

APPENDIX 4.4-A

**BIOLOGICAL RESOURCES TECHNICAL REPORT FOR
SALT CREEK SUBSTATION PROPONENT'S
ENVIRONMENTAL ASSESSMENT (PEA)**

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**BIOLOGICAL TECHNICAL REPORT
FOR THE
SALT CREEK SUBSTATION AND POWER LINE PROJECT**

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EXECUTIVE SUMMARY

San Diego Gas and Electric (SDG&E) proposes the installation of a new 69-kilovolt (kV) power tie-line (TL 6965) from the Existing Miguel Substation (Existing Substation) to the proposed Salt Creek Substation in the City of Chula Vista (City) and unincorporated portion of San Diego County. The primary objectives of the Proposed Project are to provide additional capacity to serve existing area load and future customer-driven electrical load growth, and to provide the necessary distribution and transmission network to prevent long-term outages or disruptions of service to existing customers in the southeastern portion of SDG&E's service territory.

The proposed Salt Creek Substation is located adjacent to the southeasterly side of Hunte Parkway, near the southern terminus of Exploration Falls Drive, and adjacent to SDG&E's Existing Substation to Mexico transmission corridor. The proposed substation would be a 69/12kV design with an ultimate capacity of 120 megavolt amperes. The substation is located on land identified for development under the Otay Ranch General Development Plan and is outside of the City's Multi Species Conservation Plan Preserve and SDG&E's Natural Community Conservation Plan (NCCP) Preserve layers.

The 5-mile-long TL 6965 would be constructed east of the Existing Substation south to the proposed Salt Creek Substation. The Existing Substation is located east of State Route (SR) 125 in the unincorporated portion of San Diego County, bounded by San Miguel Road on the north and the City on the south. The Existing Substation is located on an approximately 200-acre parcel, owned by SDG&E. The TL would be constructed entirely within SDG&E rights-of-way (ROWS) and SDG&E fee-owned property.

Existing structures along a portion of TL 643, which is located on SDG&E's Existing Substation property, would be used to complete the TL 6965 connection to the 69kV bay position at the Existing Substation. TL 6910 is an existing 69kV circuit with terminal points at SDG&E's Existing Substation and Border Substations in Otay Mesa. Existing TL 6910 is located on a combination of wood and steel poles along the west side of the 120-foot-wide transmission corridor. As part of the Proposed Project, SDG&E would open TL 6910 by installing two new engineered foundation steel cable poles, and intercept and loop the transmission line underground via two new 69kV underground duct packages from the existing transmission corridor into the proposed Salt Creek Substation.

The project would be conducted under the jurisdiction of the California Public Utilities Commission, in coordination with the U.S. Fish and Wildlife Service and California Department of Fish and Game. The project is located within the boundaries of SDG&E's Sub-Regional NCCP.

Surveys and assessments to inventory and evaluate biological resources were conducted in 2011 and 2012 within the Biological Study Area (BSA). The BSA is composed of an existing transmission line corridor (which contains an existing wood pole alignment); the Existing Substation, Hunte Parkway, and Eastlake Parkway, staging yards; the proposed Salt Creek Substation; and a 500-foot survey buffer around these areas. Biological field surveys completed for the project included vegetation mapping; rare plant surveys; jurisdictional waters and wetlands delineation (including a functions and values assessment); general wildlife surveys; and focused protocol surveys for the Quino checkerspot butterfly (*Euphydryas editha quino*; QCB), coastal California gnatcatcher (*Polioptila californica californica*; CAGN), least Bell's vireo (*Vireo bellii pusillus*; LBV), and western burrowing owl (*Athene cunicularia hypugaea*; WBO). In addition to these field efforts, under its NCCP, SDG&E is required to conduct a pre-activity survey and complete a pre-activity survey report that evaluates the scope and nature of potential impacts in advance of construction or maintenance activities.

The BSA is located on flat to minor slopes along previously disturbed areas near the Existing Substation and within an existing SDG&E ROW. The transmission corridor is located within urban developed, landscape/ornamental, disturbed, nonnative grassland and coastal sage scrub habitats and cover types. The proposed Salt Creek Substation is primarily flat with a gentle slope across the site. The site is composed primarily of nonnative grassland, Diegan coastal sage scrub, and ornamental/landscaped cover types. Commercial and residential developments are located within and adjacent to the BSA. Other development features present include major transportation corridors (SR-125), asphalt and compacted earthen roads, trails, fencing, ephemeral and intermittent stream features, culverts, and swales. Potential jurisdictional "waters of the U.S." (including wetlands) are also present on-site, including stream features and vegetated wetlands.

Thirteen special status plant species were observed within the BSA, including the federally and state-listed Otay tarplant (*Deinandra [=Hemizonia] conjugens*). An additional 17 special status plant species have some potential to occur within the BSA, based on habitats present and the locations of known recent occurrences. A total of 13 special status wildlife species, including the federally and state-listed LBV and the federally listed CAGN, were observed within the BSA. Of the remaining 11 species, one is a California fully protected species; eight are California species of special concern; and two are on the California Department of Fish and Game watch list. An

additional 12 special status wildlife species have some potential to occur within the BSA. No QCB were observed within the BSA, and no suitable habitat coincides with SDG&E's QCB mapped habitat. Suitable QCB habitat occurs within the proposed Salt Creek Substation and southern terminus of proposed TL 6965. Although these impacted areas are considered suitable according to the HCP criteria, since they are neither within the Mapped Area nor occupied, no habitat mitigation is required for these impacts per SDG&E's HCP for QCB. Critical habitat for the Otay tarplant coincides with the BSA at the southern terminus of the transmission corridor, near the proposed Salt Creek Substation. Designated critical habitat for CAGN occurs just north of the northern terminus of the transmission corridor but does not coincide with BSA.

Although the transmission corridor is a linear feature that consists of vegetation communities and supports wildlife species, the transmission corridor is intersected by numerous roadways, with some carrying high volumes of traffic, and bordered by dense development on either side. This likely deters most wildlife species from using the narrow strip of fragmented vegetation present within the transmission corridor. As such, the transmission corridor does not represent an important regional or local migration corridor for wildlife movement. The substation is not a linear feature that could potentially serve as a wildlife migration corridor and the site does not coincide with a known migration corridor.

Permanent direct impacts to biological resources would occur from construction within the project footprint, including permanent direct loss to special status species and their habitats. Specifically, direct impacts may include injury, death, and/or harassment of special status species. Direct impacts may also include destruction of habitats necessary for species breeding, feeding, or sheltering. Direct impacts to plants can include crushing of adult plants, bulbs, or seeds. Indirect impacts resulting from the Proposed Project may include edge effects, noise, exotic species introduction, lighting, and fugitive dust, among others.

Approximately 23,430 square feet (0.54 acre) of temporary impacts and 304,759 square feet (7 acres) of permanent impacts would occur to coastal sage scrub and grassland/wildflower field as a result of construction of the proposed Salt Creek Substation. Approximately 64,578 square feet (1.48 acres) of temporary impacts and 65,991 square feet (1.52 acres) of permanent impacts would occur to coastal sage scrub and grassland/wildflower field as a result of construction of the proposed TL 6965. No impacts would occur to jurisdiction waters and wetlands as a result of construction of the proposed Salt Creek Substation and TL 6965. No impacts to vegetation communities, jurisdictional waters and wetlands, or special status plant or wildlife species are anticipated from modifications to the Existing Substation and use of the staging yards since these areas consist of paved, gravel-covered, and bare ground areas.

Implementation of SDG&E's Subregional NCCP operation protocols and habitat enhancement measures would avoid and minimize impacts to ensure that potential impacts to all biological resources would remain at a less-than-significant level. Per their NCCP, SDG&E proposes to mitigate for permanent and temporary impacts to grassland and coastal sage scrub habitat at a ratio ranging from 1:1 to 2:1, depending on the location of the habitat within the SDG&E Preserve. Additionally, SDG&E has designed and incorporated an APM into the Proposed Project to avoid or minimize potential impacts to WBO. All associated impacts to biological resources for this Proposed Project are considered less than significant due to permit conditions and SDG&E standard practices.

CHAPTER 1.0

INTRODUCTION

San Diego Gas and Electric (SDG&E) proposes the construction and operation of the proposed Salt Creek Substation and new 69kV power tie-line 6965 Project (Proposed Project). The Proposed Project includes the installation of a new substation (proposed Salt Creek Substation), a new 69-kilovolt (kV) power tie-line (TL) from the Existing Miguel Substation (Existing Substation) to the proposed Salt Creek Substation (TL 6965), and modifications to the Existing Substation. The primary objectives of the Proposed Project are to provide additional capacity to serve existing area load and future customer-driven electrical load growth, and to provide the necessary distribution and transmission network to prevent long-term outages or disruptions of service to existing customers in the southeastern portion of SDG&E's service territory.

This Biological Technical Report (BTR) describes the existing biological resources located within the vicinity of the Proposed Project; details the methodologies used to assess potential impacts to sensitive habitats and species; provides results of the assessment; and presents avoidance, minimization, and mitigation measures to reduce potential impacts.

1.1 PROJECT LOCATION

The Proposed Project site is situated approximately 15 miles southeast of downtown San Diego and 5 miles north of the international border with Mexico. The proposed Salt Creek Substation and the majority of the proposed power line are located in the eastern portion of the City of Chula Vista, California (Figure 1-1). The proposed Salt Creek Substation is located adjacent to and southeasterly of Hunte Parkway, where SDG&E's Existing Substation-Mexico transmission corridor crosses Hunte Parkway (Figure 1-2). Approximately 4,700 linear feet of the northernmost portion of the proposed power line is located in the unincorporated portion of San Diego County on SDG&E fee-owned land surrounding the Existing Substation (Figure 1-2). The remaining portion of the proposed power line is located within the City of Chula Vista (Figure 1-2). The Existing Substation is located east of State Route (SR) 125 in the unincorporated portion of San Diego County, bounded by San Miguel Road on the north and the City of Chula Vista boundary on the south (Figure 1-2).



Source: AECOM, GeomorphIS LLC, SDG&E, 2013; Esri Basemaps, 2013



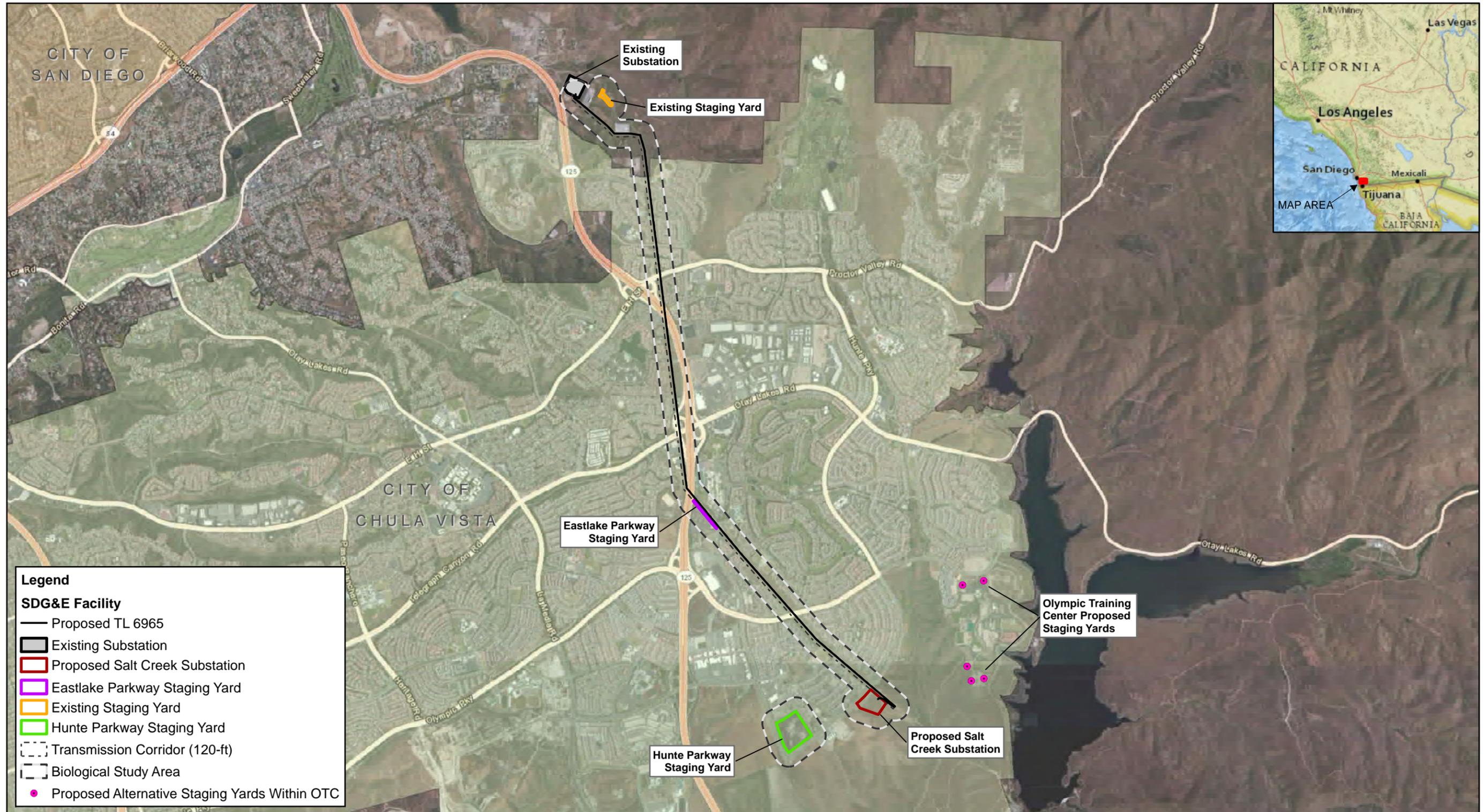
0 1 2 Miles



Scale: 1:110,880 1 inch = 2 miles

Figure 1-1
Regional and Vicinity Map

SDG&E is providing this map with the understanding that the map is not survey grade.



Legend

SDG&E Facility

- Proposed TL 6965
- ▭ Existing Substation
- ▭ Proposed Salt Creek Substation
- ▭ Eastlake Parkway Staging Yard
- ▭ Existing Staging Yard
- ▭ Hunte Parkway Staging Yard
- - - Transmission Corridor (120-ft)
- - - Biological Study Area
- Proposed Alternative Staging Yards Within OTC

Source: AECOM, GeomorphIS LLC, SDG&E, 2013; Esri Basemaps, 2013

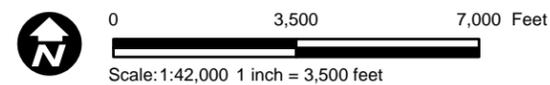


Figure 1-2
Proposed Project Location and Biological Study Area
 SDG&E is providing this map with the understanding that the map is not survey grade.

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1.2 PROJECT DESCRIPTION

The Proposed Project includes four primary components:

- Construction and operation of a 120-megavolt ampere (MVA) 69/12kV proposed Salt Creek Substation, including construction and operation of underground 12kV distribution circuits;
- Power lines, including construction and operation of a 5-mile-long overhead 69kV power line 6965 (TL 6965), from the Existing Substation to the proposed Salt Creek Substation, and construction and operation of a 69kV power line loop-in (TL 6910) to the proposed Salt Creek Substation;
- Modifications at the Existing Substation, including installation of a new 69kV power line position; and
- Three temporary staging yards identified for the Proposed Project; one at the Existing Substation (Existing Staging Yard), a second on the north side of Hunte Parkway between Discovery Falls, Eastlake Parkway, and Crossroads Street (Hunte Parkway Staging Yard), and a third within the transmission corridor between Eastlake Parkway and SR-125 (Eastlake Parkway Staging Yard). Five alternate staging yards sites at the Olympic Training Center facility, south of Olympic Parkway, have also been identified. These five alternate staging sites are not included in the project analysis provided herein.

1.2.1 Project Components

This section describes each of the Proposed Project components and provides detailed descriptions of the components evaluated in this BTR.

1.2.1.1 Salt Creek Substation

The Proposed Project includes construction and operation of the proposed 120-MVA 69/12kV Salt Creek Substation. The proposed Salt Creek Substation would be unattended and automated. The substation electrical facilities are listed below:

- Two 69/12kV low profile 30-MVA transformer banks;
- Four bays of low profile 69kV bus consisting of steel, 69kV bus, 69kV potential transformers, and associated disconnects;

- Six 69kV gas circuit breakers;
- Two quarter sections of 12kV switchgear with four 12kV circuit positions terminating inside each switchgear section;
- Two) 12kV metal enclosed capacitor banks;
- One 40-foot-long x 20-foot-wide enclosed, all-weather structure that would house the 69kV and 12kV associated relays, controls, and station batteries;
- Three 69kV power lines;
- Three distribution circuits connecting to the new quarter section switchgear;
- One AT&T circuit; and
- SDG&E communication fiber.

To accommodate future growth and associated increased energy demand, ultimate buildout involves the following electrical components in addition to those components listed above. An area within the proposed Salt Creek Substation will be allocated for such uses.

- Two 69/12kV low profile 30 MVA transformer banks;
- Two quarter sections of 12kV switchgear with four 12kV circuit positions terminating inside each switchgear section;
- Two 12kV metal enclosed capacitor banks;
- One 69kV power line (total possibility of four (4) 69kV power lines);
- Thirteen 12kV distribution circuits (total possibility of sixteen [16] 12kV distribution circuits); and
- All associated relays and controls to be housed in the previously described enclosed, all-weather structure.

Additional facilities located inside the enclosed, all-weather structure would include metering, Supervisory Control and Data Acquisition (SCADA), security, and communications equipment. A 10-foot-high masonry wall would enclose the entire substation area.

Global transformer oil containment would be provided by a concrete containment basin proposed along the southerly portion of the substation. The global containment system would be designed

to hold the amount of oil from the transformer, the largest oil equipment; therefore, local oil containment for each transformer is unnecessary. The maximum amount of oil required for the transformers at the proposed Salt Creek Substation would be approximately 5,500 to 9,400 gallons per transformer.

A water quality detention basin is proposed in the southwest corner of the substation. The water quality basin would be designed to meet volume, area, depth, and detention time objectives of the San Diego Regional Water Quality Control Board (RWQCB) and the City of Chula Vista. The preliminary substation layout includes a 15,500-square-foot area for a 4-foot-deep basin. With 3:1 side slopes, this would provide a detention volume of approximately 49,700 cubic feet. This preliminary design is conservative and further analysis should yield design criteria substantially less than indicated above. The basin would also serve to meet San Diego County hydromodification requirements. Approximately 75,000 square feet of impervious area is proposed for the substation improvements. The preliminary calculation of required hydromodification area is approximately 10,000 square feet. The water quality detention basin would be connected to an existing drainage dissipater.

An existing sewer access road, from Hunte Parkway to the proposed Salt Creek Substation, would be widened from approximately 12 feet to 30 feet to ensure adequate substation access and to accommodate the proposed 12kV underground conduit packages in the access road without disturbing the existing sewer line in the road. The total length of the improved road section is approximately 850 feet.

Substation lighting, which would follow SDG&E lighting standards, would provide enough light for a safe entry and exit from the substation; allow for safe driving around buses/racks, corners, and roadways; and allow a preliminary visual inspection of the substation. Lights are not for security and are not to be left on at night with the exception of the gate entry light and the lights required for nighttime work and/or an emergency.

1.2.1.2 Power Lines

TL 6965

A new overhead 69kV power line, approximately 5 miles long, would be constructed from the Existing Substation extending southerly to the proposed Salt Creek Substation. The northernmost 4,700 linear feet would be located in the unincorporated portion of San Diego County. The remainder of the power line would be constructed within SDG&E's existing 120-foot-wide

transmission corridor within Chula Vista, where it would terminate on a new cable pole located approximately 1,200 feet southeast of Hunte Parkway.

TL 6965 would use approximately 48 pole structures (49 poles), including eight existing poles (seven associated with TL 643 and one associated with TL 6910). Approximately 40 new structures (41 poles) would be erected on the new 69kV power line, including 29 galvanized steel pole structures (30 poles) (one H-frame double-pole structure), 10 galvanized engineered foundation poles, and one engineered foundation cable poles. Permanent work pads would be required at approximately 24 pole locations to provide a safe work area during construction and also for post-construction operation and maintenance work. At approximately 16 of these locations, the proposed pole structure must be located in the existing access road to meet engineering design requirements; therefore, the access road would be adjusted at these locations to allow for access around the pole.

The final approximately 1,000-foot segment of the 69kV power line would be installed underground in a concrete-encased duct bank, from the cable pole to the substation rack for the new underground connection. The duct bank would measure approximately 30 inches wide and 33 inches high for a vertical configuration and 72 inches wide and 15 inches high for a horizontal configuration. Either configuration would contain 6-inch-diameter conduits for transmission cable and one 4-inch-diameter conduit for telecommunication. One steel cable riser pole approximately 103 feet high would be installed at the end of the overhead segment to connect the overhead conductors to the underground substation getaways.

TL 6910 Loop-In

TL 6910 is an existing overhead 69kV circuit spanning approximately 10 miles, with terminal points at the Existing Substation and Border Substations. The Proposed Project would “open” TL 6910, allowing SDG&E to loop-in the line into the proposed Salt Creek Substation. The looped portion of TL 6910 between the Border Substation and the proposed Salt Creek Substation would retain the TL 6910 designation. The looped portion of TL 6910 between the proposed Salt Creek Substation and Existing Substation would carry the new designation of TL 6964.

Two cable poles (approximately 83 feet in height) would be erected east of proposed Salt Creek the Substation to loop-in existing TL 6910 to proposed Salt Creek the Substation. As part of the Proposed Project, TL 6910 would split and proceed underground from the cable poles via a double-circuit trench alignment in the existing ROW to the proposed Salt Creek Substation for a distance of approximately 300 feet into the substation perimeter wall. Trench installation would

total approximately 1,000 feet from the cable pole to the substation terminal equipment. The 69kV duct package would have a standard depth of approximately 4.5 feet below grade to bottom of package.

In addition to the duct package, installation of approximately two 69kV vaults along this trench alignment would be required, as well as associated vault racking, installation of approximately 2,000 circuit-feet of 69kV underground cable, telecommunications cable, 69kV cable joints, and terminations. TL 6910 would then be reconfigured as TL 6964 (Existing Substation to Salt Creek) and TL 6910 (Border to Salt Creek).

All work for the TL 6910 loop-in would occur within areas disturbed as part of the proposed TL 6965 undergrounding and the proposed Salt Creek Substation improvements.

1.2.1.3 Existing Substation Modification

At the Existing Substation, a new 69kV circuit position would be installed for the new TL 6965 going to the proposed Salt Creek Substation. The circuit breaker for TL 6910 would be retagged with its new designated circuit name (TL 6954), and TL 643 would be relocated to provide a circuit position for TL 6965. The following modifications would be installed at Existing Substation:

- Steel supports and associated bus work to extend the 69kV rack;
- Four 69kV disconnect switches;
- Two 69kV gas circuit breakers; and
- Associated relays and controls installed in the existing enclosed, all-weather structure.

1.2.1.4 Staging Yards

Hunte Parkway Staging Yard

The Hunte Parkway Staging Yard would be located approximately 0.5 mile to the northwest of the proposed Salt Creek Substation. Approximately 8 acres of a 22-acre previously graded pad would be used for staging purposes during construction of the Proposed Project. Temporary overhead power lines would be installed at this staging yard. An approximately 6-foot-high chain-link security fence with screening slats or mesh and locking gate would enclose the entire Hunte Parkway Staging Yard.

Existing Staging Yard

Staging for construction would also occur at an existing SDG&E-owned staging yard located at the Existing Substation. This staging yard would be used primarily to support construction activities associated with the proposed modifications at the Existing Substation and the storage of transmission material and related construction equipment. This staging yard would also be used as the helicopter fly yard.

The footprint of the existing staging yard at Existing Substation would occupy approximately 2 acres and has been used by SDG&E for staging purposes during previous projects. This site is previously disturbed; therefore, no grading and/or slope stabilization is anticipated. An approximately 6-foot-high chain-link security fence and locking gate enclose the staging yard.

The use of helicopters during the installation of the conductor on TL 6965 is anticipated. As such, the Existing Staging Yard would be used as a fly yard and landing zone during construction to allow for take-offs and landings, refueling, and other related activities.

Eastlake Parkway Staging Yard

The Eastlake Parkway Staging Yard would be located between Eastlake Parkway and SR-125. It is approximately 1.7 acres in size and would be used for staging purposes during construction of the Proposed Project. This site consists of disturbed habitat and no grading and/or slope stabilization is anticipated. An approximately 6-foot-high chain-link security fence with screening slats or mesh and locking gate would enclose the entire Eastlake Parkway Staging Yard.

Olympic Training Center Staging Yards

Five potential alternative staging yards identified within the Olympic Training Center have been considered to provide backup and flexibility during construction, should staging yard availability change prior to construction of the Proposed Project. The five potential staging yards have been previously disturbed and, therefore, no grading is anticipated. The staging yards would be enclosed by chain-link fencing with a security gate.

1.2.2 Construction

This section describes the construction staging areas, required access, vegetation clearing and land disturbance, anticipated workspace requirements, and methods that would be employed to construct the facilities of the Proposed Project.

1.2.2.1 Salt Creek Substation Construction

Construction activities would be completed in two stages. Stage 1 would consist of site grading and below grade construction. Site grading would include the construction of all access roads and retaining walls concurrently, grading associated with underground duct packages, and clearing and grading of the substation pad. Below grade construction would include installation of all substation foundations and the perimeter site wall construction. Stage 2 would include erection of substation structures.

Stage 1 – Site Preparation

Prior to construction, site preparation activities would include clearing and vegetation removal. Clearing activities would use mowers, excavators, front-end loaders, and/or bulldozers, and would impact approximately 6.7 acres of ruderal, nonnative, and coastal sage scrub habitat.

Earthmoving activities associated with the proposed Salt Creek Substation would require limited remedial grading (removal of colluvium and alluvium) and mass grading to create the substation pad and improve the existing access road. Construction activities include installing the following: retaining walls, storm water conveyances, a containment basin, a water quality basin, electrical underground conduits, a perimeter screen wall, entry gates, and paving of internal and external operational and maintenance access roads.

During construction of the access road retaining walls, dewatering is not anticipated. However, in the event that groundwater is encountered, dewatering would occur during the back-cut and remedial grading for the retaining wall foundation. Should dewatering be necessary, the following dewatering procedures would be implemented during construction.

- A submersible pump would be installed.
- Groundwater would be pumped to a desiltation tank (baker tank) at one end for sediment and filtering. Baffles would be installed in the tank to increase sedimentation. Water in the tank would be allowed to flow out from the opposite end.
- Water quality testing would be performed to ensure compliance with the RWQCB National Pollutant Discharge Elimination System (NPDES) requirements. If water quality levels do not meet permit requirements, additional baker tanks or treatment or filtering may be required.
- Disposal of water would be at an approved SDG&E disposal site.

SDG&E would prepare and implement a drainage plan to minimize surface runoff and erosion impacts. A water quality detention basin would be constructed in the southwestern portion of the substation. A storm drain from the water quality basin would convey runoff discharge to the existing 96-inch storm drain dissipater southwest of the site.

Permanent cut and fill slopes for the proposed Salt Creek Substation and access road would be stabilized during construction with best management practices (BMPs) that are outlined in the Proposed Project Storm Water Pollution Prevention Plan (SWPPP). Landscaping would also be installed as outlined in the Proposed Project Conceptual Landscape Plan. The SWPPP BMPs would remain in place and would be maintained until new vegetation is established.

Following site development, below grade work would begin. Below grade work would include structure and equipment foundations, underground ducts, ground grid, and construction of the control shelter. Construction of the distribution circuits and transmission tie lines surrounding the Proposed Project will start while the proposed Salt Creek Substation is under construction. Concrete trucks, backhoes, and loaders would be used for foundation and below grade work.

Stage 2 - Above Grade Construction

Once grading activities and below grade foundation construction are complete, major equipment and structures would be installed and anchored on their respective foundation. The following steps are associated with installing above grade equipment.

- 69kV rack erected;
- 69kV circuit breakers installed on their foundations;
- Enclosed, all-weather structure constructed and relay panels, controls, battery, and station light and power installed;
- Ground grid, control, communication, and power ducts installed with wiring of the equipment controls and protection devices to follow;
- Two 69/12kV transformers installed on their foundations, assembled, and filled with oil; and
- 12kV switchgear and capacitors installed on their foundations.

Power lines and distribution circuits would be connected inside the substation after substation structures and equipment are completed. Control and protection wiring would be completed in

parallel with these construction activities. Testing would be performed on all equipment after the equipment is installed and wired, and before placing it in service. Equipment would be placed in service once individual power lines and 12kV circuits are ready to be energized and are tested outside the substation.

Portable cranes and heavy hauling trucks would be employed to transport and unload the 69/12kV transformers. Substation crew, assist vehicles, forklifts, man lifts, and boom trucks would be used to construct the proposed Salt Creek Substation. Oil processing equipment and vacuum pumps would be used to fill transformers with oil. Pick-up trucks and vans would be used for the wiring and control testing of the substation equipment. Line trucks, assist vehicles, and cable dolly trailers would be used for construction of the transmission and distribution circuits.

Underground Distribution Construction

Throughout trench excavation and installation of the duct bank and manholes, excess materials (e.g., asphalt, concrete, and excavated materials) would be hauled to a materials staging area. Excavated materials would be tested and may be used as backfill if the material is suitable as a thermal backfill. If unexpected soils and/or groundwater contamination is encountered during construction, soil would be tested, handled, and disposed of in accordance with SDG&E standards and applicable environmental laws and regulations. Jackhammers would be used sparingly to break up sections of concrete that the saw-cutting and pavement-breaking machines cannot reach. Other miscellaneous equipment would include a concrete saw, various paving equipment, and pickup trucks.

Access

The existing sewer access road from Hunte Parkway would provide primary access to the proposed Salt Creek Substation during construction. During road improvements that include pavement widening, retaining wall construction, and construction of 12kV distribution packages, temporary access to the substation would be provided from the Transmission Corridor. Temporary access from the Transmission Corridor to the substation would follow the 69kV underground route from the substation to the Transmission Corridor. This temporary access would be provided by the existing driveway apron on Hunte Parkway within the Transmission Corridor and would follow the existing unpaved access road southerly to a point near the proposed cable pole for TL 6965 underground.

Current graded width of the existing sewer access road from Hunte Parkway to the substation is approximately 16 feet. The paved portion of the roadway averages approximately 12 feet wide. The remaining 4 feet are occupied by roadway shoulder and drainage elements. An existing 13-foot-wide driveway apron provides an entry to the sewer access road from Hunte Parkway. Proposed access road improvements include widening the total graded width to approximately 41 feet, installing new asphaltic concrete pavement to an approximate width of 30 feet, installing guardrail above the proposed downhill side retaining structure, widening the existing driveway apron to 30 feet, and removing and replacing approximately 120 feet of curb and gutter westerly from the driveway, and along Hunte Parkway. Drainage conveyance associated with access road improvements will be installed and maintained in accordance with the requirements of the City of Chula Vista and the RWQCB.

1.2.2.2 Power Lines

Overhead Power Line Construction

Mowers and bulldozers would be used to clear the areas required for pole/structure installation and at work pads. Two Mexican fan palms (*Washingtonia robusta*) would be removed within the portion of the proposed transmission corridor between Eastlake Drive and Otay Lakes Road. Mowing and minimal grading would be used at stringing sites. Permanent work pads would be required at approximately 24 pole locations to provide a safe work area during construction, as well as for post-construction operation and maintenance work. At approximately 16 of these locations, the proposed pole structure must be located in the existing access road to meet engineering design requirements; therefore, the access road will be adjusted at these locations to route access around the pole.

Steel Pole Installation

Installing direct-bury galvanized steel poles would begin with excavating 40 inch diameter holes. Depending on pole type and height, excavated holes are approximately 8 to 11 feet deep. Holes would be drilled using a truck-mounted auger or similar equipment and would result in the excavation of 1 to 2 cubic yards (CY) of soil. Plywood boards would be used to cover the excavated holes until pole installation activities begin. New poles would then be delivered to the site and placed with a small crane. The annular space between poles and holes would then be backfilled with concrete. Any remaining excavated material would be placed around the holes, spread on adjacent access roads and properly compacted, or disposed of offsite at an approved facility.

All of the engineered steel poles that would be installed as part of the Proposed Project would be placed on new concrete foundations, typically consisting of drilled concrete piers. Following the preparation of the pole work area, the foundation process would begin with excavating a hole using a truck-mounted excavator with various-diameter augers to match the diameter and depth requirements of the foundation.

Each foundation hole would range from approximately 6 to 7 feet in diameter and 20 to 30 feet deep, requiring the excavation of between approximately 21 and 43 CY of soil, depending on conditions. Following excavation of the foundation hole, a reinforcing steel cage and anchor bolts, assembled at one of the Proposed Project's staging yards or temporary work areas, would be transported to the foundation site and installed. Following the cage installation, a form would be built and concrete would be poured to a height of approximately 6 to 24 inches above grade.

Underground Transmission Construction

Duct banks typically consist of three 6-inch-diameter PVC conduits that house electrical cables. Duct bank dimensions would be approximately 30 inches wide by 33 inches in height for vertical configuration or approximately 72 inches wide by 15 inches in height for horizontal configuration for each duct package. The duct package would consist of double 69kV transmission circuits. The currently proposed cable design consists of a 3,000-kcmil copper conductor cable for the 69kV transmission circuit TL 6910 loop-in and the proposed TL 6965 line loop-in. Additional ducts for communication cables used for system protection and communication purposes would also be installed within the same trench/duct package as the 69kV cables.

The final approximately 1,000-foot segment of TL 6965 would be placed underground from the cable pole to the substation rack for the new underground connection. Trenching would occur within SDG&E's Substation property and Transmission Corridor, but would cross the City of Chula Vista's sewer access road. The typical trench dimensions for installing a double duct bank would be approximately 3 to 6 feet deep and 3 to 7 feet wide depending on the circuit voltage class and duct bank configurations. Additionally, depth may vary depending on soil stability and the presence of existing substructures. The trench would be widened and shored where necessary to meet California Occupational and Safety Health Administration requirements. If trench water is encountered, trenches would be dewatered using a portable pump and disposed of in accordance with required permits.

Use of Helicopters

Helicopter use is anticipated during construction of TL 6965. A light- or medium-lift construction helicopter would be used during installation of the overhead conductor cable. Helicopter operation would occur during specific daytime construction activities (for 5 days) at ground to low altitude (ground-level to 300 feet high). The helicopter flight path would be low elevation and limited to along the power line corridor ROW except for ingress and egress from the helicopter landing/staging yard. The Existing Staging yard would be used for helicopter takeoffs and landings, helicopter storage, and refueling. Helicopter utilization would be compliant with all applicable usage permits including the Federal Aviation Administration and the California Department of Transportation.

Access

Existing dirt access roads within and along SDG&E's Transmission Corridor would be utilized to the maximum extent possible during construction of the new 69kV power line. At approximately 16 pole locations, the existing access road would be adjusted to accommodate the new pole construction and maintain necessary vehicular access. A new permanent access road to Structure 40 is required for crews to install and maintain Structure 40; the access road is 4,046 square feet in area (approximately 330 feet long and ranging in width from 12 to 14 feet) and will include the temporary work area around Structure 40. Structure 40 is adjacent to a concrete brow ditch. A steel plate will be placed over the concrete brow ditch during construction to allow the crew the work area needed for installation of Structure 40. The steel plate will span the brow ditch and will not impede storm flow in the brow ditch. In addition, overland travel to three structures would be used during construction where construction vehicles drive to the structures without requiring any grading but may require vegetation trimming and/or mowing. Overland travel would occur for a total distance of approximately 150 feet with a width of approximately 12 feet. Additionally, an approximately 2-foot-wide by 30-foot-long footpath would be required to one pole structure to facilitate access.

At Salt Creek Substation, the existing dirt road extending northwesterly down the slope from the Transmission Corridor to the existing sewer access road would be improved from the southern terminus of TL 6965, extending down into the proposed substation to accommodate the 69kV underground package. This access road would provide secondary temporary construction access to the Salt Creek Substation.

As the TL 6910 loop-in would occur within existing ROW areas and within the proposed Salt Creek Substation, no new access roads would be required.

1.2.2.3 Existing Substation Modification

No site development work is involved at the Existing Substation because it is an existing substation. The existing 69kV rack, where all the construction work would take place, allows room for the new TL 6965 circuit position. A breaker position for TL 6964 exists and is currently designated TL 6910. The circuit breaker and circuit position would be relabeled to reflect the circuit name change. The 69kV rack would be expanded by one bay position. This would allow moving TL 643 to the new bay position. The new circuit breaker for TL 6965 would be installed this vacant position previously occupied by TL 643.

Below grade work includes foundations for the steel structure and equipment. Concrete trucks, backhoes, and skid steer loaders would be used for the foundation and below grade work. Once the below grade foundation construction is complete, major equipment and structures would be installed and anchored on their respective foundation. The following steps would be taken to install the above grade equipment:

- The 69kV rack extension would be erected. This would consist of steel structures, disconnects, and insulators.
- The 69kV circuit breakers would be installed on their foundations.

The proposed Existing Substation modifications would occur within the existing substation footprint; therefore, no new access roads would be required. Existing access to the Existing Substation is provided via San Miguel Road. The proposed Existing Substation modifications would occur within the existing substation footprint and no additional work areas would be required.

1.2.2.4 Schedule

Construction of the Proposed Project is anticipated to require approximately 18 to 24 months from initial site development through energization and testing. Table 1-1, *Proposed Construction Schedule*, identifies the estimated length of time anticipated to complete construction for each component of the Proposed Project.

**Table 1-1
Proposed Construction Schedule**

Project Components and Activities	Approximate Duration (work days)	Approximate Start Date
<i>Salt Creek Substation Development</i>		
• Demolition	15	9/4/2014
• Grading and Road Improvements	90	9/4/2014
• Retaining Walls	30	9/11/2014
• Storm Drain System and Erosion Control	40	10/20/2014
• Public Improvements and Access Road Paving	20	12/22/2014
• Substation Concrete Masonry Walls	20	11/24/2014
<i>Substation Facility Construction</i>		
• Below Grade	120	1/2/2015
• Wiring	90	7/9/2015
• Telecom	60	7/9/2015
• Erect Steel	60	5/25/2015
• Equipment Installation	45	5/27/2015
• 69kV Riser Pedestal	18	7/1/2015
• Terminate Underground 69kV	18	11/13/2015
• Controls and Relays	40	10/9/2015
• Complete Landscaping	40	12/9/2015
• Testing	40	1/2/2016
• Energizing (TL 6965)	5	2/21/2016
• Energizing (TL 6910)	5	3/1/2016
• Cut Over	15	3/8/2016
<i>TL 6965</i>		
• Roads and Foundation	66	12/15/2014
• Foundation Installations	30	3/17/2015
• Pole Installations	60	4/28/2015
• String Conductor	23	7/21/2015
• Trench and Conduit	30	8/21/2015
• Cable Installation	30	10/2/2015
<i>TL 6910 Loop-In</i>		
• Foundation Installations	45	2/9/2015
• Pole Installations	10	4/13/2015
• Trench and Conduit	30	8/10/2015
• Cable Installation	30	9/21/2015
<i>Distribution Getaways</i>		
• Underground Trench/Conduit/Substructure	94	6/30/2015
• Cable/Conductor Pulling and Tensioning	38	10/22/2015
<i>Existing Substation Modification</i>		
• Substation Below Grade Construction	20	3/31/2015
• Substation Above Grade Construction	20	4/28/2015
• Substation Wiring	20	5/26/2015
• Relay Testing	20	12/9/2015
• Existing Substation Side TL6965 Energization	5	2/21/2016
• 69kV Substation Cutover	15	3/8/2016

Construction of the proposed Salt Creek Substation would generally occur during normal work hours on Monday through Friday, 7:00 a.m. to 7:00 p.m., and between 8:00 a.m. and 7:00 p.m. on Saturday; however, some concrete pours may take place during an extended day depending on the size of the pour. Transformer oil filling may necessitate vacuum pulls and oil installation requiring continuous work 24 hours per day (3 to 5 days per transformer).

Conductor splicing may require extended work hours due to the time required for continuous splicing. Actual cutovers of the transmission and distribution circuits to the proposed Salt Creek Substation would be dependent upon loading requirements and would be performed in a manner that maintains uninterrupted service to customers. This may require part or all of this work to be conducted after normal business hours or on the weekend and/or nights to minimize impacts to schedules and to facilitate cutover work.

1.2.3 Project Operation and Maintenance

Once construction is complete, the proposed Salt Creek Substation and Existing Substation would be unattended. The substations would be monitored and controlled by SDG&E's Remote Control Center, so no new full-time staff would be required for operation and/or maintenance of the facilities. Ongoing maintenance would involve testing, monitoring, and repair of the equipment, as well as emergency and routine procedures to enable efficient provision of SDG&E services. A perimeter wall would be provided around the proposed Salt Creek Substation, and all access gates would be locked to prevent the entry of unauthorized individuals. An access road gate and a perimeter fence around the Existing Substation are provided, and all access gates would be locked to prevent the entry of unauthorized individuals. Access would be restricted further by posting signage on the exterior and at the entryway to the substations. Consistent with existing landscape, maintenance activities would occur on an as-needed basis for purposes of safety and/or access.

The transmission facilities associated with the Proposed Project would continue to be inspected, maintained, and repaired following completion of the Proposed Project. Operation and maintenance activities would involve both routine preventive maintenance and emergency procedures to maintain service continuity. Operation and maintenance activities for the TL 6910 loop-in and TL 6965 would include routine inspection, maintenance, and repair activities. Both routine preventive maintenance and emergency procedures would occur to ensure that integrity of the system is maintained over the long term. Poles fitted with specific nonexempt hardware (fuses, switches, etc.) would be brushed to a radius of 10 feet from the base of the pole, Transmission poles and towers with external grounds would be brushed to a radius of 5 feet from the base of the

pole or tower. SDG&E conducts annual inspection of areas where trees exist within proximity to its electrical facilities. If necessary, tree trimming activities would be conducted

1.3 REGULATORY FRAMEWORK

Several regulations have been established by federal, state, and local agencies to protect and conserve biological resources. The descriptions below provide a brief overview of agency regulations that may be applicable to the resources that occur within the Proposed Project site, and their respective requirements. The final determination of whether permits are required is made by the regulating agencies.

1.3.1 Federal Regulations and Standards

1.3.1.1 Federal Endangered Species Act

The federal Endangered Species Act (ESA) of 1973 (50 Code of Federal Regulations [CFR] 17) is aimed at the protection of plants and animals that have been identified as being at risk of extinction, and classified as either threatened or endangered. The federal ESA also regulates the “taking” of any endangered fish or wildlife species, per Section 9 of the Act. As development is proposed, the responsible agency or individual landowners is required to submit to a formal consultation with the U.S. Fish and Wildlife Service (USFWS) to assess potential 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 federal ESA. USFWS is required to make a determination as to the extent of impact to a particular species a project would have. If it is determined that potential impacts to a species would likely occur, measures to avoid or reduce such impacts must be identified. 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. Section 10 of the federal ESA provides for issuance of incidental take permits to private parties with the development of a habitat conservation plan (HCP), such as SDG&E’s Subregional Natural Community Conservation Plan (NCCP).

1.3.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S. Code [U.S.C.] 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 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 federal 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).

1.3.1.3 Clean Water Act

Pursuant to Section 404 of the Clean Water Act (CWA), the U.S. Army Corps of Engineers (USACE) is authorized to regulate any activity that would result in the discharge of dredged or fill material into waters of the U.S. (including wetlands), which include those waters listed in 33 CFR 328.3 (Definitions). USACE, with oversight from the U.S. Environmental Protection Agency (USEPA), has the principal authority to issue CWA Section 404 permits.

Pursuant to Section 401 of the CWA, the RWQCB certifies that the discharge will comply with state water quality standards. RWQCB, as delegated by USEPA, has the principal authority to issue a CWA Section 401 water quality certification or waiver.

The NPDES is the permitting program for discharge of pollutants into surface waters of the U.S. under Section 402 of the CWA. Substantial impacts to wetlands may require an Individual Permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A water quality certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions.

1.3.1.4 Executive Order 11988, Floodplain Management

Executive Order 11988 requires federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains, and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. This Executive Order provides an eight-step process that agencies carry out as part of their decision-making process for projects that have potential impacts to or within a floodplain.

1.3.1.5 Executive Order 11990, Protection of Wetlands

Pursuant to Executive Order 11990, each federal agency is responsible for preparing implementing procedures for carrying out the provisions of the Executive Order. The purpose of

this Executive Order is to “minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands.” Each agency, to the extent permitted by law, must avoid undertaking or providing assistance for any activity located in wetlands, unless the head of the agency finds that there is no practical alternative to such activity, and the proposed action includes all practical measures to minimize harm to wetlands that may result from such actions. In making this finding, the head of the agency may take into account economic, environmental, and other pertinent factors. Each agency must also provide opportunity for early public review of any plans or proposals for new construction in wetlands.

1.3.1.6 Executive Order 13112, Invasive Species

Executive Order 13112 requires federal agencies to “prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health effects that invasive species cause.” An invasive species is defined by the Executive Order as “an alien species [a species not native to the region or area] whose introduction does or is likely to cause economic or environmental harm or harm to human health.”

1.3.2 State

1.3.2.1 California Endangered Species Act and Natural Community Conservation Planning Act

The California ESA of 1984, in combination with the California Native Plant Protection Act of 1977, regulates the listing and take of plant and animal species designated as endangered, threatened, or rare within the state. California also lists species of special concern based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. The California Department of Fish and Wildlife (previously California Department of Fish and Game, CDFG) (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 addressed through the issuance of a 2081 permit (Memorandum of Understanding). In 1991, the California NCCP Act was approved and the NCCP Coastal Sage Scrub program was initiated in Southern California. California law (Section 2800 *et seq.* of the California Fish and Game Code [CFGFC]) established the NCCP program “to provide for regional protection and perpetuation of natural wildlife diversity while allowing compatible land use and appropriate development and growth.” The NCCP Act encourages preparation of subarea plans, such as SDG&E’s Subregional NCCP, that address habitat conservation and management on an ecosystem basis rather than one species or habitat at a time.

1.3.2.2 Fully Protected Species

Prior to the development of the federal and state ESAs, species were listed as “fully protected” by 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 California ESA and/or the federal ESA. Per § 4700 of the CFGC, the possession or taking of fully protected species is only allowed as provided in §2081.7 and §2835 of the CFGC.

1.3.2.3 Sections 1600-1602 of the California Fish and Game Code – Lake or Streambed Alteration

Pursuant to Division 2, Chapter 6, Section 1602 of the CFGC, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel or bank of any river, stream or lake that supports fish or wildlife. A Lake or Streambed Alteration Agreement Application must be submitted to 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.” CDFW has jurisdiction over riparian habitats associated with watercourses. Jurisdictional waters are delineated by the outer edge of riparian vegetation or at the top of the bank of streams or lakes, whichever is wider. CDFW jurisdiction does not include tidal areas or isolated resources. 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 CDFW and applicant is the Lake or Streambed Alteration Agreement.

1.3.2.4 California Fish and Game Code Sections 3503, 3511, 3513, 3801, 4700, 5050, and 5515

Within the California, fish, wildlife, and native plant resources are protected and managed by CDFW. The California Fish and Game Commission and/or CDFW are responsible for issuing permits for the take or possession of protected species. The following sections of the CFGC address protected species: Section 3511 (birds), Section 4700 (mammals), Section 5050 (reptiles and amphibians), and Section 5515 (fish). In addition, the protection of birds of prey is provided for in Sections 3503, 3513, and 3800 of the CFGC.

1.3.2.5 Native Plant Protection Act

The Native Plant Protection Act (NPPA) was adopted in 1977 (CFGC §§ 1900–1913) to preserve, protect, and enhance rare and endangered plants. CDFW is responsible for

administering the NPPA, while the Fish and Wildlife Commission has the authority to designate native plants as “endangered” or “rare” and provide measures to avoid take.

1.3.2.6 Porter-Cologne Water Quality Act

The Act provides for statewide coordination of water quality regulations. The state Water Resources Control Board was established as the statewide authority and nine separate RWQCBs were developed to oversee water quality on a day-to-day basis.

1.3.2.7 Regional Water Quality Control Board

The RWQCB is the primary agency responsible for protecting water quality in California. The RWQCB regulates discharges to surface waters under the federal CWA and the California Porter-Cologne Water Quality Control Act. The RWQCB’s jurisdiction extends to all waters of the state and to all waters of the U.S., including wetlands (isolated and non-isolated conditions).

Through 401 Certification, Section 401 of the CWA allows the RWQCB to regulate any proposed federally permitted activity, that may affect water quality. Such activities include the discharge of dredged or fill material, as permitted by USACE, pursuant to Section 404 of the CWA. The RWQCB is required to provide “certification that there is reasonable assurance that an activity that may result in the discharge to waters of the United States will not violate water quality standards,” pursuant to Section 401. Water Quality Certification must be based on the finding that proposed discharge will comply with applicable water quality standards.

In addition, pursuant to the Porter-Cologne Water Quality Control Act, the state is given authority to regulate waters of the state, which are defined as any surface water or groundwater, including saline waters. As such, any person proposing to discharge waste into a water body that could affect its water quality must first file a *Report of Waste Discharge* if a Section 404 does not apply. “Waste” is partially defined as any waste substance associated with human habitation, including fill material discharged into water bodies.

1.3.3 Regional and Local Plans

1.3.1.1 SDG&E Subregional Natural Community Conservation Plan

In December 1995, USFWS and CDFW approved the *SDG&E Subregional NCCP*, developed in coordination with such agencies and addresses potential impacts to species and habitat associated with SDG&E’s ongoing installation, use, maintenance, and repair of its gas and electric systems,

and typical expansion to those systems throughout much of SDG&E's existing service territory. As a part of the *SDG&E Subregional NCCP*, SDG&E was issued incidental take permits (Permit PRT-809637) by USFWS and CDFW for 110 "covered species." Covered Species or their habitats are subject to the provisions of the *SDG&E Subregional NCCP*. The *SDG&E Subregional NCCP* was developed by following the multiple species and habitat conservation planning approach. Even with the *SDG&E Subregional NCCP*, SDG&E's goal is to avoid "take" of covered species whenever possible and to implement measures to minimize and mitigate any take to the maximum extent possible. The *SDG&E Subregional NCCP* includes 61 operational protocols that apply to construction, operations, and maintenance activities. In approving the NCCP, USFWS, and CDFW determined that the operational protocols avoid potential impacts and provide appropriate mitigation where such impacts are unavoidable, and ensure the protection and conservation of federally and state-listed species and covered species. The Proposed Project falls within the area in which SDG&E's utility operations are governed by the *SDG&E Subregional NCCP*, which would be applied to the Proposed Project. The NCCP is limited to new electric substations that would result in up to 20 acres of habitat disturbance and does not apply to major expansions of SDG&E's electric system. Because it is not a major expansion and would result in less than 9 acres of habitat disturbance to SDG&E NCCP covered habitats (see Section 4.2 Construction Impacts), the Proposed Project is covered by the NCCP. As such, the NCCP fully addresses all of the potential construction, operations, and maintenance impacts of the Proposed Project on federally and state-listed species and covered species. The NCCP avoidance and minimization measures and operational protocols have been incorporated as part of the Proposed Project description.

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

1.3.1.2 City of Chula Vista Multiple Species Conservation Program Subarea Plan

The MSCP is a comprehensive, long-term habitat conservation plan developed to address the needs of multiple species and the preservation of natural vegetation communities in southwestern San Diego County. The MSCP Subregional Plan, a "framework" plan for the 12 participating

jurisdictions, was adopted by the City of San Diego and County of San Diego in 1997. The MSCP Subregional Plan addresses the potential impacts of urban growth, natural habitat loss, and species endangerment, and creates a plan to mitigate for the potential loss of covered species and their habitat due to the direct, indirect and cumulative impacts of future development of both public and private lands within the MSCP's approximately 900-square-mile study area. The City of Chula Vista MSCP Subarea Plan is a policy document through which the MSCP Subregional Plan is implemented within the City of Chula Vista's jurisdiction (City of Chula Vista 1993, 1997). The City of Chula Vista's MSCP Subarea Plan provides a blueprint for habitat preservation and forms the basis for federal and state incidental "take" permits for 86 plant and animal species within the City of Chula Vista.

1.3.1.3 City of Chula Vista Wetlands Protection Program

Wetlands are protected throughout the City of Chula Vista's MSCP Subarea Plan through individual project entitlement reviews and the associated California Environmental Quality Act (CEQA) process. The process would provide an evaluation of wetlands avoidance and minimization and would ensure mitigation within the Chula Vista Subarea or Chula Vista Planning Area for unavoidable impacts to wetlands, thereby achieving no overall net loss of wetlands.

1.3.1.4 Otay Ranch Resource Management Plan

The proposed Salt Creek Substation is located within Otay Ranch, an approximately 22,899-acre planned community in the eastern portion of the City of Chula Vista (City of Chula Vista 1993; 1996). The Otay Ranch Resource Management Plan (RMP) was developed prior to the City of Chula Vista's MSCP to provide mitigation for development projects occurring in Otay Ranch by requiring conveyance/purchase of 1.188 acres of land (for every 1 acre of developable land) to assemble the Otay Ranch Preserve (City of Chula Vista 1993, 1996). The RMP is intended to be the functional equivalent of the County of San Diego Resource Protection Ordinance (RPO) for Otay Ranch.

CHAPTER 2.0 METHODS

Surveys and assessments to inventory and evaluate biological resources were conducted within the BSA during 2011, 2012, and 2013. The BSA is composed of an existing transmission corridor (which contains an existing wood and steel pole alignment); the Existing, Hunte Parkway, and Eastlake Parkway staging yards; the proposed Salt Creek Substation; and a 500-foot survey buffer around these areas (Figure 1-2). The BSA encompasses approximately 775 acres.

Prior to conducting field surveys, a search of the California Natural Diversity Database (CNDDDB; CDFG 2010, 2012a, 2012c) and the California Native Plant Society (CNPS) Electronic Inventory (CNPS 2012). was conducted for the Jamul Mountains, Otay Mesa, and surrounding seven quadrangles (Imperial Beach, National City, Otay Mountain, Dulzura, La Mesa, El Cajon, and Alpine) to determine if there are any special status species known from the region within and surrounding the Proposed Project. The results of the data query were then refined through site visits involving habitat assessments for these species. Only special status species with potential to occur within the BSA are discussed in this BTR.

For the purposes of this report, species are considered to have special status if they meet at least one of the following criteria:

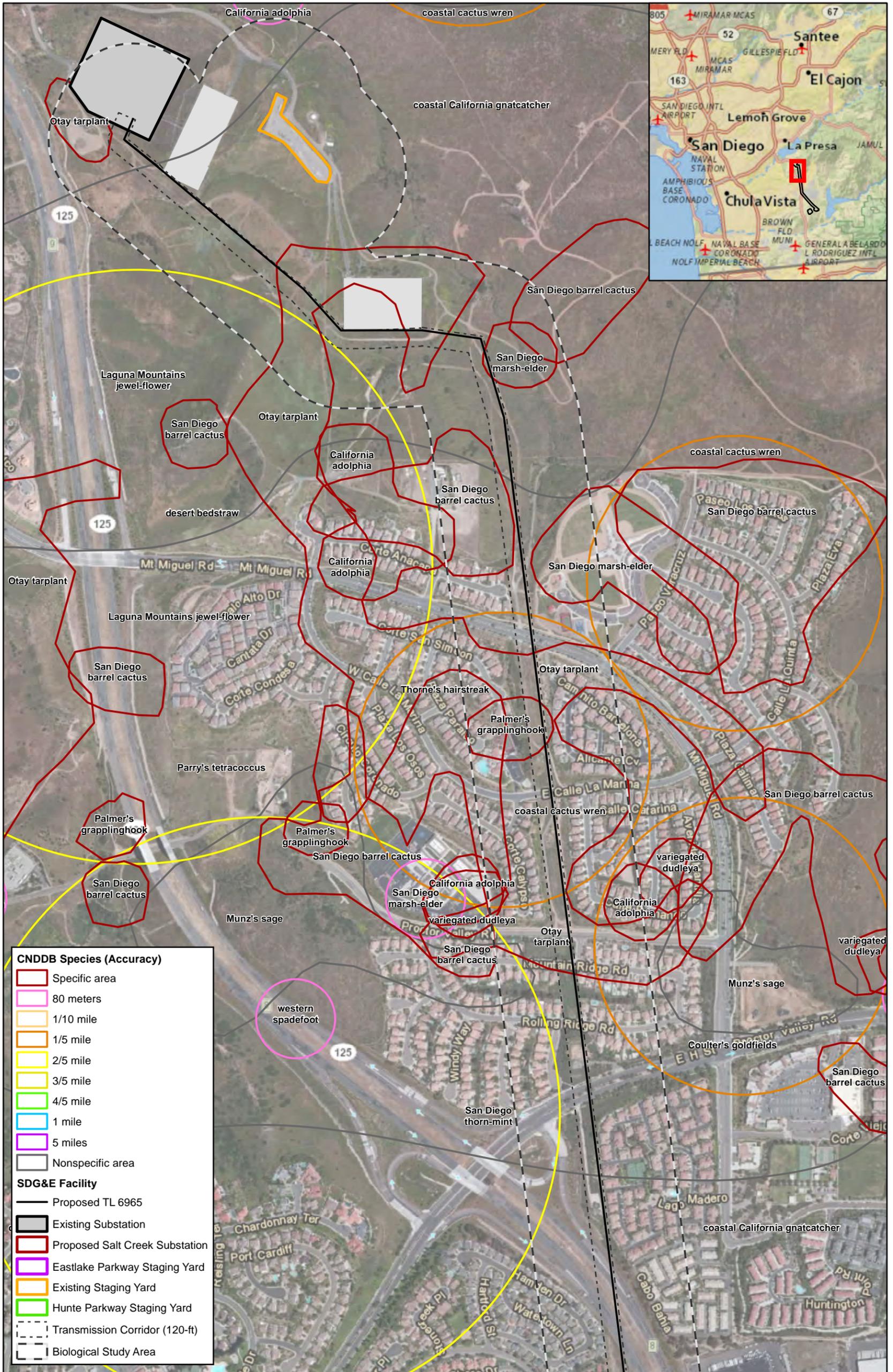
- Covered under the federal or state Endangered Species Act (CDFG 2011a; USFWS 1996, 1997, 2004).
- CDFW species of special concern (CDFG 2011a; Remsen 1978; Williams 1986).
- CDFW fully protected species (CDFG 2011a, 2012b).
- Covered as a state protected furbearing mammal (California Code of Regulations [14 CCR Section 460]).
- Listed as having a California Rare Plant Rank (CRPR) (formerly CNPS List) as List 1A (presumed extinct in California), 1B (rare, threatened, and endangered in California and elsewhere), or 2 (rare, threatened, or endangered in California, but more common elsewhere). CRPR List 1A, 1B, and 2 species are considered special status plant species if they fall within any of these categories as defined in the NPPA, CFGC Section 1901 or the state ESA, CFGC Sections 2050 through 2098.
- CRPR List 3: (plants for which more information is needed [a review list]), or List 4 (plants of limited distribution [watch list]) (CNPS 2012).

- Covered under the SDG&E NCCP Subregional Natural Community Conservation Plan (SDG&E 1995).

Figures 2-1a through 2-1c show the results of the nine-quad CNDDDB and CNPS database search. Based on this analysis, it was determined that focused surveys would be required for three federally listed wildlife species, the endangered Quino checkerspot butterfly (*Euphydryas editha quino*) (QCB), the threatened coastal California gnatcatcher (*Polioptila californica californica*) (CAGN), and the endangered least Bell's vireo (*Vireo bellii pusillus*) (LBV); for western burrowing owl (*Athene cunicularia*) (WBO), a California Species of Concern; and for special status plant species (USFWS 2006, 2002, 1997a; CDFG 2012a).

