



Appendix D
Biological Technical Report

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Final Biological Technical Report

Ocean Ranch Substation Project San Diego County, California



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Table of Contents

	PAGE
ACRONYMS AND ABBREVIATIONS	III
1.0 INTRODUCTION	1
2.0 PROJECT DESCRIPTION	1
3.0 REGULATORY SETTING	6
4.0 METHODS	12
5.0 RESULTS AND DISCUSSION	17
6.0 IMPACTS	25
7.0 REFERENCES	30

List of Figures

FIGURE	PAGE
FIGURE 1: PROJECT LOCATION OVERVIEW	2
FIGURE 2: CNDDDB SPECIAL STATUS SPECIES WITHIN 1 MILE OF THE PROJECT SURVEY AREA	14
FIGURE 3: CRITICAL HABITAT WITHIN 5 MILES OF THE PROJECT SURVEY AREA	16

List of Tables

TABLE	PAGE
TABLE 2.1 PROPOSED PROJECT COMPONENT SUMMARY	5
TABLE 5.1 VEGETATION COMMUNITIES LOCATED WITHIN THE PSA	18
TABLE 5.2 SPECIAL STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING WITHIN THE PSA	22
TABLE 6.1 ESTIMATED CONSTRUCTION IMPACTS BY VEGETATION COMMUNITY	28
TABLE 6.2 ESTIMATED IMPACTS TO SENSITIVE AND NON-SENSITIVE HABITATS	28

List of Appendices

APPENDIX A – BIOLOGICAL CONSTRAINTS MAPBOOK
APPENDIX B – PLANT AND WILDLIFE SPECIES LISTS

ACRONYMS AND ABBREVIATIONS

BMPs	Best Management Practices
BTR	Biological Technical Report
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CNPS	California Native Plant Society
CNDDB	California Natural Diversity Database
CPUC	California Public Utilities Commission
RWQCB	California Regional Water Quality Control Boards
CPCN	Certificate of Public Convenience and Necessity
CWA	Clean Water Act
CFR	Code of Federal Regulations
ESA	Endangered Species Act
MBTA	Migratory Bird Treaty Act
NOAA	National Oceanic and Atmospheric Administration
NCCP	Natural Communities Conservation Plan
PEA	Proponent's Environmental Assessment
PSA	Proposed Study Area
SDG&E	San Diego Gas & Electric Company
SWRCB	State Water Resources Control Board
ACOE	U.S Army Corps of Engineers
U.S.C.	United States Code
USFWS	United States Department of the Interior Fish and Wildlife Service
EPA	United States Environmental Protection Agency

1.0 INTRODUCTION

San Diego Gas & Electric Company (SDG&E) is a regulated public utility that provides electric service to 3.4 million people within its 4,100 square mile service territory, covering parts of two counties and 25 cities and unincorporated communities in the San Diego area. In an effort to serve existing customers and anticipate customer-driven load, and maintain reliability of the electrical distribution system, SDG&E proposes to construct a new substation in the City of Oceanside within San Diego County (Figure 1). The proposed substation site is located on land owned by SDG&E and the power line loop-in is located within existing SDG&E rights-of-way (ROW) and franchise position within the City of Oceanside public streets.

SDG&E has retained Pangea Biological (Pangea) to conduct biological resource surveys within the Proposed Study Area (PSA) for the proposed Project. Analysis of biological and water/wetland resources within the PSA included a 50-foot wide buffer from the proposed substation, associated staging, storage, and work areas.

The purpose of this Biological Technical Report (BTR) is to document the findings of both reconnaissance-level and focused biological studies conducted along the PSA, analyze the potential and actual impacts that could occur as a result of the proposed Project, and to recommend measures to avoid, minimize, or mitigate for unavoidable impacts that would result from the implementation of the proposed Project. This report will be included as a supplement to SDG&E's Proponent's Environmental Assessment (PEA), and filed as part of its application for a Certificate of Public Convenience and Necessity (CPCN) that will be submitted to the California Public Utilities Commission (CPUC). Pangea has prepared this report on behalf of SDG&E.

2.0 PROJECT DESCRIPTION

The proposed Project is situated in the northwestern portion of San Diego County in the City of Oceanside, approximately 35 miles north of downtown San Diego. The proposed Ocean Ranch Substation is located within the Pacific Coast Business Park, which is part of the Rancho del Oro Specific Plan area. The proposed Ocean Ranch Substation will be located entirely on land owned by SDG&E, and the powerline loop-in is located within existing SDG&E ROW and franchise position within the City of Oceanside public streets.

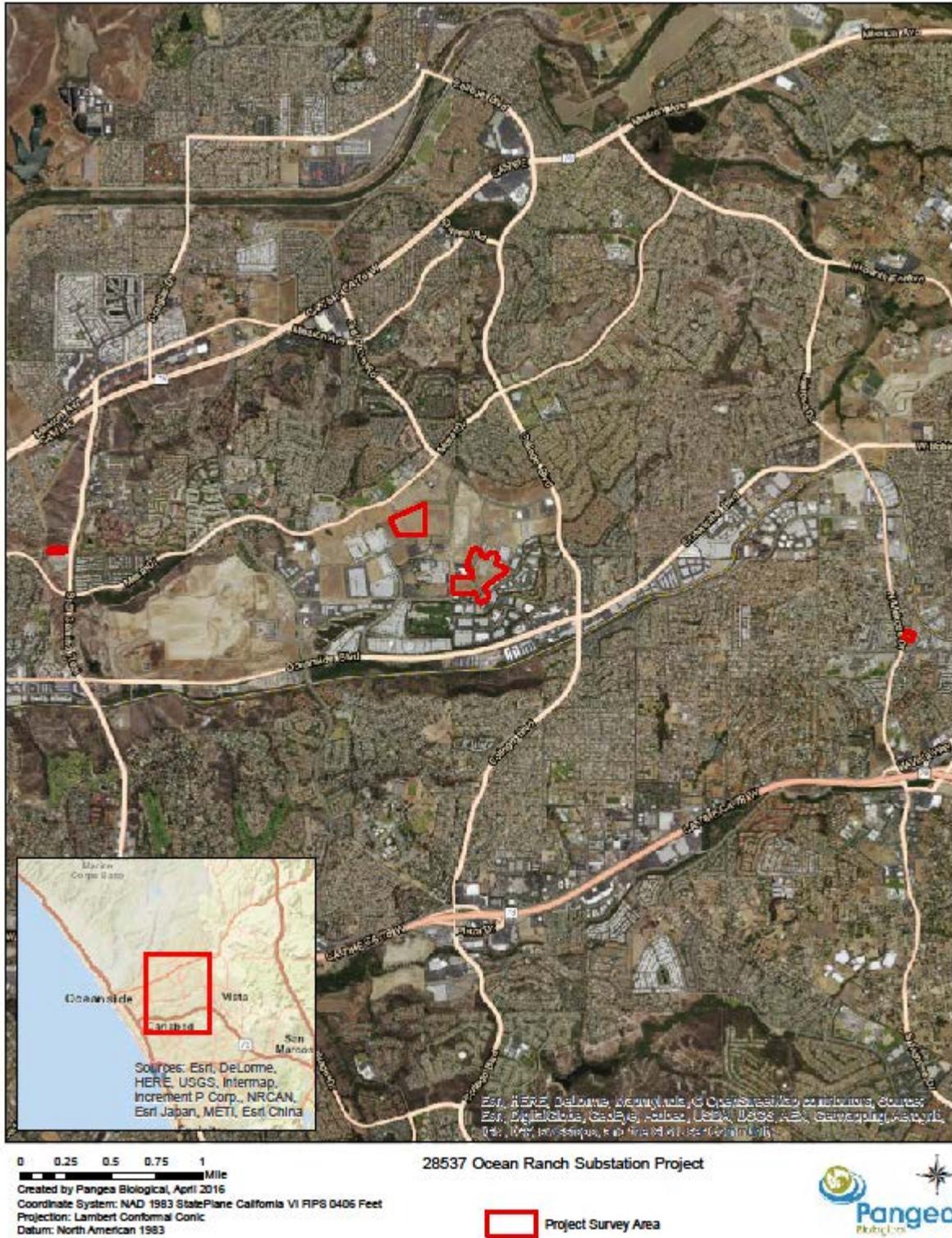


Figure 1: Project Location Overview

2.1 Project Overview

The proposed Project includes the following main components:

- **Ocean Ranch Distribution Substation:** Construction of a new 69/12 kV low profile substation in the City of Oceanside. The substation will have an initial capacity of 60 megavolt ampere (MVA) rating, and an ultimate capacity of 120 MV).
- **TL 6966 Loop-In.** TL 6966 is an existing underground 69 kV circuit which has termination points at San Luis Rey Substation (to the west) and Melrose Substation (to the east). It will be intercepted at the intersection of Avenida De La Plata and Rancho Del Oro and extended to the proposed substation via the construction of an underground power line duct bank with a total length of approximately 1,330 feet. This will reconfigure the existing tie line into TL 6966 (San Luis Rey to Ocean Ranch) and TL 6979 (Ocean Ranch to Melrose).
- **12 kV Distribution System:** Four new underground distribution circuits will be installed and will intercept four existing circuits. A portion of the existing circuits will be offloaded to the new Ocean Ranch circuits. Approximately 4,650 feet of new 12 kV distribution line will be constructed, most of which will be on the Ocean Ranch Substation site. The proposed Project includes construction of four new manholes and one new handhole to access the new segment of underground 12 kV distribution line.
- **Telecommunication Systems:** A 40-foot monopole will be installed in the southwest corner of the Ocean Ranch substation property for a proposed microwave radio communication system. A fiber optic cable will be installed on the existing overhead poles and in the underground duct structures connecting the Ocean Ranch substation and the San Luis Rey substation. Two pad-mounted pedestals, approximately 3 feet high, will be installed to enclose the communications equipment at or near the property line.

Each of these general proposed Project components are discussed in detail below.

Ocean Ranch Substation

The proposed Ocean Ranch Substation is a planned 9.66-acre site, which will include the facility's water quality basins, landscaping, internal maintenance roads, and future uses. The proposed Substation will be a low profile design, and once constructed will be enclosed by an approximately 10-foot-tall, "La Paz" or similarly brown-colored, masonry perimeter wall. All substation construction work will be conducted within the SDG&E-owned parcel.

TL 6966 Loop-In

In order to connect in to the proposed Ocean Ranch Substation, the existing underground segment of power line TL 6966 will be intercepted at the intersection of Rancho Del Oro and Avenida De La Plata and extended underground along Rancho Del Oro to the proposed substation site. This proposed underground segment will consist of an underground duct bank traversing in a northerly direction along Ranch Del Oro from the Avenida De La Plata and Rancho Del Oro intersection to the proposed substation site, for a combined total distance of approximately 1,330 feet. The proposed underground segment will create two circuits into the proposed Ocean Ranch Substation. The underground power line within the constructed duct bank connecting into the proposed Ocean Ranch Substation from the Melrose substation will be

relabeled TL 6979. The underground power line within the constructed duct bank connecting into the proposed substation from San Luis Rey Substation will continue to be labeled TL 6966. Approximately two vaults, one per underground power line, shall be installed within the proposed substation property area. Additionally, an off-set vault design configuration (one circuit per vault) will be implemented to maintain reliability and for maintenance. The total length of the new underground power line is approximately 1,500 feet, of which approximately 1,000 feet is within the public road ROW and 500 feet is within SDG&E ROW or franchise position.

Distribution Circuits

The proposed Project will entail the installation of 2,850 feet of new underground duct banks to facilitate the relocation of distribution circuits C509, C903, C904, and C905 from existing substations to the proposed Ocean Ranch Substation.

The proposed Project will provide additional circuits to facilitate load transfers and distribute circuit load. The electric distribution circuits exiting the substation will be installed in public ROW or within the franchise position of City of Oceanside public streets, or in new ROW if required. The four circuits will cut-over to existing circuits originating from the Ocean Ranch Substation and tie in to existing distribution circuits.

Telecommunication Systems

The proposed telecommunication system will be composed of fiber optic cable and microwave radio, and AT&T communication service to provide reliable and redundant communications to the substations. The telecommunication services facilitate the remote monitoring, control, and operation of the substation equipment and provide teleprotection relaying, telemetry, telephone, modem, access control, and video monitoring. In order to connect the proposed Ocean Ranch Substation to these substation systems, fiber optic cable, microwave radio, and AT&T services will be installed.

