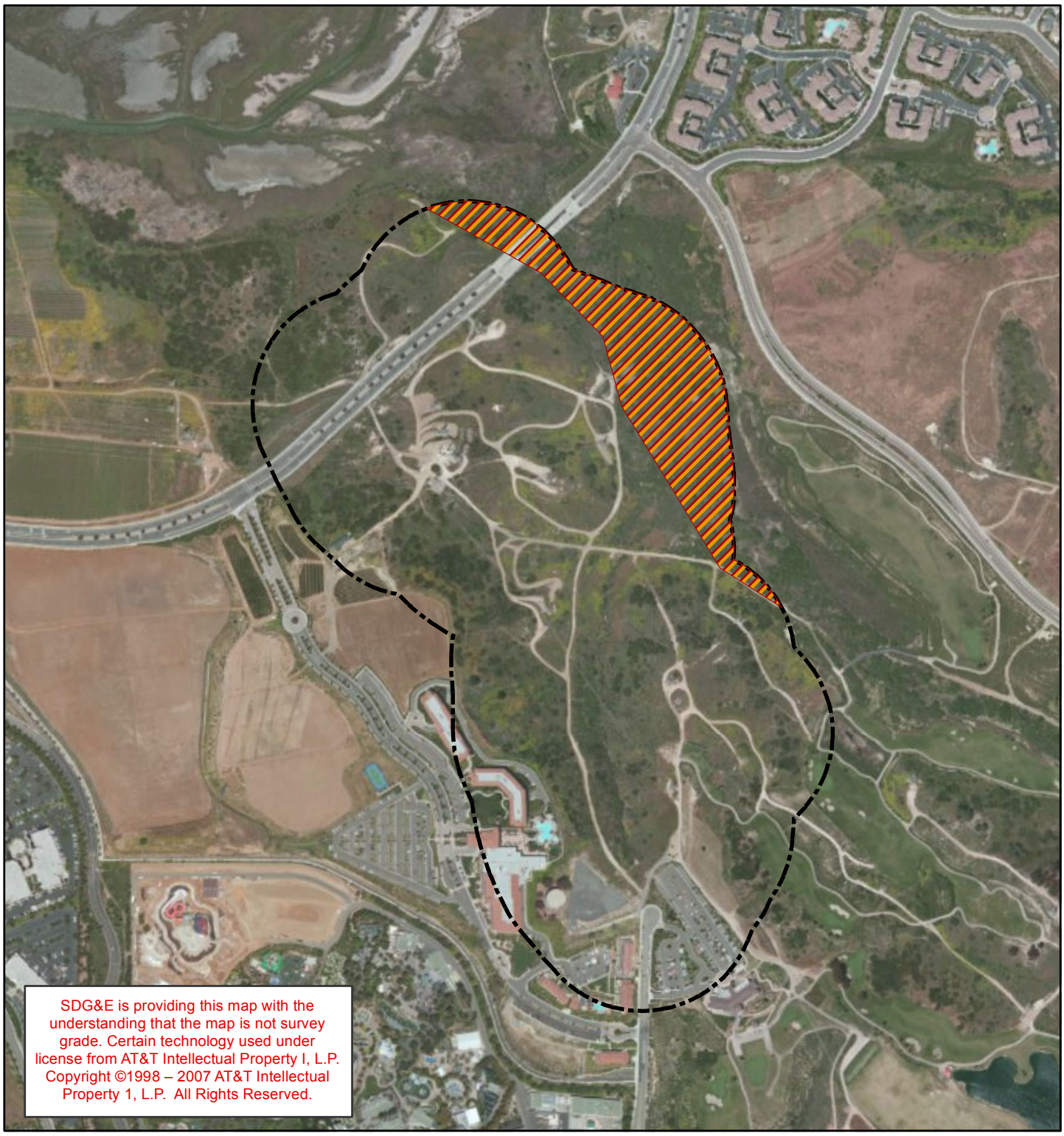
Date: 4/15/2015

TRC

SDGE

A Sempra Energy® utility

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community. Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ BUOW\SXtoPQ_BUOW_NotificationLetterFig3b.mxd

Sycamore to Peñasquitos 230 kV Transmission Line Project

Ridgeway's Rail Survey Area

Figure 4

Ridgeway Rail Habitat

Biological Survey Area

0 500 1,000 1,500 Feet

Date: 4/15/2015

TRC

SDGE

A Sempra Energy utility

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

ATTACHMENT 2
KONECNY BIOLOGICAL SERVICES
SURVEY SUMMARY REPORT

Konecny Biological Services
Biological Consulting, Research, Conservation

July 11, 2015

Busby Biological Services, Inc.
4629 Cass Street, # 192
San Diego, California, 92109

Attn: Ms. Melissa Busby

Re: Results of a Focused Survey for the Light-footed Ridgeway's Rail for the Encina Hub Portion of the Proposed San Diego Gas & Electric Sycamore to Penasquitos 230 Kilovolt Transmission Line Project, City of Carlsbad, San Diego County, California, 2015.

Dear Ms. Busby:

This letter report presents the results of a focused survey for the light-footed Ridgeway's rail (*Rallus obsoletus levipes*; LFRR) (formerly light-footed clapper rail, *Rallus longirostris levipes*), for the Encina Hub portion of the proposed San Diego Gas and Electric (SDG&E) Sycamore to Penasquitos 230 Kilovolt Transmission Line Project (Proposed Project) located in the City of Carlsbad, north-coastal San Diego County, California (Figure 1). The LFRR is listed as an endangered species by the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW). This coastal southern California subspecies is one of three subspecies of federally endangered *R. obsoletus*, which was formerly *R. longirostris* but recently has been taxonomically reclassified by the American Ornithologist Union because of genetic studies (Chesser *et al* 2014).

Surveys for the LFRR were conducted by wildlife biologist John Konecny. The surveys were conducted in accordance with the recommendations provided to the USFWS by the Clapper Rail Study Team (2009). This activity is authorized by John Konecny's USFWS Section 10(a)(1)(A) permit number TE-837308-6, and a CDFW Memorandum of Understanding. No LFRRs were detected in the survey area in 2015.

INTRODUCTION

The LFRR is a slender, tawny-breasted bird with grayish edges on brown centered back feathers, olive wing coverts, vertical white bars on the flanks, a white stripe over the eye, and a partially orange bill. LFRR occurred historically along the coast of southern California from Carpinteria Marsh in Santa Barbara County south to San Quintín, Baja California, Mexico (Grinnell and Miller 1944, USFWS 1994).

The LFRR is a permanent resident of coastal salt marsh traversed by tidal sloughs, usually characterized by cordgrass (*Spartina foliosa*) and pickleweed (*Salicornia* spp.) (Grinnell and Miller 1944, USFWS 1994). LFRRs have also nested in freshwater marsh characterized by cattails (*Typha* sp.) and bulrush (*Scirpus* sp.) at Buena Vista, Agua Hedionda, Batiquitos, San Elijo, and San Dieguito Lagoons in San Diego County (Zembal *et al* 2014); and in spiny rush (*Juncus acutus*) at Naval Air Station (NAS) Point Mugu.

LFRRs forage primarily on crustaceans when present. They will also feed on mollusks, small fish, aquatic insects, grasshoppers, small vertebrates, and in some cases, seeds (Eddleman and Conway 1998). LFRRs forage within emergent vegetation or along the ecotone between mudflats and marsh (Zembal and Fancher 1988), and in the central drains of tidal creeks at low tide. Surface gleaning and shallow probing compose approximately 90 percent of foraging time, while they very irregularly probe deep into the substrate (Zembal and Fancher 1988).

1501 East Grand Avenue #2403, Escondido, California, 92027
Tel (760) 390-8959 E-mail jkonecny@cox.net

Populations of LFRRs have undergone decline in the United States due to the subspecies's limited distribution and destruction and degradation of coastal salt marsh habitat. The statewide LFRR population in 2014 was reported to be 528 pairs in 21 marshes (Zembal *et al* 2014), and represents the highest count since the statewide census began in 1980. The 2014 total is three pairs greater than the 2013 count of 525 pairs, the previous high. Fifty-six percent of these pairs were found in two coastal salt marsh complexes at Upper Newport Bay and the Tijuana Marsh National Wildlife Refuge (NWR). Six other marshes; NAS Point Mugu, Batiquitos Lagoon, San Elijo Lagoon, Buena Vista Lagoon, Seal Beach NWR, and Kendall-Frost Marsh in Mission Bay, had between 16 and 49 pairs, representing an additional 34 percent of the state total. The remaining 13 marshes had between one and nine pairs.

Zembal and Massey (1986) have shown that paired LFRR can be detected "clappering" throughout the year, but have a bimodal peak in vocalizing during mid-February to mid-April and again in September through October. The initial peak in "clappering" vocalizing corresponds to the onset of breeding season and the second peak is thought to function in pair formation in the fall (Zembal and Massey 1986). In contrast to "clappering", single male and female "kekking" is highly seasonal, almost exclusively occurring between February and June.

PROJECT LOCATION

The Encina Hub portion of the Proposed Project is located just southeast of Agua Hedionda Lagoon and southwest of Faraday Road in an unnumbered Section of the U.S. Geological Survey San Luis Rey 7.5-minute quadrangle. The Proposed Project LFRR survey area is predominantly south of Cannon Road and north of the Encina Hub (Figure 1). A small portion of the survey area lies just north of Cannon Road.

PROJECT SITE DESCRIPTION

The Encina Hub portion of the Proposed Project site is a mosaic of Diegan coastal sage scrub, southern willow scrub with several small pockets of freshwater marsh imbedded, and disturbed habitat. The southern willow scrub is characterized by arroyo willow (*Salix lasiolepis*), black willow (*S. gooddingii*), sandbar willow (*S. hindsiana*), and mule fat (*Baccharis salicifolia*), with scattered cottonwood (*Populus fremontii*), and a large component of coyote bush (*Baccharis pilularis*). The small pockets of freshwater marsh are predominantly cattails, bulrush, and some tall grasses mixed in. Elevation of the Encina Hub portion of the Proposed Project site is approximately thirteen to forty feet (four to twelve meters) above mean sea level.

METHODS

Six focused LFRR survey events were conducted at least five days apart in all potentially suitable freshwater marsh habitat within the Encina Hub survey area between 30 April and 26 May 2015. The survey area is comprised of all LFRR suitable habitat that occurs within a 500 foot buffer of the Encina Hub portion of the Proposed Project footprint. The LFRR surveys were conducted mostly in accordance with the recommendations provided to the USFWS by the Clapper Rail Study Team (2009), but with a compressed schedule. Surveys were conducted at either dawn or dusk. Each dawn and dusk survey lasted approximately three hours. Dawn surveys were conducted from pre-dawn to no later than three-hours after sunrise, with the exception of the first survey which lasted a bit longer. Dusk surveys were initiated three hour before sunset and continued until dark. A summary of the environmental conditions on the eleven survey dates is provided in Table 1 below.

Table 1. Summary of Weather Conditions During Six Light-footed Ridgeway's Rail Survey Events for the Encina Hub Portion of the Proposed San Diego Gas and Electric Sycamore to Penasquitos 230 Kilovolt Transmission Line Project in 2015.

Survey #	Date	Surveyor (Species)	Time	Weather Conditions
1	04/30/2015	JK (LFRR)	1620-1950	80% overcast, 72-67°F, wind 5-9 mph
2	05/05/2015	JK, (LFRR)	1620-1930	80% overcast, 65-61°F, wind 3-7 mph
3	05/10/2015	JK (LFRR)	0610-0915	100% overcast, 54-61°F, wind 1-3 mph
4	05/16/2015	JK (LFRR)	1620-1925	100% overcast, 56-58°F, wind 1-3 mph
5	05/21/2015	JK (LFRR)	0600-0910	100% overcast, 60-62°F, wind 1-3 mph
6	05/26/2015	JK (LFRR)	1625-1940	100% overcast, 66-62°F, wind 1-3 mph

*JK = John Konecny; LFRR = light-footed Ridgeway's rail

The surveys were conducted by stopping at stations approximately 100 feet (33-meters) apart along the perimeter of the survey area and listening for vocalizing LFRRs. Occasionally, forays were made into the southern willow scrub in an attempt to get closer to marsh habitat. If LFRRs were not detected passively, a digital call-prompt of the LFRR "dueting" was played with an iPod and amplified speakers at 30-second intervals. A response was listened for before proceeding to the next survey station.

RESULTS and DISCUSSION

No LFRRs was detected in the survey area for the Encina Hub portion of the Proposed Project in 2015.

Described as "formerly common in all coastal marshes" by Grinnell and Miller (1944), the LFRR has never been a common bird species in the Agua Hedionda Lagoon area in recent history. Since the LFRR range-wide survey was initiated in 1980, the LFRR population has varied between zero and a high of nine pairs in 2012.

A major change in the drainage of Agua Hedionda Creek greatly impacted the eastern saltmarsh in the 1980's and 1990's and only between zero and three pairs were present during most of those years. With the buildup of urbanization in the area, street runoff has likely contributed to the enhancement of the area to some degree. Eight pairs were present in 2006, 2008, and 2011 (Zembal *et a*l 2014). An all-time high of nine pairs were detected in 2012. Six pairs were present in 2014 (Zembal *et a*l 2015). LFRR's have been detected as far east as the SDG&E transmission line between Kelly Street and the Discovery Center. I am not aware of LFRRs being detected south of Cannon Road.

CERTIFICATION

I certify that the information in this survey report and attached exhibits fully and accurately represent my work. The results of focused surveys for listed species are typically considered valid for one year by the USFWS and CDFW. If you have any questions or require additional information, please call me at (760) 390-8959.

Sincerely,

John K. Konecny
Wildlife Biologist
TE837308-6

REFERENCES CITED

Chesser R.T., Richard C. Banks, Carla Cicero, Jon L. Dunn, Andrew W. Kratter, Irby J. Lovette, Adolfo G. Navarro-Sigüenza, Pamela C. Rasmussen, J. V. Remsen, Jr., James D. Rising, Douglas F. Stotz, and Kevin Winker (*2014*) Fifty-Fifth Supplement to the American Ornithologists' Union *Check-list of North American Birds*. The Auk: October 2014, Vol. 131, No. 4, pp. CSi-CSxv.

Clapper Rail Study Team. 2009. Survey Guidelines to Determine Presence/Absence of the Light-footed Clapper Rail in Southern California; Recommendations of the Clapper Rail Study Team (John Konecny, Richard Zembal, Susan Hoffman). Draft Recommendations Provided to the Fish and Wildlife Service. 2pp.

Eddleman, W.R., and C.J. Conway. 1998. Clapper Rail (Rallus longirostris). In The Birds of North America, No.340 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA. 32 pp.

Grinnell, J., and A.H. Miller. 1944. The Distribution of the Birds of California. Cooper Ornithological Club. Berkeley, California.

U.S. Fish and Wildlife Service. 1994. Light-footed Clapper Rail. Unpublished two-page pamphlet, prepared by R. Zembal.

Zembal, R. S. Hoffman, and J. Konecny. 2014. Status and Distribution of the Light-footed (Ridgeway's) Clapper Rail in California, 2014 Season. Report to California Department of Fish and Wildlife, Wildlife Management Division, Nongame Wildlife Unit Report, 2014-05, Sacramento, CA, 26pp.

Zembal, R. and J. M. Fancher. 1988. Foraging Behavior and Foods of the Light-footed Clapper Rails. Condor, 90:959-962.

Zembal, R. and B. W. Massey. 1986. Seasonality of Vocalizations by Light-footed Clapper Rails. J. Field Ornithol., 58(1):41-48.

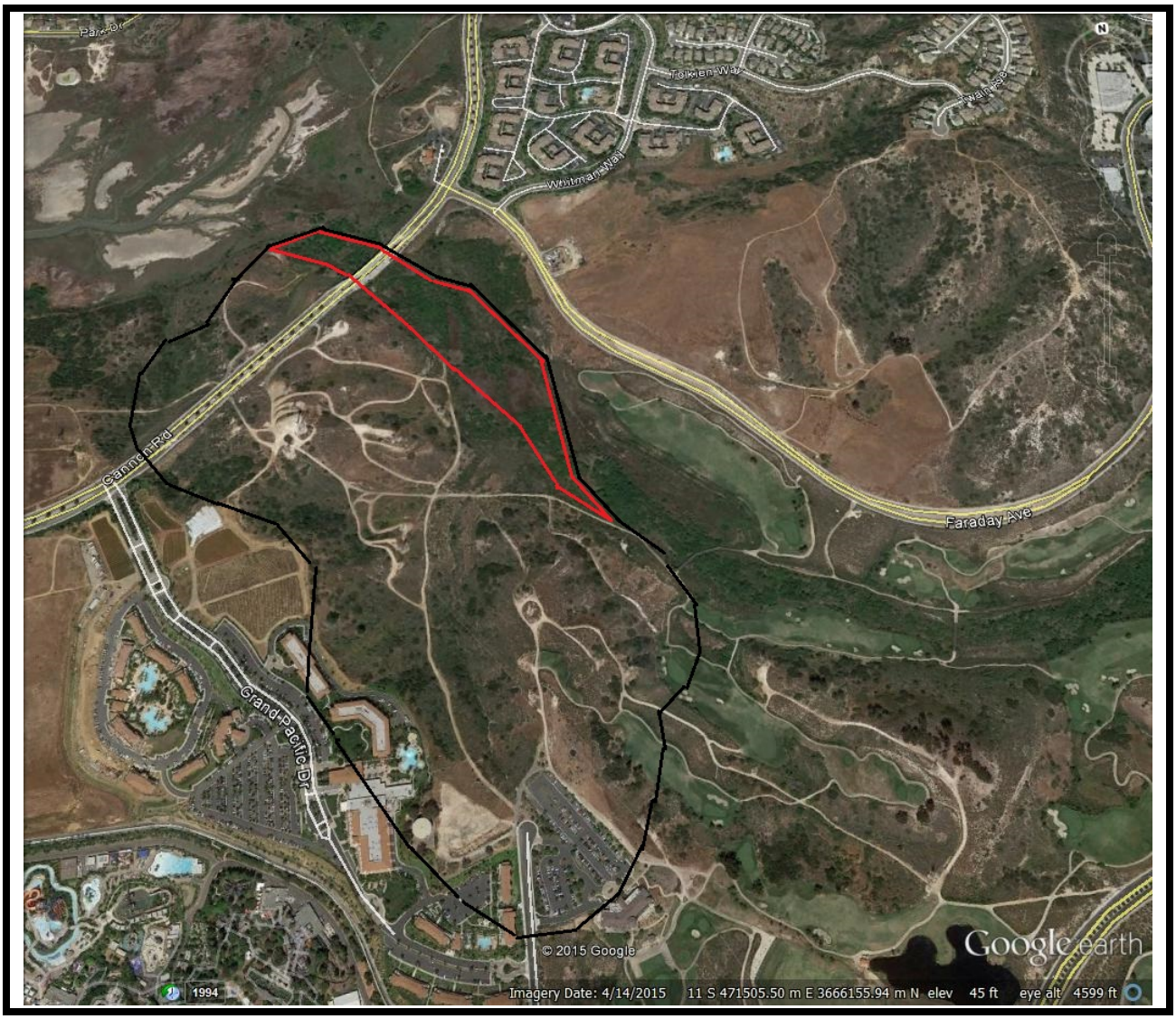


Figure 1. Location of the Proposed San Diego Gas & Electric Sycamore to Penasquitos 230 Kilovolt Transmission Line Project Site (shown as black line) and Light-footed Ridgeway's Rail Survey Area (shown as red line), San Diego County, California, 2015.

MEMORANDUM

TO: Robert Fletcher, San Diego Gas & Electric

FROM: Melissa Busby, Busby Biological Services, Inc.

DATE: December 7, 2015

RE: Results of California Orcutt Grass (*Orcuttia californica*) Surveys Performed for the Proposed Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project

Busby Biological Services, Inc. (BBS) conducted focused special-status plant species surveys as well as a focused habitat assessment and focused reference site checks for California Orcutt grass (*Orcuttia californica*) for the proposed San Diego Gas & Electric Company (SDG&E) Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project (Proposed Project), Application No. 14-04-011.

This memorandum provides background information on the California Orcutt grass surveys that have been conducted for the Proposed Project, a species description of California Orcutt grass, a summary of the methods used for the various California Orcutt grass surveys conducted to date, and the results of these surveys.

CALIFORNIA ORCUTT GRASS –SURVEY BACKGROUND

Initially, California Orcutt grass was included as a target species for the special-status plant species surveys that were conducted within the original Biological Survey Area (BSA) for the Proposed Project in late summer/early fall 2013 and spring 2014. The methods and results of the 2013/2014 special-status plant species surveys are summarized in the *Biological Technical Report for Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project* (BTR; BBS 2014a) and *Special-Status Plant Survey Summary Report for the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, San Diego County, California* (BBS 2014b).

Following submittal of the BTR and 2013/2014 special-status plant survey summary report, the California Public Utilities Commission (CPUC) requested an explanation for the “very low” potential for occurrence given to California Orcutt grass. The CPUC also requested that additional surveys for this species be conducted within potentially suitable habitat beyond the limits of the original BSA.

To support the "very low" potential for occurrence and respond to the CPUC request, biologists performed a focused California Orcutt grass habitat assessment within the updated BSA, which included the original BSA plus areas that had been added to the Proposed Project during subsequent project planning efforts. Biologists performed this focused habitat assessment in fall 2014. The methods and results of the focused habitat assessment were summarized in a memorandum to Robert Fletcher (SDG&E) from Melissa Busby (BBS) titled *Response to Data Request 107: Provide explanation for "very low" potential for California Orcutt grass (Oc;* Orcuttia californica*)* and dated October 22, 2014. This memorandum was submitted to the CPUC as SDG&E's partial response # 2 for Energy Division (ED) Data Request 2, Question 107.

Biologists identified California Orcutt grass reference populations within the vicinity of the BSA to monitor during spring 2015 for an appropriate survey window to document California Orcutt grass surveys within the current BSA.

CALIFORNIA ORCUTT GRASS – SPECIES INFORMATION

California Orcutt grass is a federally listed endangered, state-listed endangered, California Rare Plant Rank (CRPR) 1B.1, and *SDG&E Subregional NCCP*-covered species. This inconspicuous annual grass is restricted to southern California (Los Angeles, Riverside, San Diego, and Ventura counties) and few historical occurrences in northern Baja California, Mexico (U.S. Fish and Wildlife Service [USFWS] 2011, California Native Plant Society [CNPS] 2014). California Orcutt grass is a vernal pool obligate species and is found only in deep, ephemeral vernal pools underlain by clay soils (USFWS 2011). The species colonizes adjacent vernal pools through wind dispersal. California Orcutt grass is often associated with a variety of other federally listed vernal pool taxa, including San Diego button-celery (*Eryngium aristulatum* var. *parishii*), San Diego mesa mint (*Pogogyne abramsii*), Otay mesa mint (*Pogogyne nudiuscula*), spreading navarretia (*Navarretia fossalis*), San Diego fairy shrimp (*Branchinecta sandiegonensis*), and Riverside fairy shrimp (*Streptocephalus woottoni*).

Threats to California Orcutt grass include urban and agricultural development, grazing, altered hydrology, off-road vehicle use, trampling, and invasion of non-native plants. As a result of low population numbers, California Orcutt grass was state-listed as endangered in 1979 (USFWS 2011) and federally listed as endangered in 1993 (USFWS 1993). At the time of its federal listing in 1993, California Orcutt grass was known from only four extant locations in Riverside and San Diego counties. In 2011, however, it was known from 28 extant locations, 13 of which occur in San Diego County (USFWS 2011).

Within San Diego County, this species is historically known to occur naturally in Otay Mesa and Mira Mesa, and from a single location in Carlsbad (CNDDB occurrence 34; Figure 1). The closest naturally occurring population to the BSA along the main alignment for the Proposed Project is located in the western portion of U.S. Marine Corps Air Station (MCAS)

Miramar and approximately 4 miles south of the BSA (CNDDB occurrences 43 and 44; Figure 1); the closest naturally occurring population to the Encina Hub portion of the Proposed Project is located approximately 1.5 miles southwest of the BSA (CNDDB occurrence 34; Figure 1).

A single CNDDB occurrence for California Orcutt grass (CNDDB occurrence 45) has also been recorded adjacent to the westernmost portion of the BSA, southeast of the Peñasquitos Substation (Figures 1 through 3). Restoration activities in vernal pool habitat just outside of the BSA included the introduction of California Orcutt grass along with other vernal pool species. The last known observation of the California Orcutt grass at this location was in 2007 (CNDDB 2014), and this population is presumed to be extant despite the lapse in available current data. However, research indicates that restored pools that lack appropriate mycorrhizal fungi may not be able to support self-sustaining populations of California Orcutt grass (Center for Plant Conservation [CPC] 2014).

METHODS

To evaluate the potential for California Orcutt grass to occur within the BSA, a detailed literature and database review was performed, the special status-plant species survey summary report prepared for the Proposed Project (BBS 2014b) was reviewed, a focused habitat assessment was conducted in the areas that were not previously surveyed, and a focused vernal pool evaluation was completed. In addition, several reference California Orcutt grass populations within San Diego County (Figure 3) were identified and monitored during spring 2015 to determine when/if focused surveys in the BSA should be conducted. The methods for each of these are described in detail below.

Literature & Database Review

A detailed literature review for California Orcutt grass was conducted to supplement the information provided in the BTR (BBS 2014a). In addition, historical occurrence databases (e.g., California Natural Diversity Database [CNDDB], SanGIS, Sunrise Powerlink) were searched, and other references were consulted to better understand the historical location data and distribution of this species, particularly in San Diego County.

2013/2014 Special-Status Plant Species Surveys in Original BSA

Three rounds of focused special-status plant species surveys were conducted within the original BSA for the Proposed Project. These surveys were conducted in late summer/fall 2013, early spring 2014, and late spring 2014 by walking meandering transects throughout the original BSA. The BSA included (1) a 500-foot-wide survey corridor along the approximately 16.5-mile alignment, (2) the existing Sycamore Canyon and Peñasquitos Substations, and (3) the proposed Sycamore and Stowe construction yards.

California Orcutt grass was included in the target species list for the focused special-status plant species surveys conducted within the original BSA for the Proposed Project. All vernal pools within the BSA were assessed during the fall 2013 surveys and thoroughly surveyed for California Orcutt grass during the early spring 2014 and late spring 2014 surveys. Surveys were conducted by highly qualified botanists who are familiar with this species and its phenology.

To respond to CPUC Energy Division Data Request 2, Question 107, the data obtained during these focused special-status plant species surveys were reviewed to determine if the probability for occurrence for California Orcutt grass was accurately assessed in the BTR for the Proposed Project.

2014 Focused Habitat Assessment in Newly Added Areas of the BSA

A focused habitat assessment for special-status plant species was conducted in fall 2014 to evaluate the areas that are part of the Proposed Project, but that were not included in the original BSA and, thus, were not surveyed during the previous efforts. During these focused habitat assessments, the new survey areas were assessed for their potential to support the special-status plant species with a potential to occur within the BSA, including California Orcutt grass.

2014 Focused Vernal Pool Evaluation for California Orcutt Grass

Potentially suitable vernal pool habitat located within the BSA was surveyed during fall 2013, early spring 2014, and late spring 2014 during the focused special-status plant species surveys conducted for the Proposed Project. All vernal pools were revisited during fall 2014 to critically review the vernal pool conditions and their potential to support California Orcutt grass; this evaluation also included three restored vernal pools that are located adjacent to the BSA. The restored vernal pools were known to support California Orcutt grass that had been planted as part of the restoration efforts.

2015 California Orcutt Grass Reference Site Checks

Several reference sites that are known to support California Orcutt grass based on historical occurrence data were identified and monitored during spring and early summer 2015 to determine when/if focused California Orcutt grass surveys should occur within the current BSA for the Proposed Project. Botanists visited the reference sites during the period when California Orcutt grass is typically conspicuous. Botanists also coordinated with other local botanists to determine the status of the emergence of this species at other known populations.

2015 Focused Vernal Pool Plant Species Surveys

Botanists performed two rounds of focused vernal pool plant species surveys for the Proposed Project in spring 2015: one in early spring to identify species that typically emerge when vernal pools are still inundated or in the early stages of drying, and one in late spring to identify species that typically emerge in vernal pools that are dry. Botanists performed these surveys in each of the 65 previously documented basins within the current BSA for the Proposed Project. The basins contained seasonally wet depressions such as vernal pools, road ruts, and other areas that support temporary ponding. Botanists also evaluated areas that were previously documented by Scott McMillan (AECOM) as being vernal pools but that are not currently distinguishable as basins. California Orcutt grass was included as a target species during these surveys.

RESULTS

The results of the literature and database review, special status-plant species survey summary report review, focused habitat assessment in the areas not yet surveyed, and focused vernal pool evaluation are provided below.

Literature & Database Review

The results of the detailed literature and database review were used to prepare the California Orcutt grass species information provided above. CNDDB occurrences 43 and 44 (Figure 1), which are located approximately 4 miles south of the BSA in the western portion of MCAS Miramar, represent the closest known natural occurrences of California Orcutt grass to the main alignment of the Proposed Project. CNDDB occurrence 34 (Figure 1), which is located approximately 1.5 miles southwest of the BSA, represents the closest known natural occurrence of California Orcutt grass to the Encina Hub portion of the Proposed Project. CNDDB occurrence 45 (Figures 1 and 2) is located adjacent to the westernmost portion of the BSA, southeast of the Peñasquitos Substation. This point represents the location of California Orcutt grass that was introduced along with other vernal pool species as part of the restoration activities in several vernal pools that are located outside of the BSA.

2013/2014 Special-Status Plant Species Surveys in Original BSA

Only one vernal pool within the BSA provides potential habitat for California Orcutt grass. Other vernal pools species, such as San Diego button-celery and dwarf woolly marbles (*Psilocarphus brevissimus* var. *brevissimus*), were observed during the focused special-status plant species surveys that were conducted for the Proposed Project in 2013/2014. This indicates that, despite drought conditions, California Orcutt grass should have been observable during the spring 2014 surveys if it were present in these vernal pools. However, no California Orcutt grass was observed in this vernal pool or in any other part of the BSA during the 2013/2014 special-status plant species surveys.

2014 Focused Habitat Assessment in Newly Added Areas of the BSA

No suitable vernal pool habitat with a potential to support California Orcutt grass was identified during the focused habitat assessment conducted in fall 2014 within the portions of the BSA that were not previously surveyed.

2014 Focused Vernal Pool Evaluation for California Orcutt Grass

The single vernal pool within the BSA that provides potential habitat for California Orcutt grass was visited three times (fall 2013, early spring 2014, late spring 2014) during the focused special-status plant species surveys conducted for the Proposed Project, and it was visited again on October 21, 2014, to analyze the conditions within the vernal pool and determine the potential for occurrence of California Orcutt grass in the vernal pool.

Surveyors determined that the vernal pool provides very low quality habitat for California Orcutt grass because it does not provide the deep, clay soils and other attributes required by this species that many other vernal pools provide (Photo 1, below). No evidence of California Orcutt grass was observed in any of the vernal pools during the October 2014 visit; however, this is not unexpected, as California Orcutt grass is an ephemeral annual species, and it was not detected during the spring 2014 surveys. San Diego button-celery requires similar conditions as California Orcutt grass to germinate. San Diego button-celery was mapped in spring 2014 in the only vernal pool present within the BSA and was again observed in fruit in this vernal pool during the October 2014 visit.

Photo 1: Vernal pool with very low quality habitat for California Orcutt grass

Botanists also visited the three restored vernal pools located adjacent to the BSA where California Orcutt grass was introduced to see if there was any forensic evidence of California Orcutt grass in these pools that would confirm that the species germinated during spring 2014 and that the population is still extant. Botanists also visited these restored vernal pools to assess their overall quality and to compare the condition of these vernal pools, which are known to support California Orcutt grass, to the basins within the BSA. No previous surveys had been conducted in these vernal pools because they are outside of the BSA. San Diego button-celery was observed in fruit in these pools; however, remnants of California Orcutt grass were not observed.

2015 California Orcutt Grass Reference Site Checks

During spring 2015, two California Orcutt grass reference sites (Figure 3) were selected based on historical occurrence data for the species, including CNDDB occurrence 45 (Figures 1 and 2) southeast of the Peñasquitos Substation and another known population adjacent to the San Ysidro Department of Motor Vehicles (DMV). In late spring, a third reference site near San Ysidro High School was added.

Botanists conducted seven reference site checks between April 2, 2015, and June 17, 2015. These are summarized in Table 1, below.

Table 1. California Orcutt Grass Reference Site Checks (Spring 2015)

Date	Reference Site	Biologists
4/2/15	Peñasquitos Substation	Lee Ripma, Ryan Meszaros
4/27/15	Peñasquitos Substation	Brian Lohstroh, Ryan Meszaros
5/5/15	San Ysidro DMV	Lee Ripma, Ryan Meszaros
5/11/15	San Ysidro DMV	Lee Ripma, Brian Lohstroh
5/21/15	Peñasquitos Substation	Ryan Meszaros
5/27/15	San Ysidro DMV	Melanie Dicus
6/17/15	San Ysidro DMV & San Ysidro High School	Lee Ripma, Jim Rocks

California Orcutt grass was not identified at any of these reference populations during these reference site checks during spring 2015, though the species has been documented at these locations in previous years.

In addition, botanists coordinated with other local botanists to indirectly monitor other known California Orcutt grass populations. One such existing population was monitored by MCAS Miramar biologist, Chuck Black, who monitors California Orcutt grass populations that are near the main Proposed Project alignment but that have restricted access (CNDDB occurrences 43 and 44; Figure 1). Based on information from Chuck Black, California Orcutt grass did not emerge at any of the historical locations on MCAS Miramar during spring 2015.

2015 Focused Vernal Pool Plant Species Surveys

California Orcutt grass was not observed during the focused vernal pool plant species surveys that were conducted for the Proposed Project in spring 2015; however, several other vernal pool plant species with similar requirements, such as San Diego button-celery, were observed during spring 2015 surveys.

CONCLUSION/DISCUSSION

California Orcutt grass has not been observed within the BSA during any of the general or focused surveys conducted for the Proposed Project.

While the BSA is outside the range in which California Orcutt grass naturally occurs, this species has been documented as recently as 2007 in restored vernal pools that are located southeast of the Peñasquitos Substation and immediately outside the BSA (Figures 1 and 2) where this species was introduced as part of the restoration effort. However, the single vernal pool within the BSA that provides potential habitat for California Orcutt grass (Figure 2) was assessed in fall 2013 and meticulously surveyed by highly qualified botanists who are familiar with this species and its phenology once in fall 2013, twice in spring 2014, and once in fall 2014. California Orcutt grass was not observed during any of these surveys. In addition, this location was surveyed two times during spring 2015 special-status plant species surveys, two times during the spring 2015 focused vernal pool plant species surveys, and three times in spring 2015 during focused California Orcutt grass reference site checks. This species was also not observed during any of these surveys.

Typically, a species that is not observed during a thorough, focused survey would be classified as “not expected to occur within the BSA;” however, the vernal pool within the BSA provides low quality habitat for the species and – because California Orcutt grass is wind dispersed – could, theoretically, be colonized in the future from the populations of California Orcutt grass that have been documented within the adjacent restored pools. As such, California Orcutt grass will continue to have a very low potential for occurrence within the BSA as long as adjacent populations continue to support California Orcutt grass (which has yet to be verified).

Impacts to California Orcutt grass are not anticipated to result from implementation of the Proposed Project. Regardless of its potential for occurrence within the BSA, the California Orcutt grass is a vernal pool obligate, and impacts to the single vernal pool that provides potential habitat for this species will be avoided through Proposed Project design features. As such, no additional avoidance, minimization, or mitigation measures would be required for this species.

REFERENECES

Busby Biological Services, Inc. (BBS)

2014a Biological Technical Report for Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, City of San Diego, San Diego County, California. March 2014.

2014b Special-Status Plant Survey Summary Report for the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, San Diego County, California. June 2014.

California Department of Fish and Wildlife (CDFW)

2014 Natural Diversity Data Base. Nongame-Heritage Program, California Department of Fish and Wildlife, Sacramento.

California Native Plant Society (CNPS)

2014 Inventory of Rare and Endangered Plants (online edition, v7-14jun). California Native Plant Society. Sacramento, CA. Available at: http://www.cnps.org/inventory. Accessed October 2014.

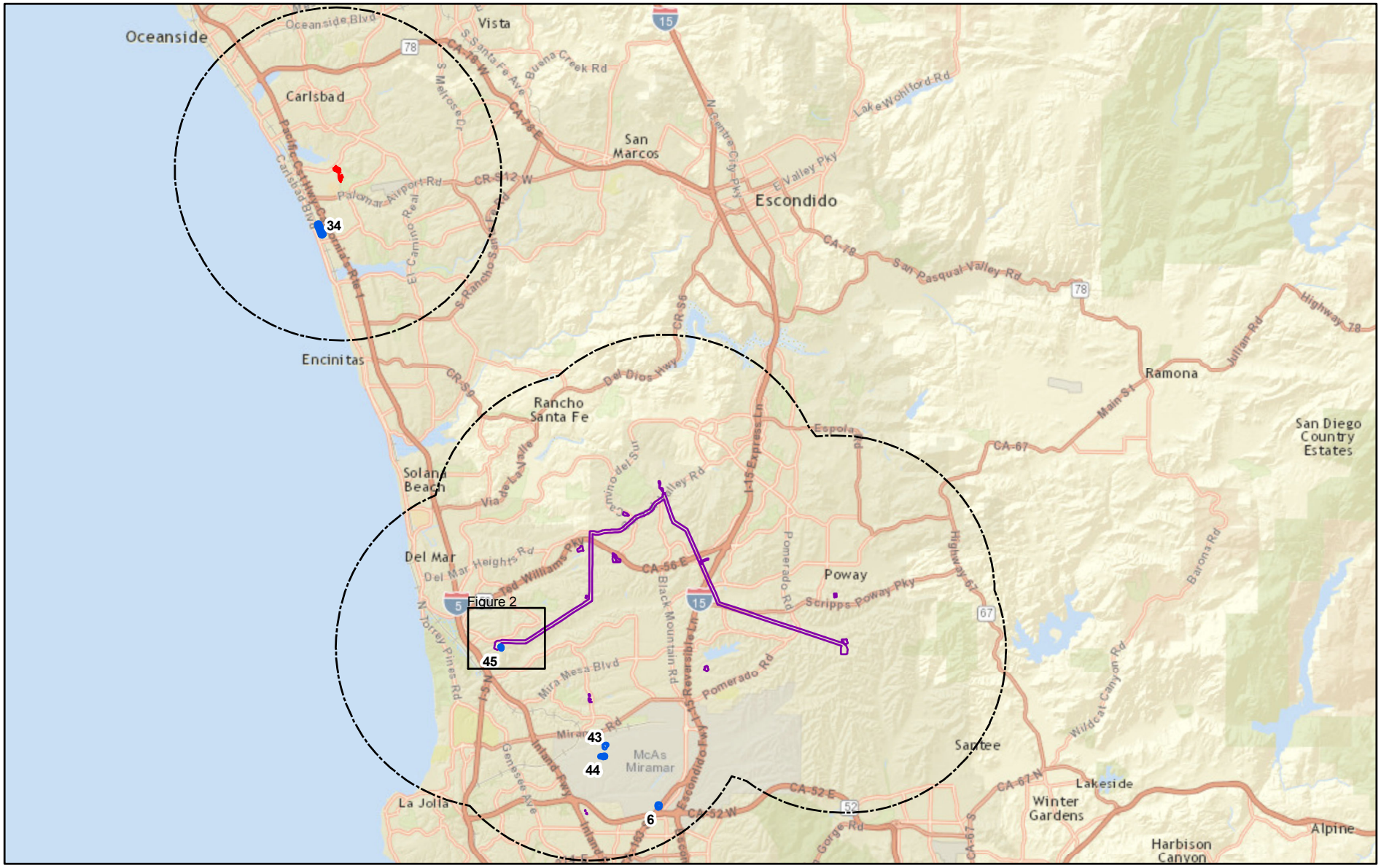
Center for Plant Conservation (CPC)

2014 National Collection Plant Profile available at: http://www.centerforplantconservation.org/collection/cpc_viewprofile.asp?CPCNum=3038. Accessed October 2014.