Biological surveys for within the BSA were conducted in 2011, 2012, and 2013. Between March and July of 2011, AECOM conducted vegetation mapping; rare plant surveys; general wildlife surveys; and focused surveys for QCB, CAGN, LBV, and WBO for the proposed Salt Creek Substation. Between January and September 2012, AECOM conducted vegetation mapping; rare plant surveys; general wildlife surveys; and focused surveys for QCB, CAGN, and WBO for the proposed transmission corridor and staging yards. In March and September 2012, a jurisdictional delineation and assessment was completed for both the proposed Salt Creek Substation, transmission corridor, and staging yards. In March 2013, follow up visits were conducted by David Faulkner (Forensic Entomology Services) within the previous QCB survey areas to assess the suitability of habitat for QCB. In July 2013, general biological surveys were conducted to capture changes in the Proposed Project description, including the addition of the Eastlake Parkway Staging Yard. No biological surveys were conducted within the Existing Substation and 500-foot buffer of this facility since all modification activities to this substation would occur within the existing substation footprint, which consists of paved and gravel-covered areas, and is surrounded by chain-link fence. A habitat assessment was conducted in October 2012 at the five alternative staging areas within OTC to determine their potential to support biological resources. These alternative staging yards occur within previously graded areas and do not support biological resources. In addition, it is not known whether they would be used for the Proposed Project. For these reasons, the alternative staging areas are not included in the BSA or impact analysis.

Subsequent to the completion of surveys, the Proposed Project footprint changed in size due to design modifications for several of the Proposed Project components, thus changing the area covered by the 500-foot buffer. Vegetation mapping results presented in this report have been truncated to the BSA; however, special status species results are presented for the BSA and areas surveyed outside of the current BSA, which yields a more comprehensive and thereby conservative analysis. A list of the survey personnel and dates for each survey is provided in Appendix A.

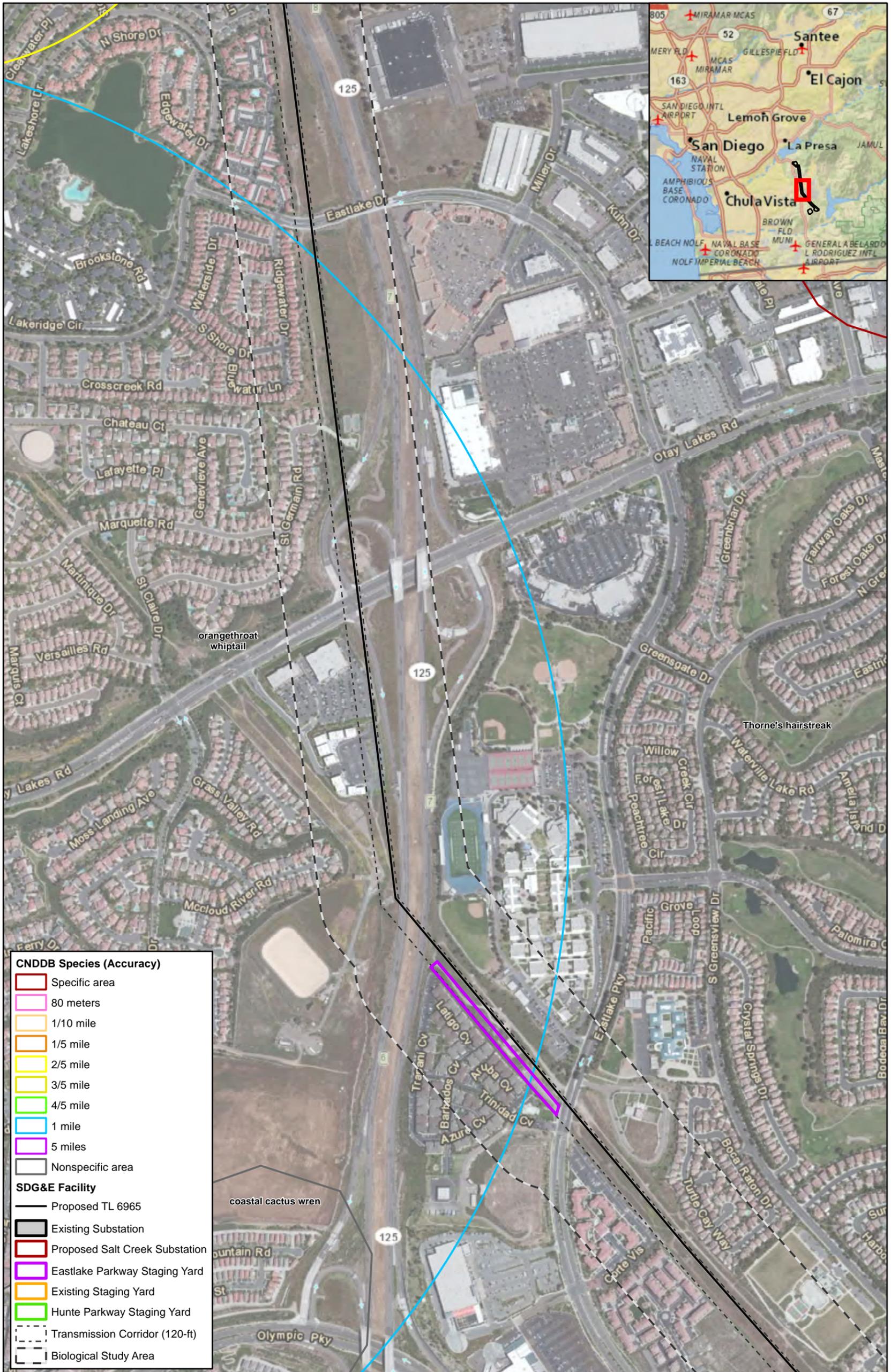


0 325 650 Feet
 Scale: 1:7,800 1 inch = 650 feet

Figure 2-1a
CNDDDB Species Locations within Biological Study Area

SDG&E is providing this map with the understanding that the map is not survey grade.

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; Esri Basemaps, 2013



0 325 650 Feet



Scale: 1:7,800 1 inch = 650 feet

Figure 2-1b
CNDDDB Species Locations within Biological Study Area

SDG&E is providing this map with the understanding that the map is not survey grade.

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; Esri Basemaps, 2013



0 325 650 Feet



Scale: 1:7,800 1 inch = 650 feet

Figure 2-1c
CNDDDB Species Locations within Biological Study Area

SDG&E is providing this map with the understanding that the map is not survey grade.

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2.1 VEGETATION MAPPING

Vegetation mapping was conducted within of the proposed Salt Creek Substation and a 500-foot buffer around the site in March, April, and June 2011. Vegetation mapping was conducted within the transmission corridor; Existing, Hunte Parkway, and Eastlake Parkway staging yards; and a 500-foot survey buffer around each of these areas on March 9, 2012 and July 8, 2013 (Eastlake Parkway Staging Yard). Vegetation mapping of the Eastlake Parkway Staging Yard was modified from the original survey of the BSA in that area because the vegetation conditions at the Eastlake Parkway Staging Yard in July 2013 changed from those mapped in March 2012.

Vegetation communities were classified and mapped in the field to provide a baseline of biological resources that occur or have the potential to occur in the Proposed Project. Habitats were classified based on the dominant and characteristic plant species in accordance with vegetation community classifications following Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986), as modified by Oberbauer in *Draft Vegetation Communities of San Diego County* (Oberbauer et al. 2008). Vegetation mapping was completed utilizing a field computer and a handheld submeter-accuracy Global Positioning System (GPS) unit, at a 1:2400 scale (1 inch = 200 feet). Acreages of each habitat type (delineated as a habitat polygon on the compiled vegetation maps) were calculated using a geographic information system (GIS). Detailed survey methods and results of the 2011 vegetation mapping are presented in a vegetation and rare plant report (AECOM 2011a) included in Appendix B. Detailed survey methods and results of the 2012 vegetation mapping are presented in a Preliminary Impact and Mitigation Analysis for the Salt Creek Transmission Line report (AECOM 2012a) included in Appendix C.

2.2 JURISDICTIONAL WATERS AND WETLANDS DELINEATION SURVEYS

Prior to field surveys, a pre-survey investigation was conducted to obtain contextual information relevant to the site to be surveyed. The following sources were consulted to gain a better understanding of the physical and hydrologic setting of the site:

- Historical maps of wetlands, riparian habitat, and other linear watercourses in the Proposed Project vicinity were assessed in the National Wetlands Inventory map and reviewed in ArcGIS Version 10 software.
- Blue line data and watershed details were obtained through the National Hydrography Dataset and viewed in ArcGIS Version 10 software.

- Topographical features that may promote the development of jurisdictional waters or contain potential jurisdictional waters were identified by reviewing the Jamul Mountains and Otay Mesa U.S. Geological Survey (USGS) 7.5-Minute Quadrangle Maps.

A jurisdictional waters assessment, following the guidelines set forth by the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the USACE Wetland Delineation Manual: Arid West Region, Version 2.0* (Environmental Laboratory 2008), was performed within a 60-foot buffer on each side of the proposed TL 6965 north of Hunte Parkway, a 75-foot buffer on each side of the proposed TL 6965 south of Hunte Parkway, and for the Salt Creek Substation. AECOM and RECON performed assessments on March 21, 2012 and April 27, 2012, respectively, within the transmission corridor and proposed Salt Creek Substation. A follow-up assessment was conducted by AECOM on September 13, 2012, to further investigate the potential jurisdictional status of drainages that occur within the proposed Salt Creek Substation. A jurisdictional waters assessment was completed for the Eastlake Parkway Staging Yard on July 29, 2013. A jurisdictional waters assessment was completed for the portion of the proposed transmission line corridor bounded by Eastlake Drive to the north and Otay Lakes Road to the south by RECON on April 27, 2012. Spatial and tabular data were collected using a handheld submeter-accuracy GPS unit during the field assessment. Field-collected spatial and tabular data were exported to ArcGIS software to map the type, location, and extent of potential jurisdictional waters. Detailed survey methods and results of these assessments are presented in the jurisdictional assessments included in Appendix D.

Areas meeting the criteria for jurisdiction under the CDFW and the San Diego RWQCB were also evaluated and mapped. CDFW asserts jurisdiction over streambeds as they are described in CFGC Section 1600 *et seq.* and Title 14 CCR 720, which described state jurisdictional waters as follows:

“...all rivers, streams, lakes, and streambeds in the State of California, including all rivers, streams, and streambeds which may have intermittent flows of water.”

In practice, CDFW usually extends its jurisdictional limit to the top of a stream/river bank, the bank of a lake, or the outer edge of the riparian vegetation, whichever is wider.

RWQCB jurisdiction is considered congruent with that of USACE jurisdiction. The RWQCB also considers whether a feature possesses a “beneficial use” as outlined in the *Water Quality Control Plan for the San Diego Basin* (Basin Plan) (RWQCB 1994) when deciding if RWQCB jurisdiction should be asserted over a feature.

2.3 RARE PLANT SURVEYS

Focused rare plant surveys were performed in accordance with survey protocols set forth by *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants* (USFWS 2000); *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFG 2009)¹; and *CNPS Botanical Survey Guidelines* (CNPS 2001). Surveys in the transmission corridor and staging yards, and a 500-foot buffer around each of these areas were conducted in March, May, and July 2012, and within the footprint of the proposed Salt Creek Substation and a 500-foot buffer in March, April, and May 2011. Rainfall during both survey periods was approximately 1 inch below the historical average for this area. However, the below average rainfall did not seem to inhibit plant germination, as a large number of annual plant species were detected within the BSA. Thus rare plant survey results appear to be adequate as rainfall patterns did not inhibit plant detection.

All plant species observed within the survey areas were recorded and the location of special status plants was mapped with a hand-held, submeter-accuracy GPS unit. Subsequent to the field survey, data were downloaded from the GPS unit, post-processed, and brought into ArcGIS for analysis. For very large occurrences of small annuals, a quadrat sampling method, using a 1-square-foot quadrat, was used to estimate number of individuals. For large occurrences of shrubs, visual density estimates were made and then multiplied by the area occupied to estimate number of individuals. Detailed survey methods and results of the 2011 and 2012 rare plant surveys are presented in the reports included in Appendices C and E (AECOM 2011a, 2012b).

2.4 GENERAL WILDLIFE SURVEYS

The suitability of habitats for special status wildlife species within the BSA was evaluated during general wildlife surveys. These surveys occurred concurrently with focused protocol surveys during 2011 and 2012. These surveys coincided with times of the year when the wildlife species occurring in the BSA would be more conspicuous or readily observable in the field (e.g., breeding season). AECOM biologists incidentally recorded wildlife sign, track, and direct observations during focused protocol surveys.

¹ This document replaced the CDFG document *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened and Endangered Plants and Natural Communities*.

2.5 QUINO CHECKERSPOT BUTTERFLY SURVEYS

Focused protocol surveys for Quino were conducted within the BSA to determine the extent of potentially suitable habitat and determine presence or absence of the species. Prior to surveys, a Quino habitat assessment was conducted to determine the extent of potentially suitable habitat within the BSA. In accordance with the most current USFWS survey protocol for Quino (USFWS 2002a), a habitat assessment by permitted biologists occurred prior to the initiation of adult focused protocol surveys. A habitat assessment was conducted on March 14, 2011, for the proposed Salt Creek Substation and 500-foot buffer. Approximately 13 acres of suitable QCB habitat, including nonnative grassland and coastal sage scrub, for the proposed Salt Creek Substation and 500-foot buffer, were identified for surveys in 2011. A habitat assessment was conducted on February 8, 2012, within the proposed transmission line corridor, staging areas, and a 500-foot survey buffer around these Proposed Project features. Approximately 280.5 acres of suitable QCB habitat, including nonnative grassland and coastal sage scrub, within the proposed transmission line corridor, staging areas, and a 500-foot survey buffer around these Proposed Project features, were identified for surveys in 2012. In 2012, survey areas partially overlapped with 2011 survey areas and, subsequent to the completion of surveys in 2012, the footprint decreased in size due to design changes for several of the Proposed Project components; thus, the total survey area within the BSA was 220 acres.

Following the initial habitat assessment, focused protocol surveys were led by permitted Quino biologists Bonnie Hendricks (TE-820658-4) and Erin Bergman (TE-820658-4) to determine presence or absence of the species. Focused presence/absence QCB surveys within the proposed Salt Creek Substation and 500-foot buffer were conducted for 6 weeks during the flight season between March 14, 2011, and April 20, 2011. In 2011, project surveys were not initiated until March 14 due to cool and rain weather early in the flight season. To accommodate the late start date, two surveys were conducted per week instead of one survey per week for the remainder of the flight season. The modified QCB protocol was approved by USFWS. Surveys were terminated after April 20, 2011, because dot-seed plantain was observed to be drying up and no further observations of adult QCB had been reported on the USFWS website in the lower elevation reference sites (USFWS 2011).

Focused presence/absence surveys for QCB were conducted by permitted Quino biologists Erik LaCoste (TE-027736-5) and Viviane Marquez (TE-800930-10) within the transmission corridor, staging yards, and a 500-foot survey buffer over a 7-week period during the flight season between February 17, 2012, and March 30, 2012. Surveys were terminated after week 7 surveys on March 30 because most dot-seed plantain populations were beginning to dry and drop seed by

survey week 7. In addition, no further observations of adult QCB had been reported on the USFWS website in the lower elevation reference sites after March 28 (USFWS 2012a). All suitable QCB habitat within the project survey area was surveyed a total of seven times over a 7-week period.

All butterfly species, potential larval host plant species, and flowering plant species with potential as a nectar source were recorded during 2011 and 2012 surveys. Data recorded during each focused protocol survey included date of survey, survey number, time, weather conditions, field biologists, and all wildlife species observed. Detailed methods and results of the focused QCB surveys are presented in the *45-Day Summary Report of 2012 Focused Surveys for the Quino Checkerspot Butterfly for the Proposed 69-kV Transmission Line Installation Project for SDG&E* (AECOM 2011b) and the *45-Day Summary Report of Focused Surveys for the Quino Checkerspot Butterfly for the Proposed Salt Creek Substation for SDG&E* (AECOM 2012c) included in Appendix F.

On March 13 and 16, 2013, follow up visits were conducted by David Faulkner (Forensic Entomology Services) within the previous QCB survey areas throughout the entire BSA to assess the suitability of habitat for QCB using the suitable habitat criteria established under SDG&E's QCB Low-Effect HCP (Faulkner 2013). Suitable QCB habitat under SDG&E's QCB Low-Effect HCP (SDG&E 2007) is defined as shrub communities, such as coastal sage scrub, chaparral, and desert scrub, with 50 percent shrub cover or less, and the potential to support dot-seed plantain and other larval host plants. Areas that meet the shrub cover standard are excluded if the ground cover vegetation is disturbed and/or covered by understory vegetation to the extent that larval host plants do not grow. Areas of solid rock substrate and the surfaces of solidly compacted access roads which are not likely to support vegetation are also excluded. All areas of vernal pool complexes are included as suitable QCB habitat regardless of upland vegetation surrounding the vernal pools. Areas meeting the 50 percent shrub cover with QCB host plants, native herbaceous species, cryptobiotic crusts, or the potential to support any of these elements are included as suitable QCB habitat. Also included in suitable QCB habitat are all native grasslands and nonnative grasslands that show evidence of potential to support larval host plants. Evidence for a potential to support larval host plants included presence of native grasses, native wildflowers, and cryptobiotic crusts.

2.6 CALIFORNIA GNATCATCHER SURVEYS

Due to the presence of suitable habitat for CAGN, including coastal sage scrub habitat, focused presence/absence surveys were determined necessary. Protocol-level surveys were conducted by AECOM wildlife biologist Bonnie Hendricks under TE-820658-4 between April 20 and June 24, 2011, in all suitable CAGN habitat within the proposed Salt Creek Substation and 500-foot buffer zone. Protocol-level surveys were conducted by AECOM wildlife biologist James McMorran under TE-820658-4 between May 11 and August 16, 2012, in all suitable CAGN habitat within the transmission corridor, staging yards, and a 500-foot buffer around these Proposed Project features. Approximately 15 acres of suitable habitat within the proposed Salt Creek Substation and a 500-foot buffer was surveyed in 2011. Approximately 66 acres of suitable habitat within the transmission corridor, staging yards, and a 500-foot buffer was surveyed in 2012. In 2012, survey areas partially overlapped with 2011 survey areas and, subsequent to the completion of surveys in 2012, the footprint decreased in size due to design changes for several of the Proposed Project components; thus, the total survey area within the Proposed Project was 54 acres.

Protocol surveys followed the current USFWS survey protocol for the species (USFWS 1997a). According to protocol, if the project is located within the jurisdiction of an NCCP, a minimum of three surveys shall be conducted at least a week apart between February 15 and August 30, to determine the presence/absence of CAGN. The Proposed Project is covered by SDG&E's NCCP (SDG&E 1995); thus, three surveys were conducted in 2011 and three surveys were conducted in 2012. The surveys consisted of walking meandering transects and conducting passive surveillance (i.e., listening and looking for the species) in all habitats with potential to support the species, including all scrub habitats. If an observation was not made after approximately 5 to 10 minutes of passive survey activity, a digital vocalization of CAGN was broadcast for approximately 5 to 10 seconds (i.e., active survey activity), followed by another period of passive observation. The digital vocalization was discontinued with any positive CAGN response. The location of all CAGN detections was recorded and all avian species detected were recorded on field datasheets.

Detailed methods and results of the focused CAGN surveys are presented in the *45-Day Summary Report of 2012 Focused Surveys for the Coastal California Gnatcatcher for the Proposed 69kV Transmission Line Installation Project for SDG&E* (AECOM 2011c) and in the *45-day Summary Report of 2011 Protocol Surveys for Coastal California Gnatcatcher for the Proposed Salt Creek Substation for SDG&E, Otay Mesa, San Diego County, California*, (AECOM 2012d) included in Appendix G.

2.7 LEAST BELL'S VIREO SURVEYS

Due to the presence of suitable habitat in the vicinity of the proposed Salt Creek Substation, focused surveys for LBV were determined necessary. The LBV survey area was limited to all riparian scrub habitats, totaling approximately one acre, within the 500-foot buffer of the proposed Salt Creek Substation. Protocol-level surveys were conducted between May 5, and July 27, 2011, following current USFWS survey protocol for the species (USFWS 2001). Biologists walked all potential LBV habitat and conducted passive surveillance (i.e., listening and looking for the species). Per the current USFWS protocol, suitable habitats within the survey area were surveyed eight times, at least 10 days apart, during the LBV breeding period (April 10 through July 31). In addition to any LBV observations/detections, all avian species detected were recorded on field datasheets. No surveys were conducted for this species within the transmission line corridor, staging areas, or associated 500-foot buffers, as suitable habitat is not present. Detailed methods and results of the focused LBV surveys are presented in *45-Day Summary Report of 2011 Protocol Surveys for Least Bell's Vireo for the Proposed Salt Creek Substation for SDG&E, Otay Mesa, San Diego County, California* (AECOM 2011d) included in Appendix H.

2.8 WESTERN BURROWING OWL SURVEYS

Due to the presence of suitable habitat for WBO, including grassland and scrub habitat with low-growing vegetation, focused presence/absence surveys were determined necessary. Surveys in 2011 were performed for the proposed Salt Creek Substation according to the protocol established by the California Burrowing Owl Consortium (CBOC) (1993) and accepted by CDFW. In accordance with the protocol, a habitat assessment (Phase I survey) for WBO was conducted within the proposed Salt Creek Substation and in the surrounding 500-foot buffer. Following the Phase I survey, a focused burrow survey (Phase II survey) and WBO survey (Phase III survey) were conducted in suitable habitat within the proposed Salt Creek Substation and surrounding 500-foot buffer.

AECOM biologists conducted Phase II WBO surveys between May 3 and May 31, 2011. Surveys were conducted by walking transects spaced no greater than 100 feet apart through WBO suitable habitat within the proposed Salt Creek Substation and a 500-foot buffer. Biologists conducting the Phase II survey recorded and mapped potentially suitable burrows (based on burrow dimensions and characteristics); they also recorded and mapped WBO observations, presence and types of WBO sign (e.g., whitewash, pellets, feathers) observed, and

active or potentially active WBO burrows (based on the presence and quality of sign at suitable burrows).

AECOM biologists conducted Phase III breeding surveys between June 10 and July 12, 2011. Surveys were conducted from as few vantage points as necessary to achieve full visual coverage of all suitable burrows and habitat. A vehicle was used as a blind when possible to minimize disturbance to any owls that may have been present. Because suitable burrows were found, but no owls were observed during the breeding season, winter season surveys were required according to CBOC guidelines. AECOM biologists conducted Phase III winter surveys between December 2 and December 8, 2011. Surveys followed the same protocol as Phase III breeding season surveys.

Surveys in 2012 were performed for the transmission corridor, staging yards, and a 500-foot survey buffer around these Proposed Project features. An initial habitat assessment of suitable WBO habitat was conducted on March 16, 2012. The first survey was conducted on April 21 and 28, 2012. The second and third surveys were conducted on May 8 and June 7, 2012, and the fourth was conducted on July 4 and 5, 2012.

CDFW released updated survey guidelines on March 7, 2012 (CDFG 2012b). The updated survey protocols were generally followed with two exceptions. Per CDFW 2012 requirements, where suitable WBO habitat exists, WBO breeding season surveys should consist of four survey visits as follows:

- One survey visit between February 1 and April 15
- Two survey visits, at least 3 weeks apart, between April 15 and July 15
- One survey visit after June 15 but prior to the end of the breeding season (August 31), at least 3 weeks after previous survey

All survey dates except the first survey were conducted according to current CDFW (2012) guidelines and all surveys were at least 3 weeks apart. The first survey was conducted 6 days after the suggested latest start date (April 21 vs. April 15) because the work was, originally, scheduled to comply with the CBOC (1993) guidelines, which said “the nesting season survey should be conducted between April 15 and July 15 (the peak of the breeding season).” When the new CDFW (2012) guidelines were distributed, a scheduling conflict prevented the first survey from technically complying with the requirement to conduct the first survey by April 15. Additionally, the CDFW survey guidelines suggest that surveys between morning civil twilight and 10:00 a.m. and 2 hours before sunset until evening civil twilight provide the highest detection probabilities; however, due to mild daily temperatures surveys 1 through 3 extended

beyond 10:00 a.m. Survey 4 was conducted during the time of day suggested by the CDFW (2012) guidelines. During all four surveys, biologists recorded and mapped potentially suitable burrows (based on burrow dimensions and characteristics); they also recorded and mapped WBO observations, presence, and types of WBO sign (e.g., whitewash, pellets, feathers) observed, and active or potentially active WBO burrows (based on the presence and quality of sign at suitable burrows).

Detailed methods and results of the focused WBO surveys are presented in the *Western Burrowing Owl Presence/Absence Surveys for the Proposed Salt Creek Substation for SDG&E* (AECOM 2011e) and the *Western Burrowing Owl Presence/Absence Surveys for the Transmission Line Installation Project, Chula Vista, California* (AECOM 2012e) included as Appendix I.

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CHAPTER 3.0

EXISTING CONDITIONS

3.1 PHYSICAL SETTING

The BSA is located on flat to minor slopes along previously disturbed areas near the Existing Substation and within an existing SDG&E ROW. The transmission corridor is located within urban developed, landscape/ornamental, disturbed, nonnative grassland and coastal sage scrub habitats and cover types. The elevation for the transmission corridor and staging yards ranges from approximately 300 feet above mean sea level (AMSL) at the northern end of the Transmission Corridor at the Existing Substation to 540 feet amsl at the southern end of the Transmission Corridor along Hunte Parkway. The proposed Salt Creek Substation consists primarily of a flat mesa top, with a gentle slope across the site from north (510 feet AMSL) to south (430 feet AMSL). Manufactured slopes rise up to Hunte Parkway at 535 feet AMSL, which lies along the northern perimeter of the substation. The site is composed primarily of nonnative grassland, Diegan coastal sage scrub, and ornamental/landscaped cover types. Commercial and residential developments are located within and adjacent to the BSA. Other development features present include major transportation corridors (SR-125), asphalt and compacted earthen roads, trails, fencing, ephemeral and intermittent stream features, culverts, and swales.

3.2 VEGETATION COMMUNITIES

Vegetation communities are assemblages of plant species that usually coexist in the same area. These vegetation communities also provide habitat for wildlife species. The classification of vegetation communities is based upon the life form of the dominant species within that community and the associated flora. Descriptions of these vegetation communities and other cover types are provided in the following discussion. Three generalized categories are being used to characterize and discuss the land cover types observed during vegetation community mapping: riparian and wetlands, uplands, and other cover types. Vegetation classification systems used in this BTR follow those of Holland (1986), as modified by Oberbauer (2008).

Vegetation communities and other land cover types classified as “sensitive” within this report were determined by applying the following regulatory context. Guidance for determining sensitive vegetation communities is provided by the resource agencies, including CDFW, and CNPS, as well as supporting documentation such as the CNDDDB. These federal, state, and local agencies and

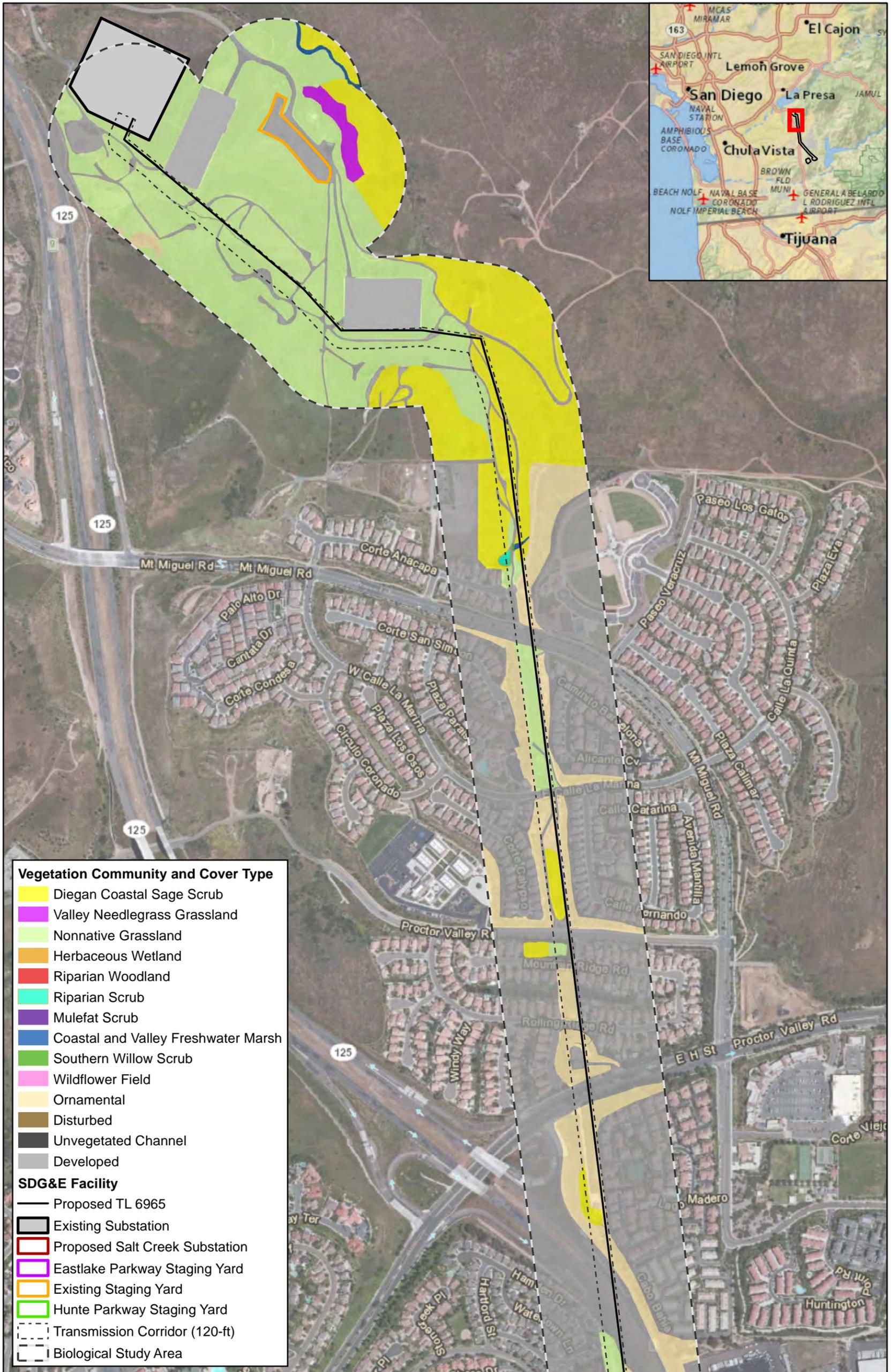
related publications are typically in concurrence on the classification of sensitive vegetation communities and other land cover types. For example, vegetation communities or other cover types that are considered potential U.S. and state jurisdictional areas typically result in the vegetation community or nonvegetated area being considered sensitive. For this Proposed Project, these waters are regulated by Sections 401 and 404 of the CWA, Sections 1600 *et seq.* of the CFGC, and the Porter-Cologne Water Quality Control Act. Additionally, the occurrence of suitable habitat for special status plant and animal species also raises the sensitivity of a vegetation community. Biologically, the vegetation communities that provide the highest habitat values within the BSA are the structurally diverse riparian communities and the native upland communities.

Fourteen vegetation communities and other cover types were identified within the transmission corridor, staging yards, Salt Creek Substation, and 500-foot survey buffer, nine of which are native vegetation communities: coastal and valley freshwater marsh, herbaceous wetland, mulefat scrub, riparian scrub, riparian woodland, southern willow scrub, Diegan coastal sage scrub, valley needlegrass grassland, and wildflower field (Figures 3-1a through 3-1c). Table 3-1 provides a summary of the acreages of vegetation communities and other cover types within the BSA.

Table 3-1
Vegetation Communities and Other Cover Types within the BSA¹

Vegetation Communities and Other Cover Types	Proposed Salt Creek Substation (Acres)	Transmission Corridor (Acres)	Staging Yards (Acres)	500-foot Buffer (Acres)	Total (Acres)
<i>Riparian and Wetland</i>					
Coastal and Valley Freshwater Marsh	-	0.04	-	0.41	0.45
Herbaceous Wetland	-	0.16	-	0.03	0.19
Mulefat Scrub	-	0.21	-	-	0.21
Riparian Scrub	-	0.17	-	0.98	1.15
Riparian Woodland	-	0.23	-	0.16	0.39
Southern Willow Scrub	-	0.87	-	3.50	4.37
Unvegetated Channel	0.13	0.41	-	0.10	0.64
<i>Total Riparian and Wetland</i>	<i>0.13</i>	<i>2.09</i>	<i>0.00</i>	<i>5.18</i>	<i>7.40</i>
<i>Upland</i>					
Diegan Coastal Sage Scrub	1.14	4.14	-	49.23	54.51
Nonnative Grassland	5.26	39.45	23.40	127.02	195.13
Valley Needlegrass Grassland	-	-	-	1.70	1.70
Wildflower Field	1.59	-	-	-	1.59
<i>Total Upland</i>	<i>7.99</i>	<i>43.59</i>	<i>23.40</i>	<i>177.95</i>	<i>252.93</i>
<i>Other Cover Types</i>					
Disturbed Habitat	2.42	1.23	0.55	1.47	3.89
Landscape/Ornamental	-	5.67	0.05	51.91	57.63
Urban/Developed	1.10	20.88	2.90	422.22	445.98
<i>Total Other Cover Types</i>	<i>3.52</i>	<i>27.78</i>	<i>3.50</i>	<i>475.60</i>	<i>507.50</i>
Total	11.64	73.46	26.90	663.24	775.24

¹Values may not sum due to rounding after summation.



Source: AECOM, GeomorphIS LLC, SDG&E, 2013; Esri Basemaps, 2013



0 325 650 Feet



Scale: 1:7,800 1 inch = 650 feet

Figure 3-1a
Vegetation Communities and Cover Types within Biological Study Area

SDG&E is providing this map with the understanding that the map is not survey grade.

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; Esri Basemaps, 2013



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Scale: 1:7,800 1 inch = 650 feet

Figure 3-1b
Vegetation Communities and Cover Types within Biological Study Area

SDG&E is providing this map with the understanding that the map is not survey grade.

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; Esri Basemaps, 2013



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Scale: 1:7,800 1 inch = 650 feet

Figure 3-1c
Vegetation Communities and Cover Types within Biological Study Area

SDG&E is providing this map with the understanding that the map is not survey grade.

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3.2.1 Riparian and Wetland

3.2.1.1 Coastal and Valley Freshwater Marsh

A thin band of coastal and valley freshwater marsh is located within a small tributary in the far northern portion of the BSA, just northeast of the Existing Staging Yard. Another small area of coastal and valley freshwater marsh is located in the extreme southern portion of the BSA, south of the Salt Creek Substation. These areas consist of approximately 0.45 acre and are permanently inundated by freshwater, which flows from small ponds located outside of the BSA. These communities consist of monotypic stands of southern cattail (*Typha domingensis*).

3.2.1.2 Mulefat Scrub

A small area of mulefat scrub of approximately 0.21 acre occurs within a flood control channel in the central portion of the BSA, east of SR-125 and west of St. Germain Road. This early seral community is strongly dominated by mulefat (*Baccharis salicifolia*), along with the occasional arroyo willow (*Salix lasiolepis*) and invasive tree tobacco (*Nicotiana glauca*).

3.2.1.3 Herbaceous Wetland

Herbaceous wetland occurs within mesic depressional areas. Often, these wetlands may only occur during wetter than average years and are usually found in swale areas or adjacent to drainages. These seasonal wetlands support mainly annual species including rabbitfoot grass (*Polypogon monspeliensis*), rye grass (*Festuca perennis*), loosestrife (*Lythrum hyssopifolia*), scarlet pimpernel, (*Anagallis arvensis*), and curly dock (*Rumex crispus*). These areas do not support species (*Typha*, *Scirpus*, and *Juncus*) typically associated with coastal and valley freshwater marsh.

Within the BSA approximately 0.19 acre of herbaceous wetland occurs along a channel/drainage feature in a larger area of nonnative grassland, south of Eastlake Parkway and west of SR-125.

3.2.1.4 Riparian Scrub

Riparian scrub occurs in the far northern and southern portions of the BSA and consists of approximately 1.15 acres. In the north, this community is part of a flood control channel and consists of mostly nonnative species, including myoporum (*Myoporum* sp.), Mexican fan palm (*Washingtonia robusta*), and invasive tree tobacco.

In the south, a tributary drainage connecting downstream to Salt Creek flows along the southern boundary of the BSA. This drainage is occupied by arroyo willow with pockets of freshwater marsh occurring within the willow scrub habitat. Other characteristic species found within this community include the invasive saltcedar (*Tamarix ramosissima*), mulefat, red willow (*Salix laevigata*), and southern cattail.

3.2.1.5 Riparian Woodland

Riparian woodland is a moderately dense woodland dominated by small trees or shrubs. This community predominantly occurs along major river systems, but also occasionally occurs along smaller tributaries and drainage features. Within the BSA approximately 0.39 acre of riparian woodland occurs along a small channel/drainage feature south of Eastlake Parkway and west of SR-125. Characteristic species include arroyo willow, black elderberry (*Sambucus nigra*), tree tobacco, and broom baccharis (*Baccharis sarothroides*).

3.2.1.6 Southern Willow Scrub

Southern willow scrub occurs in two separate stands in the central and southern portions of the BSA. In the central portion of the BSA, east of SR-125 and south of Eastlake Drive, this community occurs within a flood control channel. Dominant plants include arroyo willow, mulefat, and broom baccharis.

In the southern portion of the BSA, a tributary drainage connecting downstream to Salt Creek flows along the southern edge, just outside of the Salt Creek Substation footprint. This drainage is occupied by southern willow scrub dominated by arroyo willow with pockets of freshwater marsh occurring within the willow scrub habitat. Other characteristic species found within this community on-site include salt cedar, mulefat, red willow (*Salix laevigata*), and southern cattail. Approximately 4.37 acres of area consisting of southern willow scrub occurs within the BSA.

3.2.1.7 Unvegetated Channel

Approximately 0.64 acre of area consisting of earthen or concrete channels occurs throughout the BSA. These features consist of a bed and bank and are considered unvegetated (less than 2 percent cover of herbaceous species and less than 10 percent cover by tree or shrub species).

3.2.2 Upland Vegetation Communities

3.2.2.1 Diegan Coastal Sage Scrub

Diegan coastal sage scrub is found mostly in the far northern and southern portions of the BSA, with three small, isolated areas in the central portion of the BSA. This community consists of approximately 54.51 acres and is dominated by California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), and San Diego sunflower (*Bahiopsis laciniata*). Other characteristic species of coastal sage scrub found within the survey area include lemonade berry (*Rhus integrifolia*), deerweed (*Acmispon glaber*), and wild cucumber (*Marah macrocarpa*).

3.2.2.2 Nonnative Grassland

Approximately 195.13 acres of nonnative grassland is found on disturbed soils throughout the BSA. Dominant species include wild oats (*Avena* spp.) and ripgut brome (*Bromus diandrus*). Numerous native and nonnative species occur in association with this vegetation community, including invasive yellowstar thistle (*Centaurea solstitialis*) and Russian thistle (*Salsola tragus*). Large areas of nonnative grassland are mowed and maintained within the central portion of the BSA.

3.2.2.3 Valley Needlegrass Grassland

Valley needlegrass grassland, designated as rare by the CNDDDB, occurs on fine-textured clay soil just east of the Existing Substation. This grassland consists of approximately 1.70 acres and is dominated by perennial, tussock-forming purple needlegrass (*Stipa pulchra*). Many native perennial and annual herbs are present such as checker-mallow (*Sidalcea malviflora*), onion (*Allium haematochiton*), blue-eyed grass (*Sisyrinchium bellum*), blue dicks (*Dichelostemma capitata*), California poppy (*Eschscholzia californica*), and goldfields (*Lasthenia californica*).

3.2.2.4 Wildflower Field

Wildflower field occurs on heavy clay soils within the central mesa-top in the far southern portion of the BSA, south of Hunte Parkway. Clay soils in this region often support clay endemic plant species, including special status species. The wildflower field on-site consists of approximately 1.59 acres and is dominated by a special status clay endemic plant species, Palmer's grapplinghook (*Harpagonella palmeri*). Other associated plant species include

storksbill (*Erodium botrys*), blue-eyed grass, blue dicks, purple needlegrass, and foothill needlegrass (*Stipa lepida*).

3.2.3 Other Cover Types

3.2.3.1 Disturbed Habitat

Disturbed habitat is common throughout the BSA and consists of approximately 6.10 acres. These areas occur primarily along roadsides in the transmission line corridor. This cover type is generally dominated by nonnative grassland and invasive species, interspersed with varying amounts of bare ground.

The cut banks or manufactured slopes associated with Hunte Parkway are maintained with an ornamental ground cover of African daisy (*Gazania linearis*) with the nonnative weed species sweet clover (*Melilotus indicus*) and Russian thistle co-dominating. This land cover type contains about 20 percent bare ground.

3.2.3.2 Landscape/Ornamental

Areas of ornamental/landscape plantings occur throughout the BSA and consist of approximately 57.63 acres. These areas include lawns, parks, and freeway and residential roadsides and medians. Common species in these areas include African daisy, eucalyptus (*Eucalyptus* spp.), myoporum, African fountain grass (*Pennisetum setaceum*), California bay (*Umbellularia californica*), and invasive Peruvian pepper tree (*Schinus molle*). Ornamental plantings of native sage scrub species, such as California sage brush and lemonade berry, were also observed.

3.2.3.3 Urban/Developed

This category consists of approximately 451.18 acres and includes areas of paved roads, parking lots, and buildings, such as the residential housing and commercial development found in the BSA. It is not considered a vegetation community and typically supports no or very few biological resources.

3.3 JURISDICTIONAL WATERS AND WETLANDS

As presented in Table 3-2, a total of 0.81 acre of potential jurisdictional waters was identified during jurisdictional reconnaissance-level field assessments conducted within the proposed Salt Creek Substation, Transmission Corridor, and staging yards. A total of 0.77 acre of “waters of the U.S.” and state and 0.03 acre of potentially jurisdictional waters exclusively of the state were mapped. The location of jurisdictional features identified during the field assessment are provided in Figures 3-2a through 3-2l.

Based on the results of the reconnaissance-level field assessment and evaluation of watershed and hydrological spatial data, it was determined that all aquatic features identified as potential jurisdictional “waters of the U.S.” have the following features:

- possess physical characteristics that may meet the definition of both wetland and non-wetland “waters of the U.S.” (33 CFR 328.3), and
- may possess a hydrologic or significant nexus connection with a traditional navigable water (TNW).²

The feature identified as coastal and freshwater marsh, north of the Existing Staging yard, exists as a portion of Wild Man’s Canyon, which connects to Sweetwater River, approximately 2.5 miles to the west of the staging yard. Other features in the northern portion of the transmission corridor generally occur in or adjacent to areas previously disturbed during substation or residential development (Figures 3-2a through 3-2d).

The drainage feature mapped between Eastlake Drive and Otay Lakes Road flows south into Telegraph Creek (Figures 3-2h and 3-2i). It then continues west and exits into the Pacific Ocean near the South Bay Power plant in Chula Vista, via a series of underground and open concrete channels. A distinct water channel was observed throughout the majority of this drainage feature. The remainder of the water flow appears to be carried sub-surface or by sheet flow. These sheet flow areas can be considered a discontinuous ephemeral stream. The riparian scrub habitat described as “CDFW jurisdictional only,” is located outside the ordinary high water mark (OHWM) and did not meet the hydrophytic vegetation criteria needed to be considered wetland.

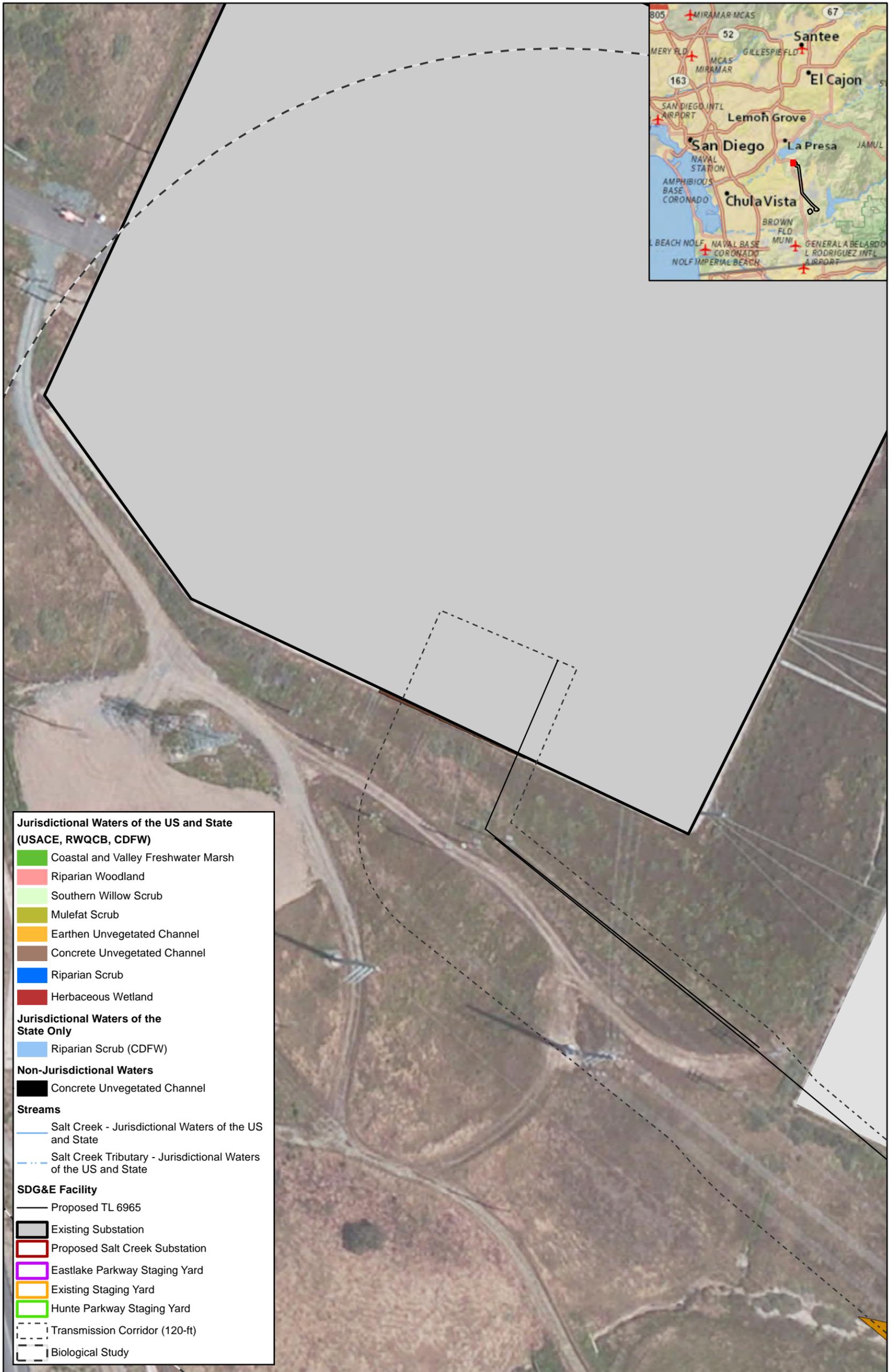
² The survey area traverses the Lower Sweetwater River (10-digit Hydrologic Unit Code [HUC] 1807030409), Otay River (10-digit HUC 1807030410), and San Diego Bay (10-digit HUC 1807030412) coastal watersheds. The major riverine features within these watersheds form a direct hydrological connection with San Diego Bay and the Pacific Ocean (a TNW).

**Table 3-2
Potential Jurisdictional Status of Aquatic Features Occurring within the Proposed Project Area**

Type of Jurisdictional Waters ¹	Vegetation Community/ Other Cover Type	Regulatory Authority	Proposed Salt Creek Substation (Acres / Linear Feet) ²	Transmission Corridor (Acres / Linear Feet) ²	Staging Yards (Acres / Linear Feet) ²	Total (Acres / Linear Feet) ²
Jurisdictional “Waters of the U.S.” and State						
Wetland	Coastal and Valley Freshwater Marsh	USACE, RWQCB, CDFW	-	0.041	-	0.041
Wetland	Herbaceous Wetland	USACE, RWQCB, CDFW	-	0.162	-	0.162
Wetland	Riparian Woodland	USACE, RWQCB, CDFW	-	0.229	-	0.229
Wetland	Southern Willow Scrub	USACE, RWQCB, CDFW	-	0.019	-	0.019
Wetland	Riparian Scrub	USACE, RWQCB, CDFW	-	0.060	-	0.060
Other Waters	Concrete Unvegetated Channel	USACE, RWQCB, CDFW	-	0.090 / 971	-	0.090 / 971
Other Waters	Earthen Unvegetated Channel	USACE, RWQCB, CDFW	-	0.173 / 1,118	-	0.173 / 1,118
Subtotal Jurisdictional “Waters of the U.S.” and State			0.000	0.773 / 2,089	0.000	0.773 / 2,089
Jurisdictional Waters of the State						
Wetland	Riparian Scrub	CDFW	-	0.032	-	0.032
Subtotal Jurisdictional Waters of the State			0.000	0.032	0.000	0.032
Total Jurisdictional Waters			0.000	0.805 / 2,089	0.000	0.805 / 2,089

¹ All aquatic features identified as “other waters” were observed to possess an ordinary high water mark (defined at 33 CFR Section 328.3[e]) during the field assessment.

² Linear feet distances are only provided for linear aquatic features.



Source: AECOM, GeomorphIS LLC, SDG&E, 2013; RECON, 2012; Esri Basemaps, 2013



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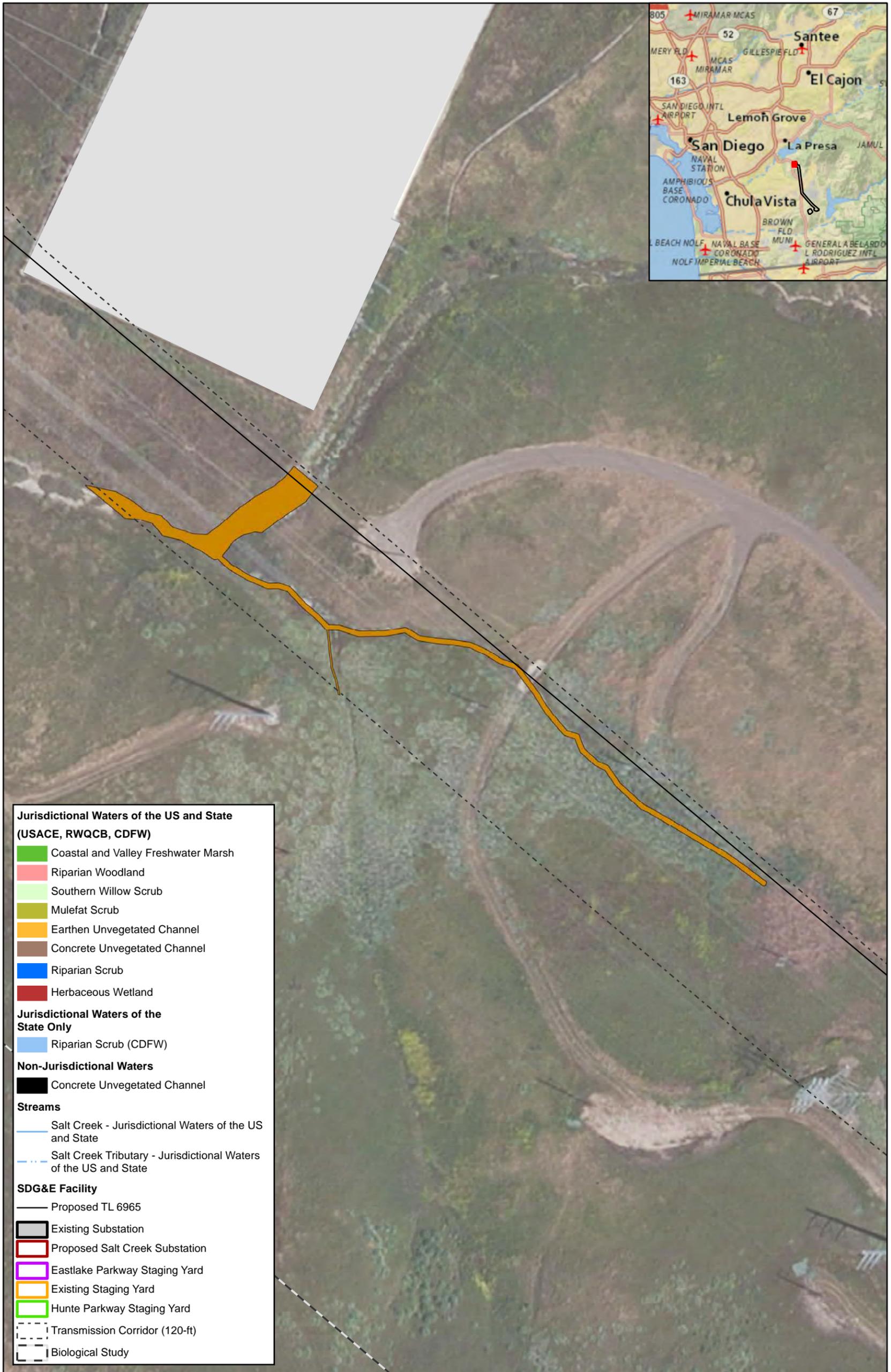


Scale: 1:960 1 inch = 80 feet

Figure 3-2a
Potential Jurisdictional Waters within the Proposed Project

SDG&E is providing this map with the understanding that the map is not survey grade.