The fiber optic cable will be installed between the Ocean Ranch Substation and the San Luis Rey Substation. The fiber optic cable will be installed on the existing overhead poles and in the underground duct structures connecting the Ocean Ranch substation and the San Luis Rey substation.

A 40-foot monopole will be installed in the southwest corner of the property for the microwave radio communication system. A 2-foot diameter antenna will be mounted on the monopole and point west to provide a communications link to the San Luis Rey Substation. A conduit duct will be installed on the property between the monopole and the substation control shelter.

2.2 Project Components

Activities associated with the proposed Project include construction of the new Ocean Ranch Substation, installation of new underground distribution line, and access and use of four staging yards. Wherever possible, activities will occur within existing paved or unpaved access roads or other previously disturbed areas. Table 2.1 summarizes all the construction components in support of the proposed Project.

Table 2.1 Proposed Project Component Summary

Workspace Type	Quantity	Typical Workspace Dimensions Size
<i>Underground Construction</i>		
Underground Trench Work Area, Vault Installation, Wire Pulling	5,980 feet	Approximately 5,980 feet of new underground line, with temporary workspace of a 30-foot width for the length of the line (5,980 feet by 30 feet, or approximately 179,400 square feet [4.12 acres])
<i>Proposed Ocean Ranch Substation</i>		
The proposed Ocean Ranch Substation Site	1	9.66 acres
<i>San Luis Rey Substation</i>		
Work conducted within existing developed substation, no extra workspace required	1	N/A
<i>Staging Yards</i>		
San Luis Rey Staging Yard	1	0.5 acre
Corporate Staging Yard	1	11.5 acres
USPS Staging Yard	1	5.0 acres
Melrose Staging Yard	1	0.5 acre

Pulling Sites

The underground cable installation process will require a network of pull sites located adjacent to the proposed and existing underground vaults. These pull sites will be approximately 50 feet long by 30 feet wide and will be located within the temporary work areas associated with underground trench/vault work areas.

Underground Construction

The installation of new duct banks and vaults will require temporary workspace within an existing paved street (Avenida Del Oro). The underground trench temporary work area will be approximately 30 feet wide and will be generally centered on the power line alignments. The underground trench work area will be adjusted to comply with traffic control permits to maintain traffic flow through construction areas as necessary. The duct banks would require an approximately 30-foot-wide workspace (approximately 15 feet on each side of the line), for approximately 5,980 feet in length (a total of 4.12 acres of temporary workspace within paved roads will be required).

Ocean Ranch Substation Work Area

All construction equipment, vehicles, personnel, and material staging in support of construction of the Ocean Ranch Substation will be located within the property lines of the proposed Ocean Ranch Substation Site. Because the site is currently disturbed, minimal clearing of vegetation will be required for construction. The proposed Ocean Ranch Substation Site will include adequate space to accommodate all construction activities, equipment, materials, temporary office trailers, and vehicle parking for construction of the substation.

Staging Areas

The proposed Project includes four temporary construction staging areas: the San Luis Rey Staging Yard, Corporate Staging Yard, USPS Staging Yard, and Melrose Staging Yard. The staging areas may be used for the refueling of vehicles and construction equipment by a mobile fueling truck, pole framing and assembly, parking, and open storage for material and equipment, construction trailers, portable restrooms, and lighting. Generators may also be used in this area to provide temporary power to construction trailers. Construction workers typically meet at the staging area each morning and park their vehicles at the yard. In-ground fencing will be installed at the staging yards in cases where it is not already installed. Gravel, class II base, or other BMP may be used to line the ground at staging yards to avoid the creation of unsafe mud conditions and unnecessary sediment transport off site. SDG&E has attempted to identify a reasonable number of staging yards commensurate with the size, location, and scope of the proposed Project.

Access Roads

Construction will primarily take place within the existing SDG&E easements, access roads, and substation properties. Most work areas are accessible by vehicle in paved/developed areas, unpaved SDG&E-maintained access roads, or other existing disturbed areas. Vehicles will remain within existing access roads, previously disturbed areas, and designated temporary work areas, where feasible.

3.0 REGULATORY SETTING

This section includes a description of the biological resources regulatory framework. The California Public Utilities Commission has exclusive jurisdiction over the siting, design, and construction of the proposed Project, and the proposed Project is not subject to local discretionary land use regulations.

3.1 Federal

Federal Endangered Species Act

The Federal Endangered Species Act (ESA) of 1973 (16 United States Code (USC) Section 1531 *et seq.*) is aimed at the protection of plants and animals which have been identified as being at risk of extinction, and classified as either threatened or endangered. Section 9 of the ESA also regulates the “taking” of any endangered fish or wildlife species. As development is proposed, the responsible agency or individual landowners are required to submit to a formal consultation with the U.S. Fish and Wildlife Service (USFWS) to assess impacts to listed species (including plants) or its critical habitat as the result of a development project, pursuant to Sections 7 and 10 of the ESA. The USFWS is required to make a determination as to the extent an impact(s) would have to a particular species due to a project. If it is determined that impacts to a species would likely occur, measures to avoid or reduce such impacts must be identified. The USFWS may issue an incidental take statement, following consultation and the issuance of a Biological Opinion.

This allows for take of the species that is incidental to another authorized activity, provided that the action will not adversely affect the existence of the species.

Migratory Bird Treaty Act (MBTA)

The Migratory Bird Treaty Act (MBTA) (16 USC 703 et seq.) is a federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The number of bird species covered by the MBTA is extensive and is listed at 50 Code of Federal Regulation (CFR) 10.13. The regulatory definition of “migratory bird” is broad and includes any mutation or hybrid of a listed species and includes any part, egg, or nest of such bird (50 CFR 10.12).

Migratory birds are not necessarily federally listed endangered or threatened birds under the ESA. The MBTA, which is enforced by USFWS, makes it unlawful “by any means or in any manner, to pursue, hunt, take, capture, [or] kill” any migratory bird, or attempt such actions, except as permitted by regulation. The applicable regulations prohibit the take, possession, import, export, transport, sale, purchase, barter, or offering of these activities, except under a valid permit or as permitted in the implementing regulations (50 CFR 21.11).

Clean Water Act (CWA)

The purpose of the Clean Water Act (CWA) is to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” Section 404 of the CWA prohibits the discharge of dredge or fill material into waters of the U.S. without a permit from the U.S. Army Corps of Engineers (USACE). The definition of “waters of the U.S.” includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas “that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR § 328.3(b)). The U.S. Environmental Protection Agency has veto authority over the USACE’s administration of the Section 404 program and may override a USACE decision with respect to permitting.

The CWA (33 USC Section 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point sources discharges into surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). The proposed Project is under the jurisdiction of the San Diego Regional Water Quality Control Board (RWQCB). Section 4.9, Hydrology and Water Quality, has additional details regarding the CWA, including Sections 401, 402, and 404 (including the June 2015 final Clean Water Rule).

The U.S Army Corps of Engineers (ACOE) administers Section 404 of the CWA, which regulates the discharge of dredged or fill material into navigable waters, including wetlands and other Waters of the U.S. The definition of Waters of the U.S. includes rivers, streams, estuaries, territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas “that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR § 328.3(b)). The ACOE issues general and individual permits and makes determinations on whether an area is considered jurisdictional. Substantial impacts to Waters of the U.S. may require an Individual Permit.

Projects that only minimally affect Waters of the U.S. may meet the conditions of one of the existing Nationwide Permits, provided such permits' other respective conditions are satisfied.

A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions. The SWRCB (State Water Resources Control Board), in conjunction with the nine California Regional Water Quality Control Boards (RWQCB), administers Section 401 of the CWA, which is a requirement of 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 issues permits pursuant to the Section 401 Water Quality Certification Program. For the proposed Project, this certification or waiver would need to be issued by the San Diego Regional Water Quality Control Board (RWQCB).

Final Rule for Revised Designation of Critical Habitat for the Coastal California Gnatcatcher

The USFWS designates critical habitat for endangered and threatened species under the FESA (16 USC § 1533 (a)(3)). Critical habitat is designated for the survival and recovery of federally listed endangered and/or threatened species. Critical habitat includes areas used for foraging, breeding, roosting, shelter, and movement or migration.

In the USFWS 2003 Proposed Rule to Revise Designation of Critical Habitat for the Coastal California Gnatcatcher, the USFWS considered but did not propose as critical habitat, pursuant to sections 3(5)(A) and 4(b)(2) of the Act, reserve lands covered by three completed and approved regional/subregional HCPs (68 FR 20228). These lands include SDG&E right-of-way (ROW) within SDG&E's Natural Community Conservation Plan (NCCP). Although these areas were not included in the proposed critical habitat, the USFWS sought public review and comment on these lands, provided maps to facilitate the public's ability to comment, and alerted the public that the lands could potentially be included in the final designation. Lands considered but not proposed for designation were also analyzed for potential economic impacts in the Draft Economic Analysis.

In 2007, USFWS issued the Revised Final Rule, reaffirming exclusion of lands within approved regional and subregional HCPs under section 4(b)(2) of the FESA. USFWS determined that lands owned by SDG&E and covered under SDG&E's NCCP provided greater benefits to coastal California gnatcatcher than other areas designated as critical habitat. As such, the USFWS designation of critical habitat for the coastal California gnatcatcher specifically excludes SDG&E ROW within SDG&E's NCCP area.

3.2 State

CEQA Guidelines § 15125 (c) and/or § 15380

Enacted in 1970, CEQA requires an applicant to fully disclose potential environmental impacts before issuance of a permit by State and local agencies. State CEQA Guidelines Sections 15125(c) and 15380(b) articulates the classifications of species to be analyzed under CEQA. In general, impacts to plants or their habitat having a California Rare Plant Rank (CRPR) of 1A (plants presumed extirpated in California and either rare or extinct elsewhere), 1B (plants rare, threatened, or endangered in California and elsewhere), 2A (plants presumed extirpated in California, but common elsewhere), 2B (plants rare, threatened, or endangered plants in California), or 3 (plants about which more information is needed – a review list) must be analyzed during preparation of the environmental documents relating to CEQA. According to the California Native Plant Society's (CNPS) Rare Plant Program, species with these CRPR meet the definition

of “rare and endangered” under the aforementioned CEQA Guidelines. Impacts on these species would be considered significant and would require mitigation.

California Endangered Species Act (Fish and Game Code §§ 2050-2115.5)

The California Endangered Species Act (CESA) of 1984 regulates the listing and take of plant and animal species designated as endangered, threatened, or rare within the State. The State of California also lists Species of Special Concern (SSC) based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. The California Department of Fish and Wildlife (CDFW) is given the responsibility by the State to assess development projects for their potential to impact listed species and their habitats. State-listed special status species are also addressed through the issuance of a permit under Fish and Game Code Section 2081 (Memorandum of Understanding), consistent with the Multiple Habitat Conservation Program (MHCP) which affects the Project area.

“Take” is defined in Section 86 of the Fish and Game Code as to “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA allows for take incidental to otherwise lawful projects. State lead agencies are required to consult with the CDFW to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of essential habitat.

California Species of Special Concern

Species of Special Concern (SSC) is an administrative designation by CDFW and carries no formal legal status. These species are designated by the CDFW with the goal of focusing attention on animals with conservation risk, to stimulate research on poorly known species, and to achieve conservation and recovery of these animals before they meet criteria for listing under CESA. SSC should be considered during the environmental review process.

CEQA (California Public Resources Code §§ 21000-21177) requires State agencies, local governments, and special districts to evaluate and disclose impacts from "projects" in the State. Section 15380 of the CEQA Guidelines clearly indicates that species of special concern should be included in an analysis of project impacts if they can be shown to meet the criteria of sensitivity outlined therein.

Sections 15063 and 15065 of the CEQA Guidelines, which address how an impact is identified as significant, are particularly relevant to SSCs. Project-level impacts to listed (rare, threatened, or endangered species) species are generally considered significant thus requiring lead agencies to prepare an Environmental Impact Report to fully analyze and evaluate the impacts. In assigning "impact significance" to populations of non-listed species, analysts usually consider factors such as population-level effects, proportion of the taxon's range affected by a project, regional effects, and impacts to habitat features (CDFW 2015).