United States Fish and Wildlife Service (USFWS)

1993 Determination of Endangered Status for Three Vernal Pool Plants and the Riverside Fairy Shrimp. August 3, 1993.

2011 *Orcuttia californica* (California Orcutt grass) 5-Year Review: Summary and Evaluation. March 11, 2011.



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_OrcuttiaFig1.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

CNDDB Occurrence
Encina Hub
BSA
5-Mile Buffers Around BSA and Encina Hub

Sycamore to Peñasquitos 230 kV Transmission Line Project
Historical *Orcuttia californica* Locations
Figure 1

0 3 6 9 Miles

Sources: CNDDB October 2014 Database, CA Dept. Fish and Wildlife; Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_OrcuttiaFig2.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

BSA

CNDDB Occurrence 45

Actual CNDDB Occurrence 45 Location

Very Low Potential Habitat in BSA

Sycamore to Peñasquitos 230 kV Transmission Line Project

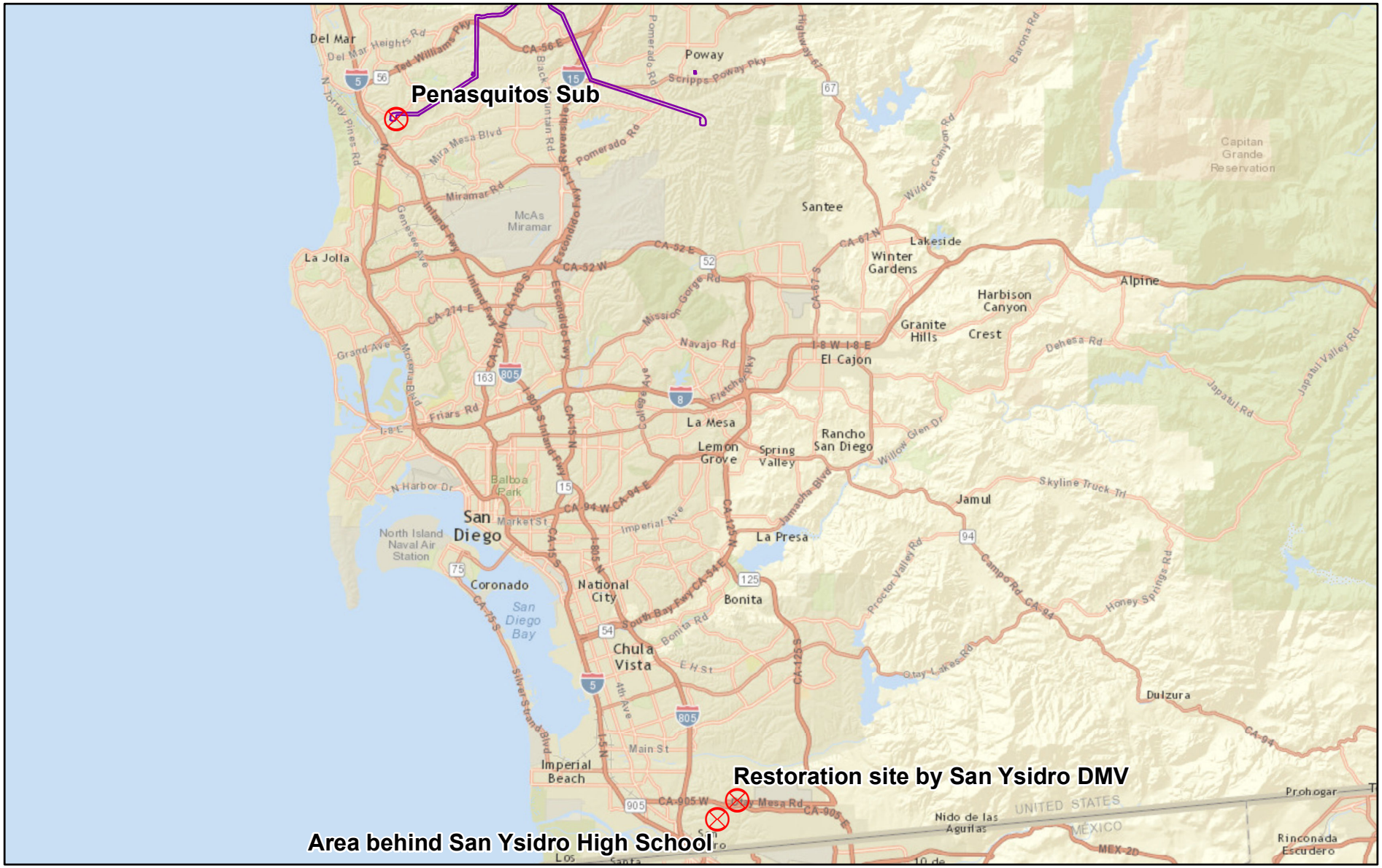
Orcuttia californica Habitat in BSA

Figure 2

0 150 300 450 Feet

SDGE A Sempra Energy utility

Sources: CNDDB October 2014 Database, CA Dept. Fish and Wildlife; Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_OrcuttiaFig3.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

Reference Locations

BSA

Sycamore to Peñasquitos 230 kV Transmission Line Project

Orcuttia californica Reference Populations

Figure 3

0 3.5 7 10.5 Miles

Sources: CNDDB October 2014 Database, CA Dept. Fish and Wildlife; Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

MEMORANDUM

TO: Robert Fletcher, San Diego Gas & Electric

FROM: Melissa Busby, Busby Biological Services, Inc.

DATE: December 7, 2015

RE: Results of Focused Thread-Leaved Brodiaea (*Brodiaea filifolia*) Surveys Performed for the Proposed Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project

Busby Biological Services, Inc. (BBS) conducted focused special-status plant species surveys as well as a focused habitat assessment and focused surveys for thread-leaved brodiaea (*Brodiaea filifolia*) for the proposed San Diego Gas & Electric Company (SDG&E) Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project (Proposed Project), Application No. 14-04-011.

This memorandum provides background information on the thread-leaved brodiaea surveys that have been conducted for the Proposed Project, a species description of thread-leaved brodiaea, a summary of the methods used for the various thread-leaved brodiaea surveys, and the results of these surveys.

THREAD-LEAVED BRODIAEA SURVEY BACKGROUND

Initially, thread-leaved brodiaea was included as a target species for the special-status plant species surveys that were conducted within the original Biological Survey Area (BSA) for the Proposed Project in late summer/early fall 2013 and spring 2014. The methods and results of the 2013/2014 special-status plant species surveys are summarized in the survey summary report, titled *Special-Status Plant Survey Summary Report for the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, San Diego County, California* and dated June 2014 (BBS 2014b).

Following observations of thread-leaved brodiaea during the 2013/2014 focused special-status plant species surveys, the California Public Utilities Commission (CPUC) requested a focused thread-leaved brodiaea habitat assessment within the updated BSA, which included the original BSA plus areas that had been added to the Proposed Project during subsequent project planning efforts. Biologists performed this focused habitat assessment in fall 2014. The methods and results of the focused habitat assessment are summarized in a memorandum to Robert Fletcher (SDG&E) from Melissa Busby (BBS), titled *Response*

to Data Request 105: Provide a habitat assessment for the thread-leaved brodiaea (Bf; Brodiaea filifolia*)* and dated October 29, 2014. This memorandum was submitted to the CPUC as SDG&E's partial response # 3 to Energy Division (ED) Data Request 2, Question 105.

Based on the results of the 2013/2014 focused special-status plants species surveys combined with the results of the 2014 focused habitat assessment, biologists performed focused thread-leaved brodiaea surveys during spring 2015 within potentially suitable habitat located within the current BSA.

THREAD-LEAVED BRODIAEA – SPECIES INFORMATION

Thread-leaved brodiaea is a federally listed threatened, state-listed endangered, California Rare Plant Rank (CRPR) 1B.1, and *SDG&E Subregional NCCP*-covered species. This species is a perennial, bulbiferous herb that regrows annually from an underground corm. Typically, not all thread-leaved brodiaea individuals in a population emerge and/or flower each year. Thus, many non-emergent corms may remain dormant below the ground.

Thread-leaved brodiaea is typically found in habitats that range from grasslands to ephemeral wetlands, such as vernal pools at low elevations and meadows in montane habitat (CNPS 2014). Specifically, thread-leaved brodiaea grows in open areas within herbaceous communities, including valley needlegrass grassland, valley sacaton grassland, non-native grassland, alkali playa, southern interior basalt vernal pools, San Diego mesa hardpan vernal pools, and San Diego mesa claypan vernal pools. It often grows in interstitial areas (often narrow bands of habitat surrounded by other vegetation) in association with coastal sage scrub when suitable soils and site conditions are present. Thread-leaved brodiaea is associated with clay soils, subsurface clay soils, or clay lenses within loamy, silty loam, loamy sand, silty deposits with cobbles, or alkaline soils (USFWS 2009).

Thread-leaved brodiaea is distributed in southern California from San Diego to Los Angeles counties and east to the San Bernardino Mountains. In San Diego County, thread-leaved brodiaea occurs at elevations ranging from 80 feet to 2,400 feet above mean sea level.

Threats to thread-leaved brodiaea include loss of habitat from urbanization, agricultural conversion, alteration of hydrology and impacts from livestock grazing, unauthorized off-highway vehicle (OHV) use, discing for fire suppression, and competition from nonnative plants. Thread-leaved brodiaea was state-listed as endangered in 1982 (CNPS 2014) and federally listed as threatened in 1998. When the species was listed in 1998, there were only 39 extant occurrences; however, by 2009 this number increased to about 68 extant occurrences (USFWS 2009).

Thread-leaved brodiaea occurs within the BSA and Proposed Project vicinity according to historical occurrence data (California Department of Fish and Wildlife [CDFW] 2014) and as documented by the results of the focused special-status plant species surveys conducted for the Proposed Project.

METHODS

To determine the locations within the current BSA that support thread-leaved brodiaea, a literature and database review was performed, the special status-plant species survey summary report prepared in 2014 for the Proposed Project (BBS 2014b) was reviewed, a focused habitat assessment was conducted in the BSA during fall 2014, and focused thread-leaved brodiaea surveys were conducted during spring 2015. The methods for each of these are described in detail below.

Literature & Database Review

A literature review for thread-leaved brodiaea was conducted to supplement the information provided in the Biological Technical Report (BBS 2014a). In addition, historical occurrence databases (e.g., California Natural Diversity Database [CNDDB], SanGIS, SDG&E's internal Sunrise Powerlink database) were searched, and other references were consulted to better understand the historical location data and distribution of this species in San Diego County.

2013/2014 Special-Status Plant Species Surveys

Three rounds of focused special-status plant species surveys were conducted within the original BSA for the Proposed Project. These surveys were conducted in late summer/fall 2013, early spring 2014, and late spring 2014 by walking meandering transects throughout the original BSA. The original BSA included (1) a 500-foot-wide survey corridor along the approximately 16.5-mile alignment, (2) the existing Sycamore Canyon and Peñasquitos Substations, and (3) the proposed Sycamore and Stowe construction yards.

Thread-leaved brodiaea was included in the target species list for the focused special-status plant species surveys conducted within the original BSA for the Proposed Project. Areas with clay soils were assessed during the special-status plant species surveys for potentially suitable habitat by highly qualified botanists who are familiar with this species and its phenology. No focused habitat assessment was conducted for thread-leaved brodiaea prior to or during these surveys; however, botanists noted the locations of clay soils in the alignment because of the soils' high potential to support many special-status species, including thread-leaved brodiaea, and thoroughly surveyed these areas during the special-status plant species surveys.

2014 Focused Habitat Assessment

A focused habitat assessment for thread-leaved brodiaea was conducted in fall 2014 to evaluate the current BSA for areas that have a potential to support thread-leaved brodiaea. The current BSA includes areas in the original BSA that were previously surveyed for special-status plant species as well as areas that were not part of the original BSA and, therefore, were not previously surveyed, but that have been added to the Proposed Project during project planning efforts.

During the focused thread-leaved brodiaea habitat assessment, potentially suitable habitats with clay soils in grassland vegetation communities were assessed for the potential to support thread-leaved brodiaea. Potentially suitable habitats were mapped in the field using aerial imagery of the BSA (1 inch = 200 feet) and handheld Global Positioning Systems (GPS) units. Potentially suitable habitat areas were digitized using Google™ Earth based on field notes and waypoints collected in the field.

2015 Focused Thread-Leaved Brodiaea Surveys

Based on the results of the literature and database review, 2013/2014 special-status plant species surveys, and the focused thread-leaved brodiaea habitat assessment, biologists performed focused thread-leaved brodiaea surveys within potentially suitable habitat located within the current BSA during spring 2015.

Before initiating the focused thread-leaved brodiaea surveys, biologists monitored the thread-leaved brodiaea reference population – the thread-leaved brodiaea population that occurs within and adjacent to the current BSA – during spring 2015 to determine when the species had emerged and was observable within BSA.

Once thread-leaved brodiaea was observed at the reference population, a focused thread-leaved brodiaea survey was conducted in the potentially suitable habitat within the current BSA. Biologists mapped the locations of and counted all thread-leaved brodiaea individuals observed. For all thread-leaved brodiaea observations, biologists mapped the observation by hand onto the aerial photograph (either a point or a polygon), estimated the number of individuals, and collected a GPS point for the plant/population location.

RESULTS

The results of the literature and database review, the thread-leaved brodiaea observations during the 2013/2014 special-status plant species surveys, the fall 2014 focused habitat assessment, and the spring 2015 focused thread-leaved brodiaea surveys are provided, below.

Literature & Database Review

The results of the detailed literature and database review were used to prepare the thread-leaved brodiaea species information provided above. CNDDB occurrence 89 is located adjacent to the eastern boundary of the BSA (Figure 1), and a new population of thread-leaved brodiaea was documented within the original BSA during the late spring 2014 plant surveys (Figure 2a). Extant CNDDB occurrences 66, 70, 84, and 90 also occur north of the BSA, within approximately 5 miles of the BSA (Figure 1).

2013/2014 Focused Special-Status Plant Species Surveys

Potentially suitable thread-leaved brodiaea habitat was surveyed during the fall 2013, early spring 2014, and late spring 2014 surveys. During spring 2014 surveys, thread-leaved brodiaea was found in one location within the BSA adjacent to a known location (Figure 1: CNDDB occurrence 89), which is located outside of and adjacent to the BSA (Figure 2a) and is the southern-most record for this species across its entire range (Figure 1). Approximately 62 flowering individuals were observed within the original BSA growing in deep clay soils (Figure 2a), within a mix of native and non-native grassland, at the City of San Diego's Black Mountain Open Space Preserve.

Photograph 1, below, shows thread-leaved brodiaea in bloom in the Black Mountain Open Space Preserve. This photograph was taken on May 12, 2014, during the focused special-status plant species surveys conducted for the Proposed Project.

Photograph 1: Thread-leaved brodiaea in bloom during focused surveys for the Proposed Project (Spring 2014)

2014 Focused Habitat Assessment

Potentially suitable thread-leaved brodiaea habitat with appropriate clay soils was mapped during the fall 2014 focused habitat assessment (Figures 2a and 2b). All of the potential thread-leaved brodiaea habitat included clay soils in grassland habitat adjacent to coastal sage scrub habitat.

Potentially suitable habitat was mapped at two primary locations, in the Black Mountain Open Space Preserve (Figure 2a) and near the junction of Carmel Valley Road and Black Mountain Road (Figure 2b). These areas include both the areas where thread-leaved brodiaea was observed during the spring 2014 surveys (Figure 2a) as well as areas within the BSA that contain potentially suitable habitat, but where thread-leaved brodiaea was not observed during the previous surveys (Figures 2a and 2b). Photographs 2 and 3, below, provide examples of suitable habitat within the BSA. No suitable habitat was identified during the fall 2014 habitat assessment in areas that were previously not surveyed.

Photograph 2, below, shows potentially suitable thread-leaved brodiaea habitat within the Black Mountain Open Space Preserve. This photograph was taken during the fall 2014 habitat assessment. The green arrow indicates the location of the thread-leaved brodiaea population that was observed during the spring 2014 focused special-status plant species surveys. The red arrows point to potentially suitable habitat where thread-leaved brodiaea was not observed during any of the focused special-status plant species surveys conducted for the Proposed Project.

Photograph 2: Black Mountain Open Space Preserve (Fall 2014), locations of thread-leaved brodiaea (green arrow) and potentially suitable habitat (red arrows).

Photograph 3, below, shows the potentially suitable thread-leaved brodiaea habitat that was identified during the fall 2014 habitat assessment near the junction of Black Mountain Road and Carmel Valley Road. This photograph was taken during the fall 2014 habitat assessment. No thread-leaved brodiaea was observed in this habitat during any of the special-status plant species surveys conducted for the Proposed Project.

Photograph 3: Black Mountain Road and Carmel Valley Road (Fall 2014)

2015 Focused Thread-Leaved Brodiaea Surveys

Two thread-leaved brodiaea reference site checks were conducted during spring 2015. The first reference site check was performed on March 30, 2015, and determined that the species had not yet emerged and was not yet observable. The second reference site check was conducted on April 20, 2015, and several individuals were observed. Therefore, because the species was observable within the BSA, the focused survey was initiated.

The focused thread-leaved brodiaea survey was conducted on April 27, 2015. All potentially suitable thread-leaved brodiaea habitat within the current BSA was surveyed. Eight individuals were documented during the spring 2015 survey (Figure 2a); these eight individuals were within and adjacent to the observable individuals documented during the spring 2014 surveys.

DISCUSSION

As discussed above, not all individuals of thread-leaved brodiaea emerge and/or flower each year. Many corms remain dormant underground and are not observable during focused special-status plant species surveys. As such, a thread-leaved brodiaea population may often be much larger than the number of individuals observed in a given year.

During the spring 2014 surveys, thread-leaved brodiaea was found in one location within the original BSA and adjacent to a known historical location located outside of and adjacent to the BSA (CNDDB occurrence 89, Figures 1 and 2a). This occurrence is the southern-most record for this species across its entire range (Figure 1). Approximately 62 flowering individuals were observed growing in clay soils, within a mix of native and non-native grassland, at the City of San Diego's Black Mountain Open Space Preserve.

During the spring 2015 surveys, all potentially suitable habitat within the current BSA that was identified during the fall 2014 focused thread-leaved brodiaea habitat assessment (Figures 2a and 2b) was surveyed for thread-leaved brodiaea. Eight flowering individuals were observed within and adjacent to the same location as those observed in spring 2014. These individuals were also growing in clay soils, within a mix of native and nonnative grassland, at the City of San Diego's Black Mountain Open Space Preserve. No additional populations were observed during these focused surveys.

Based on the phenology of the thread-leaved brodiaea and the recent drought conditions, the population size at the documented location within the Proposed Project area (Figure 2a) likely contains many more individuals than what has been observed to date during the surveys conducted for the Proposed Project.

REFERENCES

Busby Biological Services, Inc. (BBS)

2014a Biological Technical Report for Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, City of San Diego, San Diego County, California. March 2014.

2014b Special-Status Plant Survey Summary Report for the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, San Diego County, California. June 2014.

California Department of Fish and Wildlife (CDFW)

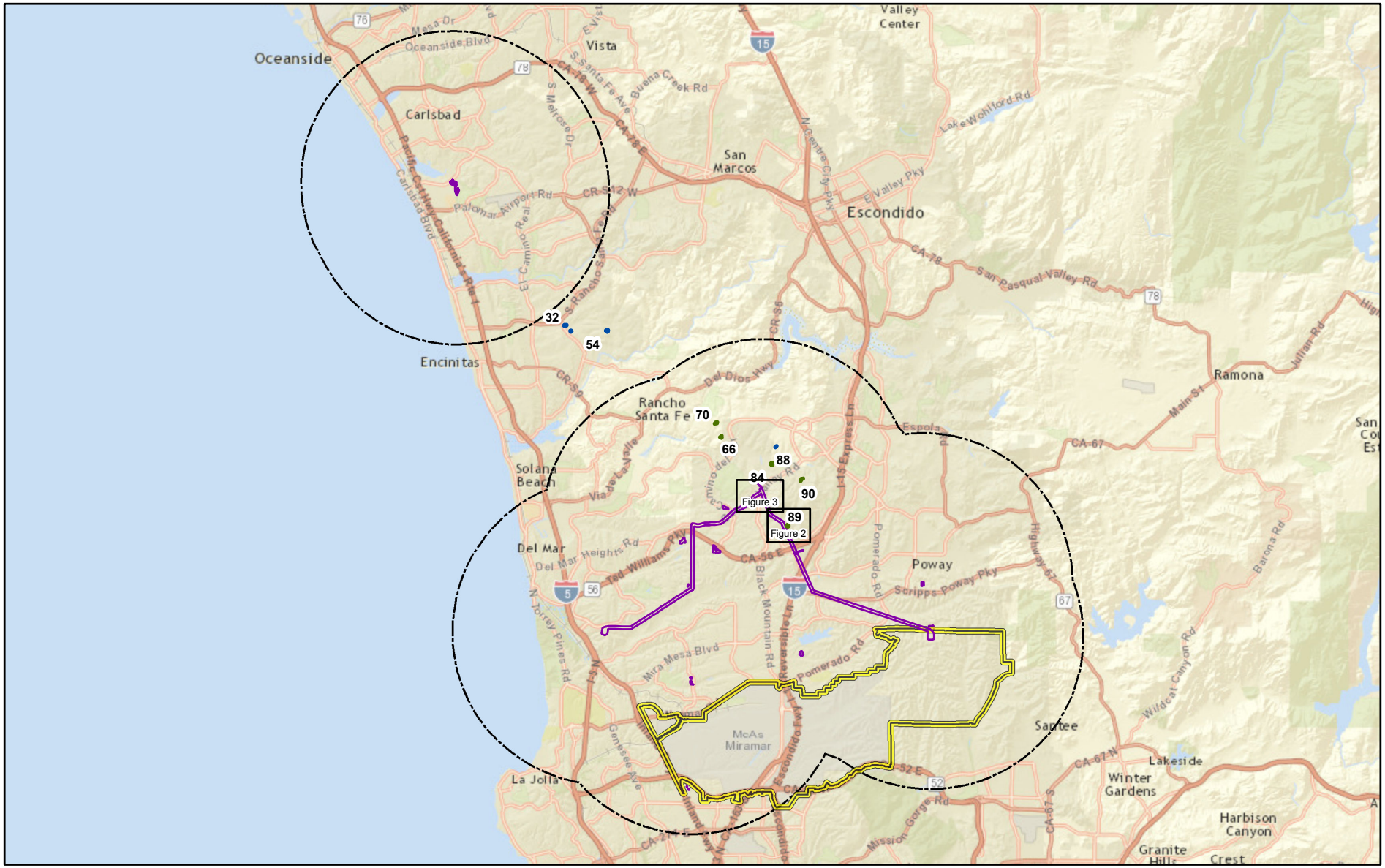
2014 Natural Diversity Data Base. Nongame-Heritage Program, California Department of Fish and Wildlife, Sacramento.

California Native Plant Society (CNPS)

2014 Rare Plant Program. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website http://www.rareplants.cnps.org [accessed 20 October 2014].

U.S. Fish and Wildlife Service (USFWS)

2009 *Brodiaea filifolia* (thread-leaved brodiaea). Carlsbad Fish and Wildlife Office, CA August 13, 2009. 47 pgs.



G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_ThreadleafFig1.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

Extirpated CNDDB Occurrence
Extant CNDDB Occurrence
MCAS Miramar
EncinaSurveyArea_5mileBuffer

CNDDB Occurrence Number
BSA
5-Mile Buffer Around BSA

Sycamore to Peñasquitos 230 kV Transmission Line Project
Historical *Brodiaea filifolia* Locations
Figure 1

0 3 6 9 Miles

Sources: CNDDB October 2014 Database, CA Dept. Fish and Wildlife; Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_ThreadleafFig3.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

BSA

Potentially Suitable Habitat

Sycamore to Peñasquitos 230 kV Transmission Line Project

Potentially Suitable Habitat for *Brodiaea filifolia* in BSA

Figure 2b

0 200 400 600 Feet

SDGE

A Sempra Energy utility

Sources: CNDDB October 2014 Database, CA Dept. Fish and Wildlife; Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\SXtoPQ_ThreadleafFig2.mxd

SDG&E is providing this map with the understanding that the map is not survey grade. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2007 AT&T Intellectual Property 1, L.P. All Rights Reserved.

- Brodiaea filifolia documented during 2015 plant surveys
- BSA
- Potentially Suitable Habitat
- Population of *Brodiaea filifolia* documented during 2014 plant surveys - 62 Individuals Observed
- Extant CNDDB Occurrence (#89)

0 180 360 540 Feet

Sycamore to Peñasquitos 230 kV Transmission Line Project

Potentially Suitable Habitat for *Brodiaea filifolia* in BSA

Figure 2a

SDGE A Sempra Energy utility

Sources: CNDDB October 2014 Database, CA Dept. Fish and Wildlife; Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

MEMORANDUM

TO: Robert Fletcher, San Diego Gas & Electric

FROM: Melissa Busby, Busby Biological Services, Inc.

DATE: February 20, 2015

RE: Survey of New Proposed Camino Del Sur Staging Yard

As part of the San Diego Gas & Electric Company (SDG&E) Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project (Proposed Project), SDG&E proposes to add a new staging yard northwest of the intersection of Camino Del Sur and Carmel Valley Road.

Busby Biological Services, Inc. (BBS) conducted general biological surveys (i.e., vegetation mapping and habitat assessments) within the portions of the new proposed Camino Del Sur staging yard that were not included in the previous Biological Survey Area (BSA). These surveys included the approximately 11.67-acre Camino Del Sur staging yard plus a 50-foot buffer (approximately 4.12 acres); however, because this proposed yard is located immediately adjacent to the original BSA, approximately 3.03 acres of this yard had already been surveyed previously. As such, this survey effort was focused on the approximately 12.76-acre area that had not been surveyed previously.

This memorandum provides a description of the methods and results used for the general biological surveys at the proposed Camino Del Sur staging yard. This information is intended to supplement the information provided in the Biological Technical Report (BTR) prepared for the Proposed Project (BBS 2014a). For additional information pertaining to the biological resources associated with the Proposed Project, please refer to the BTR.

METHODS

The methods used for the vegetation mapping and habitat assessments at the proposed Camino Del Sur staging yard are described, below.

Vegetation Mapping Methods

Vegetation communities and land cover types within the proposed Camino Del Sur staging yard were delineated by hand in the field using color aerial imagery. Surveys included a 50-foot buffer around the potential impact area.

Biologists mapped the vegetation communities and land cover types by walking through the proposed Camino Del Sur staging yard and documented the dominant plant species within each of the vegetation communities and land cover types. After the field mapping was completed, biologists reviewed each map for consistency or errors, and the hand drawn vegetation community and land cover type boundaries were digitized in the office using Geographic Information Systems (GIS) software.

Vegetation community classifications are consistent with, or similar to, Holland (1986) and plant names largely follow Rebman and Simpson (2006), but updated names are included where applicable (Baldwin et. al 2012). Vegetation communities are identified according to the estimated percent cover of the combination of dominant plant species observed. Vegetation community classifications are based on a dominant species comprising approximately 50 percent or more of the total cover within the mapped unit relative to the list of dominant species for a given Holland vegetation community (e.g., grasslands must have approximately 50 percent cover of dominant grassland species to be mapped as that particular community). Mixed communities are identified where species comprising a second vegetation community are present at approximately 35 percent or higher percent cover 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 a mix of different shrubs, the community is identified as chamise chaparral rather than southern mixed chaparral.

Additionally, certain natural vegetation communities are given a disturbed 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.

Habitat Assessments Methods

In addition to the vegetation mapping, BBS also conducted a habitat assessment within the proposed Camino Del Sur staging yard and associated buffers (i.e., 50 feet for special-status plant species and wetlands, 300 feet for coastal California gnatcatcher, and 500 feet for burrowing owl). This habitat assessment was intended to determine if the potential for occurrence of any of the previously discussed special-status species needed to be updated, if additional special-status species needed to be added to the lists of special-status species with a potential to occur within the BSA, and/or if additional focused special-status species surveys may be required to assess potential impacts that are anticipated to occur from implementation of the Proposed Project.

RESULTS

The results of the vegetation mapping and habitat assessment are described, below.

Vegetation Mapping Results

Biologists mapped vegetation communities and land cover types in the proposed Camino Del Sur staging yard on Wednesday, February 18, 2015. A summary of the vegetation communities and land cover types identified within the proposed Camino Del Sur staging yard and the survey buffer that are outside of the original BSA are presented in Table 1, below.

Table 1. Vegetation Communities and Land Cover Types at the Proposed Camino Del Sur Staging Yard

Veg/Land Cover	Approx. Acreage Within Yard	Approx. Acreage Within Buffer	TOTAL
Diegan Coastal Sage Scrub	--	0.03	**0.03**
Coastal Sage Scrub – Revegetated	--	0.27	**0.27**
Non-Native Grassland	11.41	2.29	**13.70**
Developed Lands*	--	0.62	**0.62**
Ornamental*	0.26	0.91	**1.17**
TOTAL	**11.67****	**4.12****	**15.79****

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

No additional vegetation communities or land cover types were identified within the proposed Camino Del Sur staging yard that were not already covered in the BTR, and the descriptions of the vegetation communities and land cover types remain consistent with those presented in the BTR (BBS 2014a).

With the addition of the proposed Camino Del Sur staging yard, the BSA is now approximately 1,266.05 acres. This includes the original BSA that is presented in the BTR (BBS 2014a); the other proposed staging yards, access roads, Encina Hub, Mira Mesa Hub, and other work areas and their associated survey buffers (i.e., 20 feet for roads and 50 feet for other types of work areas) that were surveyed previously; and the proposed Camino Del Sur staging yard and associated buffer.

Table 2, below, provides a breakdown of this acreage into the 25 different vegetation community and land cover type categories. For a detailed description of each vegetation community, please refer to the BTR that was prepared for the original BSA (BBS 2014).

Table 2. 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	188.42
	Diegan Coastal Sage Scrub – Disturbed	42.39
	Coastal Sage Scrub – Revegetated	64.74
Coastal Sage/Chaparral Mix	Coastal Sage – Chaparral Scrub	11.19
Chaparral	Chamise Chaparral	79.42
	Chamise Chaparral - Disturbed	5.74
	Southern Mixed Chaparral	101.90
	Southern Mixed Chaparral – Disturbed	13.63
	Scrub Oak Chaparral	81.54
Grassland	Native Grassland	10.97
	Nonnative Grassland	105.41
Alkali Marsh	Alkali Marsh – Revegetated	0.29
Freshwater Marsh	Freshwater Marsh	0.49
Inland Water	San Diego Mesa Vernal Pool	0.10
	Open Water*	0.92
Riparian Scrub	Southern Riparian Scrub	1.72
	Mulefat Scrub	1.77
	Southern Willow Scrub	3.41
	Tamarisk Scrub	0.40
Coast Live Oak Riparian Forest	Southern Coast Live Oak Riparian Forest	2.86
Eucalyptus Forest	Eucalyptus Woodland*	5.50
Disturbed Habitat	Disturbed Habitat*	61.83
N/A	Developed Lands*	320.50
	Ornamental*	96.52
	Bare Ground*	67.44
	TOTAL	1,266.05**

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

Habitat Assessments Results

The habitat assessments conducted in the proposed Camino Del Sur staging yard and the associated buffer areas indicate that additional special-status species surveys may be required to assess potential impacts that are anticipated to occur from implementation of

the Proposed Project. Suitable habitat for both special-status plant species and burrowing owl along with potential wetland areas were identified during these surveys. However, no additional special-status species that were not covered in the BTR have the potential to occur within the BSA, and the potential for occurrence for all of the special-status species did not change based on the habitat assessments in these areas (BBS 2014a and BBS 2014b).

DISCUSSION

No focused special-status species surveys were conducted in the proposed Camino Del Sur staging yard and buffer areas that were surveyed and assessed as part of the general biological surveys described above. Based on the results of the vegetation mapping and habitat assessments conducted in these areas, we anticipate that focused special-status plant species surveys, and burrowing owl surveys will be required. In addition, a focused wetland assessment/delineation should be performed at these locations. No other focused special-status species surveys are anticipated for the Proposed Project.

SCHEDULE

These focused surveys would be conducted in 2015, concurrent with the other surveys planned for the Proposed Project, and the results would be presented in survey summary memorandums/reports for each individual task. The current proposed schedule (which may require adjustments based on weather conditions) is as follows:

- Special-Status Plant Species Surveys
  - Early spring survey = week of 4/5/15 or 4/12/15
  - Late spring survey = week of 5/17/15 or 5/24/15
  - Fall survey = week of 9/20 or 9/27
- Burrowing Owl Surveys
  - Survey 1 = week of 3/15/15
  - Survey 2 = week of 4/19/15
  - Survey 3 = week of 5/10/15
  - Survey 4 = week of 6/14/15
- Wetland Assessment/Delineation
  - Week of 2/22/15 or 3/1/15

REFERENECES

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors.

2012 *The Jepson manual: vascular plants of California, second edition*. University of California Press, Berkeley.

Busby Biological Services, Inc. (BBS)

2014a Biological Technical Report for Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, City of San Diego, San Diego County, California. March 2014.

2014b Special-Status Plant Survey Summary Report for the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, San Diego County, California. June 2014.

Rebman, J.P. and M.G. Simpson

2006 *Checklist of the Vascular Plants of San Diego County*, 4th Edition. San Diego. Natural History Museum, San Diego, California.

October 1, 2015
(20807)

Stacey Love
Recovery Permit Coordination
United States Fish and Wildlife Service
2177 Salk Avenue, Suite 250
Carlsbad, CA 92008

SUBJECT: 2015 FOCUSED SURVEY REPORT FOR COASTAL CALIFORNIA GNATCATCHER ALONG AN ALTERNATIVE ROUTE OF SAN DIEGO GAS & ELECTRIC COMPANY'S SYCAMORE TO PEÑASQUITOS 230 KILOVOLT TRANSMISSION LINE PROJECT

Dear Ms. Love:

Chambers Group, Inc. (Chambers Group) biologists conducted focused surveys for coastal California gnatcatcher (*Polioptila californica californica,* CAGN) during the breeding season of 2015 for the proposed alternative route for the San Diego Gas & Electric Company (SDG&E) Sycamore to Peñasquitos (SX to PQ) 230 Kilovolt Transmission Line Project (proposed Project) located in the City of San Diego, San Diego County, California. The results of the surveys are presented in this letter report.

PROJECT DESCRIPTION

As part of the Partial 69kV Underground Alternative proposed by the CPUC, SDG&E prepared preliminary engineering for underground 69kV power line alignment that would connect the existing overhead 69kV power line alignment to the Peñasquitos Substation, mostly within Carmel Mountain Road. The purpose of the surveys summarized herein was to determine the presence or absence of CAGN within and adjacent to areas proposed for an alternative underground route for the SX to PQ Project. Proposed work would include undergrounding of approximately 2.6 miles of new power line.

SURVEY LOCATION

The proposed Project site is located within the United States Geological Survey (USGS) *Escondido* and *Del Mar* Quadrangle maps, Section 27, 28, 29, and 32, Township 14, Range 03W, along Carmel Mountain Road, from Ocean Air Drive to just east of Gallop Crest Court. Elevation at the proposed Project ranges from 700 to 850 feet above mean sea level (amsl) and consists primarily of native vegetation, with a with a small amount of disturbed habitat intermixed. A map of the survey area is provided in Attachment 1.

COASTAL CALIFORNIA GNATCATCHER NATURAL HISTORY

The CAGN is a federally threatened subspecies of California gnatcatcher and a California Species of Special Concern. The range of this species extends from southern California west of the Peninsular and Transverse ranges south into northwestern Baja California, Mexico. The CAGN has a short and slender bill, a tail that is mostly black with white edges, grayish plumage overall, a back and wings that are gray with brown tinge,

and a white eye ring. Breeding males have a black cap. It is a permanent resident of Diegan, Riversidian, and Venturan sage scrub sub-associations found from sea level to 2,500 feet in elevation. This species lives and breeds within California sagebrush dominant habitats and also occurs in mixed scrub habitats with lesser percentages of this favored shrub (Atwood and Bontrager 2001). The largest threat to the species is a loss of habitat. Other threats include wildfires and nest parasitism.

METHODS

Suitable habitat was determined through desktop analysis of aerial imagery of the Proposed Project site prior to conducting the field surveys. Polygons of potential habitat were mapped based off aerial imagery, and were refined during the initial survey based on the boundaries of suitable habitat determined in the field. Focused surveys were conducted within habitat that was determined to be suitable for CAGN by the surveying biologist in 2015 (Attachment 2).

Three breeding season CAGN surveys were conducted by United States Fish and Wildlife Service (USFWS)-permitted biologist Heather Franklin (TE 53787B-0). Survey methodology followed current protocol (USFWS 1997) for Natural Community Conservation Plan (NCCP) areas, and the conditions of the 10(a)(1)(A) species recovery permit. Each survey was conducted during favorable weather conditions to maximize detection probability.

All surveys were conducted on foot by looking and listening for the target species in all suitable coastal sage scrub habitat within the survey area and a 300-foot buffer (Attachment 2). No more than 32 hectares (80 acres) of suitable habitat were surveyed during any single survey day.

Observations of the songs, scolds, whisper calls, flight patterns, behaviors, and plumage characteristics were used in conjunction to ascertain presence/absence of CAGN. The biologist conducted the surveys from optimal stationary locations to see and hear the target species without harming any other wildlife species in the area.

The permitted biologist used prerecorded CAGN vocalizations to elicit CAGN within and/or adjacent to all suitable habitat. After a brief and silent acclimation period of one to two minutes, H. Franklin broadcasted the prerecorded CAGN vocalizations at least once at each chosen location, mimicking natural vocalization conditions (i.e., broadcast at natural volume occurring for approximately 15 seconds followed by 1 to 2 minutes of silence). Distance between broadcast locations varied from 20 to 30 meters (60 to 100 feet), depending on topographic, vegetative, and other factors. If a CAGN was detected, the taped vocalization broadcast was ceased at that location, and the location, numbers, status, and demographic data of the target species were recorded (Attachment 3; Table 2).

The locations of any detected CAGN, and other sensitive species were documented and mapped, and submitted to California Natural Diversity Database (CNDDB). If leg bands were observed, they were noted. All observed wildlife species were recorded for each survey day (Attachment 4).

RESULTS

Vegetation Communities

The survey area is within a newly developed residential area with open space areas consisting of upland, riparian, and ruderal communities. The identified suitable habitat for CAGN is presented in Attachment 2.

Solving Environmental Challenges

Approximately 49.1 acres (19.87 hectares) of suitable California Sagebrush – California Buckwheat Scrub habitat for CAGN was present (Attachment 2).

California Sagebrush – California Buckwheat Scrub

California Sagebrush – California Buckwheat Scrub (also known as Coastal Sage Scrub) is an open vegetation community typically dominated by California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*), where each attains at least 20 percent cover (Holland 1986). This community usually occurs on steep, south-facing slopes with severely drained soils or clays that release stored soil moisture slowly (Sawyer et al. 2009). This community may intergrade with other southern California chaparral communities at higher elevations. In addition to California sagebrush and California buckwheat, other species present within this community include laurel sumac (*Malosma laurina*), coyote brush (*Baccharis pilularis*), white sage (*Salvia apiana*), Australian saltbush (*Atriplex semibaccata*), and black sage (*Salvia mellifera*).

Survey Conditions

Survey conditions are presented in Table 1.