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; RECON, 2012; Esri Basemaps, 2013



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Scale: 1:960 1 inch = 80 feet

Figure 3-2b
Potential Jurisdictional Waters within the Proposed Project

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; RECON, 2012; Esri Basemaps, 2013



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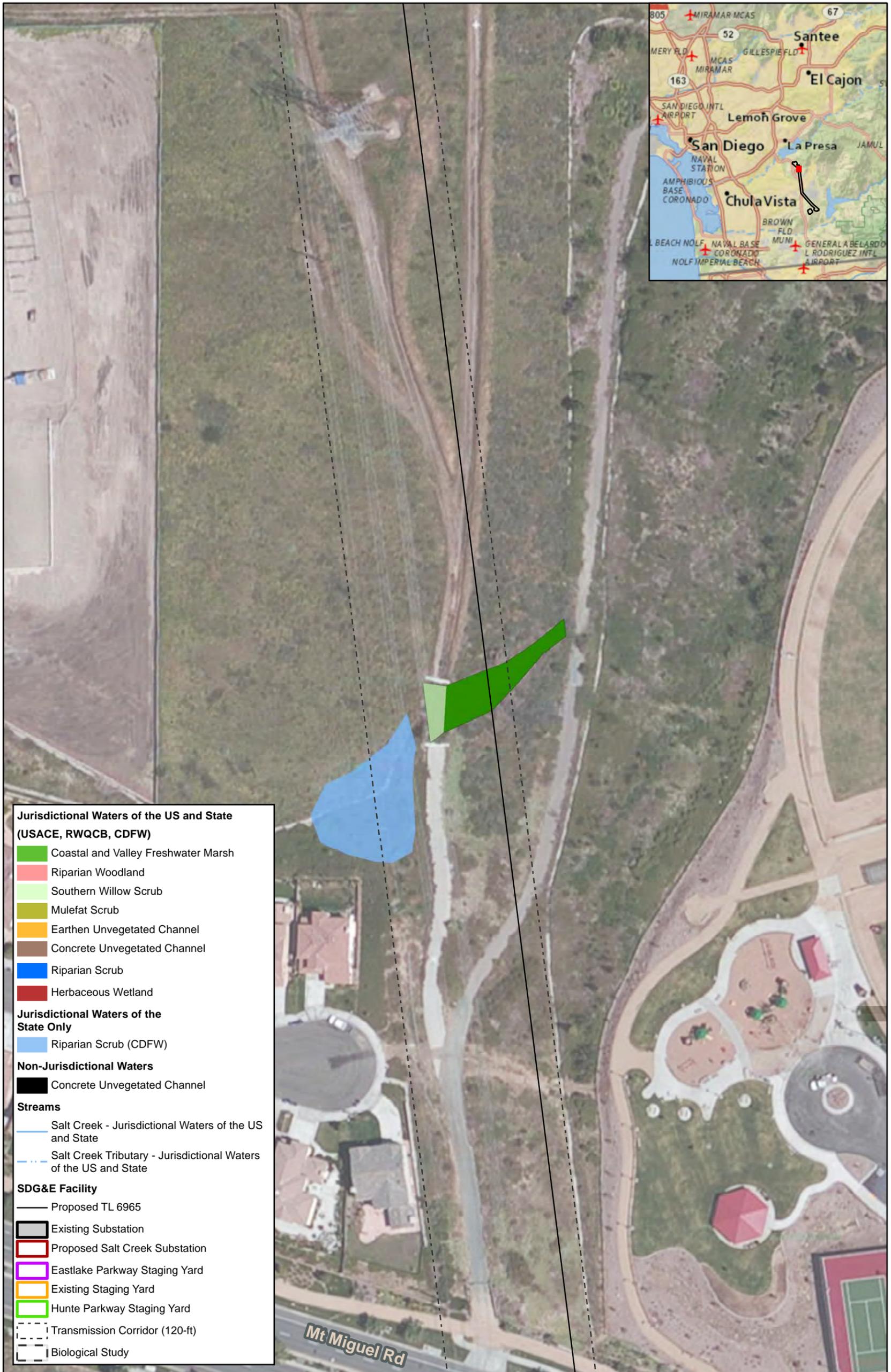


Scale: 1:960 1 inch = 80 feet

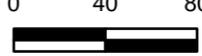
Figure 3-2c
Potential Jurisdictional Waters within the Proposed Project

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Scale: 1:960 1 inch = 80 feet

Figure 3-2d
Potential Jurisdictional Waters within the Proposed Project

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; RECON, 2012; Esri Basemaps, 2013



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Scale: 1:960 1 inch = 80 feet

Figure 3-2e
Potential Jurisdictional Waters within the Proposed Project

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; RECON, 2012; Esri Basemaps, 2013



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Scale: 1:960 1 inch = 80 feet

Figure 3-2f
Potential Jurisdictional Waters within the Proposed Project

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; RECON, 2012; Esri Basemaps, 2013



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Scale: 1:960 1 inch = 80 feet

Figure 3-2g
Potential Jurisdictional Waters within the Proposed Project

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; RECON, 2012; Esri Basemaps, 2013



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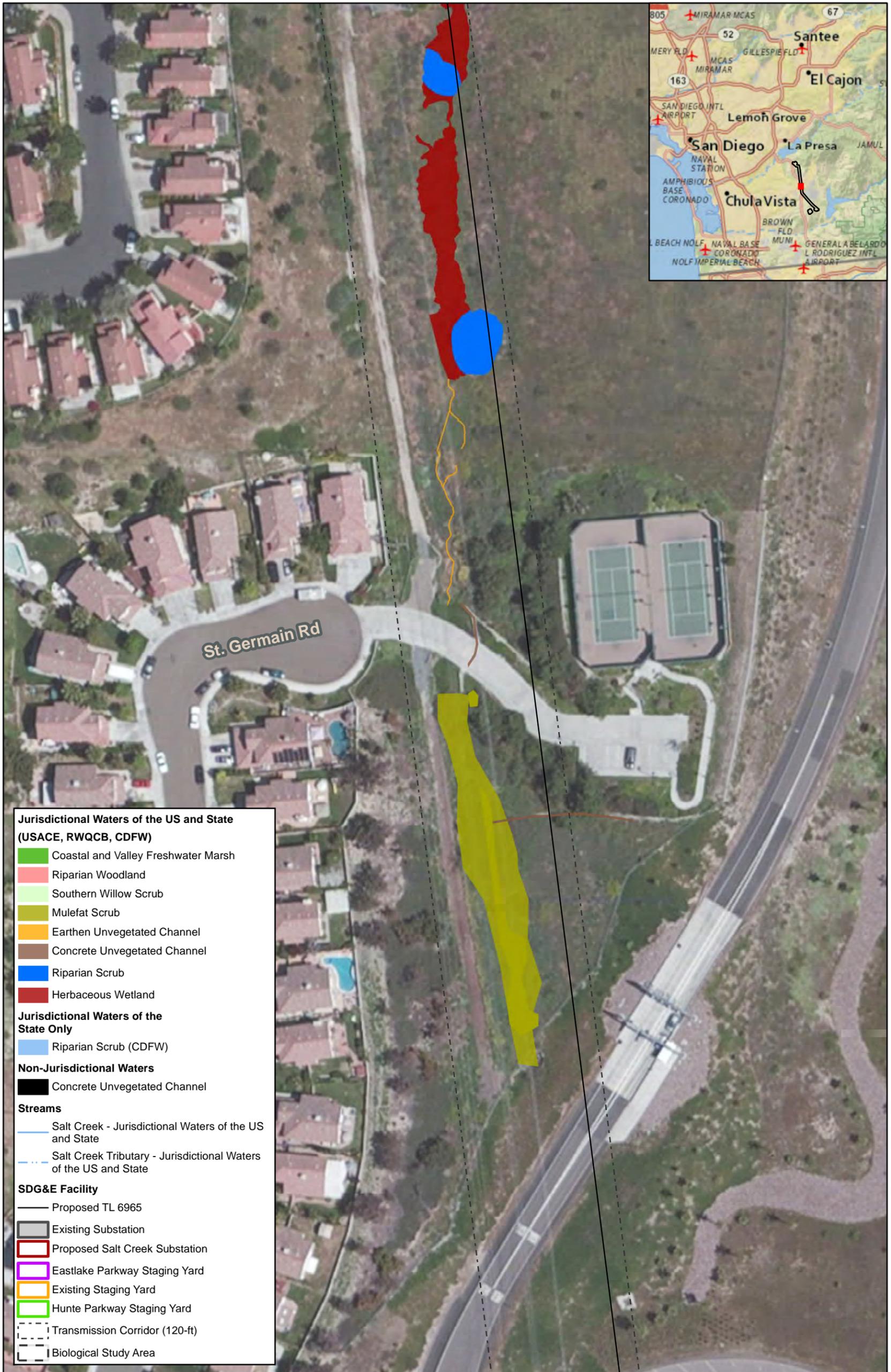


Scale: 1:960 1 inch = 80 feet

Figure 3-2h
Potential Jurisdictional Waters within the Proposed Project

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; RECON, 2012; Esri Basemaps, 2013



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Scale: 1:960 1 inch = 80 feet

Figure 3-2i
Potential Jurisdictional Waters within the Proposed Project

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; RECON, 2012; Esri Basemaps, 2013



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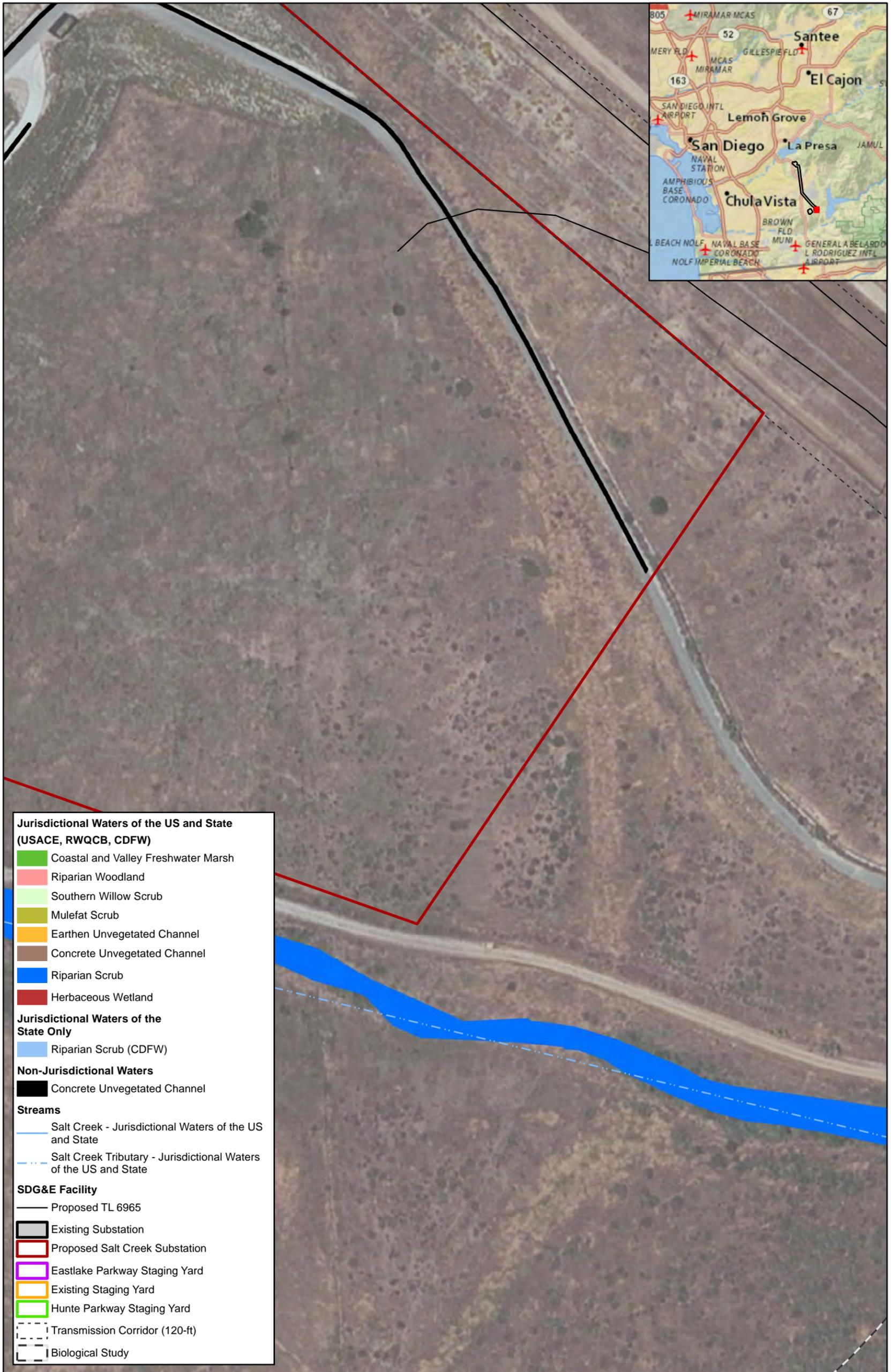


Scale: 1:960 1 inch = 80 feet

Figure 3-2j
Potential Jurisdictional Waters within the Proposed Project

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; RECON, 2012; Esri Basemaps, 2013



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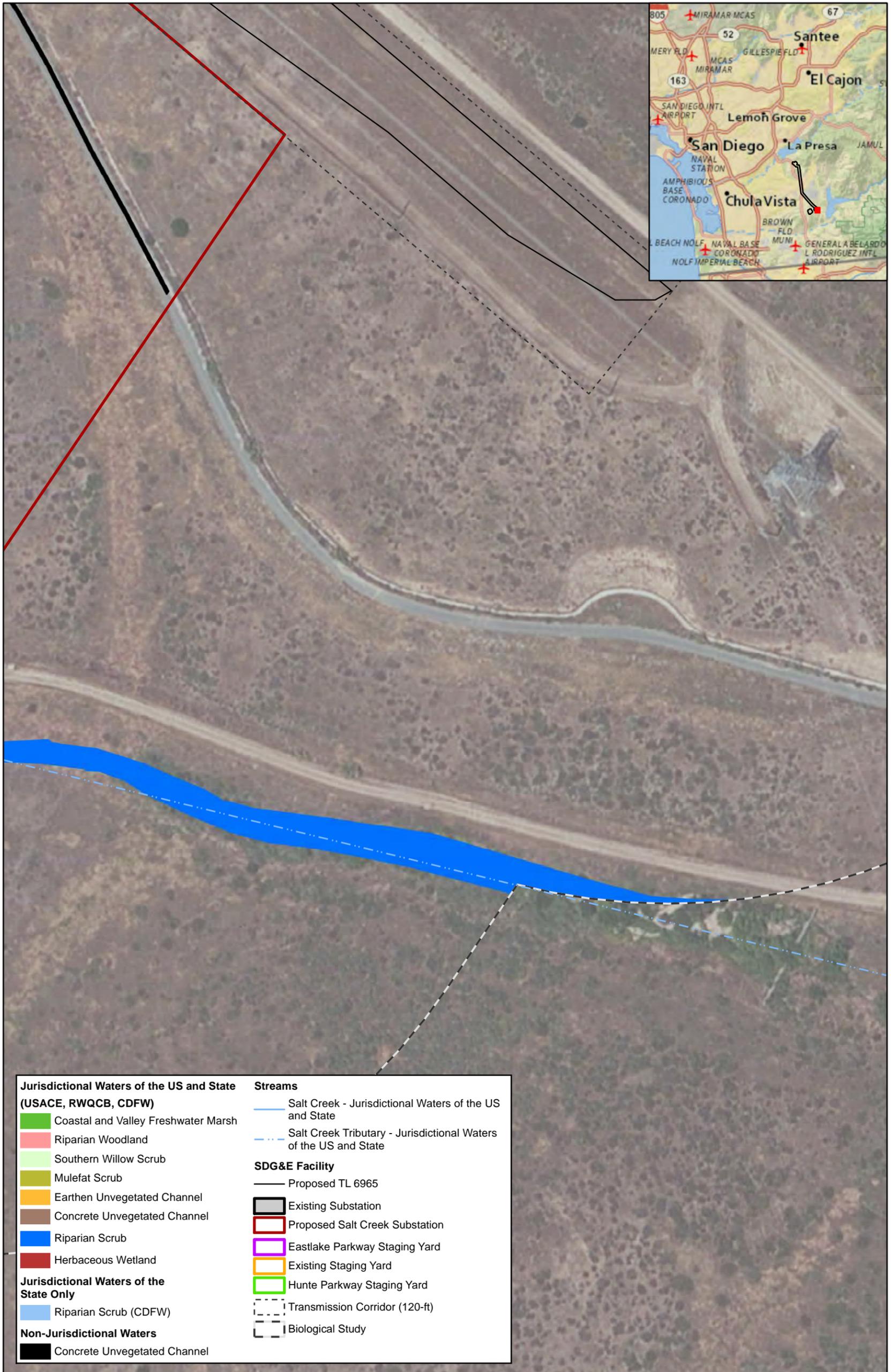


Scale: 1:960 1 inch = 80 feet

Figure 3-2k
Potential Jurisdictional Waters within the Proposed Project

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; RECON, 2012; Esri Basemaps, 2013



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Scale: 1:960 1 inch = 80 feet

Figure 3-21
Potential Jurisdictional Waters within the Proposed Project

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Features identified as unvegetated concrete channels that occur within the proposed Salt Creek Substation were constructed wholly in uplands and collect stormwater (Figures 3-2j through 3-2l). These constructed drainage features, along previously disturbed and contoured areas on-site, appear to have been installed for erosion control and stormwater conveyance purposes and are non-jurisdictional features (both state and federal).

3.4 FLORA

This section discusses plant species detected within the BSA or with potential to occur within the BSA. Approximately 248 plant species (61 percent native, 39 percent nonnative) were observed within the BSA. A comprehensive list of all plant species, special status and nonsensitive, that were detected during the rare plant and vegetation mapping surveys within the BSA are included in Appendix J.

As presented in Chapter 2, prior to conducting field surveys for special status plant species, a search of the CNDDDB and CNPS databases for the Jamul Mountains and Otay Mesa quadrangle and surrounding nine quadrangles was conducted. From this database search, 106 special status plant species were identified as occurring in the vicinity of the BSA. Special status plant species were evaluated for potential to occur in the BSA, based on habitats present and the locations of known recent occurrences. The level of probability for occurrence of a given species within the BSA is determined based on the following criteria.

Observed/Expected: Species detected during surveys or with known recent (i.e., last 25 years) recorded occurrences/populations on surrounding areas, and for which suitable habitat occurs within the survey area. Suitable habitat includes all necessary habitat elements to support the species (habitat type, soils, cover, food resources, etc.).

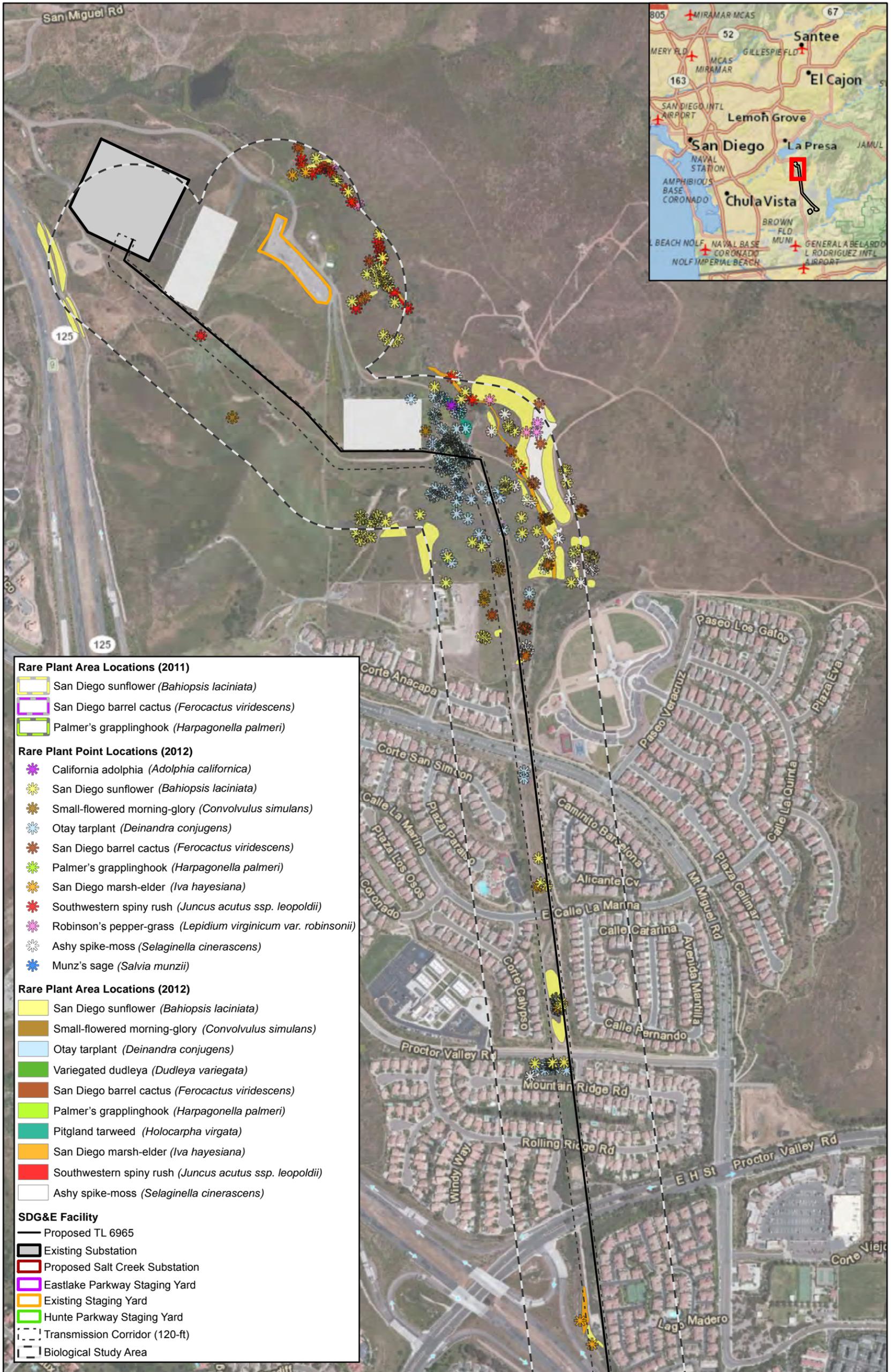
High: Species with known recent (i.e., last 25 years) recorded occurrences/ populations nearby (i.e., within the same USGS quadrangle map or an adjacent quadrangle map) and for which highly suitable habitat occurs within the survey area. Suitable habitat includes all necessary habitat elements to support the species (habitat type, soils, cover, food resources, etc.).

Moderate: Species with known recent (i.e., last 25 years) recorded occurrences/populations nearby (i.e., within the same USGS quadrangle map or an adjacent quadrangle map); however, suitable habitat within the survey area is moderately disturbed. Suitable habitat for the species could be fragmented or small/limited in size. Additionally, a “moderate” assessment would be made for species for which suitable habitat occurs within the survey area, but the survey area is near the edge of the species’ range or there are no reported occurrences/populations from surveys of nearby areas.

Low: Species with few known recent (i.e., last 25 years) recorded occurrences/populations nearby (i.e., within the same USGS quadrangle map or an adjacent quadrangle map), but suitable habitat within the survey area is highly disturbed or extremely limited in area. Also, species with known historic (i.e., more than 25 years) recorded occurrences/populations from the site or nearby; however, the suitable habitat on-site has been severely reduced or disturbed since past documentation. Additionally, species for which potentially suitable habitat is present within the survey area, but the reported extant range is far outside the survey area. For plant species only, a low potential would be assigned to annual or perennial species that would have been detectable during a focused survey in the appropriate blooming period but were not found; however, small populations or scattered individuals are still considered to have a low potential to occur.

Through comparing known occurrences with habitats present in the BSA, it was determined that 30 special status plant species known to occur within the region were expected to occur within the BSA or have low, moderate, or high potential to occur within the BSA (see Appendices B and E). Thirteen special status plant species were observed within the BSA (Table 3-3). An additional 17 special status plant species have low, moderate, or high potential to occur within the BSA, based on habitats present and the locations of known recent occurrences (Table 3-3). The locations of observed plant species are depicted in Figures 3-3a through 3-3d.

One federally and state-listed plant species, Otay tarplant (*Deinandra* [=*Hemizonia*] *conjugens*), was observed during rare plant surveys and is discussed in more detail below. Two species listed as CRPR 1B; four listed as CRPR 2; and six listed as CRPR 4 were also observed and are also discussed in more detail below.



Source: AECOM, GeomorphIS LLC, SDG&E, 2013; Esri Basemaps, 2013



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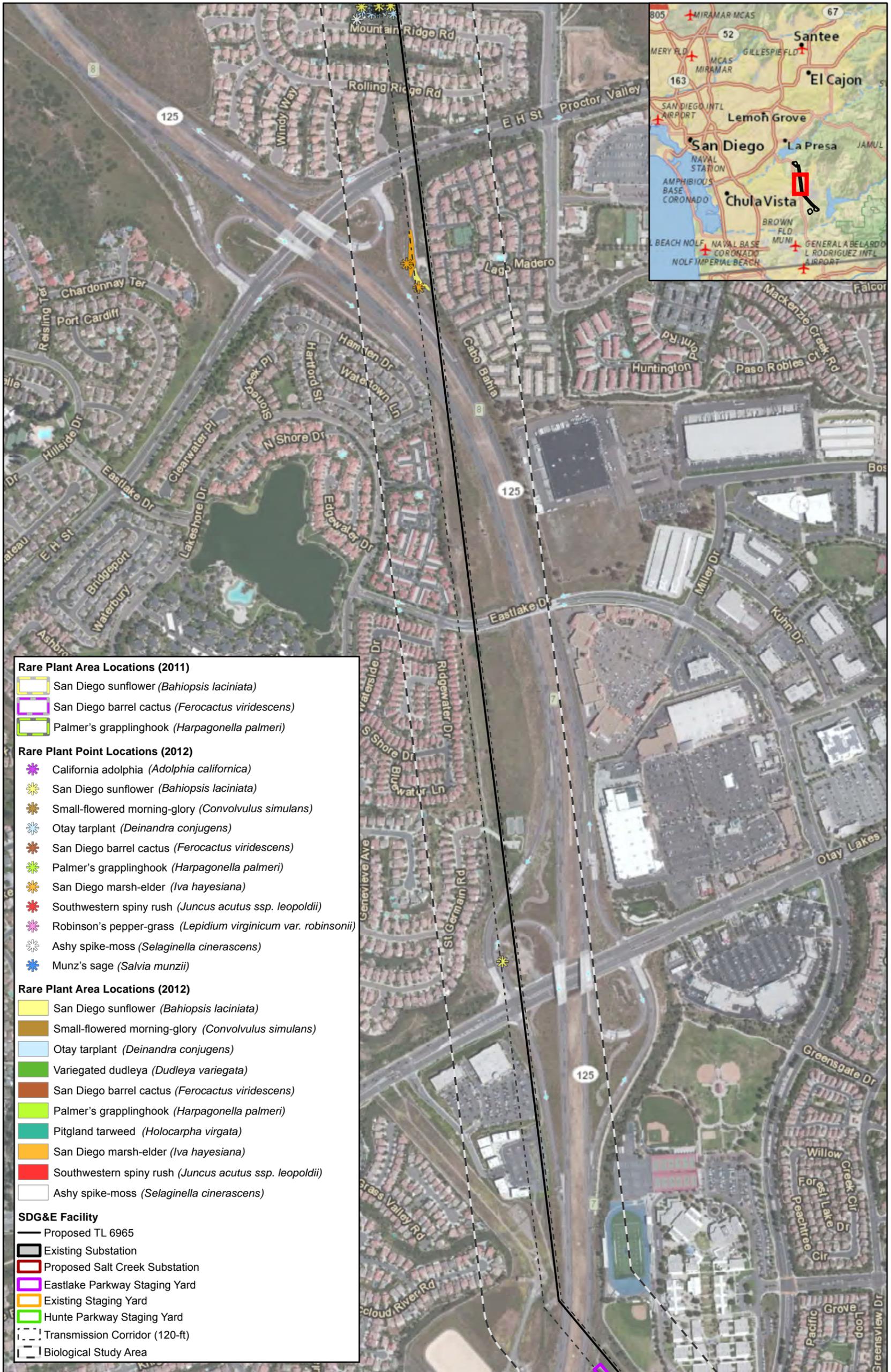


Scale: 1:7,800 1 inch = 650 feet

Figure 3-3a
Special Status Plant Species within Biological Study Area and Vicinity

SDG&E is providing this map with the understanding that the map is not survey grade.

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; Esri Basemaps, 2013



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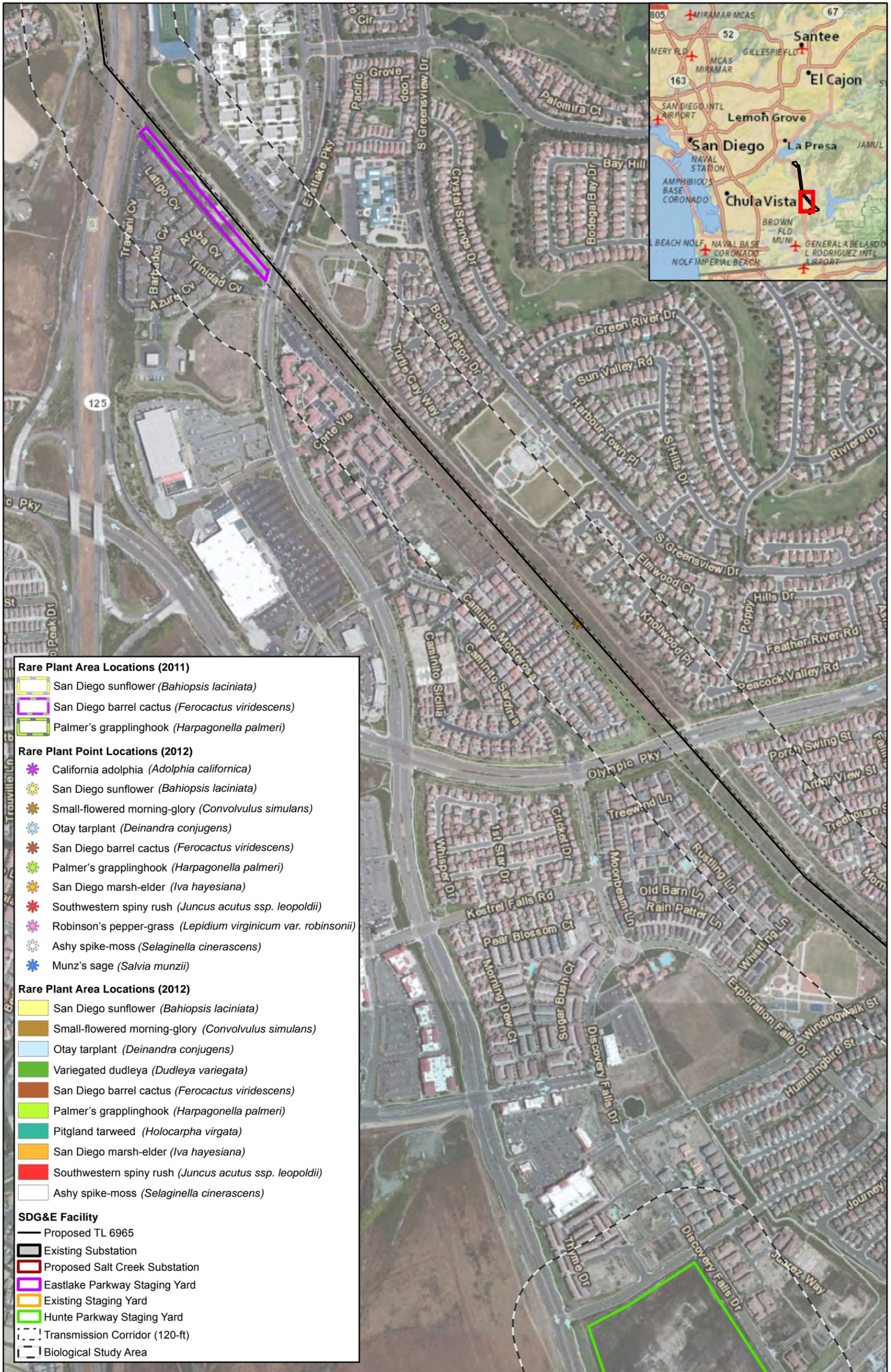


Scale: 1:7,800 1 inch = 650 feet

Figure 3-3b
Special Status Plant Species within Biological Study Area and Vicinity

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; Esri Basemaps, 2013



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Scale: 1:7,800 1 inch = 650 feet

Figure 3-3c
Special Status Plant Species within Biological Study Area and Vicinity

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; Esri Basemaps, 2013



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Scale: 1:7,800 1 inch = 650 feet

Figure 3-3d
Special Status Plant Species within Biological Study Area and Vicinity

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**Table 3-3
Special Status Plant Species Known or with Potential to Occur in the BSA**

Species	Status ¹	Primary Habitat Associations/ Life Form / Blooming Period	Potential to Occur / Comments	Substation	Transmission Corridor	Buffer
				Findings ²		
San Diego thorn-mint <i>Acanthomintha ilicifolia</i>	FT/SE - 1B.1 – NCCP NE	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; clay/annual herb/ April–June	Not observed on-site. Moderate potential to occur. If present on-site, this species would have been observed.	ND - M	ND - L	ND - M
California adolphia <i>Adolphia californica</i>	2.1	Chaparral, coastal scrub, valley and foothill grassland; clay/shrub/ December–May	Eleven individuals were observed within the BSA in coastal sage scrub in the northern portion of the BSA.	ND - L	ND - L	P
San Diego bur-sage <i>Ambrosia chenopodiifolia</i>	2.1	Coastal scrub/shrub/April–June	Not observed on-site. Low potential to occur. If present on-site, this species would have been observed.	ND - L	ND - L	ND - L
Singlewhorl burrobrush <i>Ambrosia monogyra</i>	2.2	Chaparral/shrub/sandy/August–November	Not observed on-site. Low potential to occur. If present on-site, this species would have been observed.	ND - L	ND - L	ND - L
San Diego ambrosia <i>Ambrosia pumila</i>	FE - 1B.1 – NCCP NE	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; often in disturbed areas/perennial herb/May–October	Not observed on-site. Low potential to occur. If present on-site, this species would have been observed.	ND - L	ND - L	ND - L
San Diego sagewort <i>Artemisia palmeri</i>	4.2	Chaparral, coastal scrub, riparian forest and scrub; sandy/shrub/May–September	Not observed on-site. Low potential to occur. If present on-site, this species would have been observed.	ND - L	ND - L	ND - L
Coulter’s saltbush <i>Atriplex coulteri</i>	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland; alkaline or clay/perennial herb/ March–October	Not observed on-site. Low potential to occur. If present on-site, this species would have been observed.	ND - L	ND - L	ND - L
South Coast saltscale <i>Atriplex pacifica</i>	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, playas/annual herb/ March–October	Not observed on-site. Low potential to occur. If present on-site, this species would have been observed.	ND - L	ND - L	ND - L

Species	Status ¹	Primary Habitat Associations/ Life Form / Blooming Period	Potential to Occur / Comments	Substation	Transmission Corridor	Buffer
				Findings ²		
San Diego County sunflower <i>Bahiopsis</i> [= <i>Viguiera</i>] <i>laciniata</i>	4.2	Chaparral, coastal scrub/ shrub/ February–June	Approximately 19,450 individuals were observed throughout the BSA in coastal sage scrub and grasslands.	P	P	P
San Diego goldenstar <i>Bloomeria</i> <i>clevelandii</i>	1B.1 - NCCP	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; clay/ bulbiferous herb/ May	Not observed on-site. Moderate potential to occur. If present on-site, this species would have been observed.	ND - M	ND - M	ND - M
Orcutt's brodiaea <i>Brodiaea</i> <i>orcuttii</i>	1B.1 - NCCP	Closed-cone conifer forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools; mesic, clay, sometimes serpentine/ bulbiferous herb/ May–July	Not observed on-site. Low potential to occur. If present on-site, this species would have been observed.	ND - L	ND - L	ND - L
Brewer's calandrinia <i>Calandrinia</i> <i>breweri</i>	4.2	Chaparral, coastal scrub, disturbed sites and burns/ annual herb/ March–June	Not observed on-site. Low potential to occur. If present on-site, this species would have been observed.	ND - L	ND - L	ND - L
Round-leaved filaree <i>California</i> <i>macrophylla</i>	1B.1	Cismontane woodland, valley and foothill grassland; clay/ annual herb/ March–May	Not observed on-site. Low potential to occur. If present on-site, this species would have been observed.	ND - L	ND - L	ND - L
Lewis's evening primrose <i>Camissoniopsis</i> <i>lewisii</i>	3	Coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland; sandy or clay/ annual herb/ March–June	Not observed on-site. Low potential to occur. If present on-site, this species would have been observed.	ND - L	ND - L	ND - L
Small-flowered morning-glory <i>Convolvulus</i> <i>simulans</i>	4.2	Chaparral (openings), coastal scrub, valley and foothill grassland; clay, serpentine seeps/ annual herb/ March– July	There were 178 individuals mapped within the BSA in grasslands on clay soils.	ND - L	P	P

Species	Status ¹	Primary Habitat Associations/ Life Form / Blooming Period	Potential to Occur / Comments	Substation	Transmission Corridor	Buffer
				Findings ²		
Otay tarplant <i>Deinandra</i> [= <i>Hemizonia</i>] <i>conjugens</i>	FT/ SE - 1B.1 - NCCP	Coastal scrub, valley and foothill grassland; clay/ annual herb/ May–June	There were 934 individuals mapped within the BSA in grasslands and in grassy openings in coastal sage scrub, on clay soils.	ND - M	P	P
Western dichondra <i>Dichondra</i> <i>occidentalis</i>	4.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/ rhizomatous herb/ March– May	Not observed on-site. Low potential to occur. If present on-site, this species would have been observed.	ND - L	ND - L	ND - L
Variegated dudleya <i>Dudleya variegata</i>	1B.2 - NCCP	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools/ perennial herb/ May–June	Sixty individuals were mapped in a grassy opening in coastal sage scrub, on the southern end of the BSA.	ND - M	ND - M	P
San Diego barrel cactus <i>Ferocactus</i> <i>viridescens</i>	2.1 - NCCP	Chaparral, coastal scrub, valley and foothill grassland, vernal pools/ shrub/ May–June	Approximately 140 plants were observed in coastal sage scrub, in both the northern and southern regions of the BSA.	P	P	P
Palmer's grapplinghook <i>Harpagonella</i> <i>palmeri</i>	4.2 - NCCP	Chaparral, coastal scrub, valley and foothill grassland; clay/ annual herb/ March–May	Approximately 1,065,000 individuals were observed in wildflower field, coastal sage scrub, and nonnative grassland, on heavy clay soils in the southern portion of the BSA.	P	ND - H	P
Graceful tarplant <i>Holocarpha virgata</i> ssp. <i>elongate</i>	4.2	Coastal scrub, cismontane woodland, chaparral, valley and foothill grassland/ annual herb/ August–November	Approximately 13,060 individuals were mapped in grasslands in the northern portion of the BSA, on clay soils.	ND - L	NP - L	P
San Diego marsh- elder <i>Iva hayesiana</i>	2.2	Marshes and swamps, playas/ perennial herb/ April–September	Approximately 1,860 plants were mapped on-site along the perennial stream channels traversing the northern and southern regions of BSA.	ND - L	P	P
Southwestern spiny rush <i>Juncus acutus</i> spp. <i>leopoldii</i>	4.2	Coastal dunes, meadows and seeps (alkaline), saltwater marsh and swamp/ rhizomatous herb/ May–June	There were 130 individuals mapped on-site along stream channels in the northern and southern regions of the BSA.	ND - L	P	P

Species	Status ¹	Primary Habitat Associations/ Life Form / Blooming Period	Potential to Occur / Comments	Substation	Transmission Corridor	Buffer
				Findings ²		
Robinson's pepper grass <i>Lepidium virginicum</i> var. <i>robinsonii</i>	1B.2	Chaparral, coastal scrub/ annual herb/ January–July	There were 37 individuals mapped in coastal sage scrub in the northern and southern regions of BSA.	ND - L	ND - L	P
Munz's sage <i>Salvia munzii</i>	2.2	Chaparral, coastal scrub/ perennial evergreen shrub/ February–April	Two individuals were mapped in coastal sage scrub in the southern region of the BSA.	ND - L	ND - L	P
Ashy spike-moss <i>Selaginella cinerascens</i>	4.1	Chaparral, coastal scrub (in openings)/ perennial herb/ March	Approximately 1.75 occupied acres were mapped within coastal sage scrub in the northern region of the BSA.	ND - L	ND - L	P
Rayless ragwort <i>Senecio aphanactis</i>	2.2	Chaparral, cismontane woodland, coastal scrub; alkaline/ annual herb/ January–April	Not observed on-site. Low potential to occur. If present on-site, this species would have been observed.	ND - L	ND - L	ND - L
Purple stemodia <i>Stemodia durantifolia</i>	2.1	Sonoran desert scrub (often mesic, sandy) / perennial herb / January–December	Not observed on-site. Low potential to occur. If present on-site, this species would have been observed.	ND - L	ND - L	ND - L
San Diego County needlegrass <i>Stipa diegoensis</i>	4.2	Chaparral, coastal scrub/ rocky, often mesic/ perennial herb/ February–June	Not observed on-site. Low potential to occur. If present on-site, this species would have been observed.	ND - L	ND - L	ND - L
Rush-like bristleweed <i>Xanthisma</i> [= <i>Macharantha juncea</i>] <i>juncea</i>	4.3	Chaparral, coastal scrub/ perennial herb/ June–January	Not observed on-site. Low potential to occur. If present on-site, this species would have been observed.	ND - L	ND - L	ND - L

Species	Status ¹	Primary Habitat Associations/ Life Form / Blooming Period	Potential to Occur / Comments	Substation	Transmission Corridor	Buffer
				Findings ²		

¹Status:

FE: Federally listed as endangered
 FT: Federally listed as threatened
 SCE: State candidate for listing as endangered
 SE: State-listed as endangered
 ST: State-listed as threatened
 SR: State rare

California Rare Plant Ranks:

1B: Plants Rare, Threatened, or Endangered in California and Elsewhere
 2: Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere
 3: Plants About Which We Need More Information – A Review List
 4: Plants of Limited Distribution – A Watch List
 0.1 – Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
 0.2 – Fairly threatened in California (20–80% occurrences threatened / moderate degree and immediacy of threat)
 0.3 – Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

SDG&E Natural Community Conservation Plan Covered Species (NCCP)

NE = SDG&E Narrow Endemic Species

Findings:

P (present) – Species detected during Project surveys
 ND (not detected) – Species not detected during Project surveys
 L (low potential) – Suitable habitat present, highly disturbed
 M (moderate potential) – Suitable habitat present, moderately disturbed
 H (high potential) – Suitable habitat present, and species known to occur within the vicinity

3.4.1 Federal Listed Plant Species

3.4.1.1 Otay Tarplant

Species Background

Otay tarplant is a federally listed threatened and state-listed endangered species. It is also a covered species under SDG&E's NCCP. This species is an annual herb in the Asteraceae (Sunflower Family) that grows to approximately 20 inches in height and has aromatic deep green or gray-green leaves covered with soft shaggy hairs and 7–10 yellow ray flowers and 13–21 disk flowers (Baldwin 2012). The species typically blooms from April through June and is known only from southern San Diego County, primarily in the Chula Vista region, to Baja California, Mexico. This species prefers heavy clay soils in valley and foothill grasslands or sparsely vegetated Diegan coastal sage scrub occurring up to 1,000 feet AMSL.

Habitat and Occurrence in the Biological Study Area

The BSA occurs within the northern portion of the known range of this species. Several large populations occur near the BSA. Within the BSA, approximately 934 individuals of Otay tarplant were observed within grasslands and in large grassy openings in Diegan coastal sage scrub (Figures 3-3a and 3-3d). The majority of individuals were concentrated in the northern portion of the transmission corridor, from the Existing Substation area south until the Mountain Ridge Road crossing (just south of Proctor Valley Road). Several additional individuals were mapped in a small area in the southern portion of the transmission corridor, just south of Hunte Parkway in the buffer area of the Salt Creek Substation.

3.4.2 State-Listed Plant Species

Otay tarplant was the only state-listed endangered species documented within the BSA. Its background and occurrence within the BSA are described above.

3.4.3 Other Special Status Plant Species

Twelve nonlisted special status plant species were observed within the BSA. Two species listed as CRPR 1B, four listed as CRPR 2, and six listed as CRPR 4 were observed on-site. A discussion of each of these species is presented below.

3.4.3.1 California adolphia

Species Background

California adolphia (*Adolphia californica*) is a CRPR 2.1 species. This perennial, often thorny, deciduous shrub in the Rhamnaceae (Buckthorn Family) is often associated with clay soils on dry slopes in chaparral, valley needlegrass grassland, and coastal sage scrub within the foothill and coastal regions from Santa Barbara to Baja California, Mexico.

Habitat and Occurrence in the Biological Study Area

Eleven individuals of California adolphia were observed on the northern end of the BSA near the Existing Substation. Ten plants were mapped as a polygon just south of the substation, and a single plant was mapped just to the east of the substation, in coastal sage scrub (Figure 3-3a).

3.4.3.2 San Diego sunflower

Species Background

San Diego sunflower (*Bahiopsis* [=*Viguiera*] *laciniata*) is a CRPR 4.2 species. This small-to-medium-sized shrub in the Asteraceae (Sunflower Family) occurs in clay soils within chaparral and coastal sage scrub on south-facing slopes from Orange County south to Baja California and Sonora, Mexico.

Habitat and Occurrence in the Biological Study Area

San Diego sunflower was mapped in large quantities throughout the BSA. Approximately 19,450 individuals were mapped as points and polygons, largely concentrated in the northern and southern regions of the BSA (Figures 3-3a, 3-3b, and 3-3d). Plants occur within coastal sage scrub and grassland on-site and are especially numerous in areas of recent disturbance. A comparison of 2012 results with the survey results for the 2011 special status plant survey (AECOM 2011) of the proposed Salt Creek Substation shows a larger area of occupation by this species in 2012 than previously mapped. Many of the plants mapped in 2012 were very small and may have been difficult to observe in 2011.

3.4.3.3 Small-flowered morning-glory

Species Background

Small-flowered morning-glory (*Convolvulus simulans*) is a CRPR 4.2 species found within grassland and openings within coastal sage scrub often on clay soils and serpentine seeps. This diminutive annual in the Convolvulaceae (Morning-Glory family) blooms between February and July with tiny lavender flowers; it occurs in central and Southern California and in Baja California, Mexico.

Habitat and Occurrence in the Biological Study Area

Several small occurrences of small-flowered morning glory were mapped on-site, generally in the northern portion of the BSA (Figures 3-3a and 3-3c). A total of 178 individuals were mapped, generally in points of one to a few individuals, on clay soils in grasslands.

3.4.3.4 Variegated dudleya

Species Background

Variegated dudleya (*Dudleya variegata*) is a CRPR 1B.2 species found on clay soils within grassland, chaparral, and coastal scrub. This species is known only from San Diego County and Baja California, Mexico, where it is threatened by development, grazing, and nonnative plants. It belongs to the Crassulaceae (Stonecrop Family) and blooms in the late spring with small, yellow, star-shaped flowers.

Habitat and Occurrence in the Biological Study Area

A small occurrence of 60 individuals of variegated dudleya was observed within a grassy, clay opening in coastal sage scrub in the buffer area of the Salt Creek Substation, just south of Hunte Parkway (Figure 3-3d).

3.4.3.5 San Diego barrel cactus

Species Background

San Diego barrel cactus (*Ferocactus viridescens*) is a CRPR 2.1 species that occurs within grassland, coastal sage scrub, and chaparral. San Diego barrel cactus, a perennial in the Cactaceae (Cactus Family), occurs only in coastal and foothill areas of San Diego County and Baja California, Mexico. This species is seriously threatened by urbanization, off-road vehicles, illegal collecting, and nonnative plants.

Habitat and Occurrence in the Biological Study Area

San Diego barrel cactus was mapped in the northern and southern areas of the BSA, generally in coastal sage scrub (Figures 3-3a and 3-3d). On-site, the species is most concentrated in scrub with a south-facing aspect. Approximately 140 plants were observed. Of these, 17 plants were in black plastic pots left by the prior property owner. These 17 plants, also mapped previously during surveys of the proposed Salt Creek Substation (AECOM 2011), have rooted into the ground through the decaying pots.

3.4.3.6 Palmer's grapplinghook

Species Background

Palmer's grapplinghook (*Harpagonella palmeri*) is a CRPR 4.2 species that occurs on heavy clay soils within grassland and coastal sage scrub openings. This tiny annual plant in the Boraginaceae (Borage family) blooms in early spring and is present in scattered locations throughout Southern California and Baja California, Mexico, though it is most concentrated in western Riverside County and coastal and foothill regions of San Diego County. This species is very inconspicuous and easily overlooked and is threatened by development, nonnative plants, and agriculture.

Habitat and Occurrence in the Biological Study Area

Palmer's grapplinghook occurs within the BSA on heavy clay soils in areas mapped as wildflower field, nonnative grassland, and coastal sage scrub. Two large and three small polygons, plus two points of a single individual each, of Palmer's grapplinghook were mapped in the southern region of the BSA south of Hunte Parkway, in the Salt Creek Substation footprint

and buffer area (Figure 3-3d). A total of 1,065,044 individuals were estimated present via a quadrat sampling method. This number is slightly less than the approximately 1.2 million plants observed during 2011 surveys (AECOM 2011), despite the approximately 2.17 additional occupied acres mapped in 2012. Population sizes of annual plants are known to fluctuate widely from year to year with fluctuations in rainfall and temperatures, among other factors.

3.4.3.7 Graceful tarplant

Species Background

Graceful tarplant (*Holocarpha virgata* ssp. *elongata*) is a CRPR 4.2 species. The species occurs generally in grasslands with clay soils but also may be found in openings in coastal sage scrub, chaparral, woodlands, and coastal scrubs. This annual plant in the Asteraceae family generally blooms in the summer. This species occurs from Riverside County south to Baja California, Mexico. It is threatened by development throughout its range.

Habitat and Occurrence in the Biological Study Area

A total of 13,061 graceful tarplant individuals were mapped on-site. Plants generally occur as single individuals or as small groups of two to 75 individuals within a small area, but two larger polygons of 250 and 12,408 individuals were also mapped. Plants are most abundant in the northern region of the BSA, just east of the materials storage yard near the Existing Substation (Figure 3-3a).

3.4.3.8 San Diego marsh elder

Species Background

San Diego marsh elder (*Iva hayesiana*) is a CRPR 2.2 species. This species is a spring-to-summer-blooming perennial herb in the Asteraceae family. It occurs in marshes and swamps, on playas, and along stream channels in San Diego County and Baja California, Mexico. San Diego marsh elder is threatened throughout its range by waterway channelization, coastal development, off-road vehicles, and nonnative plants.

Habitat and Occurrence in the Biological Study Area

Within the BSA, San Diego marsh elder grows in nearly uninterrupted thickets along the perennial stream traversing the eastern edge of the BSA in the north, and along Salt Creek in the

south (Figures 3-3a, 3-3b, and 3-3d). Since it often grows in clumps, counts of individuals are difficult. For this study, a density estimate was made and multiplied by the area occupied to arrive at an approximate number of 1,859 plants.

3.4.3.9 Southwestern spiny rush

Species Background

Southwestern spiny rush (*Juncus acutus* ssp. *Leopoldii*) is a CRPR 4.2 species. This large, perennial, rhizomatous, herb in the Juncaceae (Rush family) is also found on coastal dunes and in meadows and seeps. In the United States, it is most common in San Diego County, but it also may be found as far north as San Luis Obispo County, west into Nevada and Arizona, and south into Baja California, Mexico and South America. It is threatened by urbanization and flood control facilities throughout its range.

Habitat and Occurrence in the Biological Study Area

A total of 130 individuals of southwestern spiny rush were mapped within the BSA. With one exception, all individuals were associated with the perennial stream channels and marshes traversing the north and south portions of the BSA (Figures 3-3a and 3-3d). Two individuals were observed in an ephemeral channel on the north end of the BSA just south of the Existing Substation (Figure 3-3d).

3.4.3.10 Robinson's pepper-grass

Species Background

Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*) is a CRPR 1B.2 species. This small, annual plant in the Brassicaceae (Mustard family) is restricted to openings in coastal sage scrub, generally on south- or west-facing slopes. It occurs in Southern California and in Baja California, Mexico. Although Robinson's pepper-grass is now thought by leading authorities to be a synonym of the nonsensitive *Lepidium virginicum* ssp. *menziesii* (Baldwin et al. 2012), occurrences of this taxon were nevertheless recorded, since CNPS continues to recognize the plant as a distinct entity.

Habitat and Occurrence in the Biological Study Area

A total of 37 individuals were mapped in the northern and southern ends of the BSA (Figures 3-3a and 3-3d).

3.4.3.11 Munz's sage

Species Background

Munz's sage (*Salvia munzii*) is a CRPR 2.2 species. This perennial evergreen shrub in the Lamiaceae (Mint family) occurs in chaparral and coastal scrub in southern San Diego County and Baja California, Mexico. Within San Diego County, this species is mostly confined to the Otay Mesa and Otay Mountain areas. Munz's sage is threatened by development throughout its range.

Habitat and Occurrence in the Biological Study Area

Two individuals of Munz's sage were mapped in the southeastern region of the BSA, in coastal sage scrub (Figure 3-3d).

3.4.3.12 Ashy spike-moss

Species Background

Ashy spike-moss (*Selaginella cinerascens*) is a CRPR 4.1 species that occurs within openings of coastal sage scrub and chaparral. It is found in Orange and San Diego Counties and Baja California, Mexico. This perennial, rhizomatous herb in the Selaginellaceae (Spike-Moss family) grows as a flat groundcover on the soil surface.

Habitat and Occurrence in the Biological Study Area

Ashy spike-moss was mapped in the easternmost portions of the northern end of the site, in coastal sage scrub (Figure 3-3a). It is difficult to estimate the number of plants at a particular location since it grows as a flat groundcover, so estimates of area occupied were made for the purposes of this study. A total of 1.75 acres (76,275 square feet) of ashy spike-moss was mapped within the BSA.

3.5 GENERAL WILDLIFE

Wildlife observed within the transmission corridor, staging yards, and survey buffers is typical of urban, scrub, and riparian communities in San Diego County. Wildlife species observed in the BSA were documented during vegetation mapping surveys, rare plant surveys and focused surveys for special status species (i.e., QCB, CAGN, LBV, and WBO) and included butterflies, amphibians, reptiles, birds, and mammals. A complete list of wildlife species detected is included in Appendix K.

3.5.1 Butterflies

The distribution of butterflies is generally defined by the distribution of their larval food plants. Species common to urban, scrub, and riparian communities are expected to be the most common butterfly species within the survey area.

A total of 26 butterfly species were detected during protocol biological surveys in the BSA; no QCB were detected. The most commonly observed species were painted lady (*Vanessa cardui*) and Behr's metalmark (*Apodemia virgulti*). Relatively small numbers of the more common species were detected during surveys, and diversity of nectar sources was moderate.

3.5.2 Reptiles

The diversity and abundance of reptile species varies with habitat type. Many reptiles are restricted to certain vegetation communities and soil types, although some of these species will also forage in adjacent communities. Other species are more ubiquitous, using a variety of vegetation types for foraging and shelter.

Four reptile species; western fence lizard (*Sceloporus occidentalis*), southern alligator lizard (*Elgaria multicarinata*), southern Pacific rattlesnake (*Crotalus viridis helleri*), and gopher snake (*Pituophis catenifer*), were observed during biological surveys within the BSA.

3.5.3 Birds

The diversity of bird species varies with respect to the character, quality, and diversity of vegetation communities present on a site. As presented in Table 3-1, the BSA is dominated by nonnative grassland, Diegan coastal sage scrub, urban/developed, and landscape/ornamental habitats.

A total of 76 bird species were observed during biological surveys within the BSA. The most commonly observed species are typical of urban communities and include American crow (*Corvus brachyrhynchos*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), common raven (*Corus corax*), house finch (*Carpodacus mexicanus frontalis*), lesser goldfinch (*Carduelis psaltria hesperophilus*), mourning dove (*Zenaida macroura*), and northern mockingbird (*Mimus polyglottos*). Common scrub or riparian species observed include California towhee (*Pipilo crissalis*), Bewick's wren (*Thryomanes bewickii*), and common yellowthroat (*Geothlypis trichas*).

3.5.4 Mammals

Mammal species observed are those that are typically found in urban interface communities or rural areas within San Diego County. Eight mammal species were observed during biological surveys within the BSA: Botta's pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus beecheyi*), woodrat sp. (*Neotoma* sp.), coyote (*Canis latrans*), bobcat (*Lynx rufus*), desert cottontail (*Sylvilagus auduboni*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and southern mule deer (*Odocoileus hemionus*).

3.6 SPECIAL STATUS WILDLIFE

As presented in Chapter 2, prior to conducting field surveys for special status wildlife species, a search was conducted of the CNDDDB for the Jamul Mountains and Otay Mesa quadrangle and surrounding nine quadrangles. Some of these species were not expected to occur due to range restrictions or lack of suitable habitat and were not surveyed for nor are they addressed further in this report. Twenty-five special status wildlife species were observed or have low, moderate, or high potential (see Section 3.4) to occur in the BSA.

A total of 12 special status wildlife species were observed within the BSA and one (least Bell's vireo) was observed just outside the southern portion of the BSA. Of these 13 species, two are federally listed, one of which is also state-listed; one is a California fully protected species; eight are California species of special concern; and two are on the CDFW watch list. Of the 13 species, eight were also NCCP covered species. An additional 12 special status wildlife species have some potential to occur within the BSA. Of these 12 species, one has a high potential, seven have moderate potential, and four have a low potential to occur based on habitat conditions and regional location. The 25 special status wildlife species observed or with a potential to occur are listed in Table 3-4. The locations of observed species are depicted in Figures 3-4a and 3-4b through 3-8a and 3-8b. Special status species observed within the BSA are discussed below.



Source: AECOM, GeomorphIS LLC, SDG&E, 2013; Esri Basemaps, 2013



0 500 1,000 Feet

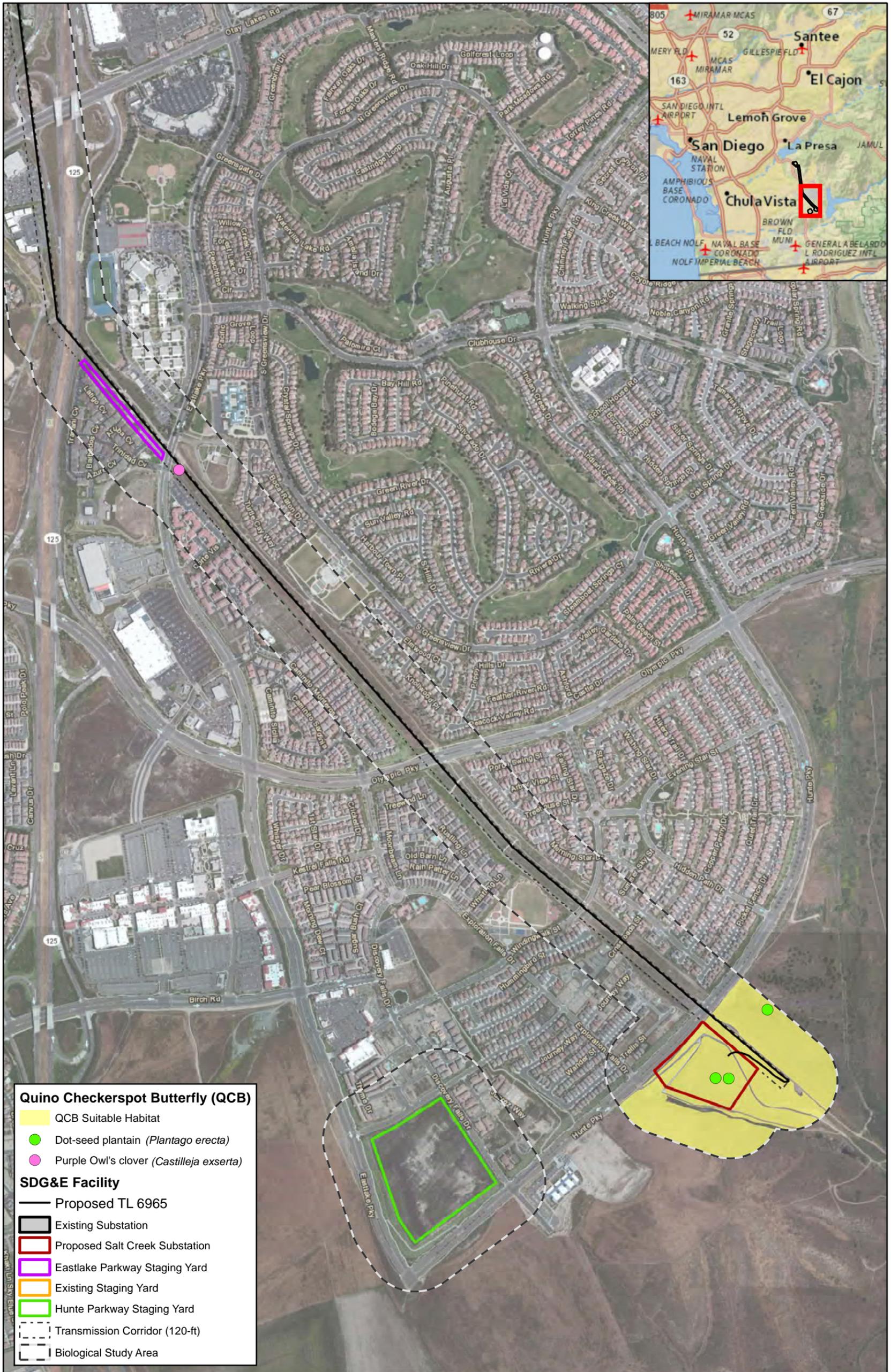


Scale: 1:12,000 1 inch = 1,000 feet

Figure 3-4a
Quino Checkerspot Butterfly Suitable Habitat, Survey Area, and Survey Results

SDG&E is providing this map with the understanding that the map is not survey grade.

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; Esri Basemaps, 2013



0 500 1,000 Feet

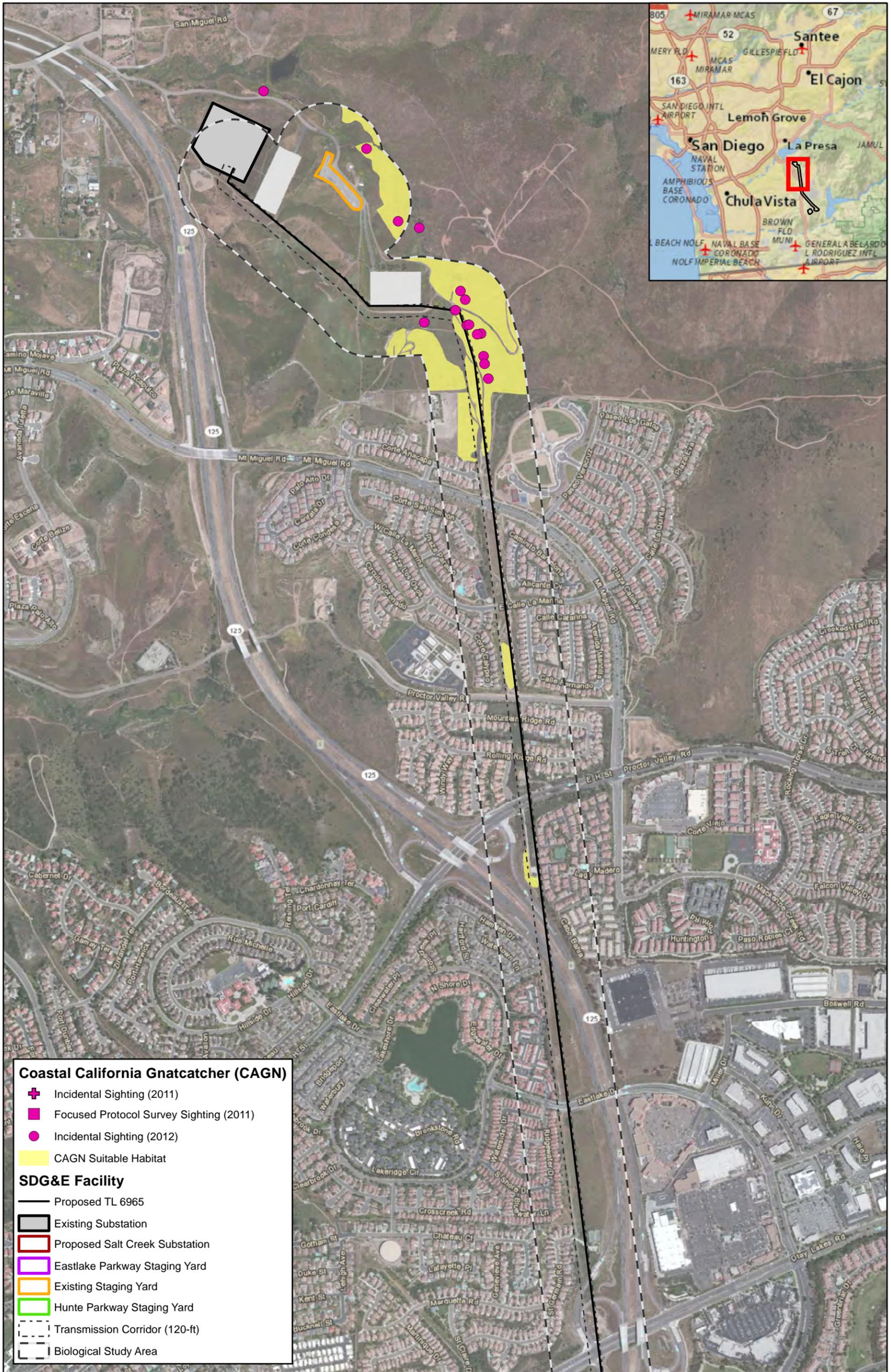


Scale: 1:12,000 1 inch = 1,000 feet

Figure 3-4b
Quino Checkerspot Butterfly Suitable Habitat, Survey Area, and Survey Results

SDG&E is providing this map with the understanding that the map is not survey grade.