Fully Protected Species (Fish and Game Code §§ 3511, 4700, 5050, 5515)

Prior to the development of the CESA and the ESA, species were listed as “fully protected” by the State of California. Fully protected species, including fish, amphibians, reptiles, birds, and mammals, were identified to allow for the protection of those animals that were rare or that were threatened by potential extinction. The majority of fully protected species have since been listed as threatened or endangered under the CESA and/or the ESA. Fully protected species may not be taken or possessed at any time. Fish and Game Code lists birds (Section 3511), mammals (Section 4700), reptiles and amphibians (Section 5050), and fish (Section 5515).

California Fish and Wildlife Code

Within the State of California, fish, wildlife, and native plant resources are protected and managed by the CDFW. The Fish and Game Commission and/or the CDFW are responsible for issuing permits for the take or possession of protected species. The following sections of the Code address the protected species: Section 3511 (birds), Section 4700 (mammals), Section 5050 (reptiles and amphibians), and Section 5515 (fish).

Non-game Birds, Birds of Prey, Nests and Eggs (Fish and Game Code §§3503, 3503.5, 3513, 3800)

The State of California has incorporated the protection of birds and nests in Sections 3503, and (migratory) non-game birds in Section 3513 and 3800 of the Fish and Game Code. Birds of prey, that is, birds in the orders *Falconiformes* or *Strigiformes*, are protected from possession, and egg/nest destruction in Section 3503.5.

Section 2081 of the California Fish and Game Code gives the California Department of Fish and Wildlife (CDFW) the authority to issue an incidental take permit for projects that have the potential for take on a special status species, including 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.

Native Plant Protection Act (Fish and Game Code §§ 1900–1913)

The Native Plant Protection Act (NPPA) was adopted in 1977 (Fish and Game Code §§ 1900–1913) to preserve, protect, and enhance rare and endangered plants. The CDFW is responsible for administering the NPPA, while the Fish and Game Commission has the authority to designate native plants as “endangered” or “rare” and to protect them from “take.”

Streambed Alteration Program (Fish and Game Code §§ 1601–1606)

Sections 1601 through 1606 of the Fish and Game Code require that a Notification of Lake or Streambed Alteration Agreement Application be submitted to the CDFW for “any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake.” The CDFW reviews the proposed actions and, if necessary, submits (to the applicant) a proposal that includes measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by the CDFW and applicant is a Lake or Streambed Alteration Agreement.

Porter-Cologne Water Quality Act

The intent of the Porter-Cologne Act is to protect water quality, and the beneficial uses of water. It applies to both surface and ground water. Under this law, the SWRCB develops statewide water quality plans, and the RWQCBs develop basin plans, which identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of both statewide and basin plans. Waters regulated under Porter-Cologne, referred to as “Waters of the state,” include isolated waters that are no longer regulated by the ACOE. Any person discharging, or proposing to discharge, waste to Waters of the state must file a Report of Waste Discharge and receive either waste discharge requirements (WDRs) or a waiver to WDRs before beginning the discharge.

Natural Community and Conservation Plans (NCCP)

The Natural Community and Conservation Planning Act (California Fish and Wildlife Code Section 2800-2835) allows for the creation of NCCPs to protect state-listed species, usually in connection with the issuance of a Section 2081 take permit under the CESA.

SDG&E Subregional NCCP

The proposed Project falls within the area in which SDG&E's utility operations are governed by SDG&E's Subregional Natural Community Conservation Plan (NCCP) (SDG&E 1995). The NCCP prescribes "protocols" (i.e., various protection, mitigation, and conservation measure) that SDG&E must implement when utilizing the NCCP. Protocols include 61 operation protocols that SDG&E routinely implements with every project to avoid and/or minimize impacts to sensitive resources. The proposed Project will not use the take authority granted by the USFWS and the CDFW in the NCCP for impacts to covered species. Potential take of state and federally listed species will be handled through consultation with the USFWS and CDFW in accordance with applicable sections of the federal ESA and the CESA. However, the proposed Project will implement Project Design Features and Ordinary Construction/Operating Restrictions, which will include applicable impact avoidance and minimization measures that are specified in the NCCP Operational Protocols.

3.3 Local

As provided in CPUC General Order 131-D, the CPUC has exclusive jurisdiction over the siting, design, and construction of the proposed Project, preempting local discretionary authority over the location and construction of electrical utility facilities. Therefore, the Proposed Project is not subject to local discretionary land use regulations. Nonetheless, as part of the environmental review process, SDG&E considers relevant local land use plans and policies that pertain to biological resources as discussed below.

North County Multiple Habitat Conservation Program

The Multiple Habitat Conservation Program (MHCP) is a planning process that addresses plant and animal species in northwestern San Diego County, including Oceanside. The goal of the program is to conserve approximately 19,000 acres of habitat (of which 8,800 acres are already in public ownership and contribute toward the habitat preserve system) to protect over 80 rare, threatened, or endangered species.

Subarea plans for the Cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, and Vista are being prepared and must be adopted by each City Council. Then implementing agreements with the CDFW and the USFWS must be signed before incidental take permits can be issued.

The City of Oceanside is in the process of adopting a Subarea Habitat Conservation Plan/Natural Community Conservation Plan (SAP) that will address how the City will conserve natural biotic communities and sensitive plant and wildlife species pursuant to the California NCCP Act of 1991, the CESA and the federal ESA. If adopted, this could provide landowners with more regulatory certainty and aid in conserving the area's biodiversity.

City of Oceanside General Plan

The Land Use Element has a policy that the City shall protect, maintain, and enhance existing sensitive habitats. The Environmental Resource Management Element is also designed to conserve natural resources and preserve open space. It includes goals and objectives geared toward preservation, including ones specifically to enhance vegetation and wildlife habitats, especially those areas with rare, endangered, or threatened species. Areas with unique vegetation and wildlife habitats receive a high priority in the planning of parks; and in areas where habitat modification is inevitable, mitigating and/or compensatory measures such as native plant restoration, land reclamation, or donation will be considered.

Vegetation and Wildlife Habitats Policies

- A biological survey report, including a field survey, shall be required for a proposed project site if the site is largely or totally in a natural state or if high interest species of plants or animals have been found on nearby properties.
- In areas where vegetation or wildlife habitat modification is inevitable, mitigation and/or compensatory measures such as native plant restoration, land reclamation, habitat replacement, or land interest donation will be considered.
- Areas containing unique vegetation or wildlife habitats shall receive a high priority for preservation.
- Specific plans shall be developed in conjunction with regional and county agencies where appropriate, for areas where there is occurrence of endangered or threatened species.

4.0 METHODS

4.1 Proposed Study Area

The PSA includes a 50-foot survey buffer around the proposed 9.66 acres Ocean Ranch substation site, and associated staging yards (Figure 1).

A study “corridor” was established for biological resource surveys and was designed to study a wide enough area that it would accommodate minor changes in project design (such as changes to the dimensions of workspace and/or additions/deletions or changes to the locations of poles/structures) without the need to conduct additional surveys. The methods used to conduct the studies within the PSA are detailed below.

4.2 Literature and Existing Data Review

Literature Review

A number of recent studies (from reconnaissance-level constraints analyses to site- and species-specific focused surveys) have been conducted within and in the immediate vicinity of the PSA. Prior to conducting the field surveys, existing documentation relevant to the proposed Project and the surrounding areas was reviewed. As part of the initial data review for the proposed Project, a literature review of reference materials was conducted, including existing management plans, aerial photography of the region, the CDFW Natural Diversity Database (CNDDDB), a search of the CNPS Inventory of Rare and Endangered

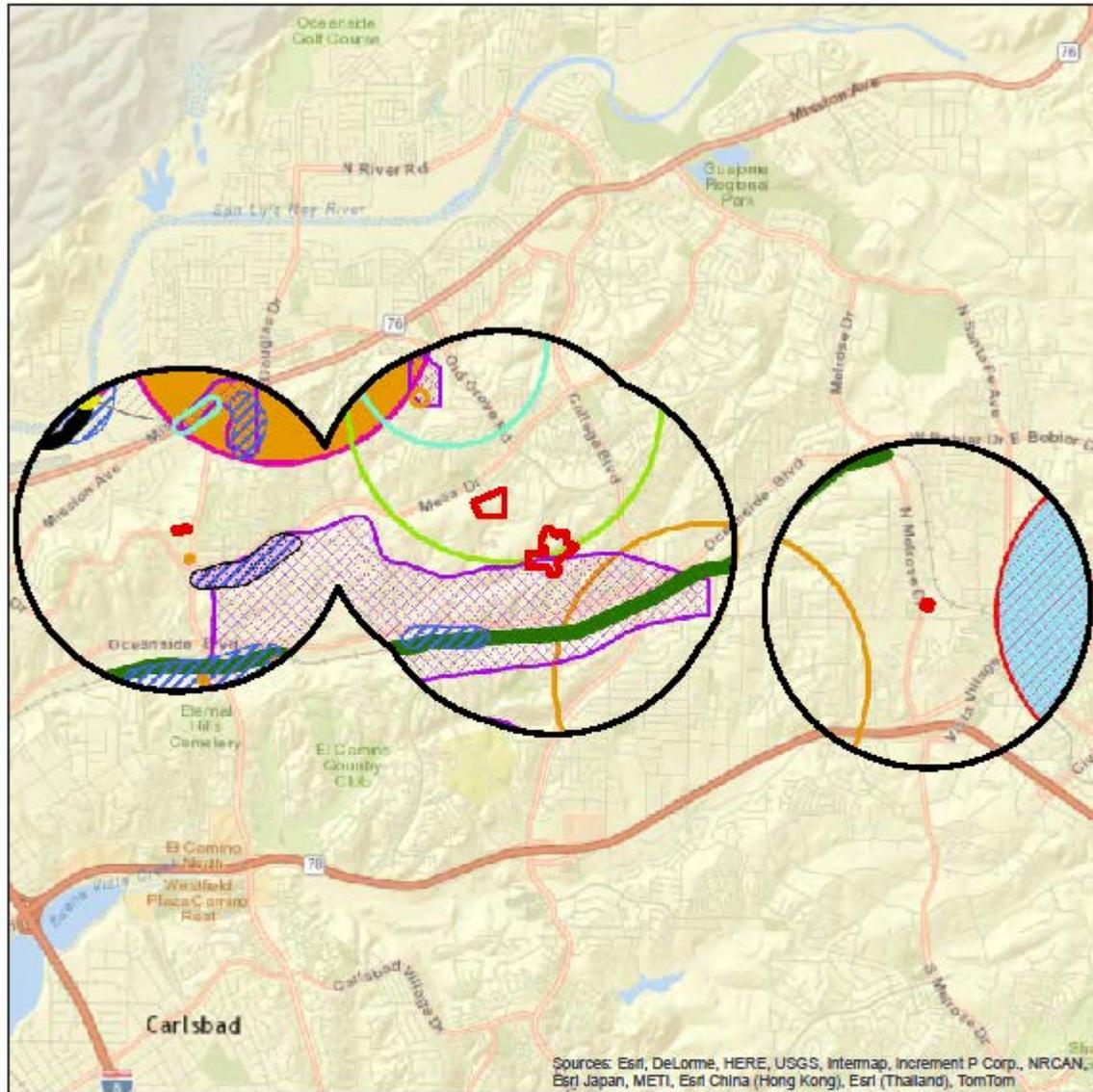
Vascular Plants of California, the USFWS website and Federal Register regarding federally listed species, U. S Geological Survey topographic maps, National Wetland Inventory maps, review of the reports of previous biological resource surveys conducted within and in the vicinity of the project, and manuals, guides, and other environmental documentation and resources for California plants and wildlife. Pertinent planning documents relevant to the proposed Project were also referenced, including SDG&E's Subregional NCCP.

Special Status Species Lists

In order to develop a list of special status plant and wildlife species that occur or could potentially occur within the proposed Project, a search of the CNDDDB RareFind 5 program, maintained by the CDFW, was conducted for plant and wildlife species that could be within 1 mile of the Proposed Study Area (Figure 2). Other resources that were queried included the USFWS website, CDFW website (CDFW 2016a, CDFW 2016b) CNPS Inventory of Rare and Endangered Vascular Plants of California, the SDG&E Subregional NCCP, and San Diego County Bird Atlas. Records for known special status plants and wildlife within 1 mile of the proposed Project were compiled and reviewed. Species were considered special status if they met the following criteria:

- Included on CRPR of 1A, 1B, 2A, 2B, or 3 based on the CNPS' Rare Plant Program;
- Designated by the USFWS as Birds of Conservation Concern;
- Federally listed as endangered, threatened, or are a candidate for listing status; or
- State-listed as endangered, threatened, a California Species of Special Concern (SSC), or fully protected.