Table 1. Survey Conditions

Date	Surveyor	Time		Temperature*		Wind**		Cloud Cover		Precipitation	
		Start	End	Start	End	Start	End	Start	End	Start	End
06/01/15	Heather Franklin, Corinne Klein	7:00 A.M.	11:00 A.M.	62	70	0-1	0-1	100%	20%	0	0
06/11/15	H. Franklin, C. Klein	7:30 A.M.	11:00 A.M.	67	68	0-1	0-1	100%	100%	0	0
06/22/15	H. Franklin, Paul Morrissey	8:00 A.M.	11:00 A.M.	68	75	1-3	1-3	100%	0%	0	0

*All temperature readings are in Fahrenheit
**All wind readings are in miles per hour

All three surveys resulted in the detection of at least one pair of CAGN within the survey area, with a family group detected during the first two surveys. One pair and two juveniles were observed occupying habitat north of the bridge near Center Heights Dr. (west bridge). An additional pair was observed occupying habitat south of the west bridge. One adult male was observed occupying habitat north of the bridge near Timber Brook Lane (east bridge), and one pair was observed occupying the habitat south of the east bridge. The family group near the west bridge was observed primarily utilizing habitat on an east-facing slope, but was also observed utilizing a patch of riparian habitat for foraging. Continuous observation of the individuals and pairs during each survey ranged from 2.5 to 4 hours. A summary of each survey is as follows:

Survey 01: On June 1, 2015, the survey was conducted from 0700 to 1100 hours. A family group of CAGN was initially detected at approximately 0720 hours foraging together on the east-facing slope to the riparian area, north of the west bridge. The adult pair was observed flying from the top of the slope to the riparian

Solving Environmental Challenges

area on several occasions and bringing food back to the two juveniles. The family group were observed calling to one another several times throughout the observation period. An additional pair of CAGN was observed foraging within the habitat south of the west bridge. One adult male with a full cap and one adult female were observed foraging along both the east and west facing slopes approximately 50 feet south of the bridge. No nest was observed and the pair appeared to be site-selecting for a future nesting site. No nesting material was observed in either individual's bill throughout the observation time. In addition, one adult male was observed approximately 70 feet north of the east bridge. The adult male with a full cap was observed responding to a broadcast call near the bottom of the west facing slope. The male responded with 2 scolding calls and then flew further north into the vegetation along the bottom portion of the west facing slope and was not observed again throughout the remainder of the survey. No additional CAGN were detected.

Survey 02: On June 11, 2015, the survey was conducted from 0730 to 1100 hours. The family group of two adults and two juvenile CAGN observed during Survey 01 remained in the area. The family group was initially observed flying just north of the west bridge along the east facing hillside. The group was then observed flying down to a flat area, sparse of vegetation, just on the north side of the bridge. The family group was observed foraging throughout the duration of the survey. The pair observed on the south side of the west bridge during Survey 01 was not observed during Survey 02. The adult male observed north of the east bridge during Survey 01 was observed for approximately 5 minutes during Survey 02. The adult male was observed at the base of the west facing slope in riparian scrub. The male emerged approximately 375 feet north of the bridge in response to a broadcast call. The male did not call or scold and disappeared into the vegetation. No additional CAGN were detected.

Survey 03: On June 22, 2015, the survey was conducted from 0800 to 1100 hours. The family group of CAGN observed during Surveys 01 and 02 was not observed during Survey 03. No CAGN were observed on the north side of the west bridge. One adult CAGN was observed at 0830 approximately 300 feet south of the west bridge. The adult appeared in response to a broadcast call and appeared to be either an adult female or a juvenile, as no black cap could be visualized. A second vocalization was heard approximately 50 feet south of the bridge at 0845; however, no visualization was obtained. The adult male observed on the north side of the east bridge during Surveys 01 and 02 was not observed during Survey 03. One individual CAGN was observed vocalizing approximately 90 feet south of the east bridge. The individual did not appear to have a black cap, so it is likely it was either an adult female or a juvenile. The individual was observed calling briefly before disappearing in the vegetation mid-slope on the east facing slope. No additional CAGN were detected.

Several CAGN were incidentally observed during least Bell's vireo (*Vireo bellii pusillus,* LBVI) focused surveys conducted in 2015 within riparian habitat adjacent to suitable CAGN habitat. CAGN suitable habitat occurred along the east and west facing slopes which bordered the riparian habitat, and south of the riparian habitat. The individuals were observed utilizing both the upland and riparian habitat within the survey area. CAGN were observed during all eight of the focused LBVI surveys. One active CAGN nest was incidentally observed during the first LBVI survey and the family group remained in the area for the remaining seven surveys.

Locations of CAGN detected throughout the surveys are included in Table 2.

Solving Environmental Challenges

Table 2. Locations of Sensitive Species Observed

Species	Latitude	Longitude	Comments
CAGN	32.924117	-117.211262	Active nest with 2 nestlings
CAGN	32.923929	-117.211223	Adult pair observed foraging
CAGN	32.923619	-117.211018	2 individuals observed foraging
CAGN	32.923577	-117.210900	Family group of 4 observed foraging
CAGN	32.923454	-117.211006	Adult pair observed, potential nest building
CAGN	32.922971	-117.210881	2 individuals observed foraging
CAGN	32.922884	-117.209996	Adult pair observed foraging
CAGN	32.922491	-117.210025	Adult male observed
CAGN	32.929757	-117.190936	Adult male observed
CAGN	32.929052	-117.190262	Adult male observed
CAGN	32.928368	-117.190675	2 vocalizations heard
CAGN	32.928069	-117.190456	Pair heard vocalizing back and forth

CONCLUSIONS

Based on behavioral observations over the three surveys, it is likely that up to three pairs of CAGN are currently occupying suitable habitat within the survey area: one pair north of the east bridge; one pair north of the west bridge; and one pair south of the west bridge. The attached map (Attachment 3) describes suitable CAGN occupied habitat observed during the surveys as well as currently unoccupied habitat patches occurring within the survey area.

Please contact me at (949) 261-5414 ext. 7232 if you have any questions or concerns regarding these results.

Sincerely,

CHAMBERS GROUP, INC.

Heather Franklin
Staff Biologist

Solving Environmental Challenges

ATTACHMENTS

Attachment 1 – Survey Location
Attachment 2 – Suitable Habitat
Attachment 3 – Survey Results
Attachment 4 – Wildlife Species Observed

Solving Environmental Challenges

REFERENCES

Atwood, J L. and D R. Bontrager

2001 California Gnatcatcher (*Polioptila californica*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/574

California Department of Fish and Wildlife (CDFW)

2015 California Natural Diversity Database, Rarefind 4. Biogeographic Data Branch, Sacramento, CA.

Sawyer, J.O., Jr., T. Keeler-Wolf, and J. Evens

2009 *A Manual of California Vegetation, Second Edition*. California Native Plant Society. Sacramento, California.

U.S. Fish and Wildlife Service (USFWS)

1997 *California gnatcatcher Survey Guidelines*. Carlsbad Fish and Wildlife Office.

ATTACHMENT 1 – SURVEY LOCATION

Legend

- Project Alignment
- Staging Yards
- Stringing Sites
- Substations

N

0 0.25 0.5 1
Miles

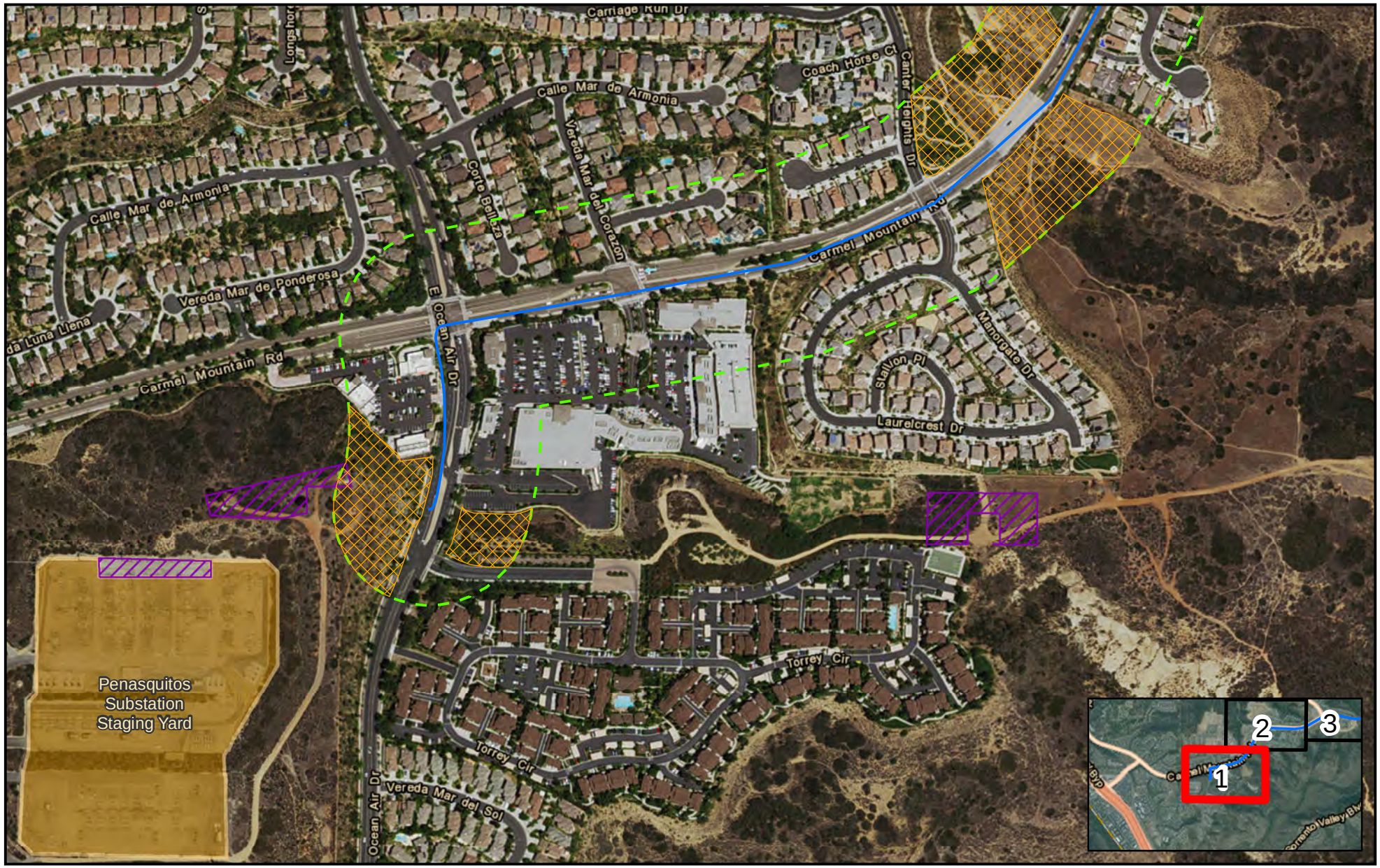
Attachment 1

Sycamore to Peñasquitos Alternative Line
Project Location Map

Name: 20807 CAGN Attach 1 Location.Mxd
Print Date: 8/5/2015, Author: stondre

CHAMBERS GROUP

ATTACHMENT 2 – SUITABLE HABITAT



Legend

- Project Alignment
- 300-foot Survey Area
- Potentially Suitable CAGN Habitat
- Stringing Sites

N

0 125 250 500

Feet

Attachment 2

Sycamore to Peñasquitos Alternative Line
California Gnatcatcher Suitable Habitat

Name: 20807 CAGN Attach 2 Suit Habitat.Mxd
Print Date: 8/5/2015, Author: stondre

CHAMBERS GROUP

Legend

- Project Alignment
- 300-foot Survey Area
- Potentially Suitable CAGN Habitat

N

0 125 250 500

Feet

Attachment 2

Sycamore to Peñasquitos Alternative Line
California Gnatcatcher Suitable Habitat

Name: 20807 CAGN Attach 2 Suit Habitat.Mxd
Print Date: 8/5/2015, Author: stondre

CHAMBERS GROUP

Legend

- Project Alignment
- 300-foot Survey Area
- Potentially Suitable CAGN Habitat
- Stringing Sites

N

0 125 250 500

Feet

Attachment 2

Sycamore to Peñasquitos Alternative Line
California Gnatcatcher Suitable Habitat

Name: 20807 CAGN Attach 2 Suit Habitat.Mxd
Print Date: 8/5/2015, Author: stondre

CHAMBERS GROUP

Legend

- Project Alignment
- 300-foot Survey Area
- Potentially Suitable CAGN Habitat

N

0 125 250 500

Feet

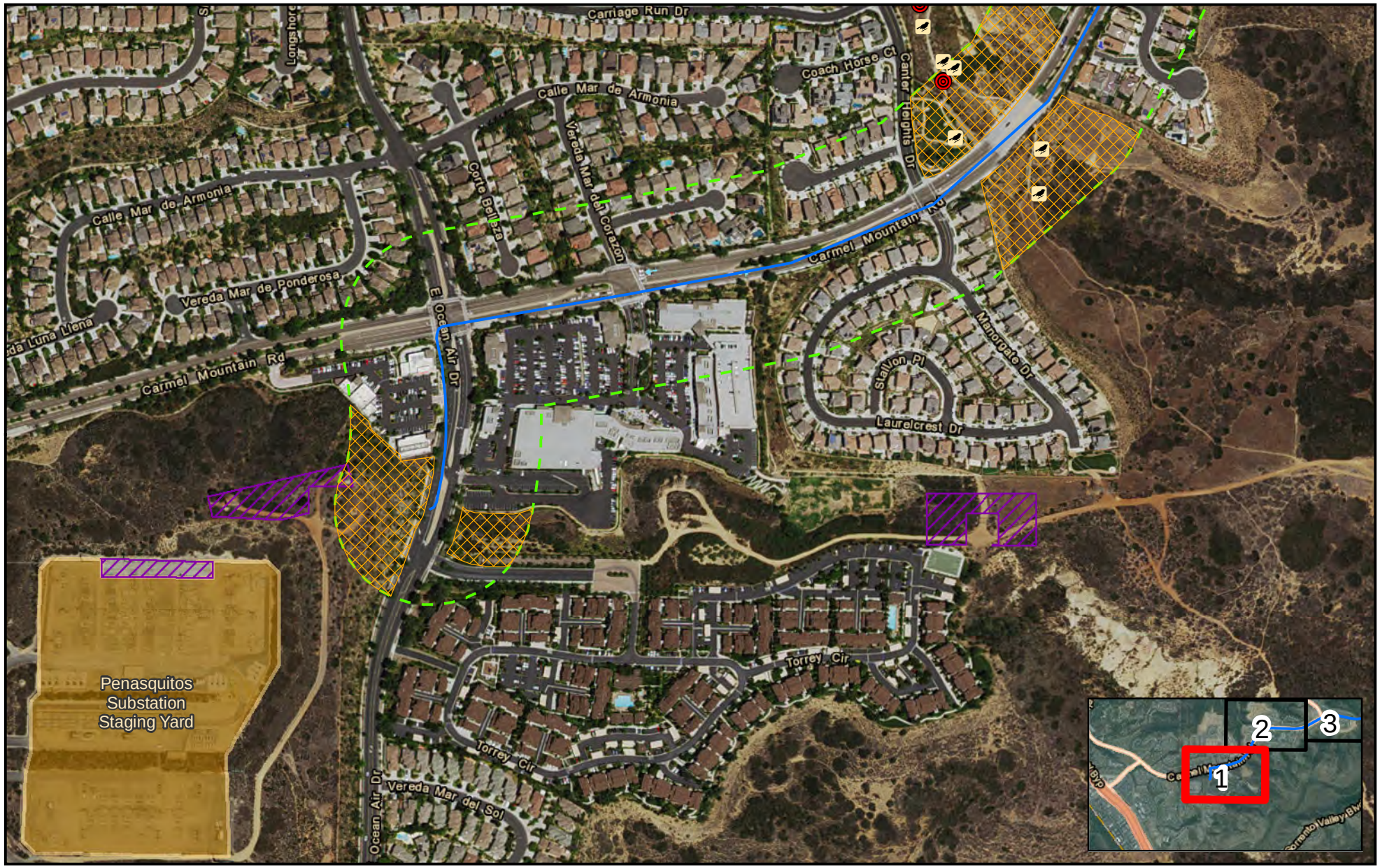
Attachment 2

Sycamore to Peñasquitos Alternative Line
California Gnatcatcher Suitable Habitat

Name: 20807 CAGN Attach 2 Suit Habitat.Mxd
Print Date: 8/5/2015, Author: stondre

CHAMBERS GROUP

ATTACHMENT 3 – SURVEY RESULTS



Legend

- Project Alignment
- 300-foot Survey Area
- Potentially Suitable CAGN Habitat
- Stringing Sites
- California Gnatcatcher Observation
- California Gnatcatcher Nest

N

0 125 250 500

Feet

Attachment 3

Sycamore to Peñasquitos Alternative Line
California Gnatcatcher 2015 Survey Results

Name: 20807 CAGN Attach 3 Survey Results Map.Mxd
Print Date: 9/11/2015, Author: msimmons

CHAMBERS GROUP

Legend

- Project Alignment
- 300-foot Survey Area
- Potentially Suitable CAGN Habitat
- California Gnatcatcher Observation
- California Gnatcatcher Nest

N

0 125 250 500

Feet

Attachment 3

Sycamore to Peñasquitos Alternative Line
California Gnatcatcher 2015 Survey Results

Name: 20807 CAGN Attach 3 Survey Results Map.Mxd
Print Date: 9/11/2015, Author: msimmons

CHAMBERS GROUP

Legend

- Project Alignment
- 300-foot Survey Area
- Potentially Suitable CAGN Habitat
- Stringing Sites
- California Gnatcatcher Observation

N

0 125 250 500

Feet

Attachment 3

Sycamore to Peñasquitos Alternative Line
California Gnatcatcher 2015 Survey Results

Name: 20807 CAGN Attach 3 Survey Results Map.Mxd
Print Date: 9/11/2015, Author: msimmons

CHAMBERS GROUP

Legend

- Project Alignment
- 300-foot Survey Area
- Potentially Suitable CAGN Habitat

N

0 125 250 500

Feet

Attachment 3

Sycamore to Peñasquitos Alternative Line
California Gnatcatcher 2015 Survey Results

Name: 20807 CAGN Attach 3 Survey Results Map.Mxd
Print Date: 9/11/2015, Author: msimmons

CHAMBERS GROUP

ATTACHMENT 4 – WILDLIFE SPECIES OBSERVED

Attachment 4 – Wildlife Species Observed

Scientific Name	Common Name
CLASS REPTILIA	**REPTILES**
PHRYNOSOMATIDAE	**ZEBRA-TAILED, EARLESS, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, AND HORNED LIZARDS**
Sceloporus occidentalis	western fence lizard
Uta stansburiana	side-blotched lizard
CROTALIDAE	**PIT VIPERS**
Crotalus helleri	southern pacific rattlesnake
CLASS AVES	**BIRDS**
ARDEIDAE	**HERONS, BITTERNS**
Ardea herodias	great blue heron
ACCIPITRIDAE	**HAWKS, KITES, EAGLES**
Accipiter striatus	sharp-shinned hawk
Buteo jamaicensis	red-tailed hawk
FALCONIDAE	**FALCONS**
Falco sparverius	American kestrel
ODONTOPHORIDAE	**NEW WORLD QUAIL**
Callipepla californica	California quail
COLUMBIDAE	**PIGEONS & DOVES**
Zenaida macroura	mourning dove
APODIDAE	**SWIFTS**
Aeronautes saxatalis	white-throated swift
TROCHILIDAE	**HUMMINGBIRDS**
Calypte anna	Anna's hummingbird
Selasphorus sasin	Allen's hummingbird
PICIDAE	**WOODPECKERS**
Picoides nuttallii	Nuttall's woodpecker
TYRANNIDAE	**TYRANT FLYCATCHERS**
Empidonax difficilis	Pacific-slope flycatcher
Myiarchus cinerascens	ash-throated flycatcher
Tyrannus verticalis	western kingnird
Tyrannus vociferans	Cassin’s kingbird
HIRUNDINIDAE	**SWALLOWS**
Stelgidopteryx serripennis	northern rough-winged swallow
CORVIDAE	**JAYS & CROWS**
Aphelocoma californica	Western scrub-jay
Corvus brachyrhynchos	American crow
Corvus corax	common raven
AEGITHALIDAE	**BUSHTITS**

Scientific Name	Common Name
Psaltriparus minimus	bushtit
TROGLODYTIDAE	**WRENS**
Thryomanes bewickii	bewick's wren
Troglodytes aedon	house wren
SYLVIIDAE	**OLD WORLD WARBLERS**
Chamaea fasciata	wrentit
POLIOPTILIDAE	**GNATCATCHERS**
Polioptila californica	California gnatcatcher
MIMIDAE	**MOCKINGBIRDS, THRASHERS**
Mimus polyglottos	northern mockingbird
Toxostoma redivivum	California thrasher
PTILOGONATIDAE	**SILKY-FLYCATCHERS**
Phainopepla nitens	phainopepla
ICTERIDAE	**BLACKBIRDS**
Icterus cucullatus	hooded oriole
EMBERIZIDAE	**EMBERIZIDS**
Melospiza melodia	song sparrow
Melozone crissalis	California towhee
Pipilo maculatus	spotted towhee
Aimophila ruficeps	rufous-crowned sparrow
FRINGILLIDAE	**FINCHES**
Spinus psaltria	lesser goldfinch
Carpodacus mexicanus	house finch
CLASS MAMMALIA	**MAMMALS**
LEPORIDAE	**HARES & RABBITS**
Sylvilagus audubonii	desert cottontail

October 1, 2015
(20807)

Stacey Love
Recovery Permit Coordination
United States Fish and Wildlife Service
2177 Salk Avenue, Suite 250
Carlsbad, CA 92008

SUBJECT: 2015 FOCUSED SURVEY REPORT FOR LEAST BELL'S VIREO ALONG AN ALTERNATIVE ROUTE OF SAN DIEGO GAS & ELECTRIC COMPANY'S SYCAMORE TO PEÑASQUITOS 230 KILOVOLT TRANSMISSION LINE PROJECT

Dear Ms. Love:

Chambers Group, Inc. (Chambers Group) biologists conducted focused surveys for least Bell's vireo (*Vireo bellii pusillus,* LBVI) during the breeding season of 2015 for the proposed alternative route for the San Diego Gas & Electric Company (SDG&E) Sycamore to Peñasquitos (SX to PQ) 230 Kilovolt Transmission Line Project (proposed Project) located in the City of San Diego, San Diego County, California. The results of the surveys are presented in this letter report.

PROJECT DESCRIPTION

As part of the Partial 69kV Underground Alternative proposed by the CPUC, SDG&E prepared preliminary engineering for underground 69kV power line alignment that would connect the existing overhead 69kV power line alignment to the Penasquitos Substation, mostly within Carmel Mountain Road. The purpose of the surveys summarized herein was to determine the presence or absence of LBVI within and adjacent to areas proposed for an alternative underground route for the SX to PQ Project. Proposed work would include undergrounding of approximately 2.6 miles of new power line.

SURVEY LOCATION

The proposed Project site is located within the United States Geological Survey (USGS) *Escondido* and *Del Mar* Quadrangle maps; Sections 27, 28, 29, and 32; Township 14; and Range 03W along Carmel Mountain Road, from Ocean Air Drive to just east of Gallop Crest Court. Elevation at the proposed Project ranges from 700 to 850 feet above mean sea level (amsl) and consists primarily of native vegetation, with a with a small amount of disturbed habitat intermixed. A map of the survey area is provided in Attachment 1.

LEAST BELL'S VIREO NATURAL HISTORY

The LBVI was state listed as an endangered subspecies of Bell's vireo by the California Department of Fish and Wildlife (CDFW) in 1980 and federally listed as endangered by the United States Fish and Wildlife Service (USFWS) in 1986. Critical habitat for the LBVI was designated by USFWS in 1994. The LBVI subspecies

SANTA ANA LOS ANGELES REDLANDS PALM DESERT SAN DIEGO EL CENTRO RENO
CORPORATE OFFICE 5 Hutton Centre Drive, Suite 750 | Santa Ana, California 92707
t | 949.261.5414 f | 714.545.2255 w | www.chambersgroupinc.com

is restricted to coastal and inland southern California and Baja California, Mexico. Its winter range extends along the Pacific coast from northern Mexico south to northern Nicaragua.

The LBVI is a small, gray songbird with pale yellow wash on its sides, two faint wing bars, and a faint eye ring. Preferred nesting habitat is low, dense, scrubby vegetation in early successional areas that are particularly dependent on riparian areas. Habitats may include willow woodlands and dense mule fat (*Baccharis salicifolia* subsp. *salicifolia*), scrub oak (*Quercus berberidifolia*), coastal chaparral, and mesquite (*Prosopis* sp.) patches with dense, early successional understories. The two major factors in the decline of LBVI populations are loss of habitat and nest parasitism by the brown-headed cowbird (*Molothrus ater*).

METHODS

Suitable habitat was determined through desktop analysis of aerial imagery of the proposed Project site prior to conducting the field surveys. Polygons of potential habitat were mapped based off aerial imagery, and were refined during the initial survey based on the boundaries of suitable habitat determined in the field. Focused surveys were conducted within habitat that was determined to be suitable for LBVI by the surveying biologists in 2015 (Attachment 2).

Eight focused LBVI surveys were conducted at least 10 days apart by Chambers Group qualified biologists Heather Franklin, Paul Morrissey, Christina Congedo, and Corinne Klein, who are familiar with the songs, whisper songs, calls, scolds, and visual identification of LBVI. The focused surveys were conducted according to USFWS guidelines (USFWS 2001).

All surveys were conducted on foot by looking and listening for the target species in all suitable riparian habitats within the survey area (Attachment 2). Surveys were conducted during favorable weather conditions. Surveys were not conducted during excessive heat, cold, wind, rain, or other inclement weather that would be reasonably expected to reduce bird activity and consequential detection. No more than 3 linear kilometers or 50 hectares (124 acres) of suitable habitat were surveyed by each biologist during any single survey day.

Observations of the songs, scolds, whisper calls, flight patterns, behaviors, and plumage characteristics were used in conjunction to ascertain presence/absence of LBVI. The biologists conducted the surveys from optimal stationary locations with the aid of binoculars to see and hear the target species without harming any other wildlife species in the area. Prerecorded vocalizations were not used to determine the presence/absence of LBVI. All observed wildlife species were recorded for each survey day (Attachment 4).

RESULTS

Vegetation Communities

The survey area is within a newly developed residential area with open space areas consisting of upland, riparian, and ruderal communities. The identified suitable habitat for LBVI is presented in Attachment 2. Approximately 4.5 acres (1.82 hectares) of suitable Riparian habitat for LBVI was present.

Mule Fat Thickets

Mule Fat Thickets consist of dense stands of mule fat with lesser amounts of willow species. This community type is classified as a mixed evergreen-deciduous shrubland with a continuous canopy and a sparse

Solving Environmental Challenges

understory. This community typically occupies intermittent streambeds and seeps and it occurs at elevations ranging from sea level to 4,100 feet amsl (Sawyer et al. 2009).

Mule Fat Thickets were present in the survey area. The native plant species found within this community in the survey area include mule fat (*Baccharis salicifolia*), arroyo willow (*Salix lasiolepis*), narrow-leaved willow (*Salix exigua*), and black willow (*Salix gooddingii*). Non-native species found within this community in the survey area include Italian thistle (*Carduus pycnocephalus*), poison hemlock (*Conium maculatum*), and shortpod mustard *(Hirschfeldia incana*).

Survey Conditions

Survey conditions are presented in Table 1.

Table 1. Survey Conditions

Date	Surveyor	Time		Temperature*		Wind**		Cloud Cover		Precipitation	
		Start	End	Start	End	Start	End	Start	End	Start	End
04/14/15	Heather Franklin	7:30 A.M.	12:30 P.M.	63	71	1-3	0-2	0%	0%	0	0
04/28/15	H. Franklin, Paul Morrissey	7:30 A.M.	10:15 A.M.	69	83	0-1	1-2	0%	0%	0	0
05/12/15	H. Franklin, Christina Congedo	7:30 A.M.	11:00 A.M.	63	72	0-1	1-4	90%	20%	0	0
5/23/15	H. Franklin, C. Klein	7:30 A.M.	11:30 A.M.	63	66	0-1	1-4	95%	60%	0	0
6/4/15	H. Franklin, C. Klein	7:00 A.M.	10:30 A.M.	66	73	1-5	1-3	80%	100%	0	0
6/17/15	H. Franklin	6:30 A.M.	11:10 A.M.	65	72	1-3	2-4	100%	0%	0	0
7/2/15	H. Franklin, C. Klein	7:30 A.M.	10:30 A.M.	72	80	0-1	0-1	100%	0%	0	0
7/15/15	H. Franklin	6:00 A.M.	9:00 A.M.	64	71	1-3	1-3	100%	50%	0	0

*All temperature readings are in Fahrenheit
**All wind readings are in miles per hour

No LBVI were detected within the survey area during the 2015 surveys. The quality of habitat in the area was not considered high quality; however, a sufficient amount of moderate quality habitat within the survey area to support a LBVI territory was present. In addition, no brown-headed cowbirds were observed throughout the surveys.

Solving Environmental Challenges

Other Sensitive Species

California gnatcatcher

Several California gnatcatcher (*Polioptila californica californica*; CAGN) were incidentally observed within the buffer area during several of the surveys throughout the season (Attachment 3). CAGN were observed throughout the LBVI focused surveys, as well as throughout focused CAGN surveys conducted within the same areas during the 2015 breeding season.

CONCLUSIONS

No LBVI were found within the survey area during the 2015 focused surveys. Therefore, it can be assumed LBVI are absent from the proposed Project area.

Please contact me at (949) 261-5414 ext. 7232 if you have any questions or concerns regarding these results.

Sincerely,

CHAMBERS GROUP, INC.

Heather Franklin
Staff Biologist

ATTACHMENTS

Attachment 1 – Survey Location
Attachment 2 – Suitable Habitat
Attachment 3 – Survey Results
Attachment 4 – Wildlife Species Observed

Solving Environmental Challenges

REFERENCES

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken (editors)
2012 *The Jepson Manual: Vascular Plants of California, Second Edition*. University of California Press, Berkeley, CA.

California Department of Fish and Wildlife (CDFW)
2015 California Natural Diversity Database, Rarefind 4. Biogeographic Data Branch, Sacramento, CA.

Grinnell, J. and A. H. Miller
1944 The distribution of the birds of California. *Pacific Coast Avifauna* No. 27. 1-608

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens
2009 *A Manual of California Vegetation, 2nd edition*. California Native Plant Society Press, Sacramento, CA.

U.S. Fish and Wildlife Service (USFWS)
2001 *Least Bell's Vireo Survey Guidelines*. Carlsbad Fish and Wildlife Office.

Solving Environmental Challenges

ATTACHMENT 1 – SURVEY LOCATION

Legend

- Project Alignment
- Staging Yards
- Stringing Sites
- Substations

N

0 0.25 0.5 1
Miles

Attachment 1

Sycamore to Peñasquitos Alternative Line
Project Location Map

Name: 20807 LBVI Attach 1 Location.Mxd
Print Date: 9/11/2015, Author: msimmons

CHAMBERS GROUP

ATTACHMENT 2 – SUITABLE HABITAT

Legend

- Project Alignment
- 300-foot Survey Area
- Potentially Suitable LBVI Habitat
- Stringing Sites

N

0 125 250 500

Feet

Attachment 2

Sycamore to Peñasquitos Alternative Line
Least Bell's Vireo Suitable Habitat

Name: 20807 LBVI Attach 2 Suit Habitat.Mxd
Print Date: 9/15/2015, Author: msimmons

CHAMBERS GROUP

Legend

- Project Alignment
- 300-foot Survey Area
- Potentially Suitable LBVI Habitat

N

0 125 250 500

Feet

Attachment 2

Sycamore to Peñasquitos Alternative Line
Least Bell's Vireo Suitable Habitat

Name: 20807 LBVI Attach 2 Suit Habitat.Mxd
Print Date: 9/15/2015, Author: msimmons

CHAMBERS GROUP

Legend

- Project Alignment
- 300-foot Survey Area
- Potentially Suitable LBVI Habitat
- Stringing Sites

N

0 125 250 500

Feet

Attachment 2

Sycamore to Peñasquitos Alternative Line
Least Bell's Vireo Suitable Habitat

Name: 20807 LBVI Attach 2 Suit Habitat.Mxd
Print Date: 9/15/2015, Author: msimmons

CHAMBERS GROUP

Legend

- Project Alignment
- 300-foot Survey Area

N

0 125 250 500

Feet

Attachment 2

Sycamore to Peñasquitos Alternative Line
Least Bell's Vireo Suitable Habitat

Name: 20807 LBVI Attach 2 Suit Habitat.Mxd
Print Date: 9/15/2015, Author: msimmons

CHAMBERS GROUP

ATTACHMENT 3 – SURVEY RESULTS

Legend

- Project Alignment
- 300-foot Survey Area
- Potentially Suitable LBVI Habitat
- Stringing Sites
- California Gnatcatcher Observation
- California Gnatcatcher Nest

N

0 125 250 500

Feet

Attachment 3

Sycamore to Peñasquitos Alternative Line
Least Bell's Vireo 2015 Survey Results

Name: 20807 LBVI Attach 3 Survey Results Map.Mxd
Print Date: 9/15/2015, Author: msimmons

CHAMBERS GROUP

Legend

- Project Alignment
- 300-foot Survey Area
- Potentially Suitable LBVI Habitat
- California Gnatcatcher Observation
- California Gnatcatcher Nest

N

0 125 250 500

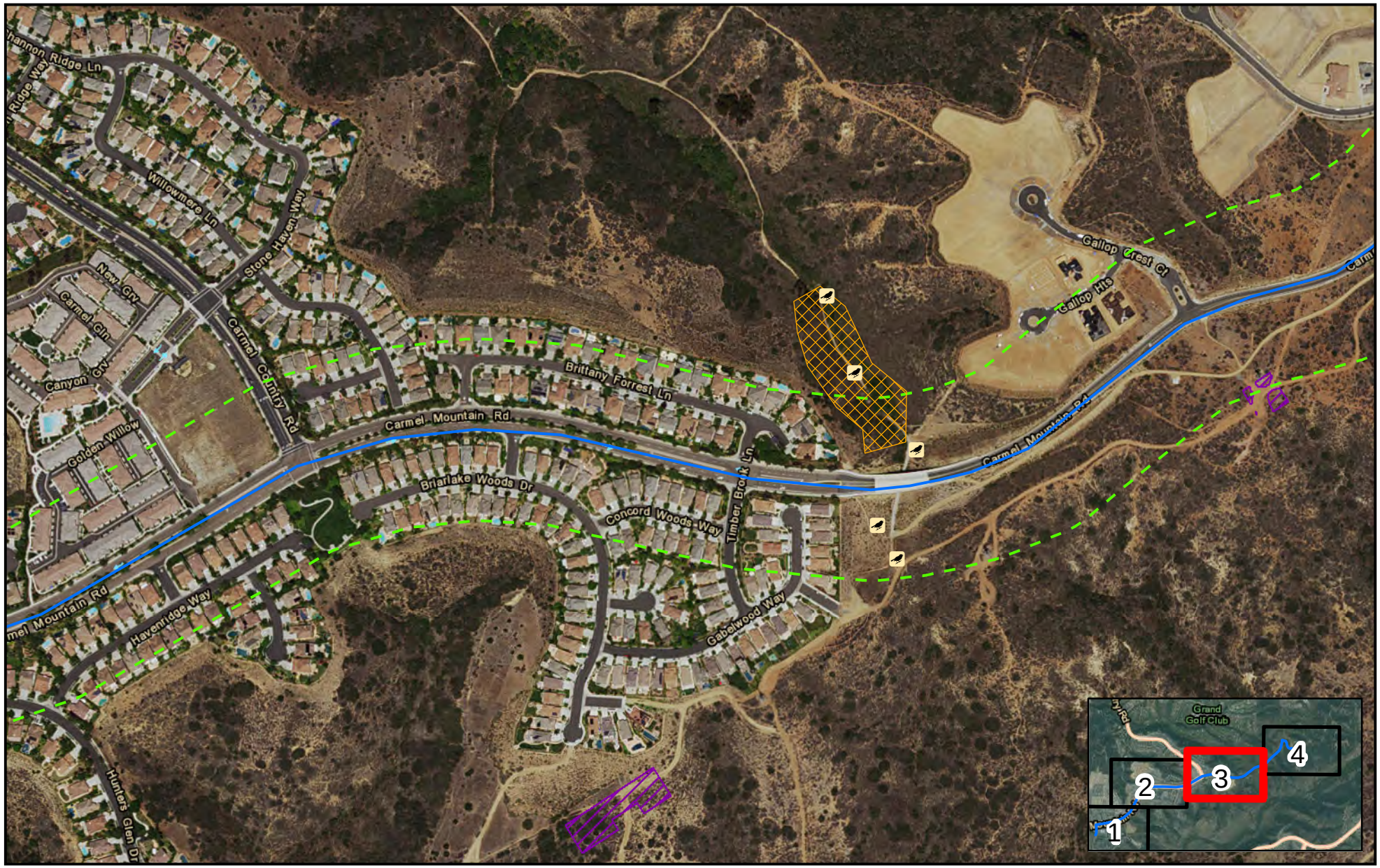
Feet

Attachment 3

Sycamore to Peñasquitos Alternative Line
Least Bell's Vireo 2015 Survey Results

Name: 20807 LBVI Attach 3 Survey Results Map.Mxd
Print Date: 9/15/2015, Author: msimmons

CHAMBERS GROUP



Legend

- Project Alignment
- 300-foot Survey Area
- Potentially Suitable LBVI Habitat
- Stringing Sites
- California Gnatcatcher Observation

N

0 125 250 500

Feet

Attachment 3

Sycamore to Peñasquitos Alternative Line
Least Bell's Vireo 2015 Survey Results

Name: 20807 LBVI Attach 3 Survey Results Map.Mxd
Print Date: 9/15/2015, Author: msimmons

CHAMBERS GROUP

Legend

- Project Alignment
- 300-foot Survey Area

N

0 125 250 500

Feet

Attachment 3

Sycamore to Peñasquitos Alternative Line
Least Bell's Vireo 2015 Survey Results

Name: 20807 LBVI Attach 3 Survey Results Map.Mxd
Print Date: 9/15/2015, Author: msimmons

CHAMBERS GROUP

ATTACHMENT 4 – WILDLIFE SPECIES OBSERVED

Attachment 4 – Wildlife Species Observed

Scientific Name	Common Name
CLASS REPTILIA	**REPTILES**
PHRYNOSOMATIDAE	**ZEBRA-TAILED, EARLESS, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, AND HORNED LIZARDS**
Sceloporus occidentalis	western fence lizard
Uta stansburiana	side-blotched lizard
ANGUIDAE	**ALLIGATOR LIZARDS**
Elgaria multicarinata multicarinata	California alligator lizard
CLASS AVES	**BIRDS**
ACCIPITRIDAE	**HAWKS, KITES, EAGLES**
Accipiter striatus	sharp-shinned hawk
Buteo jamaicensis	red-tailed hawk
ODONTOPHORIDAE	**NEW WORLD QUAIL**
Callipepla californica	California quail
COLUMBIDAE	**PIGEONS & DOVES**
Zenaida macroura	mourning dove
APODIDAE	**SWIFTS**
Aeronautes saxatalis	white-throated swift
TROCHILIDAE	**HUMMINGBIRDS**
Calypte anna	Anna's hummingbird
Selasphorus sasin	Allen's hummingbird
PICIDAE	**WOODPECKERS**
Picoides nuttallii	Nuttall's woodpecker
Melanerpes formicivorus	acorn woodpecker
TYRANNIDAE	**TYRANT FLYCATCHERS**
Empidonax difficilis	Pacific-slope flycatcher
Myiarchus cinerascens	ash-throated flycatcher
Sayornis nigricans	black phoebe
Tyrannus verticalis	western kingbird
HIRUNDINIDAE	**SWALLOWS**
Stelgidopteryx serripennis	northern rough-winged swallow
CORVIDAE	**JAYS & CROWS**
Aphelocoma californica	western scrub-jay
Corvus brachyrhynchos	American crow
Corvus corax	common raven
AEGITHALIDAE	**BUSHTITS**
Psaltriparus minimus	bushtit
TROGLODYTIDAE	**WRENS**
Thryomanes bewickii	Bewick's wren

Scientific Name	Common Name
Troglodytes aedon	house wren
SYLVIIDAE	**OLD WORLD WARBLERS**
Chamaea fasciata	wrentit
REGULIDAE	**KINGLETS**
Regulus calendula	ruby-crowned kinglet
POLIOPTILIDAE	**GNATCATCHERS**
Polioptila caerulea	blue-gray gnatcatcher
Polioptila californica	California gnatcatcher
MIMIDAE	**MOCKINGBIRDS, THRASHERS**
Mimus polyglottos	northern mockingbird
Toxostoma redivivum	California thrasher
PTILOGONATIDAE	**SILKY-FLYCATCHERS**
Phainopepla nitens	phainopepla
PARULIDAE	**WOOD WARBLERS**
Geothlypis trichas	common yellowthroat
ICTERIDAE	**BLACKBIRDS**
Icterus cucullatus	hooded oriole
Agelaius phoeniceus	red-winged blackbird
EMBERIZIDAE	**EMBERIZIDS**
Melospiza melodia	song sparrow
Melozone crissalis	California towhee
Pipilo maculatus	spotted towhee
Junco hyemalis	dark-eyed junco
Aimophila ruficeps	rufous-crowned sparrow
CARDINALIDAE	**CARDINALS**
Pheucticus melanocephalus	black-headed grosbeak
FRINGILLIDAE	**FINCHES**
Spinus psaltria	lesser goldfinch
Carpodacus mexicanus	house finch
CLASS MAMMALIA	**MAMMALS**
LEPORIDAE	**HARES & RABBITS**
Sylvilagus audubonii	desert cottontail

September 21, 2015
(20807)

Rob Fletcher
San Diego Gas and Electric
8315 Century Park Court, CP21E
San Diego, CA 92123

SUBJECT: **Updated Special-Status Plant Species Survey Results Following Late Spring/Early Summer 2015 Surveys For the Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project**

Dear Mr. Fletcher,

This memo report summarizes the results of the additional vegetation community mapping and focused plant survey conducted for the San Diego Gas & Electric Company (SDG&E) Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project (proposed Project), Application No. 14-04-011.This information is intended to supplement the information provided in the Biological Technical Report (BTR; Busby Biological Services (BBS) 2014a) and special-status plant survey summary report (BBS 2014b) prepared for the Proposed Project.