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; Esri Basemaps, 2013



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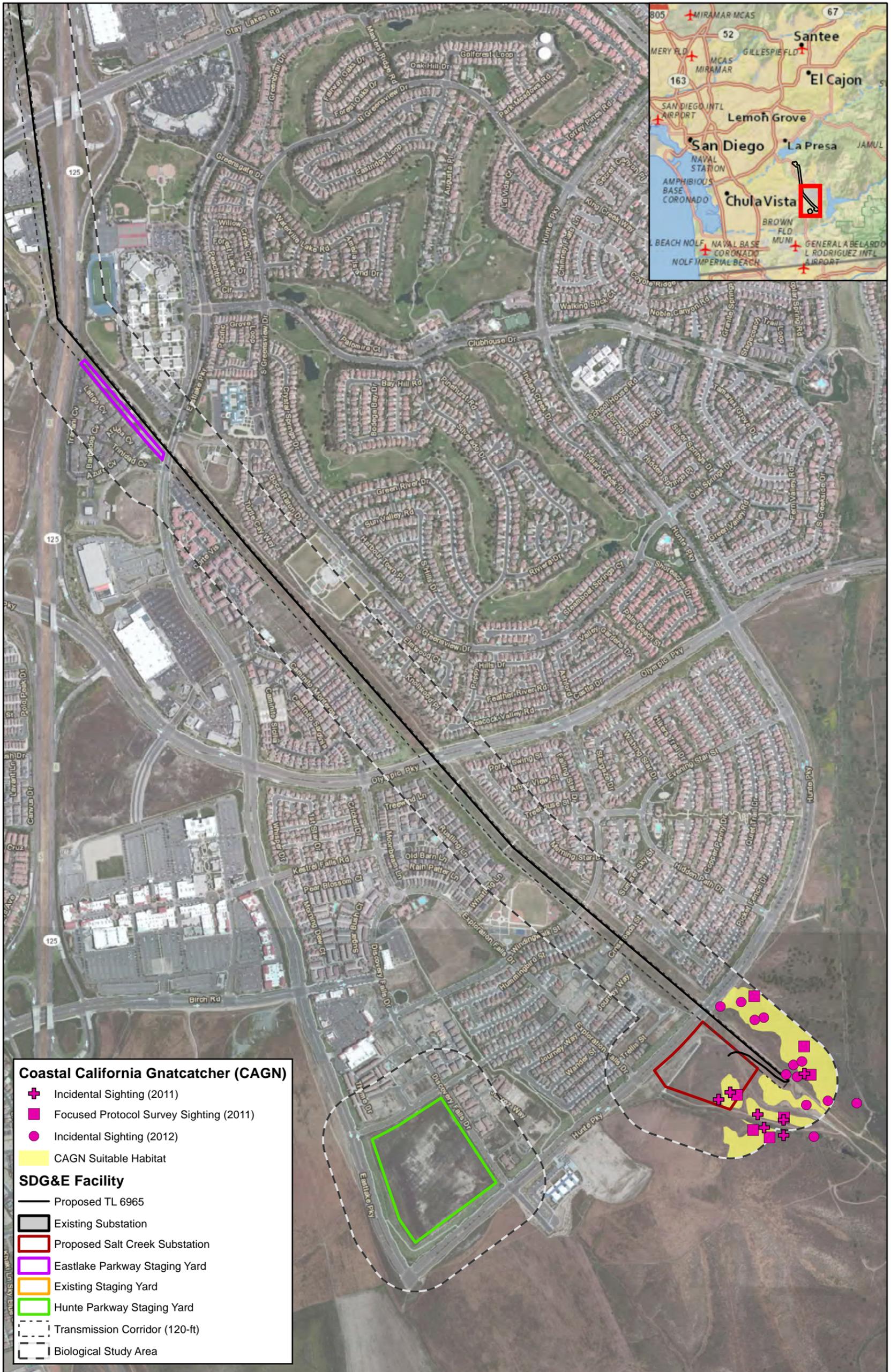


Scale: 1:12,000 1 inch = 1,000 feet

Figure 3-5a
Coastal California Gnatcatcher Suitable Habitat and Survey Results

SDG&E is providing this map with the understanding that the map is not survey grade.

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; Esri Basemaps, 2013



0 500 1,000 Feet



Scale: 1:12,000 1 inch = 1,000 feet

Figure 3-5b
Coastal California Gnatcatcher Suitable Habitat and Survey Results

SDG&E is providing this map with the understanding that the map is not survey grade.

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; Esri Basemaps, 2013



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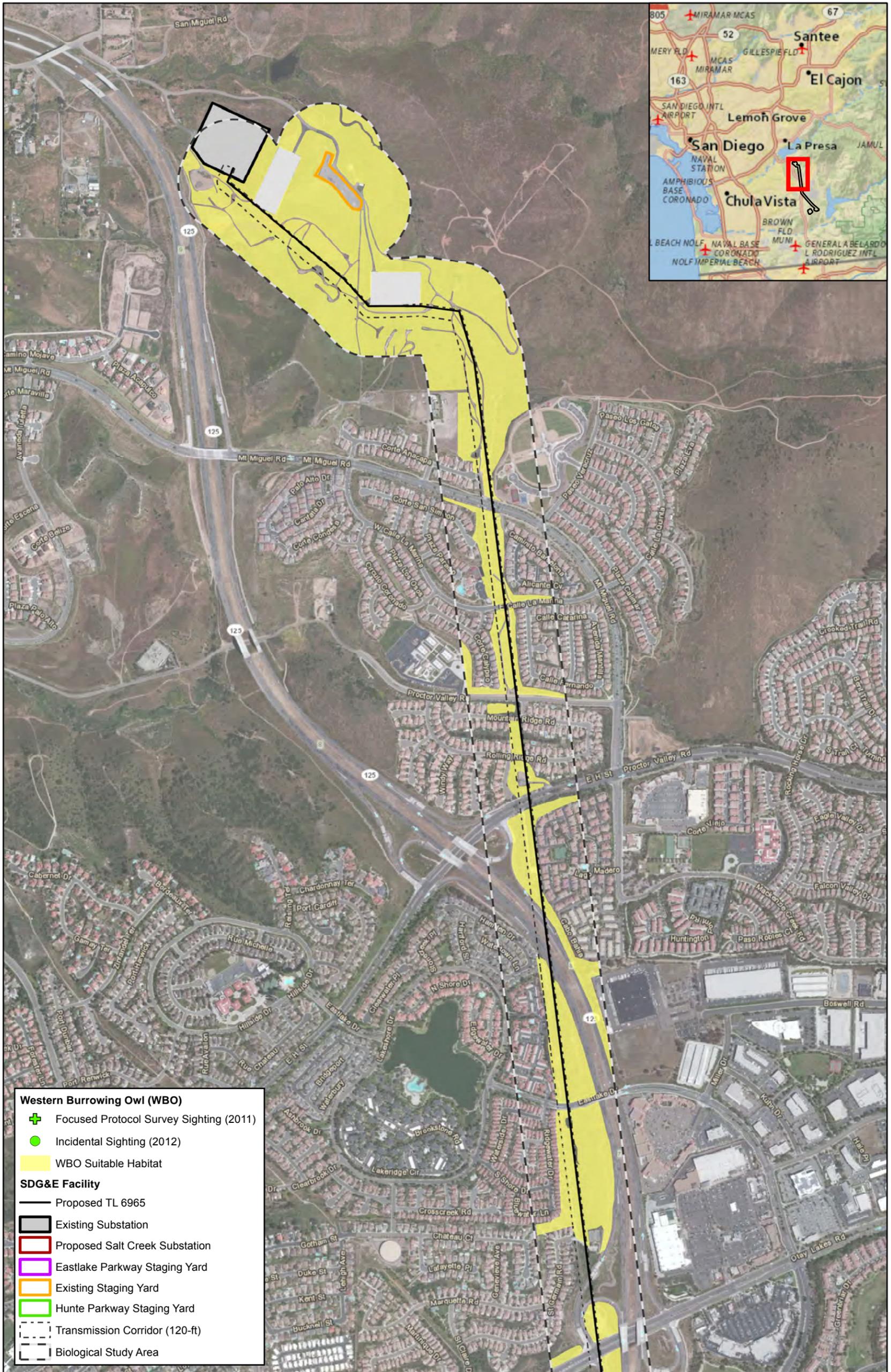


Scale: 1:4,800 1 inch = 400 feet

Figure 3-6
Least Bell's Vireo Suitable Habitat and Survey Results

SDG&E is providing this map with the understanding that the map is not survey grade.

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; Esri Basemaps, 2013



0 500 1,000 Feet

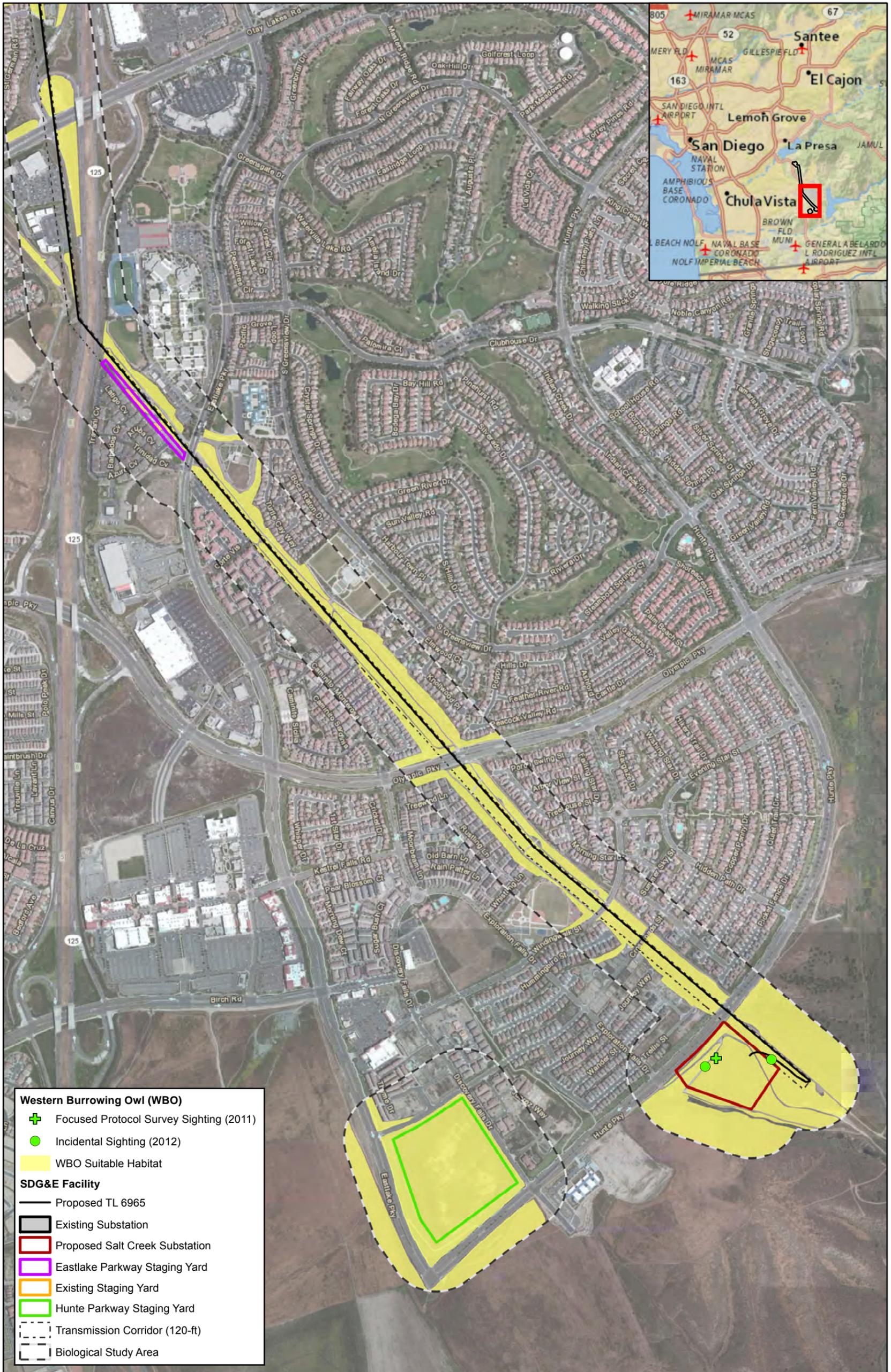


Scale: 1:12,000 1 inch = 1,000 feet

Figure 3-7a
Western Burrowing Owl Suitable Habitat and Survey Results

SDG&E is providing this map with the understanding that the map is not survey grade.

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; Esri Basemaps, 2013



0 500 1,000 Feet



Scale: 1:12,000 1 inch = 1,000 feet

Figure 3-7b
Western Burrowing Owl Suitable Habitat and Survey Results

SDG&E is providing this map with the understanding that the map is not survey grade.

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; Esri Basemaps, 2013



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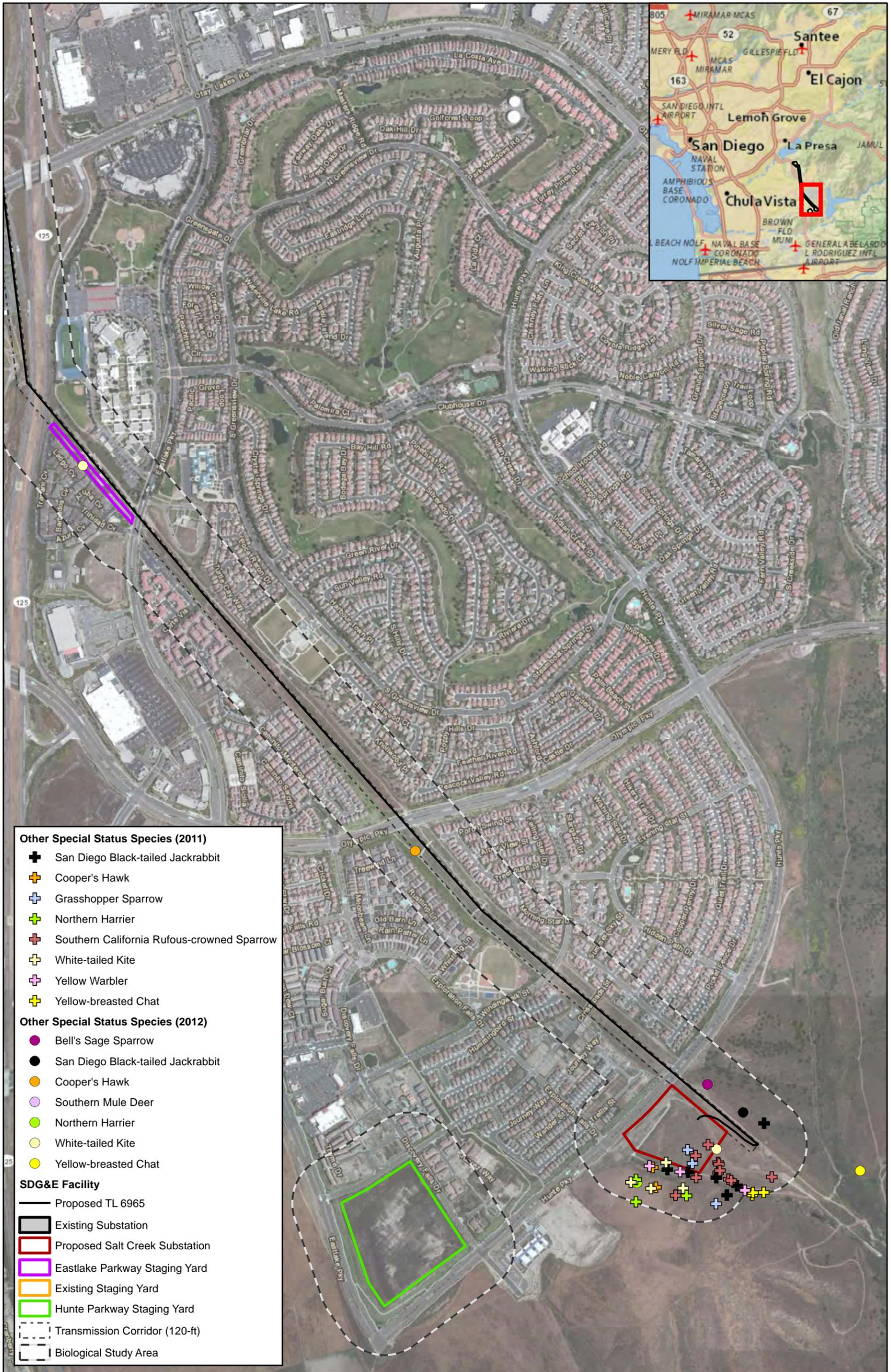


Scale: 1:12,000 1 inch = 1,000 feet

Figure 3-8a
Other Special Status Wildlife Species within Biological Study Area

SDG&E is providing this map with the understanding that the map is not survey grade.

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; Esri Basemaps, 2013



0 500 1,000 Feet



Scale: 1:12,000 1 inch = 1,000 feet

Figure 3-8b
Other Special Status Wildlife Species within Biological Study Area

SDG&E is providing this map with the understanding that the map is not survey grade.

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**Table 3-4
Special Status Wildlife Species Known or with Potential to Occur in the BSA**

Species	Status ¹	Primary Habitat Associations	Potential to Occur / Comments	Substation	Transmission Corridor	Buffer
				Findings ²		
INVERTEBRATES						
Quino checkerspot butterfly <i>Euphydryas editha quino</i>	FE	Sunny openings within coastal sage scrub and chaparral scrublands. Requires plantain (<i>Plantago</i> spp.) or owl's clover (<i>Castilleja exserta</i>) as a host plant.	This species has a high potential to occur in southern terminus of the transmission line corridor and proposed Salt Creek Substation due to the presence of marginally suitable sage scrub habitat and populations of dot-seed plantain (<i>P. erecta</i>) and owl's clover.	ND - H	ND - H	ND - H
AMPHIBIANS						
Western spadefoot toad <i>Spea hammondi</i>	CSC, NCCP	Grasslands and occasionally in valley-foothill hardwood woodlands. Requires vernal pools for breeding and egg-laying.	This species has a low potential to occur transmission line corridor and proposed Salt Creek Substation due to the presence of grasslands; however, vernal pools are not present.	ND - L	ND - L	ND - L
REPTILES						
Belding's orange-throated whiptail <i>Aspidoscelis</i> [= <i>Cnemidophorus</i>] <i>hyperythra beldingi</i>	CSC, NCCP	Chaparral, coastal sage scrub with coarse sandy soils and scattered brush.	This species has a moderate potential to occur transmission line corridor and proposed Salt Creek Substation due to the presence of marginally suitable coastal sage scrub habitat and soils.	ND - M	ND - M	ND - M
Northern red-diamond rattlesnake <i>Crotalus ruber ruber</i>	CSC, NCCP	Coastal sage scrub, chaparral in inland and desert locales with rocky soils.	This species has a moderate potential to occur within transmission line corridor and proposed Salt Creek Substation due to the presence of marginally suitable, isolated scrub habitat.	ND - M	ND - M	ND - M

Species	Status ¹	Primary Habitat Associations	Potential to Occur / Comments	Substation	Transmission Corridor	Buffer
				Findings ²		
Coastal rosy boa <i>Lichanura trivigata roseofusca</i>	NCCP	Coastal sage scrub, desert scrub, and chaparral with rocky soils.	This species has a moderate potential to occur within the transmission line corridor and proposed Salt Creek Substation due to the presence of marginally suitable, isolated scrub habitat.	ND - M	ND - M	ND - M
San Diego horned lizard <i>Phrynosoma coronatum</i> (San Diego/blainvillii population)	CSC, NCCP	Chaparral, coastal sage scrub with fine, loose soil. Partially dependent on harvester ants for forage.	This species has a low potential to occur within the transmission line corridor or proposed Salt Creek Substation due to the presence of marginally suitable scrub habitat and soils. No harvester ants (<i>Pogonomyrmex</i> sp.), a main component of this species' diet, were observed within the BSA.	ND - L	ND - L	ND - L
Two-striped garter snake <i>Thamnophis hammondi</i>	CSC, NCCP	Along permanent streams, creeks, vernal pools, and intermittent streams. Can occur a distance away from permanent water sources.	This species has a moderate potential to occur within the transmission line corridor or proposed Salt Creek Substation due to the presence of suitable aquatic habitat observed in the survey buffer.	ND - M	ND - M	ND - M
BIRDS						
Southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	WL, NCCP	Coastal sage scrub, chaparral, grassland; favors steep and rocky areas. Localized resident.	This species was observed within the footprint of proposed Salt Creek Substation and in the buffer of the southern terminus of the transmission corridor.	P	ND - H	P
Cooper's hawk <i>Accipiter cooperi</i>	WL (nesting), NCCP	Mature forest, open woodlands, wood edges, and river groves. Parks and residential areas. Year-round resident.	This species was observed both within the transmission corridor south of Olympic Parkway and within the strip of riparian vegetation located southwest of the proposed Salt Creek Substation.	ND - H	P	P

Species	Status ¹	Primary Habitat Associations	Potential to Occur / Comments	Substation	Transmission Corridor	Buffer
				Findings ²		
Grasshopper sparrow <i>Ammodramus savannarum</i>	CSC (nesting) NCCP	Grassland on rolling hills, lowland plains, and in valleys and on hillsides on lower mountain slopes.	This species was observed within the footprint of proposed Salt Creek Substation and in the buffer near the southern terminus of the transmission corridor.	P	ND - H	P
Bell's sage sparrow <i>Amphispiza belli belli</i>	WL	Nests in chaparral dominated by chamise, but is also found in coastal sage scrub in south of this species' range.	This species was observed in the buffer at the northern terminus of the transmission corridor, just south of the Existing Staging yard.	ND - M	ND - M	P
Western burrowing owl <i>Athene cunicularia hypugaea</i>	CSC, NCCP NE	Annual and perennial grasslands, deserts, agricultural areas, disturbed habitat, and scrublands, characterized by low-growing vegetation.	This species was observed within the proposed Salt Creek Substation during the 2011 Phase III Winter WBO survey. This species was also observed within the footprint of the substation during the 2012 QCB and CAGN surveys of the transmission corridor	P	P	ND - H
Ferruginous hawk <i>Buteo regalis</i>	WL (Wintering), NCCP	Open grasslands, sagebrush flats, desert scrub, and low foothills. Forages mostly on rabbits, ground squirrels, and mice.	There is moderate potential for this species to forage in the transmission line corridor and proposed Salt Creek Substation, due to the presence of suitable grassland habitat and rabbits and ground squirrels that were observed during surveys of the BSA.	ND - M	ND - M	ND - M
Swainson's hawk <i>Buteo swainsoni</i>	ST (nesting), NCCP	Breeds in grasslands with scattered trees and requires grasslands or grain fields that support rodent populations for foraging.	There is moderate potential for this species to forage in the transmission line corridor and proposed Salt Creek Substation, due to the presence of suitable grassland habitat and rodents that were observed during surveys of the site.	ND - M	ND - M	ND - M

Species	Status ¹	Primary Habitat Associations	Potential to Occur / Comments	Substation	Transmission Corridor	Buffer
				Findings ²		
Northern harrier <i>Circus cyaneus hudsonius</i>	CSC (nesting), NCCP	Coastal lowland, marshes, grassland, agricultural fields. Migrant and winter resident, rare summer resident.	This species was observed foraging throughout the grassland and open sage scrub within the transmission corridor and proposed Salt Creek Substation.	P	P	P
White-tailed kite <i>Elanus leucurus</i>	CFP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland	This species was observed near the southern terminus and in the central portion of the transmission corridor, as well as the proposed Salt Creek Substation.	P	P	P
Yellow-breasted chat <i>Icteria virens</i>	CSC	Riparian thickets consisting of willow and other brushy thickets near watercourses.	This species was observed just south of the southern terminus of the transmission corridor.	ND - M	ND - M	P
Coastal California gnatcatcher <i>Polioptila californica californica</i>	FT, CSC, NCCP	Coastal sage scrub, maritime succulent scrub. Resident.	This species was observed in the northern terminus and southern terminus of the transmission corridor and within the proposed Salt Creek Substation.	P	P	P
Yellow warbler <i>Setophaga petechia</i>	CSC (nesting)	Riparian plants associations. Prefers willow, cottonwood, aspen, sycamore, and alder species for nesting and foraging	This species was observed within the strip of riparian vegetation southwest of the proposed Salt Creek Substation.	ND - M	ND - M	P
Western bluebird <i>Sialia mexicana occidentalis</i>	NCCP	Open woodlands, farmlands, orchards.	This species has a low potential to nest within the transmission line corridor due to the presence of small patches of mature trees associated with ornamental vegetation.	ND - L	ND - L	ND - L
Least Bell's vireo <i>Vireo bellii pusillus</i>	FE, SE, NCCP	Willow riparian woodlands. Migrant and summer resident.	This species was observed in riparian habitat southwest and southeast (outside) of the BSA at the southern terminus of the transmission corridor	ND - M	ND - M	ND - M

Species	Status ¹	Primary Habitat Associations	Potential to Occur / Comments	Substation	Transmission Corridor	Buffer
				Findings ²		
MAMMALS						
Northwestern San Diego pocket mouse <i>Chaetodipus fallax fallax</i>	CSC, NCCP	San Diego County west of mountains in sparse, disturbed coastal sage scrub or grasslands with sandy soils.	This species has a low potential to occur transmission line corridor or proposed Salt Creek Substation due to the presence of sparse scrub habitat; however, suitable sandy soils are limited in the BSA.	ND - L	ND - L	ND - L
San Diego black-tailed jackrabbit <i>Lepus californicus bennetti</i>	CSC, NCCP	Coastal sage scrub, chaparral, grasslands, croplands, and open, disturbed areas that include at least some scrub cover.	This species was observed near the Existing Staging yard at the northern terminus of the transmission corridor, at the southern terminus of the transmission corridor, near the proposed Salt Creek Substation.	P	ND- H	P
Southern mule deer <i>Odocoileus hemionus fuliginata</i>	NCCP	Many habitats.	This species was observed near the Existing Staging yard at the northern terminus of the transmission corridor.	ND-H	ND-H	P
American badger <i>Taxidea taxus</i>	CSC, NCCP	Dry, open habitat stages of most shrub, forest, and grassland habitats with friable soils.	This species has a moderate potential to occur within the transmission line corridor and proposed Salt Creek Substation due to the presence of potentially suitable grassland and scrub habitat, and friable soils.	ND - M	ND - M	ND - M

¹ Status:

SDG&E Natural Community Conservation Plan (NCCP) = Covered Species

NE = SDG&E Narrow Endemic Species

Federal/State Listed:

FE = Federally listed endangered

FT = Federally listed threatened

SE = State listed endangered

ST = State listed threatened

OTHER:

CFP = California Department of Fish and Game Fully Protected Species

CSC = California Department of Fish and Game Species of Special Concern

WL = California Department of Fish and Game Watch List

² Findings:

P (present) – Species detected during Project surveys

ND (not detected) – Species not detected during Project surveys

L (low potential) – Suitable habitat present, highly disturbed

M (moderate potential) – Suitable habitat present, moderately disturbed

H (high potential) – Suitable habitat present, and species known to occur within the vicinity

3.6.1 Federal Listed Wildlife Species

3.6.1.1 Quino Checkerspot Butterfly

Species Background

QCB, a subspecies of Edith's checkerspot butterfly (*Euphydryas editha*), is a federally listed endangered species and is a covered species under SDG&E's NCCP. The current distribution of the species is limited to southern San Diego County and northern Baja California, Mexico, and western Riverside County. Distribution of this subspecies is driven by metapopulation dynamics involving local extinctions and population explosions, which lead to recolonization of habitat. QCB is generally found in native and nonnative grasslands, coastal sage scrub, open chaparral, and other open plant community types where high densities of host plant species occur (USFWS 1997b). The primary larval host plant species for the QCB is dwarf plantain (*Plantago erecta*) (Mattoni et al. 1997). Field observations and laboratory studies indicate several other host plants may be used for egg deposit and larval feeding, including purple owl's clover (*Castilleja exserta*), southern Chinese houses (*Collinsia concolor*), and bird's beak (*Cordylanthus rigidus*).

Adults have one flight period per year, which generally occurs between late January and mid-May, with peak activity between March and April. Adult males patrol suitable habitat for females, perching intermittently on the ground or vegetation. They also engage in hill-topping activity, during which hilltops or ridges are guarded against other males. Females lay egg masses on host plants, typically between mid-February and April. Eggs hatch in about 10 days, and the larvae begin to feed immediately. Substantial population decline has been observed after extended periods of drought. There is evidence to indicate that the species can undergo multiple-year diapause during drought, lasting up to 5 or 6 years.

Habitat and Occurrence in the Biological Study Area

Approximately 220 acres of nonnative grassland and coastal sage scrub habitats were surveyed within the BSA (Figures 3-1a through 3-1c). SDG&E's HCP for QCB delineates potential QCB habitat (referred to as "Mapped Areas") based on the 2003 USFWS QCB recovery plan. Mapped Areas occur within SDG&E's NCCP preserve at the north end of the Transmission Corridor. However, based on project surveys, no suitable QCB habitat occurs within these Mapped Areas. Using the suitable QCB habitat criteria established under SDG&E's QCB Low-Effect HCP, approximately 50 acres of suitable QCB habitat occur within the proposed Salt Creek Substation, southern terminus of the transmission corridor, and buffer southeast of Hunte Parkway, including

non-native grassland, Diegan coastal sage scrub and wildflower field habitats (Figures 3-4a and 3-4b). This portion of the BSA contained extensive habitat for QCB including primary larval host plants, hilltops, adult butterfly nectar sources, open soils with clay crusts, and a few invasive insects such as Argentine ants (*Linepithema humile*) (Faulkner 2013). Dot-seed plantain was not in mats but scattered mostly to the eastern side of the area and most plants were small (under 1 ½” in height) (Faulkner 2013). Other portions of the BSA surveyed for QCB, including the northern portion of the BSA, staging yards, and transmission corridor, did not meet the suitable habitat criteria established under SDG&E’s QCB Low-Effect HCP due to the presence of extensive invasive grasses that excluded most native vegetation, impacts from previous grading, off-road activity, or human activity, abundant invasive invertebrate species, and lack of larval host plants (Faulkner 2013).

During focused QCB surveys, small patches of dot-seed plantain, which is a QCB larval host plant, was observed in the southern end of BSA; however, no QCB were observed during these surveys. Although these impacted areas are considered suitable according the HCP criteria, since they are neither within the Mapped Area nor occupied, no habitat mitigation is required for these impacts per SDG&E's HCP for QCB.

3.6.1.2 Coastal California Gnatcatcher

Species Background

CAGN is federally listed as threatened and is considered a California species of special concern. CAGN is a local and uncommon year-round resident of Southern California. This species is found in the six southernmost California counties located within the coastal plain (San Bernardino, Ventura, Los Angeles, Orange, San Diego, and Riverside).

The primary cause of this species’ decline is the cumulative loss of coastal sage scrub vegetation to urban and agricultural development. Little of this species’ habitat is formally protected or managed. Initial studies suggest that CAGN may be highly sensitive to the effects of habitat fragmentation and development activity (Atwood 1990; ERCE 1990). USFWS has estimated that coastal sage scrub habitat has been reduced by 70 to 90 percent of its historical extent (USFWS 1991) and little of what remains is in protected natural open space.

CAGN generally inhabits Diegan coastal sage scrub and Riversidian coastal sage scrub dominated by California sagebrush and flat-topped buckwheat, generally below 1,500 feet in elevation along the coastal slope. When nesting, this species typically avoids slopes greater than

25% with dense, tall vegetation. CAGN pairs will attempt several nests each year (average of four), each placed in a different location inside their breeding territory, but most nest attempts are unsuccessful due to depredation by a variety of species (Grishaver et al. 1998; Atwood and Bontrager 2001). Clutch size ranges from one to five eggs, with three or four eggs most common. CAGN will remain paired through the nonbreeding season and will generally expand their home range when not breeding.

CAGN is particularly vulnerable to habitat destruction and fragmentation because of their low dispersal rate, reliance on a specific habitat type, and poor breeding success. Juvenile CAGN tend to remain close to their natal territories. On average, juveniles disperse less than 1.2 miles from their natal territories, making colonization of distant habitat patches difficult. CAGN has been described as “an obligate resident of coastal sage scrub” (Atwood and Bontrager 2001), a vegetation community that is vulnerable to urban pressures. The destruction of coastal sage scrub by wildfire also has a detrimental effect on local CAGN populations. Weather conditions in 2007 may have contributed to an unfavorable breeding season because CAGN tend to have slightly smaller clutches in years with low rainfall (Grishaver et al. 1998). CAGN also experience a higher rate of mortality during cold winters, such as the unusually cold winter of 2006–2007 (Atwood and Bontrager 2001).

Habitat and Occurrence in the Biological Study Area

Due to the presence of suitable habitat in the Proposed Project area for CAGN, focused surveys were conducted on approximately 54 acres of suitable coastal sage scrub habitat within the BSA. During the 2011 surveys, a total of seven CAGNs (five adults and two juveniles) were detected (Figure 3-5b). Seven, 11, and six CAGNs were detected during the three protocol surveys in 2012, respectively, including family groups, adult pairs, individual adults, and nestlings (Figure 3-5a). Observations were clustered at the northern terminus and southern terminus of the transmission corridor, where larger patches of suitable sage scrub habitats exist. Incidental sightings of CAGN were observed during other biological resource surveys throughout the BSA in 2011 and 2012 (Figure 3-5b).

3.6.1.3 Least Bell’s Vireo

Species Background

LBV is federally and state-listed as endangered, and is a covered species under SDG&E’s NCCP. Historically, this species was a common summer visitor to riparian habitat throughout

much of California. Currently, LBV is found only in riparian woodlands in Southern California, with the majority of breeding pairs in San Diego, Santa Barbara, and Riverside Counties. LBV is restricted to riparian woodland and is most frequent in areas that combine an understory of dense young willows or mulefat with a canopy of tall willows. Since LBV build their nests in dense shrubbery 3 to 4 feet above the ground (Salata 1984), they require young successional riparian habitat or older habitat with a dense understory. Therefore, riparian plant succession is an important factor in maintaining LBV habitat. Nests are also often placed along internal or external edges of riparian thickets (Unitt 2004). LBV is migratory and arrives in Southern California in late March and early April and leaves for its wintering ground in September. The LBV's decline was attributed to loss, degradation, and fragmentation of riparian habitat combined with brood/nest parasitism by the brown-headed cowbird (*Molothrus ater*). Due to concerted programs focused on preserving, enhancing, and creating suitable nesting habitat, the vireo population has steadily increased in population size along several of its breeding drainages in Southern California (USFWS 2006).

Habitat and Occurrence in the Biological Study Area

Due to the presence of approximately 1 acre of suitable riparian scrub habitat in the vicinity of the proposed Salt Creek Substation, focused surveys for LBV were conducted at the substation during the 2011 breeding season. One LBV was detected as an incidental sighting approximately 130 feet east (outside) of the BSA during the 2011 focused LBV survey (Figure 3-6). Additionally, one LBV was detected south (outside) of the BSA during the 2012 CAGN survey (Figure 3-6). This individual was located within the riparian scrub habitat south of the proposed Salt Creek Substation; therefore, the suitable riparian scrub habitat south and adjacent to the proposed Salt Creek Substation is considered occupied.

3.6.2 State-Listed Species

LBV is the only state-listed endangered species documented within the BSA, and its background and occurrence within the BSA are described above.

3.6.3 Other Special Status Species

3.6.3.1 Western Burrowing Owl

Species Background

WBO is a CDFW species of special concern and is a covered species under SDG&E's NCCP. It is primarily restricted to the western United States and Mexico. Habitat for the WBO includes

dry, open, short-grass areas often associated with burrowing mammals (Haug et al. 1993). A year-round resident in San Diego County, the WBO ranges throughout the coastal lowlands in grasslands, agricultural areas, and coastal dunes (Unitt 1984). In Imperial County, it can be found in desert scrub, grassland, and agricultural areas, where it digs its own burrows or occupies existing burrows. WBO is diurnal and perches during daylight at the entrance to its burrow or on low posts. Nesting occurs from March through August. WBOs form a pair-bond for more than 1 year and exhibit high site fidelity, reusing the same burrow year after year (Haug et al. 1993). The female remains inside the burrow during most of the egg laying and incubation period and is fed by the male throughout brooding. The WBO is an opportunistic feeder, consuming a diet that includes arthropods, small mammals, and birds, and occasionally amphibians and reptiles (Haug et al. 1993). Urbanization has greatly reduced the amount of suitable habitat for this species. Other contributions to the decline of this species include the poisoning of squirrels and prairie dogs and collisions with automobiles.

Habitat and Occurrence in the Biological Study Area

Habitat assessments conducted during Phase I WBO surveys in 2011 and during initial biological resources studies in 2012 identified approximately 88 acres of suitable habitat within the proposed Salt Creek Substation and 500-foot survey buffer during 2011, and approximately 829 acres of suitable habitat within the transmission corridor, staging yards, and a 500-foot survey buffer around these Proposed Project features in 2012, respectively. In 2012, survey areas partially overlapped with 2011 survey areas and, subsequent to the completion of surveys in 2012, the footprint decreased in size due to design changes for several of the Proposed Project components; thus, the total suitable WBO habitat that occurs within the BSA is 269 acres (Figures 3-7a and 3-7b).

Results of the 2011 WBO winter surveys documented the presence of 38 potential burrows and one WBO individual. Because no sign of WBO activity was found at any burrow from May through July of 2011, it can be assumed that no breeding took place on-site in 2011. WBO in 2011 were observed in December and indicate that the project site is currently being used by WBO as a wintering, post-breeding dispersal, or migratory stopover site (Figure 3-7b). The two burrows found to contain sign during the winter surveys were most likely alternate burrows being used by the one observed individual in instances where it was flushed from its primary burrow. Only one burrow showed any significant or fresh sign during the duration of the winter surveys. The high concentration of California ground squirrels (evidenced by the 38 suitable burrows observed) will allow any WBO on-site a wide selection of shelters so that any disturbance is not likely to flush the owl a great distance away.

A total of 86 potentially suitable WBO burrows, or burrow clusters, were documented, primarily in the central and southern portions of the transmission corridor during the 2012 WBO surveys. No WBO and no recent sign of WBO were, however, detected or observed during these surveys. An incidental sighting of an individual adult WBO was recorded in March 2012 during the QCB survey (Figure 3-7b). The location of this owl occurs at the southern terminus of the transmission corridor, which overlaps with the footprint of the proposed substation. Additionally, a WBO family group was detected in July 2012 during the CAGN survey within the transmission corridor. The location of this family group overlaps with the footprint of the proposed substation and is within 150 feet of the WBO detected during the 2011 Phase III winter survey.

3.6.3.2 Southern California Rufous-Crowned Sparrow

Species Background

Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) is a CDFW watch list species and is an SDG&E NCCP covered species. This species' habitat consists of rocky hillsides and steep slopes in open grass and coastal sage scrub in areas, ranging from roughly 200 to 4,500 feet AMSL.

Habitat and Occurrence in the Biological Study Area

Suitable foraging and nesting habitat for Southern California rufous-crowned sparrow occurs throughout the transmission corridor and in the surrounding area. This species was observed in coastal sage scrub and grassland habitats at the southern terminus of the transmission corridor and Salt Creek Substation. Southern California rufous-crowned sparrow was observed during focused QCB, WBO, CAGN, and LBV surveys, and general field surveys conducted in 2011 and 2012 within the transmission corridor and Salt Creek Substation (Figure 3-8b).

3.6.3.3 Cooper's Hawk

Species Background

Cooper's hawk (*Accipiter cooperii*) is a CDFW watch list species and is an SDG&E NCCP covered species. Cooper's hawks are generally found in forested areas up to 3,000 feet AMSL. Cooper's hawks nest primarily in oak woodlands but occasionally in willows or eucalyptus. This species most frequently prefers dense stands of live oak, riparian deciduous or other forest

habitat near water. The species usually nests and forages near open water or riparian vegetation, but can be found in urban and suburban areas where there are tall trees for nesting.

Habitat and Occurrence in the Biological Study Area

Suitable foraging habitat for Cooper's hawk occurs within coastal sage scrub, grassland, and riparian habitats throughout the transmission corridor and Salt Creek Substation. Nesting habitat for Cooper's hawk occurs within patches of ornamental habitat containing tall trees and within southern willow scrub and riparian scrub habitats. Cooper's hawk was observed throughout the transmission corridor and Salt Creek Substation perching within trees and on poles, and flying over coastal sage scrub, grassland, and riparian habitats. This species was observed during general surveys conducted in 2011 and focused CAGN surveys in 2012 (Figure 3-8b).

3.6.3.4 Grasshopper Sparrow

Species Background

Grasshopper sparrow (*Ammodramus savannarum*) is a CDFW species of special concern and a SDG&E NCCP covered species. This species is found in grassland habitat and prefers areas with significant grass cover with a few scattered shrubs for protection. This species' habitat can include open coastal sage scrub with scattered shrubs such as California buckwheat (*Eriogonum fasciculatum*) or coastal sagebrush dispersed amongst native or nonnative grasses.

Habitat and Occurrence in the Biological Study Area

Suitable foraging and nesting habitat for grasshopper sparrow occurs within grassland and open coastal sage scrub habitats within the transmission corridor and Salt Creek Substation. Individual grasshopper sparrows, and a family group including juveniles, were observed in grassland and coastal sage scrub habitats during LBV surveys conducted in 2011 at the proposed Salt Creek Substation (Figure 3-8b).

3.6.3.5 Bell's Sage Sparrow

Species Background

Bell's sage sparrow (*Amphispiza belli belli*) is a CDFW watch list species. This species prefers semi-open habitats with shrubs 3 to 6 feet high and is closely associated with sagebrush. Bell's

sage sparrow is an uncommon to fairly common but localized resident breeder in dry chaparral and coastal sage scrub along the coastal lowlands, inland valleys, and in the lower foothills of local mountains. It often occurs in chaparral dominated by chamise, and coastal sage scrub dominated by California sagebrush.

Habitat and Occurrence in the Biological Study Area

Suitable foraging and nesting habitat for Bell's sage sparrow occurs within open coastal sage scrub and transitional grassland/sage scrub habitats. This species was observed at the northern terminus of the transmission corridor and at the southern terminus of the transmission corridor and Salt Creek Substation during WBO surveys conducted in 2012 (Figures 3-8a and 3-8b).

3.6.3.6 Northern Harrier

Species Background

Northern harrier (*Circus cyaneus hudsonius*) is a CDFW species of special concern and is an SDG&E NCCP covered species. Northern harriers are open-country birds, often seen soaring low over grassland habitat and farmlands.

Habitat and Occurrence in the Biological Study Area

Suitable foraging and nesting habitat for northern harrier occurs within open coastal sage scrub and grassland habitats at the northern terminus of the transmission corridor, and at the southern terminus of the transmission corridor and Salt Creek Substation. Northern harrier was observed foraging in open coastal sage scrub and grassland habitats at the southern terminus of the transmission corridor and Salt Creek Substation. This species was observed during focused WBO and LBV surveys conducted in 2011 and 2012 (Figure 3-8b).

3.6.3.7 White-Tailed Kite

Species Background

White-tailed kite (*Elanus leucurus*) is a California fully protected species and is a fairly common resident in San Diego County. This species nests in riparian or oak woodland adjacent to grassland or open fields where it hunts rodents. White-tailed kite forages in undisturbed, open

grasslands, meadows, farmlands, and emergent wetlands. This species soars, glides, and hovers less than 100 feet above the ground in search of prey.

Habitat and Occurrence in the Biological Study Area

Suitable foraging habitat for white-tailed kite occurs within coastal sage scrub, grassland, and riparian habitats throughout the transmission corridor and proposed Salt Creek Substation. Nesting habitat for white-tailed kite occurs within southern willow scrub and riparian scrub habitats. White-tailed kite was observed foraging in grassland, open coastal sage scrub, and riparian habitats throughout the transmission corridor and Salt Creek Substation. This species was observed during focused QCB, WBO, CAGN, and LBV surveys, and general field surveys conducted in 2011 and 2012 within the transmission corridor and proposed Salt Creek Substation (Figure 3-8b).

3.6.3.8 Yellow-Breasted Chat

Species Background

Yellow-breasted chat (*Icteria virens*) is a CDFW species of special concern. This species is typically found in second growth, shrubby old pastures, thickets, brushy areas, scrub, woodland undergrowth, and fencerows. Yellow-breasted chat is often found in low, wet places near streams, pond edges, or swamps. Nesting yellow-breasted chats occupy early successional riparian habitats with a well-developed shrub layer and an open canopy.

Habitat and Occurrence in the Biological Study Area

Suitable foraging and nesting habitat for yellow-breasted chat occurs within riparian, mulefat, and southern willow scrub habitats throughout the transmission corridor and Salt Creek Substation. Yellow-breasted chat was observed in riparian habitat at the southern terminus of the transmission corridor during focused WBO, CAGN, and LBV surveys, and general field surveys conducted in 2011 and 2012 within the transmission corridor and Salt Creek Substation (Figure 3-8b).

3.6.3.9 Yellow warbler

Species Background

Yellow warbler (*Setophaga petechia*) is a California species of concern. This species nests in mature riparian woodland from coastal and desert lowlands up to 8,000 feet in elevation. Yellow warbler prefers to nest in mature cottonwood, willow, alder, and ash trees. This species frequents open to medium-density woodlands and forests with a heavy brush understory in breeding season.

Habitat and Occurrence in the Biological Study Area

Suitable foraging and nesting habitat for yellow warbler occurs within riparian, mulefat, and southern willow scrub habitats throughout the transmission corridor and Salt Creek Substation. Yellow warbler was observed in riparian habitat during focused LBV and WBO surveys in 2011 in the buffer near the southern terminus of the transmission corridor and Salt Creek Substation (Figure 3-8b).

3.6.3.10 San Diego Black-Tailed Jackrabbit

Species Background

San Diego black-tailed jackrabbit (*Lepus californicus bennetti*) is a CDFW species of special concern and is an SDG&E NCCP covered species. This species is found from the coast to the western slope of the coastal mountains, up to 6,000 feet in elevation, in San Diego County. It inhabits open land but requires some shrubs for cover. Typical habitats include early stages of chaparral, open coastal sage scrub, and grasslands near the edges of brush.

Habitat and Occurrence in the Biological Study Area

Suitable habitat for San Diego black-tailed jackrabbit occurs within open coastal sage scrub and grassland habitats throughout the transmission corridor and Salt Creek Substation. This species was observed near the southern terminus of the transmission corridor and in the surrounding area. San Diego black-tailed jackrabbit was observed during several field surveys associated with the transmission corridor and Salt Creek Substation (Figure 3-8b).

3.6.3.11 Southern Mule Deer

Species Background

Southern mule deer (*Odocoileus hemionus*) is an SDG&E NCCP covered species. Southern mule deer is widespread throughout undeveloped portions of San Diego County, ranging from Camp Pendleton to the Laguna Mountains, Sweetwater River, and Otay Lakes at elevations of 400 to 3,600 feet (Bleich and Holl 1982). Resident and migratory populations are present throughout California. This species requires relatively large, undisturbed tracts of chaparral, coastal sage scrub, and mixed grassland/shrub habitats. Breeding usually occurs between November and February, with the fawning period between June and August. The diet of the southern mule deer consists of forbs, grasses, and nuts. Although the species is not threatened with extinction within its range, urbanization and habitat fragmentation could result in local extirpation without appropriate conservation measures.

Habitat and Occurrence in the Biological Study Area

Suitable habitat for southern mule deer occurs within open coastal sage scrub and grassland habitats throughout the transmission corridor and Salt Creek Substation. Southern mule deer was observed within the survey area near the Existing Staging yard at the northern terminus of the transmission corridor. This species was observed during focused WBO surveys conducted in 2012 (Figure 3-8a).

3.7 CRITICAL HABITAT

Critical habitat is defined as areas of land, water, and air space that contain 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. Critical habitat is designated by USFWS for endangered and threatened species per the federal ESA (16 U.S.C. § 1533 (a)(3)), and to the extent prudent and determinable. Special management of critical habitat, including measures for water quality and quantity, host animals and plants, food availability, pollinators, sunlight, and specific soil types is required to ensure the long-term survival and recovery of the identified species. Critical habitat designation delineates all suitable habitat for the species, whether or not it is occupied.

No critical habitat for QCB occurs within the BSA. The nearest designated critical habitat for QCB occurs along the eastern perimeter of Otay Lake, approximately 1.1 miles southeast of the southern terminus of the transmission corridor (USFWS 2002b).

A review of final boundaries (USFWS 2012b) indicates that designated critical habitat for the endangered Otay tarplant coincides with the BSA at the southern terminus of the transmission corridor, near the Salt Creek Substation (Figure 3-9). A total of 13.46 acres of critical habitat occurs within the 500-foot buffer of the transmission corridor at the southern terminus and within 500 feet of the northern terminus and the Existing Staging yard.

Designated critical habitat for CAGN occurs just east and north of the northern terminus of the transmission corridor, but does not coincide with BSA (Figure 3-9).

No critical habitat for LBV occurs within the BSA. The nearest designated critical habitat for LBV occurs northeast of Sweetwater Reservoir, approximately 1.7 miles northeast of the northern terminus of the transmission corridor. Designated critical habitat for this LBV also occurs east of Otay Lake, approximately 2.5 miles east of the southern terminus of the transmission corridor.

3.8 NCCP PRESERVE AREAS

Under the NCCP, designated preserves are considered sensitive. Within San Diego County, preserves are defined and delineated using existing preserve areas from local and regional planning documents such as the City of Chula Vista MSCP Subarea Plan (City of Chula Vista 1997), County of San Diego MSCP Subarea Plan (County of San Diego 1997), and the North County Final Multiple Habitat Conservation Plan (San Diego Association of Governments [SANDAG] 2003). Preserve areas in these planning documents include the Multi-Habitat Planning Area (City of San Diego 1997), Pre-approved Mitigation Areas (County of San Diego 1997), Biological Resource Core Areas (County of San Diego 1997), and the Focused Planning Areas (SANDAG 2003). The BSA is within the City of Chula Vista's Subarea and MSCP Planning Area.

A portion of the northern section of the transmission corridor, Existing Substation and Existing Staging Yard are located within a SDG&E-defined "Preserve" area; the remainder of the proposed TL is located outside of defined Preserve boundaries. The Salt Creek Substation is located on land identified for development under the Otay Ranch General Development Plan and is outside of the City of Chula Vista's MSCP Preserve and SDG&E's NCCP Preserve area (Figure 3-10).

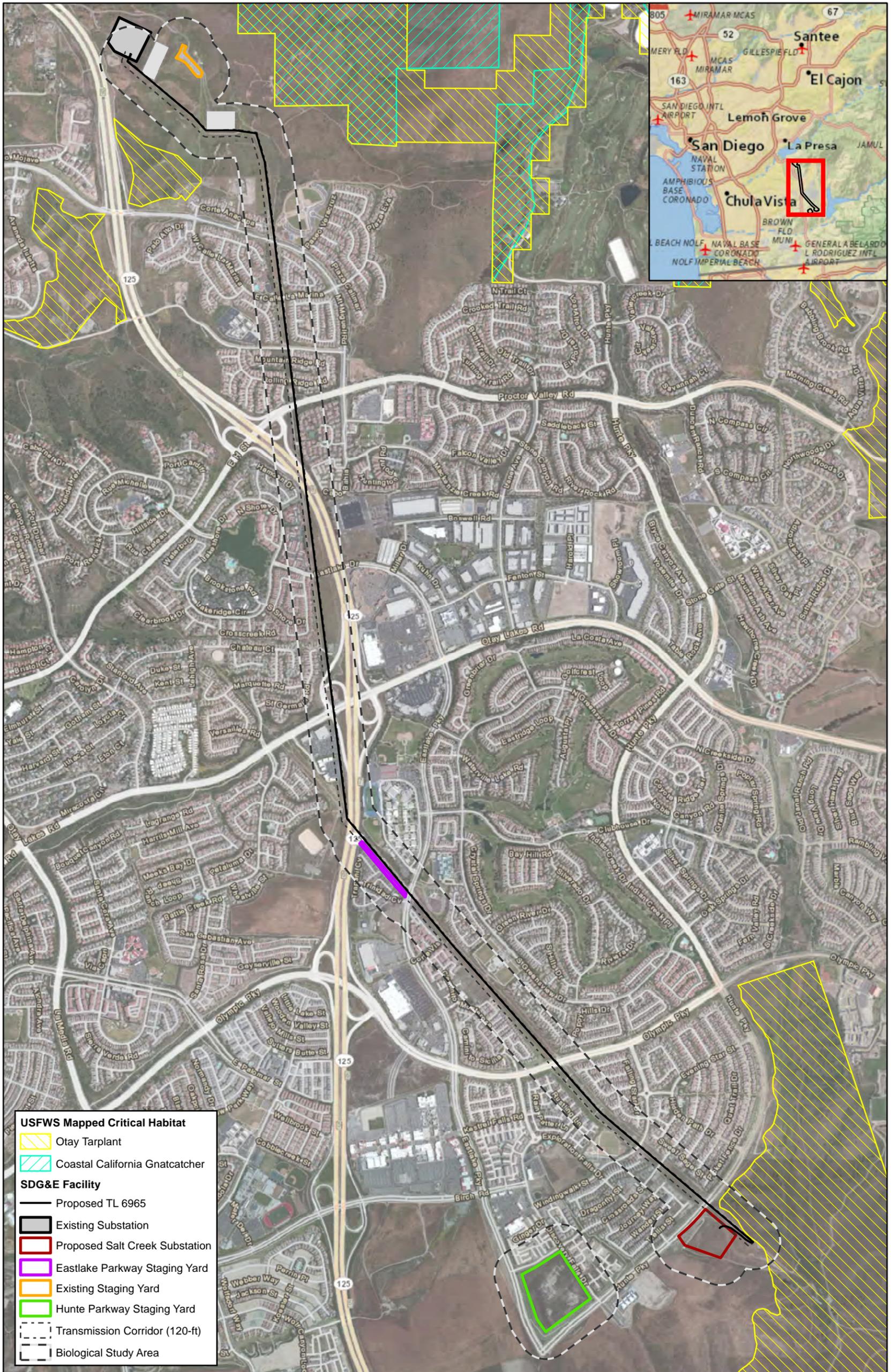
3.9 WILDLIFE CORRIDORS

In an urban context, a wildlife migration corridor is generally a linear landscape feature of sufficient width and buffer to allow wildlife movement between two patches of comparatively

undisturbed habitat, or between a patch of habitat and some vital resources. Regional corridors are defined as those linking two or more large patches of habitat, and local corridors are defined as those allowing resident animals to access critical resources (food, cover, and water) in a smaller area that might otherwise be isolated by urban development. A viable wildlife migration corridor consists of more than an unobstructed path between habitat areas. Appropriate vegetation communities must be present to provide food and cover for both transient species and resident populations of less mobile animals. There must also be a sufficient lack of stressors and threats within and adjacent to the corridor for species to use it successfully.

Although the transmission corridor is a linear feature that consists of vegetation communities and supports wildlife species, the transmission corridor is intersected by numerous roadways, with some carrying high volumes of traffic, and bordered by dense development on either side. These factors likely deter most wildlife species from using the narrow strip of fragmented vegetation present within the transmission corridor. As such, the transmission corridor does not represent an important regional or local migration corridor for wildlife movement, and project activities within the transmission corridor would not interfere with wildlife migration patterns.

The substation is not a linear feature that could potentially serve as a wildlife migration corridor and the site does not coincide with a known migration corridor. The substation lies adjacent to a roadway (Hunte Parkway) and is flanked to the north by urban development, both of which can introduce stressors to adjacent environments. As such, the substation does not represent an important regional or local migration corridor for wildlife movement or coincide with such a corridor. Proposed Project activities within the substation would not interfere with wildlife migration patterns.



Source: AECOM, GeomorphIS LLC, SDG&E, 2013; USFWS, 2010; Esri Basemaps, 2013



0 900 1,800 Feet

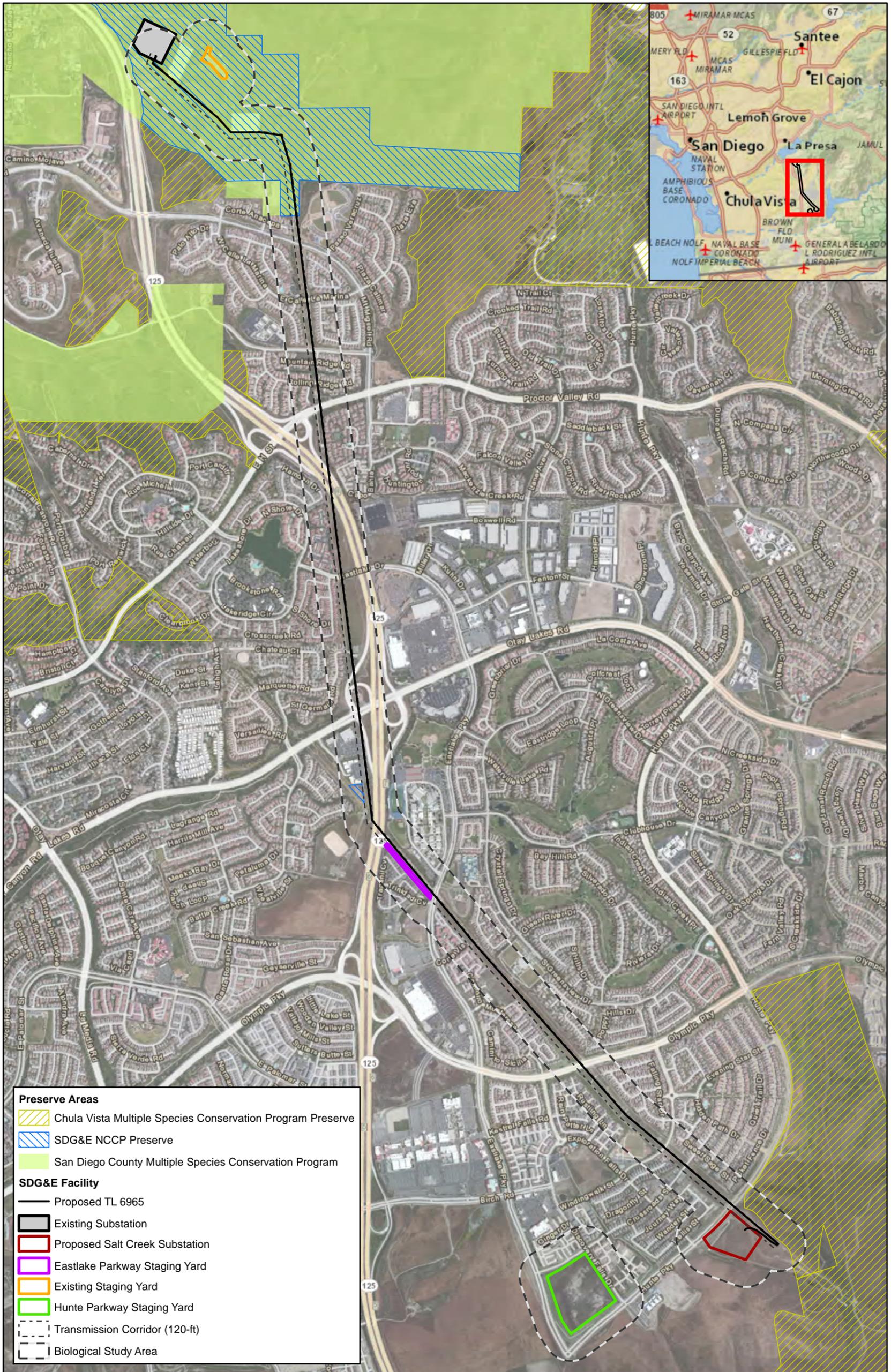


Scale: 1:21,600 1 inch = 1,800 feet

Figure 3-9
USFWS Mapped Critical Habitat within Biological Study Area

SDG&E is providing this map with the understanding that the map is not survey grade.

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Source: AECOM, GeomorphIS LLC, SDG&E, 2013; Esri Basemaps, 2013
 MSCP data: SanGIS/SANDAG Data Warehouse, 2012

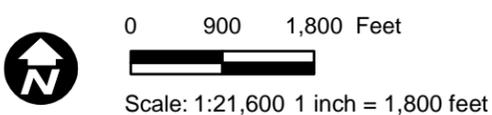


Figure 3-10
Biological Study Area in Relation to MSCP Preserve Areas

SDG&E is providing this map with the understanding that the map is not survey grade.

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CHAPTER 4.0

IMPACT ANALYSIS

The following discussion describes the Proposed Project's potential to impact sensitive resources during construction and operation of the proposed Salt Creek Substation; construction and operation of a five-mile-long power line along an existing Transmission Corridor; modifications to the Existing Substation; and use of the three staging yards. Impacts that would result in irreversible loss of habitat or individuals are considered permanent; impacts that would end with the cessation of construction are considered temporary. SDG&E would operate in compliance with all state and federal laws, regulations, and permit conditions. This includes compliance with the CWA, Porter-Cologne Water Quality Control Act, federal ESA, MBTA, California ESA, CEQA, and requirements and protective measures from CDFW and USFWS. In addition, SDG&E would implement the SDG&E Subregional NCCP, which was established according to the federal ESA and California ESA and the NCCP Act. Compliance also includes following the guidelines outlined in Section 7.1, Operational Protocols, and Section 7.2, Habitat Enhancement Measures, of the SDG&E Subregional NCCP. The Operational Protocols (see Appendix L of this BTR) are designed to provide avoidance and minimize impacts to all sensitive resources, regardless of whether the species is an NCCP-covered species. Additionally, SDG&E has designed and incorporated an APM into the Proposed Project to avoid or minimize potential impacts to WBO. No other APMs are recommended at this time.