If formal Section 7 consultation is required, then established with the USFWS, the proposed Project will receive a final list of species (listed or candidate species) that are of concern from the USFWS. Approximately 18 special status plant and wildlife species have been identified as occurring or potentially occurring within or in the immediate vicinity of the proposed Project. These species are described in Section 5.0 Results and Discussion.



28537 Ocean Ranch Substation



Created by Pangea Biological, May 2016
 Coordinate System: NAD 1983 StatePlane California VI FIPS 0406 Feet
 Projection: Lambert Conformal Conic
 Datum: North American 1983

Legend	
	1 Mile Buffer
	Project Survey Area
	Agelaius tricolor
	Ambrosia pumila
	Brodiaea filifolia
	Buteo swainsoni
	Ceanothus verrucosus
	Dipodomys stephensi
	Empidonax traillii extimus
	Eucydogobius newberryi
	Euphorbia misera
	Icteria virens
	Lanius xanthinus
	Nema stenocarpa
	Phrynosoma coronatum blainvillii
	Polioptila californica californica
	Setophaga petechia
	Thamnopis sirtalis ssp.
	Vireo belli pusillus

Figure 2: CNDDDB Special Status Species within 1 Mile of the Project Survey Area

Determination of the potential for listed, sensitive, or other sensitive plant and/or wildlife species to occur on the proposed Project was assessed based on a few criteria:

- Low Potential for Occurrence – There are no historical records for this species within or in the immediate vicinity of the PSA, and any habitat or specific environmental conditions needed to support the species do not exist or are of poor quality.
- Moderate Potential for Occurrence – 1) Historical records exist for the species within or adjacent to the PSA; however, either no suitable habitat exists, or only poor quality habitat occurs within or in the immediate vicinity of the PSA, or 2) No previous historical records for this species have been recorded within or in the immediate vicinity of the PSA; however, suitable habitat exists for the species within or in the immediate vicinity of the PSA.
- High Potential for Occurrence – Historical records exist for the species within or adjacent to the PSA and suitable habitat for the species exists for the species within or in the immediate vicinity of the PSA.
- Present – The species has been observed within or in the immediate vicinity of the PSA.

Critical Habitat

A search of the USFWS Environmental Conservation Online System - Critical Habitat Portal was conducted to identify whether the PSA is located within any USFWS-designated critical habitat areas. In addition, recovery plans for special status species and Geographic Information System (GIS) data from the USFWS website were also reviewed (USFWS 2015) (Figure 3).

4.4 Field Surveys

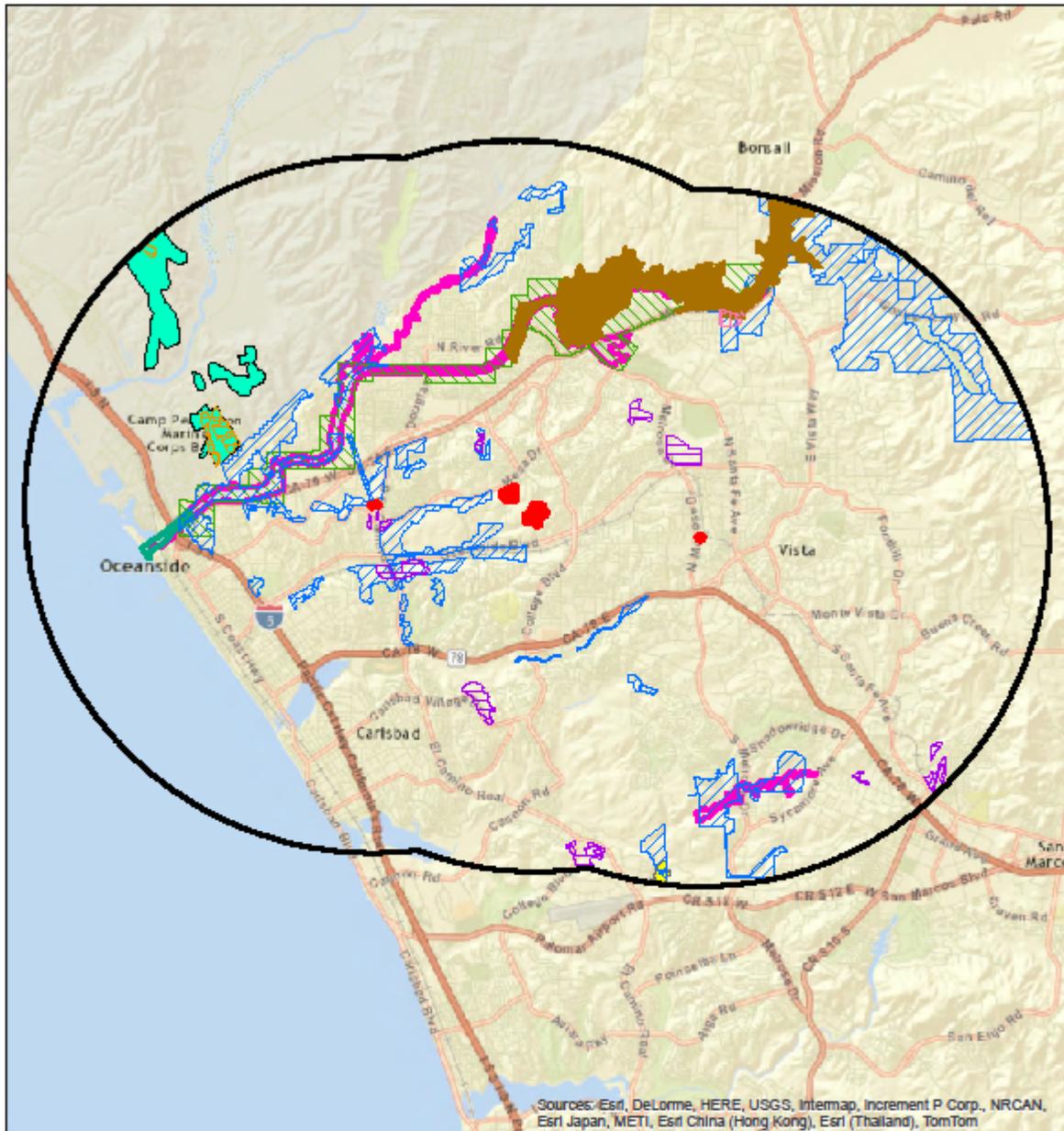
During field surveys conducted within the PSA, biologists noted any general and special status plant and wildlife species occurring onsite or in the immediate vicinity. Species were detected by direct observation, but also through the detection of signs such as parts of plants that had grown in previous seasons or earlier in the growing season, and scat, tracks, burrows, and vocalizations of wildlife species.

Biological Resource Surveys/Vegetation Mapping

At the request of SDG&E, general biological resource surveys were conducted by Pangea Biological in March, May, and October 2015, and March 2016 to identify the vegetation communities located within the PSA, as well as determine the potential federal, state, and/or NCCP Sensitive (covered) species that occur or have potential to occur. Surveys were conducted to map vegetation communities, and to determine potential habitat areas for the special status species listed as potentially occurring in the PSA. Vegetation community classifications used in this report follow Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986), as modified by Oberbauer (Oberbauer, Kelly, & Buegge 2008). The vegetation maps are included in Appendix A.

Rare Plant Surveys

Reconnaissance-level field surveys were conducted throughout the PSA to determine the potential habitat for rare plants that could occur on the project.



28537 Ocean Ranch Substation



Figure 3: Critical Habitat within 5 Miles of the Project Survey Area

Special Status Wildlife Surveys

Potential suitable habitat for the western burrowing owl (*Athene cunicularia hypugaea*) was identified during the biological surveys of the PSA. Protocol surveys for the western burrowing owl will be conducted prior to construction to determine the presence or absence of this species within the PSA.

Jurisdictional Delineation

The following informational sources were reviewed to evaluate potential ACOE, CDFW, RWQCB, and CCC jurisdictional wetland and non-wetland waters within the PSA:

- SDG&E's Aerial photographs;
- United States Geologic Survey (USGS) 7.5 degree-minute topographic quadrangle maps;
- United States Department of Agriculture Natural Resources Conservation Service (NRCS) soil survey maps;
- United States Fish and Wildlife Service (USFWS) National Wetland Inventory GIS data; and
- USGS National Hydrological Dataset GIS data for modeling of streams to evaluate possible stream features.

In addition, a wetland delineation of wetland and non-wetland waters within the PSA was conducted on May 4, 2015, May 21, 2015 and October 28, 2015 by Pangea and Borchert Environmental Management. The methodology followed the ACOE Regional Supplement Wetland Delineation Manual Arid West Region (Version 2.0, ACOE 2008) guidelines, and consisted of preliminary data gathering and research, field assessment surveys, digital mapping, and documentation of final boundary determinations (Pangea and Borchert 2015). To assist with the field analysis, a customized data dictionary was uploaded onto a Global Positioning System (GPS) unit to allow field surveyors to select specific feature data. No jurisdictional areas were identified as being located within the PSA.

5.0 RESULTS AND DISCUSSION

Biological Resources Setting

The PSA ranges in elevation from 194 feet to 372 feet above mean sea level (MSL). The terrain along the PSA consists primarily of relatively flat topography. The PSA primarily consists of disturbed, undeveloped areas, as well as some developed areas, with a substantial network of existing paved roads providing access to the proposed Project.

The proposed Project is located within San Diego County, which is known for its biological diversity. In addition to the vegetation communities that occur within the survey area, suitable habitat for sensitive plant and wildlife species was also identified. This section identifies the vegetation communities identified within the PSA, as well as the plant and wildlife species that occur or could potentially occur within the PSA.

5.1 Vegetation Communities

The PSA supports three vegetation communities and cover types. Vegetation communities are assemblages of plant species that commonly coexist in the wild. The classification of vegetation communities is based on the life form of the dominant species within that community and the associated flora. Plant community definitions, classifications, and categories are based on Holland (1986) as updated by Oberbauer et al. (2008) for San Diego County.

A description of the plant communities occurring within the PSA are described below. Vegetation communities observed within the PSA and the relative acreages they encompass are provided in Table 5.1.

The PSA and other associated project components generally support three vegetation communities:

- Disturbed Southern Riparian Scrub
- Disturbed Habitat
- Urban/Developed/Landscape/Ornamental/Bare Ground

Table 5.1 Vegetation Communities Located within the PSA

Vegetation Community	Approximate Area In Acres
<i>Riparian/Wetland</i>	
Disturbed Southern Riparian Scrub	0.16
Subtotal	0.16
<i>Urban/Developed/Landscape/Ornamental/Disturbed</i>	
Disturbed Habitat	24.37
Urban/Developed/Landscape/Ornamental/Bare Ground	3.34
Subtotal	27.71
TOTAL	27.86

Riparian/Wetland

Disturbed Southern Riparian Scrub (Holland Code 63300)

Disturbed southern riparian scrub is a vegetation community dominated by small trees or shrubs that are associated with drainages or river systems (Oberbauer et al. 2008). The native vegetation can also be mixed with non-native vegetation in previously disturbed areas and can be highly disturbed in some areas. The dominant species in this disturbed southern riparian scrub community within the PSA include arroyo willow (*Salix lasiolepis*), mule-fat (*Baccharis salicifolia*), chrysanthemum (*Chrysanthemum* sp.), wild oat (*Avena fatua*), -thistle (*Salsola tragus*), and iceplant (*Mesembryanthemum crystallinum*). There is one location within the PSA where disturbed riparian scrub was observed.

The proposed site for the Ocean Ranch Substation consists primarily of disturbed (maintained) vegetation, including both native and non-native plant species. Within this site is a human-made drainage basin engineered and installed to minimize offsite storm water runoff from this disturbed area during storm events. The vegetation around this basin does not appear to have been maintained as often as the surrounding area, and an assemblage of native and non-native plant species that also occur in wet areas persist. Although a few of the plant species observed immediately around the drainage basin can also be found in wet areas such as waterbodies and/or wetlands, and during a storm event the drainage basin is capable of retaining surface water, this area was determined to be non-jurisdictional during biological surveys.¹ The area surrounding the drainage basin was initially described as disturbed southern riparian scrub habitat based solely on the plant species composition observed at this disturbed location during biological surveys. However, it is expected that the riparian plant species observed in the vicinity of the

¹ Nor was this area identified as a jurisdictional wetland or non-wetland during the biological surveys.

basin only exist as a result of the water runoff generated and diverted to the drainage basin, and would not occur there if not for the installed basin. Also, due to the highly disturbed and isolated nature of the site, the vegetation immediately surrounding the basin is not functioning as riparian habitat. Therefore, the ecological value of the disturbed southern riparian scrub is considered to be low.