PROJECT DESCRIPTION

As part of the Alternative Cable Pole (South of Carmel Valley Road) proposed by the CPUC, SDG&E prepared preliminary engineering for underground 230kV transmission line alignments that would connect the Alternative Cable Pole location (south of Carmel Valley Road) to the proposed 230kV underground alignment within Carmel Valley Road. Two alignments were reviewed: an easterly route and a westerly route. The eastern route would follow an existing paved access road northeast from the cable to Carmel Valley Road. The western route would largely follow an unpaved access road southwest, and then north until connecting with Carmel Valley Road.

PROJECT LOCATION

The proposed Project is located in the city of San Diego of San Diego County, California. The proposed Project can be found on the California United States Geological Survey (USGS) 7.5-minute *Del Mar*topographic quadrangle. The proposed Project ranges from 700 to850 feet in elevation above mean sea level (amsl) and consists primarily of native vegetation, with a lesser degree of disturbed areas. A map of the survey area is provided in Attachment 1.

METHODS

A list of special-status plant survey target species was developed for the proposed Project by reviewing the results of various databasesearches for special-status plant species reported within 1, 3, and 5 miles of the main proposed Project alignment and the Encina Hub. The focused plant survey was conducted by Chambers Group, Inc., botanists Jeremy Smith and Heather Clayton on May 20 and July 1, 2014. The focused

survey for sensitive plant species included federally and state listed endangered and California Rare Plant Rank 2 and above. The sensitive species were surveyed in accordance with the Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (CDFW 2000). Table 1 identifies these three sensitive plant species.

During the focused plant surveys, the botanists both visually scanned and walked meandering transects through the entire anticipated impact area within the proposed Project site for the presence of sensitive plant species in bloom. 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. Where vegetation was very dense on steep slopes, 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 and incorporated into the Geographic Information System (GIS) database.

All other plant species observed during the surveys were also noted (Attachment 2). Plants of uncertain identity were collected and subsequently identified from keys, descriptions, and illustrations in Baldwin et al. (2012) and Munz (1974). Plant nomenclature follows that of *The Jepson Manual, Vascular Plants of California, Second Edition* (Baldwin et al. 2012).

RESULTS

Five sensitive species were observed during the April survey (Table 1), which was conducted during the appropriate blooming period for all species. No other federally and/or state listed endangered or threatened or otherwise sensitive plant species were observed during the survey. A total of 116 plant species, including 68 native species and 48 nonnative species, were observed within the Project area during the survey (Attachment 2).

Table 1. Sensitive Species Status and Blooming Period

Common Name	Scientific Name	Number of Individuals	Status	Blooming Period
spineshrub	*Adolphia californica*	89 (approx.)	CRPR 2B.1	Dec-May
coast barrel cactus	*Ferocactus viridescens*	2	CRPR 2B.1	May-June
Palmer's grapplinghook	*Harpagonella palmeri*	10,070 (approx.)	CRPR 4.2	Mar-May
graceful tarplant	*Holocarpha virgata* ssp. *elongata*	59	CRPR 4.2	May-Nov
decumbent goldenbush	*Isocoma menziesii* var. *decumbens*	106 (approx.)	CRPR 1B.2	Apr-Nov

CRPR: California Rare Plant Rank

CONCLUSIONS

A total of five sensitive plant species with multiple individuals were observed within and adjacent to the proposed Project area during the time of the surveys (Table 1). The majority of these species were found in

the areas mapped as native grassland. No other sensitive plant species were observed during the surveys. All five species are considered sensitive by the CNPS and CDFW. It is recommended that efforts be made to avoid impacts to these species during Project activities.

Please contact Paul Morrissey at (949) 261-5414 ext. 7288 or pmorrissey@chambersgroupinc.comif you have any questions or concerns regarding this memo.

Sincerely,

CHAMBERS GROUP, INC.

Jeremy Smith
Biologist

ATTACHMENTS

Attachment 1 – Project Survey Area
Attachment 2 – Plant Species Observed
Attachment 3 – Project Photographs

REFERENCES

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken (editors)
2012 *The Jepson Manual: Vascular Plants of California, Second Edition*. University of California Press, Berkeley, CA.

Munz, P. A.
1974 *A Flora of Southern California*. University of California Press, Berkeley, CA.

State of California, the Resources Agency, Department of Fish and Wildlife (CDFW)
2000 Guidelines for Accessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities.

Solving Environmental Challenges

Legend

- Underground Alternative
- Survey Area

N

0 250 500

Feet

Attachment 1

Sycamore to Penasquitos
Project Survey Area

Name: 20807 Attch 1 Survey Area.Mxd
Print Date: 9/25/2015, Author: msimmons

CHAMBERS GROUP

Attachment 2 – Plant Species Observed

Scientific Name	Common Name
GYMNOSPERMS	
PINACEAE	**PINE FAMILY**
*Pinus halepensis**	Aleppo pine
Pinus sp.	pine
ANGIOSPERMS (EUDICOTS)	
ADOXACEAE	**MUSKROOT FAMILY**
Sambucus nigra subsp. *caerulea*	blue elderberry
AIZOACEAE	**FIG-MARIGOLD FAMILY**
*Carpobrotus edulis**	hottentot-fig
ANACARDIACEAE	**SUMAC OR CASHEW FAMILY**
Malosma laurina	laurel sumac
Rhus integrifolia	lemonadeberry
APIACEAE	**CARROT FAMILY**
Apiastrum angustifolium	wild celery
*Foeniculum vulgare**	fennel
ASTERACEAE	**SUNFLOWER FAMILY**
Acourtia microcephala	sacapellote
Ambrosia psilostachya	western ragweed
Artemisia californica	California sagebrush
Baccharis pilularis	coyote brush
Baccharis salicifolia subsp. *salicifolia*	mule fat
Baccharis sarothroides	broom baccharis
Brickellia californica	California brickellbush
Carduus pycnocephalus subsp. *pycnocephalus**	Italian thistle
*Centaurea melitensis**	tocalote
*Chrysanthemum carinatum**	tricolor chrysanthemum
Corethrogyne filaginifolia	sand-aster
*Cynara cardunculus**	cardoon
Deinandra fasciculata	fascicled tarweed
Encelia californica	California bush sunflower
Encelia farinosa	brittlebush
*Erigeron bonariensis**	flax-leaved horseweed
Erigeron canadensis	horseweed
Eriophyllum confertiflorum	golden yarrow
Grindelia camporum	gum-plant
Hazardia squarrosa	saw-toothed goldenbush

Scientific Name	Common Name
*Hedypnois cretica**	crete hedypnois
*Helminthotheca echioides**	bristly ox-tongue
Heterotheca grandiflora	telegraph weed
Holocarpha virgata subsp. *elongata*	graceful tarplant
Isocoma menziesii var. decumbens	decumbent goldenbush
Isocoma menziesii var. *menziesii*	spreading goldenbush
Isocoma menziesii var. *vernonioides*	Coastal goldenbush
*Lactuca serriola**	prickly lettuce
Logfia filaginoides	California fluffweed
Pseudognaphalium californicum	California everlasting
Pseudognaphalium canescens	felty everlasting
Pseudognaphalium leucocephalum	white-head cudweed
*Sonchus oleraceus**	common sow thistle
BORAGINACEAE	**BORAGE FAMILY**
Harpagonella palmeri	Palmer's grappling hook
BRASSICACEAE	**MUSTARD FAMILY**
*Brassica nigra**	black mustard
*Hirschfeldia incana**	shortpod mustard
CACTACEAE	**CACTUS FAMILY**
Ferocactus viridescens	San Diego barrel cactus
Opuntia littoralis	coastal prickly pear
CAPRIFOLIACEAE	**HONEYSUCKLE FAMILY**
Lonicera subspicata	southern honeysuckle
CHENOPODIACEAE	**GOOSEFOOT FAMILY**
*Atriplex semibaccata**	Australian saltbush
*Chenopodium album**	lamb's quarters
*Salsola tragus**	Russian thistle
CISTACEAE	**ROCK-ROSE FAMILY**
*Cistus incanus**	purple rock-rose
CONVOLVULACEAE	**MORNING-GLORY FAMILY**
Calystegia macrostegia	western bindweed
CUCURBITACEAE	**GOURD FAMILY**
Marah macrocarpa	wild cucumber
EUPHORBIACEAE	**SPURGE FAMILY**
*Chamaesyce maculata**	spotted spurge
FABACEAE	**LEGUME FAMILY**
*Acacia longifolia**	Sydney golden wattle
Acmispon glaber	deerweed

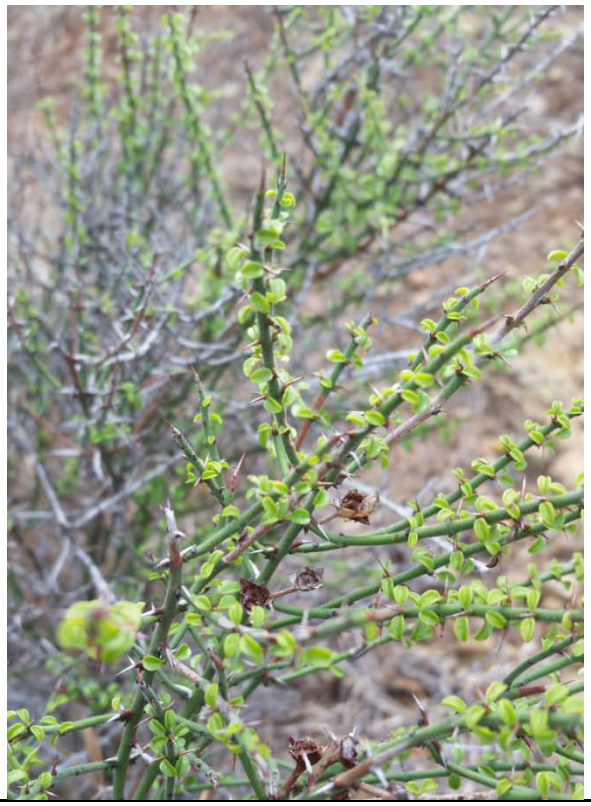
Scientific Name	Common Name
Acmispon strigosus	strigose lotus
Astragalus trichopodus	Santa Barbara locoweed
Calliandra californica	fairyduster
Lupinus sp.	lupine
*Medicago polymorpha**	bur clover
*Melilotus alba**	white sweetclover
*Melilotus indica**	sourclover
Trifolium sp.	clover
FAGACEAE	**OAK FAMILY**
Quercus agrifolia	coast live oak
GENTIANACEAE	**GENTIAN FAMILY**
Zeltnera venusta	canchalagua
GERANIACEAE	**GERANIUM FAMILY**
*Erodium botrys**	broad-lobed filaree
*Erodium cicutarium**	red-stemmed filaree
GROSSULARIACEAE	**GOOSEBERRY FAMILY**
Ribes indecorum	white flowering currant
LAMIACEAE	**MINT FAMILY**
*Rosmarinus officinalis**	rosemary
Salvia apiana	white sage
Salvia leucophylla	purple sage
Salvia mellifera	black sage
MALVACEAE	**MALLOW FAMILY**
Malacothamnus fasciculatus	mesa bushmallow
*Malva parviflora**	cheeseweed
MYRSINACEAE	**MYRSINE FAMILY**
*Anagallis arvensis**	scarlet pimpernel
NYCTAGINACEAE	**FOUR O'CLOCK FAMILY**
*Bougainvillea spectabilis**	bougainvillea
Mirabilis laevis	wishbone bush
PHRYMACEAE	**LOPSEED FAMILY**
Mimulus aurantiacus	orange bush monkey-flower
PITTOSPORACEAE	**TOBIRA FAMILY**
Pittosporum sp.	pittosporum
PLATANACEAE	**SYCAMORE FAMILY**
Platanus racemosa	western sycamore
POLYGONACEAE	**BUCKWHEAT FAMILY**
Eriogonum fasciculatum var. *polifolium*	Mojave desert California buckwheat

Scientific Name	Common Name
*Rumex crispus**	curly dock
PORTULACACEAE	**PURSLANE FAMILY**
*Portulaca oleracea**	common purslane
RHAMNACEAE	**BUCKTHORN FAMILY**
Adolphia californica	California adolphia
Rhamnus crocea	spiny redberry
ROSACEAE	**ROSE FAMILY**
Heteromeles arbutifolia	toyon
*Rhaphiolepis indica**	Indian hawthorne
RUBIACEAE	**MADDER FAMILY**
Galium angustifolium subsp. *angustifolium*	narrow-leaf bedstraw
SALICACEAE	**WILLOW FAMILY**
Populus fremontii subsp. *fremontii*	Fremont cottonwood
Salix gooddingii	black willow
Salix lasiolepis	arroyo willow
SAPINDACEAE	**SOAPBERRY FAMILY**
*Koelreuteria bipinnata**	Chinese flame tree
SIMAROUBACEAE	**QUASSIA FAMILY**
*Ailanthus altissima**	tree of heaven
SOLANACEAE	**NIGHTSHADE FAMILY**
*Nicotiana glauca**	tree tobacco
TAMARICACEAE	**TAMARISK FAMILY**
*Tamarix ramosissima**	Mediterranean tamarisk
ANGIOSPERMS (MONOCOTS)	
AGAVACEAE	**AGAVE FAMILY**
*Agave attenuata**	agave
ALLIACEAE	**ONION FAMILY**
Allium sp.	onion
ARECACEAE	**PALM FAMILY**
*Washingtonia robusta**	Mexican fan palm
ASPHODELACEAE	**ASPHODEL FAMILY**
Aloe sp.*	aloe
CYPERACEAE	**SEDGE FAMILY**
*Cyperus involucratus**	umbrella-plant
IRIDACEAE	**IRIS FAMILY**
Sisyrinchium bellum	blue-eyed grass
LILIACEAE	**LILY FAMILY**
Calochortus sp.	mariposa lily

Scientific Name	Common Name
POACEAE	**GRASS FAMILY**
*Avena barbata**	slender wild oat
*Bromus diandrus**	ripgut grass
*Bromus japonicus**	Japanese brome
Bromus madritensis subsp. *rubens**	red brome
Bromus sp.	brome
*Cortaderia selloana**	pampas grass
*Cynodon dactylon**	Bermuda grass
*Festuca perennis**	Italian ryegrass
Muhlenbergia rigens	deergrass
*Schismus barbatus**	Mediterranean schismus
Stipa pulchra	purple needlegrass
Stipa speciosa	desert needlegrass
THEMIDACEAE	**BRODIAEA FAMILY**
Dichelostemma capitatum	blue dicks

*Non-Native Species, +Ornamental, Unlikely to be Invasive

Attachment 3 – Site Photographs



California adolphia (*Adolphia californica*)

San Diego barrel cactus (*Ferocactus viridescens*)

	Palmer's grapplinghook (*Harpagonella palmeri*)
	Decumbent goldenbush (*Isocoma menziesii* var. *decumbens*)

	Delicate tarplant (*Holocarpha virgata* ssp. *elongata*)

To: Tamara Spear
Environmental Specialist
SDG&E Environmental Services
8315 Century Park Court, CP21E
San Diego, CA 92123

From: Chambers Group, Inc.
Date: 07/29/15
RE: Delineation Memo regarding Energy Division Data Request #17 (Question 7) for the SX to PQ 230kV Transmission Line CPCN Project

Aquatic Resources Memorandum for the San Diego Gas & Electric Carmel Valley Staging Yard, Sycamore to Penasquitos 230 Kilovolt Transmission Line Project, San Diego County, California

This Aquatic Resources Memorandum (Memo) was prepared by Chambers Group, Inc. (Chambers Group) biologist Paul Morrissey as a response to the Energy Division Data Request #17 (Question 7) for the Sycamore to Penasquitos (SX to PQ) 230 Kilovolt (kV)Transmission Line Project (Proposed Project).

San Diego Gas & Electric (SDG&E) plans to utilize the Carmel Valley Road Staging Yard (Study Area) as part of the Proposed Project. Proposed Project activities within the Study Area would include the use of the area for an approximately 6 acre staging yard. The staging yard may be used for equipment and materials storage, re-fueling of equipment, placement of construction trailers and restroom facilities, equipment storage, materials laydown, and helicopter flight operations. Following completion of the Proposed Project, all materials, equipment, and rock base would be removed, soils would be de-compacted and stabilized, and all BMPs would be removed after closeout of applicable portions of the Proposed Project Stormwater Pollution and Prevention Plan (SWPPP).

This memo summarizes a jurisdictional delineation (JD) assessment conducted to determine the presence and/or extent of aquatic resources potentially regulated by the United States Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW), and/or the California Regional Water Quality Control Board (RWQCB).

Study Area

The Study Area is situated on a mesa top at the northeast corner of the intersection of Carmel Valley Road and Camino Del Sur in the City of San Diego, in San Diego County. The Study Area evaluated during the assessment included the final proposed limits of the Carmel Valley Staging Yard, and included an approximately 6.84 acre area (Study Area) (Attachment B, Figure 1). Topographically, the Study Area is level. To the north of the Study Area, topography descends along a north facing valley slope of the San Dieguito River that is located approximately 500 feet north of the Study Area.

Literature Review

Prior to the field assessment, a desktop analysis was conducted that included an evaluation of United States Geological Survey (USGS) quadrangle maps and blue-line drainages, United States Department of Agriculture (USDA) Natural Resources Conservation Service soil survey maps, National Wetland Inventory (NWI) data, and aerial photography to assist with jurisdictional wetland boundaries.

Based on topographic, USFWS NWI, and USGS maps, no naturally occurring drainage features or streambeds appear to occur within the Study Area (Attachment B, Figure 3) or connect to a jurisdictional waterway.

The NWI indicates that no wetland features or riparian areas occur within the Study Area. The NWI shows a freshwater forested/shrub wetland within the San Dieguito River approximately 500 feet north of the Study Area, and an emergent freshwater wetland area located approximately 1,000 feet west of the Study Area. However, no feature on site appears to convey waters to these features.

Two soil types occur onsite: Olivenhain cobbly loam 2 to 9 percent slopes and Las Flores loamy fine sand 9 to 15 percent slopes (Attachment B, Figure 2). Olivenhain cobbly loam is considered to be partially-hydric.

Past and Present Land Use

Historical aerials of the site were reviewed from 1953 to present day. Prior to 1996, the site was undeveloped and appears as non-native grassland potentially used for grazing. Sometime between 1996 and 2002, the site was extensively graded for development. By 2002 the existing parking lot, driveway and constructed brow ditches appear on aerials. Since 2002 the Study Area has been used for material storage.

Preliminary Site Visit and Vegetation Mapping

Blackhawk Environmental, Inc. biologist Ian Maunsell conducted a habitat assessment within the Study Area on June 4 and June 11, 2015. The site visit included a pedestrian survey of the Study Area. Plant communities within the Survey Area were identified, qualitatively described, and mapped onto high resolution aerial photographs. Vegetation communities were classified according to those described within the *SDG&E Subregional Natural Communities Conservation Plan* (NCCP). The 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 Study Area were identified according to the estimated percent cover of the combination of dominant plant species observed relative to the list of dominant species for a given Holland vegetation community. Within the Study Area, three vegetation communities/land use types were identified, including: developed lands, non-native grasslands, and disturbed habitat. During a previous survey conducted in June 2015, a small area approximately 0.13 acre in size within the Study Area was misidentified as a meadow/seep (Holland Code 45400). This "meadow/seep area" is surrounded to the south by a developed asphalt parking pad, to the west by a gravel road, and to the north and east by disturbed upland habitat (Attachment B, Figure 2).

Meadow/seeps, a NCCP-vegetation classification, are composed of annual and perennial herbs, including wildflowers and bulbs such as mariposa lily (*Calochortus* spp.), lupine (*Lupinus* spp.), and bluedicks (*Dichelostemma capitatum*). Where meadow/seeps occur, groundwater keeps the soil moist longer than the surrounding uplands, and vegetation often includes rushes (*Carex* spp.), spike rushes (*Eleocharis* spp.) and other plants typically associated with moist or wet areas. Meadow/seeps are located on slopes or at the base of slopes.

This habitat was not identified as a meadow/seep area based on the recent July 24, 2015 survey effort. Species identified within this area include: non-native Italian ryegrass (*Festuca perennis*; Facultative (FAC) species), wild oat (*Avena barbata*; Upland (UPL) species) fringed by tamarisk (*Tamarix* sp.; FAC), Russian thistle (*Salsola tragus*), bristly oxtongue (*Helminthotheca echiloides*; Facultative Upland (FACU) species), and scattered native slender creeping spike-rush (*Eleocharis montevidensis*; Facultative wet (FACW) species). This area also hosted one small pepper tree (*Schinus molle*) and is predominantly surrounded by Russian thistle (Attachment C, Photos). The slender creeping spike-rush and the non-native tamarisk each comprised approximately 10 percent of the soil pit location 1 Survey Area. The non-native Italian ryegrass comprised approximately 50 percent of the area within soil pit location 1, and occurs in both wet and dry environments. Although collectively these species pass the dominance test for hydrophytic vegetation for the soil pit location, the Italian ryegrass is the dominant species and is typically found in non-native grassland communities. Based on the topography, lack of hydrologic connectivity, and existing conditions of the surrounding area, this small 0.13 acre area has been re-classified as non-native grassland.

Jurisdictional Delineation Site Visit

Chambers Group biologist Paul Morrissey and SDG&E environmental resource specialist Tamara Spear visited the Study Area on July 24, 2015. The survey was conducted in response to the Energy Division Data Request #17 (Question 7), in which an additional delineation survey was requested. The focus of the survey was to determine if any aquatic resources exist within the proposed staging yard, which would be mapped for avoidance.

The Study Area was evaluated using the methodology set forth in the USACE Wetland Delineation Manual (USACE 1987) and the Arid West Regional Delineation Supplement (USACE 2008). A total of two Arid West Wetland Delineation Data Forms were completed according to USACE standards. Copies of all field data forms are included in Attachment A. Photographs of site conditions at the time of the survey are included in Attachment C: Site Photographs.

Jurisdictional Delineation Results

The majority of the Study Area is disturbed habitat, characterized by heavily disturbed and previously graded areas interspersed with developed and paved areas. The Study Area exhibited various levels of disturbance ranging from tire tracks, scattered rip-rap, man-made surface water control systems, and gravel/crushed rock base. Vegetation appeared previously mowed as evidenced by lower vegetation height than that in the surrounding areas (typically less than 1 foot in height compared to surrounding areas up to 2-3 feet in height). Dominant plant species observed to occur within these areas included

non-native Russian thistle, ragweed (*Ambrosia psilostachya*), filaree (*Erodium cicutarium*), fennel (*Foeniculum vulgare*), wild oat (*Avena* sp.), mustard (*Heirshfeldia* sp.), and red brome (*Bromus madritensis*). Sub-dominant species occurring occasional throughout the yard included artichoke thistle (*Cynara cardunculus*), crab grass (*Digitaria* sp.), cheeseweed (*Malva parviflora*), and smooth cats ear (*Hypochaeris glabra*). Occasional native species such as coyote bush (*Baccharis pilularis*) and needle grass (*Stipa* sp.) occur, primarily within small fragmented patches immediately adjacent to the paved areas, possibly due to previous landscaping as they are intermixed with non-native wattle trees (*Acacia* sp.).

Based on the results of the delineation, no water features potentially under federal or state jurisdiction were identified within the Study Area. The area evaluated includes non-native grassland habitat, developed, and disturbed habitat as described above.

The delineation was performed under "normal circumstances" for the site, which has undergone regular disturbances and routine land uses as a staging and storage area. The survey was conducted after two weekends of rain events, uncharacteristic for this time of year (July).

Two Arid West Wetland Determination Data Forms were completed for the Study Area. Sample Point (SP)-01 was located within the non-native grassland area, and SP-02 was located to the north of the grassland area, within disturbed habitat. Several test soil pits were also dug within and outside of the non-native grassland area.

Within the SPs, soils were heavily disturbed, and relics of erosion management in the form of gravel were observed within the soil sample. Soils were determined to be non-hydric (SP-01 and SP-02); however, the soils did exhibit signs of infrequent inundation and slightly anaerobic conditions (less than 5 percent redox features within soil matirx). Soils were identified as clay/loam soils ranging in matrix color from 10Y/R 3/3 to 4/4 with up to 4 percent redox features ranging from 7.5Y/R 3/4 to 5/8. No evidence of saturated soils was observed in the feature during the time of the survey. Due to the current drought conditions, hydrology was evaluated according to standards for problematic conditions. The primary source of hydrologic input appears to come from rain water collecting on the flat surface of the Study Area. No ordinary high water marks or other hydrology other than soil surface cracks in exposed clay soils were observed. The paved parking area, driveway, and gravel roads do not allow permeability into the ground and directs surface waters into the non-native grassland area by pavement to the north and water collecting against a gravel road to the west. This is likely the reason for non-native species such as Italian ryegrass and tamarisk, and native slender creeping spike-rush to be present on site and relegated to this small area.

Approximately 0.016 acre of un-vegetated man-made brow ditches constructed in uplands were mapped within the Study Area (Attachment B, Figure 1). These features are approximately 2-feet in width by 1 foot deep, and flow off of the Study Area to a detention basing located to the northwest. No culvert appears to provide flow from the basin into the San Dieguito River to the north. These features are man-made, and according to historical photographs and data, do not follow or direct formerly naturally occurring drainage features within the Study Area. As such, these features are not likely to be considered waters of the US or waters of the State. As such, brow ditches within the Study Area are considered non-jurisdictional by USACE, RWQCB, and CDFW.

Due to the lack of hydric soils and the Study Area being isolated (no hydrological connectivity) from the San Dieguito River or other riparian systems nearby, this proposed staging yard does not contain water features under jurisdiction by the USACE, RWQCB, or CDFW.

CONCLUSION

The survey effort resulted in the determination that the Study Area does not contain non-wetland or wetland waters of the US, wetland or non-wetland waters of the state, or riparian areas under the jurisdiction of USACE, RWQCB and/or CDFW.

If you have any questions regarding this internal memo, please feel free to contact me at (949) 261-5414 extension 7288 or at pmorrissey@chambersgroupinc.com.

Respectfully submitted,

Paul Morrissey
Director of Biology
Chambers Group, Inc.

Attachments
Attachment A: Arid West Data Sheets
Attachment B: Project Figures
Attachment C: Site Photos

ATTACHMENT A – ARID WEST DATA SHEETS

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Carmel Valley Construction Yard City/County: San Diego, San Diego County Sampling Date: July 24, 2015

Applicant/Owner: San Diego Gas & Electric Company State: CA Sampling Point: 01

Investigator(s): Paul Morrissey Section, Township, Range: Sections 1 and 12 of Township 14S Range 3W

Landform (hillslope, terrace, etc.): mesa top Local relief (concave, convex, none): concave Slope (%): <1

Subregion (LRR): C - Mediterranean California Lat: 32.97800 Long: -117.14800 Datum: NAD-83

Soil Map Unit Name: Olivenhein Cobbly Loam 2 to 9 percent slopes NWI classification: None

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 [ ] NO significantly disturbed? Are "Normal Circumstances" present? Yes (•) No ( )

Are Vegetation [ ] Soil [ ] or Hydrology [ ] NO naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Sampling point conducted within representative area of a previously developed/graded parcel where facultative vegetation apprarrently occurs adjacent to a concrete parking lot.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Tamarix sp.*	10	Yes	FAC
2. *Schinus molle*	2	No	FACU
3.			
4.			
Total Cover:	12 %		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0 %		
Herb Stratum			
1. *Eleocharis montevidensis*	5	No	FACW
2. *Festuca perennis*	50	Yes	FAC
3. *Avena barbata*	10	No	UPL
4. *Salsola tragus*	25	Yes	FACU
5. *Helminthotheca echioides*	10	No	FACU
6.			
7.			
8.			
Total Cover:	100 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0 %		

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

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 % (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- [X] Dominance Test is >50%
- [ ] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes (•) No ( )

Remarks: Hyrdrophytic vegetation present based on Festuca perennis to be facultative. Species occurs in both wet and dry environments but typically requires greater than 11 inches per rain annually. Given current drought conditions the species presence likely indicates that the area collects water in higher frequency/duration than surrounding area.

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2.5	10YR 3/3	100					CL	organic debris present
2.5-17	10YR 4/3	90	7.5YR 3/4	4	C	M	CL	6% gravel in sampled horizon

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

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

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

Indicators for Problematic Hydric Soils:[3]

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

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Hydric Soil Present? Yes ○ No ◉

Remarks:

Soils display signs of infrequent inundation and anaerobic condictions but are not hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ 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:

No apparent hydrology or drainage patterns within sample plot. Area is flat and collects water with evidence of clay hardpan occurring throughout the area. Water likely accumulates in low area due to gravel roads and the presence of paved parking area immediately to the south. Sampling conducted during dry season.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Carmel Valley Construction Yard City/County: San Diego, San Diego County Sampling Date: July 24, 2015

Applicant/Owner: San Diego Gas & Electric Company State: CA Sampling Point: 02

Investigator(s): Paul Morrissey Section, Township, Range: Sections 1 and 12 of Township 14S Range 3W

Landform (hillslope, terrace, etc.): mesa top Local relief (concave, convex, none): concave Slope (%): <1

Subregion (LRR): C - Mediterranean California Lat: 32.97900 Long: -117.14800 Datum: NAD-83

Soil Map Unit Name: Olivenhein Cobbly Loam 2 to 9 percent slopes NWI classification: None

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

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (•) No ( )

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

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

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

Remarks: Sampling point conducted within area adjacent to SP-01 approximately 1.5 feet from a gravel road.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acacia sp.*	15	Yes	Not Listed
2.			
3.			
4.			
Total Cover:	15 %		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0 %		
Herb Stratum			
1. *Bromus madritensis*	45	Yes	UPL
2. *Erodium sp.*	10	No	UPL
3. *Salsola tragus*	15	Yes	FACU
4. *Brassica sp.*	5	No	UPL
5.			
6.			
7.			
8.			
Total Cover:	75 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 15 % % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 % (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- Dominance Test is >50%
- Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ( ) No (•)

Remarks: Sampled point occurs within upland area.

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/4	95					CL	5% gravel in sampled horizon
2-18	10YR 4/4	90	7.5YR 5/8	4	C	M	CL	6% gravel in sampled horizon

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

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

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

Indicators for Problematic Hydric Soils:[3]

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

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

Restrictive Layer (if present):

Type: None

Depth (inches): NA

Hydric Soil Present? Yes ○ No ◉

Remarks:

Soils display signs of infrequent inundation and anaerobic condictions but are not hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ 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:

Area is flat and collects surface water after rain events with evidence of clay hardpan occurring throughout the area, no hydrological connectivity to any body of water in the area. Water likely accumulates in low area due to gravel roads and paved parking area. Sample conducted during dry season; however, survey was conducted one week after two heavy rain events.

ATTACHMENT B – FIGURES

Legend

- Carmel Valley Road Staging Yard
- Brow Ditch
- Soil Pit
- Non-jurisdictional Non-native Grassland

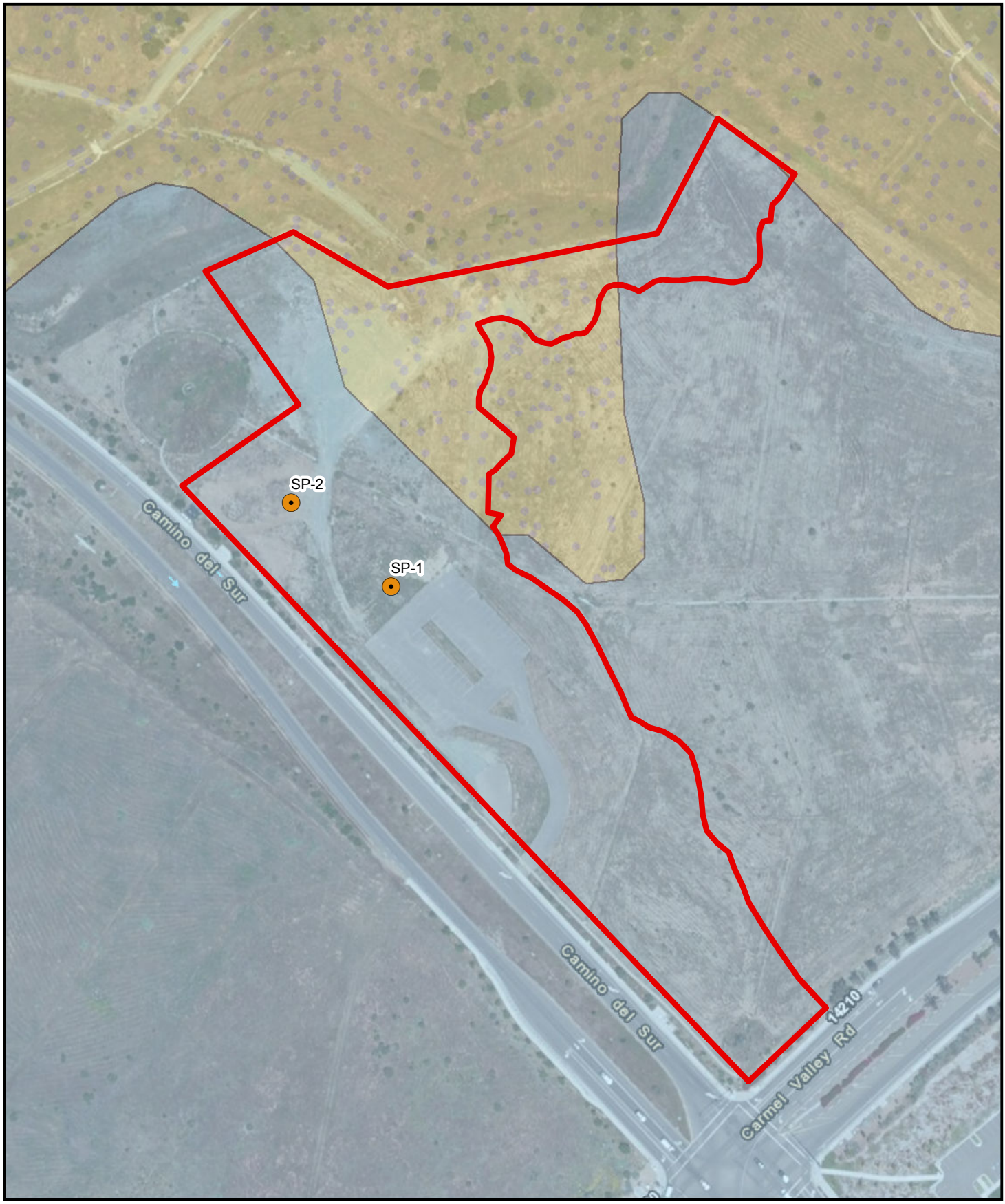
N

0 50 100 200
Feet

Figure 1
Delineation Results

Name: 20807 JD Fig 1 Srvy Results_.Mxd
Print Date: 7/29/2015, Author: msimmons

CHAMBERS GROUP



Legend

Carmel Valley Road Staging Yard

Soil Pit

SSURGO Soils Mapunit Name

Las Flores loamy fine sand, 9 to 15 percent slopes (Not Hydric)

Olivenhain cobbly loam, 2 to 9 percent slopes (Partially Hydric)

N

0 50 100 200

Feet

Name: 20807 JD Fig 2 Soils_.Mxd
Print Date: 7/29/2015, Author: msimmons

CHAMBERS GROUP

Figure 2
Soils Map

Legend

- Carmel Valley Road Staging Yard
- Soil Pit
- NWI Wetlands

N

0 100 200 400

Feet

Figure 3
NWI Map

Name: 20807 JD Fig 3 NWI.Mxd
Print Date: 7/31/2015, Author: msimmons

CHAMBERS GROUP

ATTACHMENT C – PHOTO PAGES

SITE PHOTOGRAPHS

Photo 1. Soil Pit 1, within the non-native grassland habitat comprised of Italian ryegrass, wild oat, Russian thistle, bristly oxtongue, and scattered native slender creeping spike-rush fringed by tamarisk.

Photo 2. Area immediately surrounding the non-native grassland at Soil Pit 1. Species include non-native Russian thistle, ragweed, filaree, fennel, wild oat, mustard, and red brome, artichoke thistle, crab grass, cheeseweed, and smooth cats ear.

Photo 3. Soil Pit 2. Vegetation appeared previously mowed as evidenced by lower vegetation height than that in the surrounding areas (typically less than 1 foot in height compared to surrounding areas up to 2-3 feet in height).

Photo 4. Brow ditches constructed within upland habitat within the Survey Area. These features are approximately 2-feet in width by 1 foot deep.

MEMO

To: Rob Fletcher, San Diego Gas & Electric

From: Paul Morrissey

Date: July 13, 2015

RE: Focused Surveys for the Carmel Valley Road Staging Yard

This memorandum provides a response for Question number 5 for the Energy Division Data Request 16 for the proposed San Diego Gas & Electric Company (SDG&E) Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project (Proposed Project), Application No. 14-04-011 pertaining to the inclusion of one new proposed staging yard. The proposed Carmel Valley Road Staging Yard (owned by the Poway Unified School District [PUSD]) is located near the intersection of Camino Del Sur and Carmel Valley Road within the City of San Diego, and was not previously evaluated within the existing Proposed Project Biological Survey Area (BSA).

Chambers Group Inc. surveyed the entire PUSD-owned property (Property) and a 50-foot buffer for vegetation and potential habitat conditions. The Property is approximately 25.5 acres in size and included mainly developed lands, disturbed habitat, and non-native grasslands. The specific vegetation cover for the Property is summarized in Table 1 and shown in Figure 1, Carmel Valley Road Staging Yard Vegetation Map.

Table 1: Vegetation Communities within the Property

Vegetation Communities	Acreage
Developed Lands	1.68
Disturbed Areas	6.54
Non-native grassland	17.07
Meadow Seep	0.23
Grand Total	**25.52**
*Acreages of individual vegetation communities are rounded to the nearest hundredth of an acre	

In compliance with the *SDG&E Subregional NCCP*, a potential staging yard area (Staging Yard) was identified within the Property that maximizes the utilization of non-sensitive habitat types, including developed land and disturbed habitat. The inclusion of this proposed Staging Yard (refer to Figure 1) is expected to result in a total of an additional 7.16 acres of temporary work area as a result of the Proposed Project. A summary of anticipated impacts to habitat by type within the proposed Staging Yard is included in Table 2. Geographic information system (GIS) data has also been provided for the Property, Staging Yard, and vegetation communities described herein.