Direct and indirect impacts may be either permanent or temporary. These impact categories are defined below.

Direct: Direct impacts are caused by the project and occur at the same time and place as the project. Any alteration, disturbance, or destruction of biological resources that would result from project-related activities is considered a direct impact. Direct impacts would include direct losses to native habitats, potential jurisdictional waters, wetlands, and special status species; and diverting natural surface water flows. Direct impacts could include injury, death, and/or harassment of listed and/or special status species. Direct impacts could also include the destruction of habitats necessary for species breeding, feeding, or sheltering. Direct impacts to plants can include crushing of adult plants, bulbs, or seeds.

Indirect: As a result of project-related activities, biological resources may also be affected in a manner that is not direct. Indirect impacts may occur later in time or at a place that is farther removed in distance from the project than direct impacts, but indirect impacts are still reasonably

foreseeable and attributable to project-related activities. Examples include habitat fragmentation; elevated noise, dust, and lighting levels; changes in hydrology, runoff, and sedimentation; decreased water quality; soil compaction; increased human activity; and the introduction of invasive wildlife (domestic cats and dogs) and plants.

Permanent: All impacts that result in the irreversible removal of biological resources are considered permanent. For the purposes of this project, impacts are irreversible if filling activities result in an elevation (gradient) change or an impervious surface. Examples include constructing a building or permanent road on an area containing biological resources.

Temporary: Any impacts considered to have reversible effects on biological resources can be viewed as temporary. For the purpose of this project, if preconstruction contours are maintained and the area can be revegetated in place, then the impact is considered temporary. Examples include the generation of fugitive dust during construction, or removing vegetation for underground pipeline trenching activities and allowing the natural vegetation to recolonize the impact area.

For the purpose of this analysis, the following applicable thresholds of significance have been used to determine whether implementing the Proposed Project would result in a significant impact. These thresholds of significance are based on Appendix G of the state CEQA Guidelines (CCR Title 14, Division 6, Chapter 3, Sections 15000–15387). A biological resources impact is considered significant if implementation of the Proposed Project would do any of the following:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS;
- Have a substantial adverse effect on federal protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marshes, vernal pools, and coastal areas) or any state-protected jurisdictional areas not subject to regulation under Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy, or ordinance;
- Conflict with the provisions of an adopted habitat conservation plan; natural community conservation plan; or other approved local, regional, or state habitat conservation plan; or
- Substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

4.1 BIOLOGY-RELATED DESIGN ELEMENTS

The following sections summarize some of the key Proposed Project elements as they are used in the biological resources impacts discussion below.

4.1.1 Salt Creek Substation Impacts

Construction the proposed Salt Creek Substation would result in permanent impacts to biological resources. Prior to construction, site preparation activities, including clearing and vegetation removal, would be required. Clearing activities would require the use of mowers, excavators, front-end loaders, and/or bulldozers and would impact disturbed habitat, nonnative grassland, wildflower field, and coastal sage scrub habitat. Earthmoving activities associated with the proposed Salt Creek Substation would require limited remedial grading (removal of colluvium and alluvium), dewatering (if necessary), and mass grading to create the substation pad and improve the existing access road. Construction activities include installation of the following: retaining walls, storm water conveyances, a containment basin, a water quality basin, electrical underground conduits, a perimeter screen wall, entry gates, and paving of internal and external operational and maintenance access roads. Additional temporary impacts (50-foot buffer around the substation pad) are anticipated to result during the construction of the substation.

No impacts are included for the underground 12kV distribution circuits from the proposed Salt Creek Substation, as these impacts would occur in existing paved roads and the proposed access road associated with the proposed Salt Creek Substation.

4.1.2 Transmission Corridor – General Pole Replacement Impacts by Pole Type

The area of permanent and temporary impacts associated with new poles that require a permanent work pad, as described in the Proposed Project description and grading plans provided by SDG&E, were calculated from the Proposed Project grading plans that show areas with a permanent work pad around the pole and associated temporary impacts.

The area of permanent impacts resulting from the installation of light-duty, directly embedded poles that do not require a permanent work pad was calculated assuming that each pole hole averages 40 inches in diameter, with a pole at ground level of approximately 20 to 30 inches in diameter, for a total permanent impact of 5 square feet.

Permanent impacts for light-duty, steel poles are only calculated for the area of the pole alone. As all light-duty poles would be backfilled with concrete, an additional permanent impact would occur surrounding the pole resulting from the concrete backfill. As terrain would vary between pole replacement locations, and pole diameter at the base would vary between pole replacement locations, these additional permanent impacts cannot be accurately estimated at this time. Actual permanent impacts from both the pole and the concrete backfill surrounding the pole would be assessed in the post-construction report, and addressed through credit withdrawal from the SDG&E mitigation bank where appropriate.

The area of temporary impacts associated with pole installation activities was calculated assuming a 10-foot radius workspace around the pole, for a total temporary impact of 309 square feet (314 square feet of temporary impacts minus 5 square feet of permanent impacts). The positioning of line trucks, bucket trucks, and crane trucks would involve the placement of four outriggers (per vehicle) with dimensions of approximately 2 feet wide by 3 feet long (6 square feet) per outrigger for line trucks, and 4 feet wide by 4 feet long (16 square feet) per outrigger for crane trucks. The location of construction vehicles is dependent upon the contractor safely performing the work. The impacts from outriggers staged outside of delineated temporary work areas would be evaluated by the on-site biological monitor prior to their placement. The monitor, as appropriate, would assist crews in outrigger placement to avoid and minimize impacts to sensitive habitat types. In addition, to maintain a safe working space for crewmembers working directly under all poles anticipated to be replaced, construction vehicles may need to be staged off of existing access roads and/or outside of delineated temporary work areas to place new poles. These impact areas cannot be anticipated prior to construction and would not be identified in this BTR. However, the on-site biological monitor would assist crews in locating appropriate staging areas for construction vehicles that avoid and minimize impacts to sensitive habitat types.

Each pier foundation steel pole is estimated to have a foundation at ground level of approximately 6 to 7 feet in diameter. The area of permanent impacts resulting from the installation of pier foundation steel poles was calculated assuming a worst case estimate of 51 square feet. The area of temporary impacts associated with pole installation activities was calculated assuming a 75-foot by 75-foot temporary work area around the pole, for a total temporary impact of for a total temporary impact of 5,574 square feet (5,625 square feet of temporary impacts minus 51 square feet of permanent impacts). Permanent impact for the pier foundation steel poles was calculated based on the worst-case scenario; actual impacts may be less than 51 square feet. Actual permanent impacts will be assessed in the post-construction report, and addressed through mitigation credit to SDG&E (i.e. reduce credit withdraw from the SDG&E mitigation bank, where appropriate). Impacts would occur during installation of the proposed pier foundation steel poles due to excavation of the new pole holes, placement of the excavated soil, and crew members accessing and walking on areas around the poles.

Each steel cable pole is estimated to have a foundation at ground level of approximately 6-7 feet in diameter. The area of permanent impacts resulting from installation of steel cable poles was calculated assuming a worst case estimate of 51 square feet. The area of temporary impacts associated with steel cable pole installation activities were calculated assuming a 150-foot by 150-foot temporary workspace around the pole, for a total temporary impact of 22,449 square feet. Impacts will result from installing the proposed steel cable poles, and consist of excavating new pole holes, placing excavated soil in the work area, and impacts caused by crew members accessing and walking on areas around the poles.

Note: To avoid double counting impacts, the impacts associated with the installation of two steel cable poles (Structures 49 and 50) are within the permanent impact area of the proposed TL 6965 Underground and are not summarized separately. These impacts are accounted for under the TL 6965 Underground footprint.

The permanent impacts associated with pole brushing are approximately 314 square feet (10 foot radius around the pole). Impacts will be considered permanent because pole brushing will occur annually in perpetuity.

Fourteen stringing sites would be required and would be situated along existing access roads. During construction, alterations to the proposed stringing sites or additional sites may be required to accommodate the construction of the tie line. If necessary, any changes would be evaluated for consistency with SDG&E's NCCP, the project's cultural reports, and the findings within the CEQA checklist. Each of these 14 stringing sites would vary in size for a total of

57,290 square feet of temporary impacts. Impacts associated with 14 stringing sites are temporary and include the placement of vehicles and equipment within the site.

Temporary impacts associated with 33 guard structures consist of wood H-frame structures composed of two poles on each side of the crossing. Each pole would have a diameter of 2 feet, resulting in a total of 72 square feet of temporary impacts at each guard structure location; guard structures would be removed upon project completion.

No impacts were included for the adjustments to the existing access roads, as these impacts were accounted for in the permanent work pads associated with the proposed pole structures. Impacts associated with poles, work pads, stringing sites, and guard structures described above are calculated based on the size of the area as described in the SDG&E-provided pole matrix, dated September 13, 2012, and preliminary grading plans.

4.1.3 Existing Substation Modifications

No impacts to vegetation communities, jurisdictional waters and wetlands, or special status plant or wildlife species are included for the installation of a new 69kV TL position at the Existing Substation, as these activities would occur within the existing substation, which consists of paved and gravel-covered areas and is surrounded by chain-link fence.

4.1.4 Staging Yards

No impacts to vegetation communities, jurisdictional waters and wetlands, or special status plant or wildlife species are included for the Existing, Eastlake Parkway, and Hunte Parkway Staging Yards. The Existing Staging Yard is entirely within bare ground and the Hunte Parkway Staging Yard has been mitigated for previously under a separate project. The Eastlake Parkway Staging Yard consists entirely of disturbed habitat and urban/developed land. A habitat assessment was conducted in October 2012 at the five alternative staging areas within Olympic Training Center to determine their potential to support biological resources. These alternative staging yards occur within previously graded areas and do not support biological resources. In addition, it is not known whether they would be used for the Proposed Project. For these reasons, the alternative staging areas are not included in the BSA and impact analysis. Any potential impacts that may occur due to the use of the alternative staging yards would be evaluated prior to use of those areas and captured in the post construction report.

4.2 CONSTRUCTION IMPACTS

This section identifies impacts to the biological resources occurring within the BSA that would result from construction-related activities.

4.2.1 Vegetation Communities

4.2.1.1 Direct Impacts

Salt Creek Substation

Vegetation communities that would be directly, permanently impacted from construction of the proposed Salt Creek Substation, improvement of the access road to Hunte Parkway, and for installation of a drainage to an existing offsite dissipater include Diegan coastal sage scrub, nonnative grassland, disturbed habitat, and landscape/ornamental vegetation (Table 4-1). Direct, temporary impacts would occur to these same vegetation communities and other cover types (Table 4-1). Diegan coastal sage scrub and nonnative grassland vegetation communities provide habitat for NCCP Covered Species.

**Table 4-1
Potential Impacts to Vegetation Communities for the Proposed Project¹**

Type of Impact	Proposed Salt Creek Substation		Transmission Corridor		Total	
	Square Feet	Acres	Square Feet	Acres	Square Feet	Acres
Permanent Impacts						
Diegan coastal sage scrub and nonnative grassland (inside of the SDG&E Preserve)	-	-	4,443	0.10	4,443	0.10
Diegan coastal sage scrub and nonnative grassland (outside of the SDG&E Preserve)	304,759	7.00	65,991	1.52	370,750	8.52
Disturbed habitat, and landscape/ornamental	77,109	1.77	32,677	0.75	109,786	2.52
Total Permanent Impacts	381,868	8.77	103,111	2.37	484,979	11.13
Temporary Impacts						
Diegan coastal sage scrub and nonnative grassland	23,430	0.54	64,578	1.48	88,008	2.02
Disturbed habitat, and landscape/ornamental	58,837	1.35	177,176	4.07	164,464	5.42
Total Temporary Impacts	82,267	1.89	241,754	5.55	324,021	7.44

¹Values may not sum due to rounding after summation.

Transmission Corridor

Vegetation communities that would be directly, permanently impacted during power line construction activities in the transmission corridor include Diegan coastal sage scrub, nonnative grassland, disturbed habitat, landscape/ornamental vegetation, and urban/developed land (Table 4-1). Direct, temporary impacts would occur to the same habitat and other cover types (Table 4-1). Diegan coastal sage scrub and nonnative grassland vegetation communities provide habitat for NCCP Covered Species.

Existing Substation Modifications

The Existing Substation is developed, consisting of paved and gravel-covered land. As a result, no direct, permanent or temporary impacts to vegetation communities would occur.

Staging Yards

No direct, permanent or temporary impacts to vegetation communities would result from the use of the Existing, Eastlake Parkway, and Hunte Parkway Staging Yards. The Hunte Parkway Staging Yard consists of a previously graded area that has been recolonized by nonnative grassland species. Impacts to vegetation communities within the Hunte Parkway Staging Yard have been mitigated for previously under a separate project. The Existing Staging Yard consists entirely of gravel-covered land and no direct impacts to vegetation communities would occur. The Eastlake Parkway Staging Yard consists entirely of disturbed habitat and urban/developed land.

4.2.1.2 Indirect Impacts

Potential temporary and permanent, indirect impacts to vegetation communities may occur as a result of construction-related activities. Grading activities that have potential to create airborne dust, sedimentation, and erosion, can lead to the degradation of adjacent vegetation communities. The potential spread of exotic species into the surrounding vegetation communities would be considered a permanent, indirect impact. Exotic species are opportunistic and could occupy disturbed soils within disturbed areas and spread into adjacent vegetation communities. Additionally, wildfires (caused by construction) are rare but do occur and exotic species often frequent burned areas following a wildfire. Once introduced, these exotic species often compete with natives for resources resulting in a reduction in growth, future dispersal, and recruitment of native species and the eventual degradation of the vegetation community.

4.2.1.3 Significance Determination

The Proposed Project has been designed to avoid sensitive vegetation communities that may support special status species and sensitive biological resources when possible, including not placing poles in drainage areas; using existing access roads to the greatest extent possible; and placing staging areas, laydown areas, guard structures, and helicopter landing areas outside habitats when feasible. Where avoidance of sensitive vegetation communities that provide habitat to NCCP Covered Species, such as Diegan coastal sage scrub and nonnative grassland is not possible, or where sensitive vegetation communities exist adjacent to Proposed Project work areas, implementation of the measures in Sections 7.1 and 7.2 of the SDG&E Subregional NCCP (Appendix L) and compensation in accordance with the SDG&E Subregional NCCP (Section 4.4) would ensure these impacts remain less than significant.

4.2.2 Jurisdictional Waters and Wetlands

4.2.2.1 Direct Impacts

Salt Creek Substation

The natural hydrology of the proposed Salt Creek Substation site has been previously disturbed. The slopes of the site have been re-contoured and access roads with associated brow ditches have been constructed. A tributary to Salt Creek is located immediately west of the site. The tributary enters from the north, through a 96” culvert, flows south, and connects to Salt Creek. Both the tributary and Salt Creek contain riparian scrub habitat and are considered jurisdictional wetlands and streambed. There are no jurisdictional wetlands present within the proposed substation site and all proposed ground disturbing activities and structures have been located outside of jurisdictional waters and wetlands (*i.e.*, Salt Creek and its tributary).

Avoidance of indirect impacts to Salt Creek and its tributary during construction will be covered under the state Water Resources Control Board’s Construction General Permit and outlined in more detail in the project’s SWPPP. Avoidance of post-construction drainage and water quality impacts will be addressed in the site design and the project Storm Water Management Plan (SWMP) in accordance with the City of Chula Vista’s Standard Urban Storm Water Mitigation Plan (SUSMP).

Transmission Corridor

Ground-disturbing activities within the transmission corridor are located away from all potential jurisdictional waters and wetlands, and no structures or string sites would be placed within jurisdictional waters or wetlands. Construction activities associated with the power line in the transmission corridor have been designed to avoid direct impacts to jurisdictional resources. As a result, direct impacts to jurisdictional features are not expected to occur during construction of the power line within the transmission corridor.

Existing Substation Modifications

All modification activities would occur within the existing substation footprint, which consists of paved and gravel-covered areas, and no potential jurisdictional waters are present in the Existing Substation. As a result, direct impacts to jurisdictional features would not occur during modifications to the Existing Substation.

Staging Yards

The Existing Staging Yard is entirely within bare ground and the Hunte Parkway Staging Yard (previously graded) has been mitigated for previously under a separate project. Additionally, no potential jurisdictional waters are present in the Existing Staging Yard, Hunte Parkway Staging Yard, or Eastlake Parkway Staging Yard. As a result, direct impacts to jurisdictional features would not occur during use of these staging yards.

4.2.2.2 Indirect Impacts

The Proposed Project is anticipated to provide a sufficient wetland buffer to adequately protect the functions and values of existing waters and wetlands within the survey area. As a result, indirect impacts to jurisdictional features are not expected to occur.

4.2.2.3 Significance Determination

In accordance with SDG&E NCCP Protocols (see Appendix L) and the “no net loss” wetland policy implemented by USACE, CDFW, and RWQCB, direct and indirect impacts on waters and wetlands resulting from construction of the power line would not occur. Should it be determined that direct or indirect impacts to wetlands and jurisdictional waters are necessary, SDG&E may be required to obtain certain permits or authorizations such as a Section 404 Nationwide Permit from the USACE, 401 Certification or Waste Discharge Requirements (WDRs) from the

RWQCB, and/or 1600 Agreement from the CDFW, which would ensure that potential impacts are avoided and minimized to the greatest extent possible. Thus, impacts to jurisdictional features are not expected to occur during construction of the Proposed Project and would be less than significant.

4.2.3 Plant Species

4.2.3.1 Federally Listed Plant Species

Otay Tarplant

Direct Impacts

Salt Creek Substation

Otay tarplant only occurs within the 500-foot buffer of the proposed Salt Creek Substation, but not within the site itself. Therefore, no direct impacts to Otay tarplant are anticipated during construction of the proposed Salt Creek Substation.

Transmission Corridor

Otay tarplant does not coincide with areas that would be directly, permanently or temporarily impacted by project activities in the transmission corridor. Otay tarplant was observed within the 500-foot buffer of the transmission corridor. A polygon of Otay tarplant is adjacent to an area where an access road would be created for vehicle access to Structure 40, but the location of the road would be designed to avoid impacts to individual plants.

Existing Substation Modifications

Otay tarplant does not have potential to occur within the Existing Substation. Therefore, no impacts to Otay tarplant are anticipated during modification activities at the Existing Substation.

Staging Yards

Otay tarplant was not observed and does not have potential to occur within the Existing Staging Yard, Hunte Parkway Staging Yard, or Eastlake Parkway Staging Yard. Therefore, no impacts to Otay tarplant are anticipated during use of the staging yards.

Indirect Impacts

Potential temporary, indirect impacts to Otay tarplant could arise from runoff and sedimentation, erosion, fugitive dust, and unauthorized access outside of the disturbance area by construction workers. Runoff, sedimentation, and erosion can adversely impact plant populations by damaging individuals or by altering site conditions sufficiently to favor other species (native and exotic nonnatives) that would competitively displace the special status plant species. Construction-generated fugitive dust can adversely affect plants by reducing the rates of metabolic processes such as photosynthesis and respiration. Potential permanent, indirect impacts to nonlisted special status plant species are also likely to arise from population fragmentation and introduction of nonnative exotic species. Due to low densities in rare plant populations, special status plant species are susceptible to and are likely to become easily fragmented by the placement of Proposed Project facilities, which can impact pollinator activity and, as a result, gene flow. In addition, the introduction and establishment of exotic species within, or adjacent to, special status plant populations can adversely affect native species by reducing growth, in addition to dispersal and recruitment. Exotic species are opportunistic and often occupy disturbed soils such as those created in transmission line corridors and areas of exposed bare ground resulting from ground-disturbing activities within the areas of disturbance. Wildfires caused by construction are rare but may occur. Exotics often frequent areas adjacent to and within burn areas following a wildfire.

Significance Determination

SDG&E will implement NCCP protocols as described in Appendix L. These protocols include restricting vehicles to existing roads when feasible, minimizing impacts by defining the disturbance areas, providing biological monitoring to assist crews in avoiding and minimizing impacts at sites with the potential for direct impacts, and designing the construction activities to avoid or minimize new disturbance and erosion. Implementation of SDG&E's NCCP would ensure that any potential direct and indirect impacts to Otay tarplant would remain at a less-than-significant level.

4.2.3.2 State-Listed Plant Species

See the discussion above regarding impacts to the federally listed and state-listed Otay tarplant. The Otay tarplant is the only state-listed species known on-site.

4.2.3.3 Other Special Status Plant Species

Direct Impacts

Salt Creek Substation

Approximately 1.2 million individuals (2 acres) of Palmer's grappling hook (CRPR 4.2) and one individual of San Diego barrel cactus (CRPR 2.1), both SDG&E NCCP covered species, occur within the Salt Creek Substation grading limits and would be permanently impacted by construction activities. Additionally, approximately 100 individuals of San Diego sunflower (CRPR 4.2), a non-SDG&E NCCP covered species, occur within the Salt Creek Substation grading limits and would also be permanently impacted by construction activities.

Four special status plant species occur in the 500-foot buffer of the proposed Salt Creek Substation: variegated dudleya (CRPR 1B.2, NCCP covered), Palmer's grappling hook, San Diego Barrel cactus, and San Diego sunflower. These plant populations that occur only in the 500-foot buffer, would not be directly impacted by construction activities.

Transmission Corridor

Twelve special status plant species were documented within the transmission corridor and 500-foot survey buffer. No special status plant species covered by SDG&E's NCCP coincide with areas that would be directly, permanently or temporarily impacted by project activities in the transmission corridor. However, the permanent work pad associated with one light-duty steel pole (structure #30) coincides with a polygon of San Diego sunflower, a CRPR 4.2 species.

Existing Substation Modifications

No special status plant species have potential to occur within the Existing Substation. Therefore, no impacts to special status plant species are anticipated during modification activities at the Existing Substation.

Staging Yards

No special status plant species were observed or have potential to occur within the Existing Staging Yard, Hunte Parkway Staging Yard, or Eastlake Parkway Staging Yard. Therefore, no impacts on special status plant species are anticipated during use of the staging yards.

Indirect Impacts

Potential temporary, indirect impacts to special status plant species could arise from runoff and sedimentation, erosion, fugitive dust, and unauthorized access outside of the disturbance area by construction workers. Runoff, sedimentation, and erosion can adversely impact plant populations by damaging individuals or by altering site conditions sufficiently to favor other species (native and exotic nonnatives) that would competitively displace the special status plant species. Construction-generated fugitive dust can adversely affect plants by reducing the rates of metabolic processes such as photosynthesis and respiration. Potential permanent, indirect impacts to nonlisted special status plant species are also likely to arise from population fragmentation and introduction of nonnative exotic species. Due to low densities in rare plant populations, special status plant species are susceptible to and are likely to become easily fragmented by the placement of Proposed Project facilities, which can impact pollinator activity and, as a result, gene flow. In addition, the introduction and establishment of exotic species within, or adjacent to, special status plant populations can adversely affect native species by reducing growth in addition to dispersal and recruitment. Exotic species are opportunistic and often occupy disturbed soils such as those created in transmission line corridors and areas of exposed bare ground resulting from ground-disturbing activities within the areas of disturbance. Wildfires caused by construction are rare but may occur. Exotics often frequent areas adjacent to and within burn areas following a wildfire.

Significance Determination

SDG&E will implement NCCP protocols as described in Appendix L. These protocols include restricting vehicles to existing roads when feasible, minimizing impacts by defining the disturbance areas, providing biological monitoring to assist crews in avoiding and minimizing impacts at sites with the potential for direct impacts, topsoil salvage, and designing the construction activities to avoid or minimize new disturbance and erosion. Additionally, SDG&E would compensate for permanent impacts to covered species and their habitats, as described further below. Implementation of SDG&E's NCCP would ensure that any potential direct and indirect impacts to special status plant species would remain at a less-than-significant level.

4.2.4 Wildlife Species

4.2.4.1 Federally Listed Wildlife

Quino Checkerspot Butterfly

Direct Impacts

Salt Creek Substation

No QCB were detected during protocol surveys conducted within the proposed Salt Creek Substation in 2011. Project-related activities are anticipated to have both temporary and permanent impacts in suitable habitat for QCB. These impacts, however, do not occur within SDG&E's QCB Low-Effect HCP Mapped Area for QCB. Therefore, because the impacted area is neither mapped nor occupied, SDG&E's NCCP for QCB does not require mitigation.

Transmission Corridor

No QCB were detected during protocol surveys conducted within the transmission corridor in 2012. Proposed Project-related activities are anticipated to have both temporary and permanent impacts in suitable habitat for QCB near the southern terminus of the Transmission Corridor. These impacts, however, do not occur within SDG&E's QCB Low-Effect HCP Mapped Area for QCB. Therefore, because the impacted area is neither Mapped nor occupied, SDG&E's NCCP for QCB does not require mitigation.

Existing Substation Modifications

All modification activities would occur within the existing substation footprint, which consists of paved and gravel-covered areas. As a result, direct impacts to QCB suitable habitat would not occur during modifications to the Existing Substation.

Staging Yards

No QCB suitable habitat occurs within the Existing Staging Yard, Hunte Parkway Staging Yard, or Eastlake Parkway Staging Yard. As a result, direct impacts to QCB suitable would not occur during use of these staging yards.

Indirect Impacts

Potential permanent indirect impacts to QCB suitable habitat associated with construction of the Proposed Project include introduction and proliferation of invasive nonnative plant species. Potential temporary indirect impacts associated with construction of the Proposed Project include dust, sedimentation, and erosion.

Significance Determination

SDG&E will implement the NCCP Protocols (Appendix L) to avoid and minimize impacts to suitable QCB habitat. These protocols include restricting vehicles to existing roads when feasible, avoiding wildlife to the extent practicable. SDG&E proposes to mitigate for permanent and temporary impacts to coastal sage scrub habitat at a ratio ranging from 1:1 to 2:1, depending on the location of the habitat within the SDG&E Preserve (see Section 4.4). As a result, potential impacts to suitable QCB habitat would be less than significant.

Least Bell's Vireo

Direct Impacts

Salt Creek Substation

LBV suitable habitat does not occur within the proposed Salt Creek Substation. As a result, direct impacts to LBV would not occur during construction of the proposed Salt Creek Substation.

Transmission Corridor

LBV was observed in riparian habitat southeast of the southern terminus of the transmission corridor. However, the transmission corridor would not have any direct impacts to riparian habitat. As a result, direct impacts to LBV would not occur during construction of the power line within the transmission corridor.

Existing Substation Modifications

All modification activities would occur within the existing substation footprint, which consists of paved and gravel-covered areas. As a result, direct impacts to LBV would not occur during modifications to the Existing Substation.

Staging Yards

No suitable LBV habitat occurs within the Existing Staging Yard, Hunte Parkway Staging Yard, or Eastlake Parkway Staging Yard. The Existing Staging Yard is entirely within bare ground, the Hunte Parkway Staging Yard (previously graded) has been mitigated for previously under a separate project, and the Eastlake Parkway Staging Yard consists of disturbed habitat and urban/developed land. As a result, direct impacts to LBV would not occur during use of these staging yards.

Indirect Impacts

Potential permanent indirect impacts to LBV and its habitat associated with construction of the Proposed Project include potential introduction and proliferation of invasive nonnative plant species. Indirect impacts to LBV and its habitat from noise, nighttime lighting, dust, sedimentation, and erosion would be considered temporary indirect impacts.

Significance Determination

SDG&E will implement the NCCP Protocols (Appendix L) to avoid and minimize impacts to LBV. These protocols include restricting vehicles to existing roads when feasible, avoiding wildlife to the extent practicable, conducting pre-construction surveys, and providing biological monitoring where active nests are found. As a result, potential impacts to LBV would be less than significant.

Coastal California Gnatcatcher

Direct Impacts

Salt Creek Substation

CAGN were observed within the proposed Salt Creek Substation during protocol surveys in 2011. Direct impacts to CAGN in the form of habitat destruction, and potentially death, injury,

or harassment of nesting birds, their eggs, and their young may occur. Injury or mortality occurs most frequently during the vegetation clearing stage of construction and involves eggs, nestlings, and recently fledged young that cannot safely avoid equipment. Project-related activities are anticipated to have both temporary and permanent impacts in suitable coastal sage scrub habitat for CAGN (Table 4-1).

Transmission Corridor

CAGN were observed at the southern and northern terminus of the transmission corridor during protocol surveys in 2012. Direct impacts to CAGN in the form of habitat destruction, and potentially death, injury, or harassment of nesting birds, their eggs, and their young may occur. Injury or mortality occurs most frequently during the vegetation clearing stage of construction and involves eggs, nestlings, and recently fledged young that cannot safely avoid equipment. Project-related activities are anticipated to have both temporary and permanent impacts in suitable coastal sage scrub habitat for CAGN (Table 4-1). CAGN critical habitat in the vicinity of the northern terminus of the transmission corridor does not overlap with transmission corridor.

Existing Substation Modifications

All modification activities would occur within the existing substation footprint, which consists of paved and gravel-covered areas. As a result, direct impacts to CAGN would not occur during modifications to the Existing Substation.

Staging Yards

No suitable CAGN habitat occurs within the Existing Staging Yard, Hunte Parkway Staging Yard, or Eastlake Parkway Staging Yard. The Existing Staging Yard is entirely within bare ground, the Hunte Parkway Staging Yard (previously graded) has been mitigated for previously under a separate project, and the Eastlake Parkway Staging Yard consists of disturbed habitat and urban/developed land. As a result, direct impacts to CAGN would not occur during use of these staging yards.

Indirect Impacts

Potential permanent indirect impacts to CAGN and its habitat associated with construction of the Proposed Project include potential introduction and proliferation of invasive nonnative plant species. Indirect impacts to CAGN and its habitat from noise, nighttime lighting, dust, sedimentation, and erosion would be considered temporary indirect impacts.

Significance Determination

SDG&E will implement the NCCP Protocols (Appendix L) to avoid and minimize impacts to CAGN. These protocols include restricting vehicles to existing roads when feasible, avoiding wildlife to the extent practicable, conducting pre-construction surveys, and providing biological monitoring where active nests are found. SDG&E proposes to mitigate for permanent and temporary impacts to coastal sage scrub habitat at a ratio ranging from 1:1 to 2:1, depending on the location of the habitat within the SDG&E Preserve (see Section 4.4). As a result, potential impacts to CAGN would be less than significant.

4.2.4.2 State Listed Wildlife

See the discussion above regarding impacts to the federally listed and state-listed LBV. The LBV is the only state-listed species known on-site.

4.2.4.3 Other Special Status Species

Western Burrowing Owl

Direct Impacts

Salt Creek Substation

WBO were observed within the proposed Salt Creek Substation during winter WBO protocol surveys in 2011 and incidentally during surveys in spring 2012. At least one occupied WBO burrow may be impacted as a result of construction of the proposed Salt Creek Substation. Direct impacts to WBO in the form of habitat destruction, and potentially death, injury, or harassment of nesting birds, their eggs, and their young may occur. Injury or mortality occurs most frequently during the vegetation clearing stage of construction and involves eggs, nestlings, and recently fledged young that cannot safely avoid equipment. Project-related activities are anticipated to have both temporary and permanent impacts in suitable grassland and coastal sage scrub habitat for WBO (Table 4-1).

Transmission Corridor

No WBO were observed within the transmission corridor during protocol surveys in 2012. Project-related activities are anticipated to have both temporary and permanent impacts in suitable grassland and coastal sage scrub habitat for WBO (Table 4-1).

Existing Substation Modifications

All modification activities would occur within the existing substation footprint, which consists of paved and gravel-covered areas. As a result, direct impacts to WBO would not occur during modifications to the Existing Substation.

Staging Yards

No suitable WBO burrows occur within the Existing Staging Yard, Hunte Parkway Staging Yard, or Eastlake Parkway Staging Yard. The Existing Staging Yard is entirely within bare ground, the Hunte Parkway Staging Yard (previously graded) has been mitigated for previously under a separate project, and the Eastlake Parkway Staging Yard consists of disturbed habitat and urban/developed land. Additionally, WBO is not likely to occur on the Eastlake Parkway Staging Yard given the previous disturbance and fragmented habitat. As a result, direct impacts to WBO would not occur during use of these staging yards.

Indirect Impacts

Potential permanent indirect impacts to WBO and its habitat associated with construction of the Proposed Project include potential introduction and proliferation of invasive nonnative plant species. Indirect impacts to WBO and its habitat from noise, nighttime lighting, dust, sedimentation, and erosion would be considered temporary indirect impacts.

Significance Determination

SDG&E will implement the NCCP Protocols (Appendix L) to avoid and minimize for impacts to WBO. These protocols include restricting vehicles to existing roads when feasible, avoiding wildlife to the extent practicable, and conducting pre-construction surveys. SDG&E proposes to mitigate for permanent and temporary impacts to grassland and coastal sage scrub habitat at a ratio ranging from 1:1 to 2:1, depending on the location of the habitat within the SDG&E Preserve (see Section 4.4). WBO is also a narrow endemic species under the NCCP. Implementation of APM-BIO-1 would provide avoidance and impact minimization measures to prevent significant impacts to WBO (see Section 4.5). As a result of implementation of these protocols, potential impacts to WBO would be less than significant.

San Diego Black-Tailed Jackrabbit

Direct Impacts

Salt Creek Substation

San Diego black-tailed jackrabbit was observed within the proposed Salt Creek Substation during project surveys in 2011. Potential direct impacts include potential mortality from vehicle collisions and habitat destruction. Project-related activities are anticipated to have both temporary and permanent impacts in suitable grassland and coastal sage scrub habitat for San Diego black-tailed jackrabbit (Table 4-1).

Transmission Corridor

San Diego black-tailed jackrabbit was observed within the vicinity of the northern end of the transmission corridor during project surveys in 2012. Potential direct impacts include potential mortality from vehicle collisions and habitat destruction. Project-related activities are anticipated to have both temporary and permanent impacts in suitable grassland and coastal sage scrub habitat for San Diego black-tailed jackrabbit (Table 4-1).

Existing Substation Modifications

All modification activities would occur within the existing substation footprint, which consists of paved and gravel-covered areas and is enclosed by a chain-link fence. As a result, direct impacts to San Diego black-tailed jackrabbit would not occur during modification of the Existing Substation.

Staging Yards

The Existing Staging Yard is entirely within bare ground, the Hunte Parkway Staging Yard (previously graded) has been mitigated for previously under a separate project, and the Eastlake Parkway Staging Yard consists of disturbed habitat and urban/developed land. Additionally, San Diego black-tailed jackrabbit is not likely to occur on the Hunte Parkway Staging Yard or Eastlake Parkway Staging Yard given the previous disturbance and fragmented habitat. As a result, direct impacts to San Diego black-tailed jackrabbit are not expected to occur during use of these staging yards.

Indirect Impacts

Potential permanent indirect impacts to San Diego black-tailed jackrabbit and its habitat associated with construction of the Proposed Project include potential introduction and proliferation of invasive nonnative plant species. Indirect impacts to San Diego black-tailed jackrabbit and its habitat from noise, nighttime lighting, dust, sedimentation, and erosion would be considered temporary indirect impacts.

Significance Determination

SDG&E will implement NCCP Protocols (Appendix L) to avoid and minimize impacts to San Diego black-tailed jackrabbit. These protocols include restricting vehicles to existing roads when feasible, avoiding wildlife to the extent practicable, and conducting pre-construction surveys. These protocols also include a biological monitor on-site to avoid and minimize impacts to biological resources. SDG&E proposes to mitigate for permanent and temporary impacts to grassland and coastal sage scrub habitat at a ratio ranging from 1:1 to 2:1, depending on the location of the habitat within the SDG&E Preserve (see Section 4.4). As a result, potential impacts to San Diego black-tailed jackrabbit would be less than significant.

Southern Mule Deer

Direct Impacts

Salt Creek Substation

Southern mule deer was not observed within the proposed Salt Creek Substation during project surveys in 2011. However, suitable habitat exists and potential direct impacts include potential mortality from vehicle collisions and habitat destruction. Project-related activities are anticipated to have both temporary and permanent impacts in suitable grassland and coastal sage scrub habitat for southern mule deer (Table 4-1).

Transmission Corridor

Southern mule deer was observed within the vicinity of the northern end of the transmission corridor during project surveys in 2012. Potential direct impacts include potential mortality from vehicle collisions and habitat destruction. Project-related activities are anticipated to have both

temporary and permanent impacts in suitable grassland and coastal sage scrub habitat for southern mule deer (Table 4-1).

Existing Substation Modifications

All modification activities would occur within the existing substation footprint, which consists of paved and gravel-covered areas and is enclosed by a chain-link fence. As a result, direct impacts to southern mule deer would not occur during modification of the Existing Substation.

Staging Yards

The Existing Staging Yard is entirely within bare ground, the Hunte Parkway Staging Yard (previously graded) has been mitigated for previously under a separate project, and the Eastlake Parkway Staging Yard consists of disturbed habitat and urban/developed land. Additionally, southern mule deer is not likely to occur on the Hunte Parkway Staging Yard or Eastlake Parkway Staging Yard given the previous disturbance and fragmented habitat. As a result, direct impacts to southern mule deer are not expected to occur during use of these staging yards.

Indirect Impacts

Potential permanent indirect impacts to southern mule deer and its habitat associated with construction of the Proposed Project include potential introduction and proliferation of invasive nonnative plant species. Indirect impacts to southern mule deer and its habitat from noise, nighttime lighting, dust, sedimentation, and erosion would be considered temporary indirect impacts.

Significance Determination

SDG&E will implement NCCP Protocols (Appendix L) to avoid and minimize impacts to southern mule deer. These protocols include restricting vehicles to existing roads when feasible, avoiding wildlife to the extent practicable, and conducting pre-construction surveys. These protocols also include a biological monitor on-site to avoid and minimize impacts to biological resources. SDG&E proposes to mitigate for permanent and temporary impacts to grassland and coastal sage scrub habitat at a ratio ranging from 1:1 to 2:1, depending on the location of the habitat within the SDG&E Preserve (see Section 4.4). As a result, potential impacts to southern mule deer would be less than significant.

Other Migratory Birds

Direct Impacts

Salt Creek Substation

Numerous migratory bird species were detected within the proposed Salt Creek Substation, including seven special status species: rufous-crowned sparrow, Cooper's hawk, grasshopper sparrow, northern harrier, white-tailed kite, yellow-breasted chat, and yellow warbler. The proposed Salt Creek Substation would result in direct construction-related impacts to bird populations on-site, in the form of habitat destruction, and potentially death, injury, or harassment of nesting birds, their eggs, and their young. "Take" under the MBTA is generally interpreted as the direct death or injury of birds from collisions with vehicles and other machinery. This most frequently occurs during the vegetation clearing stage of construction and involves eggs, nestlings, and recently fledged young that cannot safely avoid equipment.

Transmission Corridor

Numerous migratory bird species were detected within the transmission corridor including seven special status species: Cooper's hawk, grasshopper sparrow, Bell's sage sparrow, northern harrier, white-tailed kite, yellow-breasted chat, and yellow warbler. The transmission corridor would result in direct construction-related impacts to bird populations on-site, in the form of habitat destruction, and potentially death, injury, or harassment of nesting birds, their eggs, and their young. This most frequently occurs during the vegetation clearing stage of construction and involves eggs, nestlings, and recently fledged young that cannot safely avoid equipment.

Existing Substation Modifications

All modification activities would occur within the existing substation footprint, which consists of paved and gravel-covered areas. As a result, direct impacts to migratory birds would not occur during modifications to the Existing Substation.

Staging Yards

The Existing Staging Yard is entirely within bare ground, the Hunte Parkway Staging Yard (previously graded) has been mitigated for previously under a separate project, and the Eastlake Parkway Staging Yard consists of disturbed habitat and urban/developed land. However, there is

the potential for migratory birds to nest within staging yards. Use of the staging yard would result in direct impacts to bird populations on-site, in the form of habitat destruction, and potentially death, injury, or harassment of nesting birds, their eggs, and their young.

Indirect Impacts

Potential permanent indirect impacts to migratory birds and their habitat associated with construction of the Proposed Project include potential introduction and proliferation of invasive nonnative plant species. Indirect impacts to migratory birds and their habitat from noise, nighttime lighting, dust, sedimentation, and erosion would be considered temporary indirect impacts.

Significance Determination

SDG&E will implement the NCCP Protocols (Appendix L) to avoid and minimize impacts to migratory birds. These protocols include restricting vehicles to existing roads when feasible, avoiding wildlife to the extent practicable, conducting pre-construction surveys, and providing biological monitoring where active nests are found. SDG&E would also remain in compliance with the MBTA. Implementation of SDG&E's NCCP and Operational Protocols, and compliance with the MBTA as described above, would ensure the impacts to nesting avian species remain less than significant.

In addition, SDG&E proposes to mitigate for permanent and temporary impacts to grassland and coastal sage scrub habitat at a ratio ranging from 1:1 to 2:1, depending on the location of the habitat within the SDG&E Preserve (see Section 4.4). As a result, potential impacts to migratory birds would be less than significant.

4.2.5 NCCP Preserve Areas

Direct Impacts

Salt Creek Substation

The proposed Salt Creek Substation is located on land identified for development under the Otay Ranch General Development Plan and is outside of the City of Chula Vista's MSCP Preserve and SDG&E's NCCP Preserve layer.

Transmission Corridor

The northern section of the transmission corridor (north of Mount Miguel Road, excluding Structures 35 and 34, and Guard Structure 1) is located within a SDG&E-defined “Preserve” area; the remainder of transmission corridor is located outside of defined Preserve boundaries (Figure 3-10). Project-related activities are anticipated to have permanent impacts to suitable grassland and coastal sage scrub habitat within the Preserve (Table 4-1).

Existing Substation Modifications

The Existing Substation falls within the boundaries of the City of San Diego MSCP Subarea Plan. All modification activities would occur within the existing substation footprint, which consists of paved and gravel-covered areas. Thus, no impacts to preserves would occur.

Staging Yards

The Hunte Parkway Staging Yard and Eastlake Parkway Staging Yard are outside of any preserve boundaries. The Existing Staging Yard falls within the boundaries of the City of San Diego MSCP Subarea Plan; however, the Existing Staging Yard is entirely within bare ground. Thus, no impacts to preserves would occur.

Indirect Impacts

Potential permanent indirect impacts to adjacent preserves associated with construction of the Proposed Project include potential introduction and proliferation of invasive nonnative plant species. Indirect impacts to adjacent preserves from noise, nighttime lighting, dust, sedimentation, and erosion would be considered temporary indirect impacts.

Significance Determination

SDG&E proposes to mitigate impacts to habitat within preserves under SDG&E’s NCCP. Section 6.3.3.3 of the City of Chula Vista’s MSCP states that SDG&E substation projects and associated facilities are not covered by the City’s MSCP but instead would be covered by the SDG&E NCCP. Per Table 7.4 of SDG&E’s Subregional NCCP, SDG&E proposes to mitigate for permanent impacts to coastal sage scrub and nonnative grassland habitats located within a defined Preserve at a 2:1 ratio, and a 1:1 ratio outside of a defined Preserve. Furthermore,

implementation of the NCCP Protocols (Appendix L) during construction is expected to reduce any potential impacts to less than significant.

4.2.6 Wildlife Corridors

Direct Impacts

Salt Creek Substation

The proposed Salt Creek Substation lies adjacent to urban development and a roadway (Hunte Parkway). As such, the site does not function as a wildlife movement corridor and no impacts to wildlife movement corridors would occur during construction of the proposed Salt Creek Substation. However, at the local level, wildlife species may use the site for movements related to dispersal and home range activities, and construction vehicles have the potential to result in accidental injury to or mortality of on-site species during construction

Transmission Corridor

The transmission corridor is surrounded by urbanized development and is transected and adjacent to several roadways that carry significant traffic volumes. As such, it does not function as a wildlife movement corridor and no impacts to wildlife movement corridors would occur during construction of the power line in the transmission corridor. However, at the local level, wildlife species may use the northern and southern ends of the transmission corridor for movements related to dispersal and home range activities, and construction vehicles have the potential to result in accidental injury to or mortality of on-site species during construction

Existing Substation Modifications

All modification activities would occur within the existing substation footprint, which consists of paved and gravel-covered areas and is enclosed by chain-link fence. As such, it does not function as a wildlife movement corridor and no impacts to wildlife movement corridors would occur during modification activities within the substation.

Staging Yards

The Hunte Parkway Staging Yard and Eastlake Parkway Staging Yard are surrounded by urbanized development and roadways on all sides, and the Existing Staging Yard is surrounded

by chain-link fence. As such, the staging yards do not function as wildlife movement corridors and no impacts to wildlife movement corridors would occur during use of the staging yards during construction of the Proposed Project.

Indirect Impacts

Indirect impacts to local wildlife movement (including local species home ranges and dispersal) may result during construction of the Proposed Project from increased human presence, construction-generated noise and nighttime lighting, and edge effects associated with development. These indirect impacts may result in avoidance of the site vicinity during local movements, such as home range and dispersal, due to artificial light, noise, degraded surrounding habitat, and other anthropogenic influences.

Significance Determination

Impacts to wildlife corridors are considered less than significant since the Proposed Project does not function as a wildlife corridor. The site is located adjacent to urbanized development and is transected and adjacent to several roadways that carry significant traffic volumes, which fragment it from other areas of undeveloped land. At the local level, impacts to local movement, such as home range and dispersal, are considered less than significant due to the minimal area impacted.

4.3 OPERATION AND MAINTENANCE IMPACTS

This section identifies impacts to biological resources occurring within the BSA that would result from operation and maintenance activities for the Proposed Project.

4.3.1 Vegetation Communities

4.3.1.1 Direct Impacts

Salt Creek Substation

All future operation and maintenance activities of the proposed Salt Creek Substation would occur within the fenced-in area of the substation, on areas that would be paved or covered by gravel, and in areas currently landscaped. As a result, impacts to sensitive vegetation

communities during operation and maintenance of the proposed Salt Creek Substation would not occur.

Transmission Corridor

All future operation and maintenance activities of the proposed power line would occur within the transmission corridor ROW, in areas currently landscaped or disturbed by construction. Potential impacts to sensitive vegetation communities could occur during the maintenance of vegetation around power line structures, and driving or walking across sensitive communities.

Existing Substation Modifications

All future operation and maintenance activities at the Existing Substation would occur within the fenced-in area of the substation, on areas are paved or covered by gravel. As a result, impacts to sensitive vegetation communities during operation and maintenance of the Existing Substation would not occur.

Staging Yards

Upon completion of the Proposed Project, the Existing Staging Yard, Hunte Parkway Staging Yard, and Eastlake Parkway Staging Yard would no longer be used and operation and maintenance activities would not occur at them.

4.3.1.2 Indirect Impacts

Operation and maintenance activities may result in permanent indirect impacts to vegetation communities surrounding the areas of disturbance. Permanent, indirect impacts to vegetation communities may include edge effects and increased exposure to exotic plants. Erosion and stormwater contaminant runoff may degrade adjacent vegetation communities. Exotic plant species are opportunistic and often occupy disturbed soils such as those within the transmission line corridors and areas of exposed bare ground that may occur within the disturbance area. Wildfires caused by downed transmission lines are rare but may occur. Exotics often frequent areas adjacent to and within burn areas following a wildfire. Once introduced, these exotic plant species often outcompete natives for resources resulting in a reduction in growth, future dispersal, and recruitment of native species and the eventual degradation of the vegetation community.

4.3.1.3 Significance Determination

SDG&E will implement the NCCP Protocols (Appendix L) to avoid and minimize impacts to sensitive vegetation communities during future operation and maintenance of the transmission corridor. Such Protocols include driving and remaining on existing access roads to conduct operation and maintenance activities. As such, implementation of NCCP Protocols (Appendix L) is expected to reduce potential impacts to sensitive communities to less than significant.

4.3.2 Jurisdictional Waters and Wetland

4.3.2.1 Direct Impacts

Since the permanent structures in the transmission corridor and Salt Creek Substation are located away from potential jurisdictional waters and wetlands, future operation and maintenance activities are not expected to impact jurisdictional water and wetlands. As such, no direct impacts to jurisdictional waters and wetlands would occur during operation and maintenance activities upon Proposed Project completion.

4.3.2.2 Indirect Impacts

Implementation of BMPs would adequately protect the functions and values of existing waters and wetlands, and offer further protection from potential impacts during operation and maintenance activities in the transmission corridor and proposed Salt Creek Substation. BMPs, such as installation of silt fencing and straw waddles, would protect the chemical, physical, and biological integrity of any potential jurisdictional waters adjacent to Proposed Project features. As such, no impacts to jurisdictional waters and wetlands would occur during operation and maintenance activities upon Proposed Project completion.

4.3.2.3 Significance Determination

No impacts to jurisdictional waters and wetlands would occur during operation and maintenance activities upon Proposed Project completion. Thus, impacts on waters and wetlands resulting from operation and maintenance activities of the Proposed Project would not be significant.

4.3.3 Special status Plant Species

4.3.3.1 Direct Impacts

Salt Creek Substation

All future operation and maintenance activities at the proposed Salt Creek Substation would occur within the fenced-in area of the substation, on areas that would be paved or covered by gravel, and in areas currently landscaped. As a result, impacts to special status plant species during operation and maintenance of the proposed Salt Creek Substation would not occur.

Transmission Corridor

All future operation and maintenance activities of the proposed power line would occur within the transmission corridor ROW, in areas currently landscaped. However, potential impacts to special status plant species could occur during the maintenance of vegetation around power line structures, and driving or walking across special status plant species.

Existing Substation Modifications

All future operation and maintenance activities at the Existing Substation would occur within the fenced-in area of the substation, on areas are paved or covered by gravel. As a result, impacts to special status plant species during operation and maintenance of the Existing Substation would not occur.

Staging Yards

Upon completion of the Proposed Project, the Existing Staging Yard, Hunte Parkway Staging Yard, and Eastlake Parkway Staging Yard would no longer be used and operation and maintenance activities would not occur at them.

4.3.3.2 Indirect Impacts

Operation and maintenance activities could result in permanent indirect impacts to special status plant species. Erosion and stormwater contaminant runoff may degrade adjacent habitat for special status plant species. Exotic plant species are opportunistic and often occupy disturbed soils such as those within the transmission line corridors and areas of exposed bare ground that

may occur within the areas of disturbance. Exotic plant species compete with natives for resources resulting in a reduction in growth, future dispersal, and recruitment of native species. There is a greater likelihood of impacts where special status plant species occur adjacent to the areas of disturbance.

4.3.3.3 Significance Determination

SDG&E will implement the NCCP Protocols (Appendix L) to avoid and minimize impacts to special status plant species during future operation and maintenance activities. Such Protocols include driving and remaining on existing access roads to conduct operation and maintenance activities. As such, implementation of NCCP Protocols (Appendix L) is expected to reduce potential impacts to special status plant species to less than significant.

4.3.4 Special status Wildlife Species

4.3.4.1 Direct Impacts

Direct impacts to wildlife species could occur from mortality of individuals by crushing or vehicle collisions during operation and maintenance activities.

4.3.4.2 Indirect Impacts

Operation of the Proposed Project could result in permanent, indirect impacts to special status wildlife species, which includes edge effects, where facilities would lead to increased lighting and exotic plant and wildlife invasion. Nighttime lighting could disrupt species movement and/or cause increased predation rates. Wildfires caused by downed transmission lines are rare but may occur and damage adjacent habitat. Maintenance activities could result in temporary indirect impacts that may include the disruption of nesting and foraging behavior. As SDG&E currently operates existing facilities in the transmission corridor, a significant increase in vehicle trips and activities generated by SDG&E maintenance vehicles over that which presently exists is not anticipated.

4.3.4.3 Significance Determination

SDG&E will implement the NCCP Protocols (Appendix L) to avoid and minimize impacts to special status wildlife species during future operation and maintenance of the transmission corridor. These protocols include restricting vehicles to existing roads when feasible and

avoiding wildlife to the extent practicable. These protocols also include a biological monitor on-site to avoid and minimize impacts to biological resources. As such, implementation of NCCP Protocols (Appendix L) is expected to reduce potential impacts to special status wildlife species to less than significant.

4.3.5 NCCP Preserve Areas

4.3.5.1 Direct Impacts

Operation of the Proposed Project would not result in any additional direct impacts to NCCP preserve areas beyond those described in Section 4.2.5.

4.3.5.2 Indirect Impacts

Operation of the Proposed Project would not result in any additional indirect impacts to NCCP preserve areas beyond those described in Section 4.2.5.

4.3.5.3 Significance Determination

Operation of the Proposed Project would not result in any additional significant impacts to NCCP preserve areas; thus, no avoidance and minimization measures are necessary.

4.3.6 Wildlife Corridors

4.3.6.1 Direct Impacts

Operation of the Proposed Project would not result in any additional direct impacts to wildlife movement beyond those described in Section 4.2.6.

4.3.6.2 Indirect Impacts

Operation of the Proposed Project would not result in any additional indirect impacts to wildlife movement beyond those described in Section 4.2.6.

4.3.6.3 Significance Determination

Operation of the Proposed Project would not result in any additional significant impacts to wildlife movement; thus, no avoidance and minimization measures are necessary.

4.4 COMPENSATION IN ACCORDANCE WITH SDG&E SUBREGIONAL NCCP

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 poles in drainage areas; using existing access roads to the greatest extent possible; and placing staging areas, laydown areas, guard structures, and stringing sites outside habitats when feasible. Due to the small permanent footprint of the Proposed Project, common and sensitive wildlife habitat is not expected to be adversely affected. Where avoidance of sensitive habitat areas supporting special status wildlife is not possible, or where sensitive habitat areas exist adjacent to Proposed Project work areas, implementation of the measures in Sections 7.1 and 7.2 of the SDG&E Subregional NCCP (Appendix L) would reduce these impacts to less than significant. Compliance with the SDG&E Subregional NCCP, which includes enhancement and/or mitigation for loss of habitat within Preserve areas, would reduce impacts to NCCP-covered species to a less-than-significant level.

Additionally, required pre-activity surveys, pursuant to the SDG&E Subregional NCCP, would also confirm the absence of any other special status species not covered under the SDG&E Subregional NCCP. If any non-covered species or special status species are identified during the surveys, compliance with Sections 7.1 and 7.2 of the SDG&E Subregional NCCP would provide avoidance, minimization, and mitigation of impacts, as applicable. The avoidance of any impacts to special status plant or wildlife species is expected through compliance measures in the SDG&E Subregional NCCP. In addition, per the SDG&E Subregional NCCP, verification surveys are required if surface disturbance has not commenced within 30 days of the submittal of the Pre-activity Study Report to USFWS and CDFW.

4.4.1 Salt Creek Substation

The Otay Ranch RMP was developed prior to the City of Chula Vista's MSCP to provide mitigation for development projects occurring in Otay Ranch by requiring conveyance/purchase of 1.188 acres of land for every acre of developable land, to assemble the Otay Ranch Preserve. The proposed Salt Creek Substation is located within Otay Ranch and, since SDG&E purchased the land for development of the proposed substation, SDG&E was required to fulfill the 1.188-acre conveyance requirement under the Otay Ranch RMP. SDG&E purchased 11.0959 acres of conveyance land Preserve Credits from JPB (James P. Baldwin) Development, LLC in June 2011 (Cameron, pers. comm., 2011) in conjunction with purchasing the 11.64-acre Salt Creek Substation property. Based on calculations by the City of Chula Vista, 2.3 acres of slopes created

with construction of Hunte Parkway were previously conveyed as part of the Hunte Parkway construction project and therefore did not require conveyance again by SDG&E.

Section 6.3.3.3 of the City of Chula Vista's MSCP states that SDG&E substation projects and associated facilities are not covered by the City of Chula Vista's MSCP but instead would be covered by the SDG&E NCCP as stated below.

6.3.3.3 Facilities Covered by Other Habitat Planning Efforts: There are other major facilities planned within the Chula Vista MSCP Planning Area that are not covered by this Subarea Plan, but are permitted or proposed to be permitted through other habitat conservation programs. These include, but may not be limited to the following:

SDG&E utility lines, facilities and related access roads are covered by a separate SDG&E NCCP Subregional Plan. Two substations and their associated facilities will be built in the Otay Ranch and are covered by the SDG&E NCCP Subregional Plan. Extensions of electric and/or gas utility services to individual users are covered by this Subarea Plan when not covered by the SDG&E NCCP Subregional Plan.

Impacts to vegetation communities, such as Diegan coastal sage scrub and nonnative grassland, that provide habitat for NCCP Covered Species require mitigation. Pursuant to the provisions of Section 6.3.3.3 of the City of Chula Vista's MSCP, SDG&E intends to use the NCCP to provide take coverage for the proposed Salt Creek Substation project, as described above. SDG&E is requesting that the resource agencies allow SDG&E to use 7.54 acres of the 11.0959 acres of purchased conveyance land credits in the Otay Ranch Preserve in lieu of drawing down credits from SDG&E's NCCP credits (Table 4-2). This request for in-lieu mitigation is based on the following:

- The purchase of conveyance land serves as the vehicle for mitigating all private development projects in Otay Ranch;
- The purchase of conveyance land provides mitigation credits close to the source of the impact; and
- The purchase of conveyance land allows SDG&E's conveyance land credits to mitigate Proposed Project related impacts, instead of requiring double mitigation through conveyance pursuant to the Otay Ranch RMP and drawing down SDG&E NCCP credits.

**Table 4-2
Proposed Salt Creek Substation Mitigation Summary**

Type of Mitigation		Credit Drawdown	
		Square Feet	Acres
Temporary (Outside SDG&E Preserve)	Total temporary impacts to coastal sage scrub and nonnative grassland habitat	23,430	0.54
Permanent (Outside SDG&E Preserve)	Total permanent impacts to coastal sage scrub and nonnative grassland habitat	304,759	7.00
TOTAL	Total mitigation for ALL impacts to coastal sage scrub and nonnative grassland habitats	328,189	7.54

4.4.2 Power Line 6965

4.4.2.1 Temporary Impacts

Per Table 7.4 of the NCCP, temporary impacts to coastal sage scrub and nonnative grassland habitats within and outside of a Preserve would be mitigated at a ratio of 1:1. No mitigation is required for temporary impacts to bare ground, disturbed habitat, or landscape/ornamental vegetation. SDG&E proposes to mitigate for 67,170 square feet (1.54 acres) of temporary impacts to coastal sage scrub and nonnative grassland at a ratio of 1:1 (Table 4-3). SDG&E is requesting that the resource agencies allow SDG&E to use 1.54 acres of the 11.0959 acres of purchased conveyance land credits in the Otay Ranch Preserve in lieu of drawing down credits from SDG&E's NCCP credits.

4.4.2.2 Permanent Impacts

Per Table 7.4 of SDG&E's Subregional NCCP, SDG&E proposes to mitigate for permanent impacts to coastal sage scrub and nonnative grassland habitats located within a defined Preserve at a 2:1 ratio, and a 1:1 ratio outside of a defined Preserve. No mitigation is required for permanent impacts to bare ground, disturbed habitat, or landscape/ornamental vegetation.

SDG&E proposes to mitigate for 4,443 square feet (0.10 acre) of permanent impacts to coastal sage scrub and grassland habitats at a ratio of 2:1 and 65,991 square feet (1.52 acres) of permanent impacts to coastal sage scrub and grassland habitats at a ratio of 1:1 (Table 4-3). SDG&E is requesting that the resource agencies allow SDG&E to use 1.72 acres of the 11.0959 acres of purchased conveyance land credits in the Otay Ranch Preserve in lieu of drawing down credits from SDG&E's NCCP credit.

**Table 4-3
Power Line 6965 Mitigation Summary**

Type of Mitigation		Credit Drawdown	
		Square Feet	Acres
Temporary	Total temporary impacts to coastal sage scrub and nonnative grassland habitat at a 1:1 ratio	63,594	1.46
Permanent (Inside SDG&E Preserve)	Total permanent impacts to coastal sage scrub and nonnative grassland habitat within the defined Preserve at a 2:1 ratio	8,886	0.20
Permanent (Outside SDG&E Preserve)	Total permanent impacts to coastal sage scrub and nonnative grassland habitat outside of the defined Preserve at a 1:1 ratio	65,991	1.52
TOTAL	Total mitigation (drawdown credits) for ALL impacts to coastal sage scrub and nonnative grassland habitats	138,471	3.18

4.5 APPLICANT PROPOSED MEASURES

Potential impacts to biological resources would be less than significant through the avoidance of resources, application of avoidance and minimization measures and mitigation in the *SDG&E Subregional NCCP*, implementation of *SDG&E Operational Protocols*, compliance with 401 Certification from RWQCB (Certification 11C-114; Categorical Exemption), habitat enhancement, and APMs, which have been incorporated as part of the Proposed Project description.