Urban/Developed/Landscape/Ornamental/Disturbed

Disturbed Habitat (Holland Code 11300)

Disturbed habitat includes vegetation and soils characterized by physical disturbance. In these sites, nonnative species are commonly introduced by humans. A physical disturbance may include clearing for fuel management, repeated grading, graded firebreaks, powerline access roads and areas around power poles, construction staging areas, or any repeated use areas. Examples of repeated use areas are trails, access roads, and dirt parking lots. Species commonly found in these communities include black mustard (*Brassica nigra*), sweet fennel (*Foeniculum vulgare*), Russian-thistle, tocalote (*Centaurea melitensis*), fascicled tarweed (*Deinandra fasciculata*), coyote brush (*Baccharis pilularis*), coastal goldenbush (*Isocoma menziesii*), pepper tree (*Schinus* sp.), fan palm (*Washingtonia robusta*), ripgut brome (*Bromus diandrus*), telegraph weed (*Heterotheca grandiflora*), western ragweed (*Ambrosia psilostachya*), tamarisk (*Tamarix* sp.), sea-lavender (*Limonium* sp.), and lupine (*Lupinus* sp.). Annual grasses are not often included in this vegetation community and are considered more typical of non-native annual grassland. Disturbed habitat occurs within the PSA primarily in the form of those areas regularly mowed or maintained.

Urban/Developed (Holland Code 12000)

Urban/developed areas, including landscape/ornamental areas, are those that have been constructed upon or otherwise physically altered to the extent that native vegetation is no longer supported. Urban/developed areas occur within the PSA, and include paved and dirt access roads, bare ground associated with disturbance and/or development, buildings, paved parking lots, road medians and roadsides, as well as landscaped areas that often require irrigation (Oberbauer et al. 2008). Urban/developed areas are not necessarily considered a vegetation community, and typically support none or very few biological resources.

5.2 Plant Species Observed

Approximately 43 general plant species have been observed within the PSA during surveys conducted in the area. A compendium list of plant species observed during studies in support of the proposed Project is included in Appendix B.

5.3 Special Status Plant Species

Five special status plant species were identified during the literature review as having the potential to occur within 1 mile of the PSA. For this analysis, special status plant species include any plant species that are federally listed as endangered, threatened, or candidates for listing status; species that are state-listed as endangered or threatened; CNPS Rare and Endangered Vascular Plants of California; and special status plant species documented in the CNDDDB. The five special status plant species with the potential to occur within 1 mile of the PSA are discussed in detail below and are depicted on Figure 2.

Cliff Spurge (Euphorbia misera, CNPS 2B.2)

Cliff spurge is a perennial shrub with a blooming period of December through October that typically occurs in rocky soils in coastal bluff scrub, coastal scrub, and Mojave Desert scrub habitats. No suitable coastal sage scrub habitat occurs within the PSA, therefore, there is no potential for this species to occur within the PSA.

Mud Nama (Nama stenocarpa, CNPS 2B.2)

Mud nama is an annual or perennial herb with a blooming period of January through July that typically occurs in marshes, swamps, margins of lakes, and riverbanks. No suitable habitat for mud nama occurs within the PSA, and therefore there is no potential for this species to occur within the PSA.

San Diego Ambrosia (Ambrosia pumila, Federal Endangered, CNPS 1B.1)

San Diego ambrosia is a perennial herb with a blooming period of April through July (occasionally extending through October) that typically occurs on sandy loam or clay soils in disturbed areas and drainages in grassland, chaparral, coastal scrub, and vernal pool habitats. No suitable habitat for San Diego ambrosia occurs within the PSA, and therefore there is no potential for this species to occur within the PSA.

Wart-stemmed ceanothus (Ceanothus verrucosus, CNPS 2B.2)

Wart-stemmed ceanothus (*Ceanothus verrucosus*) is an evergreen shrub with a blooming period of December through May that typically occurs on rocky slopes in coastal chaparral habitat. Wart-stemmed ceanothus is a woody shrub species that, if present, would likely have been detected during the survey. No suitable habitat for wart-stemmed ceanothus occurs within the PSA, and therefore there is no potential for this species to occur within the PSA.

Thread-leaved Brodiaea (Brodiaea filifolia, Federal Threatened, California Endangered, CNPS 1B.1)

Thread-leaved brodiaea is a perennial bulbiferous herb with a blooming period of April through May (occasionally extending from March through June) that typically occurs in clay soils around vernal pools and in openings in vernal moist grassland habitats. No suitable habitat for thread-leaved brodiaea occurs within the PSA, and therefore there is no potential for this species to occur within the PSA.

While five special status plant species have historically been documented as being located within 1 mile of the PSA, no special status plant species or any suitable habitat for these species were observed within the PSA.

5.4 Wildlife Species Observed

Approximately 21 general wildlife species have been observed within the PSA during surveys conducted in the area. A compendium list of wildlife species observed during studies in support of the proposed Project is included in Appendix B.

5.5 Special Status Wildlife Species

For the purposes of this report, special status wildlife species include those that are either listed or proposed for listing as threatened or endangered under the state or federal ESA, species designated as “Birds of Conservation Concern” by the USFWS, species designated as “fully protected” and SSC by the CDFW, or species considered “species of special concern” by the CDFW. Special status wildlife species

historically documented within 1 mile of the PSA or with potential to occur in the PSA are discussed in further detail below.

Twelve special status wildlife species have historically been documented as having a potential to occur within 1 mile of the PSA. During the biological surveys conducted for the project, no special status wildlife species were observed. However, two special status wildlife species, the western burrowing owl and the western yellow bat (*Lasiurus xanthinus*), have the potential to occur within the PSA (see Table 5.2).

Tidewater Goby (Eucyclogobius newberryi, Federal Endangered, California Species of Special Concern)

The tidewater goby is endemic to California coastal lagoons, estuaries, and coastal marshes. It is a benthic species that prefers brackish waters, shallow lagoons, and lower streams reaches where the water is still but not stagnant. Tidewater gobies are generally found within the fresh-saltwater interface in the upper part of estuaries, but can often migrate as far as 0.5 mile upstream along tributaries from an estuary (USFWS 2005). This species has been documented within 1 mile of the proposed Project, however, no suitable habitat (i.e. waterways or marshes connected to the ocean or within 0.5 mile upstream of a brackish water habitat) is located within the PSA.

San Diego Horned Lizard (Phrynosoma coronatum blainvillii, California Species of Special Concern)

The San Diego (coast) horned lizard is found within a variety of natural habitats in San Diego County that include sage scrub, chaparral, grasslands, woodlands, and coniferous forest, and prefers habitats that are undisturbed, with open areas and patches of loose soils. It primarily feeds on native harvester ants and frequently can be found near anthills. No suitable habitat for the horned lizard was observed within the PSA.

South Coast Garter Snake (Thamnophis sirtalis ssp., California Species of Special Concern)

The south coast garter snake is endemic to California and occurs in scattered locations along the southern California coastal plain, from Ventura County south to San Diego County. The south coast garter snake is a mostly aquatic snake that is restricted to marshes and upland habitats near permanent water sources with riparian vegetation. No suitable habitat for the south coast garter snake was observed within the PSA.

Coastal California Gnatcatcher (Poliioptila californica californica, Federal Threatened, California Species of Special Concern)

The coastal California gnatcatcher is only found in southern California within the United States. It is a year-round resident within coastal sage scrub habitat and prefers areas dominated by California sagebrush and California buckwheat. The coastal California gnatcatcher may also forage and nest in other scrub habitats, such as chaparral and riparian scrub, if it is closely associated with nearby coastal sage scrub habitat. The nesting season for coastal California gnatcatcher is typically from March through August. No suitable coastal sage scrub habitat for the coastal California gnatcatcher was observed within the PSA.

Least Bell's Vireo (Vireo bellii pusillus, Federal Endangered, California Endangered)

The least Bell's vireo migrates into southern California during its breeding season from around mid-March through late September and is typically associated with dense riparian woodland habitat with a dense upper canopy, where it forages, and a dense understory, where it nests. It may also forage in upland habitats up to 200 feet from the riparian edge. No suitable riparian habitat for the least Bell's vireo was observed within the PSA.

Table 5.2 Special Status Wildlife Species Potentially Occurring within the PSA

Species	Habitat Requirements	Listing or Status	Potential to Occur within PSA
Birds			
Western burrowing owl (<i>Athene cunicularia</i>)	Grassland and open scrub habitat, and occasionally in human-made structures such as culverts, for roosting and nesting	BCC, SSC	Low potential – suitable disturbed habitat observed within the PSA
Mammals			
Western yellow bat (<i>Lasiurus xanthinus</i>)	Valley foothill riparian habitat, desert riparian, desert wash, and palm oasis habitats, roosts in trees, and prefers palms for roosting	SSC	Low potential – trees within Melrose Yard may provide suitable habitat for roosting

Notes: BCC= USFWS Birds of Conservation Concern; SSC=California Species of Special Concern

Southwestern Willow Flycatcher (Empidonax traillii extimus, Federal Endangered, California Endangered)

The southwestern willow flycatcher is a migratory species that spends the breeding season in the southwestern United States. The southwestern willow flycatcher is a strict inhabitant of the dense vegetation associated with riparian woodland/forest habitats with some surface water. In San Diego County, southwestern willow flycatchers start arriving to breed in riparian woodland/forest habitats in May and start migrating south by the end of August. No suitable riparian habitat for the southwestern willow flycatcher was observed within the PSA.

Swainson’s Hawk (Buteo swainsoni, Federal Birds of Special Concern, California Threatened)

The Swainson’s hawk migrates to the western United States to breed and was once seen in large numbers during spring and fall migration in San Diego County. Summer sightings of the Swainson’s hawk in San Diego County are now extremely rare and it no longer nests in the region. Swainson’s hawks forage in grassland habitats for insects such as grasshoppers, dragonflies, and caterpillars. No suitable habitat for the Swainson’s hawk was observed within the PSA.

Tricolored Blackbird (Agelaius tricolor, Federal Birds of Special Concern, California Species of Special Concern)

The tricolored blackbird is a year-round resident in the western half of California and nests and roosts in large colonies in freshwater marshes while foraging in nearby grasslands, fields, or pastures. Nests are most often built in cattail marshes, but also occur in blackberry thickets or stands of black mustard. Their nesting season typically extends from March through June. Outside of the breeding season the tricolored blackbird may disperse further from their nest sites, including foraging in human-made habitats. No suitable habitat for the tricolored blackbird was observed within the PSA.

Western Burrowing Owl (Athene cunicularia, Federal Birds of Special Concern, California Species of Special Concern)

The burrowing owl can be found in grassland and open scrub habitats where it utilizes mammal burrows, and occasionally human-made structures such as culverts, for roosting and nesting. The species occurs in San Diego County year-round, with the breeding season generally from February through August, but is more common in winter. While this species was not identified on the CNDDDB database search results for sensitive species occurring within 1 mile of the PSA, open disturbed areas and human-made structures that provide potentially suitable habitat for the burrowing owl were observed in the PSA. Therefore, there is a low potential for this species to occur within the PSA. Protocol surveys for the western burrowing owl will be conducted in early 2017 to determine the presence or absence of this species within the PSA.

Yellow-breasted Chat (Icteria virens, Federal Birds of Special Concern, California Species of Special Concern)

The yellow-breasted chat is a summer visitor to southern California and typically inhabits riparian woodland habitats where it nests in thickets of dense vegetation. The breeding season for yellow-breasted chat occurs as early as April and as late as July. No suitable riparian habitat for the yellow-breasted chat was observed within the PSA.

Yellow Warbler (Setophaga petechia, Federal Birds of Special Concern, California Species of Special Concern)

The yellow warbler is a summer visitor to southern California and typically inhabits riparian woodland habitats where it nests in upright forks of twigs. The breeding season for yellow warbler occurs from mid-April through July. No suitable riparian habitat for the yellow warbler was observed within the PSA.