Table 2: Anticipated Temporary Vegetation Communities Impacts

Vegetation Communities	Acreage
Disturbed Areas	5.96
Developed Lands	1.20
Grand Total	**7.16**
*Acreages of individual vegetation communities are rounded to the nearest hundredth of an acre	

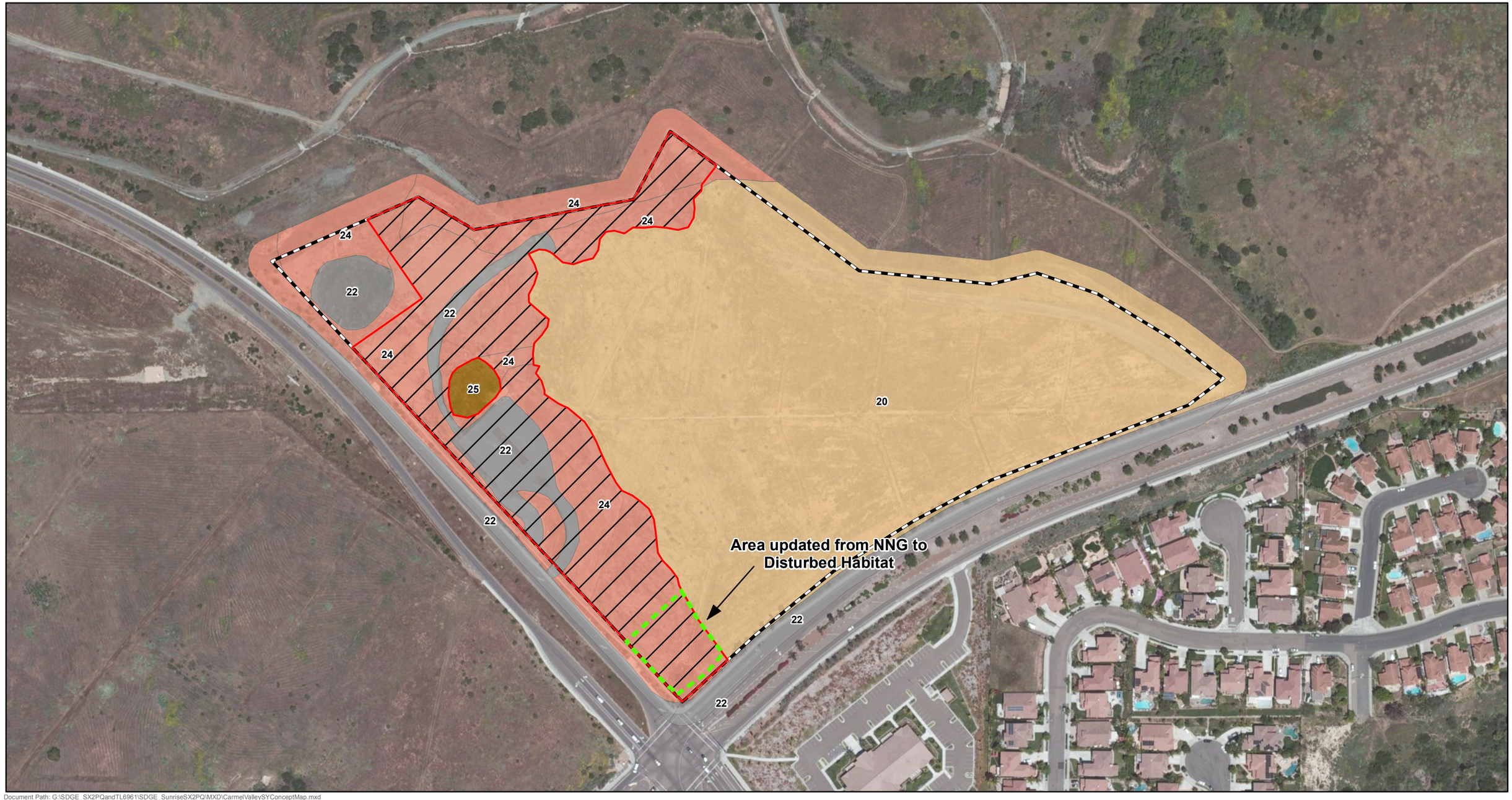
Depending upon the availability of property between the proposed Camino Del Sur and Carmel Valley Road Staging Yards at the time of construction, SDG&E may use the anticipated 2.6 acres assigned to the Camino Del Sur Staging Yard at the Carmel Valley Road site to either increase the usable size, or allow flexibility to work with the Property owner (PUSD) to use a different portion of the Property than the area included as SDG&E proposed Carmel Valley Road Staging Yard (as described in Table 2 and shown on Figure 1). Application of this 2.6 acres would allow use of the Property where non-native grassland is present. However, whether the 2.6 acres is applied to the Camino Del Sur or Carmel Valley Road sites, the total project impact area would not increase (i.e. 9.76 [7.16 plus 2.6]) acres of impacts.

Based on the results of the vegetation mapping and habitat assessments conducted in the Staging Yard and overall Property areas, it is anticipated that focused special-status plant species surveys and burrowing owl surveys will be required. SDG&E would limit any use of the Staging Yard and Property such that Project-related activities would remain at least 500 feet from riparian habitat that is located north and east of the Property (outside of the survey area).

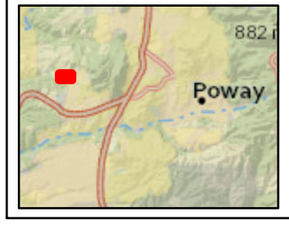
Four Wintering Burrowing Owl Surveys will be conducted between December and January 31, spaced evenly throughout the non-breeding surveys. The site and a 500 foot buffer will be surveyed a total of four times. The results of the surveys will be provided by February 15, 2016.

Focused plant surveys will be conducted during the appropriate blooming period when sensitive plant species would be conspicuous, once in July 2015 (fall species), once in April/May 2016, and once in June 2016. The results of the surveys will be provided on June 30, 2016. Any sensitive species identified during the survey effort will be mapped on an aerial image and GPS coordinates will be provided.

Two small, isolated, potential wet meadow/seep areas occur abutting one of the parking lots. A man-made detention basin also occurs in the northwest corner of the Property (refer to Figure 1). No impacts to these features are anticipated, as these areas will be fenced off for avoidance; therefore, a jurisdictional delineation survey was not conducted.



Document Path: G:\SDGE_SX2PQandTL6961\SDGE_SunriseSX2PQ\MXD\CarmelValleySYConceptMap.mxd



- Proposed Carmel Valley Road Staging Yard Boundary (Approx.)
- Property Boundary
- 20-Nonnative Grassland
- 22-Developed Lands
- 23-Ornamental
- 24-Disturbed Habitat
- 25-Meadow/Seep

SDG&E IS PROVIDING THIS MAP WITH THE UNDERSTANDING THAT IT IS NOT SURVEY GRADE

Sycamore to Peñasquitos 230kV Transmission Line Project

Carmel Valley Road Staging Yard

Figure 1

N W E S

0 160 320 480 Feet

7/17/2015

TRC

SDGE Sempra Energy utility

CHAMBERS GROUP

MEMO

To: Rob Fletcher
Environmental Specialist, Biologist
SDG&E Environmental Services
8315 Century Park Court, CP21E
San Diego, CA 92123

From: Chambers Group, Inc.
Date: 07/31/15
RE: Revised Habitat Mapping Memo regarding Energy Division Data Request #17 (Question 5 – Part 4) for the SX to PQ 230kV Transmission Line CPCN Project

Habitat Mapping Memorandum for the San Diego Gas & Electric Carmel Valley Staging Yard, Sycamore to Penasquitos 230 Kilovolt Transmission Line Project, San Diego County, California

This Habitat Mapping Memorandum (Memo) was prepared by Chambers Group, Inc. (Chambers Group) biologist Paul Morrissey as a response to the Energy Division Data Request #17 (Question 5 – Part 4) for the Sycamore to Penasquitos (SX to PQ) 230 Kilovolt (kV)Transmission Line Project (Proposed Project). This information is intended to supplement the information provided in the Biological Technical Report (BTR) prepared for the Proposed Project (BBS 2014a). For additional information pertaining to the biological resources associated with the Proposed Project, please refer to the BTR.

Study Area

San Diego Gas & Electric (SDG&E) plans to utilize the Carmel Valley Road Staging Yard (Study Area; formerly the Camino Del Sur Staging Yard) as part of the Proposed Project. The Study Area is situated on a mesa top at the northeast corner of the intersection of Carmel Valley Road and Camino Del Sur in the City of San Diego, in San Diego County. The Study Area evaluated during the vegetation and habitat mapping assessment included the final proposed limits of the Carmel Valley Staging Yard (approximately 6.84 acres) and the remainder of the approximately 25 acre property(Study Area) (Attachment A, Figure 1). Topographically, the Study Area is level.

Proposed Project activities within the Study Area would include the use of the area for an approximately 6 acre staging yard. The staging yard may be used for equipment and materials storage, placement of construction trailers and restroom facilities, equipment storage, materials laydown, and helicopter flight operations. Following completion of the Proposed Project, all materials, equipment, and rock base would be removed, soils would be de-compacted and stabilized, and all BMPs would be removed after closeout of applicable portions of the Proposed Project Stormwater Pollution and Prevention Plan (SWPPP).

Vegetation Mapping

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 Study Area 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.

Past and Present Land Use

Historical aerials of the site were reviewed from 1953 to present day. Prior to 1996, the site was undeveloped and appears as non-native grassland potentially used for grazing. Sometime between 1996 and 2002, the site was extensively graded for development. By 2002 the existing parking lot, driveway and constructed brow ditches appear on aerials. Since 2002 the Study Area has been used for material storage.

Preliminary Site Visit and Vegetation Mapping

A habitat assessment within the Study Area on June 4 and June 11, 2015 (refer to the Response to ED Data Request 16, Attachment ED17 – Q5 dated July 13, 2015). The site visit included a pedestrian survey of the Study Area. Plant communities within the Survey Area were identified, qualitatively described, and mapped onto high resolution aerial photographs. Vegetation communities were classified according to those described within the *SDG&E Subregional Natural Communities Conservation Plan* (NCCP). The 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 Study Area were identified according to the estimated percent cover of the combination of dominant plant species observed relative to the list of dominant species for a given Holland vegetation community. Within the Study Area, three vegetation communities/land use types were identified, including: developed lands, non-native grasslands, and disturbed habitat. During a previous survey conducted in June 2015, a small area approximately 0.13 acre in size within the Study Area was misidentified as a meadow/seep (Holland Code 45400). This "meadow/seep area" is surrounded to the south by a developed asphalt parking pad, to the west by a gravel road, and to the north and east by disturbed upland habitat.

Meadow/seeps, a NCCP-vegetation classification, are composed of annual and perennial herbs, including wildflowers and bulbs such as mariposa lily (*Calochortus* spp.), lupine (*Lupinus* spp.), and bluedicks (*Dichelostemma capitatum*). Where meadow/seeps occur, groundwater keeps the soil moist longer than the surrounding uplands, and vegetation often includes rushes (*Carex* spp.), spike rushes (*Eleocharis* spp.) and other plants typically associated with moist or wet areas. Meadow/seeps are located on slopes or at the base of slopes.

This habitat was not identified as a meadow/seep area based on the recent July 24, 2015 jurisdictional delineation survey effort. This area was delineated on July 24, 2015 by Chambers Group biologist Paul Morrissey and SDG&E Environmental Specialist Tamara Spear. Species identified within this area include: non-native Italian ryegrass (*Festuca perennis*; Facultative (FAC) species), wild oat (*Avena barbata*; Upland (UPL) species) fringed by tamarisk (*Tamarix* sp.; FAC), Russian thistle (*Salsola tragus*), bristly oxtongue (*Helminthotheca echiloides*; Facultative Upland (FACU) species), and scattered native

slender creeping spike-rush (*Eleocharis montevidensis*; Facultative wet (FACW) species). This area also hosted one small pepper tree (*Schinus molle*) and is predominantly surrounded by Russian thistle (Attachment B, Photos). The slender creeping spike-rush and the non-native tamarisk each comprised approximately 10 percent within this vegetation community. The non-native Italian ryegrass comprised approximately 50 percent of the area, and occurs in both wet and dry environments. Although collectively these species pass the dominance test for hydrophytic vegetation for this location, the Italian ryegrass is the dominant species and is typically found in non-native grassland communities. Based on the results of the delineation, no water features potentially under federal or state jurisdiction were identified within the Study Area. Based on the topography, lack of hydrologic connectivity, and existing conditions of the surrounding area, this small 0.13 acre area has been re-classified as non-native grassland.

In addition, during the habitat assessment of the Study Area, vegetation was updated for an approximately 0.5 acre area located at the corner of Carmel Valley Road and Camino Del Sur (refer to Attachment ED16 – Q5). The areas mapped as disturbed habitat within the proposed Carmel Valley Road Staging Yard (including the area changed from non-native grassland) were characterized by heavily disturbed and previously graded areas intersperse with developed and paved areas. Soils within the yard exhibit various levels of disturbance ranging from tire tracks, scattered rip-rap, man-made surface water control systems, and gravel/crushed rock base. Vegetation appeared previously mowed within disturbed areas as evidenced by lower vegetation height than that in the surrounding areas (typically less than 1 foot in height compared to surrounding areas up to 2-3 feet in height). Dominant plant species observed to occur within these areas included Russian thistle, ragweed (*Ambrosia psilostachya*), filaree (*Erodium cicutarium*), fennel (*Foeniculum vulgare*), wild oat, mustard (*Heirshfeldia* sp.), and red brome (*Bromus madritensis*). Sub-dominant species occurring occasional throughout the yard included artichoke thistle (*Cynara cardunculus*), crab grass (*Digitaria* sp.), cheeseweed (*Malva parviflora*), smooth cats ear (*Hypochaeris glabra*), and salt cedar (*Tamarix* sp.). Occasional native species such as coyote bush (*Baccharis pilularis*) and needle grass (*Stipa* sp.) occur, primarily within small fragmented patches immediately adjacent to the paved areas, possibly due to previous landscaping as they are intermixed with non-native wattle trees (*Acacia* sp.).

CONCLUSION

The survey effort resulted in the determination that the Study Area does not contain meadow/seep vegetation. The Study Area includes developed and disturbed areas and non-native grassland vegetation.

Depending upon the availability of property between the proposed Camino Del Sur and Carmel Valley Road Staging Yards at the time of construction, SDG&E may use all, or a portion of, the anticipated 2.6 acres assigned to the Camino Del Sur Staging Yard at the Carmel Valley Road site to either increase the usable size, or allow flexibility to work with the Property owner (PUSD) to use a different portion of the Property than the area included as SDG&E proposed Carmel Valley Road Staging Yard (as shown on Figure 1). Application of this 2.6 acres would allow use of the Property where non-native grassland is present.

If you have any questions regarding this internal memo, please feel free to contact me at (949) 261-5414 extension 7288 or at pmorrissey@chambersgroupinc.com.

Respectfully submitted,

Paul Morrissey
Director of Biology
Chambers Group, Inc.

Attachments
Attachment A: Project Figure
Attachment B: Site Photos

ATTACHMENT A – twhW9/¢ FIGURE

Legend

- Carmel Valley Road Staging Yard (Approx.)
- Property Boundary

Vegetation Community (Acres in Staging Yard)

- Disturbed (6.05 acre)
- Developed (1.18 acres)
- Non-Native Grassland (0.16 acres)
- Ornamental Landscaping
- Valley Needlegrass Grassland

Figure 1
Vegetation Communities

Name: 20807 HAB Fig 1 Veg Comm.Mxd
Print Date: 7/31/2015, Author: msimmons

CHAMBERS GROUP

ATTACHMENT B – PHOTO PAGES

SITE PHOTOGRAPHS

Photo 1. Soil investigation within the non-native grassland habitat comprised of Italian ryegrass, wild oat, Russian thistle, bristly oxtongue, and scattered native slender creeping spike-rush fringed by tamarisk.

Photo 2. Area immediately surrounding the non-native grassland (green vegetation area) within the proposed Staging Yard. Species include non-native Russian thistle, ragweed, filaree, fennel, wild oat, mustard, and red brome, artichoke thistle, crab grass, cheeseweed, and smooth cats ear.

	Photo 3. Vegetation appeared previously mowed as evidenced by lower vegetation height than that in the surrounding areas, and disturbed by tire tracks and other human disturbances.
	Photo 4. Example of the non-native grassland outside of the proposed Carmel Valley Road Staging Yard.

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

Prepared For: **TRC Solutions, Inc.**
123 Technology Drive
Irvine, CA 92618
Contact: Mr. Joshua Taylor

Prepared By: **Environmental Intelligence, LLC**
1590 South Coast Highway, Suite 17
Laguna Beach, CA 92651
Contact: Mr. Stephen Reynolds

Date: April 2014

TABLE OF CONTENTS

EXECUTIVE SUMMARY 5
1.0 INTRODUCTION 7
1.1 Project Overview 7
2.0 REGULATORY FRAMEWORK 7
2.1 U.S. Army Corps of Engineers 7
2.1.1 Waters of the United States (WoUS) 7
2.1.2 Wetland Waters of the US 9
2.1.3 Extent of Jurisdiction 9
2.1.3.1 Solid Waste Agency of Northern Cook County (SWANCC) v. USACE 9
2.1.3.2 Rapanos v. United States and Carabell v. USACE 10
2.1.3.3 Vernal Pools 11
2.2 State Water Resources Control Board/ Regional Water Quality Control Board 11
2.2.1 Section 401 of the Clean Water Act 11
2.2.2 Porter-Cologne Act and Waters of the State 11
2.3 California Department of Fish and Wildlife 11
2.4 California Coastal Commission 12
3.0 METHODS 12
4.0 RESULTS 13
4.1 Topography and Hydrology 13
4.2 Land use 14
4.3 Hydric Soils 14
4.4 Areas of Potential Jurisdiction 14
4.4.1 Feature 1: Peñasquitos Substation 14
4.4.2 Feature 2: Tributary to Peñasquitos Creek 1 14
4.4.3 Feature 3: Tributary to Peñasquitos Creek 2 15
4.4.4 Feature 4: Tributary to Peñasquitos Creek 3 16
4.4.5 Feature 5: Tributary to Peñasquitos Creek 4 16
4.4.6 Feature 6: Tributary to Peñasquitos Creek 5 17
4.4.7 Feature 7: Tributary to Peñasquitos Creek 6 18
4.4.8 Feature 8: Tributary to Peñasquitos Creek 7 18
4.4.9 Feature 9: Tributary to Peñasquitos Creek 8 19
4.4.10 Feature 10: Tributary to Peñasquitos Creek 9 20
4.4.11 Feature 11: Tributary to Deer Canyon 1 20
4.4.12 Feature 12: Tributary to Deer Canyon 2 21
4.4.13 Feature 13: Deer Canyon Creek 22
4.4.14 Feature 14: Tributary to Deer Canyon 3 22
4.4.15 Feature 15: McGonigle Canyon Creek 23
4.4.16 Feature 16: Tributary to McGonigle Canyon Creek 1 24
4.4.17 Feature 17: Tributary to McGonigle Canyon Creek 2 24
4.4.18 Feature 18: Tributary to McGonigle Canyon Creek 3 25
4.4.19 Feature 19: Tributary to McGonigle Canyon Creek 4 26
4.4.20 Feature 20: Tributary to La Zanja Canyon 1 26
4.4.21 Feature 21: Tributary to La Zanja Canyon 2 27
4.4.22 Feature 22: Tributary to McGonigle Canyon Creek 5 28
4.4.23 Feature 23: Black Mountain Features 28
4.4.24 Feature 24: Los Peñasquitos Mesa Features 1 29
4.4.25 Feature 25: Los Peñasquitos Mesa Features 2 30
4.4.26 Feature 26: Los Peñasquitos Mesa Features 3 30
4.4.27 Feature 27: Tributary to Peñasquitos Creek 10 31
4.4.28 Feature 28: Los Peñasquitos Creek 31
4.4.29 Feature 29: Tributary to Peñasquitos Creek 11 32
4.4.30 Feature 30: Cypress Canyon Feature 1 33
4.4.31 Feature 31: Cypress Canyon Feature 2 34
4.4.32 Feature 32: Tributary to Beeler Creek 1 34

4.4.33 Feature 33: Tributary to Beeler Creek 2....35
4.5 Vernal Pools....35
4.5.1 Feature 34: Vernal Pool Complex 1....35
4.5.2 Feature 35: Vernal Pool Complex 2....36
4.5.3 Feature 36: Vernal Pool Complex 3....36
4.5.4 Feature 37: Road Ruts....37
4.6 Staging Areas....37
4.6.1 Stowe Staging Yard....37
4.6.2 Stonebridge Staging Yard....37
4.6.3 Torrey Santa Fe Staging Yard....37
4.7 Summary of Potential Jurisdiction....38
4.7.1 USACE Jurisdiction....38
4.7.2 RWQCB Jurisdiction....40
4.7.3 CDFW Jurisdiction....43
4.7.4 CCC Jurisdiction....45
5.0 CONCLUSIONS....45
6.0 LITERATURE CITED....46

TABLES

Table ES-01: Summary of Total Jurisdiction by Regulatory Agency 6
Table 1: Summary of USACE Jurisdiction.....39
Table 2: Summary of RWQCB Jurisdiction 41
Table 3: Summary of CDFW Jurisdiction 44
Table 4: Summary of CCC Jurisdiction.....45

EXHIBITS

EXHIBIT 1: PROJECT VICINITY AND OVERVIEW
EXHIBIT 2: JURISDICTIONAL DELINEATION RESULTS

APPENDICES

A. WETLANDS DATA SHEETS
B. SOILS DESCRIPTIONS
C. SITE PHOTOGRAPHS

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 Resource s 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[1]										
				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[2]	Non-native Upland Habitat[3]	Other[4]
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[5]	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[6]	NA	103.25	NA	**	**	**	**	**	**	**	**	**	**	**

[1] From Biological Technical Report for the Sycamore to Peñasquitos 230 kV Transmission Line Project, Dated March 2014 prepared by Busby Biological Services Inc..
[2] 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
[3] Includes Eucalyptus Woodland, Nonnative Grassland, and Tamarisk Scrub
[4] Includes Bare Ground, Developed Lands, Disturbed Habitat, and Ornamental
[5] Excludes 1.84 acres (29,493 linear feet) of RWQCB exempt, MS4 erosion control V-ditches
[6] 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 course 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 1are 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 OHWM.

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 gooddingiii,* 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 though 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 gasses 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 partial surveyed due 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
	Total	**4.06**	**5.15**	**9.21**	**43,952**

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
Total		**4.19**	**5.15**	**9.34**	**47,430**	**1.84**	**29,493**

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
	Total	**2.88**	**12.04**	**14.92**	**43,953**

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
Wetlands		
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
Total Wetlands	**1.66**	**9,396**
Environmentally Sensitive Habitat Areas		
Total ESHA	**110.85**	**NA**

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

Bing, 2013. Aerial as taken: March, 2011. Online.

Busby Biological Services Inc., 2014. Biological Technical Report for the Sycamore to Peñasquitos 230 kV Transmission Line Project.

California Resources Agency. 1969. Porter-Cologne Water Quality Control Act. California Water Code, Section 13000 et seq.: "Water Quality."

Google, 2013. Aerial as taken: November, 2003 through January, 2013. Online.

Environmental Law Institute. 2007 The Clean Water Act Jurisdictional Handbook. 2007 Edition. Washington D.C.

Federal Register. 2002. Vol. 67, No. 10 Tuesday, January 15, 2002.

Keeler-Wolf, T, DR Elam, K Lewis, and SA Flint. 1998. California Vernal Pool Assessment Preliminary Report. Prepared for State of California Department of Fish and Game.

Lichvar, R.W. 2013. The National Wetland Plant List: 2013 wetland ratings. Phytoneuron 2013-49: 1–241.Published17 July 2013. ISSN 2153 733X

NRCS (Natural Resources Conservation Service). 2013a. *Web Soil Survey*. Online. http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.

NRCS (Natural Resources Conservation Services). 2013b. *National List of Hydric Soils*. Online. http://soils.usda.gov/use/hydric/.

Reed, P.B., Jr. 1988. National list of plant species that occur in wetlands: national summary. U.S. Fish Hildl. Serv. Biol. Rep. 88(24). 244 pp

USACE (U.S. Army Corps of Engineers). 1987. USACE of Engineers Wetlands Delineation Manual. U.S. Army Corps of Engineers Waterways Experiment Station. Vicksburg, MS.

USACE (U.S. Army Corps of Engineers). 1997. Indicator Species for Vernal Pools. In: Special Public Notice, Regional General Conditions to Nationwide Permits, November 25, 1997. Prepared by the Los Angeles District, Regulatory Branch. November 1997.

USACE (U.S. Army Corps of Engineers). 2008a. Regional Supplement to the USACE of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

USACE (U.S. Army Corps of Engineers). 2008b. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States, R. W. Lichvar, and S. M. McColley. ERDC/ CRREL TR-08-12. Hanover, NH: U.S. Army Engineer Research and Development Center.

USEPA (U.S. Environmental Protection Agency). 2008. Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States.

USFWS (United States Fish and Wildlife Service). 2013a. National Wetlands Inventory Mapper Application. Online. Accessed September 2013.

USFWS (United States Fish and Wildlife Service). 2013b. Threatened and Endangered Species Occurrence Data. Online. Accessed November 2013.

Wilson, Craig M. January 25, 2001. Memo addressed to the State Board Members and Regional Board Executive Officers.

Zedler, P.H. 1987. The Ecology of Southern California Vernal Pools: A Community Profile. U.S. Fish and Wildlife Service. Biological Report 85(7.11).

SOURCE: ESRI 2012, AEX 2010

SX to PQ Survey Corridor

Environmental Intelligence. Date: 3/25/2014. Q:\TRC\SDG&E SX to PQ\05_GIS_Data\maps\workspace\2013\JDReport\Exhibit_1_Vicinity_EI01_20131011.mx

Exhibit 1: Project Vicinity and Overview

SDG&E - SX to PQ | San Diego County, CA

N W E S

0 2,500 5,000 10,000 Feet

Peñasquitos Substation

Vernal Pool 1

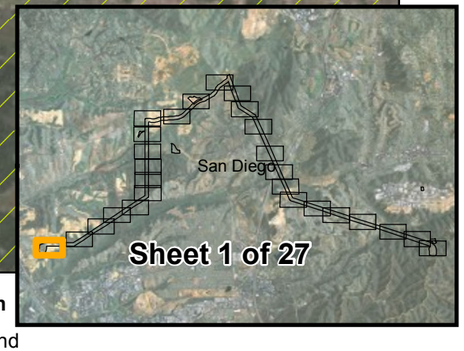
1

2

3

4

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 Juridiction
- 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

N W E S

0 155 310 620 Feet

Exhibit 2: Delineation Results, Sheet 1 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

Tributary to Peñasquitos Creek 4

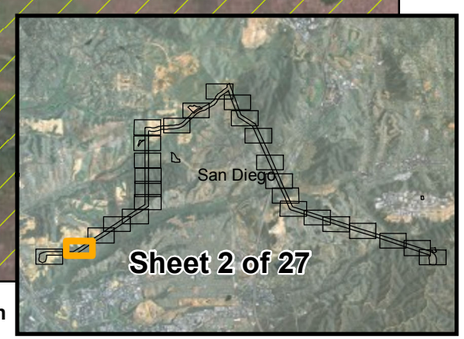
Tributary to Peñasquitos Creek 2

Tributary to Peñasquitos Creek 3

Tributary to Peñasquitos Creek 1

13
11
12
10
9
8
7
5
6
93

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 Juridiction
- 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 2 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

Vernal Pools 2

Tributary to Peñasquitos Creek 5

Tributary to Peñasquitos Creek 5

Tributary to Peñasquitos Creek 5

20
21
16
17
15
14
13

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 Juridiction
- 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

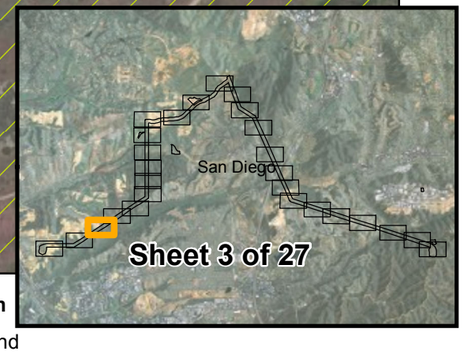


Exhibit 2: Delineation Results, Sheet 3 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

Environmental Intelligence. Date: 3/25/2014. Q:\TRC\SDG&E SX to PQ\05_GIS_Data\mapsworkspace\2013\JDReport\Exhibit_2_JD_FDS_20140311.mxd

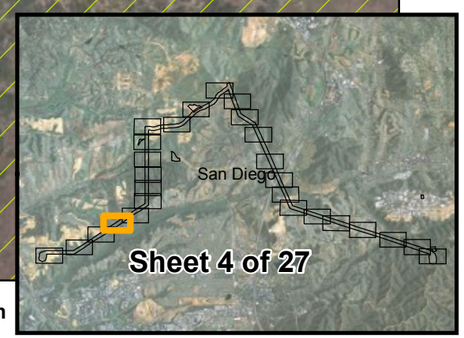
Tributary to Peñasquitos Creek 7

Tributary to Peñasquitos Creek 6

Vernal Pools 2

22
19
18
20
21

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 Juridiction
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 4 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

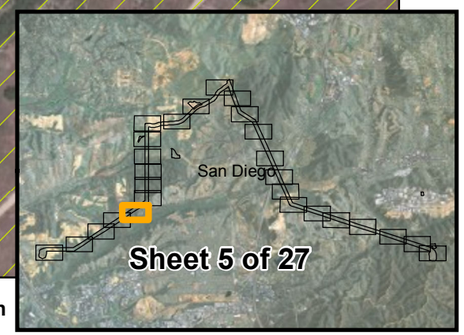
Tributary to Peñasquitos Creek 8

Tributary to Peñasquitos Creek 7

Tributary to Peñasquitos Creek 7

22 23 24 25 26 27 28 32

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 Juridiction
- 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 5 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

Tributary to Peñasquitos Creek 9

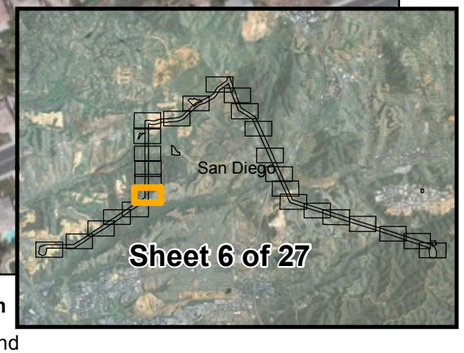
30

31

Tributary to Peñasquitos Creek 9

32

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 Juridiction
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 6 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

Tributary to Deer Canyon 1

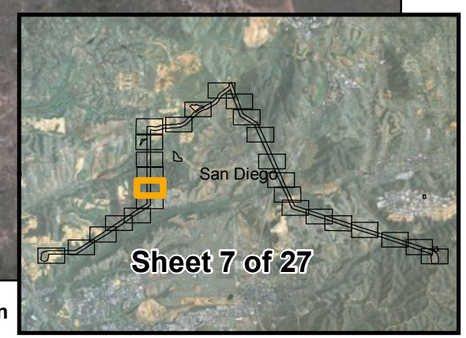
91

36

35

29

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 Juridiction
- 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 7 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

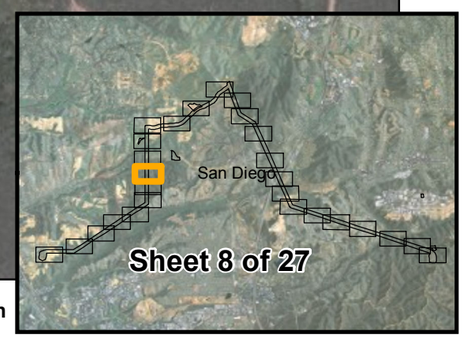
0 155 310 620 Feet

Tributary to Deer Canyon 2

Vernal Pools 3

Tributary to Deer Canyon 1

33
34
38
39
37
91



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 Juridiction
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

N
W
E
S
0 155 310 620 Feet

Exhibit 2: Delineation Results, Sheet 8 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

95
92
44
46
45
47
48
Tributary to Deer Canyon 3
Deer Canyon Creek
San Diego
Sheet 9 of 27

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 Juridiction
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 9 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

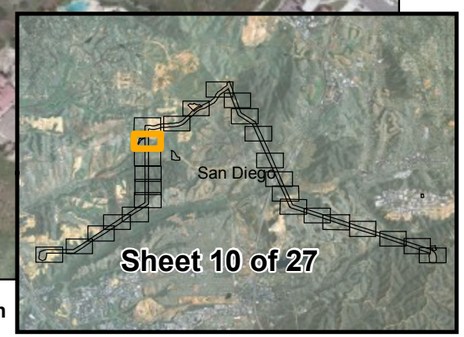
N W E S
0 155 310 620 Feet

Environmental Intelligence. Date: 3/25/2014 Q:\TRC\SDG&E SX to PQ\05_GIS_Data\mapsworkspace\2013JDReport\Exhibit_2_JD_EI06_20140311.mxd

Tributary to McGonigle Canyon Creek 1

McGonigle Canyon Creek

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 Juridiction
- 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 10 of 27

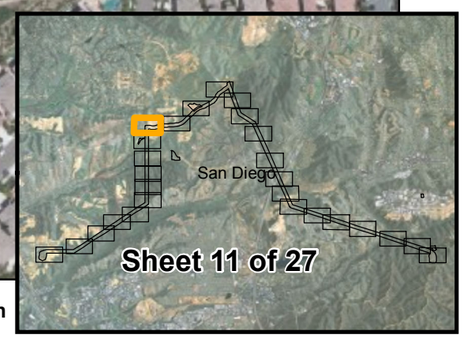
SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

Environmental Intelligence. Date: 3/25/2014. Q:\TRC\SDG&E SX to PQ\05_GIS_Data\maps\workspace\2013\JDReport\Exhibit_2_JD_EI06_20140311.mxd

94



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 Juridiction
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

N W E S

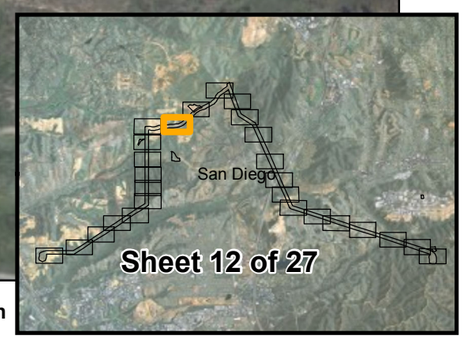
0 155 310 620 Feet

Environmental Intelligence. Date: 3/25/2014. Q:\TRC\SDG&E SX to PQ\05_GIS_Data\maps\workspace\2013\JDReport\Exhibit_2_JD_EI06_20140311.mxd

Tributary to McGonigle Canyon Creek 2

Tributary to McGonigle Canyon Creek 3

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 Juridiction
- 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 12 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

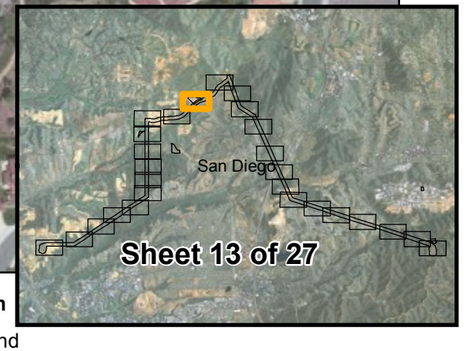
Tributary to La Zanja Canyon 1

59

96

Tributary to McGonigle Canyon Creek 4

58



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 Juridiction
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

N
W
E
S
0 155 310 620
Feet

Exhibit 2: Delineation Results, Sheet 13 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

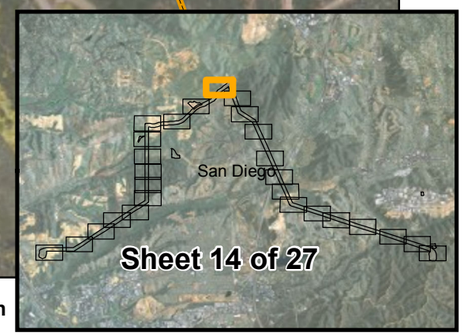
Environmental Intelligence. Date: 3/25/2014. Q:\TRC\SDG&E SX to PQ\05_GIS_Data\maps\workspace\2013\JDReport\Exhibit_2_JD_EI06_20140311.mxd

Tributary to La Zanja Canyon 2

Tributary to La Zanja Canyon 1

60 61 62 63 64

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 Juridiction
- 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 14 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

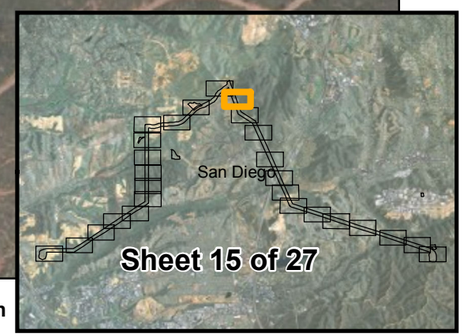
65

66

98

Tributary to McGonigle Canyon Creek 5

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 Juridiction
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 15 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

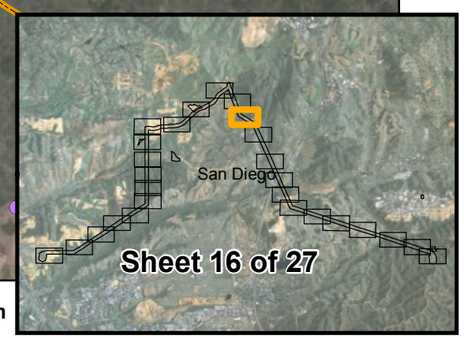
Environmental Intelligence. Date: 3/25/2014. Q:\TRC\SDG&E SX to PQ\05_GIS_Data\maps\workspace\2013\JDReport\Exhibit_2_JD_EI06_20140311.mxd

68

67

99

Black Mountain Features



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 Juridiction
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 16 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N
W E
S

0 155 310 620 Feet

Environmental Intelligence. Date: 3/25/2014. Q:\TRC\SDG&E SX to PQ\05_GIS_Data\maps\workspace\2013\JDReport\Exhibit_2_JD_EI06_20140311.mxd

Black Mountain Features

Los Peñasquitos Mesa Features 1

69

70

San Diego

Sheet 17 of 27

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 Juridiction
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

N
W
E
S

0 155 310 620 Feet

Exhibit 2: Delineation Results, Sheet 17 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

Environmental Intelligence, Date: 3/25/2014. Q:\TRC\SDG&E SX to PQ\05_GIS_Data\maps\workspace\2013\JDReport\Exhibit_2_JD_EI06_20140311.mxd

Los Peñasquitos Mesa Features 2

71

San Diego

Sheet 18 of 27

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 Juridiction
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 18 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

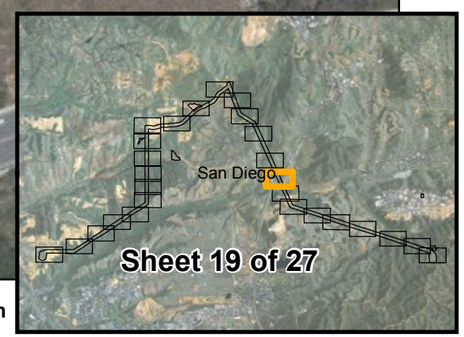
N W E S

0 155 310 620 Feet

7

72

Los Peñasquitos Mesa
Features 3



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 Juridiction
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 19 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N
W
E
S
0 155 310 620 Feet

Los Peñasquitos Creek

76

75

74

Tributary to Peñasquitos Creek 10

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 Juridiction
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 20 of 27

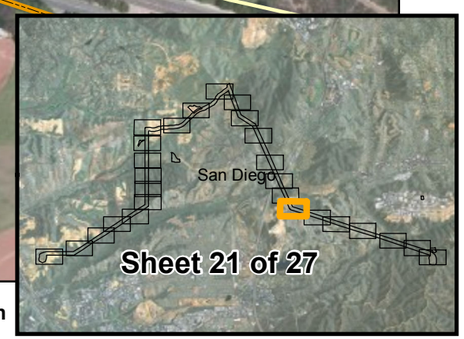
SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N
W
E
S

0 155 310 620 Feet

Tributary to Peñasquitos Creek 10

Tributary to Peñasquitos Creek 10



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 Juridiction
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 21 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