SDG&E has designed and incorporated the following APM into the Proposed Project to avoid or minimize potential impacts to WBO:

APM-BIO-1 - SDG&E shall coordinate with the wildlife agencies to implement the avoidance and minimization measures presented in the “Mitigation Methods” section of the CDFW guidance (CDFG 2012b), as needed and as appropriate, to avoid impacts to WBO. No less than 14 days prior to initiating ground-disturbance activities, an initial “take” avoidance survey shall be completed on-site and within a 500-foot buffer (CDFG 2012b). Based on the guidelines put forth by CDFW, if WBO occupancy on-site is confirmed, SDG&E shall coordinate with CDFW to develop mitigation methods for occupied burrows and habitat that may be directly impacted, which may include preparing a CDFW-approved “Burrowing Owl Exclusion Plan” and “Mitigation Management Plan” (CDFG 2012b) and the option of using the 11.0959 acres of purchased conveyance land credits in the Otay Ranch Preserve in lieu of the purchase of additional lands.

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APPENDIX A

**LIST OF SURVEY PERSONNEL
AND DATES OF SURVEYS**

Appendix A

List of Survey Personnel and Dates of Surveys

Survey Activity ¹	Dates	Survey Personnel
<i>2011 Biological Surveys</i>		
Focused Least Bell's Vireo Surveys	May 5, 19, and 31; June 10 and 21; and July 2, 12, and 27, 2011	Brennan Mulrooney
Focused Western Burrowing Owl Surveys	June 6 and 21; July 2 and 12; December 2, 5, 6, and 8, 2011	Brennan Mulrooney
Focused Coastal California Gnatcatcher Surveys	April 20, May 17, and June 24, 2011	Bonnie Hendricks
Focused Quino Checkerspot Butterfly Surveys	March 14, 15, 22, 23, 28, and 31; April 4, 6, 11, 13, and 20, 2011	Bonnie Hendricks, Erin Bergman
<i>2012 Biological Surveys</i>		
Focused Quino Checkerspot Butterfly Surveys	February 8 (habitat assessment), 17, 24, and 25; and March 2, 3, 8, 9, 10, 13, 14, 15, 21, 22, 23, 28, 29, and 30, 2012	Erik LaCoste, Viviane Marquez
Vegetation Community Mapping	March 9, 2012	Brynne Mulrooney, Lance Woolley
Rare Plant Surveys	March 16 (general site reconnaissance), 26, 28, 29, 30, and 31; May 1, 3, 7, 15, 18, 19, and 31; and July 20 and 25, 2012	Michelle Balk
Reconnaissance-level Jurisdictional Waters Assessment ²	March 21, 2012 September 13, 2012	Brian Felten Joshua Zinn
Focused Western Burrowing Owl Surveys	April 21 and 28; May 8; June 7; and July 4 and 5, 2012	Jeffrey L. Lincer, D. Palmer, and Brynne Mulrooney
Focused Coastal California Gnatcatcher Surveys	May 11; July 24; and August 16, 2012	James McMorran, Brynne Mulrooney
PSR Field Survey	September 12 and 13, 2012	Art Popp

¹ Detailed survey information is provided in survey reports included as Appendices B through J.

² The portion of the proposed transmission line corridor bounded by Eastlake Drive to the north and Otay Lakes Road to the south was formally delineated by RECON for SDG&E under a separate contract. Therefore, this segment of the transmission line corridor was not assessed during the reconnaissance-level field assessment.

APPENDIX B

**VEGETATION AND RARE PLANT
SUMMARY REPORT FOR THE PROPOSED
SALT CREEK SUBSTATION**

December 22, 2011

Ms. Debbie Collins
San Diego Gas & Electric
8315 Century Park Court - CP21E
San Diego, CA 92123

RE: Vegetation and Rare Plant Summary Report for the Proposed Salt Creek Substation for SDG&E

Dear Ms. Collins:

The purpose of this letter report is to present the findings of the botanical resource surveys conducted for the proposed Salt Creek Substation. The purpose of the botanical surveys is to (1) compile a list of plant species that occur within the site, (2) identify plant communities and map their distribution, and (3) identify sensitive plant species and map their distribution. Surveys were conducted on behalf of San Diego Gas and Electric (SDG&E).

Project Description

The Salt Creek Substation is proposed by SDG&E for meeting the electrical infrastructure needs of the Otay Ranch community. The approximately 11.7-acre site is located on Otay Mesa in Chula Vista, California, south of the intersection of Hunte Parkway and Exploration Way (Figure 1).

For purposes of this report, the term "project survey area" refers to the proposed Salt Creek Substation site plus a 500-foot survey buffer. The project survey area occurs within the City of Chula Vista's Multiple Species Conservation Planning (MSCP) Subarea Plan, Otay Ranch Planning Area. The site lies outside of the Otay Ranch Preserve, which is located approximately 1,200 feet southeast of the site (Figure 2).

The project survey area contains a variety of native habitats, including coastal sage scrub, riparian scrub, grassland, and open clay soils/wildflower field. Several dirt access roads cross the project survey area. The majority of the project survey area is non-native grassland and wildflower field on a mesa top, with adjacent coastal sage scrub along the slopes of the mesa (Figure 3).

Survey Methodology

A search of the relevant regional databases for sensitive biological resources in the vicinity of the project study area was conducted prior to conducting the field surveys. This included a search of the California Department of Fish and Game's (CDFG) California Natural Diversity Database (CNDDDB) and a search of the California Native Plant Society (CNPS) Electronic Inventory (i.e., 9 quad search based on the Jamul Mountains Quad).

AECOM biologist Bonnie Hendricks conducted spring rare plant surveys on 3 dates spanning the early, middle, and late blooming periods to maximize detection of sensitive plant species. Survey dates were March 14, April 20, and June 24, 2011. Each survey was

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conducted by walking meandering transects through the site and recording plant species observed. Vegetation communities and rare plant populations were mapped on a recent, color aerial photograph at a scale of 1 inch = 75 feet. Rare plant population size was estimated by counting the number of plants per meter square within 25 1-meter square quadrants scattered randomly throughout the mapped population. The average density was calculated and multiplied by the total area of mapped rare plant polygons to obtain an estimated total population size.

Results

Vegetation Communities

A total of 6 vegetation communities and land cover types are present within the project survey area (Figure 3). These habitat types are summarized in Table 1 and are described below. Vegetation community classifications used in this report follow Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California* published in 1986, with modifications to accommodate the lack of conformity of the observed communities to those of Holland.

**Table 1
 Vegetation Communities within the
 Salt Creek Substation Project Area and 500-foot Buffer**

Vegetation Type	Project Area (Acres)	500-foot Buffer (Acres)	Total Acreage
Uplands			
Coastal Sage Scrub	1.2	14.4	15.6
Non-native grassland	5.4	27.5	32.9
Wildflower Field	1.6	0	1.6
Riverine, Wetlands, and Water			
Southern Willow Scrub	0	0.9	0.9
Exotic, Disturbed and Developed			
Ornamental/Disturbed	3.2	1.0	4.2
Developed	0.3	29.8	30.1
Total	11.7	73.6	85.3

The project survey area is dominated by nonnative grassland, coastal sage scrub, and wildflower field. Ornamental/disturbed vegetation occurs along the cut banks associated with Hunte Parkway and the several paved access roads that occur within the proposed project area. A riparian scrub corridor (i.e., southern willow scrub) occurs along the southern edge, just outside of the proposed project area. Figure 3 illustrates the vegetation communities and Table 1 provides the acreages within the project survey area (including the 500-foot buffer) and proposed project area. A discussion of each community type is presented below.

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Coastal Sage Scrub

This community was dominated by California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), and San Diego sunflower (*Bahiopsis laciniata*). Other characteristic species of coastal sage scrub found within the survey area include lemonade berry (*Rhus integrifolia*), deerweed (*Acemisson glaber*), and wild cucumber (*Marah macrocarpa*).

Wildflower Field

Wildflower field occurs on heavy clay soils within the central mesa-top portion of the proposed project area. Clay soils in this region often support clay endemic plant species including sensitive species. The wildflower field onsite is dominated by a sensitive clay endemic plant species, Palmer's grapplinghook (*Harpagonella palmeri*). Other associated plant species include birds's beak (*Erodium botrys*), blue-eyed grass (*Sisyrinchium bellum*), blue dicks (*Dichelostemma capitata*), purple needlegrass (*Nasella pulchra*), and foothill needlegrass (*N. lepida*).

Non-Native Grassland

Non-native grassland is found within the slightly more disturbed soils onsite and particularly within the 500-foot buffer area south of the project area and within the disjunct project area north of Hunte Parkway. Dominant species include wild oats (*Avena* spp.) and ripgut grass (*Bromus diandrus*). Numerous native and non-native species occur in association with this vegetation community within the proposed project area.

Southern Willow Scrub

A tributary drainage connecting downstream to Salt Creek flows along the southern edge, just outside of the proposed project area (Figure 3). This drainage is occupied by southern willow scrub dominated by arroyo willow (*Salix lasiolepis*) with pockets of freshwater marsh occurring within the willow scrub habitat. Other characteristic species found within this community onsite include salt cedar (*Tamarix* sp.), mulefat (*Baccharis salicifolia*), red willow (*Salix laevigata*), and cattail (*Typha* sp.).

Ornamental/Disturbed Habitat

The cut banks or manufactured slopes associated with Hunte Parkway are maintained with an ornamental ground cover of African daisy (*Gazania* sp.) with the non-native weed species sweet clover (*Melilotus indicus*) and Russian thistle (*Salsola tragus*) co-dominating. This land cover type onsite contained about 20 percent bare ground.

Developed

This category includes areas of paved roads and buildings, such as the residential housing found in the project survey area. It is not considered a vegetation community, and typically

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supports no or very few biological resources. Where ornamental areas are intermixed with developed land, they are included in this category.

Sensitive Plant Species

Table 2 lists the sensitive species that would have had a potential to occur onsite based on the habitat evaluation, CNPS, and CNDDDB record searches. However, after rare plant surveys were conducted, most of the potentially occurring species were ranked as not expected on the site due to a lack of sufficiently suitable habitat and negative survey results during the appropriate blooming period. A few sensitive plant species were observed during rare plant surveys: Palmer's grapplinghook (*Harpogonella palmeri*), San Diego sunflower (*Bahiopsis laciniata*), and San Diego barrel cactus (*Ferocactus viridescens*). Dotseed plantain (*Plantago erecta*), a host plant for Quino checkerspot butterfly was also observed onsite during the survey effort. A few sensitive species were ranked with a low likelihood of occurrence because although suitable habitat was present, they were not detected during the appropriate blooming periods for these species. A discussion of the three sensitive plant species detected onsite is presented below.

Palmer's grapplinghook

A large population of this CNPS List 4.2 plant was found onsite restricted to the clay lenses within the wildflower field habitat. The distribution of Palmer's grapplinghook within the project area occupies 1.02 acres (4,128 square meters) (Figure 3). The average number of plants over 25 sample plots was 297 plants per square meter for a total population size of approximately 1.2 million plants. This species is endemic to heavy clay soils and typically occurs in smaller populations, as indicated by historical herbarium records (Consortium of California Herbaria, ucjeps.berkeley.edu/consortium/; Thu Dec 8 18:30:50 2011). For example, of the 36 historical herbarium records for Palmer's grapplinghook that have associated notes regarding population size, the largest population size recorded for this species is 50,000 plants. Other herbarium records indicate population sizes of between 20 and 3,271 plants with the average size calculated to be 379 (Consortium of California Herbaria, ucjeps.berkeley.edu/consortium/; Thu Dec 8 18:30:50 2011). This species was not observed offsite in the 500-foot buffer.

San Diego sunflower

Approximately 500 individuals of San Diego Sunflower, a CNPS List 4.2 species, were present within the project site. This species was also present within the 500-foot buffer area.

Table 2. Potential Sensitive Plant Species

Scientific Name	Common Name	CNPS Rare Plant Rank	CESA	FESA	Likelihood to Occur Onsite ¹
<i>Acanthomintha ilicifolia</i>	San Diego thorn-mint	1B.1	CE	FT	Not expected
<i>Adolphia californica</i>	California adolphia	2.1	None	None	Not expected
<i>Agave shawii</i>	Shaw's agave	2.1	None	None	Not expected
<i>Ambrosia chenopodiifolia</i>	San Diego bur-sage	2.1	None	None	Not expected
<i>Ambrosia pumila</i>	San Diego ambrosia	1B.1	None	FE	Not expected
<i>Aphanisma blitoides</i>	aphanisma	1B.2	None	None	Not expected
<i>Artemisia palmeri</i>	San Diego sagewort	4.2	None	None	Not expected
<i>Asplenium vespertinum</i>	western spleenwort	4.2	None	None	Not expected
<i>Astragalus deanei</i>	Dean's milk-vetch	1B.1	None	None	Not expected
<i>Atriplex coulteri</i>	Coulter's saltbush	1B.2	None	None	Not expected
<i>Atriplex pacifica</i>	South Coast saltscale	1B.2	None	None	Not expected
<i>Bergerocactus emoryi</i>	golden-spined cereus	2.2	None	None	Not expected
<i>Bloomeria clevelandii</i>	San Diego goldenstar	1B.1	None	None	Low
<i>Brodiaea orcuttii</i>	Orcutt's brodiaea	1B.1	None	None	Not expected
<i>Calandrinia breweri</i>	Brewer's calandrinia	4.2	None	None	Not expected
<i>California macrophylla</i>	round-leaved filaree	1B.1	None	None	Not expected
<i>Calochortus dunnii</i>	Dunn's mariposa lily	1B.2	CR	None	Not expected
<i>Camissonia lewisii</i>	Lewis' evening-primrose	3	None	None	Not expected
<i>Carex obispoensis</i>	San Luis Obispo sedge	1B.2	None	None	Not expected
<i>Centromadia pungens</i> ssp. <i>laevis</i>	smooth tarplant	1B.1	None	None	Not expected
<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	Orcutt's pincushion	1B.1	None	None	Not expected
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	long-spined spineflower	1B.2	None	None	Not expected

Scientific Name	Common Name	CNPS Rare Plant Rank	CESA	FESA	Likelihood to Occur Onsite ¹
<i>Cistanthe maritima</i>	seaside cistanthe	4.2	None	None	Not expected
<i>Convolvulus simulans</i>	small-flowered morning-glory	4.2	None	None	Low
<i>Corethrogyne filaginifolia</i> var. <i>incana</i>	San Diego sand aster	1B.1	None	None	Not expected
<i>Deinandra conjugens</i>	Otay tarplant	1B.1	CE	FT	Low
<i>Deinandra paniculata</i>	paniculate tarplant	4.2	None	None	Not expected
<i>Dichondra occidentalis</i>	western dichondra	4.2	None	None	Not expected
<i>Dicranostegia orcuttiana</i>	Orcutt's bird's-beak	2.1	None	None	Not expected
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	Blochman's dudleya	1B.1	None	None	Not expected
<i>Dudleya variegata</i>	variegated dudleya	1B.2	None	None	Low
<i>Ericameria palmeri</i> var. <i>palmeri</i>	Palmer's goldenbush	1B.1	None	None	Not expected
<i>Eryngium aristulatum</i> var. <i>parishii</i>	San Diego button-celery	1B.1	CE	FE	Not expected
<i>Euphorbia misera</i>	cliff spurge	2.2	None	None	Not expected
<i>Ferocactus viridescens</i>	San Diego barrel cactus	2.1	None	None	Present onsite (in pots)
<i>Grindelia hallii</i>	San Diego gumplant	1B.2	None	None	Not expected
<i>Harpagonella palmeri</i>	Palmer's grapplinghook	4.2	None	None	Present onsite
<i>Heterotheca sessiliflora</i> ssp. <i>sessiliflora</i>	beach goldenaster	1B.1	None	None	Not expected
<i>Holocarpha virgata</i> ssp. <i>elongata</i>	graceful tarplant	4.2	None	None	Low
<i>Isocoma menziesii</i> var. <i>decumbens</i>	decumbent goldenbush	1B.2	None	None	Not expected
<i>Iva hayesiana</i>	San Diego marsh-elder				Low
<i>Juncus acutus</i> ssp. <i>leopoldii</i>	southwestern spiny rush	4.2	None	None	Low
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	1B.2	None	None	Not expected
<i>Leptosyne maritima</i>	sea dahlia	2.2	None	None	Not expected
<i>Lilium humboldtii</i> ssp. <i>ocellatum</i>	ocellated Humboldt lily	4.2	None	None	Not expected
<i>Lycium californicum</i>	California box-thorn	4.2	None	None	Not expected

Scientific Name	Common Name	CNPS Rare Plant Rank	CESA	FESA	Likelihood to Occur Onsite ¹
<i>Monardella stoneana</i>	Jennifer's monardella	1B.2	None	None	Not expected
<i>Monardella viminea</i>	willowy monardella	1B.1	CE	FE	Not expected
<i>Myosurus minimus</i> ssp. <i>apus</i>	little mousetail	3.1	None	None	Not expected
<i>Navarretia prostrata</i>	prostrate vernal pool navarretia	1B.1	None	None	Not expected
<i>Opuntia californica</i> var. <i>californica</i>	snake cholla	1B.1	None	None	Not expected
<i>Orobanche parishii</i> ssp. <i>brachyloba</i>	short-lobed broomrape	4.2	None	None	Not expected
<i>Phacelia stellaris</i>	Brand's star phacelia	1B.1	None	FC	Not expected
<i>Piperia cooperi</i>	chaparral rein orchid	4.2	None	None	Not expected
<i>Polygala cornuta</i> var. <i>fishiae</i>	Fish's milkwort	4.3	None	None	Not expected
<i>Quercus dumosa</i>	Nuttall's scrub oak	1B.1	None	None	Not expected
<i>Quercus engelmannii</i>	Engelmann oak	4.2	None	None	Not expected
<i>Rosa minutifolia</i>	small-leaved rose	2.1	CE	None	Not expected
<i>Salvia munzii</i>	Munz's sage	2.2	None	None	Not expected
<i>Satureja chandleri</i>	San Miguel savory	1B.2	None	None	Not expected
<i>Senecio aphanactis</i>	chaparral ragwort	2.2	None	None	Not expected
<i>Stipa diegoensis</i>	San Diego County needle grass	4.2	None	None	Not expected
<i>Streptanthus bernardinus</i>	Laguna Mountains jewelflower	4.3	None	None	Not expected
<i>Tetracoccus dioicus</i>	Parry's tetracoccus	1B.2	None	None	Not expected
<i>Bahiopsis laciniata</i>	San Diego County viguiera	4.2	None	None	Present onsite
<i>Xanthisma junceum</i>	rush-like bristleweed	4.3	None	None	Not expected

¹ Species for which likelihood is ranked as "not expected" are lacking suitable habitat onsite and would have been detected during rare plant surveys if present. Species for which likelihood is ranked as "low" have suitable habitat present, but were not detected during rare plant surveys. Species ranked as "present onsite" were detected during rare plant surveys.

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San Diego barrel cactus

San Diego barrel cactus was observed onsite in black plastic pots on the mesa top in suitable habitat for this species. The plants had apparently been left there as a result of prior incomplete restoration activities. The 17 plants found onsite were rooted into the ground through partially decaying pots.

If you have any questions or comments regarding this letter report, please contact me or Cecilia Meyer Lovell at (619) 233-1454.

Sincerely,

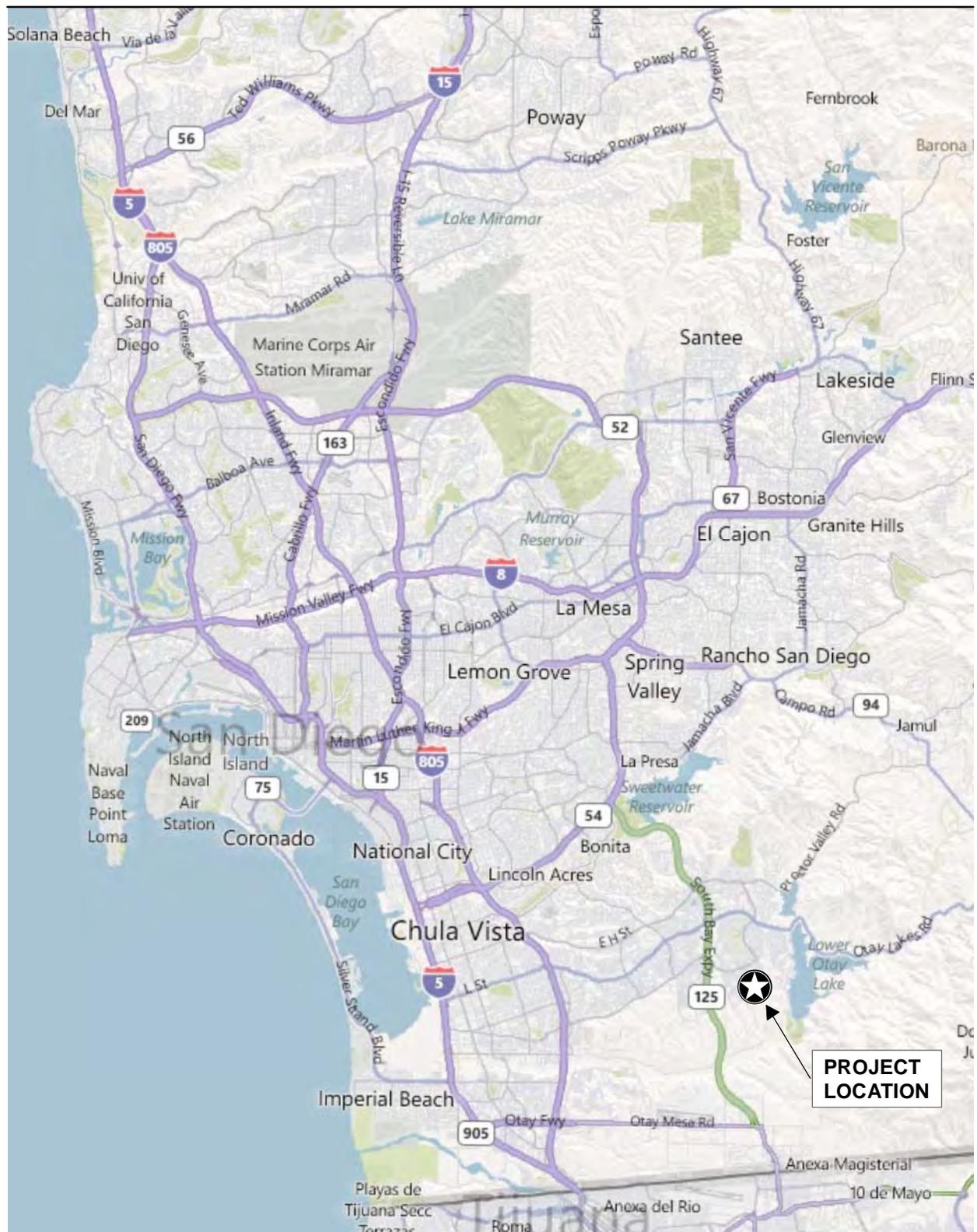


Bonnie Hendricks
Senior Biologist
bonnie.hendricks@aecom.com

Attachments:

- Figure 1 – Regional Map
- Figure 2 – Vicinity Map for Salt Creek Substation
- Figure 3 – Vegetation Map and Sensitive Plant Species for Salt Creek Substation and Surrounding 500-foot Buffer Zone
- Appendix A – Plant Species Observations at Salt Creek Substation Site

FIGURES



Source: Bing Maps 2011

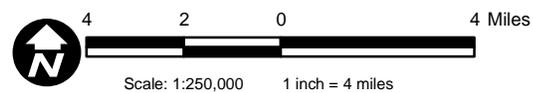
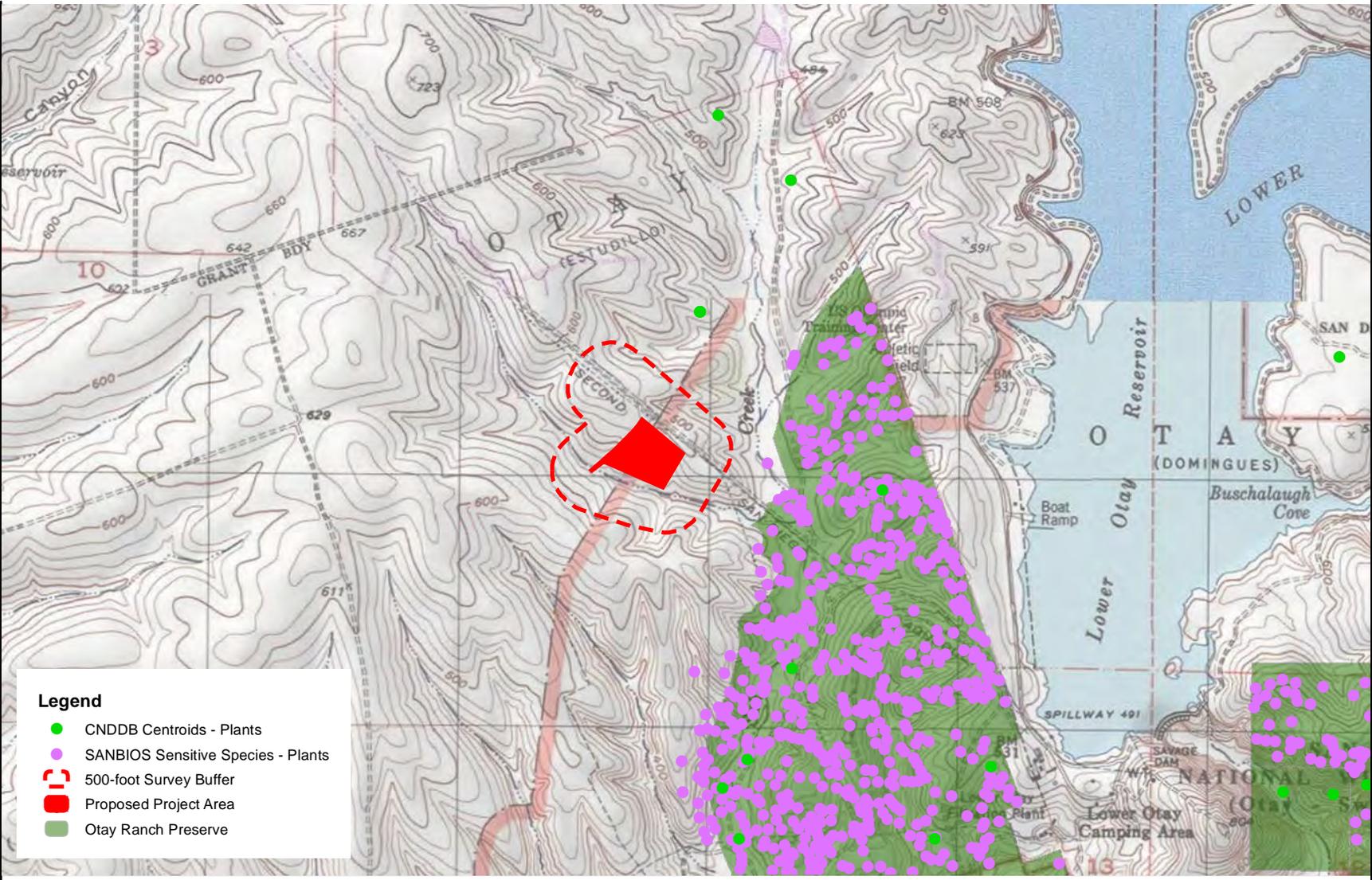


Figure 1
Regional Map

Salt Creek Substation Vegetation and Rare Plant Report

Path: P:\2009\09080065 SDGE Widget Bio Svcs\6.0 GIS\6.3 Layout\ets_3845_OtayRanch\45-day report\fig1_regional.mxd, 10/7/2011, augelopp

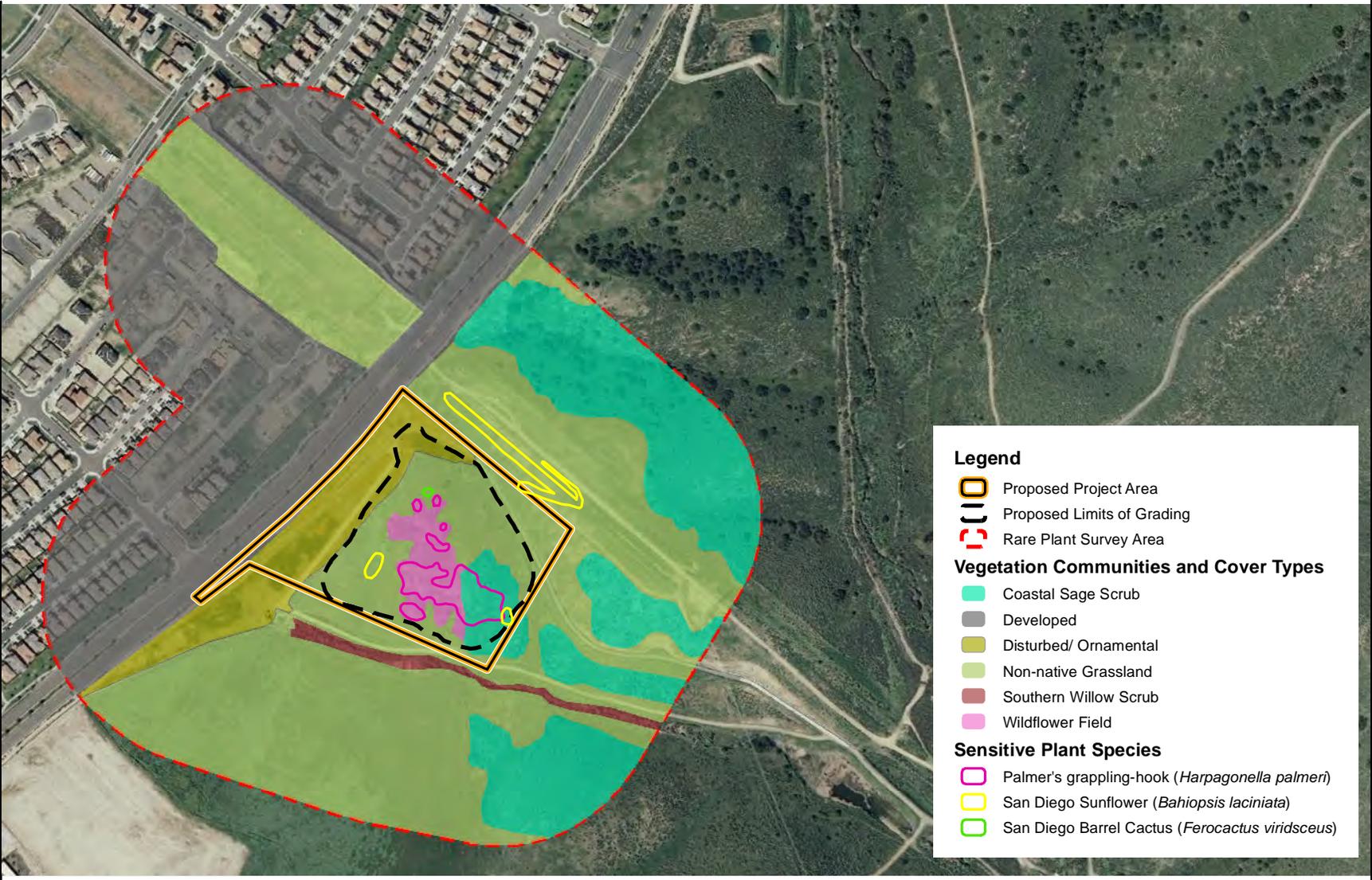


Source: USGS Quad Jamul Mountains 1975; Otay Mesa 1975

2,000 0 2,000 Feet

Scale: 1:24,000; 1 inch = 2,000 feet

Figure 2
 Vicinity Map



Legend

- Proposed Project Area
- Proposed Limits of Grading
- Rare Plant Survey Area

Vegetation Communities and Cover Types

- Coastal Sage Scrub
- Developed
- Disturbed/ Ornamental
- Non-native Grassland
- Southern Willow Scrub
- Wildflower Field

Sensitive Plant Species

- Palmer's grappling-hook (*Harpagonella palmeri*)
- San Diego Sunflower (*Bahiopsis laciniata*)
- San Diego Barrel Cactus (*Ferocactus viridsceus*)

Source: Aerials Express 2010

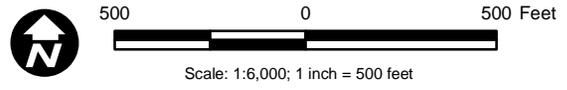


Figure 3
Vegetation Map and Sensitive Plant Species
for Salt Creek Substation and Surrounding
500-foot Buffer Zone

APPENDIX A

PLANT SPECIES OBSERVATIONS AT THE SALT CREEK SUBSTATION SITE

**APPENDIX A
PLANT SPECIES OBSERVATIONS AT
SALT CREEK SUBSTATION SITE**

Scientific Name	Common Name
<i>Acmispon glaber</i>	deerweed
<i>Anagallis arvensis</i> ³	scarlet pimpernel
<i>Artemisia californica</i>	coastal sagebrush
<i>Atriplex semibaccata</i> ³	berry saltbush
<i>Avena barbata</i> ³	wild oats
<i>Baccharis pilularis</i>	coyote bush
<i>Baccharis sarothroides</i>	broom baccharis
<i>Baccharis salicifolia</i>	mulefat
<i>Bahiopsis laciniata</i> ²	San Diego sunflower
<i>Bloomeria crocea</i>	bloomeria
<i>Brassica nigra</i> ³	black mustard
<i>Bromus diandrus</i> ³	rip-gut brome
<i>Bromus hordeaceus</i> ³	soft brome
<i>Bromus madritensis ssp. rubens</i>	fox tail chess
<i>Calochortus splendens</i>	lilac mariposa lily
<i>Calystegia macrostegia</i>	morning-glory
<i>Carduus pycnocephalus</i> ³	Italian thistle
<i>Centaurea melitensis</i> ³	tocolote
<i>Centaurium venustum</i>	canchalagua
<i>Chlorogalum sp.</i>	soap plant
<i>Cirsium vulgare</i> ³	bull thistle
<i>Convolvulus arvensis</i> ³	field bindweed
<i>Conyza canadensis</i> ³	horseweed
<i>Corethrogyne filaginifolia</i>	California sand aster
<i>Croton setigerus</i>	doveweed
<i>Cryptantha intermedia</i>	nievitas cryptantha
<i>Cylindropuntia prolifera</i>	coast cholla
<i>Datura wrightii</i>	Jimson weed
<i>Deinandra fasciculata</i>	fascicled tarplant
<i>Dichelostemma capitatum</i>	blue dicks
<i>Diplotaxis muralis</i> ³	wall rocket
<i>Distichlis spicata</i>	saltgrass
<i>Dudleya pulverulenta</i>	chalk dudleya
<i>Encelia californica</i>	California encelia
<i>Encelia farinosa</i>	brittlebush

Scientific Name	Common Name
<i>Epilobium sp.</i>	fuschia
<i>Erodium cicutarium</i> ³	red stem stork's bill
<i>Erodium botrys</i> ³	filaree
<i>Eriogonum fasciculatum</i> var. <i>fasciculatum</i>	California buckwheat (coastal variety)
<i>Eriophyllum confertiflorum</i>	golden yarrow
<i>Ferocactus viridescens</i> ²	coast barrel cactus
<i>Festuca myuros</i> ³	rat-tail fescue
<i>Foeniculum vulgare</i> ³	sweet fennel
<i>Galium angustifolium</i>	narrow-leaf bedstraw
<i>Gazania sp.</i> ³	African daisy
<i>Gnaphalium canescens</i>	white everlasting
<i>Gutierrezia sarothrae</i>	matchweed
<i>Filago sp.</i>	cotton rose
<i>Harpagonella palmeri</i> ²	Palmer's grappling-hook
<i>Hedynois cretica</i> ³	cretan weed
<i>Helminthotheca echioides</i> ³	bristly ox-tongue
<i>Hirschfeldia incana</i> ³	short-pod mustard
<i>Hordeum sp.</i> ³	barley
<i>Hypochoeris glabra</i> ³	cat's ear
<i>Isocoma menziesii</i>	goldenbush
<i>Lactuca serriola</i> ³	prickly lettuce
<i>Lasthenia sp.</i>	goldfields
<i>Lepidium sp.</i> ³	peppergrass
<i>Lolium perenne</i> ³	perennial Ryegrass
<i>Malva parviflora</i> ³	cheeseweed mallow
<i>Medicago sativa</i> ³	alfalfa
<i>Melilotus indicus</i> ³	yellow sweet clover
<i>Microseris sp.</i>	microseris
<i>Nicotiana glauca</i> ³	tree tobacco
<i>Opuntia littoralis</i>	prickly pear
<i>Osmodenia tenella</i>	osmadenia
<i>Plagiobothrys sp.</i>	popcornflower
<i>Plantago erecta</i> ¹	dot-seed plantain
<i>Peritoma arborea</i>	bladderpod
<i>Polypogon monspeliensis</i> ³	rabbit's foot grass
<i>Raphanus sativus</i> ³	wild radish
<i>Rapistrum rugosum</i> ³	bastard cabbage
<i>Rhus integrifolia</i>	lemonadeberry

Scientific Name	Common Name
<i>Rumex crispus</i>	curly dock
<i>Sambucus nigra</i>	mexican elderberry
<i>Salix gooddingii</i>	black willow
<i>Salix lasiolepis</i>	arroyo willow
<i>Salsola tragus</i>	tumbleweed
<i>Salvia apiana</i>	white sage
<i>Salvia mellifera</i>	black sage
<i>Silybum marrianum</i> ³	milk thistle
<i>Sisyrinchium bellum</i>	blue-eyed grass
<i>Sonchus asper</i> ³	spiny sow-thistle
<i>Sonchus oleraceous</i> ³	sow-thistle
<i>Stipa cernua</i>	nodding needlegrass
<i>Stipa lepida</i>	foothill needlegrass
<i>Stipa pulchra</i>	purple needlegrass
<i>Tamarix ramosissima</i> ³	salt cedar
<i>Trichotema lanceolatum</i>	vinegarweed
<i>Typha domingensis</i>	southern cattails

¹ QCB Primary Host Plant

² Sensitive Plant Species

³ Nonnative Plant Species

APPENDIX C

**PRELIMINARY IMPACT AND MITIGATION
ANALYSIS FOR THE SALT CREEK
TRANSMISSION LINE**

June 1, 2012

Ms. Debbie Collins
San Diego Gas & Electric
8315 Century Park Court – CP21E
San Diego, CA 92123

**Subject: Preliminary Impact and Mitigation Analysis for the Salt Creek
Transmission Line from the Miguel Substation to the Proposed Salt
Creek Substation**

Dear Ms. Collins:

The purpose of this letter is to summarize for San Diego Gas & Electric (SDG&E) potential impacts and mitigation requirements associated with the installation of a new 69-kilovolt (kV) transmission line (TL) from the Miguel Substation to the proposed Salt Creek Substation (TL6965) (Attachment 1, Figure 1). This letter includes the methods used to assess impacts to vegetation communities, including NCCP-covered vegetation communities, and the preliminary results for permanent and temporary impacts and potential mitigation needs. This analysis provides information that will allow the project team to determine a path forward for permitting (e.g., using SDG&E's existing NCCP permit or pursuing project permits outside the NCCP).

Project Description

The 5-mile-long TL would be constructed east of the existing Miguel Substation south to the proposed Salt Creek Substation (Attachment 1, Figure 1). The proposed Salt Creek Substation site would be located on an 11.6-acre site directly south of Hunte Parkway, near the southern terminus of Exploration Falls Drive and adjacent to the Miguel to Mexico TL corridor.

The TL corridor is 120 feet in width for the northern portion and 150 feet in width south of Hunte Parkway. It includes an existing 69-kV TL and two 230-kV TLs mutually located on a single steel lattice tower line. The new 69-kV TL is expected to be built approximately 15 feet in from the eastern edge of the 120-foot-wide easement. Based on preliminary design, dated April 20, 2012, approximately 42 new structures would be erected on the new 69-kV TL, including 27 galvanized steel poles, 14 foundation poles (3 being cable poles), and 1 H-frame double pole structure. Two poles will be access for overhead hardware work. The project also includes 24 work pads (associated with 24 of the new poles), 13 stringing sites, and 32 guard structures throughout the project corridor. Two staging yards have been identified for the project: one at the Miguel Substation and another on the north side of Hunte Parkway between Discovery Falls, Eastlake Parkway, and Crossroads Street.

Vegetation Mapping and Habitat Survey Results

On March 9, 2012, a field assessment of the project survey area was conducted by AECOM biologists to map vegetation communities and provide a baseline of

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NCCP-covered habitats that occur on-site. The project area generally supports 11 vegetation communities and cover types: coastal and valley freshwater marsh, mulefat scrub, riparian scrub, southern willow scrub, coastal sage scrub, nonnative grassland, valley needlegrass grassland, wildflower field, disturbed habitat, landscape ornamental, and developed. The vegetation communities are illustrated in Attachment 2, Figures 1 through 5. Vegetation community classifications used in this report follow Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California* (1986), as modified by Oberbauer (2008).

Methods for Assessing Impacts to NCCP-covered Vegetation Communities

Vegetation community mapping for the Salt Creek TL provides a baseline for preparing the preliminary impact analysis. The vegetation maps, Attachment 2, Figures 1 through 5, were used to determine the habitat type at each project component, including pole site, work pads, stringing sites, guard structures, and staging yards. The vegetation mapping was conducted at a larger scale than the impact areas; therefore, actual impacts to NCCP-covered habitat may be less than summarized when the pre-activity survey is conducted. For example, some of the proposed structures and/or work pads may be located partially within bare ground areas (i.e., existing work pads, access roads), which would potentially result in less temporary and permanent impacts to NCCP-covered habitat.

The Mapped Quino Checkerspot Butterfly (*Ephedryas editha quino*; QCB) Habitat layer from SDG&E was used to assess potential impacts to QCB habitat. Protocol surveys were conducted for 7 weeks during the flight season between February 17, 2012 and March 30, 2012 by permitted biologists Erik LaCoste and Viviane Marquez. No QCB were detected, therefore areas within SDG&E's Mapped QCB Habitat (e.g., north of Mt. Miguel Road) are considered Un-Occupied Suitable QCB Habitat per SDG&E's Habitat Conservation Plan for QCB. Protocol QCB surveys results were presented in a 45-day summary report, dated May 15, 2012. Project components within bare ground in the Mapped QCB area were not included in the QCB suitable un-occupied impacts totals because they are not considered suitable habitat for QCB. These areas are within existing access roads and do not support vegetation.

Potential Impacts to NCCP-covered Vegetation Communities

To assess the potential impacts resulting from the proposed TL 6965, the following impact areas were used for the project components. Permanent and temporary impacts for a galvanized steel pole structure installation are approximately 5 square feet and 309 square feet respectively (309 feet of temporary impacts: 314 square feet minus 5 square feet of permanent impacts). Permanent and temporary impacts for the pier foundation pole were calculated assuming approximately 51 square feet and 5,596 square feet respectively. Impacts associated with work pads, guard structures, and stringing sites are calculated based on the size of the area as described in the SDG&E proved pole matrix, dated April 3, 2012. No impacts were included for the staging yards, since the Miguel Staging Yard is entirely within bare ground and the Sweetwater Staging Yard has

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been mitigated previously for a separate project. No impacts were included for the gate locations in this analysis, since most of the gates are existing structures and the impacts are negligible. Table 1 summarizes the preliminary impacts to NCCP-covered habitat associated with the proposed project. Permanent impacts are presented inside the MSCP Preserve and outside the Preserve, as the mitigation ratios per SDG&E's NCCP are different.

**Table 1
 Impacts to NCCP-covered Vegetation Communities: Salt Creek Project**

Type of Impact		Area Impacted (square feet)	Area Impacted (acres)
Temporary	NCCP-covered habitats	284,008	6.52
	Non-NCCP-covered habitats	160,201	3.68
	Total Temporary Impacts	444,209	10.20
	<i>Suitable Un-Occupied QCB habitat</i>	<i>129,037</i>	<i>2.96</i>
	<i>Grassland Habitat</i>	<i>177,406</i>	<i>4.07</i>
Permanent	NCCP-covered habitat (Outside Preserve)	27,237	0.63
	NCCP-covered habitat (Inside Preserve)	3,544	0.08
	Non-NCCP-covered habitat	4,588	0.11
	Total Permanent Impacts	35,369	0.81
	<i>Suitable Un-Occupied QCB habitat</i>	<i>2,188</i>	<i>0.05</i>

Potential Mitigation Requirements under the NCCP

Eleven vegetation communities were mapped within the survey area for the Salt Creek TL. Eight of these communities require mitigation under the NCCP. Nonnative grassland is the dominant vegetation community within the TL corridor, with smaller amounts of coastal sage scrub and riparian habitats. Table 2 provides the specific mitigation requirements that were used in this analysis for NCCP-covered vegetation communities, nonnative grassland, coastal sage scrub, and riparian habitats as well as QCB mapped habitat.

**Table 2
 Mitigation Requirements under SDG&E's NCCP**

Biological Resources within TL Corridor and Staging Areas	Mitigation Requirements
NCCP-covered Vegetation Communities	<u>Outside Designated Preserve</u> (South of Mt. Miguel Road): Requires mitigation at 1:1 ratio for permanent and temporary impacts. <u>Inside Designated Preserve</u> (North of Mt. Miguel Road): Requires mitigation at 2:1 ratio for permanent impacts and 1:1 ratio for temporary impacts.

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Biological Resources within TL Corridor and Staging Areas	Mitigation Requirements
Nonnative Grassland	Requires mitigation as indicated above, but can be placed within SDG&E's NCCP Enhancement Program and mitigated by restoring on-site.
Coastal Sage Scrub	Requires mitigation as indicated above; more difficult to restore on-site within the 2-year timeframe of NCCP Enhancement Program.
Riparian Vegetation Communities (mulefat scrub and southern willow scrub)	Requires formal wetland delineation and additional permits and mitigation from the U.S. Army Corps of Engineers, California Department of Fish and Game, and Regional Water Quality Control Board, if impacted. See <i>Potential Jurisdictional Waters Letter report by AECOM dated April 2, 2012.</i>
Quino Checkerspot Butterfly	Per the SDG&E Habitat Conservation Plan (HCP), protocol surveys conducted in March 2012 to determine presence/absence. No QCB observed. Per the HCP, QCB Suitable Unoccupied habitat requires mitigation at a 1:1 ratio for permanent and temporary impacts.

Table 3a provides the mitigation requirements if all permanent and temporary impacts are mitigated through SDG&E's mitigation bank (e.g., credit drawdown only). Table 3b provides mitigation if the temporary impacts to nonnative grassland are mitigated within SDG&E's NCCP Enhancement Program and restored onsite; and all other permanent and temporary impacts are mitigated through SDG&E's mitigation bank.

**Table 3a
 Salt Creek Project Mitigation Summary Table Utilizing Credit Drawdown**

Type of Mitigation		Credit Drawdown (square feet)	Credit Drawdown (acres)
Temporary	NCCP-covered Habitat at a 1:1 Ratio	284,008	6.52
Permanent (Inside Preserve)	NCCP-covered Habitat within the Preserve at a 2:1 Ratio	7,088	0.16
Permanent (Outside Preserve)	NCCP-covered Habitat outside the Preserve at a 1:1 Ratio	27,237	0.63
Total	Total Mitigation for ALL Impacts to NCCP-covered Habitat	318,333	7.31
QCB	<i>Suitable Un-Occupied QCB habitat</i>	131,225	3.01

Ms. Debbie Collins
 San Diego Gas & Electric
 June 1, 2012
 Page 5

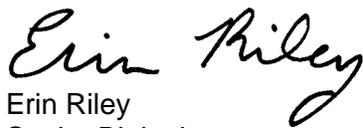
**Table 3b
 Salt Creek Project Mitigation Summary Table Utilizing
 NCCP Enhancement Program and Credit Drawdown**

Type of Mitigation		Credit Drawdown (square feet)	Credit Drawdown (acres)
Temporary	NCCP-covered Habitat at a 1:1 Ratio	106,602	2.45
Permanent (Inside Preserve)	NCCP-covered Habitat within a Preserve at a 2:1 Ratio	7,088	0.16
Permanent (Outside Preserve)	NCCP-covered Habitat outside a Preserve at a 1:1 Ratio	27,237	0.63
Total	Total Mitigation for ALL Impacts to NCCP-covered Habitat	140,927	3.24
QCB	<i>Suitable Un-Occupied QCB habitat</i>	131,225	3.01

Utilizing the NCCP Enhancement Program to mitigate impacts to grasslands reduces the credit drawdown needed from the mitigation bank by 177,406 square feet (4.07 acres). If the project elects to use the NCCP for mitigation, it is recommended that the NCCP Enhancement Program also be used to mitigate impacts to grasslands.

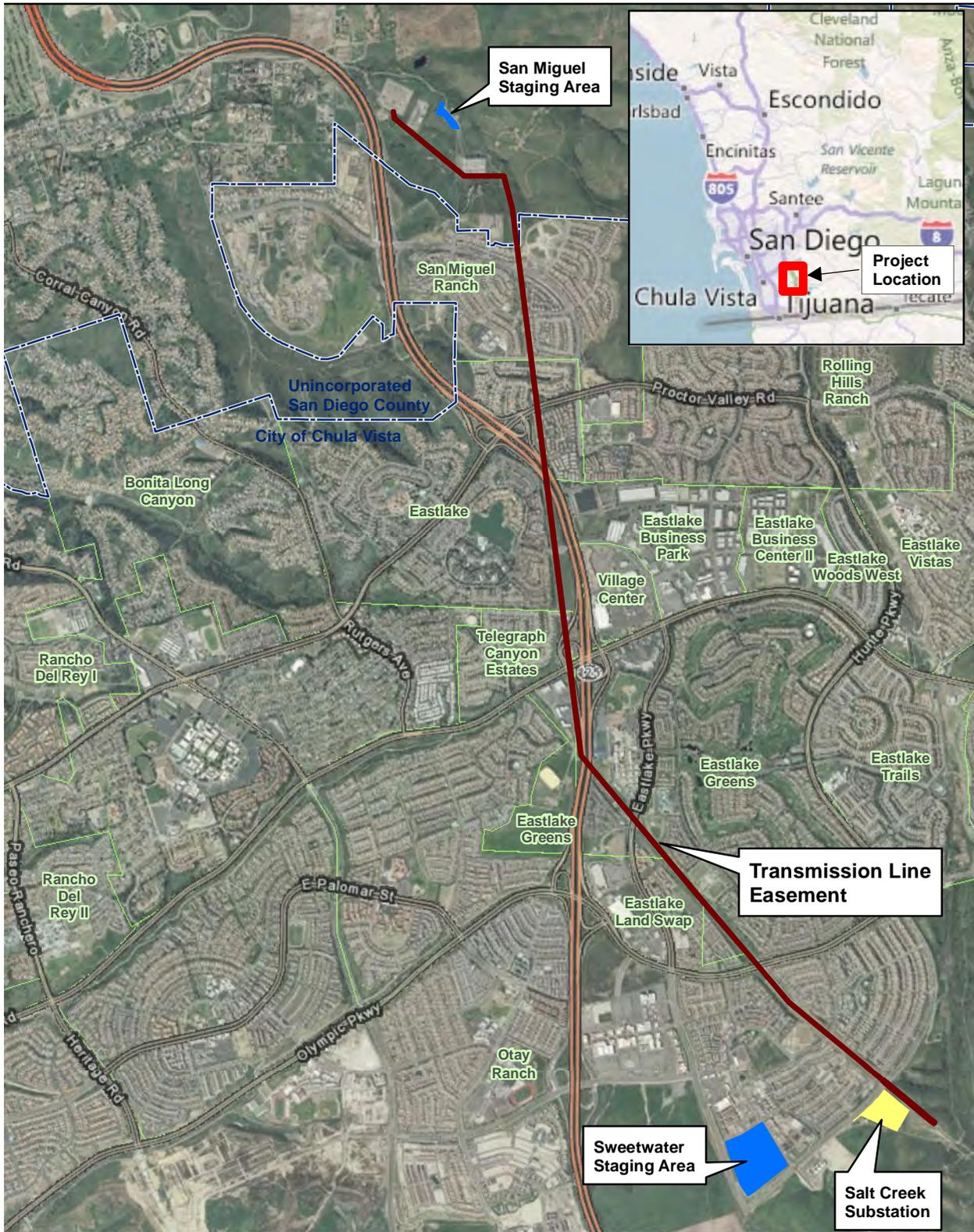
We look forward to continuing to work with you on this project. Please contact me or Barbie Blann should you have any questions.

Sincerely,

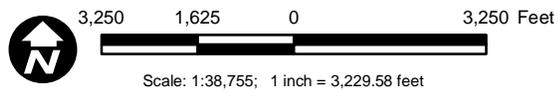


Erin Riley
 Senior Biologist

Attachment 1: Regional Location Figure
 Attachment 2: Vegetation Communities Figures



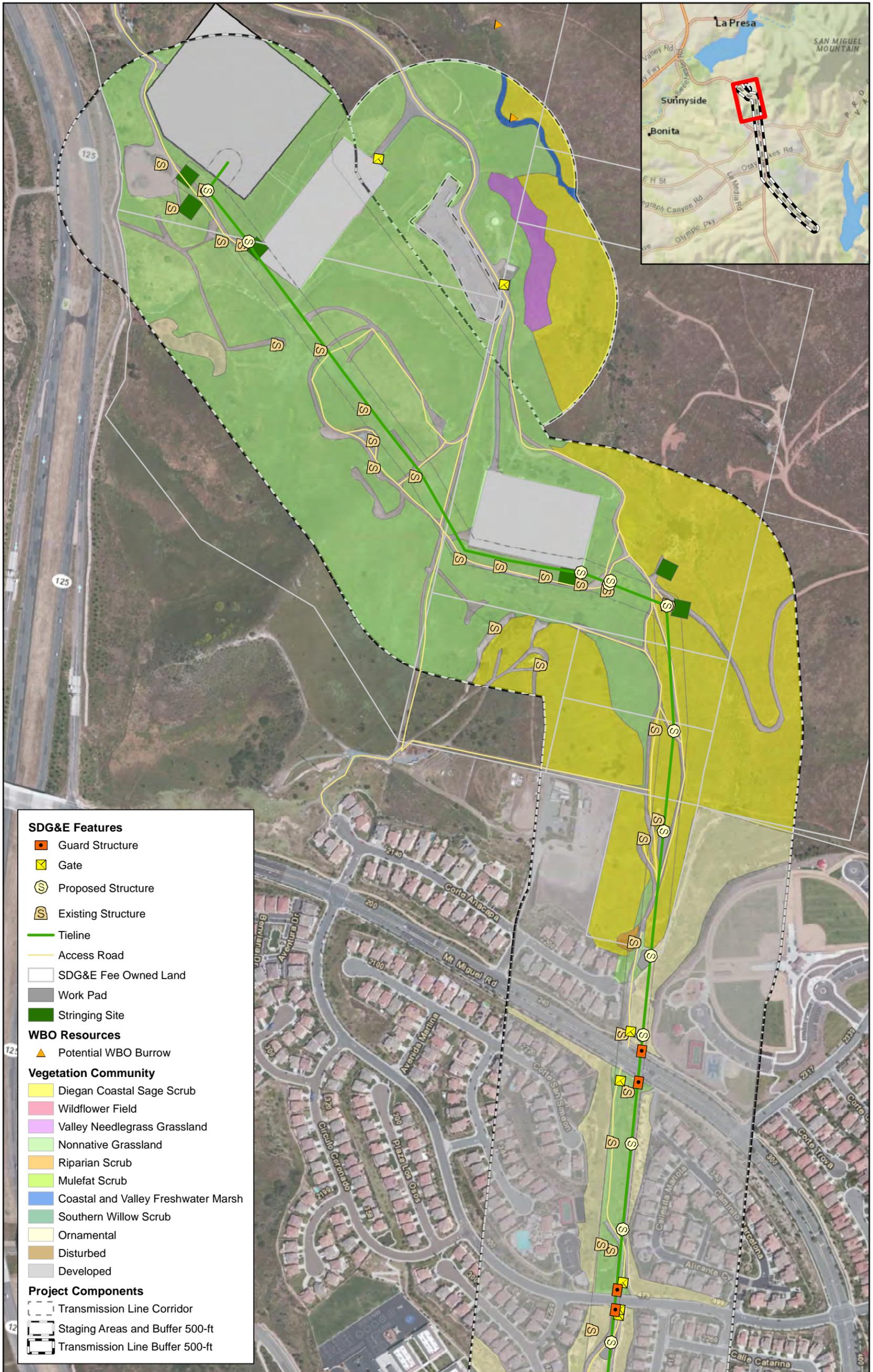
Source: Bing Maps 2011



Attachment 1, Figure 1

Project Location

Salt Creek Preliminary Impacts Analysis



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2012

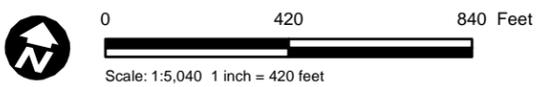


Figure 1
Salt Creek Impacts Analysis



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2010

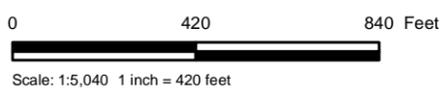


Figure 2
Salt Creek Impacts Analysis



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2010



0 420 840 Feet
Scale: 1:5,040 1 inch = 420 feet

Figure 3
Salt Creek Impacts Analysis



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2010

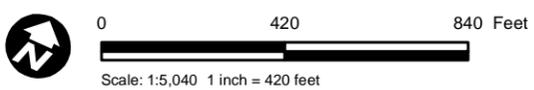
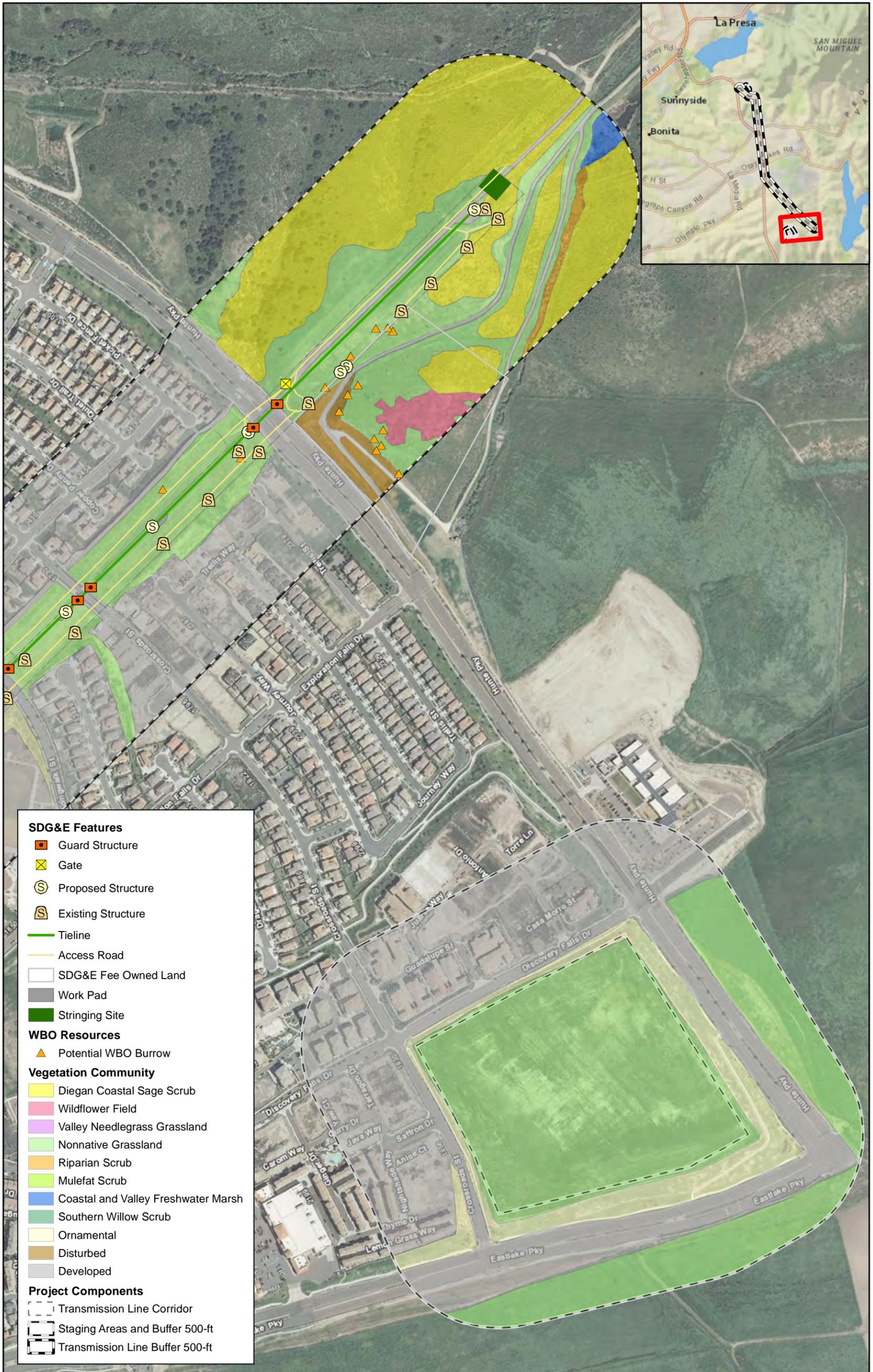


Figure 4
Salt Creek Impacts Analysis



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2010

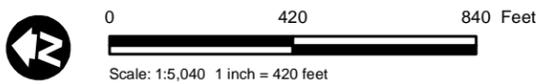


Figure 5
Salt Creek Impacts Analysis

APPENDIX D

JURISDICTIONAL ASSESSMENTS

APPENDIX D-1
AECOM APRIL 2012 MEMO



AECOM
1420 Kettner Boulevard
Suite 500
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619.233.1454 tel
619.233.0952 fax

April 2, 2012

Ms. Debbie Collins
San Diego Gas and Electric
8315 Century Park Court – CP21E
San Diego, CA 92123

Subject: Reconnaissance-Level Jurisdictional Waters Assessment Summary for the Salt Creek Transmission Line from the Miguel Substation to the Proposed Salt Creek Substation

Ms. Collins:

This letter summarizes the methods and results of a reconnaissance-level jurisdictional waters assessment associated with the installation of a new 69-kilovolt (kV) transmission line (TL) from the Miguel Substation to the proposed Salt Creek Substation (TL69XX) (Attachment 1, Figure 1) for San Diego Gas and Electric (SDG&E). Any acknowledgement of an aquatic feature's jurisdictional status contained herein is considered preliminary, and should not be considered final until the appropriate regulatory agencies (i.e., U.S. Army Corps of Engineers [USACE], Regional Water Quality Control Board [RWQCB], and California Department of Fish and Game [CDFG]) have received a formal jurisdictional delineation report or other form of data sufficient for those agencies to make a final decision regarding the presence or absence of jurisdictional waters within the proposed project footprint. However, the results of this assessment are of sufficient detail to be used during future project design to avoid impacts to aquatic features that may or may not be considered jurisdictional waters of the U.S. and/or state (jurisdictional waters), and identify any other planning and design constraints that may be evident from the presence or absence of potential jurisdictional waters. Potential biological constraints are addressed in a separate letter.