Western Yellow Bat (Lasiurus xanthinus California Species of Special Concern)

The western yellow bat is found in southern California in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. It roosts in trees, and often roosts in the dead palm fronds of palm trees. It has been documented below 2,000 feet in elevation. This species occurs year-round in California, and feeds on a variety of insects including ants, wasps, bees, flies, mosquitoes, butterflies, moths, beetles, grasshoppers, and crickets. Potential roosting habitat for the western yellow bat exists within the palm trees and other trees within the PSA (specifically, the Melrose yard). Therefore, there is a low potential for the western yellow bat to occur within the PSA.

Stephens' Kangaroo Rat (Dipodomys stephensi, Federal Endangered, California Threatened)

The Stephens' kangaroo rat is currently found only in western Riverside and northern and central San Diego counties. Like all kangaroo rat species, it is a burrow-dwelling, seed-eating rodent that is active at night. It prefers sparsely vegetated annual grasslands dominated by annual forbs and open, sparsely vegetated sage scrub habitats, but can be found in disturbed habitat. Because they take dust baths to maintain their fur, they require open ground with loose or broken soils, which can include dirt roads. No kangaroo rat burrows were observed during surveys within the PSA. In addition, the most recent documented sighting within 1 mile of the PSA was in 1973 (CNDDDB 2015). Therefore, due to the lack of suitable habitat and no recent known occurrence, the Stephens' kangaroo rat is not expected to occur within the PSA.

5.6 Critical Habitat

Under the ESA, to the extent prudent and determinable, the USFWS is required to designate Critical Habitat for endangered and threatened species (16 U.S.C. § 1533 (a)(3)). Critical Habitat is defined as areas of land, water, and air containing the physical and biological features essential for the survival and recovery of endangered and threatened species. Designated Critical Habitat includes sites for breeding and rearing, movement or migration, feeding, roosting, cover, and shelter.

Designated Critical Habitats require special management and protection of existing resources, including water quality and quantity, host animals and plants, food availability, pollinators, sunlight, and specific soil types. Critical habitat designation delineates all suitable habitat, occupied or not, that is essential to the survival and recovery of the species.

The PSA is within 5 miles of Critical Habitat for San Diego ambrosia, San Diego thornmint, spreading navarretia, thread-leaved brodiaea, San Diego fairy shrimp, tidewater goby, arroyo toad, California gnatcatcher, least Bell's vireo, cushenbury oxytheca, and southwestern willow flycatcher (refer to Figure 3).

5.7 Wildlife Movement Corridors

Wildlife corridors are defined as areas that connect suitable habitat in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features, such as canyon drainages, ridgelines, or areas with dense vegetation cover can provide corridors for wildlife travel. Wildlife corridors are important to mobile species because they provide access to individuals seeking mates, food, water, and the dispersal of individuals away from high-population-density areas. Wildlife corridors also allow for the immigration and emigration of individuals to other populations, as well as gene flow among populations. Wildlife corridors are considered sensitive by resource and conservation agencies.

While local wildlife movements may be temporarily disrupted during construction of the proposed Project, the temporary and permanent impacts as a result of construction are not expected to significantly affect the movement of wildlife through the region, or along any existing or potential wildlife movement corridors specifically within the PSA. Furthermore, the proposed Project would not occur within or adjacent to existing drainages that can serve as wildlife movement corridors. Therefore, impacts to wildlife movement corridors as a result of construction of the proposed Project are not expected.

Terrestrial wildlife species tend to travel along natural drainages such as Loma Alta Creek and the San Luis Rey River in order to maintain protective cover from predators, as well as to readily access water and food sources. Migrating avian species will use native habitat areas as stopovers on their journey through the area.

The City of Oceanside's SAP identifies the existing overhead transmission line (TL 6966) from the existing San Luis Rey Substation, east along El Camino Real to Rancho Del Oro Road, as being within a designated Wildlife Corridor Planning Zone. This existing transmission line is depicted on the City of Oceanside SAP Figure 2-7 as an existing SDG&E transmission corridor.

5.8 Jurisdictional Resources

The Proposed Project does not contain water resources including ravine, wetland and non-wetland water features that may be considered “waters of the U.S.”.

6.0 IMPACTS

The proposed Project includes construction of a new 69/12 kV substation, and installation of new underground power line to connect the existing power line TL 6966 to the proposed Ocean Ranch substation.

Once the proposed Ocean Ranch Substation is constructed and placed in service, it will not require on-site personnel except during periodic and routine maintenance activities to ensure reliable operation of all equipment within the substation. Therefore, the impact analysis is focused only on construction activities that are required to construct the new substation, install the new underground power line, and establish temporary work areas.

Construction of the proposed Project has the potential to impact special status species and habitat. The discussion below considers impacts to biological resources that may occur from construction (short-term impacts). SDG&E has identified and incorporated Applicant Proposed Measures (APMs) in the development of the proposed Project to avoid or minimize project impacts to biological resources.

Impacts associated with the proposed Project can be classified as temporary or permanent, and direct or indirect. Temporary impacts generally include impacts associated with construction activities, including the use of vehicles and equipment to assemble and install new facilities and remove and/or replace old equipment, the use of temporary workspaces, storage of construction materials and equipment, or vegetation removal in areas to conduct construction activities. These areas are intended to be restored once construction is complete. Permanent impacts generally include impacts associated with construction and installation of the proposed Ocean Ranch Substation.

Direct impacts include the physical loss or removal of vegetation due to the installation of new facilities or work at staging/laydown areas. Indirect impacts during construction may include the interruption of normal nesting or foraging behaviors, loss of prey items, such as insects or food resources, or the suppression of growth due to excessive dust or noise. Impacts to special status species may occur either through temporary or permanent habitat loss, interruption of normal species routines, or through direct mortality.

Potential impacts to special status species associated with the proposed Project were assessed by analyzing species-specific requirements, including necessary vegetative habitat, elevational range, foraging needs, denning or breeding requirements, migratory trends, current ranges, and known occurrences or records.

6.1 Project Specific Impacts

The following describes the potential for impacts to sensitive biological resources during construction of the proposed Project. During the construction and operations and maintenance phases of the proposed Project, SDG&E would operate in compliance with applicable state and federal laws, regulations, permit conditions, and requirements.

The proposed Project has been designed to avoid sensitive habitat areas that may support special status species and sensitive biological resources when possible, including not placing facilities in drainage areas or other sensitive habitats, using existing access roads to the greatest extent possible, and placing staging areas, and laydown areas outside of sensitive habitats, where feasible. Where avoidance of habitat areas supporting special status species is not possible, or where sensitive habitat areas exist adjacent to proposed Project work areas, SDG&E would implement additional mitigation measures to minimize project impacts in these areas.

Permanent Impacts

Permanent impacts include the placement of underground conductor vaults, and construction of the Ocean Ranch Substation.

Underground Conduit Vaults

Four underground conductor vaults are proposed for the underground portion of the proposed Project. The anticipated permanent impacts for the installation of the underground vaults are the dimensions of the vaults themselves (approximately 10 feet by 18 feet in size). Therefore, the estimated permanent impacts for the installation of the underground vaults is 180 square feet per vault or a total of 720 square feet.

Ocean Ranch Substation

Completion of the Ocean Ranch Substation will result in approximately 9.66 acres of permanent impacts for the initial and ultimate substation paved buildout area, which will include a graded pad and permanent access roads within the substation site.

Temporary Impacts

Temporary impact areas may vary because the positioning of construction vehicles, equipment, and materials cannot be accurately anticipated prior to construction, as locations are dependent upon the contractor safely performing the work. The impacts from construction vehicles, equipment, and materials staged outside of delineated temporary work areas would be evaluated by the on-site biological monitor prior to placement. The onsite biological monitor, as appropriate, would assist crews in placement of construction vehicles, equipment, and materials to avoid and minimize impacts to sensitive habitat types.

In general, temporary impact areas were evaluated based on anticipated geometric work spaces around each proposed work location. Construction work spaces are dynamic in nature and may require minor modifications during the construction phase of the Proposed Project to facilitate worker safety and to avoid impacts to natural resources, including sensitive habitats. Therefore, the proposed temporary impact areas below are estimated based on the best information available at the time of preparation of this technical report.

Existing Access Roads

SDG&E will utilize existing access roads during construction. No new access roads are proposed for this Project. Construction would primarily take place within existing SDG&E fee-owned property, franchise or existing easements. Work areas are accessible by vehicle in paved/developed areas or other existing disturbed areas.

Staging Yards

The proposed Project may require the use of approximately four staging yards that may temporarily impact disturbed, developed, and landscaped areas. The total size of the four proposed staging yards is approximately 17.5 acres.

Underground Power Line

The installation of approximately 5,980 linear feet of new underground transmission line will require a 30-foot-wide workspace for the entire length of the line. These impacts will be primarily within existing paved roads and disturbed areas. Impacts associated with trenching and installation of the proposed underground transmission line section will result in approximately 179,400 square feet (4.12 acres) of temporary impacts, primarily to previously developed and disturbed areas.

6.2 Impacts to Vegetation Communities

Estimated permanent and temporary construction impacts to specific vegetation communities associated with the proposed Project were calculated using the anticipated permanent and temporary impact work areas described above. The anticipated impact areas for each vegetation community are shown in detail in Table 6.1 below.

Anticipated project impacts were calculated based on vegetation mapping, site-specific conditions, and proposed impact areas (described above) for features included in the proposed Project design. Construction work spaces are dynamic in nature and may require minor modifications during the construction phase of the proposed Project to facilitate worker safety and avoid impacts to natural resources, including sensitive habitats. Therefore, the proposed permanent and temporary impact areas discussed below are estimations and may shift or be modified within the existing PSA.

Impact to Sensitive Habitats

Non-sensitive habitat types are those typically of a lower biological value and include bare ground, heavily disturbed areas, developed and urban areas (paved), and landscaping. Non-sensitive communities include disturbed and pavement/developed/bare ground. These areas are not typically expected to have a major ecological value, or contribute to the function of natural habitats and open space areas in the region. However, two sensitive wildlife species have a low potential to occur within the disturbed habitat within the PSA and have been addressed in this report. A summary of impacts of habitat types is provided in Table 6.2.

6.3 Special Status Plant Species

Construction activities are not expected to impact sensitive plant species, based on the location of proposed facilities evaluated within the PSA. Five sensitive plant species have been historically documented within the PSA; however, there is no potential for these species to occur within the PSA.

Construction-related dust could also reduce the rates of photosynthesis and hinder normal plant growth.

If found to occur within the proposed Project, impacts to potentially occurring sensitive plant species can be minimized by avoiding these species to the extent possible. Sensitive plant species populations can be avoided by flagging or fencing areas off during construction to minimize impacts.

Table 6.1 Estimated Construction Impacts by Vegetation Community

Vegetation Community	Anticipated Area of Temporary Impact in Acres	Anticipated Area of Permanent Impact in Acres
Disturbed Southern Riparian Scrub	0	0.16
Disturbed Habitat	16.39	7.98
Urban/Developed/Landscape/Ornamental/ Bare Ground	1.82	1.516
<i>Total Estimated Impacts</i>	<i>18.21</i>	<i>9.66</i>

Table 6.2 Estimated Impacts to Sensitive and Non-Sensitive Habitats

Type of Impact	Total Estimated Area of Impact in Acres
Temporary Impacts	
Total Estimated Temporary Impacts to Sensitive Native Vegetation Communities	0.0
Total Estimated Temporary Impacts to Non-Sensitive Communities (Disturbed, Developed, Bare Ground, and Landscape/Ornamental)	18.21
<i>Total Estimated Temporary Impacts</i>	<i>18.21</i>
Permanent Impacts	
Total Estimated Permanent Impacts to Sensitive Native Vegetation Communities (Disturbed Southern Riparian Scrub)	0.16
Total Estimated Permanent Impacts to Non-Sensitive Communities (Disturbed, Developed, Bare Ground, and Landscape/Ornamental areas)	9.50
<i>Total Estimated Permanent Impacts</i>	<i>9.66</i>

6.4 Special Status Wildlife Species

Construction activities could potentially impact special status wildlife species, depending on the final location of the proposed facilities. Approximately two special status wildlife species have the potential to occur within the PSA. Permanent impacts to special status wildlife species could include the removal of suitable habitat as a result of the installation of project facilities, or direct mortality to individuals, nests, burrows, and young as a result of construction. Temporary impacts may include temporary construction activities that alter normal behavior patterns, including migration and dispersal, courtship and mating, and foraging and roosting.