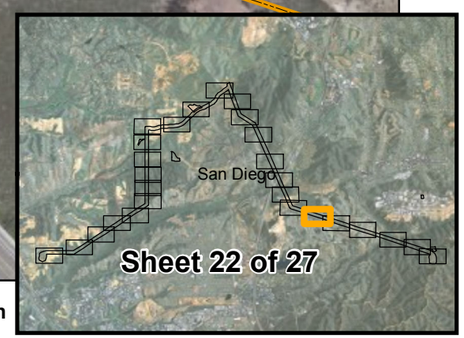
0 155 310 620 Feet

Environmental Intelligence. Date: 3/25/2014. Q:\TRC\SDG&E SX to PQ\05_GIS_Data\maps\workspace\2013\JDReport\Exhibit_2_JD_EI06_20140311.mxd

Tributary to Peñasquitos Creek 10

77

Tributary to Peñasquitos Creek 11



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 Juridiction
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

N
W
E
S
0 155 310 620 Feet

Exhibit 2: Delineation Results, Sheet 22 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

78

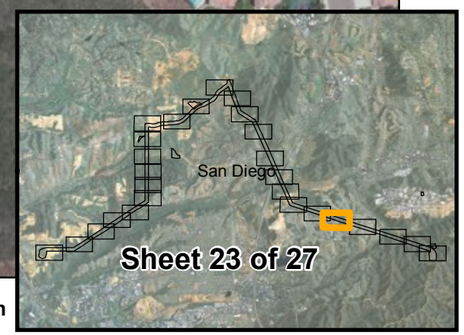
77

8

Tributary to Peñasquitos Creek 11

Tributary to Peñasquitos Creek 11

79



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 Juridiction
- 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 23 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

Cypress Canyon Feature 1

Cypress Canyon Feature 1

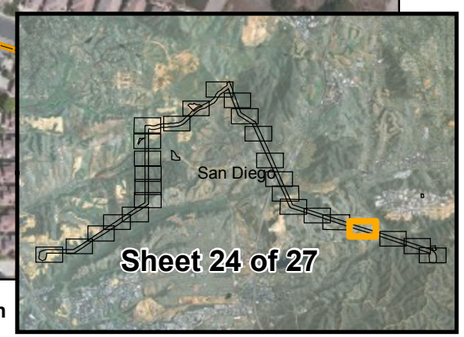
Cypress Canyon Feature 2

80

81

82

83



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 Juridiction
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

N
W
E
S

0 155 310 620 Feet

Exhibit 2: Delineation Results, Sheet 24 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

Tributary to Beeler Creek 1

84

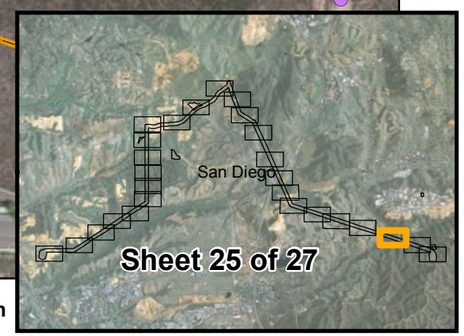
86

Tributary to Beeler Creek 1

85

Tributary to Beeler Creek 1

87



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 Juridiction
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 25 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

Environmental Intelligence. Date: 3/25/2014. Q:\TRC\SDG&E SX to PQ\05_GIS_Data\maps\workspace\2013\JDReport\Exhibit_2_JD_EI06_20140311.mxd

Tributary to Beeler Creek 2

88

89

90

Tributary to Beeler Creek 2

San Diego

Sheet 26 of 27

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 Juridiction
- CDFW Unvegetated Streambed
- CDFW Riparian

RWQCB Jurisdiction Only
- Isolated Waters of the State
- Isolated Wetland Waters of the State
- V-ditch (exempt)

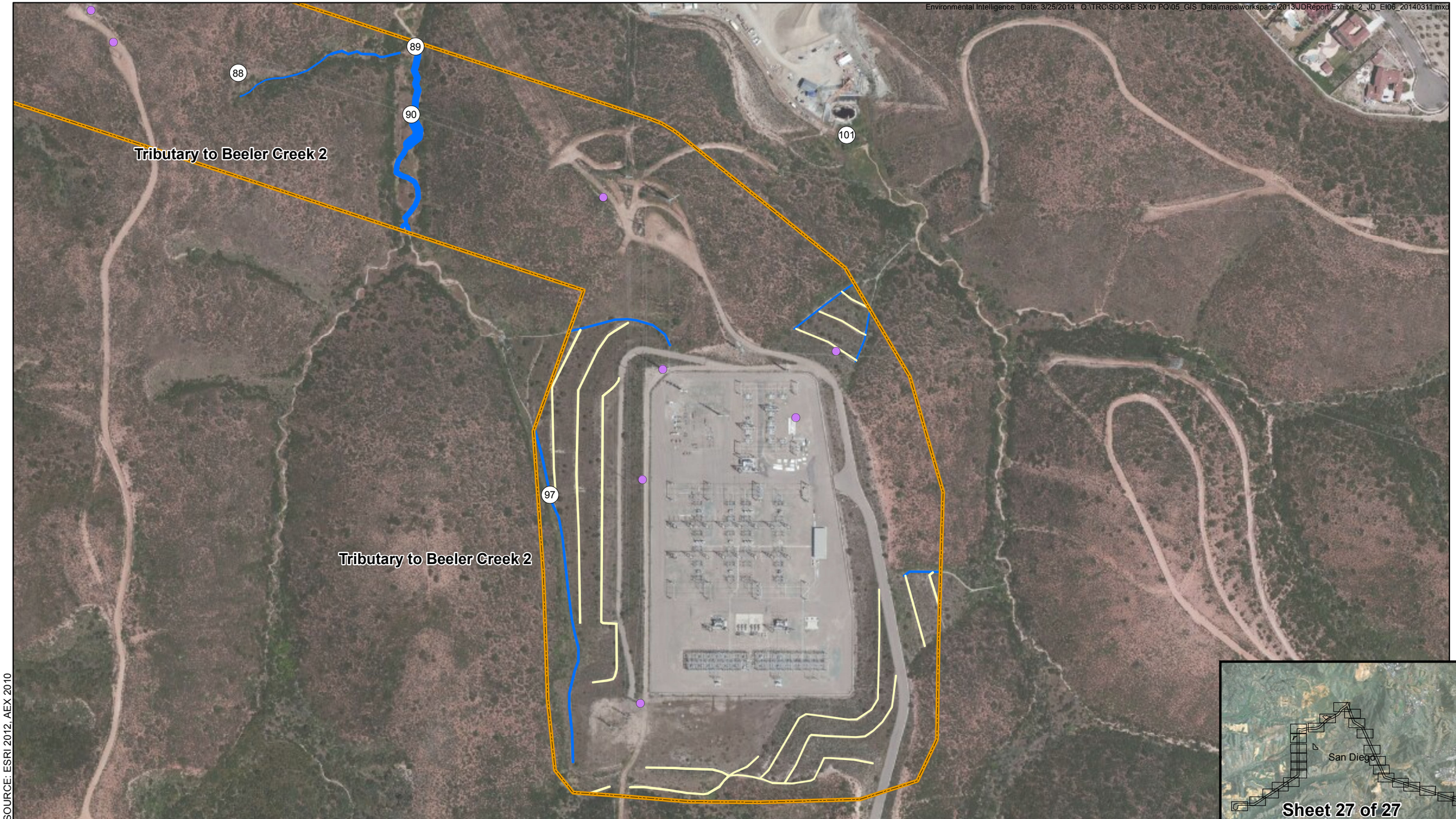
CCC Jurisdiction
- CCC Wetland
- ESHA

N W E S

0 155 310 620 Feet

Exhibit 2: Delineation Results, Sheet 26 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 Juridiction
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 27 of 27

SDG&E - Sycamore to Peñasquitos | San Diego County, CA

N W E S

0 155 310 620 Feet

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix gooddingii	40	Y	FACW
2.			
3.			
4.			
	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Schoenoplectus maritimus	30	Y	OBL
2. Baccharis salicifolia	10	Y	FAC
3.			
4.			
5.			
	40	= Total Cover	
Herb Stratum (Plot size: 10x10)			
1. Gnaphalium californicum	20	Y	UPL
2. Schoenoplectus maritimus	5	Y	OBL
3.			
4.			
5.			
6.			
7.			
8.			
	25	= Total Cover	
Woody Vine Stratum (Plot size: 10x10)			
1. NA			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 75 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: 1

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

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

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ✔ No ___

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 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 ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10x10)			
1. NA			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 10x10)			
1. Iva sp.	10	N	FACW
2. Juncus acutus	70	Y	OBL
3.			
4.			
5.			
6.			
7.			
8.			
	80	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1. NA			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 1 (B)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: _____

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

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

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 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, Towship 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 ✔ No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔ No _____	
Wetland Hydrology Present?	Yes ✔ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix laevigata	20	Y	FACW
2. Salix gooddingii	15	Y	FACW
3.			
4.			
	35 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Typha angustifolia	50	Y	OBL
2.			
3.			
4.			
5.			
	50 = Total Cover		
Herb Stratum (Plot size: 10x10)			
1. Baccharis salicifolia	10	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10 = Total Cover		
Woody Vine Stratum (Plot size: 10x10)			
1.			
2.			
	_____ = Total Cover		

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: _____

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

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

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 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 ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Typha latifolia	80	Y	OBL
2. Baccharis salicifolia	20	Y	FACW
3.			
4.			
5.			
	100 = Total Cover		
Herb Stratum (Plot size: 10x10)			
1. NA			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0 = Total Cover		
Woody Vine Stratum (Plot size: 10x10)			
1. NA			
2.			
	0 = Total Cover		

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

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: 4

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

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

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ✔ No ___ Depth (inches): 3

Water Table Present? Yes ✔ No ___ Depth (inches): 3

Saturation Present? (includes capillary fringe) Yes ✔ No ___ Depth (inches): to surface

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: 09/26/2013

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

Investigator(s): TK, MM Section, Township, Range: Section 11, Towship 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 ✔ No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔ No _____	
Wetland Hydrology Present?	Yes ✔ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Typha angustifolia	50	Y	OBL
2.			
3.			
4.			
5.			
	50 = Total Cover		
Herb Stratum (Plot size: 10x10)			
1. Atriplex prostrata	25	Y	FACW
2. Pluchea odorata	10	Y	FACW
3. Apium sp.	10	Y	UPL
4.			
5.			
6.			
7.			
8.			
	45 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 55 % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: 5

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

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

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

Water Table Present? Yes ✔ No ___ Depth (inches): 16

Saturation Present? (includes capillary fringe) Yes ✔ No ___ Depth (inches): 16

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: 09/26/2013

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

Investigator(s): TK, MM Section, Township, Range: Section 11, Towship 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 ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Eucalyptus globulus	40	Y	UPL
2. Salix lasiolepis	10	N	FACW
3. Baccharis salicifolia	10	N	FAC
4.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Baccharis salicifolia	15	Y	FAC
2. Schoenoplectus maritimus	5	Y	OBL
3. Rhus ovata	5	Y	UPL
4.			
5.			
	25	= Total Cover	
Herb Stratum (Plot size: 10x10)			
1. NA			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0	= Total Cover	
Woody Vine Stratum (Plot size: 10x10)			
1. NA			
2.			
	0	= Total Cover	

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	10	x 2 =	20
FAC species	25	x 3 =	75
FACU species	0	x 4 =	0
UPL species	45	x 5 =	225
Column Totals:	85 (A)		325 (B)

Prevalence Index = B/A = 3.8

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: _____

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

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

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ✔ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 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 ✔	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5x10)			
1. Typha latifolia	60	Y	OBL
2. Baccharis salicifolia	10	N	FAC
3.			
4.			
5.			
	70	= Total Cover	
Herb Stratum (Plot size: 5x10)			
1. Juncus xiphioides	4	N	OBL
2. Cyperus sp.	1	N	FACW*
3.			
4.			
5.			
6.			
7.			
8.			
	5	= Total Cover	
Woody Vine Stratum (Plot size: 5x10)			
1. NA			
2.			
	0	= Total Cover	

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

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 1 (B)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

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 Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/1	100					Sandy Loar	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: Dense cobbles

Depth (inches): 12

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): 2

Saturation Present? (includes capillary fringe) Yes ✔ No ___ Depth (inches): to surface

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: 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 ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30x30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix laevigata	90	Y	FACW
2. Quercus berberidifolia	5	N	UPL
3.			
4.			
	95	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10x10)			
1. Baccharis salicifolia	5	Y	FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 10x10)			
1. NA			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0	= Total Cover	
Woody Vine Stratum (Plot size: 10x10)			
1. NA			
2.			
	0	= Total Cover	

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

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: 8

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	2.5Y 7/3	60	10YR 7/6	40	C	M	Sand	
5-8							Cobbles	
8-18	10YR 5/3						Sandy Loar	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ✔ **No** ___

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

Remarks:

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, calcerous sandstone and shale.
DaD	Diablo clay, 9 to 15 percent slopes. This soil consists of well-drained, deep clays. The parent material is soft, calcerous 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 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

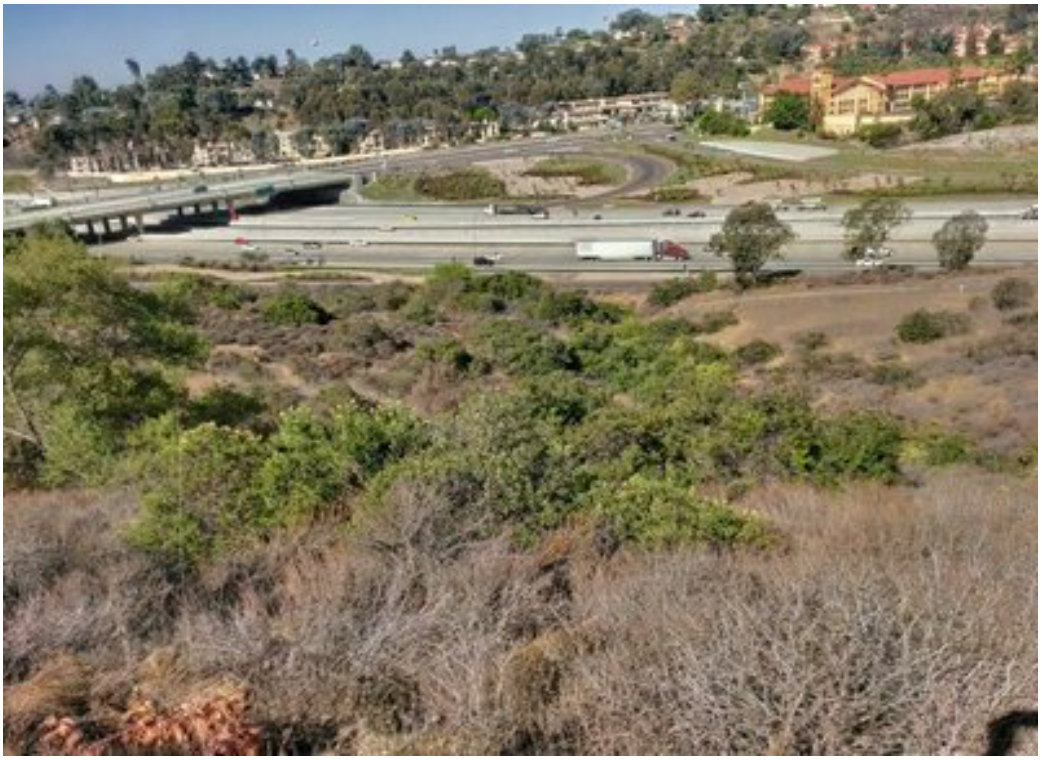


Photo 66: Los Peñasquitos Mesa Features 3, downstream overview of headwater channel in the southern portion of the drainage; Photo direction: NW

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

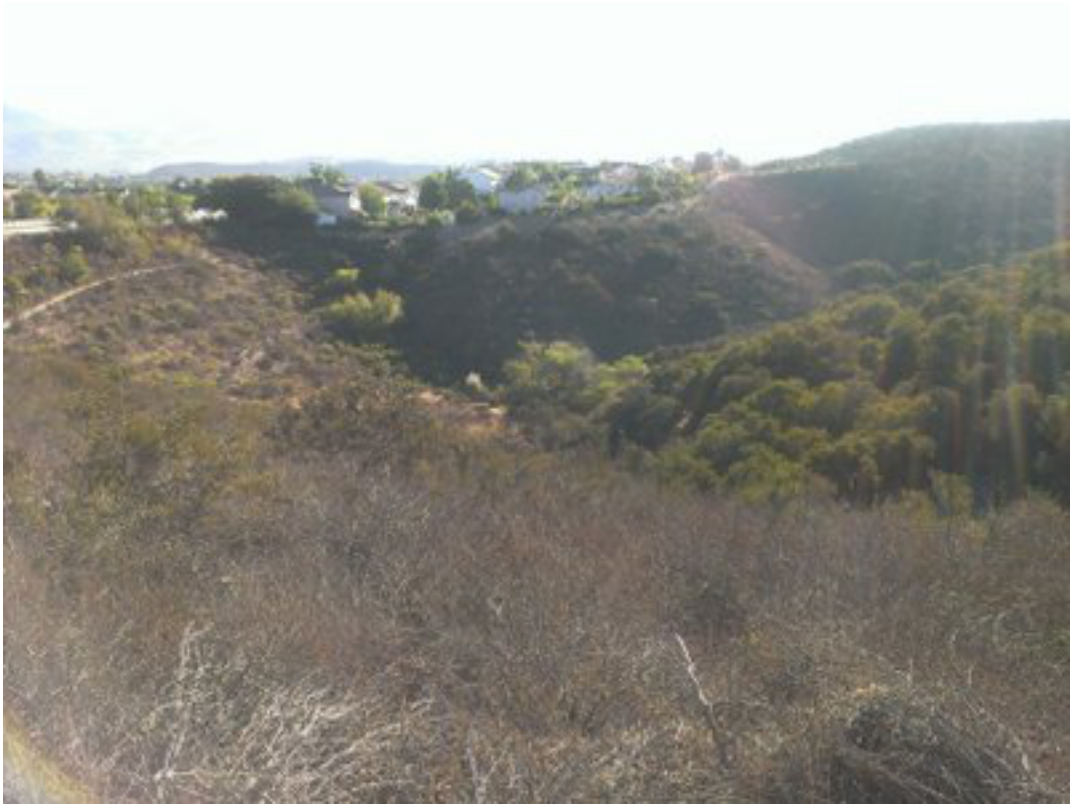


Photo 71: Tributary to Peñasquitos Creek 11, overview of top of headwater tributaries on western side of drainage; Photo direction: E

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

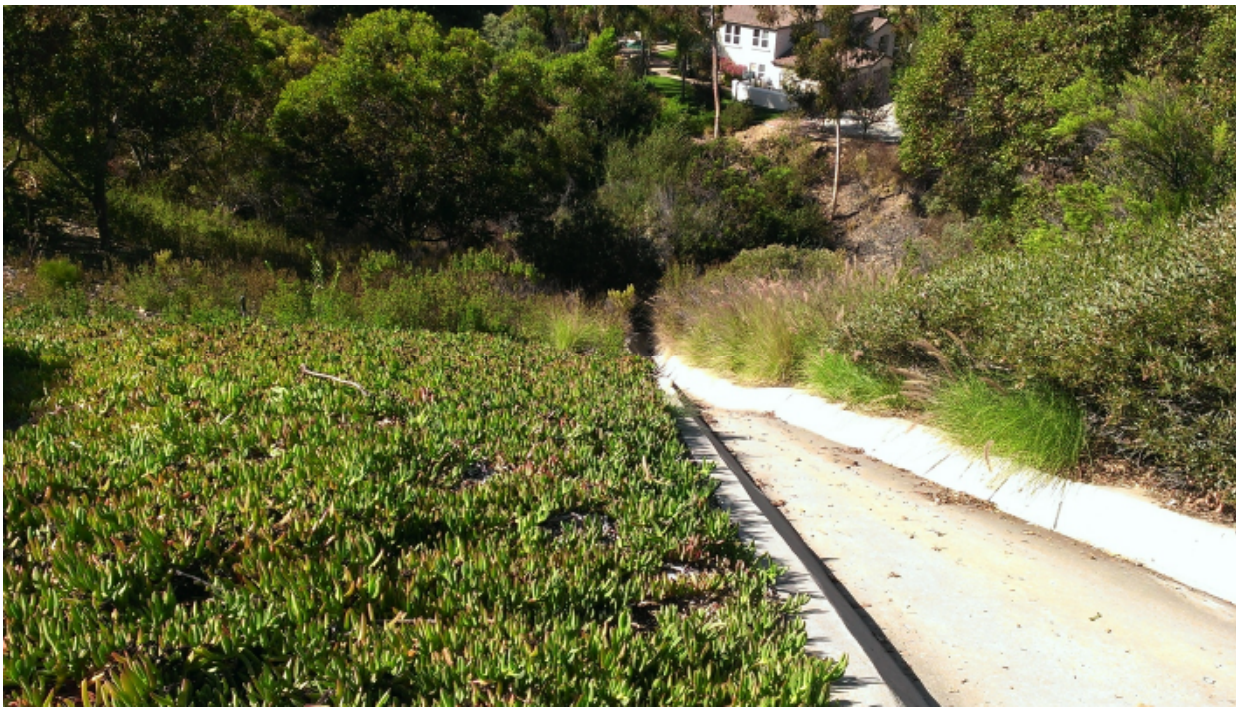


Photo 77: Cypress Canyon Feature 2, V-ditch inflow into depressional area; Photo direction: NW

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

Gmail by Google

Leo Mena <leo.mena@panoramaenv.com>

Field checks of work areas

Debbie Clayton <DebbieC@helixepi.com> Fri, Mar 6, 2015 at 5:07 PM
To: Jeff Thomas <jeff.thomas@panoramaenv.com>, Leo Mena <leo.mena@panoramaenv.com>
Cc: Shelby Howard <ShelbyH@helixepi.com>

Jeff and Leo,

The results of the field checks of the other work areas we discussed last week are listed below.

Black Mountain Community Park Staging Yard. This site was graded flat between 1996 and 2002. The vegetation reflects the fact that the soils have been disturbed. The native shrub biomass is relatively low, and there is an abundance of non-native plant species. The northwest corner of the site appears to partially overlap a detention basin that supports some mule fat scrub, which may be regarded as a wetland, although it does occur in a man-made feature.

While the site may not be likely to support sensitive plant species, a survey is still warranted, as is a jurisdictional delineation.

The site is considered to be potential habitat for the burrowing owl; therefore, a burrowing owl survey is warranted. Adjacent habitats are similar to those on site and are not expected to support animal species of concern (other than burrowing owl) that could be subject to significant indirect project impacts.

Chicarita Staging Yard. This site supports mostly grassland; however, coastal sage scrub is also present. The soil at this site appears to be clay, and in fact, is mapped as Diablo clay by the USDA. One sensitive plant species, California adolphia, was observed on site (this species was mapped in the alignment BSA where it overlaps with the western portion of the staging yard). California adolphia occurs near the middle of the site in grassland and along the southwestern part of the site in coastal sage scrub. A sensitive plant species survey is warranted on this site.

The on-site and adjacent coastal sage scrub may provide habitat for the coastal California gnatcatcher. It does not appear that this yard was assessed or surveyed for the gnatcatcher as part of the 2013 protocol survey for the project (Appendix G, *Coastal California Gnatcatcher Survey Summary Report*, in Appendix 4.4-A, *Biological Technical Report*, of the PEA). A USFWS protocol survey for the gnatcatcher should be conducted for this staging yard.

No potential jurisdictional features were noted on site.

Encina Hub. Project work areas in this location are almost entirely restricted to dirt roads, pads and other previously disturbed areas. Much of the surrounding habitat, however, is high quality coastal sage scrub, which

may provide habitat for the coastal California gnatcatcher. Due to the very close proximity of the work areas to potential gnatcatcher habitat, a USFWS protocol survey for this species is warranted.

Riparian habitat occurs immediately east of the site and may provide habitat for the least Bell's vireo. There is a CNDDB record of a vireo in this riparian habitat. At a minimum, a pre-construction survey should be conducted for the vireo for any project work to occur during the vireo breeding season, and mitigation should be implemented to avoid significant, indirect impacts to the species.

There is potential for a number of sensitive plant species to be present in this area (refer to the Excel table sent back to Leo for species with potential to occur [San Luis Rey]), so a survey for them is warranted.

A section of the road near tower E36 was ponded and may develop as a disturbed wetland. This may be a potential jurisdictional area, and a jurisdictional delineation for Encina Hub may be warranted.

An occupied red-tailed hawk nest was noted in a tower just off site to the northeast. Potential indirect impacts to this nest (and nesting raptors, in general) should be assessed as part of the analysis.

Evergreen Nursery Staging Yard. This site has been completely altered by nursery activities, and no sensitive species or potential jurisdictional features are present. SDG&E did just submit GIS data, however, showing suitable habitat for the burrowing owl just off site to the east. This area should be included in burrowing owl surveys for the project.

Mission – San Luis Rey Phase Transposition North and South. Project elements at Phase Transposition North are almost entirely restricted to roads, pads, and other previously disturbed areas. A small patch of disturbed coastal sage scrub would be affected near the pad for H-frame E31. Some of the surrounding habitat also includes coastal sage scrub, which may provide habitat for the coastal California gnatcatcher. A USFWS protocol survey for this species is warranted.

Sensitive plant species have potential to occur on Phase Transposition North as presented in the Excel table sent back to Leo for species with potential to occur (La Jolla). A survey for these sensitive species is warranted.

At Phase Transposition South, the area in and near H-frame E32 supports Nuttall's scrub oak and summer holly, both sensitive species. The area near tower E33 is completely developed; therefore, there are no sensitive plant species on that site. Additional sensitive plant species have potential to occur on Phase Transposition South (near E32; see aforementioned Excel table), so a survey for them is warranted. Please make sure to update any EIR text/tables since it's now known that these two species are present at Phase Transposition South.

The area around H-frame E32 supports coastal sage scrub, and there is additional coastal sage scrub in the canyon around E32 as well as around the tower E33 site. This habitat has the potential to support the coastal California gnatcatcher. A USFWS protocol survey for this species is warranted to analyze potential direct and indirect impacts to the species.

No potential jurisdictional features were noted at Mission – San Luis Rey Phase Transposition North or South.

SR-56 Staging Yard. This site was graded flat in early 2004. Prior to that, it appears it was dry-farmed. Two detention basins occur on site along its southern boundary, and one contains freshwater marsh and disturbed wetland. These communities were not mapped for the project and may have subsequently developed. These vegetation types may be regarded as wetlands, although they do occur in a man-made feature. A jurisdictional delineation may be warranted.

While the site is not highly likely to support sensitive plant species, a survey is still warranted, particularly since habitat has developed on site since vegetation was mapped for the project.

This site (and adjacent area to the north and east) was determined to support potential habitat for the burrowing owl; a survey for this species is warranted.

Coastal sage scrub occurs west of the site, across Carmel Valley Road. This habitat may provide habitat for the coastal California gnatcatcher. The minimum distance between the site and the habitat is approximately 135 feet; however, there is a 4-lane road and a landscaped median in between. Given the distance and intervening roadway and median, it is unlikely the project would cause significant, indirect impacts to any gnatcatchers that might occur there. A USFWS protocol survey for the gnatcatcher is not warranted.

Let me know if you have any questions, and I'll get the photographs to you on Monday.

Have a good weekend!

Debbie

Debbie Clayton

Senior Scientist

HELIX Environmental Planning, Inc.

7578 El Cajon Boulevard

La Mesa, CA 91942

619.733.5995 **tel**

619.462.0552 **fax**

DebbieC@helixepi.com

helixepi.com | LinkedIn | Facebook | Twitter

Please consider the environment before printing this email.

Gmail by Google

Leo Mena <leo.mena@panoramaenv.com>

work area information

Debbie Clayton <DebbieC@helixepi.com> Tue, Mar 10, 2015 at 4:30 PM
To: Leo Mena <leo.mena@panoramaenv.com>
Cc: Shelby Howard <ShelbyH@helixepi.com>, Larry Sward <LarryS@helixepi.com>

Leo,

Scratch what I said about Black Mountain and the detention basin, it DOES appear that a portion of a basin may be on the northwest corner of the site. Sorry about that.

Larry has also concluded that the freshwater marsh and disturbed wetland in the detention basin on SR-56 are not jurisdictional. These habitats occur in the basin in the southeast corner of the site. He estimates 0.03 acre of freshwater marsh and 0.03 acre of disturbed wetland presently occurring there. Another unvegetated basin occurs farther to the west, still along the southern boundary of the site.

At Phase Transposition South (the north site), he estimates 1 Nuttall's scrub oak and 2 summer holly (and more of each adjacent).

At the Chicarita Staging Yard he estimates 18 individuals of California adolphia in two stands (one with 8+ individuals and another with 10+ individuals); others (7+ individuals) occur immediately off site. Field map attached.

For Encina Hub, to be more specific, the nearest potential least Bell's vireo habitat is immediately adjacent to (east of) the access road east of Tower E36.

Let me know if you have any more questions.

Thanks,

Debbie

Debbie Clayton

Senior Scientist

HELIX Environmental Planning, Inc.

7578 El Cajon Boulevard

La Mesa, CA 91942

619.733.5995 **tel**

619.462.0552 **fax**

DebbieC@helixepi.com

helixepi.com | LinkedIn | Facebook | Twitter

Please consider the environment before printing this email.

Adolphia Chicarita.pdf
1071K

Gmail by Google

Leo Mena <leo.mena@panoramaenv.com>

work area information

Larry Sward <LarryS@helixepi.com> Tue, Mar 24, 2015 at 4:48 PM
To: Leo Mena <leo.mena@panoramaenv.com>
Cc: Shelby Howard <ShelbyH@helixepi.com>

Leo,

We concluded it was non-jurisdictional based on fact they were drainage features constructed in uplands. We also inferred from the location of the detention basins within a graded pad that they were required for water quality mitigation. Such features are generally not regarded as jurisdictional.

Larry

From: Leo Mena [mailto:leo.mena@panoramaenv.com]
Sent: Tuesday, March 24, 2015 3:24 PM
To: Larry Sward
Cc: Shelby Howard
Subject: Re: work area information

[Quoted text hidden]

Memorandum

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
Suite 200
La Mesa, CA 91942
ShelbyH@helixepi.com
LarryS@helixepi.com
619.462.1515 **tel**
619.462.0552 **fax**
www.**helixepi**.com

To: Ms. Susanne Heim

Date: February 19, 2015 **From:** Mr. Shelby Howard and Mr. W. Larry Sward

HELIX Proj. No.: PEI-01

Subject: Field Verification of Vernal Pool Mapping

Message: Attached for your use is a summary of our field verification of vernal pool mapping for the proposed Sycamore-Peñasquitos Transmission Line project area (Table 1; Figures 1-6). For the purposes of this memo, the project area is the same as the Project's Biological Survey Area (BSA), which includes a 500-foot corridor centered on the proposed transmission line alignment, as well as access roads outside the 500-foot corridor. The results presented herein are based on HELIX's visual inspection of the western portion of the project area (south of State Route 56). We focused field efforts on 1) areas of apparent inconsistencies between vernal pool mapping conducted by SDG&E's biological consultant and the most current vernal pool mapping from the City of San Diego that is being used to create its Vernal Pool Habitat Conservation Plan and 2) areas near proposed poles 49 through 54 where other members of the CPUC team noticed depressions in the field. The field verification took place over three days in December 2014. The surveys were conducted by HELIX biologists W. Larry Sward and Erica Harris on December 10, 2014 and by Mr. Sward and HELIX biologist Benjamin Rosenbaum on December 11 and 18, 2014.

Over the course of the surveys the roads, paths, and cleared areas in the project survey area were inspected for depressional areas, evidence of ponded water, and vernal pool indicator species. Global Positioning System data points were taken with a Garmin eTrex unit to aid in mapping potential vernal pools; representative photos were taken; and aerial imagery spanning the last 20 years (i.e., Google Earth) were inspected to identify areas that pond regularly. The extent of ponding for potential vernal pools and road pools was estimated and is presented as 1 of 4 size classes: 0-60 square feet (sf), 61 to 120 sf, 121 to 350 sf, and 351-2,000 sf. Observed hydrological conditions were recorded as one of three states: dry, moist soil surface, or inundated. Areas mapped as dry pools showed signs of past ponding, usually soil surface cracks, a thin biotic crust, or deposition of fine soil particles. Pools were recorded as inundated regardless of the amount of ponded water observed.

Between December 2 and 4, 2014, the San Diego area received approximately 2.1 inches (5.3 cm) of rain, which was enough rain to cause many ephemeral ponds to form. It was not enough, nor had it been long enough between the rain and our surveys, to form any definitive conclusions about the number and location of vernal pools, road pools, and basins containing hydrology suitable for fairy shrimp.

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
Suite 200
La Mesa, CA 91942
619.462.1515 **tel**
619.462.0552 **fax**
www.**helixepi**.com

Over the course of the surveys, 143 potential vernal and road pools were observed, including 46 basins that were dry, 33 that were moist, and 64 that contained ponded water. Please note that Table 1 and the attached figures show 103 GPS locations; as noted in Table 1, several of the GPS locations include multiple pools.

Twelve of 143 pools were previously mapped[1], and 54 are visible on aerial imagery. Four of these pools (011, 017, 059, and 061) are considered vernal pools based on the presence of vernal pool plant indicator species. One of the pools (007) was observed with fairy shrimp, but we were unable to determine if the shrimp were San Diego fairy shrimp, as we did not have prior authorization from the U.S. Fish and Wildlife Service to collect and identify the shrimp. Two additional pools (048 and 062) contained what may have been vernal pool plant indicator species, but they were unidentifiable at the time due to their immature growth stage; pools 048 and 062 were considered potential vernal pools in Table 1. One additional pool (103) is part of a recent vernal pool restoration project, immediately east of the Penasquitos substation, but was observed to be dry at the time of the field assessment. Adjacent vernal pools that occur outside the BSA are part of a California Natural Diversity Database (CNDDB) datapoint that includes California Orcutt's grass.

The probability of all of these potential basins containing vernal pool species or fairy shrimp is zero. Ponding in many of the basins that were dry during our survey is likely too ephemeral to support vernal pool habitat or fairy shrimp. The probability of basins with moist soil supporting habitat suitable for vernal pools species or fairy shrimp is higher but by no means certain. Even some of the basins that contained surface water may not hold water long enough to support vernal pool or fairy shrimp species, although the probability for these is much higher. Lastly, the probability of a given pool supporting vernal pool species or fairy shrimp is also higher for those pools that are visible on aerial imagery, as this is an indication of the length and frequency of ponding. The results of this survey are preliminary and best used to direct further evaluation of the project survey area, most notably through follow up surveys during the rainy season to survey for fairy shrimp and vernal pool plant species.

Enclosures:
Figures 1 through 8: GPS Data
Attachment A: Table 1-Field Observation Summary

[1] Busby Biological Services. Biological Technical Report, Sycamore to Peñasquitos 230 Kilovolt Transmission Line Project, City of San Diego, San Diego, San Diego, California. April. 121 pp, plus Appendices.