On March 21, 2012, Brian Felten (AECOM ecologist/regulatory specialist) conducted a reconnaissance-level jurisdictional waters assessment within the proposed Salt Creek Substation footprint and the proposed TL corridor, which extends from the proposed Salt Creek Substation location to the existing Miguel Substation. The term "project survey area" used here refers to the proposed TL corridor and the proposed Salt Creek Substation footprint.

Project Description

The 5-mile-long transmission line would be constructed east of the existing Miguel Substation south to the proposed Salt Creek Substation (Attachment 1, Figure 1). The proposed Salt Creek Substation site is located on an 11.6-acre site directly south of Hunte Parkway, near the southern terminus of Exploration Falls Drive, and adjacent to the Miguel to Mexico TL corridor.

Debbie Collins
San Diego Gas & Electric
April 2, 2012
Page 2

The TL corridor is 120 feet in width for the northern portion and 150 feet in width south of Hunte Parkway. It includes an existing 69-kV TL and two 230-kV TLs located on a single steel lattice tower line. The new 69-kV line is expected to be built approximately 15 feet from the eastern edge of the easement. Based on the preliminary design, approximately 53 new structures would be erected for the new 69-kV TL, including 46 galvanized steel poles, six engineered foundation poles, and one cable pole. Two staging yards have been identified for this project: one at the Miguel Substation and another on the north side of Hunte Parkway between Discovery Falls, Eastlake Parkway, and Crossroads Street.

Pre-Field Analysis and Investigations

The purpose of a pre-survey investigation is to obtain contextual information relevant to the site to be surveyed, which may not be evident from the ground during field surveys. For this pre-survey investigation, the following sources were consulted to gain a better understanding of the physical and hydrologic setting of the site:

- Historical maps of wetlands, riparian habitat, and other linear watercourses in the project vicinity were assessed in the National Wetlands Inventory (NWI) map and reviewed in ArcGIS Version 10 software.
- Blue line data and watershed details were obtained through the National Hydrography Dataset (NHD) and viewed in ArcGIS Version 10 software.
- Topographical features that may promote the development of jurisdictional waters or contain potential jurisdictional waters were identified by reviewing the Jamul Mountains and Otay Mesa U.S. Geological Survey (USGS) 7.5-Minute Quadrangle Maps.

Field Survey Methods

A reconnaissance-level jurisdictional waters assessment was conducted within the survey area after the pre-field analysis was completed.¹ The survey area consisted of the proposed Salt Creek Substation footprint and the proposed TL corridor. Spatial and tabular data were collected using a handheld sub-meter Global Positioning System (GPS) unit during the field assessment. Although a formal jurisdictional delineation was not conducted, aquatic features identified within the survey area were evaluated for potential jurisdictional status using the latest federal and state guidance, including to the following:

¹ The portion of the proposed transmission line corridor bounded by Eastlake Drive to the north and Otay Lakes Road to the south (Attachment 2, Figures 10 and 11) was formally delineated by AECOM for SDG&E under a separate contract on January 17, 2012. Therefore, this segment of the transmission line corridor was not assessed during the reconnaissance-level field assessment. However, the type, amount, location, and extent of potential jurisdictional waters delineated during the formal delineation effort that are coincident with the survey area for the reconnaissance-level assessment evaluated in this memorandum are included as part of this analysis. The "Jurisdictional Wetlands/Waters Determination" memorandum, which provides the methods, results, and field-collected data for the formal delineation conducted on January 17, 2012, is provided as Attachment 3.

Debbie Collins
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Page 3

- *Classification of Wetlands and Deepwater Habitats of the United States*
- *Corps of Engineers Wetland Delineation Manual*
- *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*
- *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual*
- *Water Quality Control Plan for the San Diego Basin*
- All applicable federal resource codes and regulations (e.g., 33 Code of Federal Regulation [CFR] 328 and 40 CFR 230)
- All applicable state resource codes and regulations (e.g., California Fish and Game Code Chapter 6 Section 1600 *et seq.*, California Code of Regulations Title 14 Section 720, California Water Code Section 13000 *et seq.*)

Field-collected spatial and tabular data were exported to ArcGIS software to map the type, location, and extent of potential jurisdictional waters.

Field Assessment Results

Approximately 0.94 acre of potential jurisdictional waters of the U.S. and/or state were identified within the survey area. A total of 0.73 acre were identified as potential jurisdictional waters of the U.S. and state,² and 0.21 acre were identified as potential jurisdictional waters of the state exclusively.³ Table 1 indicates the type, amount, and potential jurisdictional status of the aquatic features identified within the survey area. The location and extent of these features are identified on Attachment 2, Figures 1 through 12.

² These features are potentially subject to the purview of USACE, RWQCB, and CDFG based on the findings of the reconnaissance-level survey.

³ Based on the findings of the reconnaissance-level assessment, these features are subject to the purview of CDFG and/or RWQCB exclusively.

Debbie Collins
 San Diego Gas & Electric
 April 2, 2012
 Page 4

**Table 1
 Type, Amount (acres/linear feet), and Potential Jurisdictional Status of
 Identified Aquatic Features Occurring within the Survey Area**

Type of Potential Jurisdictional Waters ^{a, b}	Type of Habitat (Holland Code)	Amount of Resource within Survey Area (acres/linear feet) ^c	Potential Regulatory Authority
Potential Jurisdictional Waters of the U.S. and State			
Wetland	Coastal and Valley Freshwater Marsh (52410)	0.06	USACE, RWQCB, CDFG
Wetland	Mulefat Scrub (63310)	0.11	USACE, RWQCB, CDFG
Wetland	Southern Willow Scrub (63320)	0.28	USACE, RWQCB, CDFG
Other Waters	Concrete Channel (N/A)	0.10/4,189	USACE, RWQCB, CDFG
Other Waters	Earthen Channel (64200)	0.18/952	USACE, RWQCB, CDFG
Total Potential Jurisdictional Waters of the U.S. and State		0.73/5,141	
Potential Jurisdictional Waters of the State Exclusively			
Channel Bank ^d	N/A	0.20/4,189	CDFG
Vegetated Swale	Nonnative Grassland	0.01/173	RWQCB and CDFG
Total Potential Jurisdictional Waters of the State Exclusively		0.21/4,362	
Grand Total Potential Jurisdictional Waters		0.94/5,314	

^a Aquatic features identified as wetlands within the survey area but outside of the transmission line segment between Eastlake Drive and Otay Lakes Road were not formally delineated using the Corps of Engineers 1987 Wetland Delineation Manual or the 2008 Arid West Regional Supplement. However, these features displayed indicators of wetland hydrology and hydrophytic vegetation communities at the time of the field assessment. The mapped wetlands in Attachment 2, Figures 10 and 11 were formally delineated using the Corps of Engineers 1987 Wetland Delineation Manual and the 2008 Arid West Regional Supplement during the January 17, 2012, field delineation.

^b All aquatic features identified as “other waters” were observed to possess an ordinary high water mark (defined at 33 CFR Section 328.3[e]) during the field assessment.

^c Linear feet distances are only provided for linear aquatic features.

^d For the purposes of this assessment, “channel bank” is defined as the portion of other waters that begins immediately above the ordinary high water mark and extends from that point to the top of a definable bank. No other waters identified during this assessment possessed a riparian buffer.

Debbie Collins
San Diego Gas & Electric
April 2, 2012
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Jurisdictional Determination

Based on the results of the reconnaissance-level field assessment and evaluation of watershed and hydrological spatial data, it was determined that all aquatic features identified as potential jurisdictional waters of the U.S. in this summary have the following features:

- possess physical characteristics that may meet the definition of both wetland and non-wetland waters of the U.S. (33 CFR 328.3), and
- may possess a hydrologic or significant nexus connection with a traditional navigable water (TNW).⁴

Aquatic features identified as potential jurisdictional waters of the state exclusively did not display characteristics congruent with the federal definition of either wetland or non-wetland waters of the U.S., and were, therefore, not identified as such. However, these features did possess characteristics of waters of the state as they are described in California Fish and Game Code Chapter 6 Section 1600 *et seq.*, California Code of Regulations Title 14 Section 720, and California Water Code Section 13000 *et seq.*

Avoidance/Minimization Recommendations and Potential Permitting Requirements

It is recommended that proposed project features be located outside of the potential jurisdictional waters identified in this assessment.⁵ It is also recommended that appropriate best management practices that protect the chemical, physical, and biological integrity of any potential jurisdictional waters adjacent to proposed project features be employed during project construction and operation. If it is determined that impacts to potential jurisdictional waters are unavoidable due to engineering, logistical, or other unforeseen constraints, then acquisition of requisite permit authorizations, issuances, and/or agreements from the appropriate regulatory agencies with jurisdiction over the aquatic features identified in this summary may be required. These permits, authorizations, and/or agreements may include the following:

- CDFG Lake or Streambed Alteration Agreement
- USACE Clean Water Act (CWA) Section 404 Permit Issuance or Authorization
- RWQCB CWA Section 401 Water Quality Certification
- RWQCB Waste Discharge Requirements

⁴ The survey area traverses the Lower Sweetwater River (10-digit Hydrologic Unit Code [HUC] 1807030409), Otay River (10-digit HUC 1807030410), and San Diego Bay (10-digit HUC 1807030412) coastal watersheds. The major riverine features within these watersheds form a direct hydrological connection with San Diego Bay and the Pacific Ocean (a TNW).

⁵ All potential jurisdictional waters identified in Attachment 2, Figures 1 through 12 are also provide in ESRI shapefile format, and are being transmitted electronically simultaneously with this assessment summary.



Debbie Collins
San Diego Gas & Electric
April 2, 2012
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A formal jurisdictional delineation would be required to supplement any applications, notifications, and or reports submitted to the respective agencies, for which permits, authorizations, and/or agreements are being sought.

Sincerely,

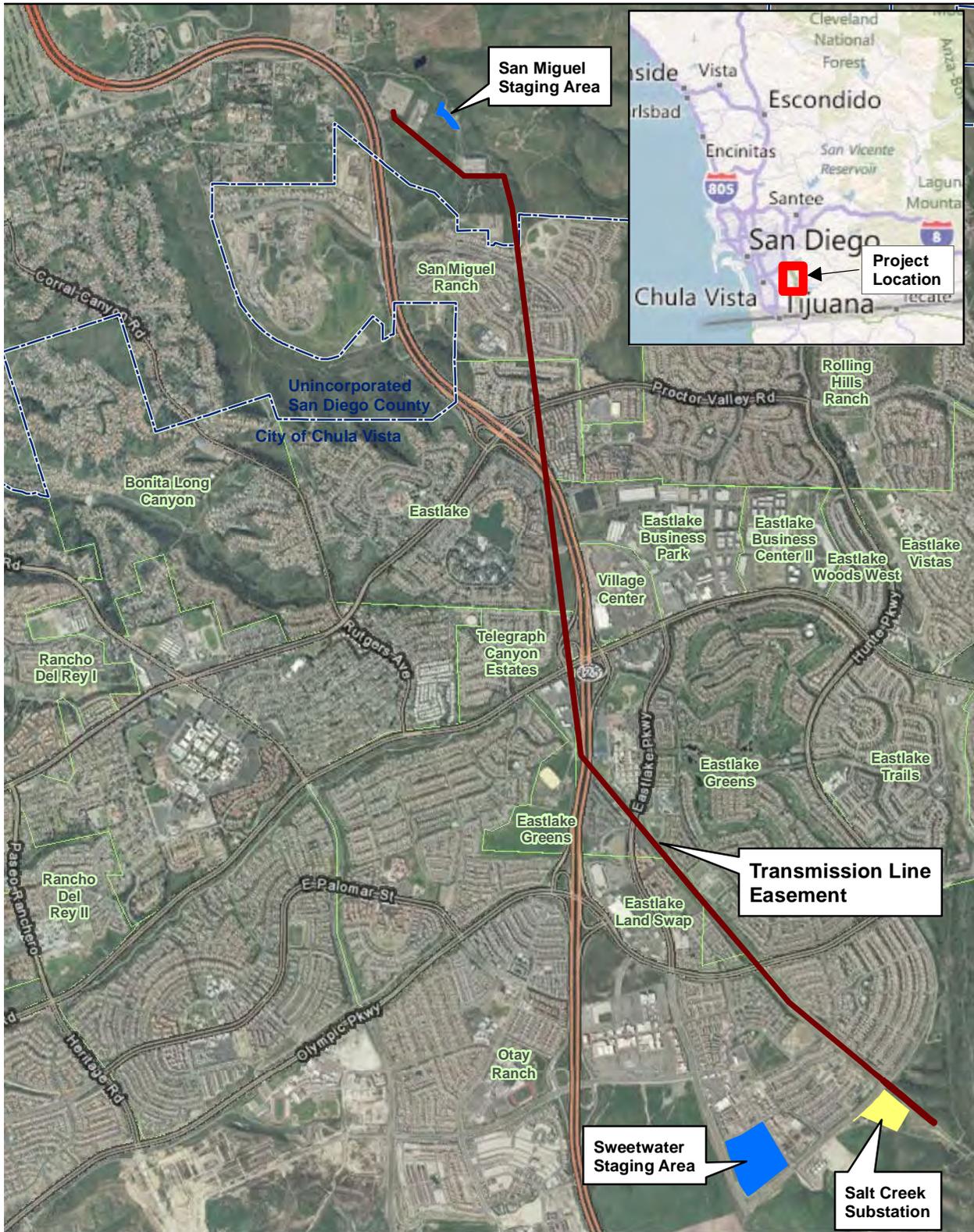
Brian Felten
Regulatory Specialist

Cecilia Meyer Lovell
Senior Biologist

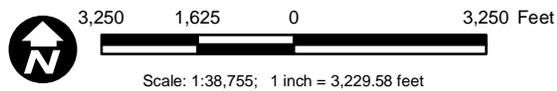
- Attachment 1: Regional Location Figure
- Attachment 2: Potential Jurisdictional Waters Figures
- Attachment 3: January 17, 2012 Jurisdictional Wetlands/Waters Determination (Eastlake Drive to Otay Lakes Road Transmission Line Segment)

ATTACHMENT 1

REGIONAL LOCATION FIGURE



Source: Bing Maps 2011



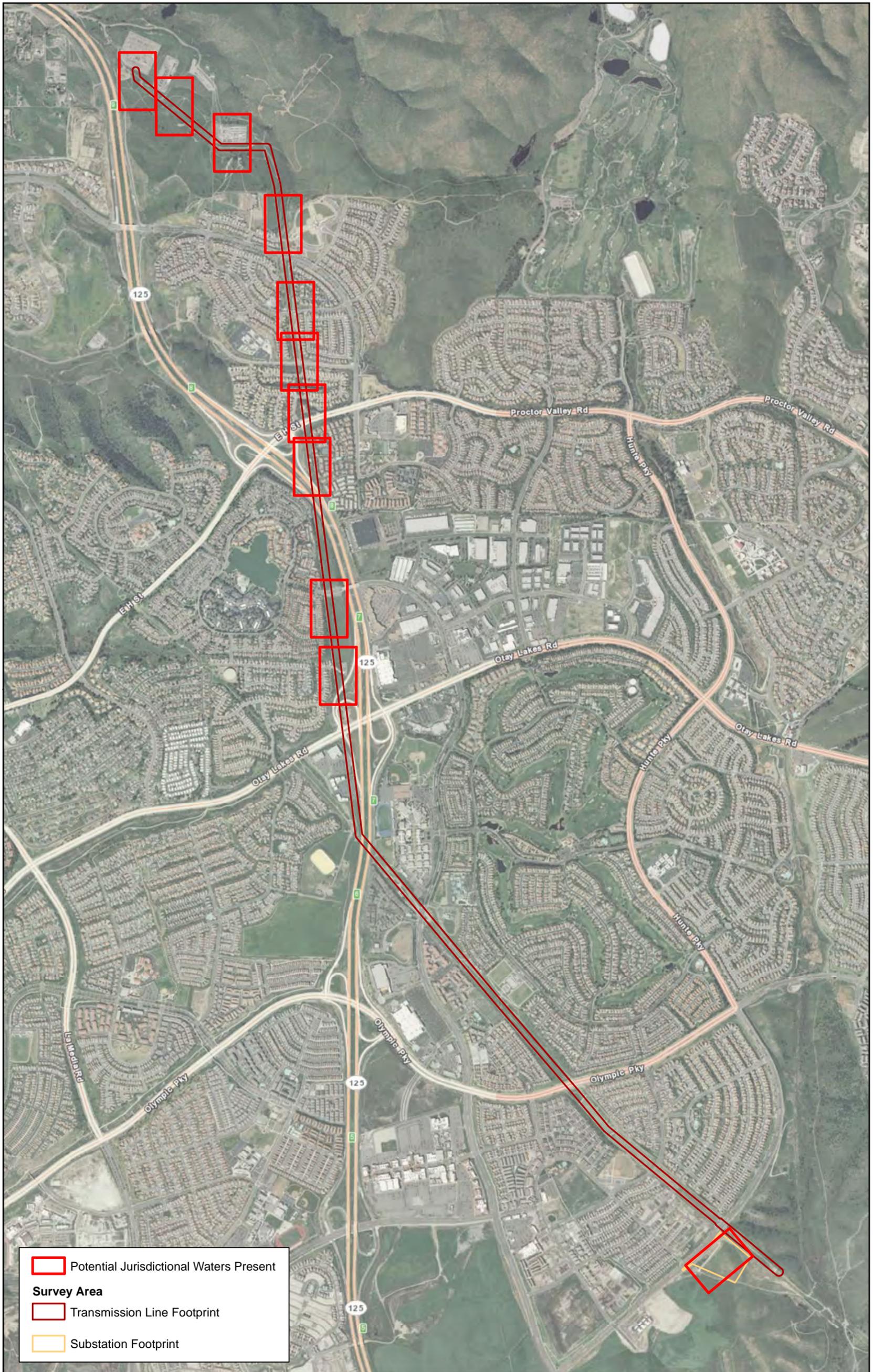
**Attachment 1, Figure 1
Project Location**

Salt Creek Substation and Transmission Line Potential Jurisdictional Impacts

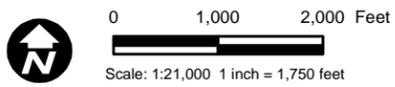
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ATTACHMENT 2

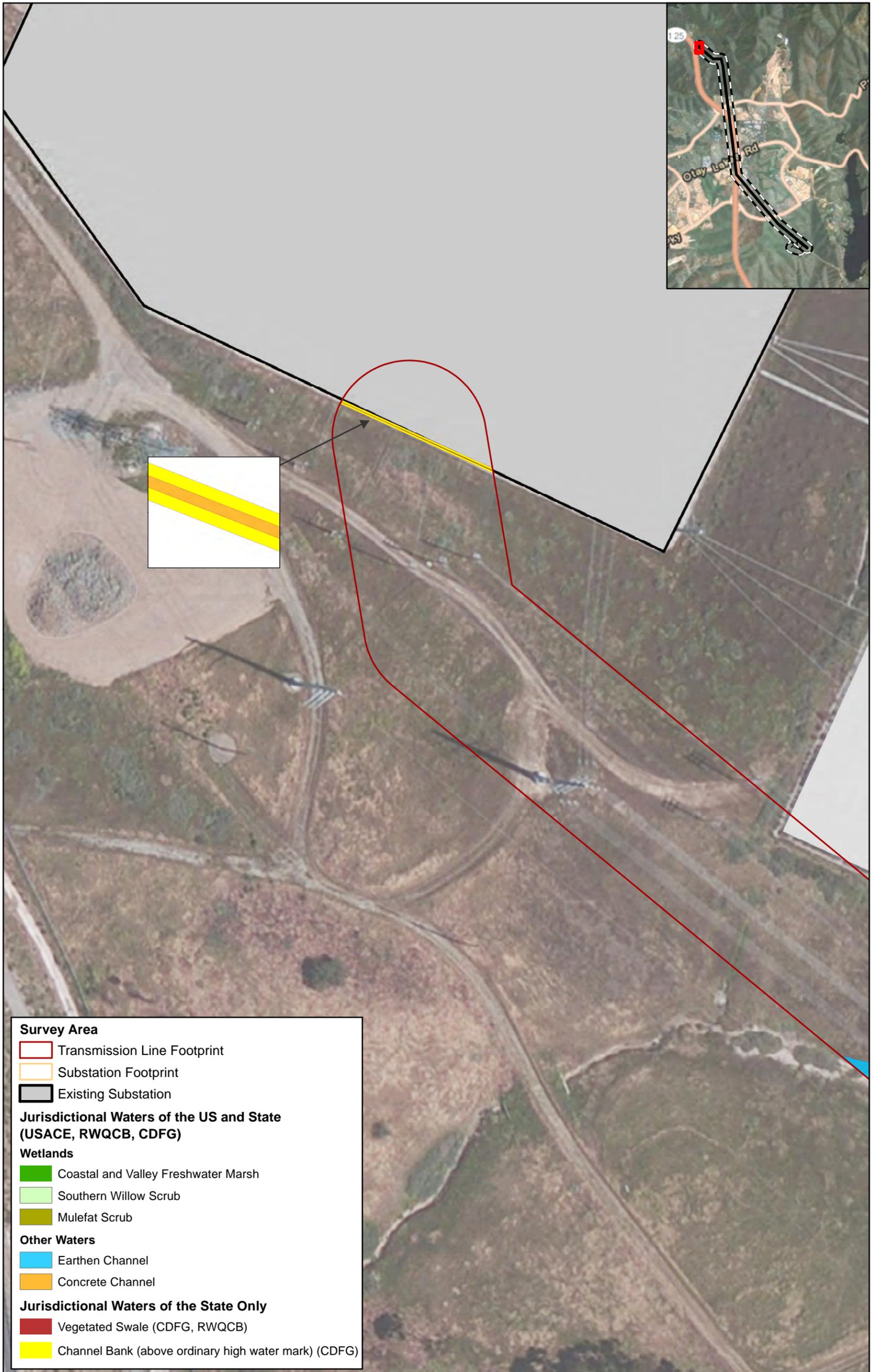
**POTENTIAL JURISDICTIONAL
WATERS FIGURES**



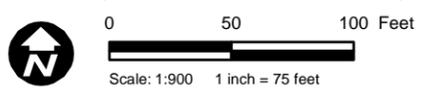
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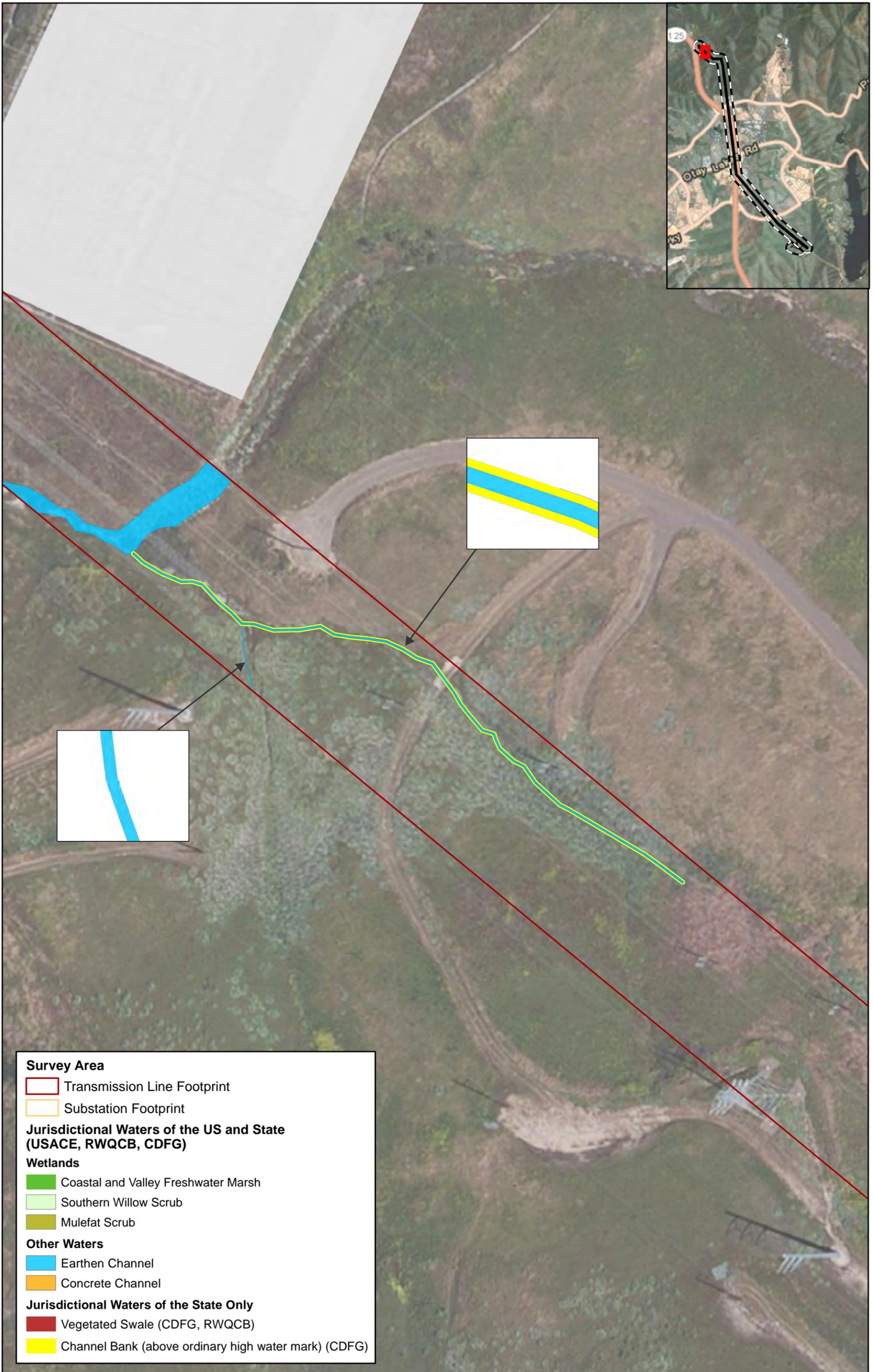
Potential Jurisdictional Waters



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2012



Potential Jurisdictional Waters

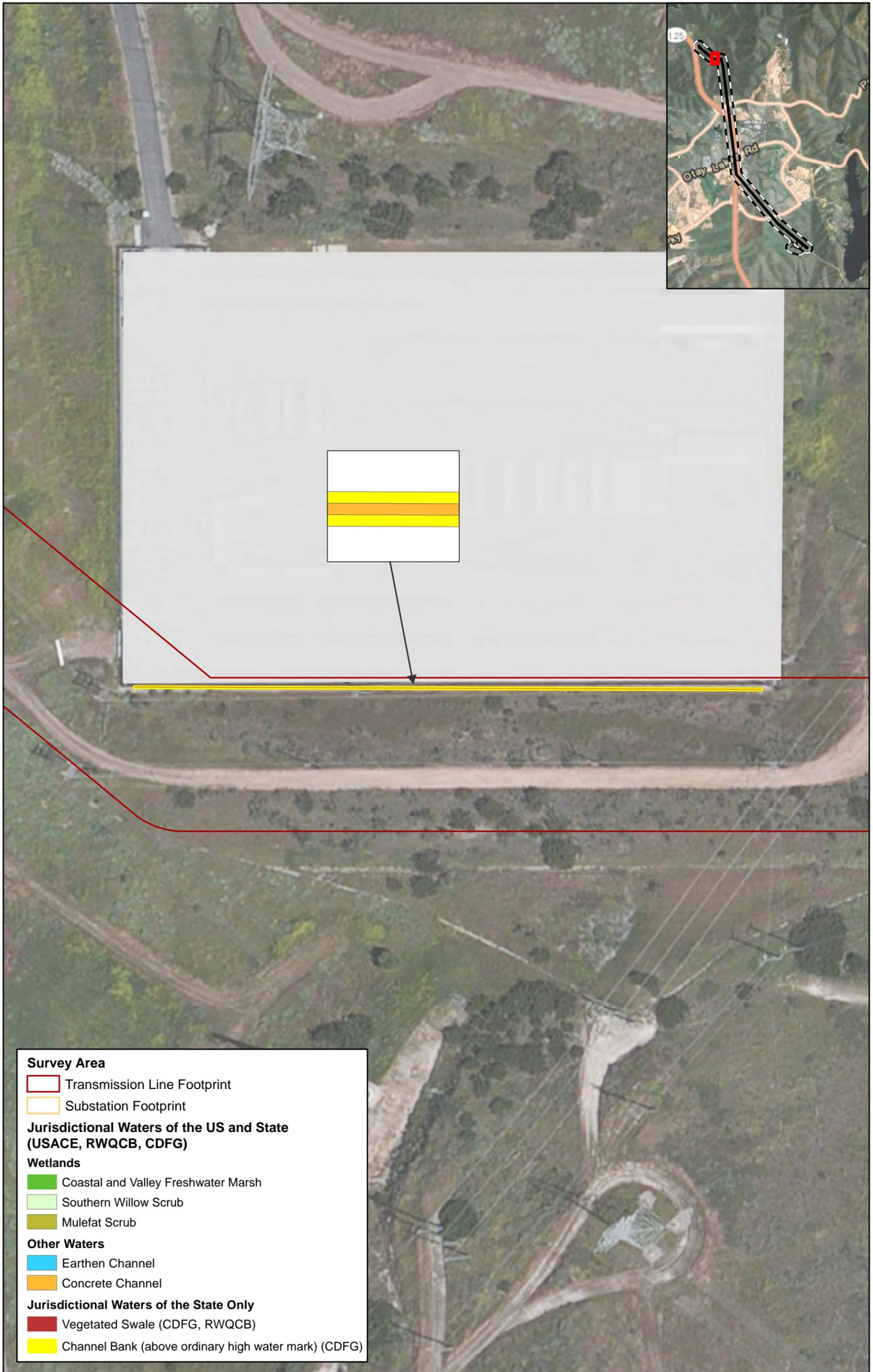


Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2012

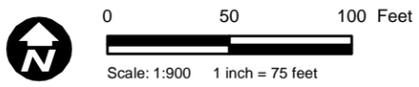


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Potential Jurisdictional Waters



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2010



Potential Jurisdictional Waters

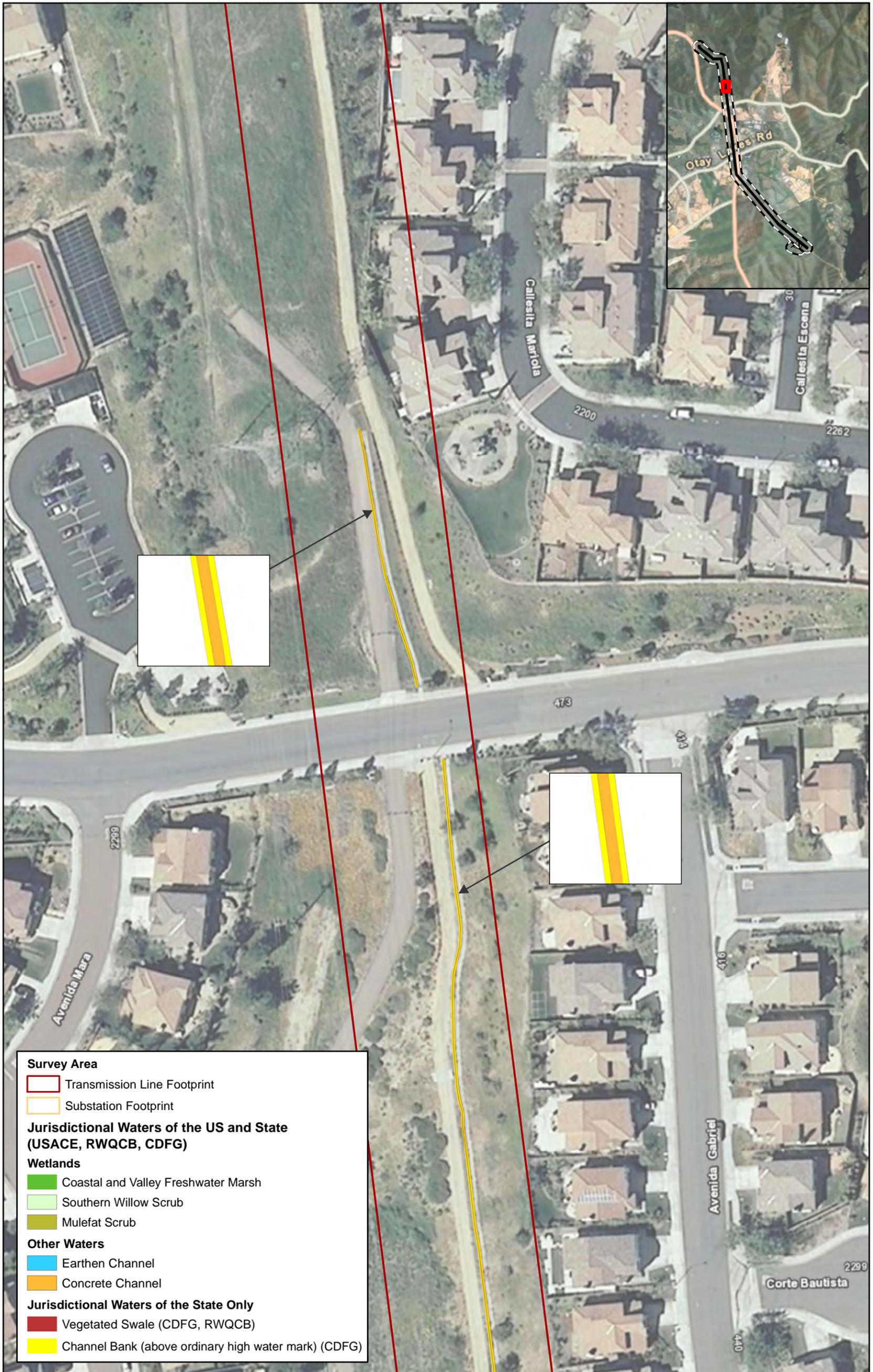


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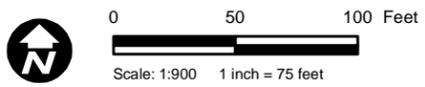


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Scale: 1:900 1 inch = 75 feet

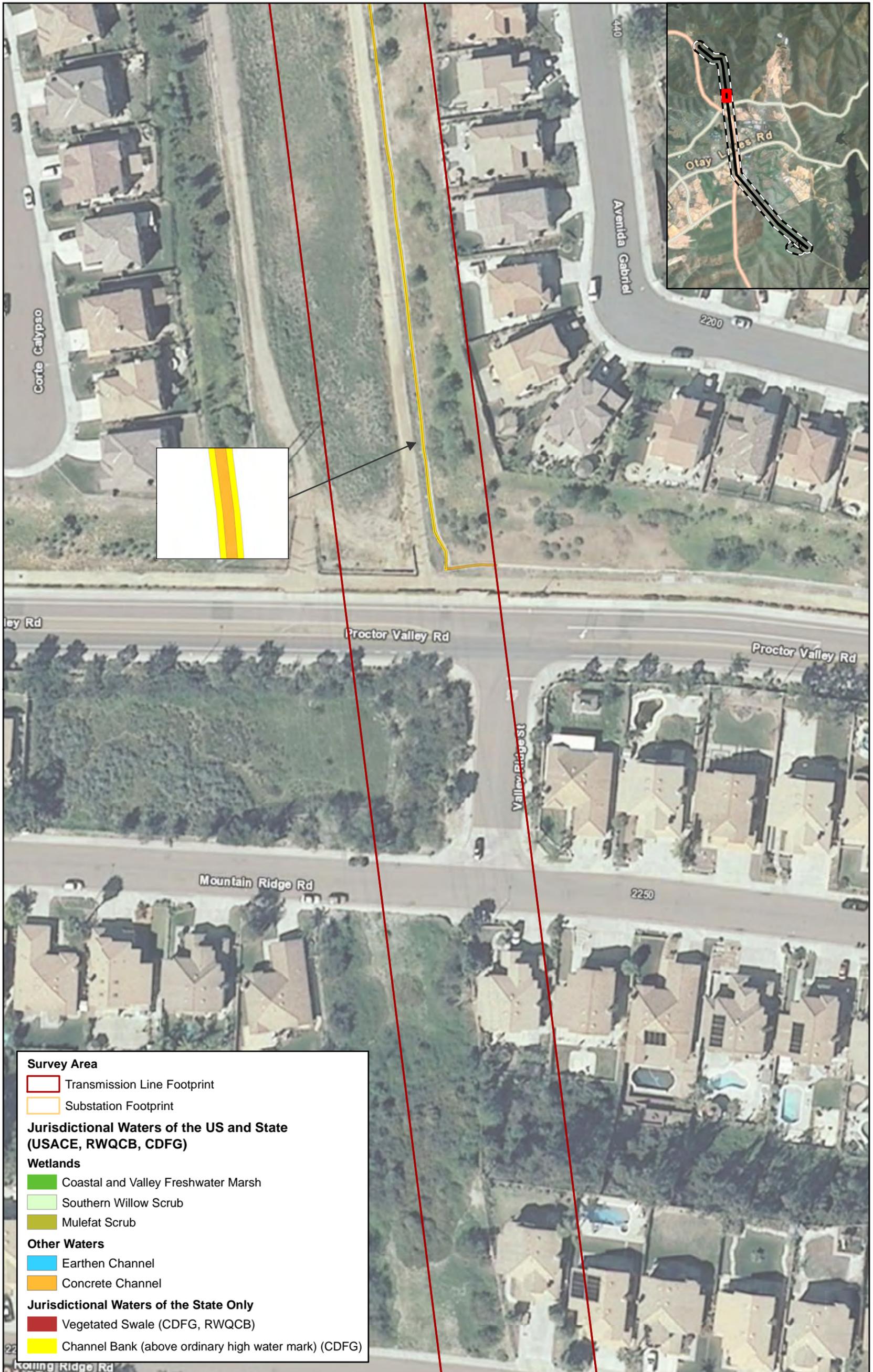
Potential Jurisdictional Waters



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2010



Potential Jurisdictional Waters



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2010



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Potential Jurisdictional Waters



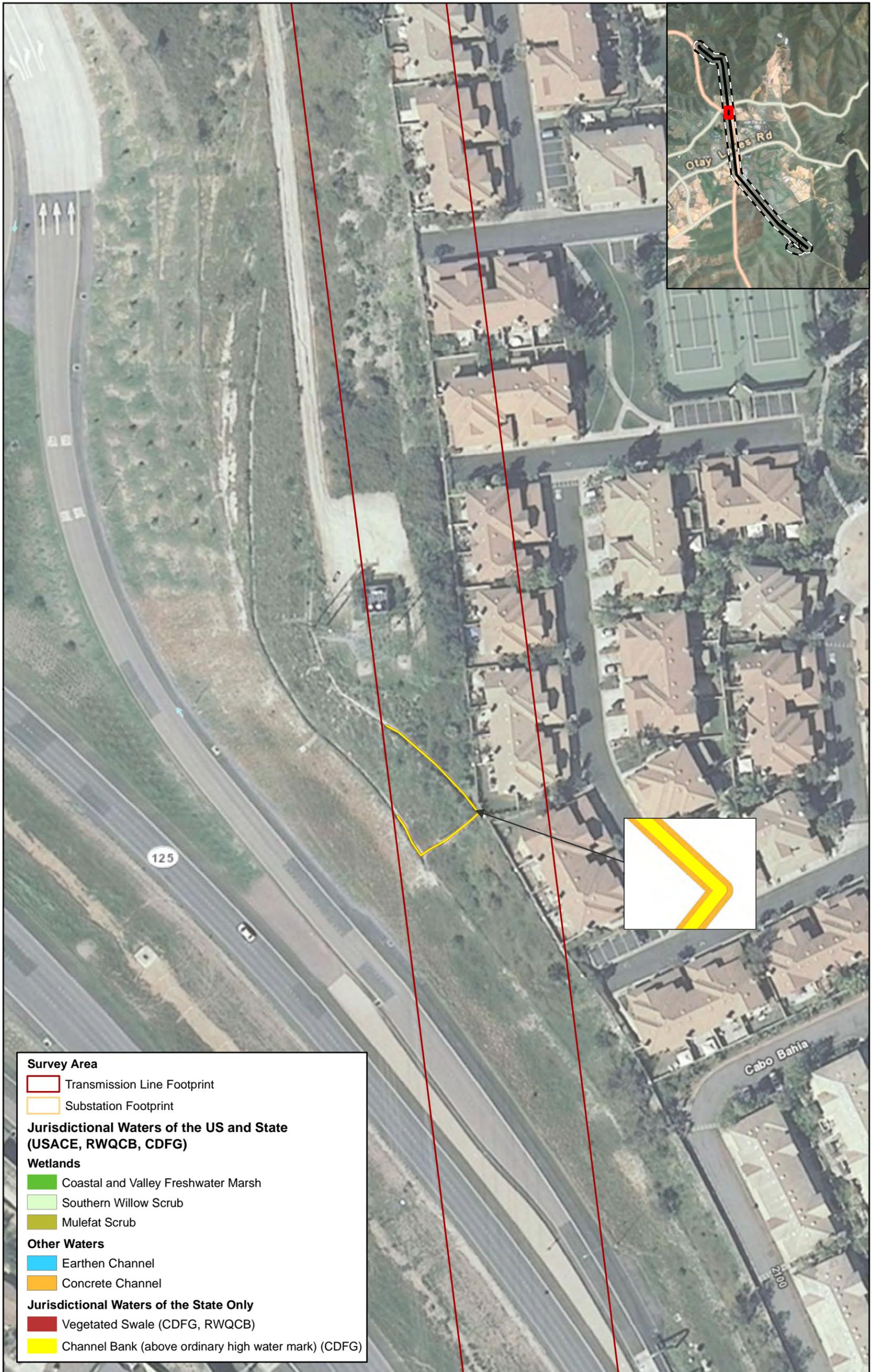
Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2010



0 50 100 Feet

Scale: 1:900 1 inch = 75 feet

Potential Jurisdictional Waters



Potential Jurisdictional Waters



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2010

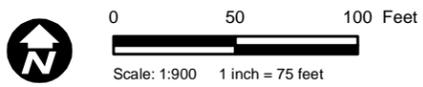


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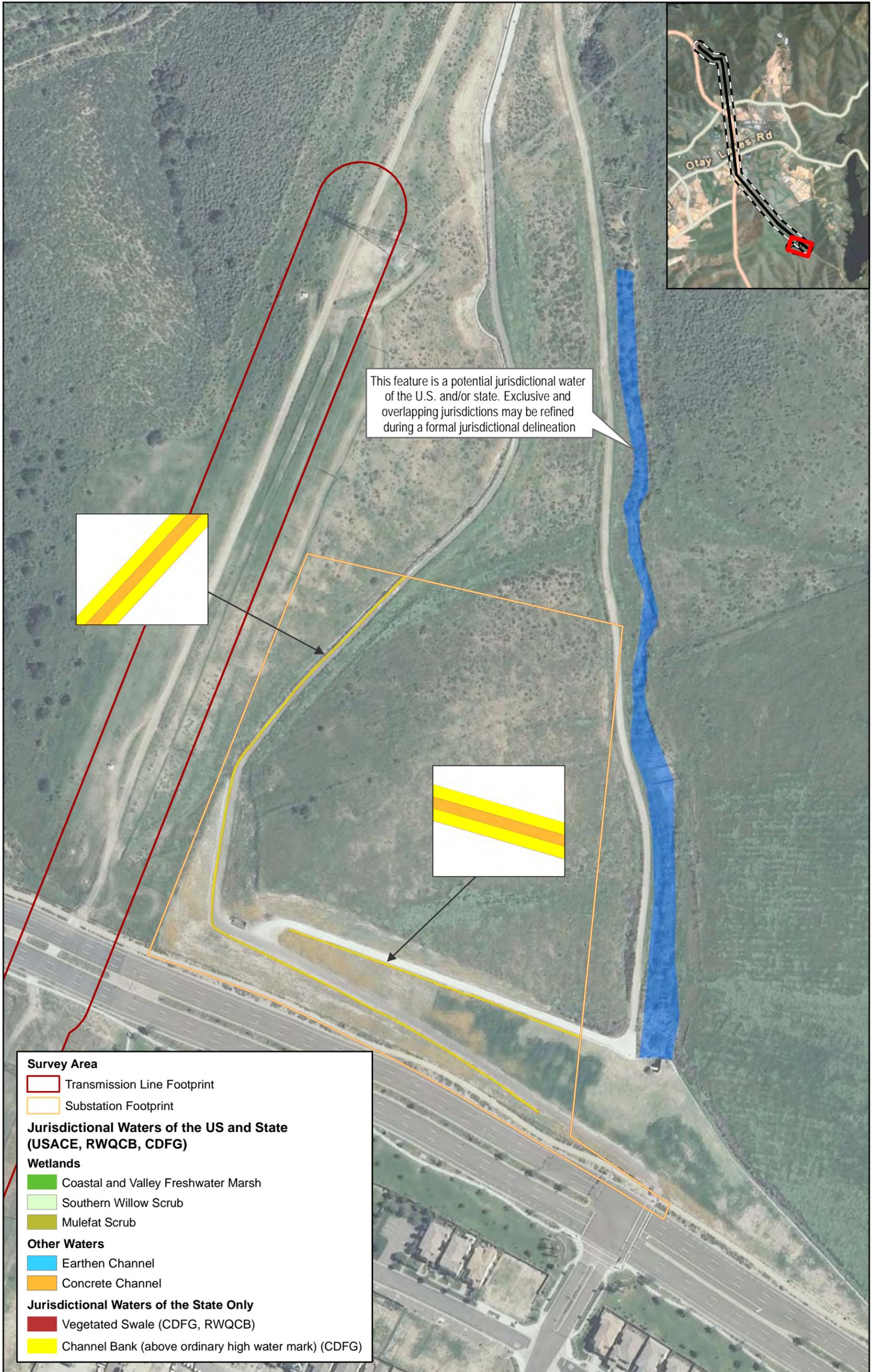
Potential Jurisdictional Waters



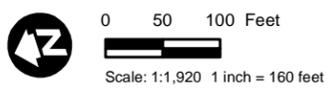
Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2010



Potential Jurisdictional Waters



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2010



Potential Jurisdictional Waters

ATTACHMENT 3

**JANUARY 17, 2012 JURISDICTIONAL
WETLANDS/WATERS DETERMINATION
(EASTLAKE DRIVE TO OTAY LAKES ROAD
TRANSMISSION LINE SEGMENT)**

Jurisdictional Wetlands/Waters Determination

Date	01/11/12
Date Due	
eTS Number	20613
Project Name	TL 6961 Section between Eastlake Parkway and Otay Lakes Road
Address / Location	Eastlake Parkway and Otay Lakes Road
Project Description	Wetland Survey for one section of TL 6961
Contract Number	56600-15703 AECOM
Internal Order Number	200403954
Cost Center	
ES South Reviewer	Tamara Spear

Proposed Work Description

SDG&E proposes to construct a new 5-mile single circuit 69 kV transmission line from the Miguel Substation to the proposed Salt Creek Substation. At the request of SDG&E, AECOM conducted a jurisdictional wetland/waters assessment to determine whether potential jurisdictional waters are present within the portion of the proposed transmission line corridor between East Lake Parkway Drive and Otay Lakes Road in Chula Vista, California. The work methods and results of the assessment are presented below.

Methods

Pre-survey investigation - The purpose of a pre-survey investigation is to obtain contextual information relevant to the site to be surveyed, which may not be evident from the ground during field surveys. For this pre-survey investigation, the following sources were consulted to gain a better understanding of the physical and hydrologic setting of the site:

- Soils data for the San Diego Area Soil Survey (SDASS) (Bowman 1973) were obtained through the Natural Resources Conservation Service's (NRCS) Soil Survey Geographic (SSURGO) Database (NRCS 2011) and viewed in ArcGIS Version 10 software.
- Historical mappings of wetlands and riparian habitat in the project vicinity were assessed in the National Wetlands Inventory (NWI) map (USFWS 2011) and reviewed in ArcGIS Version 10 software.
- Blue line data and watershed detail were obtained through the National Hydrography Dataset (NHD) (USGS 2011) and viewed in ArcGIS Version 10 software.

Field Survey - AECOM biologist Brian Felten conducted a field delineation and determination within the limits of the proposed work area (survey area) (Figure 1 [Attachment A]) on January 17, 2012. The U.S. Army Corps of Engineers (USACE) 1987 wetlands delineation manual (Environmental Laboratory 1987) and Arid West Supplement (Environmental Laboratory 2008) were used to evaluate potential wetlands in

Jurisdictional Wetlands/Waters Determination

the survey area. The 1987 manual and the 2008 Arid West Supplement provide technical guidelines and methods for a three-parameter approach to determining the existence and boundaries of federal jurisdictional wetlands. This approach requires that an area support positive indicators of hydrophytic vegetation, hydric soils, and wetland hydrology to be considered a federal jurisdictional wetland. Wetland Determination Data Forms – Arid West Region Version 2.0 were completed for four sampling points.

Additionally, guidelines and definitions provided in USACE regulatory guidance letter (RGL) 05-05, 33 CFR §328.3(e), and 33 CFR §329.11(a)(1) were consulted to assist in determining the presence or absence of potential other waters of the U.S. (i.e., streams, rivers, and washes).

Post-field Analysis - The Wetland Determination Data Forms (Arid West Region Version 2.0) were entered into electronic format and the data were verified for completeness and accuracy.

Results and Discussion

Table 1 summarizes the findings of the field determination with respect to plants, soils, and hydrology. Representative photographs of the delineated areas are provided in Attachment B. The completed Wetland Determination Data Forms are provided as Attachment C. Vegetation community descriptions and Holland Codes are derived from *Draft Vegetation Communities of San Diego County. Based on "Preliminary Descriptions of the Terrestrial Natural Communities of California," R. F. Holland, Ph.D., October 1986* (Oberbauer et al. 2008).

Sample Point (SP) 1 is located within an area that exhibits characteristics most closely resembling mulefat scrub wetland habitat (Holland Code 63310) (Figure 1 [Attachment A] and Photograph 1 [Attachment B]). SP 2 was evaluated within an area that exhibits characteristics of disturbed/non-native grassland upland habitat (Holland Codes 11300 and 42200) and is located approximately 10 feet west and up slope of SP 1 (Figure 1 [Attachment A] and Photograph 2 [Attachment B]). SP 3 is located within an area that exhibits characteristics most closely resembling southern willow scrub wetland habitat (Holland Code 63320) (Figure 1 [Attachment A] and Photograph 3 [Attachment B]). SP 4 was evaluated in non-native grassland (Holland Code 42200) approximately 20 feet west of SP 3 (Figure 1 [Attachment A] and Photograph 4 [Attachment B]).

Table 1 - Summary of Field Determination Sampling Points

Sample Point	Vegetation Community	Wetland Parameter			Potential Jurisdiction		
		Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	USACE	RWQCB	CDFG
1	Mulefat Scrub Wetland	Yes	Yes	Yes	Yes	Yes	Yes
2	Disturbed/Non-native Grassland	No	No	No	No	No	No
3	Southern Willow Scrub	Yes	Yes	Yes	Yes	Yes	Yes
4	Non-native Grassland	No	No	No	No	No	No

Jurisdictional Wetlands/Waters Determination

Vegetation

Pre-survey Investigation - NWI data do not indicate the presence of wetland or riparian habitat within the survey area.

Field Survey - The plant communities at SP 1 and SP 3 were determined to be hydrophytic (Table 1) while the vegetation communities at SP 2 and SP 4 did not meet the USACE definition of hydrophytic as the term is defined in the 2008 Arid West Supplement (Environmental Laboratory 2008). See the Wetland Determination Data Forms for each sampling point (Attachment C) for additional information and species composition.

Soils

Pre-survey Investigation - The soils in the survey area are mapped as diablo clay 15 to 30 percent slopes, diablo clay 2 to 9 percent slopes, and linne clay loam 9 to 30 percent slopes (Bowman 1973). None of these soil types are classified as hydric by the NRCS (Soil Survey Staff NRCS 2011).

Field Survey - The soil sample at SP 1 displayed characteristics that meet the definition of hydric soil indicator F3 (depleted matrix). No other evaluated soil samples within the survey area displayed characteristics of any hydric soil indicators described in the 2008 Arid West Supplement (Environmental Laboratory 2008). However, the soil at SP 2 can be considered problematic¹. The 2008 Arid West Supplement describes the procedure for determining whether a soil is hydric when it does not display hydric soil indicators; this procedure is paraphrased as follows:

1. Verify that one or more indicators of hydrophytic vegetation are present.
2. Verify that at least one primary or two secondary indicators of wetland hydrology are present.
3. Thoroughly describe and document the soil profile and landscape setting, which includes verifying that the area is within a landscape position that is likely to collect or concentrate water.
4. Choose from a list of approaches provided in the 2008 Arid West Supplement to determine whether the soil is hydric.

It is determined, based on field collected data provided on the Wetland Determination Data Form for SP 3 (Attachment C), that criterion 1 and 2 are satisfied. Additionally, the "Hydrology" section on page 4 of this memorandum describes the local topography and discrete hydrologic inputs that satisfy criteria 3. Based on the description of hydrologic inputs into the area and recent development projects it is determined that this location is a recently developed wetland, which is one of the approaches listed in the 2008 Arid West Supplement that satisfies criteria 4. Therefore, the soil at SP 3 is considered hydric.

Hydrology

¹ The soils at this sampling point can be considered problematic because they are within an area of recently developed wetlands. Hydrological inputs from the adjacent residential development and increased sheet flow from the newly constructed State Route 125 may have increased the hydrologic input in this area promoting wetland development.

Jurisdictional Wetlands/Waters Determination

Pre-survey Investigation – No streams, rivers, washes, or other waterbodies are mapped within the survey area by the NHD or identified on the United States Geological Survey (USGS) Jamul Mountains 7.5 minute quadrangle map (quad map). Telegraph Canyon, which is located approximately 0.5 mile south of the northern most point of the survey area, is mapped in the NHD and on the USGS Jamul Mountains quad map. Telegraph canyon forms a direct hydrologic connection with San Diego Bay and the Pacific Ocean (a Traditional Navigable Water [TNW]).

Field Survey – The survey area is located in a large depressional area that collects overland sheet flow from fairly steep embankments to the east and west. Additional hydrological inputs are conveyed from a stormwater outfall at the north end of the survey area. It appears that this outfall functions as a discharge point for stormwater collected by the stormwater system within the adjacent residential development located immediately west and upslope of the survey area (Figure 1 [Attachment A]).

Two cement-lined channels that concentrate overland sheetflow and direct it south to the formally delineated mulefat scrub wetland were identified during the field assessment (Figure 1 [Attachment A]). These channels possess a one foot wide ordinary high water mark (OHWM). Additionally, one swale was identified between the two formally delineated southern willow scrub wetlands in the northern portion of the survey area (Figure 1 [Attachment A]). This swale is vegetated by upland plant species and does not possess an OHWM (Photograph 5 [Attachment B]).

Wetland hydrology indicators were observed at SPs 1 and 3 as well as within the northern most southern willow scrub wetland identified on Figure 1 (Attachment A). Wetland hydrology indicators observed during the field assessment include water stained leaves, non-riverine sediment and drift deposits, and drainage patterns. See the attached Wetland Determination Data Forms (Attachment C) for additional information.

Jurisdictional Determination

United States Army Corps of Engineers – It is determined that the southern willow scrub and mulefat scrub wetland habitats delineated within the survey area satisfy the definition of a wetland as described at 33 CFR §328.3. It is also determined that the two concrete channels identified in the southern portion of the survey area possess an ordinary high water mark as it is defined in USACE RGL 05-05, 33 CFR §328.3(e), and 33 CFR §329.11(a)(1). These features are under the jurisdiction of the USACE and are subject to regulations under the Clean Water Act. Based on field observations and evaluation of other data sources (i.e., NHD data, USGS Jamul Mountains quad map, and aerial photography) it is determined that these formally delineated wetlands and concrete drainage channels may form a hydrological connection with Telegraph Canyon, which in turn possesses a discrete hydrologic connection with the Pacific Ocean (a TNW). The wetland features within the survey area may assist in removal of pollutants from adjacent residential developments and roadways through attenuation of overland sheet flow that is concentrated within the survey area. Therefore, the delineated mulefat scrub and southern willow scrub wetlands, as well as the two concrete channels depicted on Figure 1 (Attachment A) are considered potential jurisdictional wetland and other waters of the U.S.

Regional Water Quality Control Board - The delineated southern willow scrub and mulefat scrub wetlands, the two concrete channels, and the swale feature depicted on Figure 1 (Attachment A) satisfy the description of a water of the state as defined in §13050(e) of the California Water Code (CWC) and therefore these features are under the jurisdiction of the Regional Water Quality Control Board (RWQCB) and are subject to regulations under the Porter-Cologne Water Quality Control Act (Porter-Cologne).

Jurisdictional Wetlands/Waters Determination

California Department of Fish and Game - The California Department of Fish and Game (CDFG) typically asserts jurisdiction over wetlands and riparian vegetation associated with riverine surface waters of the state. The delineated wetlands identified on Figure 1 (Attachment A) may contribute to the protection of water quality within Telegraph Canyon, which is considered a water of the state by CDFG. Therefore, these wetlands are under the jurisdiction of the CDFG and are subject to regulations under California Fish and Game Code (CFG) §1600 *et seq.*. The two concrete channels and swale identified on Figure 1 (Attachment A) provide hydrologic inputs to the aforementioned wetland areas as well as Telegraph Canyon and may also be considered jurisdictional by CDFG and subject to CFG §1600 *et seq.* regulations.