Fish

The tidewater goby is not expected to occur within the proposed Project due to the lack of potential suitable habitat within temporary and permanent work areas. Although no focused surveys were conducted, this species was not observed during surveys conducted in the area, and the proposed Project has been designed to avoid riparian and jurisdictional areas. Therefore, the tidewater goby is not expected to be impacted as a result of the proposed Project.

Reptiles

The San Diego horned lizard and south coast garter snake are not expected to occur within the proposed Project due to the lack of potential suitable habitat within temporary and permanent work areas. Therefore, the San Diego horned lizard and south coast garter snake are not expected to be impacted as a result of the proposed Project.

Birds

Construction activities could potentially result in impacts to foraging and/or nesting habitat for one sensitive avian species that has the potential to occur within the PSA. Proposed Project activities that could result in impacts include the removal of vegetation to facilitate temporary staging or storage of equipment and construction vehicles and construction of the Ocean Ranch Substation. Other potential impacts to sensitive avian species include noise from construction equipment and vehicles.

Protocol surveys for the western burrowing owl will be conducted within the PSA in early 2017 to determine its presence within the PSA. There is a low potential for this species to occur within the proposed Project due to the presence of suitable habitat (open areas). If the western burrowing owl is not detected during protocol surveys within the PSA, impacts to this species are not expected. The potential for impacts is minimal. If this species is detected during future protocol surveys, protective measures for the western burrowing owl should be implemented during construction to help minimize impacts to it.

Due to the lack of suitable habitat within the PSA, impacts to the coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, Swainson's hawk, tricolored blackbird, yellow warbler, and yellow-breasted chat are not expected as a result of the proposed Project.

Mammals

Proposed construction activities, including the clearing of vegetation to create work areas, may cause both permanent and temporary impacts to one sensitive mammal species, the western yellow bat, if present. Temporary impacts from these activities may include a reduction of roosting habitat as a result of the trimming of trees for temporary work areas; construction noise; and ground vibration, as the western yellow bat may be deterred from inhabiting the trees during construction activities. If this species is detected during future preconstruction surveys, protective measures for the western yellow bat should be implemented during construction to help minimize impacts to it.

6.5 Critical Habitat

The PSA is not located within any critical habitat; therefore, the proposed Project would not result in any impacts to critical habitat.

6.6 Wildlife Movement Corridors

According to the Oceanside SAP, the existing San Luis Rey Substation is located within a Wildlife Corridor Planning Zone. The SAP identifies SDG&E's San Luis Rey Substation as being located along El Camino Real between Mesa Drive and Mission Avenue, and its electrical transmission corridor (comprised of fee-owned rights-of-way and easements) runs north-south through the central portion of the City of Oceanside. Per the City of Oceanside, "the electrical transmission corridor is associated with many of the remaining habitat patches in the City and is anticipated to continue to act as a north-south habitat corridor through the City" (City of Oceanside 2010).

The proposed San Luis Rey Staging Yard consists of a paved area located immediately north of the existing San Luis Rey Substation. The staging yard would be utilized to store equipment needed during the construction phase of the project. While local wildlife movements may be temporarily disrupted during the use of the San Luis Rey Staging Yard, the temporary impacts that result from using the site to store equipment and the additional vehicles traveling to and from the staging yard are not expected to significantly affect the movement of wildlife along any existing or potential wildlife movement corridors within the PSA. Therefore, impacts to wildlife movement corridors are not expected as a result of the proposed Project.

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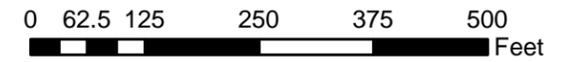
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Appendix A
Biological Constraints Mapbook

**28537 Ocean Ranch
Substation
Biological Constraints Survey**

Page 1 of 4

1 Inch = 200 Feet at 11" x 17"

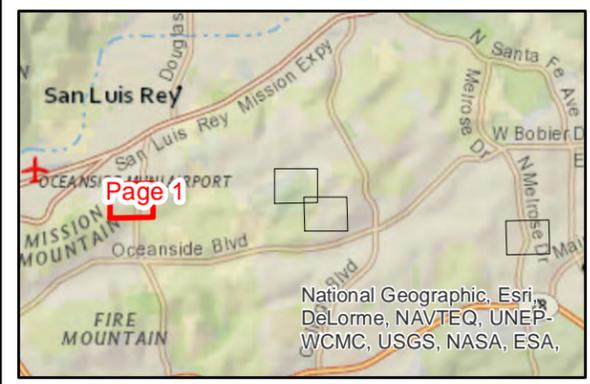
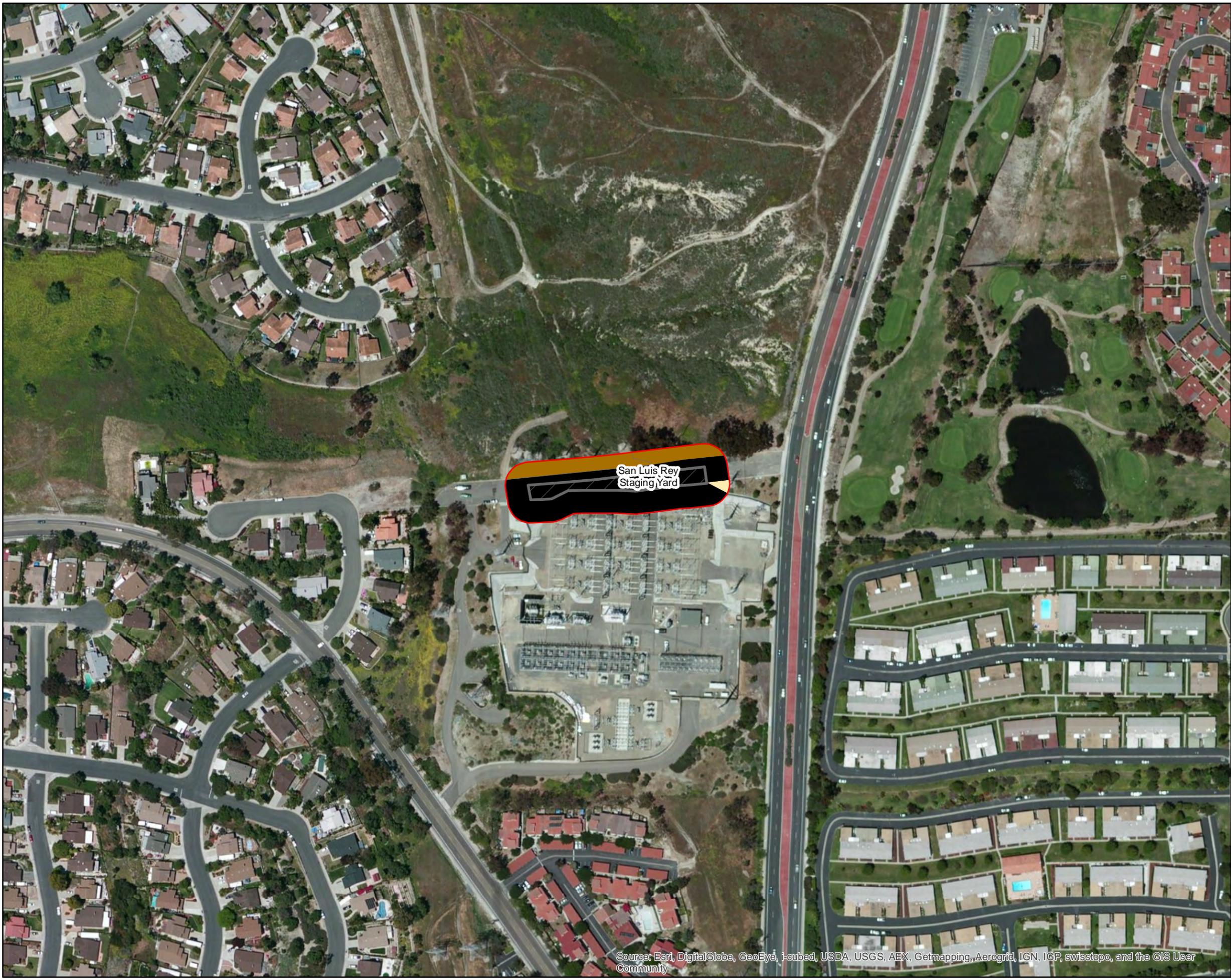


Legend

-  Staging Yard
-  Project Survey Area

Vegetation

-  Disturbed Habitat
-  Landscape/Ornamental
-  Pavement/Developed



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Created by: Pangea Biological, May 2016
Data Source: SDG&E



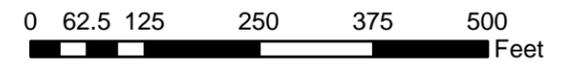
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Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**28537 Ocean Ranch
Substation
Biological Constraints Survey**

Page 2 of 4

1 Inch = 200 Feet at 11" x 17"



Legend

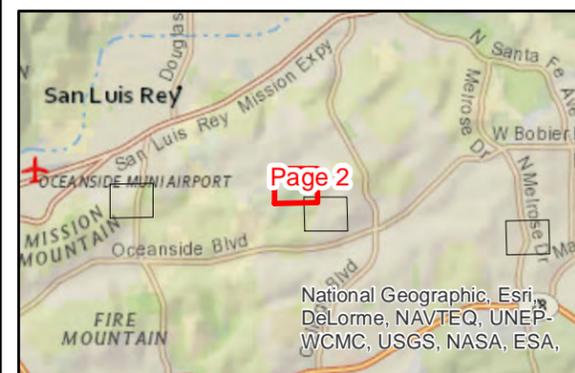
-  Staging Yard
-  Project Survey Area

Vegetation

-  Disturbed Habitat
-  Landscape/Ornamental
-  Pavement/Developed



Corporate
Centre
Staging Yard

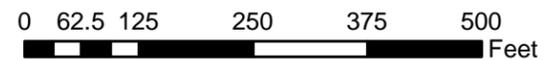


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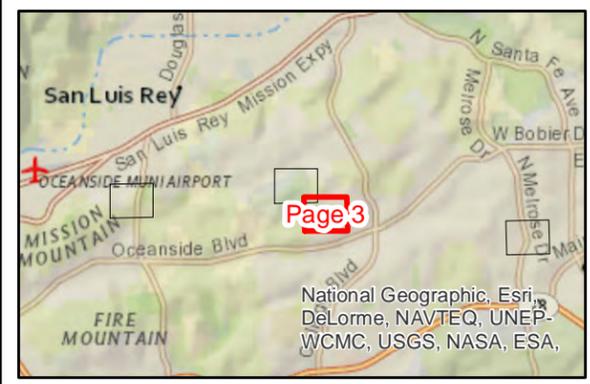
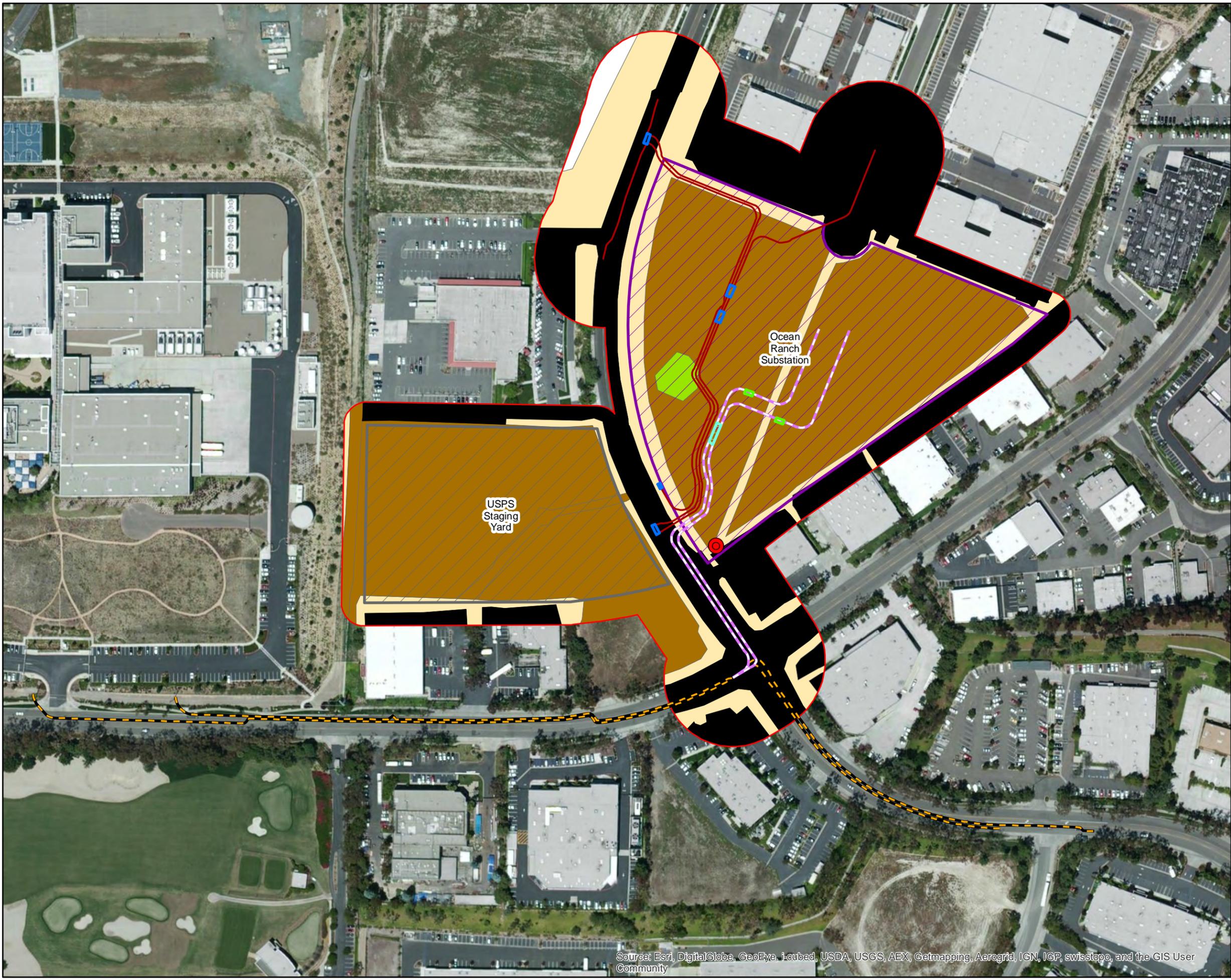
**28537 Ocean Ranch
Substation
Biological Constraints Survey**