I:\PROJECTS\PVE\PEL-01.1 Sycamore_Penasquitos\TL\MapMemo_VernalPoolFig1_VernalPools.mxd PEL-01.01 02/18/15 -KF

GPS Data

SYCAMORE-PENASQUITOS 230 KV TRANSMISSION LINE

HELIX Environmental Planning

N 0 300 Feet

Figure 1

I:\PROJECTS\P\PEI\PEI-01.1\Sycamore_Penasquitos\TL\Map\Memo_VernalPool\Fig2_VernalPools.mxd PEI-01.01 02/18/15 KF

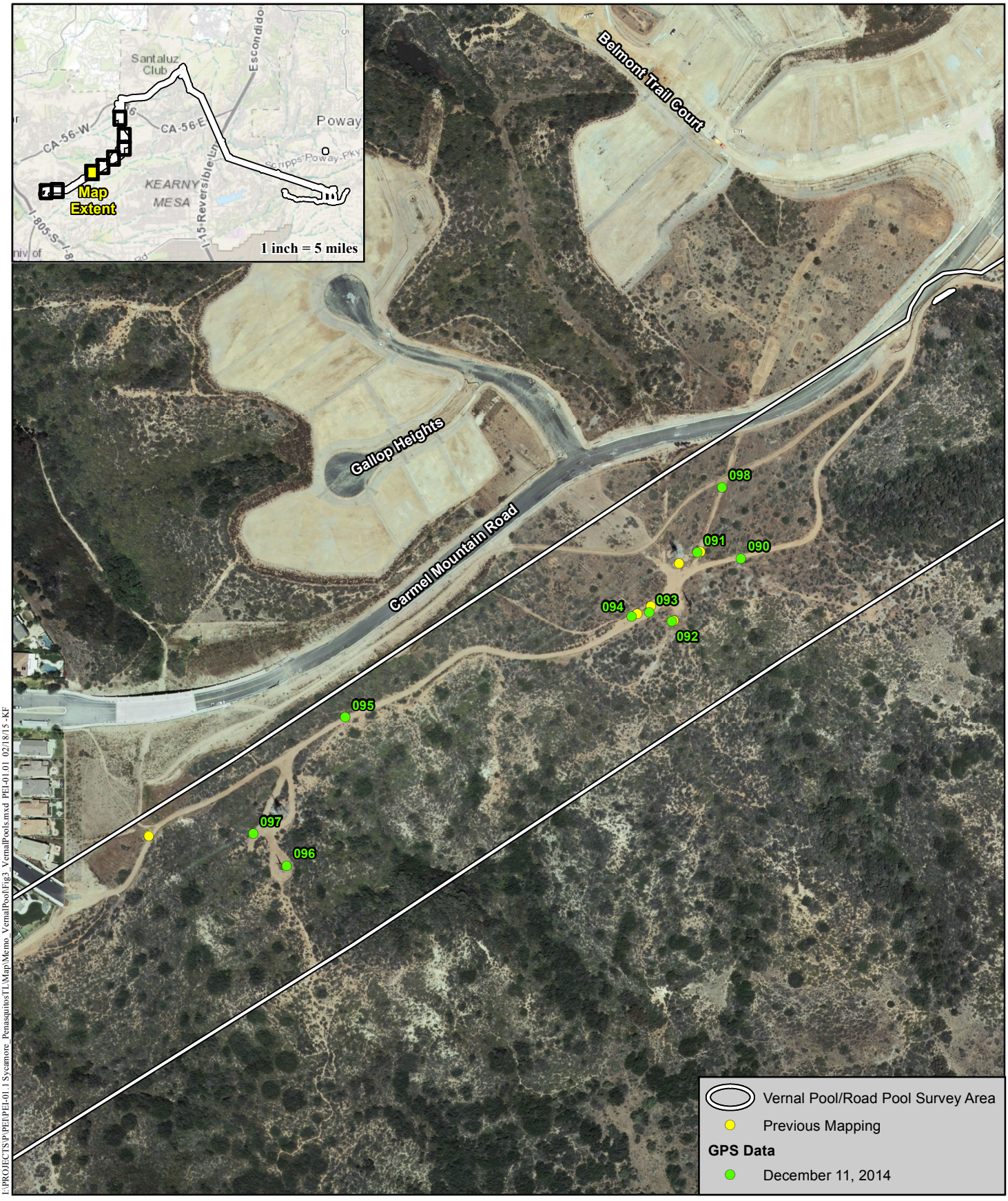
Vernal Pools

SYCAMORE-PENASQUITOS 230 KV TRANSMISSION LINE

HELIX Environmental Planning

N 0 300 Feet

Figure 2



I:\PROJECTS\P\PEI\PEI-01.1 Sycamore_PenasquitosTL\Map\Memo_VernalPool\Fig3_VernalPools.mxd PEI-01.01 02/18/15 - KF

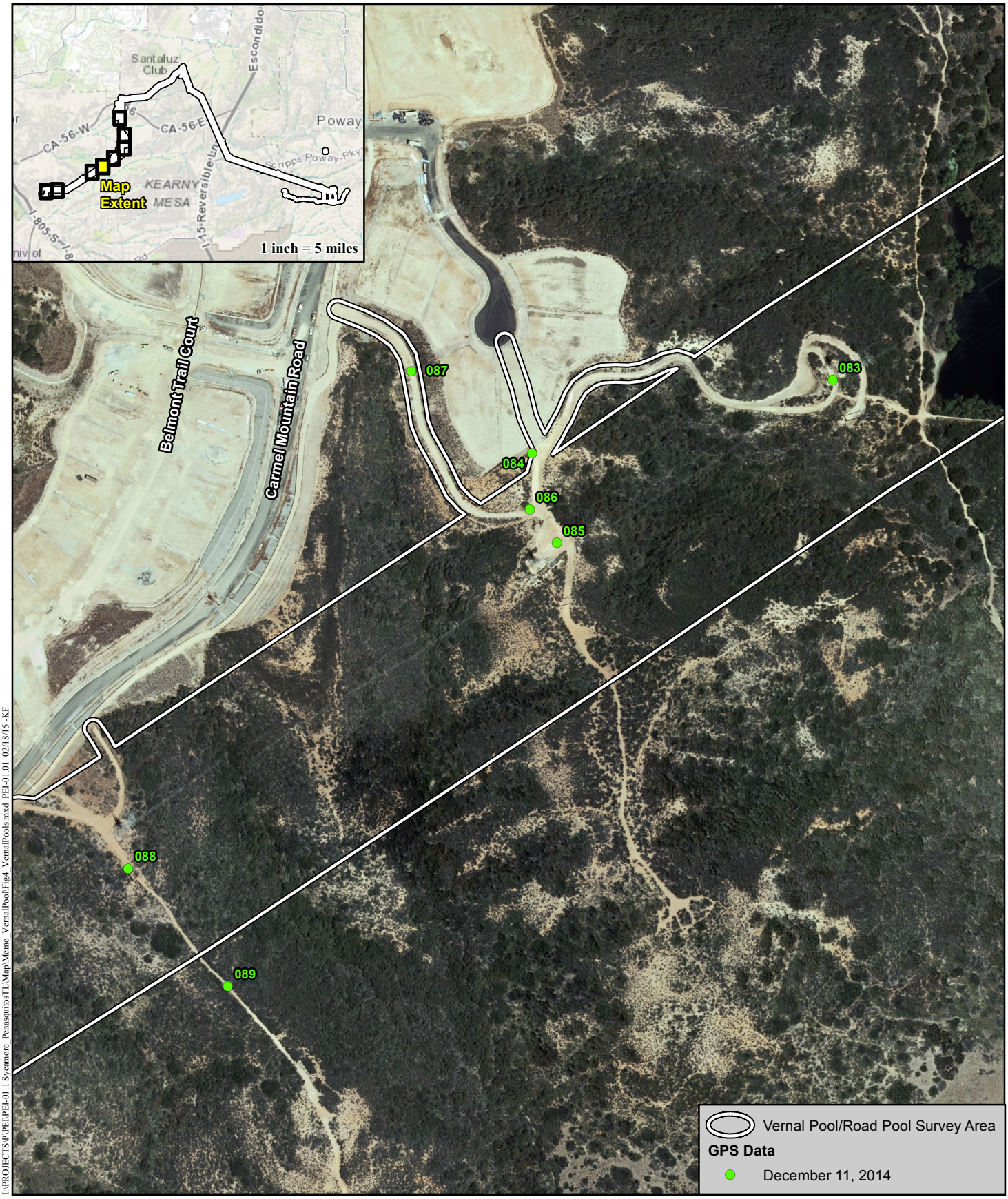
GPS Data

SYCAMORE-PENASQUITOS 230 KV TRANSMISSION LINE

HELIX Environmental Planning

N 0 300 Feet

Figure 3



I:\PROJECTS\P\PEI\PEI-01.1\Sycamore_PenasquitosTL\Map\Memo_VernalPool\Fig4_VernalPools.mxd PEI-01.01 02/18/15 - KF

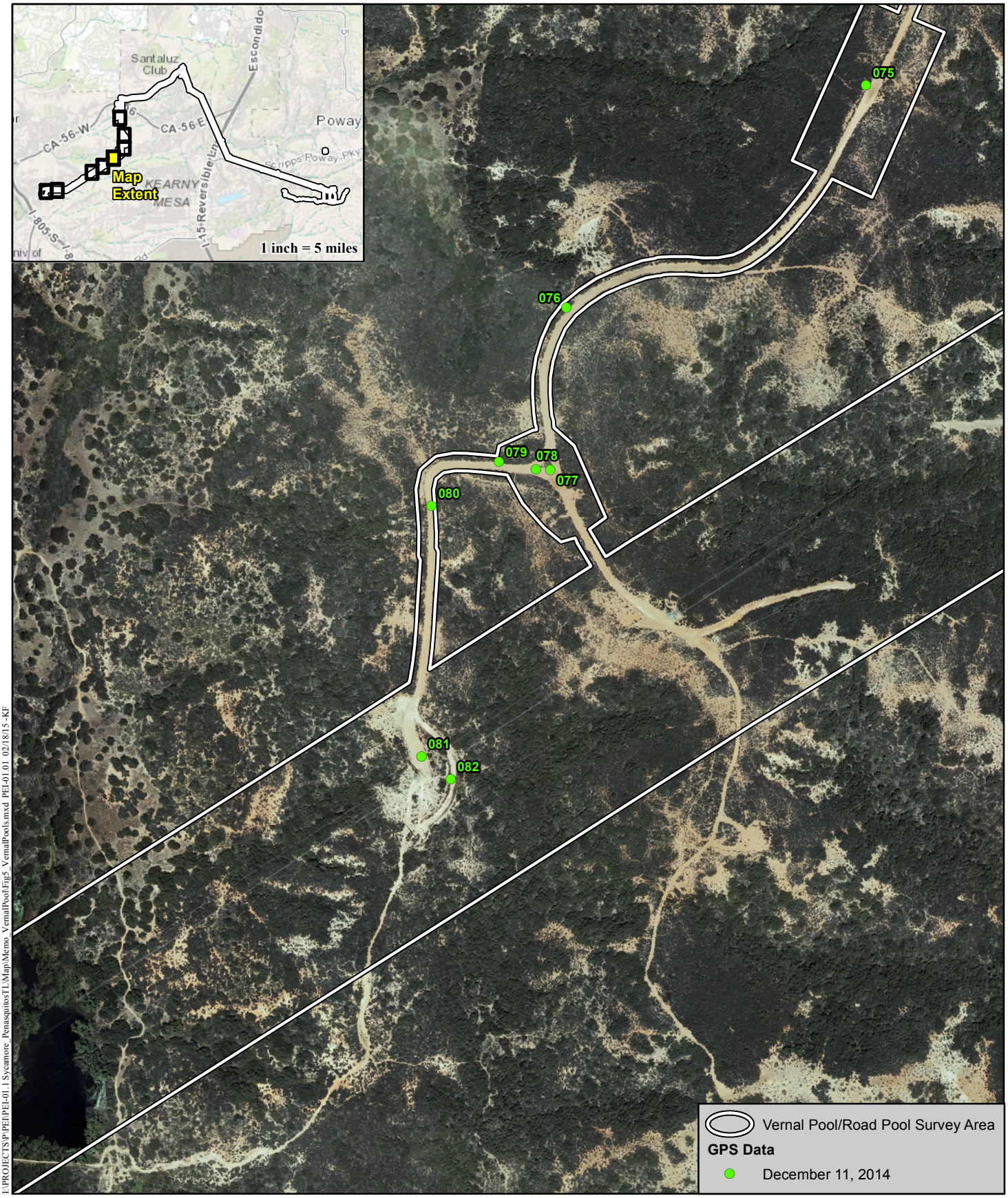
GPS Data

SYCAMORE-PENASQUITOS 230 KV TRANSMISSION LINE

HELIX Environmental Planning

N 0 300 Feet

Figure 4



I:\PROJECTS\P\PEI\PEI-01.1 Sycamore_Penasquitos\TU\Map\Memo_VernalPool\Fig5_VernalPools.mxd PEI-01.01 02/18/15 - KF

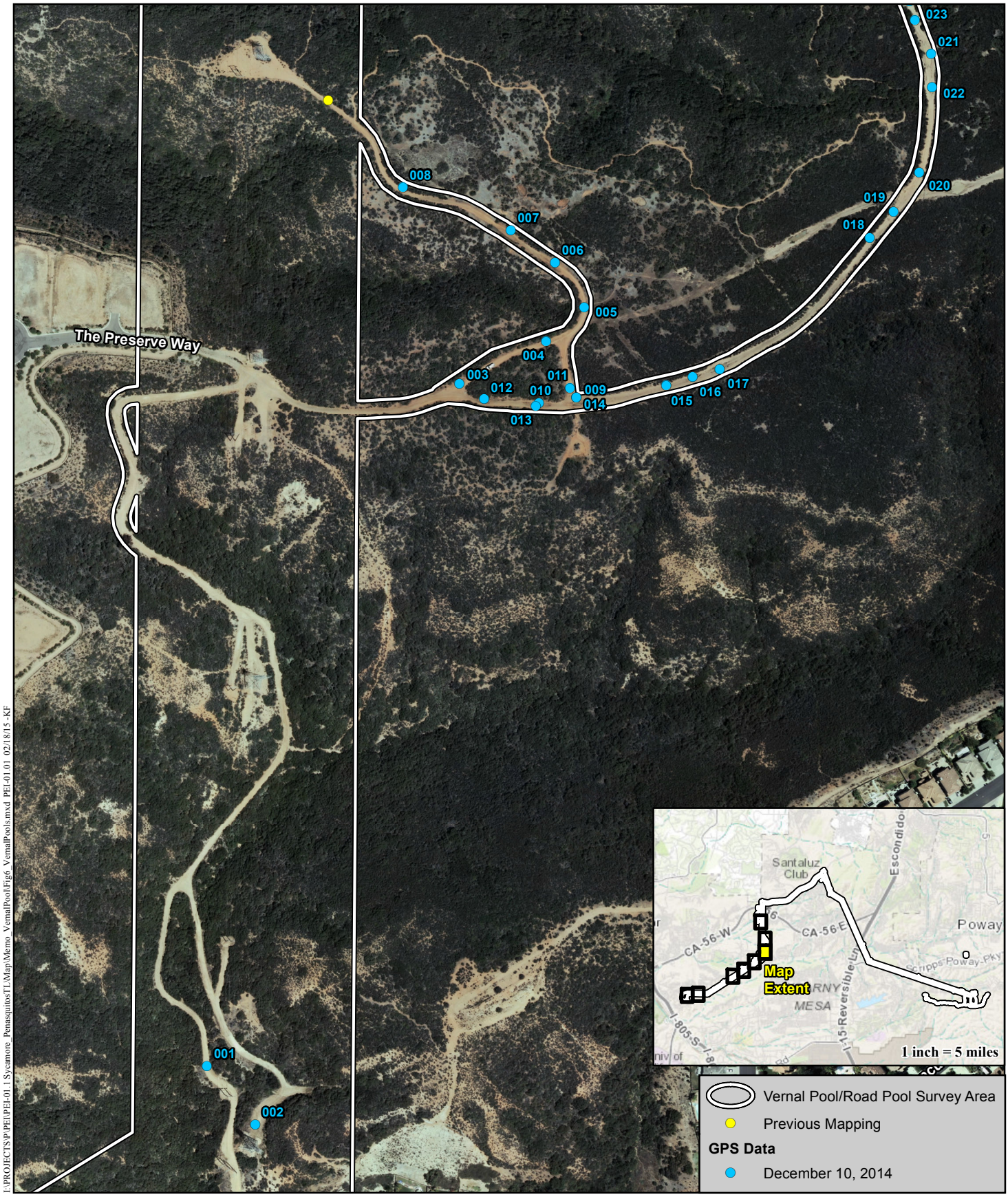
GPS Data

SYCAMORE-PENASQUITOS 230 KV TRANSMISSION LINE

HELIX Environmental Planning

N 0 300 Feet

Figure 5



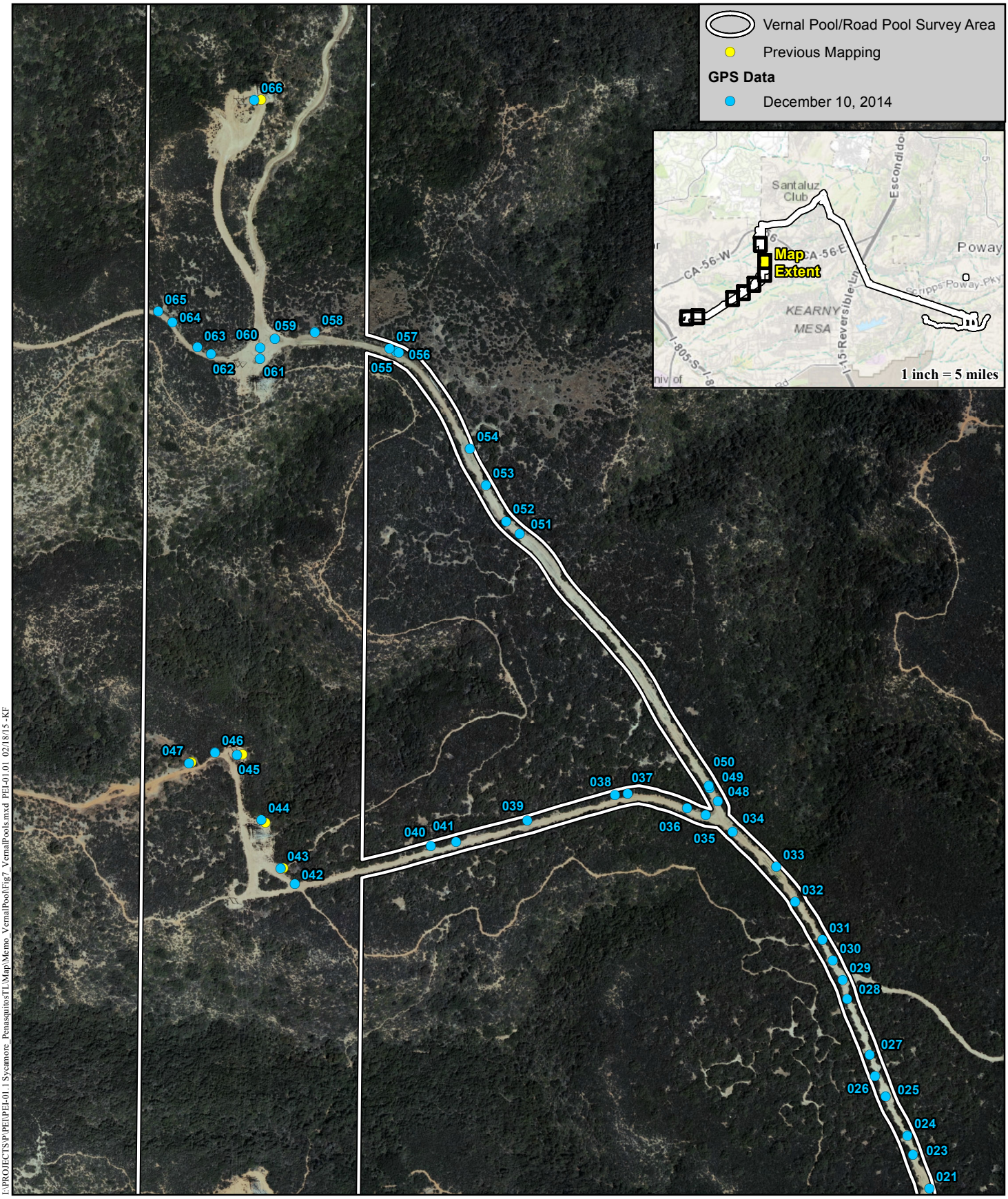
L:\PROJECTS\P\PEL\PEL-01.1\Sycamore_Penasquitos\TL\Map\Memo_VernalPool\Fig6_VernalPools.mxd PEL-01.01 02/18/15 - KF

GPS Data

SYCAMORE-PENASQUITOS 230 KV TRANSMISSION LINE

HELIX Environmental Planning

Figure 6



I:\PROJECTS\P\PEI\PEI-01.1 Sycamore_PenasquitosTL\Map\Memo_VernalPool\Fig7_VernalPools.mxd PEI-01.01 02/18/15 - KF

GPS Data

SYCAMORE-PENASQUITOS 230 KV TRANSMISSION LINE

HELIX Environmental Planning

Figure 7

L:\PROJECTS\P\PEL\PEL-01.1 Sycamore_Penasquitos\TU\Map\Memo_VernalPool\Fig8_VernalPools.mxd PEL-01.01 02/18/15 - KF

GPS Data

SYCAMORE-PENASQUITOS 230 KV TRANSMISSION LINE

HELIX Environmental Planning

Figure 8

Attachment A
Sycamore-Peñasquitos Transmission Line
December 2014 Field Verification of Vernal Pool and Road Pools
Prepared February 19, 2015

Table 1
DECEMBER 2014 FIELD VERIFICATION OF VERNAL POOL AND ROAD POOLS

GPS #	Photo #	Previously Mapped	Visible on Aerial Imagery	Observed Hydrology[1]	Size Class[2]	GPS Coordinates	Notes
001	4226	No	No	D	C	N32 56.397 W117 10.157	Potential road (rut) pool
002	4227	No	No	M	A	N32 56.375 W117 10.135	Potential pool
003	4228	No	Yes	I	C	N32 56.653 W117 10.047	Road pool
004	4229	No	Yes	I	D	N32 56.669 W117 10.009	Road pool
005	4230	No	No	M	A	N32 56.682 W117 09.992	Potential road pool
006	4231	No	Yes	I	D	N32 56.699 W117 10.005	Road pool
007	4232	No	Yes	I	D	N32 56.711 W117 10.025	Fairy shrimp, road pool
008	4233	No	Yes	I	C	N32 56.726 W117 10.073	Road pool
009/014[3]	4234	No	Yes	M	A	N32 56.648 W117 09.995	Potential road (rut) pool
010	4237	No	Yes	D	B	N32 56.646 W117 10.012	Potential road pool
011	4238	No	Yes	I	D	N32 56.652 W117 09.998	Vernal pool
012	4242	No	Yes	M	C	N32 56.648 W117 10.036	Road pool
013	4241	No	Yes	I	D	N32 56.645 W117 10.013	Road pool
015	4243	No	Yes	I	A	N32 56.653 W117 09.955	Potential road (rut) pool
016	4244	No	Yes	M	A	N32 56.656 W117 09.944	Potential road (rut) pool
017	4245	No	Yes	I	D	N32 56.659 W117 09.932	Vernal pool
018	4246	No	Yes	I	C	N32 56.709 W117 09.866	Road pool
019	4247	No	Yes	I/D	A	N32 56.719 W117 09.855	4 small road pools: 6 potential road pools
020	4248	No	Yes	I/D	A	N32 56.734 W117 09.844	2 road pools; 1 potential road pool
021	4249	No	Yes	I	B	N32 56.778 W117 09.839	Road pool
022	4250	No	Yes	I	D	N32 56.766 W117 09.838	Road pool

Table 1 (cont.)
DECEMBER 2014 FIELD VERIFICATION OF VERNAL POOL AND ROAD POOLS

GPS #	Photo #	Previously Mapped	Visible on Aerial Imagery	Observed Hydrology[4]	Size Class[5]	GPS Coordinates	Notes
023	4251	No	No	D	A	N32 56.791 W117 09.846	Potential road pool
024	4252	No	Yes	I/D	B	N32 56.798 W117 09.849	2 road pools; 1 potential road pool
025	4253	No	Yes	I	A	N32 56.812 W117 09.859	1 road pool; 2 potential road pool
026	4254	No	Yes	D	B	N32 56.820 W117 09.864	Potential road pool
GPS #	Photo #	Previously Mapped	Visible on Aerial Imagery	Observed Hydology[1]	Size Class[2]	GPS Coordinates	Notes
027	4255	No	Yes	I	C	N32 56.828 W117 09.866	Road pool
028	4256	No	Yes	D	A	N32 56.849 W117 09.876	4 potential road pools
029	4257	No	No	D	A	N32 56.856 W117 09.878	Potential shallow road pool
030	4258	No	Yes	D	A	N32 56.863 W117 09.883	Potential shallow road pool
031	4259	No	Yes	D/I	A	N32 56.871 W117 09.887	4 potential road pools; 1 road pool
032	4260	No	Yes	I	A	N32 56.885 W117 09.900	Road pool
033	4261	No	Yes	D	B	N32 56.898 W117 09.908	Road pool
034	4262	No	No	I	D	N32 56.911 W117 09.928	Road pool
035	4263	No	No	I	D	N32 56.917 W117 09.940	Road pool
036	4264	No	No	M	B	N32 56.920 W117 09.948	Road pool
037	4265	No	Yes	M	A	N32 56.925 W117 09.974	Road pool
038	4266	No	No	I	C	N32 56.924 W117 09.980	Road pool
039	4267	No	Yes	I	A	N32 56.914 W117 10.019	Road pool
040	4268	No	Yes	D	A	N32 56.905 W117 10.061	2-3 potential road pools

Table 1 (cont.)
DECEMBER 2014 FIELD VERIFICATION OF VERNAL POOL AND ROAD POOLS

GPS #	Photo #	Previously Mapped	Visible on Aerial Imagery	Observed Hydrology[4]	Size Class[5]	GPS Coordinates	Notes
041	4270	No	Yes	D	B	N32 56.906 W117 10.050	2 Potential shallow road pools
042	4269	No	No	D	B	N32 56.890 W117 10.122	Potential shallow pool
043	4271	Yes	No	M	B	N32 56.896 W117 10.128	Potential road pool
044	4272	Yes	No	D	A	N32 56.914 W117 10.137	Potential road pool
045	4273	Yes	No	M	D	N32 56.938 W117 10.148	Potential road pool
046	4275	No	No	I	D	N32 56.939 W117 10.158	Road pool
047	4276	Yes	No	D	C	N32 56.935 W117 10.169	Potential road pool
048	4277	No	No	M	D	N32 56.922 W117 09.934	Potential vernal pool
049	4278	No	Yes	M	C	N32 56.927 W117 09.938	Potential road pool
050 - 051[6]	4279-4284	No	Yes	I, D	A, B, C, & D	N32 56.928 W117 09.938 to N32 57.022 W117 10.023	Total of 14 road pools and 10 potential road pools
052	4285	No	Yes	I	A	N32 57.026 W117 10.029	Potential road pool
053	4286	No	Yes	I	C	N32 57.040 W117 10.038	Road pool
054	4287	No	Yes	I	B	N32 57.053 W117 10.046	Road pool
055	4288	No	No	D	A	N32 57.089 W117 10.079	Potential road (rut) pool
056	4289	No	Yes	M	A	N32 57.089 W117 10.077	Potential road (rut) pool
057	4290	No	No	D	B	N32 57.091 W117 10.082	Potential road (rut) pool
058	4291	No	Yes	I	C	N32 57.096 W117 10.115	Road pool
059	4292	No	Yes	I	C	N32 57.094 W117 10.133	Vernal pool
060	4293	No	Yes	I	C	N32 57.090 W117 10.139	Road pool
061	4294	No	No	I	D	N32 57.086 W117 10.139	Vernal pool
062	4295	No	No	M	A	N32 57.088 W117 10.161	Potential vernal pool
063	4296	No	No	I	B	N32 57.090 W117 10.167	Pair of road (ruts) pools

Table 1 (cont.)
DECEMBER 2014 FIELD VERIFICATION OF VERNAL POOL AND ROAD POOLS

GPS #	Photo #	Previously Mapped	Visible on Aerial Imagery	Observed Hydrology[4]	Size Class[5]	GPS Coordinates	Notes
064	4297	No	No	M	A	N32 57.100 W117 10.178	4 potential road pools
065	4298	No	No	I	B	N32 57.104 W117 10.184	Road pool
066	4299	Yes	No	I	B	N32 57.183 W117 10.143	Road pool
067	4300	No	No	M	C	N32 57.475 W117 10.144	Road pool
068	4301	No	Yes	M	B	N32 57.547 W117 10.141	Road pool
069	4302	No	Yes	M	D	N32 57.592 W117 10.243	Road pool
070	4303	No	Yes	M	B	N32 57.558 W117 10.301	Road pool
071	4308	No	No	I	D	N32 55.002 W117 13.140	Road pool
072	4309	No	No	M	A	N32 55.154 W117 13.036	Potential road pool
073	4310	No	Yes	M	C	N32 54.986 W117 13.173	Potential road pool
075[7]	4312	No	Yes	I	D	N32 56.441 W117 10.281	Road pool
076	4313	No	No	M	A	N32 56.356 W117 10.413	Potential shallow road pool
077	4314	No	Yes	I	D	N32 56.296 W117 10.419	Road pool
078	4315	No	Yes	D	A	N32 56.296 W117 10.426	Potential road pool
079	4316	No	Yes	M	D	N32 56.298 W117 10.442	Potential road pool
080	4317, 4319	No	No	M	C	N32 56.282 W117 10.472	Potential road pool
081	4320	No	No	M	B	N32 56.188 W117 10.475	Potential road pool
082	4321	No	Yes	M	C	N32 56.179 W117 10.462	Road pool
083	4322	No	No	M	B	N32 56.049 W117 10.706	Potential basin
084	4323	No	No	--	--	N32 56.021 W117 10.839	Recently graded
085	4324	No	No	D	B	N32 55.988 W117 10.828	Potential road pool
086	--[8]	No	Yes	I	B	N32 56.000 W117 10.840	Road pool
087	4325	No	No	M	C	N32 56.051 W117 10.893	Potential road pool

Table 1 (cont.)
DECEMBER 2014 FIELD VERIFICATION OF VERNAL POOL AND ROAD POOLS

GPS #	Photo #	Previously Mapped	Visible on Aerial Imagery	Observed Hydrology[4]	Size Class[5]	GPS Coordinates	Notes
088	4326	--	--	--	--	N32 55.864 W117 11.016	Control point
089	4327	No	No	D	A	N32 55.821 W117 10.972	Outside survey area
090	4329	No	No	M	B	N32 55.782 W117 11.164	Potential road pool
091	4330	Yes	No	I	A	N32 55.785 W117 11.183	Road pool
092	4331	Yes	No	M	C	N32 55.759 W117 11.194	Potential road pool
093	4333	Yes	Yes	I	C	N32 55.762 W117 11.204	Road pool
094	4334	Yes	No	I	C	N32 55.760 W117 11.212	Road pool
095	4335	No	No	D	C	N32 55.722 W117 11.338	Potential road pool
096	4336	No	No	M	D	N32 55.666 W117 11.364	Potential road pool
097	4337	No	No	M	D	N32 55.678 W117 11.379	Potential road pool
098	4338	No	No	M	B	N32 55.809 W117 11.172	Potential road pool
099	4357	No	No	I	D	N32 55.192 W117 12.830	Road (ruts) pools
100	4358	Yes	No	I	D	N32 55.164 W117 12.739	Road pool
101	4359	Yes	No	I	B	N32 55.197 W117 12.634	Road pool
102	4360	No	No	I	D	N32 55.210 W117 12.415	Road pool
103	--[8]	Yes	Yes	M	D	N32 55.053, W117 13.060	Potential vernal pool

[1] Surface Water Present (I); Soil Surface Moist (M), or Dry (D)

[2] Size Class A: 0-60 square feet (sf); B: 61-120 sf; C: 121-350 sf; and D: 351-2000 sf

[3] GPS data for Basin 14 was a duplicate of Basins 9.

[4] Surface Water Present (I); Soil Surface Moist (M), or Dry (D)

[5] Size Class A: 0-60 square feet (sf); B: 61-120 sf; C: 121-350 sf; and D: 351-2000 sf

[6] Data for this entry was taken between GPS points 050 and 051.

[7] Data for GPS point 074 was taken outside of the study area.

[8] A photo was not taken at this location.

Memorandum

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
Suite 200
La Mesa, CA 91942
TaraB@helixepi.com
619.462.1515 **tel**
619.462.0552 **fax**
www.**helixepi**.com

Date: February 20, 2015

To: Susanne Heim

Cc:

From: Tara Baxter

Subject: Quino Checkerspot Butterfly Habitat Assessment

HELIX Proj. No.: PEI-01

Message:

This memo presents the results of HELIX's habitat assessment for the Quino checkerspot butterfly (QCB) for the Sycamore-Peñasquitos Transmission Line Project (Project). This memo describes the purpose of the assessment, the methods used, and the results.

PURPOSE

In accordance with the USFWS December 2014 QCB Survey Guidelines (Guidelines), a site assessment is recommended for all projects within the potential range of QCB.
The eastern portion of the Project's Biological Survey Area (BSA; BSA as used herein includes access roads outside the formal limits of the transmission alignment BSA), from Pomerado Road to the eastern end of the BSA, is located within potential range of QCB in San Diego County based on the recommended survey area map in the Guidelines.

METHODS

We first determined and mapped potentially suitable QCB habitat areas during a desktop assessment using Project vegetation mapping provided by SDG&E's consultant, topographic mapping, and aerial imagery. Then, two site visits were made by Amy Mattson and me on February 4 and February 9, 2015 within the 155.8 acres of the BSA within the limits of the potential range of the QCB to more accurately define the potential QCB habitat within the BSA.

The on-site assessment included: 1) walking all areas accessible by foot and conducting a direct, visual habitat assessment and 2) surveying all inaccessible areas (i.e., physically inaccessible or without legal permission to enter; e.g., Marine Corps Air Station [MCAS] Miramar), with the aid of binoculars. There were some inaccessible areas that could not be viewed even with binoculars. For those areas, the habitat was assumed to be potentially suitable for the QCB.

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
Suite 200
La Mesa, CA 91942
619.462.1515 **tel**
619.462.0552 **fax**
www.**helixepi**.com

Per the Guidelines, the following types of areas within the BSA were excluded as potential QCB habitat:

- Orchards, developed areas, or small in-fill parcels (plots smaller than an acre completely surrounded by urban development) largely dominated by non-native vegetation;
- Closed-canopy woody vegetation including forests, riparian areas, shrub-lands, and chaparral.

RESULTS

Approximately 110.6 acres within the 155.8 acres of BSA in the 2014 USFWS QCB survey area were determined to be potential QCB habitat (Figures 1-9, attached). Approximately 48.6 acres (of the 110.6 acres) could not be accessed on foot or visually verified and were included in the potential habitat acreage total. Areas excluded as QCB habitat totaled 45.2 acres.[1]

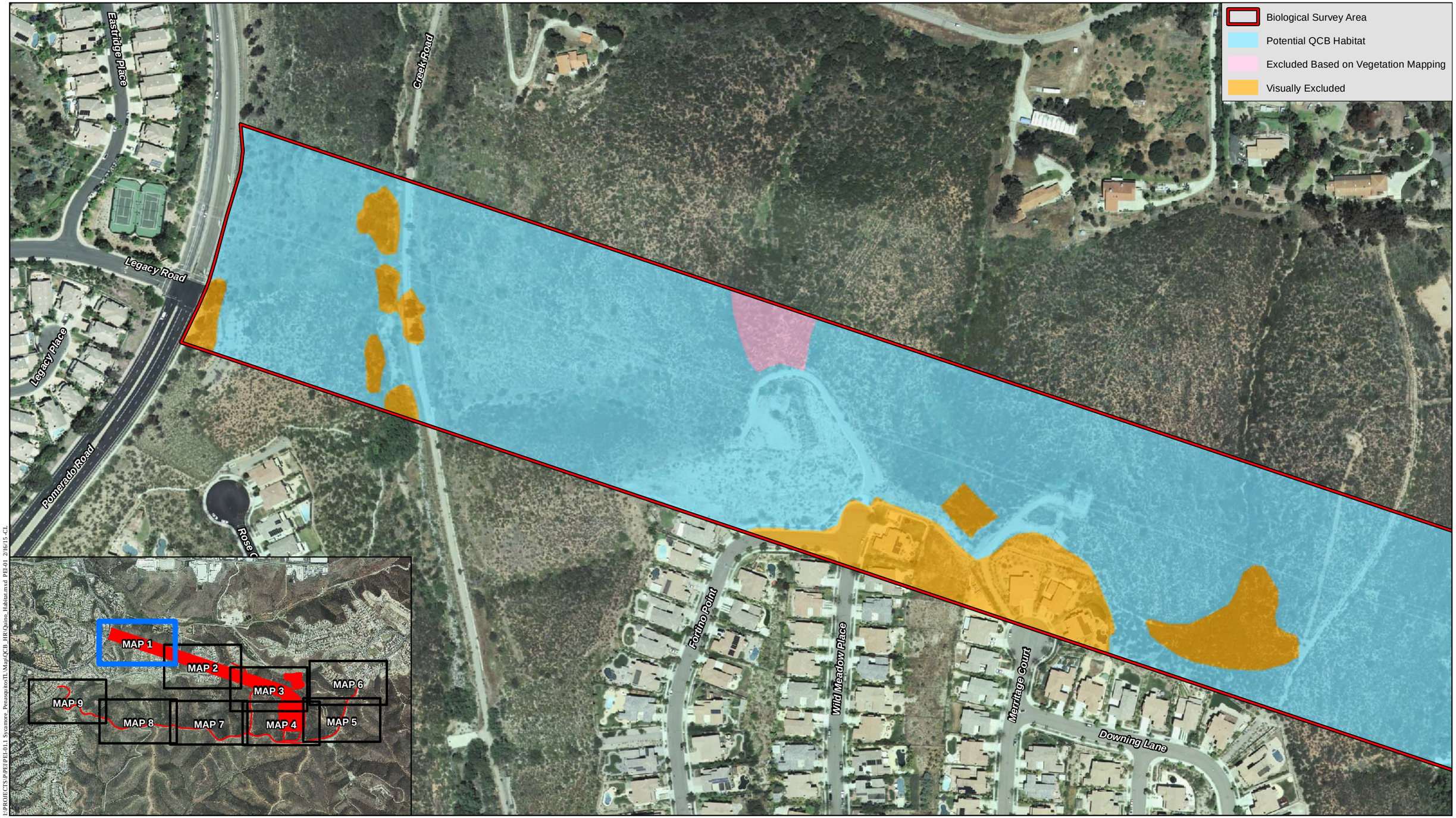
The presence of QCB larval host plants was noted during the assessment. California plantain (*Plantago erecta*) was detected in two areas as shown on Figure 2. The number of individuals in these areas was estimated to be in the hundreds to thousands.

In addition to this memo and its graphics, GIS data from the assessment will be transmitted to you for your use. If you have any additional questions or require any additional information regarding the QCB habitat assessment, please contact Shelby Howard or me at (619) 462-1515.