1 Inch = 200 Feet at 11" x 17"



Legend

- Monopole
- Transmission**
 - Existing Underground
 - Proposed Underground
 - Proposed Underground Distribution
- Underground Transmission Structure
- Underground Distribution Structure
- Ocean Ranch Substation
- Staging Yard
- Stringing Site
- Project Survey Area
- Vegetation**
 - Bare Ground
 - Disturbed Habitat
 - Southern Riparian Scrub (Disturbed)
 - Landscape/Ornamental
 - Pavement/Developed



Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

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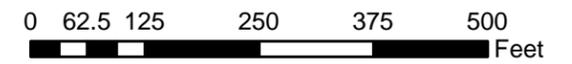
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**28537 Ocean Ranch
Substation
Biological Constraints Survey**

Page 4 of 4

1 Inch = 200 Feet at 11" x 17"

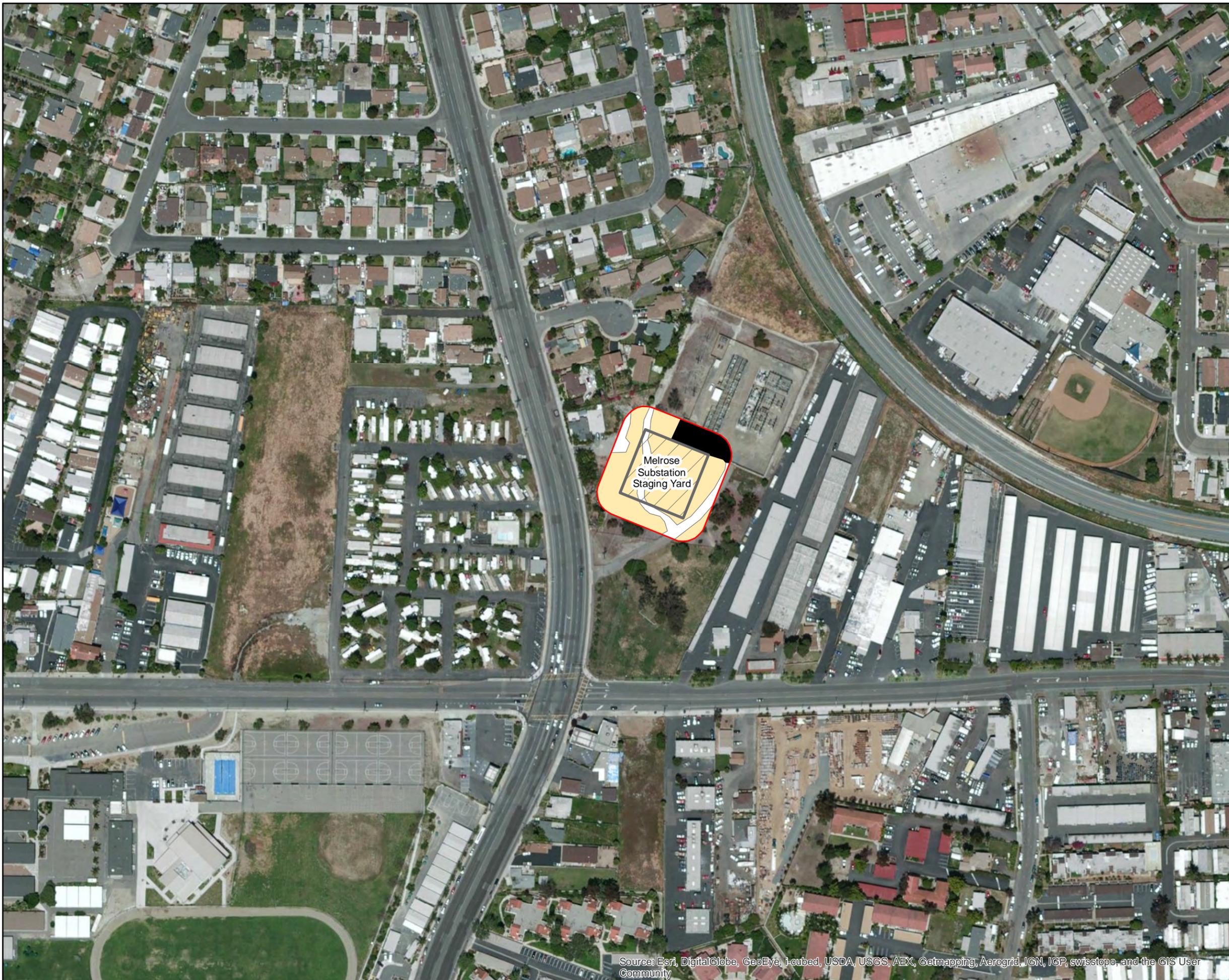


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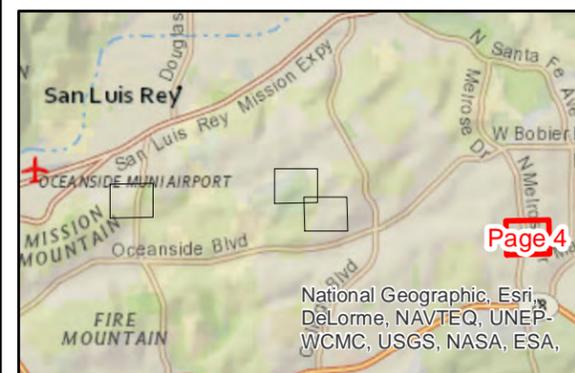
-  Staging Yard
-  Project Survey Area

Vegetation

-  Bare Ground
-  Landscape/Ornamental
-  Pavement/Developed



Melrose
Substation
Staging Yard



Page 4

National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA,



Created by: Pangea Biological, May 2016
Data Source: SDG&E
Coordinate System: NAD 1983 StatePlane California VI FIPS 0406 Feet
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Datum: North American 1983

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Appendix B
Plant and Wildlife Species Lists

Plant Species Observed

Scientific Name	Common Name
AIZOACEAE	
<i>Mesembryanthemum crystallinum</i>	iceplant
ANACARDIACEAE	
<i>Schinus</i> sp.	pepper tree
AMARANTHACEAE	
<i>Salsola tragus</i>	Russian thistle
APIACEAE	
<i>Foeniculum vulgare</i>	fennel
APOCYNACEAE	
<i>Nerium</i> sp.	oleander
ARECACEAE	
<i>Washingtonia robusta</i>	Mexican fan palm
<i>Phoenix dactylifera</i>	date palm
ASTERACEAE	
<i>Ambrosia psilostachya</i>	western ragweed
<i>Artemisia californica</i>	California sagebrush
<i>Helianthus californicus</i>	California sunflower
<i>Chrysanthemum</i> sp.	chrysanthemum
<i>Isocoma menziesii</i>	coastal goldenbush
<i>Baccharis pilularis</i>	coyote brush
<i>Baccharis salicifolia</i>	mule-fat
<i>Deinandra fasciculata</i>	fascicled tarweed
<i>Heterotheca grandiflora</i>	telegraph weed
<i>Centaurea melitensis</i>	totalote
BRASSICACEAE	
<i>Brassica nigra</i>	black mustard
<i>Nasturtium</i> sp.	nasturtium

Plant Species Observed

Scientific Name	Common Name
BORAGINACEAE	
<i>Heliotropium curassavicum</i>	salt heliotrope
CACTACEAE	
<i>Cylindropuntia californica</i> var. <i>parkeri</i>	cane cholla
<i>Opuntia</i> sp.	prickly-pear
FABACEAE	
<i>Lupinus</i> sp.	lupine
<i>Melilotus</i> sp.	sweetclover
MYOPORACEAE	
<i>Myoporum</i> sp.	myoporum
MYRTACEAE	
<i>Callistemon viminalis</i>	bottle brush
<i>Eucalyptus</i> sp.	eucalyptus
OLEACEAE	
<i>Olea europaea</i>	olive tree
OXALIDACEAE	
<i>Oxalis</i> sp.	oxalis
PHRYMACEAE	
<i>Mimulus</i> sp.	monkeyflower
PINACEAE	
<i>Pinus</i> sp.	pine
PLUMBAGINACEAE	
<i>Limonium</i> sp.	sea-lavender
POACEAE	
<i>Pennisetum setaceum</i>	African fountain grass
<i>Cynodon dactylon</i>	Bermuda grass
<i>Bromus madritensis</i> ssp. <i>rubens</i>	foxtail
<i>Hordeum jubatum</i>	foxtail barley

Plant Species Observed

Scientific Name	Common Name
<i>Cortaderia selloana</i>	pampas grass
<i>Vulpia myuros var. myuros</i>	rat-tail fescue
<i>Bromus diandrus</i>	ripgut brome
<i>Bromus hordeaceus</i>	soft chess
<i>Avena fatua</i>	wild oat
SALICACEAE	
<i>Salix lasiolepis</i>	arroyo willow
TAMARICACEAE	
<i>Tamarix sp.</i>	tamarisk

Wildlife Species Observed

Scientific Name	Common Name
BIRDS	
<i>Selasphorus sasin</i>	Allen's hummingbird
<i>Corvus brachyrhynchos</i>	American crow
<i>Falco sparverius</i>	American kestrel
<i>Calypte anna</i>	Anna's hummingbird
<i>Myiarchus cinerascens</i>	ash-throated flycatcher
<i>Thryomanes bewickii</i>	Bewick's wren
<i>Tyrannus vociferans</i>	Cassin's kingbird
<i>Petrochelidon pyrrhonata</i>	cliff swallow
<i>Corvus corax</i>	common raven
<i>Carpodacus mexicanus</i>	house finch
<i>Charadrius vociferus</i>	killdeer
<i>Spinus psaltria</i>	lesser goldfinch
<i>Zenaida macroura</i>	mourning dove
<i>Mimus polyglottos</i>	northern mockingbird
<i>Picoides nuttallii</i>	Nuttall's woodpecker
<i>Buteo jamaicensis</i>	red-tailed hawk
<i>Columba livia</i>	rock pigeon
<i>Sialia mexicana</i>	western bluebird
<i>Sturnella neglecta</i>	western meadowlark
<i>Dendroica coronata</i>	yellow-rumped warbler
MAMMALS	
<i>Spermophilus beecheyi</i>	California ground squirrel

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