Attachments: Figures 1-9

[1]The acreages based on the categories in the legends of Figures 1-9 are as follows:

Potential QCB Habitat = 62.0 acres
Excluded Based on Vegetation Mapping = 22.2 acres
No Access/ Could Not Be Visually Verified = 48.6 acres
Visually Excluded = 23.0 acres
TOTAL = 155.8 ACRES



I:\PROJECTS\PP\PEI\PEI-01\1 Sycamore_Penasquitos\TL\Mxd\QCB_HR\Quino_Habitat.mxd PEI-01 2/16/15 -CL

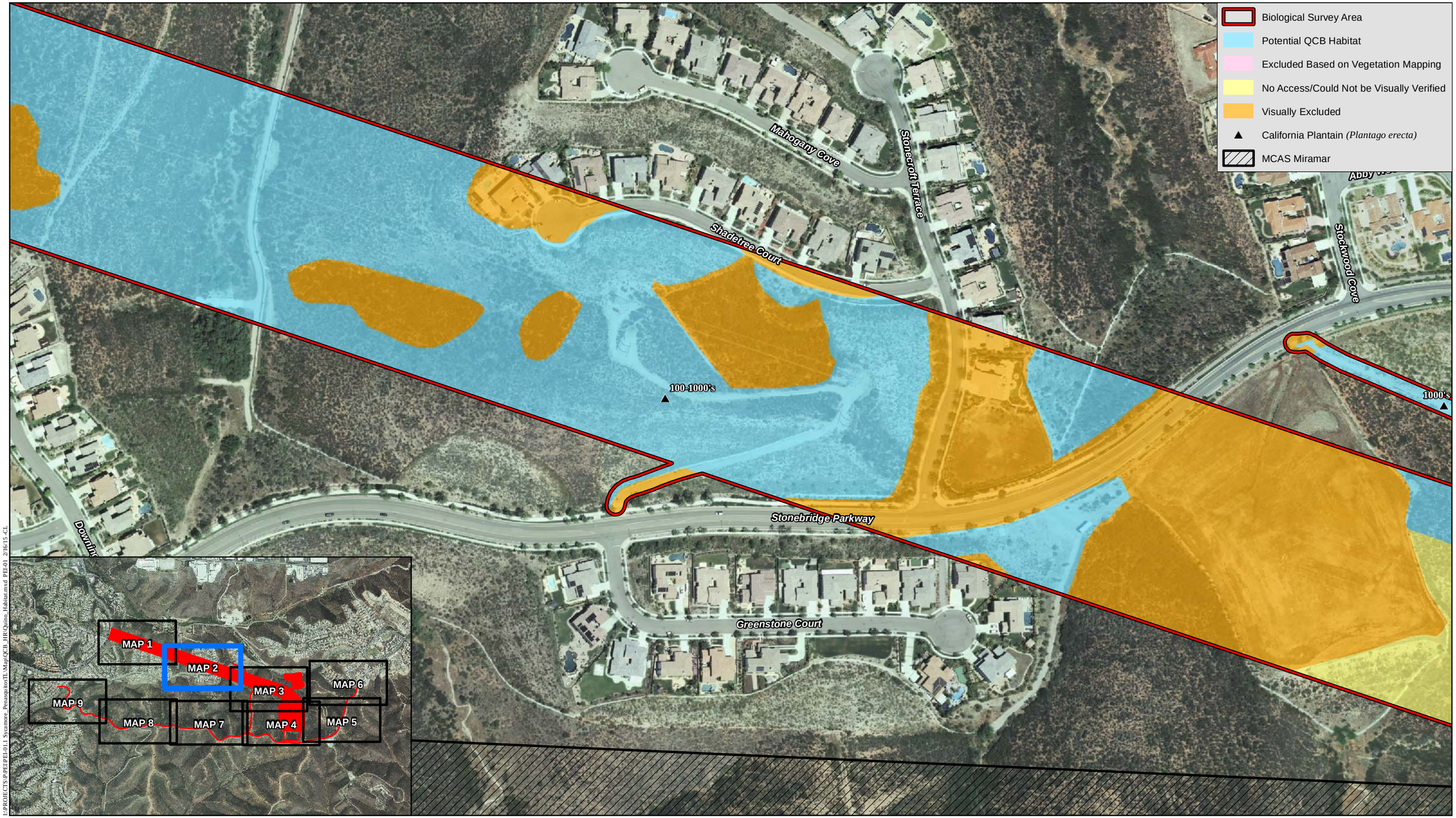
Quino Habitat Assessment

SYCAMORE-PENASQUITOS 230KV TRANSMISSION LINE

HELIX Environmental Planning

N 0 200 Feet

Figure 1



L:\PROJECTS\PEL\PEL011 Sycamore_Penasquitos\TL\Map\QCB_HR\Quino_Habitat.mxd PEL01 2/16/15 CL

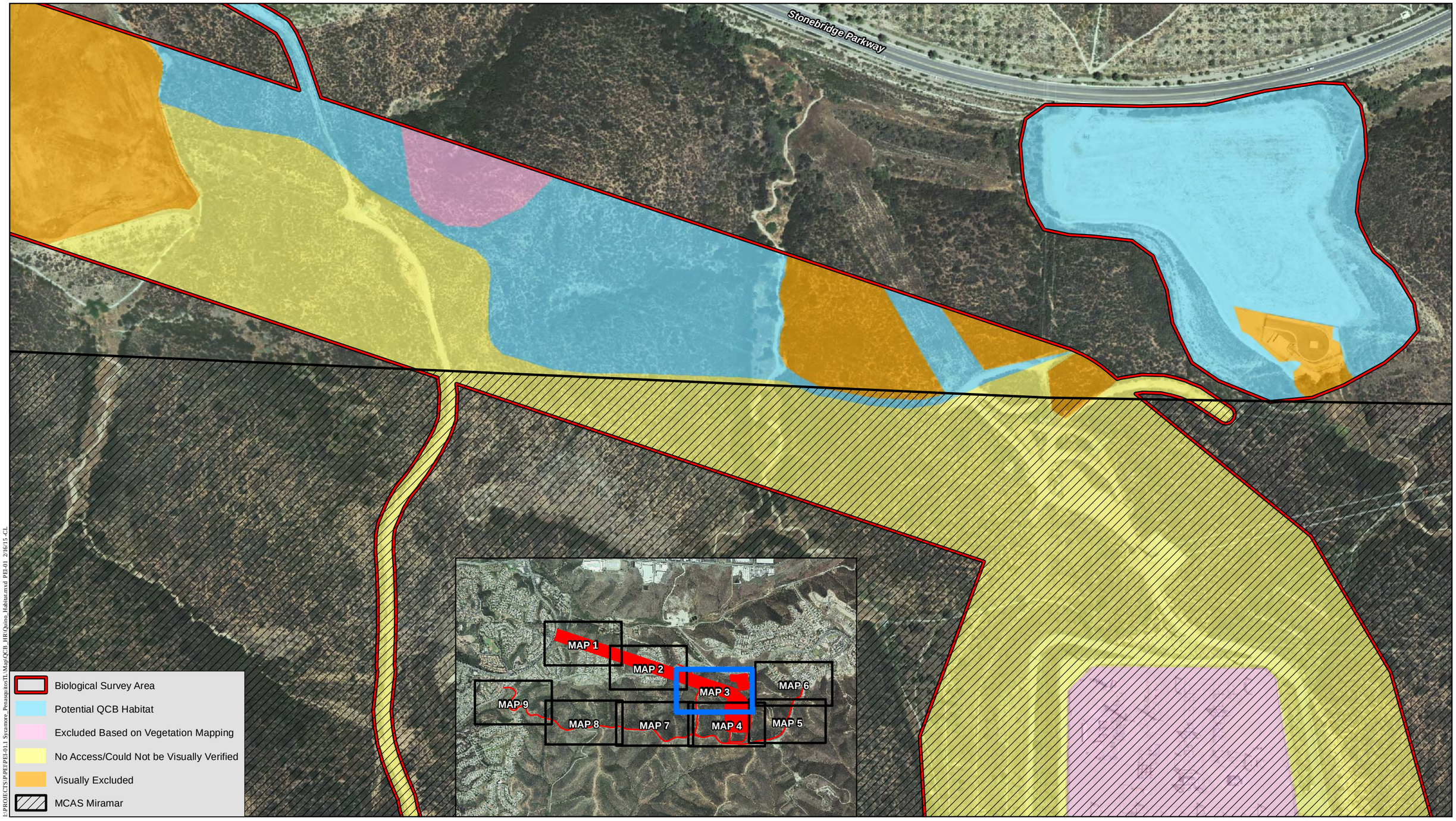
Quino Habitat Assessment

SYCAMORE-PENASQUITOS 230KV TRANSMISSION LINE

HELIX Environmental Planning

N 0 200 Feet

Figure 2



I:\PROJECTS\PPEI\PEI-011 Sycamore_Penasquitos\TL\Map\QCB_HR\Quino_Habitat.mxd PEI-01 2/16/15 -CL

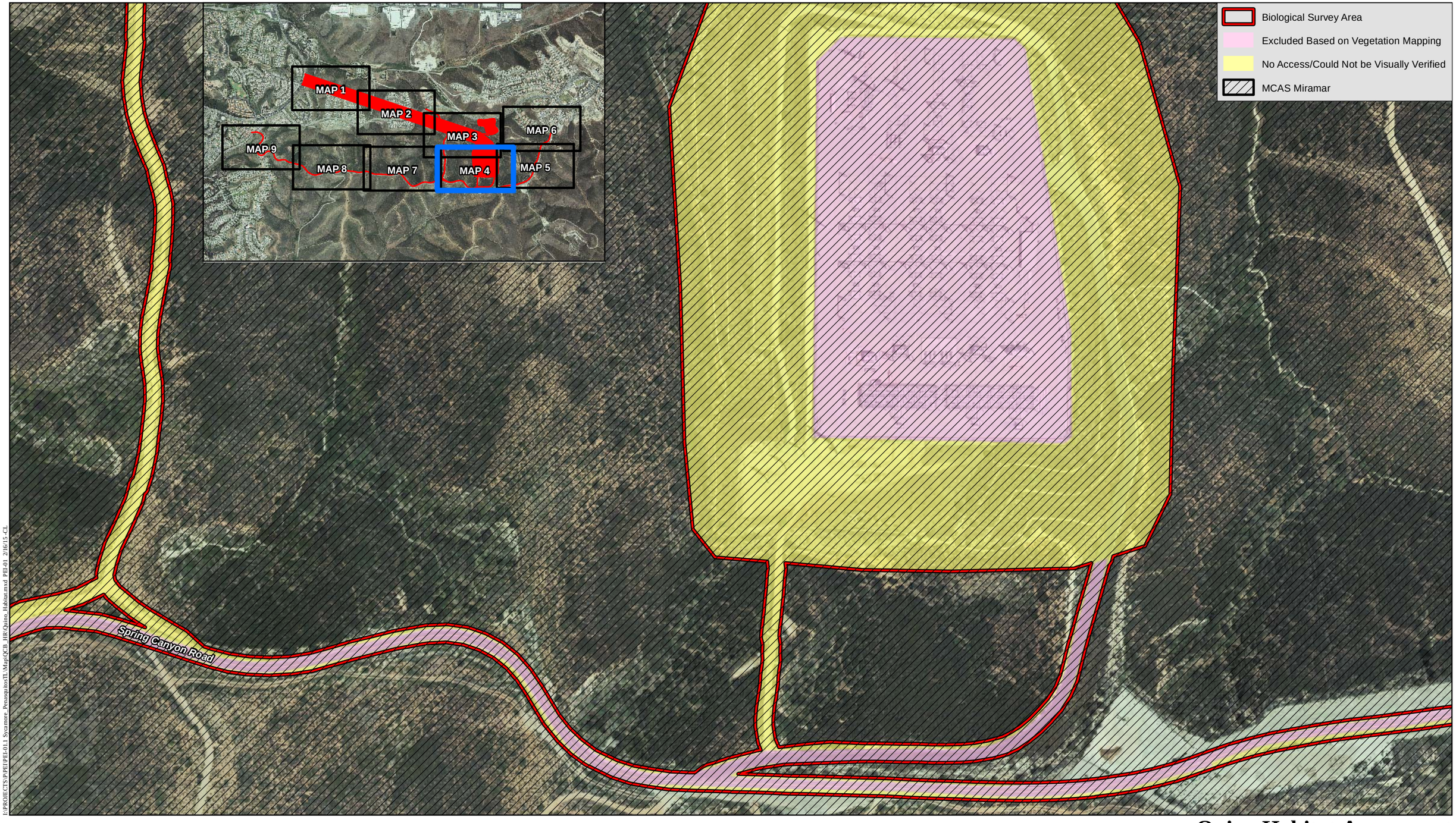
Quino Habitat Assessment

SYCAMORE-PENASQUITOS 230KV TRANSMISSION LINE

HELIX Environmental Planning

N 0 200 Feet

Figure 3



I:\PROJECTS\PPE\PEI\PEI-01\1 Sycamore_Penasquitos\T:\Map\OCB_HR\Quino_Habitat.mxd PEI-01 2/16/15 -CL

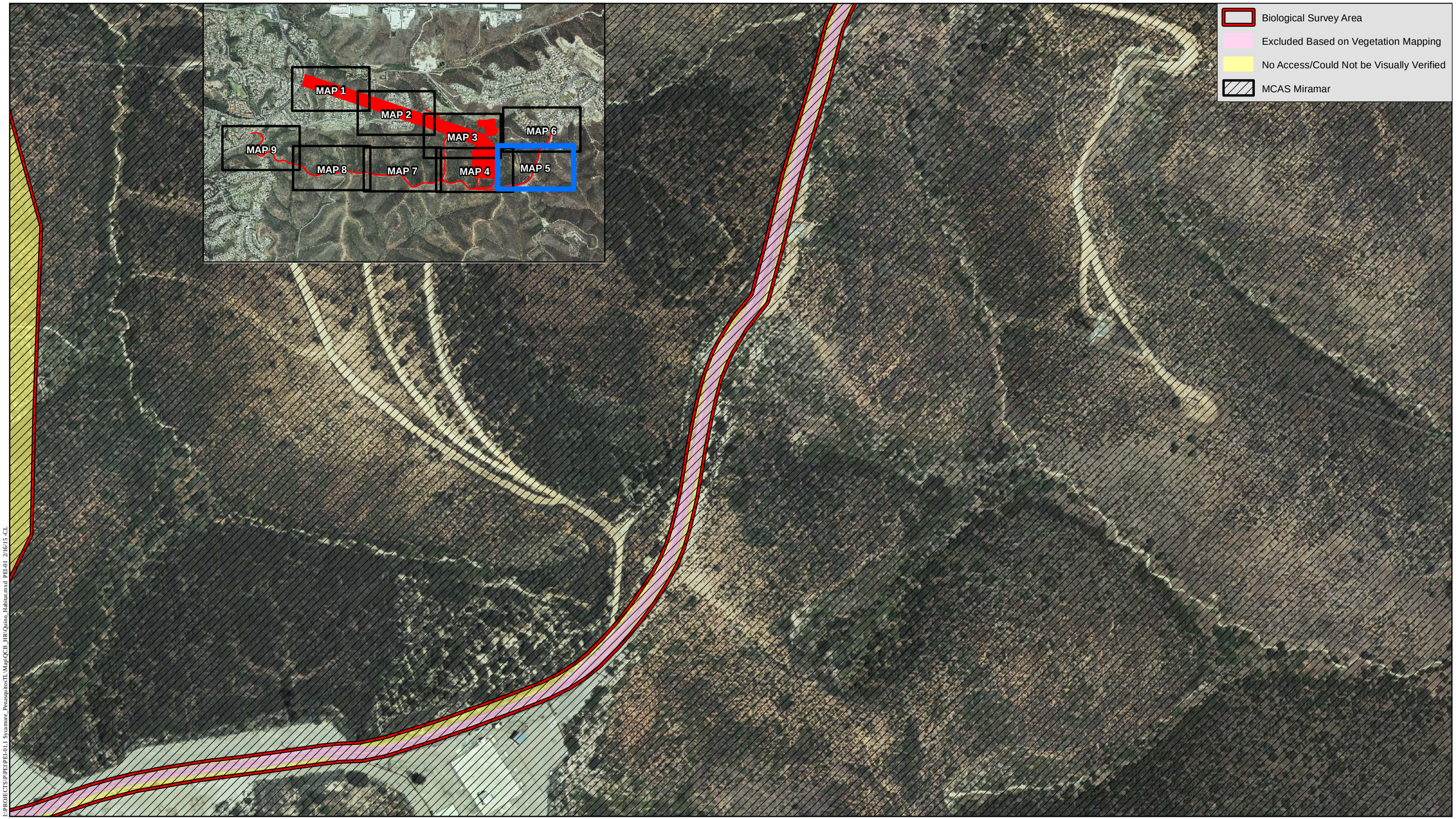
Quino Habitat Assessment

SYCAMORE-PENASQUITOS 230KV TRANSMISSION LINE

HELIX Environmental Planning

N 0 200 Feet

Figure 4



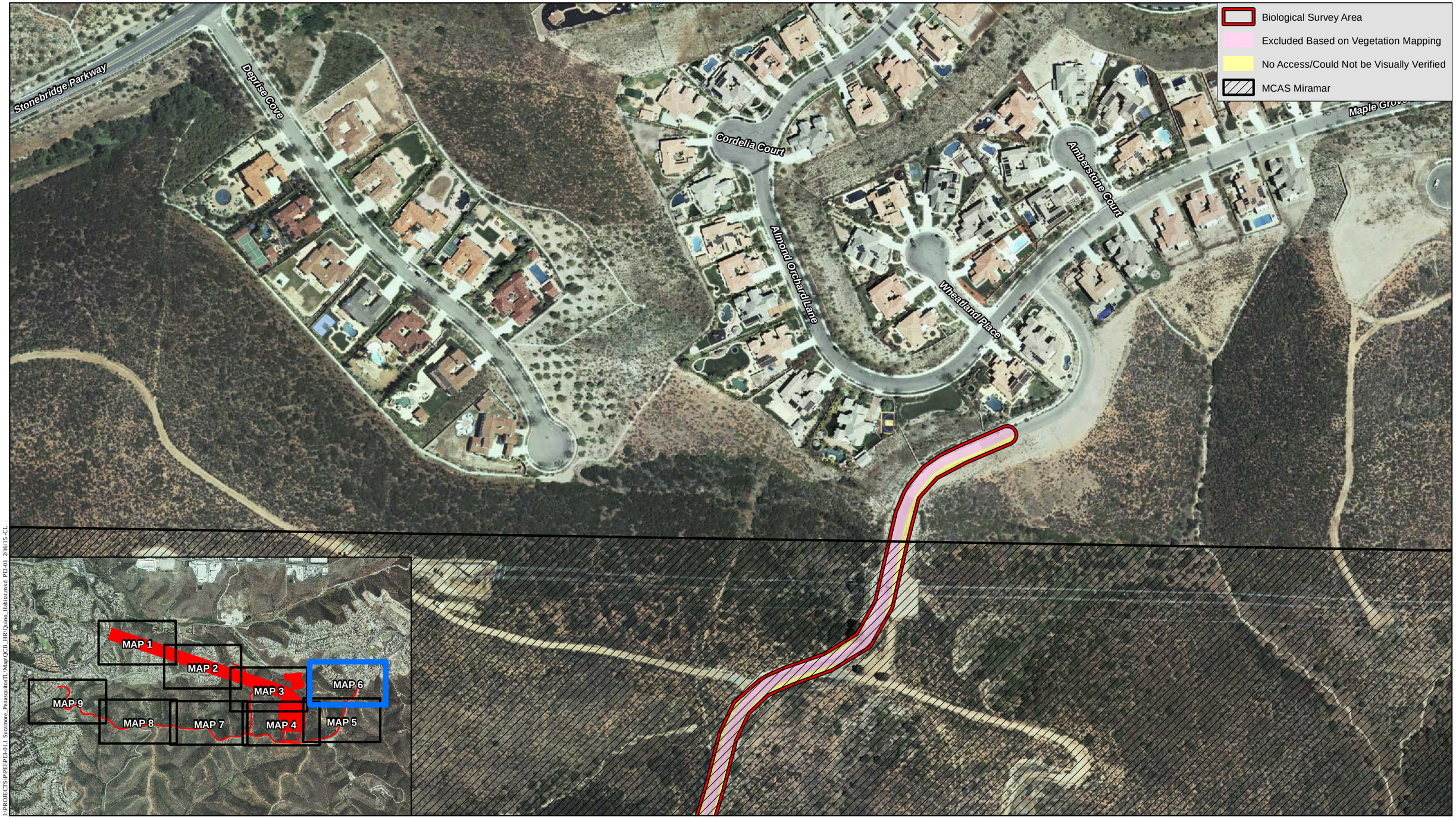
I:\PROJECTS\PEP\PEI-01\1 Sycamore_Penasquitos\TL\Map\QCB_HR\Quino_Habitat.mxd PEI-01 2/16/15 -CL

Quino Habitat Assessment

SYCAMORE-PENASQUITOS 230KV TRANSMISSION LINE

HELIX Environmental Planning

Figure 5



I:\PROJECTS\PPE\PEL-01\1 Sycamore_Penasquitos\TL\Map\QCB_HR\Quino_Habitat.mxd PEL-01 2/16/15 -CL

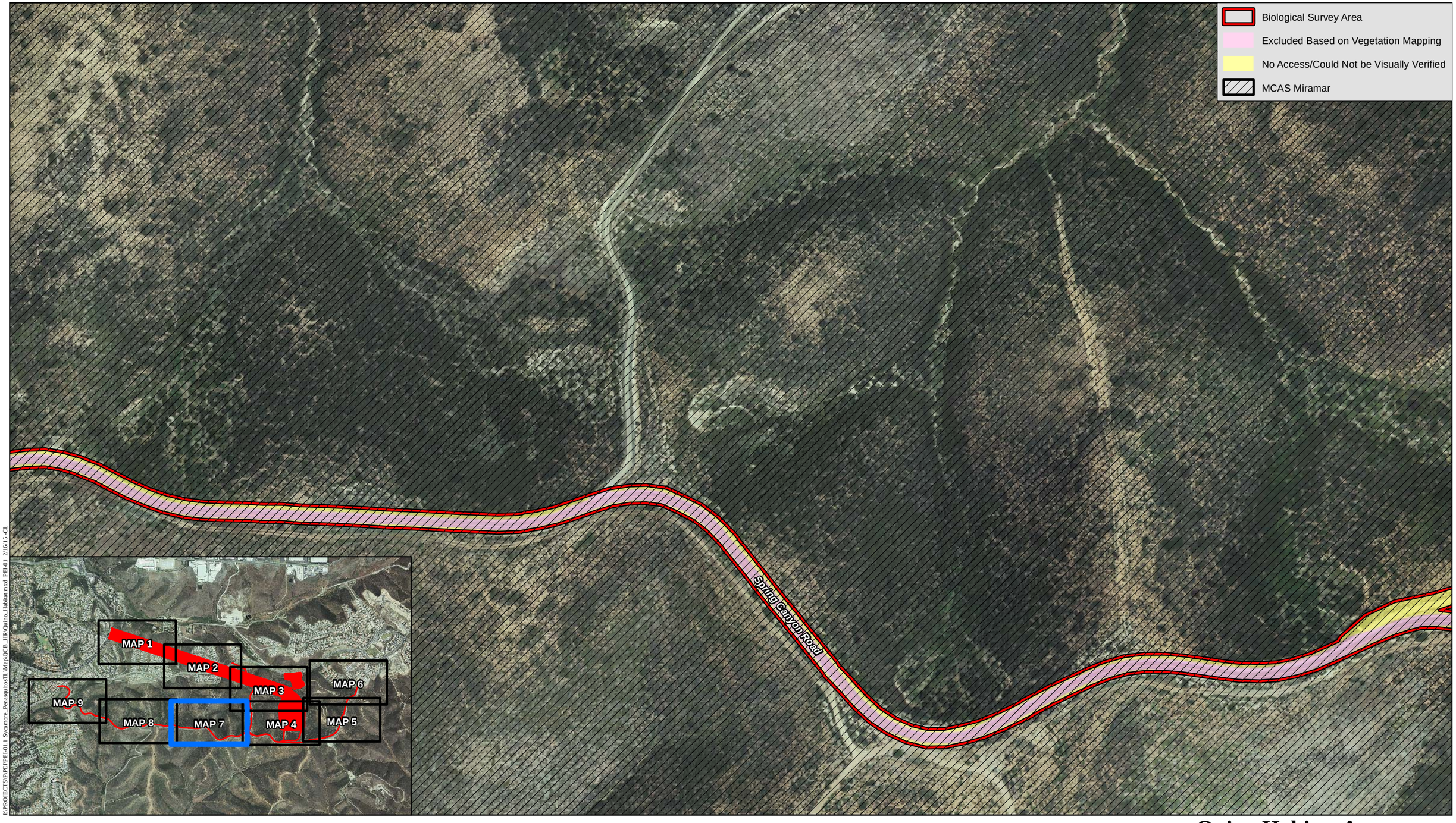
Quino Habitat Assessment

SYCAMORE-PENASQUITOS 230KV TRANSMISSION LINE

HELIX Environmental Planning

N 0 200 Feet

Figure 6



I:\PROJECTS\PJPE\PEL-01\1 Sycamore_Penasquitos\TL\Mxd\QCB_HR\Quino_Habitat.mxd PEL-01 2/16/15 -CL

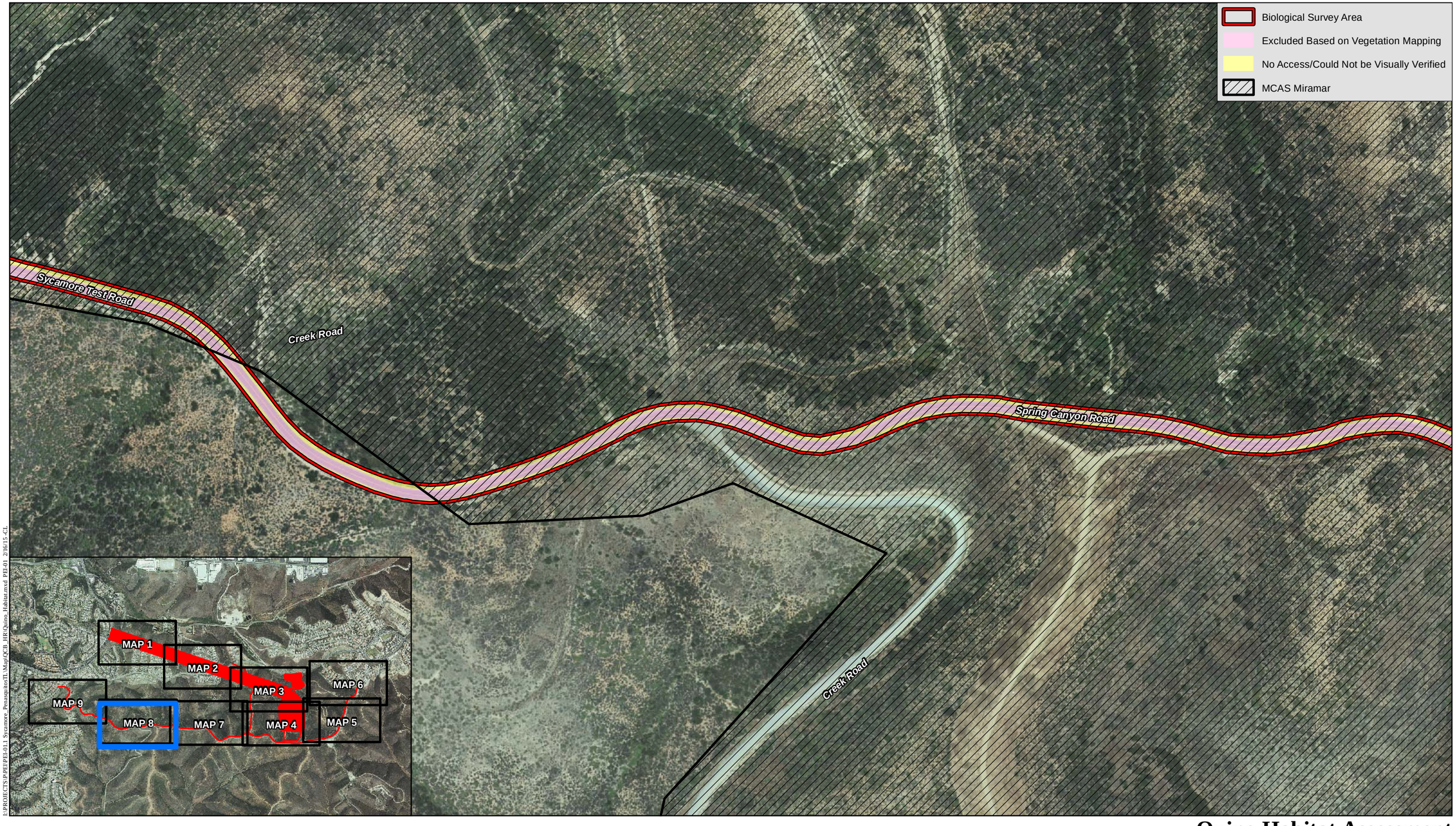
Quino Habitat Assessment

SYCAMORE-PENASQUITOS 230KV TRANSMISSION LINE

HELIX Environmental Planning

N 0 200 Feet

Figure 7



I:\PROJECTS\PPE\PEL-011 Sycamore_Penasquitos\TL\Mxd\QCB_HR\Quino_Habitat.mxd PEL-01 2/16/15 cTi

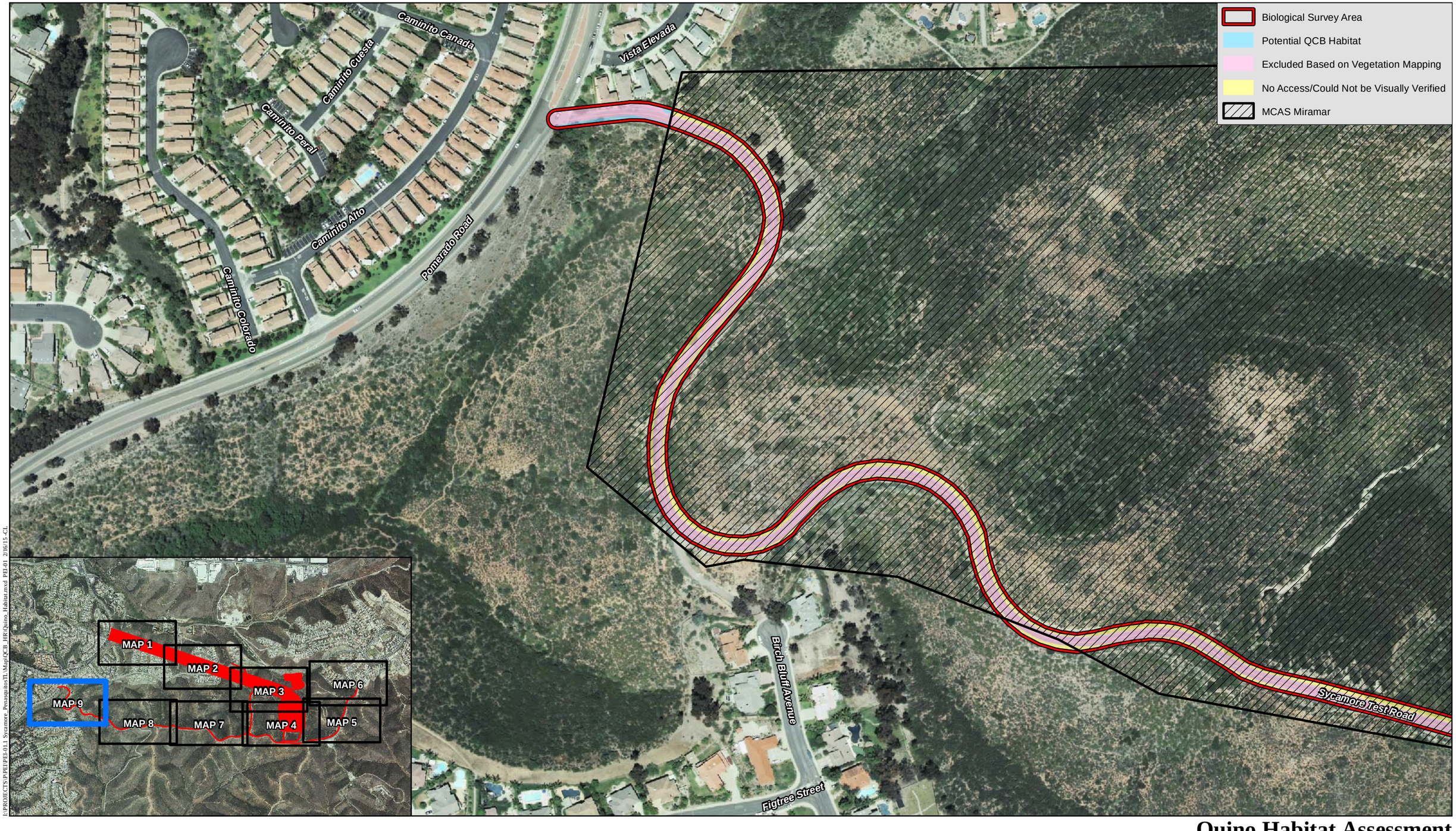
Quino Habitat Assessment

SYCAMORE-PENASQUITOS 230KV TRANSMISSION LINE

HELIX Environmental Planning

0 200 Feet

Figure 8



I:\PROJECTS\P-PE\PEI-011 Sycamore_Penasquitos\TL\Map\QCB_HR\Quino_Habitat.mxd PEI-01 2/16/15 -CL

Quino Habitat Assessment

SYCAMORE-PENASQUITOS 230KV TRANSMISSION LINE

HELIX Environmental Planning

0 200 Feet

Figure 9

Memorandum

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
Suite 200
La Mesa, CA 91942
LarryS@helixepi.com
ShelbyH@helixepi.com
619.462.1515 **tel**
619.462.0552 **fax**
www.**helixepi**.com

Date: 4 September 2015

To: Jeff Thomas, Panorama Environmental

Cc: Leo Mena, Panorama Environmental
Debbie Clayton, HELIX

From: W. Larry Sward and Shelby Howard

Subject: Proposed Habitat Mapping Changes – Sycamore-Peñasquitos Transmission Line

HELIX Proj. No.: PEI-01

Message: On September 3, 2015, HELIX Principal Biologist W. Larry Sward conducted the field assessments of the habitat mapping changes for the project, as outlined below. Our comments on each of the 5 areas are provided below.

Stonebridge Staging Yard. The staging yard was proposed to be re-mapped as bare ground when it was originally mapped as disturbed coastal sage scrub. The current condition of the site is not considered bare ground. There is a history in the use of the site. In the 1990's (and prior to the 1990's), the site was used by General Dynamics as a facility. In the mid-2000's, the site was used by the San Diego County Water Authority for the San Vicente Pipeline project. The site was hydroseeded with an erosion control mix following the completion of the pipeline project (approximately in summer 2011). The site was subsequently fenced and used by SDG&E until recently. The site currently contains a mix of native and non-native species.

The southern portion of the site is dominated by broom baccharis (*Baccharis sarothroides*) that is approximately 2 feet in height, which was a component of the erosion control mix (see Photo 1 below). This portion of the site also contains non-native plant species interspersed on the pad. Based on a review of recent aerial photographs publicly available online, the site appears to have been regularly maintained over the last several years either through mowing or some other form of vegetation management. The only vegetation community category that fits with the species that occur in this area is disturbed baccharis scrub due to the prevalence of broom baccharis. However, due to the current nature of the site, its history of disturbance, and the limited habitat value that this area provides due to the immature vegetation and presence of weed species, we do not recommend that habitat mitigation be required for this disturbed baccharis scrub.

The northern portion of the Stonebridge Staging Yard is mapped as disturbed habitat because of its disturbed nature. It consists of recently emerged broom baccharis, some weed species, and some bare ground (see Photo 2).

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
Suite 200
La Mesa, CA 91942
619.462.1515 **tel**
619.462.0552 **fax**
www.**helixepi**.com

Photo 1. View looking to the southeast from the western portion of the proposed Stonebridge Staging Yard. The County Water Authority's pipeline substation is visible on the right side of the photo. This portion of the site supports approximately 2-foot-tall broom baccharis that germinated from a previous erosion control mix and is mapped as disturbed baccharis scrub. Due to the limited habitat value of this area and previous use of the site, habitat mitigation for this area is not recommended.

Photo 2. View looking to the northeast from the western portion of the proposed Stonebridge Staging Yard. Due to the disturbed nature of this portion of the site and the scattered, recently emerged plants, this area is mapped as disturbed habitat.

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
Suite 200
La Mesa, CA 91942
619.462.1515 **tel**
619.462.0552 **fax**
www.**helixepi**.com

Creek Road. We agree that the yellow highlighted area is not mule fat scrub (MFS) and is appropriately re-mapped as disturbed Diegan coastal sage scrub (DCSS-D).

Black Mountain Ranch Park. We agree with the mapping change from CSS-R (restored coastal sage scrub) to ORN (ornamental). We also agree with the mapping change from DIST (disturbed habitat) to CSS-R due to the prevalence of coastal sage scrub species in this area. It should be noted that it appears that a portion of this area recently burned and looks like disturbed habitat, but we feel it is appropriate to map this area as restored coastal sage scrub.

Carmel Valley Road Staging Yard. Several mapping changes were made in this area. The following is our feedback on each of the proposed changes:

- CSS-R>ORN (west of Camino del Sur) – we agree with this change
- NNG>DIST (immediately east of Camino Del Sur) – we agree with this change
- ORN>DEV (long strip along Carmel Valley Road) – this area is landscaped and irrigated, which is typically considered Ornamental. However, this is typically mapped as developed lands. We don't disagree with mapping this area as ORN.
- ORN>NNG (long strip along Carmel Valley Road) – this area includes a mixture of non-native grasses and weed species, most notably being tumbleweed (*Salsola tragus*). Tumbleweed has recently emerged throughout much of San Diego County in response to summer rains and would likely not have been present at the time this area was remapped. We don't disagree with re-mapping this area as NNG.
- We do not agree with mapping a patch of Meadow/Seep at this location. This location supports a collection of non-native species, with the exception of one individual of native species (*Cyperus eragrostis*; Table 1). It is a mesic location compared to the surrounding area due from runoff from the adjacent pavement. Of the 11 species observed here, 7 species generally occur in uplands (UPL or FACU); 2 species have equal likelihood of occurring in a wetland or an upland (FAC); 2 species are generally occur in wetlands (FACW). Given the weedy habitat present here, the abundance of upland species, and hydrology derived from runoff from pavement, we think DIST would be a better choice for mapping this area.

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
Suite 200
La Mesa, CA 91942
619.462.1515 **tel**
619.462.0552 **fax**
www.**helixepi**.com

Table 1
Carmel Valley Road Species Noted in Area Re-mapped as Meadow/Seep

Scientific Name	Common Name	Wetland Rating∞
*Brachypodium distachyon**	purple false brome	UPL
*Bromus hordeaceus**	soft chess	FACU
Cyperus eragrostis[€]	tall flatsedge	FACW
*Euphorbia maculata**	spotted spurge	UPL
*Festuca perennis**	meadow rye grass	FAC
*Helminthotheca echioides**	bristly ox-tongue	FACU
*Malva parviflora**	cheeseweed	UPL
*Pennisetum clandestinum**	Kikuyu grass	FACU
*Polygonum aviculare**	common knotweed	FACW
*Rumex crispus**,[€]	curly dock	FAC
*Sonchus oleraceus**	sow thistle	UPL

∞ From Lichvar, R., M. Butterwick, N. Melvin, and W. Kirchner. 2014. Arid West Regional Plant List, The National Wetland Plant List: 2014 update of Wetland Ratings. Phytoneuron 2014-41:1-42.
* Non-native species
[€] One individual present

Evergreen Nursery. We agree with the mapping change from SMC (southern mixed chaparral) to EUC (eucalyptus woodland) based on the species present.

Stonebridge Staging Yard

9-4-15

Memorandum

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
Suite 200
La Mesa, CA 91942
LarryS@helixepi.com
619.462.1515 **tel**
619.462.0552 **fax**
www.**helixepi**.com

HELIX Environmental Planning

To: Leo Mena, Panorama Environmental

Date: 15 February 2016 **From:** W. Larry Sward

Subject: Nuttall's Scrub Oak - Sycamore-Peñasquitos Transmission Line

Message:

This memo provides the methods and results of our identification and mapping of Nuttall's scrub oak (*Quercus dumosa*) along Segment C of the Proposed Project associated with the Sycamore-Peñasquitos Transmission Line. This work was undertaken following a receipt of a comment on the Draft Environmental Impact Report (DEIR) regarding the DEIR's conclusions on the status and impact to this species.

Scrub oak identification is more problematic than many other groups. Oaks are notoriously promiscuous and hybridize freely. There is even taxonomic recognition of 3 common hybrids in San Diego County, one of which, *Quercus x acutidens*, is known from nearby[i]. The difficulty in scrub oak identification in the project area is accentuated by the fact that the vegetation in the project area is relatively old, which has produced unusually large scrub oaks. The timing of this survey was not ideal because the primary means of differentiating scrub oaks in the project area is best done on young leaves, and these had just begun to sprout. However, there were enough field characteristics on the trees in the survey area to make conclusions on the species of individuals present.

Three scrub oaks are known from coastal San Diego County: Nuttall's scrub oak, inland scrub oak (*Quercus berberidifolia*), and *Quercus x acutidens*. Prior to conducting a field survey, a review of two oak taxonomic treatments[ii] for these 3 taxa was done. Several online resources were also reviewed[iii], and I spoke with Fred Roberts regarding species identification in this group. A summary of morphological characters was developed from these sources, which was used to distinguish Nuttall's scrub oak from other oaks (Table 1). The hairs, or trichomes, on the underside of the leaves are the most reliable character for separating Nuttall's scrub oak from other taxa. The trichomes on Nuttall's scrub oak are longer, and more dense and wavy (i.e., tomentose) than the other expected species. Over time the trichomes in scrub oaks fall off or deteriorate. This is why young leaves are required for accurate identification.

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
Suite 200
La Mesa, CA 91942
LarryS@helixepi.com
619.462.1515 **tel**
619.462.0552 **fax**
www.**helixepi**.com

HELIX Environmental Planning

I conducted the field work for this analysis over 7 days in early 2016: January 22, 27, and 29, and February 1, 8, 13, and 14. During that time I used a GPS with sub meter accuracy to map all of the scrub oaks in the proposed direct impact areas, and the immediately adjacent areas. The scrub oaks that occurred next to the roads to be used during construction were also mapped. Initially the scrub oaks within 10 feet of the direct impact areas and roads were mapped. This was reduced to 2 feet for the last two days of field work.

Initially the trichomes on every scrub oak were examined for identification. After several days of field work this became unnecessary as all the plants that appeared as typical Nuttall's scrub were determined to be so after closer scrutiny. A typical Nuttall's scrub oak is a dense shrub that is less than 2 meters tall; and has leaves that are less than 2.5 centimeters, the margins of which are wavy and spine-toothed. Plants that did not fit this description were scrutinized for leaf hairs, size, and shape; and growth habit (tree vs. shrub).

Approximately 608 Nuttall's scrub oak were mapped along Segment C of the Proposed Project. In this same area approximately 163 other scrub oaks were mapped.

Please let me or Shelby Howard know if you have any questions or if you need additional information.

Attachments: Table 1 - Scrub Oak Morphological Summary
GIS shapefiles of the mapped scrub oaks within the survey area

---

[i] http://www.calflora.org/entry/observ.html#srch=t&lpcli=t&taxon=Quercus+Xacutidens&cch=t&inat=r&cc=SDG

[ii] Illustrated Guide to The Oaks of the Southern Californian Floristic Province, The Oaks of Coastal Southern California and Northwestern Baja California, Mexico. F. Roberts, Jr. F.M. Roberts Publications, Encinitas, Calif. 1995. 112 pp.

The Jepson Manual: Vascular Plants of California. Second edition. B. Baldwin, D. Goldman, D. Keil, R. Patterson, T. Rosatti, and D. Wilken, (eds.). University of California Press. Berkeley, CA. 2012. 1568 pp.

[iii] http://waynesword.palomar.edu/hybrids2.htm
http://tchester.org/plants/analysis/quercus/scrub_oaks.html

Table 1.
Scrub Oak Morphological Summary

	Leaves					Plant	
	Shape	Length	Abaxial Hairs	Margin	Petiole	Height	Trunk
Q. x acutidens							
Jepson	Oblong to obovate	2-6 cm	Densely puberulent, glabrous in age	Tip obtuse to short-toothed, margin entire, dentate, or wavy dentate	3-7 mm	5-6 (-10) m	Shrub to small tree
Roberts	Oblong to obovate; base wedge-shaped	same	Minute hairs, becoming glabrous	Without teeth, wavy, or with irregularly toothed		<6m	same
Q. berberidifolia							
Jepson	Oblong, elliptic, or ± round, adaxially ± flat to wavy	1.5-3 cm	Minute appressed stellate hairs	Tip rounded, margin mucro- or spine-toothed	2-4 mm	Shrub 1-3 m or to 8+ m	Shrub or small tree
Roberts	Oblong to elliptic or somewhat rounded	same	Scattered minute hairs; 6-8 rayed	Mostly tooted, these often spine-tipped or spinose	2-6 mm	1-4 m	Shrub, occasionally arboresscent
Quercus dumosa							
Jepson	Oblong, elliptic, or ± round; adaxially ± convex or not	1.0-2.5 cm	Fine-tomentose, glabrous in age	Tip obtuse to abruptly pointed, margin ± wavy or not, ± spine-toothed	<5mm	1-4 m	Shrub
Roberts	Short, round, or slightly longer than broad	same	Fine, densely matted gray hairs. ≤1 mm; stellate, intertwining, cobweb like; visible w/out aid; sparse with age	Flat or wavy, with abruptly pointed teeth or spines	same	1-3 m	Multiple-dense low matted clumps