Requisite Permits

If implementation of the proposed project will permanently and/or temporarily impact potential jurisdictional wetland waters of the U.S. and state. The following permits may be required:

- Authorized use of a CWA §404 Nationwide Permit (NWP) or issuance of a CWA §404 Individual Permit could be required if project activities result in the “discharge of fill material”, as defined in the CWA², into jurisdictional waters of the U.S.
- If activities associated with the proposed project are regulated under the CWA §404, issuance of a CWA §401 Water Quality Certification (WQC) from the RWQCB would be required.
- Project activities could warrant the need to obtain Waste Discharge Requirements (WDRs) from the RWQCB if impacts degrade one or more beneficial uses, or create a state of pollution within a water of the state.
- A Streambed Alteration Agreement (SAA) would need to be obtained from CDFG if the proposed activities substantially adversely affect a fish and wildlife resource associated with a water of the state or substantially obstruct or divert the flow of a water of the state³.

Summary and Conclusions

It is determined that the formally delineated wetland habitats, concrete drainage channels, and swale feature within the survey area are potential jurisdictional waters of the U.S. and state regulated by the USACE, RWQCB, and CDFG⁴. If the proposed project activities result in the permanent or temporary discharge of fill material into jurisdictional waters of the U.S., authorized use of a NWP or issuance of an IP as well as issuance of a CWA §401 WQC may be required from the USACE and the RWQCB, respectively. Additionally, if it is determined that the proposed project activities may substantially adversely affect an existing fish and wildlife resource associated with a water of the state or substantially obstruct or divert the flow of a water of the state it is recommended that a Notification of Streambed Alteration be submitted to the CDFG.

² 40 CFR §232.2 and 33 CFR §323.2(e)(1).

³ California Fish and Game Code (CFG) §1600 *et seq.*

⁴ Only the swale feature is considered a potential water of the state exclusively. All other delineated aquatic features within the survey area are considered potential waters of the U.S. and state.

Jurisdictional Wetlands/Waters Determination

References

- Bowman, R.H. 1973. Soil survey of San Diego Area, California. USDA. Soil Conservation Survey, Washington, DC.
- Environmental Laboratory. 1987. *U.S. Army Corps of Engineers Wetlands Delineation Manual*. (Technical Report Y-87-1.) U.S. Army Corps of Engineers Waterways Experiment Station. Vicksburg, MS.
- _____. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*. September.
- Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. 2011. Web Soil Survey. Available online at <http://websoilsurvey.nrcs.usda.gov/> Accessed November 11, 2011.
- Oberbauer, T., M. Kelly, and J. Buegge. 2008. Draft Vegetation Communities of San Diego County. Based on "Preliminary Descriptions of the Terrestrial Natural Communities of California," R. F. Holland, Ph.D., October 1986.
- U.S. Fish and Wildlife Service (USFWS). 2011. National Wetlands Inventory Wetlands Mapper. Accessed November 11, 2011 from <http://www.fws.gov/nwi/>.
- U.S. Geologic Survey (USGS). 2011. National Hydrography Dataset. Available at <http://nhd.usgs.gov/>. Accessed November 11, 2011.

Attachment A

Figures

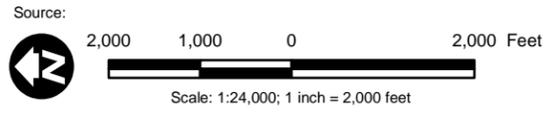


Figure 1
Potential Jurisdictional Waters of the U.S. and State

Attachment B
Photograph Log

Attachment B – Photograph Log



Photograph 1: Looking south at Sample Point (SP) 1 (shovel with pink flagging in the center of the photo) and formally delineated mulefat scrub wetland.



Photograph 2: Looking east at SP 2 (shovel with pink flagging in the center of the photo). This sampling point is located within disturbed/non-native grassland habitat upslope, and immediately west of SP1.



Photograph 3: Looking east at SP 3 (shovel with pink flagging in the center of the photo) within the formally delineated southern willow scrub wetland.



Photograph 4: Looking east at SP 4 (shovel with pink flagging in the center of the photo) within non-native grassland habitat immediately west of the formally delineated southern willow scrub wetland.



Photograph 5: Looking north at swale and southern willow scrub wetland. This swale feature conveys concentrated surface water between the two formally delineated areas of southern willow scrub wetlands.

Attachment C

Data Forms

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: TL 6961 (Eastlake Parkway to Otay Lakes Road) City/County: Chula Vista/San Diego Sampling Date: 1/17/2011
 Applicant/Owner: San Diego Gas & Electric State: CA Sampling Point: 1
 Investigator(s): Brian Felten Section, Township, Range: Section 34, Township 17 South, Range 1 West
 Landform (hillslope, terrace, etc.): Swale/Channel Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion (LRR): C - Mediterranean California Lat: 32.64842523 Long: -116.9725313 Datum: WGS84
 Soil Map Unit Name: Diablo clay, 15 to 30 percent slopes (DaE) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: <u>Sampling point is located within a linear watercourse that possesses a discontinuous ordinary high water mark.</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
Total Cover: _____ %				
Sapling/Shrub Stratum				
1. <u>Baccharis salicifolia</u>	60	Yes	FACW	
2. _____				
3. _____				
4. _____				
5. _____				
Total Cover: <u>60</u> %				
Herb Stratum				
1. <u>Epilobium ciliatum</u>	30	Yes	FACW	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
Total Cover: <u>30</u> %				
Woody Vine Stratum				
1. _____				
2. _____				
Total Cover: _____ %				
% Bare Ground in Herb Stratum <u>70</u> %	% Cover of Biotic Crust <u>0</u> %			

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by: _____
 OBL species _____ x 1 = 0
 FACW species 90 x 2 = 180
 FAC species _____ x 3 = 0
 FACU species _____ x 4 = 0
 UPL species _____ x 5 = 0
 Column Totals: 90 (A) 180 (B)
 Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present? Yes No

Remarks: Vegetation is growing within swale/channel and immediately outside of channel. Vegetation community changes at toe of adjacent slope.

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix		Redox Features				Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10 YR 5/1	100	N/A				Sandy Clay Loam	
6-20	10 YR 5/1	96	7.5 YR 4/6	4	C	RC	Sandy Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.
³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils:⁴

<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Other (Explain in Remarks)

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):
 Type: None
 Depth (inches): N/A

Hydric Soil Present? Yes No

Remarks: Soil sampling pit was dug within the limits of the swale/channel. This is the same soil in which the vegetation is growing.

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (any one indicator is sufficient)</u>		<u>Secondary Indicators (2 or more required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input checked="" type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	
Water Table Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	10
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches):	8

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
 National Weather Service data at Lindbergh Field recorded 0.04 inches of rainfall from January 1, 2012 to January 17, 2012.

Remarks: The National Weather Service recorded 0.02 inches of rainfall at the Lindbergh Field weather station on January 15, 2011 (2 days prior to the delineation field work).

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: TL 6961 (Eastlake Parkway to Otay Lakes Road) City/County: Chula Vista/San Diego Sampling Date: 1/17/2011
 Applicant/Owner: SDG&E State: CA Sampling Point: 2
 Investigator(s): Brian Felten Section, Township, Range: Section 34, Township 17 South, Range 1 West
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): Flat Slope (%): 5
 Subregion (LRR): C - Mediterranean California Lat: 32.64843323 Long: -116.9725781 Datum: WGS84
 Soil Map Unit Name: Diablo clay, 15 to 30 percent slopes (DaE) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>Sampling point is located approximately 10 feet up slope from the toe of slope.</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
Total Cover: _____ %				
Sapling/Shrub Stratum				
1. <u>Hirschfeldia incana</u>	25	Yes	Not Listed	
2. _____				
3. _____				
4. _____				
5. _____				
Total Cover: 25 %				
Herb Stratum				
1. <u>Ambrosia psilostachya</u>	85	Yes	FAC	
2. <u>Silybum marianum</u>	40	Yes	Not Listed	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
Total Cover: 125 %				
Woody Vine Stratum				
1. _____				
2. _____				
Total Cover: _____ %				
% Bare Ground in Herb Stratum <u>0 %</u>	% Cover of Biotic Crust <u>0 %</u>			

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3 % (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species	<u> </u>	x 1 =	<u>0</u>
FACW species	<u> </u>	x 2 =	<u>0</u>
FAC species	<u>85</u>	x 3 =	<u>255</u>
FACU species	<u> </u>	x 4 =	<u>0</u>
UPL species	<u>65</u>	x 5 =	<u>325</u>
Column Totals:	<u>150</u> (A)		<u>580</u> (B)
Prevalence Index = B/A =			<u>3.87</u>

Hydrophytic Vegetation Indicators:

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present? Yes No

Remarks: Transition from mulefat scrub vegetation community described at Sampling Point 1 occurs at the toe of slope.

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-20	10 YR 4/2	100	N/A				Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.
³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	Indicators for Problematic Hydric Soils:⁴ <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
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Restrictive Layer (if present): Type: <u>None</u> Depth (inches): <u>N/A</u>	Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (2 or more required) <input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
 National Weather Service data at Lindbergh Field recorded 0.04 inches of rainfall from January 1, 2012 to January 17, 2012.

Remarks: No wetland hydrology indicators observed. The National Weather Service recorded 0.02 inches of rainfall at the Lindbergh Field weather station on January 15, 2011 (2 days prior to the delineation field work).

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: TL 6961 (Eastlake Parkway to Otay Lakes Road) City/County: Chula Vista/San Diego Sampling Date: 1/17/2011
 Applicant/Owner: SDG&E State: CA Sampling Point: 3
 Investigator(s): Brian Felten Section, Township, Range: Section 34, Township 17 South, Range 1 West
 Landform (hillslope, terrace, etc.): Valley Bottom Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR): C - Mediterranean California Lat: 32.65121547 Long: -116.9727143 Datum: WGS84
 Soil Map Unit Name: Diablo clay, 15 to 30 percent slopes (DaE) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: <u>Sampling point is located within a large concave depression surrounded by steep slopes to the east and west. A stormwater outfall is also located at the north end of the depression. Overland sheet flow is concentrated at this outfall and conveyed to this sampling point via a swale. See the Jurisdictional Wetlands/Waters Assessment Memorandum for additional information.</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status																																									
1. <u>Tamarix ramosissima</u>	30	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7 %</u> (A/B)																																								
2. <u>Salix gooddingii</u>	30	Yes	OBL																																									
3. _____																																												
4. _____																																												
Total Cover: <u>60 %</u>				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%;"></td> <td style="width:10%; text-align: center;">Total % Cover of:</td> <td style="width:10%;"></td> <td style="width:10%; text-align: center;">Multiply by:</td> <td style="width:30%;"></td> </tr> <tr> <td>OBL species</td> <td align="center">30</td> <td></td> <td align="center">x 1 =</td> <td align="center">30</td> </tr> <tr> <td>FACW species</td> <td></td> <td></td> <td align="center">x 2 =</td> <td align="center">0</td> </tr> <tr> <td>FAC species</td> <td align="center">30</td> <td></td> <td align="center">x 3 =</td> <td align="center">90</td> </tr> <tr> <td>FACU species</td> <td></td> <td></td> <td align="center">x 4 =</td> <td align="center">0</td> </tr> <tr> <td>UPL species</td> <td align="center">25</td> <td></td> <td align="center">x 5 =</td> <td align="center">125</td> </tr> <tr> <td>Column Totals:</td> <td align="center">85</td> <td align="center">(A)</td> <td></td> <td align="center">245 (B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A =</td> <td align="center">2.88</td> </tr> </table>		Total % Cover of:		Multiply by:		OBL species	30		x 1 =	30	FACW species			x 2 =	0	FAC species	30		x 3 =	90	FACU species			x 4 =	0	UPL species	25		x 5 =	125	Column Totals:	85	(A)		245 (B)	Prevalence Index = B/A =				2.88
	Total % Cover of:		Multiply by:																																									
OBL species	30		x 1 =		30																																							
FACW species			x 2 =		0																																							
FAC species	30		x 3 =		90																																							
FACU species			x 4 =	0																																								
UPL species	25		x 5 =	125																																								
Column Totals:	85	(A)		245 (B)																																								
Prevalence Index = B/A =				2.88																																								
Total Cover: _____ %																																												
Sapling/Shrub Stratum																																												
1. _____																																												
2. _____																																												
3. _____																																												
4. _____																																												
5. _____																																												
Total Cover: _____ %																																												
Herb Stratum																																												
1. <u>Silybum marianum</u>	25	Yes	Not Listed	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.																																								
2. _____																																												
3. _____																																												
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
8. _____																																												
Total Cover: <u>25 %</u>																																												
Woody Vine Stratum																																												
1. _____																																												
2. _____																																												
Total Cover: _____ %																																												
% Bare Ground in Herb Stratum <u>75 %</u>		% Cover of Biotic Crust <u>0 %</u>																																										

Remarks: Ground is covered with a large amount of duff.

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture ³	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10 YR 6/2	100	N/A				Sand	
10-20	10 YR 5/1		7.5 YR 4/4	<1%	C	M	Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.
³Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	Indicators for Problematic Hydric Soils:⁴ <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input checked="" type="checkbox"/> Other (Explain in Remarks)
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

⁴Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: <u>None</u> Depth (inches): <u>N/A</u>	Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: Redoximorphic features were very sparse (approximately <1% of the soil matrix). Observed soil conditions do not meet the definition of any hydric soils indicators as they are described in the 2008 Arid West Regional Supplement. However, it is determined that the soil at this location may be problematic. See the Jurisdictional Wetland/Waters Assessment for more information regarding this determination.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____		Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: National Weather Service data at Lindbergh Field recorded 0.04 inches of rainfall from January 1, 2012 to January 17, 2012.			
Remarks: The National Weather Service recorded 0.02 inches of rainfall at the Lindbergh Field weather station on January 15, 2011 (2 days prior to the delineation field work).			

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: TL 6961 (Eastlake Parkway to Otay Lakes Road) City/County: Chula Vista/San Diego Sampling Date: 1/17/2011
 Applicant/Owner: SDG&E State: CA Sampling Point: 4
 Investigator(s): Brian Felten Section, Township, Range: Section 34, Township 17 South, Range 1 West
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): _____
 Subregion (LRR): C - Mediterranean California Lat: 32.6512283 Long: -116.9727843 Datum: WGS 84
 Soil Map Unit Name: Diablo clay, 15 to 30 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>This sampling point is located west of a southern willow scrub wetland.</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
Total Cover: _____ %				
Sapling/Shrub Stratum				
1. <u>Silybum marianum</u>	5	Yes	Not Listed	
2. _____				
3. _____				
4. _____				
5. _____				
Total Cover: 5 %				
Herb Stratum				
1. <u>Cynodon dactylon</u>	100	Yes	FAC	
2. <u>Foeniculum vulgare</u>	5	No	FACU	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
Total Cover: 105%				
Woody Vine Stratum				
1. _____				
2. _____				
Total Cover: _____ %				
% Bare Ground in Herb Stratum <u>0 %</u>	% Cover of Biotic Crust <u>0 %</u>			

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 % (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:	
OBL species	<u> </u>	x 1 =	<u>0</u>
FACW species	<u> </u>	x 2 =	<u>0</u>
FAC species	<u>100</u>	x 3 =	<u>300</u>
FACU species	<u>5</u>	x 4 =	<u>20</u>
UPL species	<u>5</u>	x 5 =	<u>25</u>
Column Totals:	<u>110</u> (A)		<u>345</u> (B)
Prevalence Index = B/A =			<u>3.14</u>

Hydrophytic Vegetation Indicators:

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present? Yes No

Remarks: Vegetation community is not hydrophytic.

APPENDIX D-2
RECON MAY 2012 MEMO

SDG&E Water Permitting Project Form

Date	05/24/12
Date Due	5/29/12
eTS Number	20613
Project Name	TL 6965 Section between Eastlake Parkway and Otay Lakes Road
Address / Location	Eastlake Parkway and Otay Lakes Road
Project Description	Wetland Survey for one section of TL 6965
Contract Number	56600-15709
Internal Order Number	200403954
Cost Center	
ES South Reviewer	Tamara Spear
Consultant Projected Cost	Consultant to provide estimate
Consultant Comments	RECON #6691

San Diego Gas and Electric proposes construction on TL 6965 within a vegetated drainage near Eastlake Drive and Otay Lakes in Bonita California. RECON biologist Michael Nieto visited the site with SDG&E staff, on April, 27, 2012 to conduct an informal assessment of potential wetland resources.

Methods

RECON conducted a reconnaissance-level wetland survey of the Right-of-Way (ROW) for TL 6965 to identify the boundaries, types, and acreages of all aquatic resources that are potentially under the jurisdiction of the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Game (CDFG). Potential waters and wetland locations contained within the survey area were evaluated using the methodology set forth in the USACE Wetland Delineation Manual (USACE 1987) and the Arid West Regional Delineation Supplement (USACE 2008a). Hydrologic and vegetative wetland indicators were recorded per the 1987 USACE manual guidelines and the 2008 Arid West Supplement, and CDFG guidelines. Wetland hydrology indicators include evidence of inundation, saturation, watermarks, drift lines, and sediment deposits. Vegetation was analyzed using dominant species Wetland Indicator Status (WIS). Suspected jurisdictional areas were evaluated for the presence of definable channels, wetland vegetation, ordinary high water marks (OHWMs) and connectivity to Traditional Navigable Waterway (TNW). As this task is being conducted for constraints purposes, formal USACE delineation forms were not processed. If suspected jurisdictional wetlands intersect with proposed project activity limits, a formal wetland delineation will be necessary to determine jurisdictional impacts.

SDG&E Water Permitting Project Form

Jurisdictional Assessment

In general, the drainage flows south through the project site emanating from a culvert to the north. The drainage continues flowing south of the project site via a culvert. According to a brief analysis using aerial photography, the project drainage flows south into Telegraph Creek, which then flows west exiting into the Pacific Ocean near the South Bay Power plant in Chula Vista via a series of underground and open concrete channels. A distinct water channel was observed throughout the majority of the project drainage. The remainder of the water flow appears to be carried sub-surface or by sheet flow. These sheet flow areas can be considered a discontinuous ephemeral stream and are likely jurisdictional (USACE 2008b).

The project site contained a total of four vegetation communities typically associated with jurisdictional resources: riparian woodland, riparian scrub, meadow/seep, and unvegetated channel (Figure 1). Riparian woodland on-site was dominated by arroyo willow (*Salix lasiolepis*, FACW) and exhibited several diagnostic wetland hydrology indicators including drift deposits and surface soil cracks (Photographs 1 and 2). Riparian scrub on-site was dominated by broom baccharis (*Baccharis sarothroides*, FAC) and Indian tree tobacco (*Nicotiana glauca*, FAC) (Photograph 3). Meadow/seep vegetation on-site was dominated by hydrophytic herbaceous vegetation including perennial ryegrass (*Lolium perenne*, FAC) and bristly oxtongue (*Picris echioides*, FAC) (Photographs 4 and 5). Areas which have been scoured by water flows within the stream floodplain were recorded as unvegetated channels (Photograph 6).

Using existing vegetation and observed hydrologic indicators, potential jurisdictional resources for USACE, CDFG, and RWQCB were observed and recorded within the project area (see Figure 2). Several informal test pits were dug along the streambed (north to south). Soil saturation and a high water table were observed in all test pits. According to hydrologic indicators throughout the drainage and connectivity to Telegraph Creek, this drainage likely contains water features and vegetation considered jurisdictional by USACE, RWQCB, and CDFG. One proposed electric pole location (staked) was observed near likely jurisdictional areas (Photograph 7). Impacts to these resources will require a formal wetland delineation and associated agency permits.

References Cited

U.S. Army Corps of Engineers (ACOE)

1987 *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1, Department of the Army. January.

2008a Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region. Prepared by U.S. Army Engineer Research and Development Center. December.

2008b A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid west Region of the Western United states: A Delineation Manual. Prepared by U.S. Army Engineer Research and Development Center. August.

FIGURES

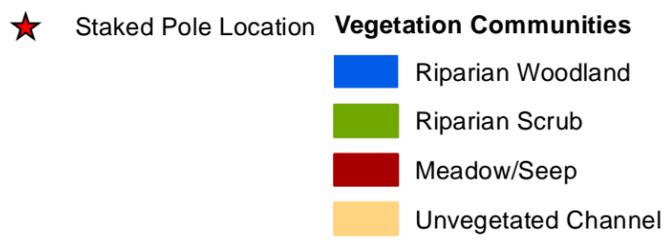
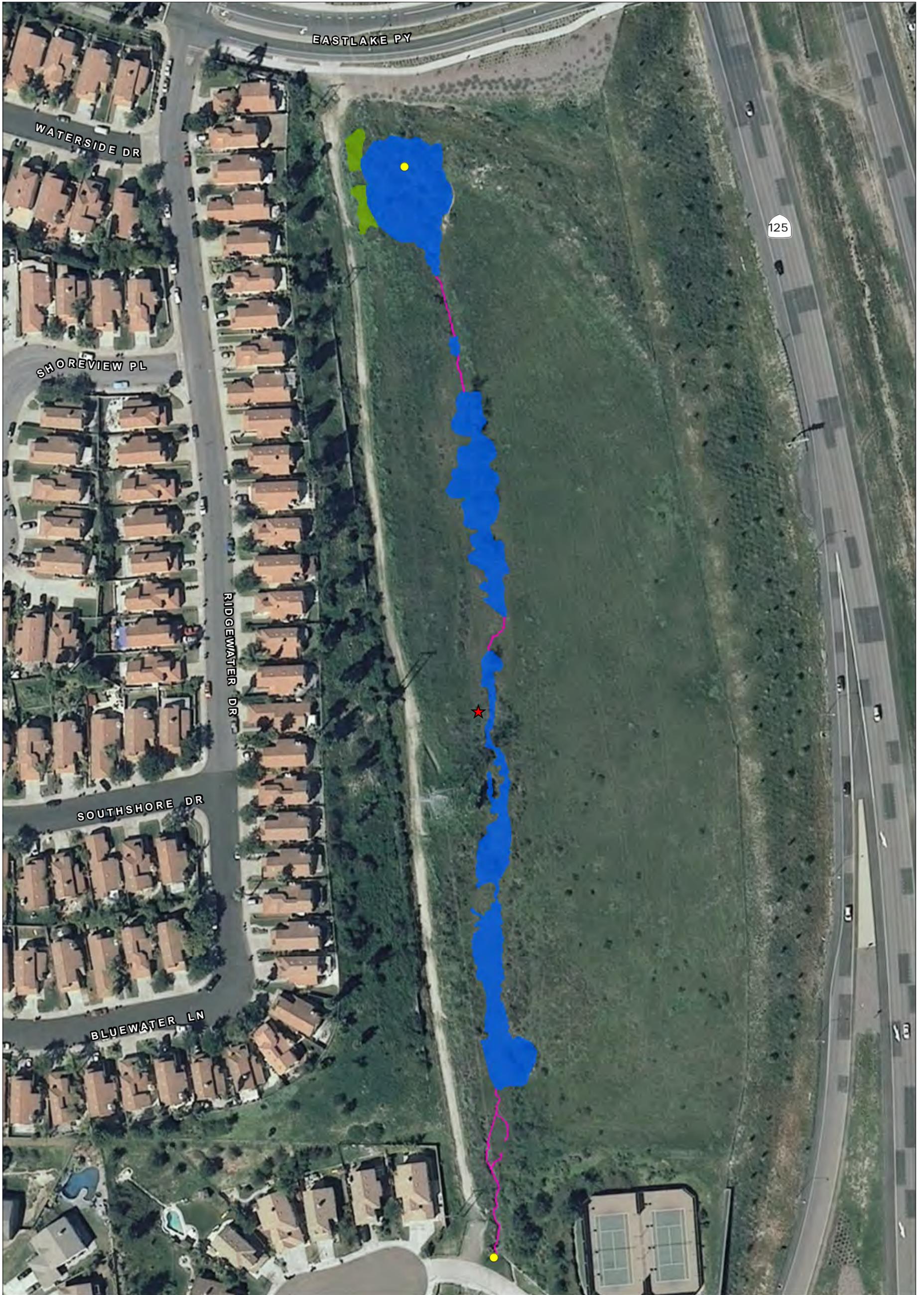


FIGURE 1

Vegetation Communities



- ★ Staked Pole Location
- Culvert
- Likely Jurisdictional Resources**
- ACOE Wetland, CDFG Riparian, RWQCB
- CDFG Riparian, RWQCB
- ACOE Non-wetland Waters, CDFG Streambed, RWQCB



FIGURE 2

PHOTOGRAPHS

DRAFT PHOTOGRAPHS (sheet 1 of 6)



PHOTOGRAPH 1: Detail of culvert within southern willow scrub at northern end of project drainage. Likely USACE, RWQCB, CDFG jurisdiction. Facing northwest.



PHOTOGRAPH 2: Detail of hydrologic features within southern willow scrub vegetation: drift deposits and surface soil cracking. Facing northwest

DRAFT PHOTOGRAPHS (sheet 2 of 6)



PHOTOGRAPH 3: Riparian scrub on-site dominated by broom baccharis (*Baccharis sarothroides*, FAC). Facing south.

DRAFT PHOTOGRAPHS (sheet 3 of 6)



PHOTOGRAPH 4: Meadow/seep vegetation dominated by perennial rye grass (*Lolium perenne*, FAC) at bottom of floodplain. There is a small discontinuous channel intermittently present through this vegetation community. Soil was observed to be saturated with a high water table. Likely USACE, RWQCB, and CDFG Riparian jurisdiction. North of Pole 283973. Facing south.



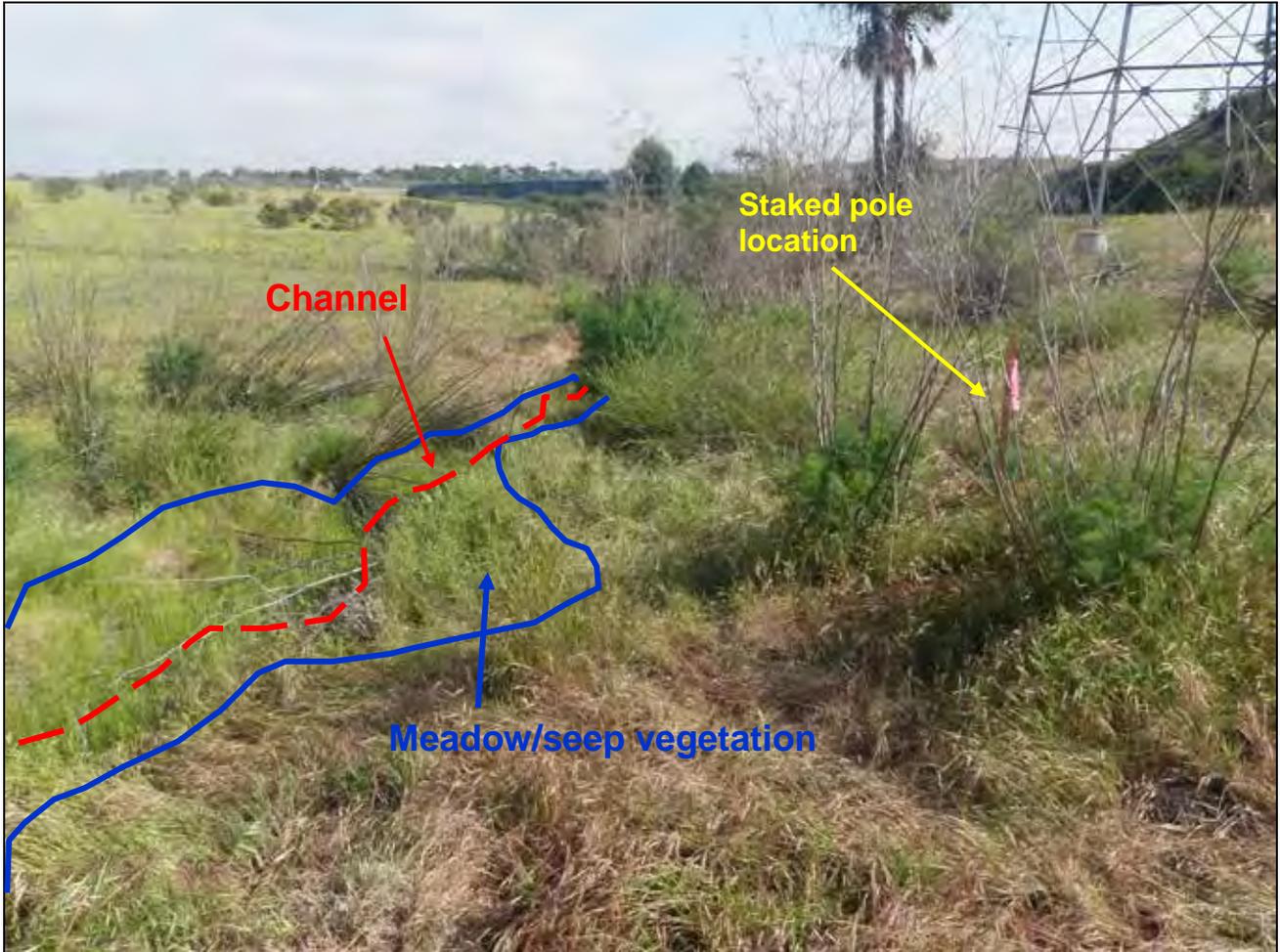
PHOTOGRAPH 5: Detail of discontinuous channel within meadow/seep vegetation. Note surface water. Prominent vegetation in the photo is annual mouse-tail (*Polypogon monspeliensis*, FACW+) and bristly ox-tongue (*Picris echioides*, FAC). Likely USCAE, RWQCB, CDFG jurisdiction. North of Pole 283973. Facing southwest .

DRAFT PHOTOGRAPHS (sheet 5 of 6)



PHOTOGRAPH 6: Unvegetated channel and culvert in southern portion of the project area. Channel is likely jurisdictional (non-wetland waters of US and state). Facing south.

DRAFT PHOTOGRAPHS (sheet 6 of 6)



PHOTOGRAPH 7: Staked pole (proposed) and adjacent meadow/seep vegetation. Meadow seep vegetation and associated channel are likely considered jurisdictional by USACE, RWQCB, and CDFG. Facing south.

APPENDIX D-3
AQUATIC FEATURES SUMMARY FOR THE
PROPOSED SALT CREEK SUBSTATION SITE

**AQUATIC FEATURES SUMMARY
FOR THE
PROPOSED SALT CREEK SUBSTATION SITE**

Prepared for:

Ms. Tamara Spear
Environmental Specialist
San Diego Gas and Electric Environmental Services
8315 Century Park Court – CP21E
San Diego, CA 92123

January 21, 2013

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INTRODUCTION

This document summarizes a reconnaissance-level jurisdictional waters assessment survey completed for the Salt Creek Substation Site (substation footprint) on October 16, 2012, by AECOM regulatory specialist Joshua Zinn. Mr. Zinn's field survey provided a follow-up assessment to the reconnaissance-level survey completed by Brian Felten in March 2012, as summarized in *Reconnaissance-Level Jurisdictional Waters Assessment Summary for the Salt Creek Transmission Line from the Miguel Substation to the Proposed Salt Creek Substation* (AECOM 2012).

CURRENT SITE CONDITIONS

As illustrated in Figure 1, the proposed Salt Creek Substation site is immediately adjacent to a tributary to Salt Creek. Water enters the site from the north through a 96" culvert, flowing south and connecting to Salt Creek. The storm water conveyance features identified as unvegetated concrete channels that occur within the proposed Salt Creek Substation site (i.e., project boundary) have been constructed wholly in uplands (e.g., have not replaced a once occurring natural drainage) and collect stormwater (Figure 2). These constructed drainage features, along previously disturbed and contoured areas onsite, appear to have been installed for erosion control and stormwater conveyance purposes and are themselves non-jurisdictional features, both state and federal.

HISTORICAL BACKGROUND

Through a review of historical aerials of the project footprint between 1953 and 2000, the tributary to Salt Creek was an underdeveloped (likely) ephemeral feature, occurring within nonnative (upland) grassland habitat, with an underdeveloped riparian component. Between 2000 and 2004, as urbanization and development occurred within the surrounding watershed and the project footprint, the tributary to Salt Creek began developing a more developed riparian component and a longer flow regime (intermittent) as a result of watershed hydromodification. In 2005–2006, grading and development occurred at the project area, and the cement-lined ditches (which occur within the project footprint) were installed to convey stormwater into the tributary to Salt Creek.¹ Since the

¹ During this time period, Hunte Parkway (which occurs within the northwest portion of the substation footprint) was created.

initial grading of the northwest portion of the substation footprint and placement of the cement-lined stormwater ditches in (circa) 2005, the project footprint has not changed.²

Absence of Potential Federal Waters within the Substation Footprint

Clean Water Act (as regulated by the USACE and USEPA)

Two cement-lined ditches occur within the substation footprint. The 2007 Memorandum of Understanding between the U.S. Army Corps of Engineers (USACE) and the U.S. Environmental Protection Agency for the *Rapanos* Decision, states “The agencies generally will not assert jurisdiction over the following features: Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.”

The source of water to these cement-lined ditches originates from rainfall and sheetflow from the adjacent street (Hunte Parkway). It appears the ditches were installed (in upland areas) for erosion control purposes after land-contouring activities were completed (the ditches are placed within contoured areas). Therefore, these ditches do not meet the terms and conditions of a potential jurisdictional water of U.S.

Absence of Potential State Waters within the Substation Footprint

California Fish and Wildlife Code (as regulated by the CDFW)

Pursuant to Section 1600 *et seq.* of the California Fish and Wildlife Code (CFWC), the California Department of Fish and Wildlife (CDFW) regulates activities of an applicant’s project that would substantially alter the flow, bed, channel, or bank of a stream or lake. CDFW extends its jurisdictional limit to the top of a bank of a stream, the bank of a lake, or outer edge of the riparian vegetation, whichever is wider.

As stated above the natural hydrology of the site has been previously disturbed. The concrete brow ditches within the proposed Substation site were installed as a Best Management Practice for the asphalt roads. The brow ditches were constructed to capture sheet flow and keep it off of the road and also to minimize erosion. These ditches have been constructed in re-contoured slopes, intercepting overland flow and would not be regulated as a stream by CDFW. The water quality function of the brow ditches would be covered as described in the summary below.

² This conclusion is based on a review of historical aerial photographs and historical topographic maps of the project footprint (and surrounding environs) between the years of 1953 and the present using Google Earth historical aerial imagery and historicaerials.com (1953 through 2005) (NETR Online 2013).



Source: AECOM, GeomorphIS LLC, SDG&E, 2012; Esri Basemaps, 2011

Figure 1
Aquatic Features for the Proposed Salt Creek Substation Site

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Photograph 1: Looking west at cement ditch at Salt Creek (background)



Photograph 2: Looking west at start of cement ditch that emptys into Salt Creek (background)

Figure 2
Representative Photographs

Porter–Cologne Water Quality Control Act (as regulated by the RWQCB)

Pursuant to Section 13000 *et seq.* of the California Water Code (CWC) (the 1969 Porter-Cologne Water Quality Control Act [Porter-Cologne]), the RWQCB is authorized to regulate any activity that would result in discharges of waste or fill material into waters of the state, including “isolated” waters and/or wetlands (e.g., vernal pools and seeps), saline waters, and groundwater within the boundaries of the state (CWC Section 13050[e]).

RWQCB jurisdiction is considered congruent with USACE jurisdiction. The RWQCB also considers whether or not a feature possesses a “beneficial use” as outlined in the *Water Quality Control Plan for the San Diego Basin* (Basin Plan) (RWQCB 1994) when deciding if RWQCB jurisdiction should be asserted over a feature. Although these features convey stormwater to Salt Creek³, these features meet no criteria or definition of Beneficial Use as outlined in the Basin Plan. Therefore, these cement-lined channels are not considered as jurisdictional waters under the state as regulated by Porter-Cologne.

Summary

All proposed ground-disturbing activities are located outside of jurisdictional waters and wetlands (e.g., Salt Creek and its tributary) and no structures will be placed within jurisdictional waters or wetlands. However, the non-jurisdictional concrete brow ditches within the proposed Salt Creek Substation project footprint do convey water to an off-site jurisdictional feature (Salt Creek).

Avoidance of indirect impacts to Salt Creek and its tributary during construction will be covered under the State Water Resources Control Board’s Construction General Permit and outlined in more detail in the project’s Storm Water Pollution Prevention Plan (SWPPP). The SWPPP will prescribe various types of Best Management Practices to minimize or prevent construction-related materials and excess sediment from discharging into the nearby waterway. Post construction drainage and water quality impacts will be addressed in the site design and the project Storm Water Management Plan (SWMP) in accordance with the City of Chula Vista’s Standard Urban Storm Water Mitigation Plan (SUSMP). The SUSMP is meant as a plan to comply with the Regional Municipal Separate Storm Water/Sewer Water NPDES permit (MS4 permit). The intent is to minimize impacts to waterways in terms of erosion and water quality.

³ Salt Creek (or this portion of it that receives stormwater runoff from the cement-lined ditches outside of the proposed Salt Creek Substation footprint) is not listed as a 303(d) waterbody.

If it is determined that impacts to potential jurisdictional waters are unavoidable due to engineering, logistical, or other unforeseen constraints, then acquisition of requisite permit authorizations, issuances, and/or agreements from the appropriate regulatory agencies with jurisdiction over the aquatic features identified in this summary may be required.

A formal jurisdictional delineation would be required to supplement any applications, notifications, and or reports submitted to the respective agencies, for which permits, authorizations, and/or agreements are being sought.

LIST OF PREPARERS

Tamara Spear, SDG&E
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Michelle Fehrensen, AECOM

REFERENCES

AECOM

- 2012 Reconnaissance-Level Jurisdictional Waters Assessment Summary for the Salt Creek Transmission Line from the Miguel Substation to the Proposed Salt Creek Substation. April 3.

NETR Online

- 2013 Historical Aerial Imagery and Historical Topographic Maps of the Salt Creek Substation footprint and surrounding environs (1953 through 2005). Available at: <http://www.historicaerials.com/>. Accessed January.

Regional Water Quality Control Board (RWQCB)

- 1994 *Water Quality Control Plan for the San Diego Basin*, as amended. Available at http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/. Accessed January 2013.

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APPENDIX E

**RARE PLANT SURVEY REPORT
FOR THE PROPOSED SALT CREEK
69kV TRANSMISSION LINE
INSTALLATION PROJECT**

October 8, 2012

Ms. Debbie Collins
San Diego Gas & Electric
8315 Century Park Court – CP21E
San Diego, California 92123

RE: Rare Plant Survey Report for the Proposed Salt Creek 69-kV Transmission Line Installation Project, Chula Vista, California

Dear Ms. Collins:

The purpose of this letter report is to present findings of the botanical resource surveys conducted for the proposed Salt Creek 69-kV Transmission Line Installation Project in the City of Chula Vista, California. The purpose of the botanical surveys was to (1) compile a list of plant species that occur within the site, and (2) identify rare (special-status) plant species and map their distribution. Surveys were conducted on behalf of San Diego Gas and Electric (SDG&E).

Project Description

The linear project is located in Eastlake and Otay Mesa, California (Figure 1). The project would include the installation of a new 69-kilovolt (kV) transmission line along an existing 5-mile-long transmission corridor east of the existing Miguel Substation south to the proposed Salt Creek Substation (Figure 2). The transmission line corridor is 120 feet in width for the northern portion of the alignment and 150 feet in width south of Hunte Parkway. The corridor includes an existing 69-kV transmission line and two 230-kV transmission lines mutually located on a single steel lattice tower line. The new 69-kV transmission line is expected to be built approximately 15 feet in from the eastern edge of the 120-foot-wide easement.

Based on preliminary design, approximately 53 new structures would be erected on the new 69-kV transmission line, including 46 galvanized steel poles, six engineered foundation poles, and one cable pole. Two staging yards have been identified for the project: one at the Miguel Substation and another on the north side of Hunte Parkway between Discovery Falls, Eastlake Parkway, and Crossroads Street. The proposed Salt Creek Substation site would be located on an 11.6-acre site directly south of Hunte Parkway, near the southern terminus of Exploration Falls Drive and adjacent to the Miguel to Mexico transmission line corridor (Figure 3).

Site Description

For purposes of this report, the term “project survey area” refers to the transmission line corridor (which contains an existing wood pole alignment) and two staging yards plus a 500-foot survey buffer around each of these areas. The project survey area occurs within the City of Chula Vista’s Multiple Species Conservation Planning (MSCP) Subarea Plan (Subarea Plan) Otay Ranch Planning Area, within areas planned for development (e.g., outside of the Otay Ranch Preserve). The project survey area contains a variety of developed areas, along with native habitats, including coastal sage scrub, riparian scrub,

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grassland, and non-native habitats including non-native grassland and disturbed areas. Several existing dirt access roads that serve the existing substation and the power pole alignment cross the project survey area.

Habitat at the northern end of the transmission line corridor, near the existing Miguel Substation, consists of non-native grassland, coastal sage scrub, and riparian scrub. Habitat along the central portion of the transmission line corridor consists of non-native grassland disturbed areas with very little native vegetation, and native vegetation consisting of small patches of coastal sage scrub. Habitat at the southern end of the transmission line corridor, near the proposed Salt Creek Substation, consists of non-native grassland, coastal sage scrub, riparian scrub, and disturbed areas.

Survey Methodology

A search of the relevant regional databases for special-status plants in the vicinity of the project study area was conducted prior to conducting the field surveys. Special-status plants include those federally listed as endangered, threatened, or proposed for listing; state-listed as endangered, threatened, rare, or proposed for listing, or having a California Rare Plant Rank (CRPR) (formerly CNPS List) of 1B, 2, 3, or 4. CRPR 1B plants are “plants rare, threatened, or endangered in California and elsewhere,” CRPR 2 plants are “plants rare, threatened, or endangered in California but more common elsewhere”; CRPR 3 plants are “plants about which we need more information - a review list”; and CRPR 4 plants are “plants of limited distribution – a watch list.” The search included a search of the California Department of Fish and Game’s (CDFG) California Natural Diversity Database (CNDDB; CDFG 2012) and a nine-quad search of the California Native Plant Society’s (CNPS) Electronic Inventory for the Jamul Mountains Quadrangle (CNPS 2012).

Senior botanist Michelle Balk conducted three rounds of special-status plant surveys, in March, May, and July 2012, to maximize detection of special-status plants. Survey dates were March 16 (general site reconnaissance), 26, 28, 29, 30, and 31; May 1, 3, 7, 15, 18, 19, 31; and July 20 and 25. A special-status plant survey for the proposed Salt Creek Substation, which partially overlaps the survey area of the current study, was completed in 2011 (AECOM 2011), and vegetation mapping of the entire survey area was completed (AECOM 2012). The special-status plant surveys were conducted by walking meandering transects through the site and recording plant species observed. Any species not immediately identifiable were brought back to the laboratory for further investigation.

The special-status plant locations were recorded with a submeter-accuracy, hand-held Trimble GeoXT Global Positioning System (GPS) unit. Subsequent to the field survey, data were downloaded from the GPS unit, post-processed, and brought into ArcGIS for analysis. For very large occurrences of small, annual plants (e.g., Palmer’s grapplinghook [*Harpagonella palmeri*]), a quadrat sampling method, using a 1-square-foot quadrat, was used to estimate number of individuals. For large occurrences of shrubs (e.g., San Diego sunflower [*Bahiopsis laciniata*], San Diego marsh elder [*Iva hayesiana*]) visual density estimates were made and then multiplied by the area occupied to estimate number of individuals.

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Results

Flora

A total of 248 plant species (61% native, 39% non-native) were observed within the project survey area. A list of plant species observed is included as an attachment to this report.

Special-status Plants

Table 1 lists special-status species potentially occurring onsite with an analysis of potential occurrence.

A total of 14 special-status plant species were observed onsite. One listed species, Otay tarplant (*Deinandra conjugens*; federally listed threatened, state-listed endangered) was observed onsite. Two species listed as CRPR 1B, four listed as CRPR 2, and seven listed as CRPR 4 were observed onsite. A discussion of each of these species onsite is presented below.

California adolphia (*Adolphia californica*; CRPR 2.1)

Eleven individuals of California adolphia were observed on the northern end of the project survey area near the San Miguel Substation. Ten plants were mapped as a polygon just south of the Substation, and a single plant was mapped just to the east of the Substation, in coastal sage scrub (Figure 4a). This perennial, deciduous shrub in the Rhamnaceae (Buckthorn Family) is often associated with clay soils on dry slopes in the foothill and coastal regions of San Diego County and Baja California, Mexico.

San Diego sunflower (*Bahiopsis [=Viguiera] laciniata*; CRPR 4.2)

San Diego sunflower was mapped in large quantities throughout the project site. Approximately 19,450 individuals were mapped as points and polygons, largely concentrated in the northern and southern regions of the project site (Figures 4a, b, c, e). Plants occur within coastal sage scrub and grassland onsite and are especially numerous in areas of recent disturbance. A comparison of 2012 results with the survey results for the 2011 special-status plant survey (AECOM 2011) of the proposed Salt Creek Substation shows a larger area of occupation by this species in 2012 than previously mapped. Many of the plants mapped in 2012 were very small and may have been difficult to observe in 2011. This small-to-medium-sized shrub in the Asteraceae (Sunflower Family) occurs in Orange and San Diego Counties in the United States and in Baja California and Sonora, Mexico.

Small-flowered morning-glory (*Convolvulus simulans*; CRPR 4.2)

Several small occurrences of small-flowered morning glory were mapped onsite, generally in the northern portion of the project survey area (Figures 4a, b, d). A total of 178 individuals were mapped, generally in points of one to a few individuals, on clay soils in grasslands.

Table 1. Special-Status Plant Species with the Potential to Occur on the Salt Creek 69-kV Transmission Line Installation Project

Scientific Name	Common Name	Status Federal/ State	California Rare Plant Rank	Primary Habitat Associations/ Life Form/ Blooming Period	Status Onsite or Potential to Occur
<i>Abronia maritima</i>	Red sand-verbena	None/ None	4.2	Coastal dunes/ perennial herb/ February–November	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Acanthomintha ilicifolia</i>	San Diego thornmint	FT/ SE	1B.1	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; clay/ annual herb/ April–June	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Adolphia californica</i>	California adolphia	None/ None	2.1	Chaparral, coastal scrub, valley and foothill grassland; clay/ shrub/ December–May	Eleven individuals observed onsite in coastal sage scrub in the northern portion of the project site.
<i>Agave shawii</i>	Shaw's agave	None/ None	2.1	Coastal bluff scrub, coastal scrub/ shrub/ May–July	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Ambrosia chenopodiifolia</i>	San Diego bur-sage	None/ None	2.1	Coastal scrub/ shrub/ April–June	Not observed onsite. If present onsite, this shrub would have been observed.
<i>Ambrosia monogyra</i>	Singlewhorl burrobrush	None/ None	2.2	Chaparral/ shrub/ sandy/ August–November	Not observed onsite. If present onsite, this shrub would have been observed.
<i>Ambrosia pumila</i>	San Diego ambrosia	FE/ None	1B.1	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; often in disturbed areas/ perennial herb/ May–October	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Aphanisma blitoides</i>	Aphanisma	None/ None	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub; sandy/ annual herb/ March–June	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>	Del Mar manzanita	FE/ None	1B.1	Maritime chaparral; sandy/ shrub/ December–April	Not observed onsite. If present onsite, this shrub would have been observed.

Scientific Name	Common Name	Status Federal/ State	California Rare Plant Rank	Primary Habitat Associations/ Life Form/ Blooming Period	Status Onsite or Potential to Occur
<i>Arctostaphylos otayensis</i>	Otay manzanita	None/ None	1B.2	Chaparral, cismontane woodland; metavolcanic/ shrub/ January–March	Not observed onsite. If present onsite, this shrub would have been observed.
<i>Artemisia palmeri</i>	San Diego sagewort	None/ None	4.2	Chaparral, coastal scrub, riparian forest and scrub; sandy/ shrub/ May–September	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Asplenium vespertinum</i>	Western spleenwort	None/ None	4.2	Chaparral, cismontane woodland, coastal scrub/rocky/perennial rhizomatous herb/ February–June	Not observed onsite. If present onsite, this species would have been observed.
<i>Astragalus deanei</i>	Dean's milk-vetch	None/ None	1B.1	Chaparral, coastal scrub, riparian forest/perennial herb/ February–May	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Astragalus oocarpus</i>	San Diego milk-vetch	None/ None	1B.2	Chaparral (openings), cismontane woodland/perennial herb/ May–August	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Atriplex coulteri</i>	Coulter's saltbush	None/ None	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland; alkaline or clay/ perennial herb/ March–October	Not observed onsite. If present onsite, this perennial species would have been observed.
<i>Atriplex pacifica</i>	South Coast saltscale	None/ None	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, playas/ annual herb/ March–October	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Baccharis vanessae</i>	Encinitas baccharis	FT/ SE	1B.1	Chaparral, cismontane woodland; sandstone/ deciduous shrub/ August–November	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Bahiopsis [=Viguiera] laciniata</i>	San Diego County viguiera	None/ None	4.2	Chaparral, coastal scrub/ shrub/ February–June	Approximately 19,450 individuals observed throughout the project site in coastal sage scrub and grasslands.

Scientific Name	Common Name	Status Federal/ State	California Rare Plant Rank	Primary Habitat Associations/ Life Form/ Blooming Period	Status Onsite or Potential to Occur
<i>Bergerocactus emoryi</i>	Golden-spined cereus	None/ None	2.2	Closed-cone conifer forest, chaparral, coastal scrub; sandy/ shrub/ May–June	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Bloomeria clevelandii</i>	San Diego goldenstar	None/ None	1B.1	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; clay/ bulbiferous herb/ May	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Brodiaea orcuttii</i>	Orcutt's brodiaea	None/ None	1B.1	Closed-cone conifer forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools; mesic, clay, sometimes serpentine/ bulbiferous herb/ May–July	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Calandrinia breweri</i>	Brewer's calandrinia	None/ None	4.2	Chaparral, coastal scrub, disturbed sites and burns/ annual herb/ March–June	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>California macrophylla</i>	Round-leaved filaree	None/ None	1B.1	Cismontane woodland, valley and foothill grassland; clay/ annual herb/ March–May	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Calochortus dunnii</i>	Dunn's mariposa lily	None/ SR	1B.2	Closed-cone conifer forest, chaparral; gabbroic or metavolcanic/ bulbiferous herb/ April–June	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Camissoniopsis lewisii</i>	Lewis's evening primrose	None/ None	3	Coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland; sandy or clay/ annual herb/ March–June	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.

Scientific Name	Common Name	Status Federal/ State	California Rare Plant Rank	Primary Habitat Associations/ Life Form/ Blooming Period	Status Onsite or Potential to Occur
<i>Carex obispoensis</i>	San Luis Obispo sedge	None/ None	1B.2	Closed-cone coniferous forest, chaparral, coastal scrub, valley and foothill grassland; often serpentinite seeps or clay soils; sometimes gabbro/ perennial rhizomatous herb/ April–June	Not observed onsite. If present onsite, this perennial species would have been observed.
<i>Castilleja plagiotoma</i>	Mojave paintbrush	None/ None	4.3	Lower montane conifer forest, pinyon and juniper woodland/ perennial herb (hemiparasitic)/ April–June	Not observed onsite. If present onsite, this perennial species would have been observed.
<i>Ceanothus cyaneus</i>	Lakeside ceanothus	None/ None	1B.2	Closed-cone conifer forest, chaparral/ shrub/ April–June	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Ceanothus otayensis</i>	Otay Mountain ceanothus	None/ None	1B.2	Chaparral (metavolcanic or gabbroic)/ perennial evergreen shrub/ January–April	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Ceanothus verrucosus</i>	Wart-stemmed ceanothus	None/ None	2.2	Chaparral/ shrub/ December–April	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Centromadia [Hemizonia] pungens</i> ssp. <i>laevis</i>	Smooth tarplant	None/ None	1B.1	Chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland; alkaline/ annual herb/ April–September	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	Orcutt's pincushion	None/ None	1B.1	Coastal bluff scrub, coastal dunes/ annual herb/ January–August	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Chamaebatia australis</i>	Southern mountain misery	None/ None	4.2	Chaparral; gabbroic or metavolcanic/ evergreen shrub/ November–May	Not observed onsite. If present onsite, this large perennial species would have been observed.

Scientific Name	Common Name	Status Federal/ State	California Rare Plant Rank	Primary Habitat Associations/ Life Form/ Blooming Period	Status Onsite or Potential to Occur
<i>Chamaesyce abramsiana</i>	Abrams' spurge	None/ None	2.2	Mojavean desert scrub, Sonoran desert scrub/ sandy/ annual herb/ September–November	Not observed onsite. Not expected onsite due to lack of suitable habitat.
<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	Salt marsh bird's-beak	FE/ SE	1B.2	Coastal dunes, coastal saltwater marshes and swamps/ annual herb/ May–October	Not observed onsite. Not expected due to lack of suitable habitat.
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	Long-spined spineflower	None/ None	1B.1	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland; often clay/ annual herb/ April–July	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Cistanthe maritima</i>	Seaside cistanthe	None/ None	4.2	Coastal bluff scrub, coastal scrub, valley and foothill grassland/ sandy/ annual herb/ February–August	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Clarkia delicata</i>	Delicate clarkia	None/ None	1B.2	Chaparral, cismontane woodland/ annual herb/ April–June	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Clinopodium chandleri</i>	San Miguel savory	None/ None	1B.2	Chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland; rocky, gabbroic or metavolcanic/ perennial herb/ March–May	Not observed onsite. If present onsite, this perennial species would have been observed.
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>	Summer-holly	None/ None	1B.2	Chaparral, cismontane woodland/ shrub/ April–June	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Convolvulus simulans</i>	Small-flowered morning-glory	None/ None	4.2	Chaparral (openings), coastal scrub, valley and foothill grassland; clay, serpentinite seeps/ annual herb/ March–July	There were 178 individuals mapped onsite in grasslands on clay soils.

Scientific Name	Common Name	Status Federal/ State	California Rare Plant Rank	Primary Habitat Associations/ Life Form/ Blooming Period	Status Onsite or Potential to Occur
<i>Cordylanthus parviflorus</i>	Small-flowered bird's-beak	None/ None	2.3	Mojavean desert scrub, pinyon and juniper woodland/ annual herb (hemiparasitic)/ August–October	Not observed onsite. Not expected to occur due to lack of suitable habitat.
<i>Corethrogyne filaginifolia</i> var. <i>incana</i>	San Diego sand aster	None/ None	1B.1	Chaparral, coastal bluff scrub, coastal scrub/ perennial herb/ June–September	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Cylindropuntia californica</i> var. <i>californica</i>	Snake cholla	None/ None	1B.1	Chaparral, coastal scrub/ stem succulent/ April–May	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Deinandra</i> [= <i>Hemizonia</i>] <i>conjugens</i>	Otay tarplant	FT/ SE	1B.1	Coastal scrub, valley and foothill grassland; clay/ annual herb/ May–June	There were 934 individuals mapped onsite in grasslands and in grassy openings in coastal sage scrub, on clay soils.
<i>Deinandra</i> [= <i>Hemizonia</i>] <i>paniculata</i>	Paniculate tarplant	None/ None	4.2	Valley and foothill grassland, vernal pools, coastal scrub/ usually vernal mesic/ annual herb/ April–November	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Dichondra occidentalis</i>	Western dichondra	None/ None	4.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland/ rhizomatous herb/ March–May	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Dicranostegia orcuttiana</i>	Orcutt's bird's-beak	None/ None	2.1	Coastal scrub/ annual herb (hemiparasitic)/ March–September	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Dudleya attenuata</i> ssp. <i>orcuttii</i>	Orcutt's dudleya	None/ None	2.1	Coastal bluff scrub, chaparral, coastal scrub; rocky or gravelly/ perennial herb/ May–July	Not observed onsite. If present onsite, this perennial species would have been observed.

Scientific Name	Common Name	Status Federal/ State	California Rare Plant Rank	Primary Habitat Associations/ Life Form/ Blooming Period	Status Onsite or Potential to Occur
<i>Dudleya blochmaniae</i> spp. <i>blochmaniae</i>	Blochman's dudleya	None/ None	1B.1	Chaparral, coastal bluff scrub, coastal scrub, valley and foothill grassland, rocky; often clay or serpentinite/ perennial herb/ April–June	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Dudleya variegata</i>	Variiegated dudleya	None/ None	1B.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools/ perennial herb/ May–June	Sixty individuals mapped onsite in a grassy opening in coastal sage scrub, on the southern end of the project survey area.
<i>Ericameria palmeri</i> ssp. <i>palmeri</i>	Palmer's goldenbush	None/ None	1B.1	Chaparral, coastal scrub/ shrub/ (July)–November	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Eriogonum evanidum</i>	Vanishing wild buckwheat	None/ None	1B.1	Chaparral, cismontane woodland, lower montane coniferous forest, pinyon and juniper woodland/ sandy/annual herb/ July–October	Not observed onsite. Not expected onsite due to lack of suitable habitat.
<i>Eryngium aristulatum</i> var. <i>parishii</i>	San Diego button-celery	FE/ SE	1B.1	Coastal scrub, valley and foothill grassland, vernal pools; mesic/ annual-perennial herb/ April–June	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Euphorbia misera</i>	Cliff spurge	None/ None	2.2	Coastal bluff scrub, coastal scrub; rocky/ shrub/ December–August	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Ferocactus viridescens</i>	San Diego barrel cactus	None/ None	2.1	Chaparral, coastal scrub, valley and foothill grassland, vernal pools/ shrub/ May–June	Approximately 140 plants observed in coastal sage scrub onsite, in both the northern and southern regions of the project survey area.
<i>Frankenia palmeri</i>	Palmer's frankenia	None/ None	2.1	Coastal dunes, coastal saltwater marsh and swamps, playas/ perennial herb/ May–July	Not observed onsite. Not expected onsite due to lack of suitable habitat.
<i>Fraxinus parryi</i>	Chaparral ash	None/ None	2.2	Chaparral/ perennial shrub/ March–May	Not observed onsite. If present onsite, this large perennial species would have been observed.

Scientific Name	Common Name	Status Federal/ State	California Rare Plant Rank	Primary Habitat Associations/ Life Form/ Blooming Period	Status Onsite or Potential to Occur
<i>Fremontodendron mexicanum</i>	Mexican flannelbush	FE/ SR	1B.1	Closed-cone conifer forest, chaparral, cismontane woodland; gabbroic, metavolcanic, or serpentinite/ evergreen shrub/ March–June	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Galium proliferum</i>	Desert bedstraw	None/ None	2.2	Mojavean desert scrub, pinyon-juniper woodland/ rocky, carbonate (limestone)/ annual herb/ March–June	Not observed onsite. Not expected due to lack of suitable habitat.
<i>Githopsis diffusa</i> ssp. <i>filicaulis</i>	Mission Canyon bluecup	None/ None	3.1	Chaparral (mesic, disturbed areas)/ annual herb/ April–June	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Grindelia hallii</i>	San Diego gumplant	None/ None	1B.2	Chaparral, lower montane conifer forest, meadows and seeps, valley and foothill grassland/ perennial herb/ July–October	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed. If present onsite, this perennial species would have been observed.
<i>Harpagonella palmeri</i>	Palmer's grapplinghook	None/ None	4.2	Chaparral, coastal scrub, valley and foothill grassland; clay/ annual herb/ March–May	Approximately 1,065,000 individuals observed in wildflower field, coastal sage scrub, and non-native grassland, on heavy clay soils in the southern portion of the project survey area.
<i>Hesperocyparis forbesii</i>	Tecate cypress	None/ None	1B.1	Chaparral, closed-cone coniferous forest/clay, gabbroic or metavolcanic/perennial evergreen tree	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Heterotheca sessiliflora</i> ssp. <i>sessiliflora</i>	Beach goldenaster	None/ None	1B.1	Chaparral (coastal), coastal dunes, coastal scrub/ perennial herb/ March–December	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.

Scientific Name	Common Name	Status Federal/ State	California Rare Plant Rank	Primary Habitat Associations/ Life Form/ Blooming Period	Status Onsite or Potential to Occur
<i>Holocarpha virgata</i> ssp. <i>elongata</i>	Graceful tarplant	None/ None	4.2	Coastal scrub, cismontane woodland, chaparral (?), valley and foothill grassland/ annual herb/ August–November	Approximately 13,060 individuals mapped in grasslands in the northern portion of the project survey area, on clay soils.
<i>Horkelia truncata</i>	Ramona horkelia	None/ None	1B.3	Chaparral, cismontane woodland/ clay/ perennial herb/ May–June	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Hosackia crassifolia</i> var. <i>otayensis</i>	Otay Mountain lotus	None/ None	1B.1	Chaparral (metavolcanic, often in disturbed areas)/ perennial herb/ May–August	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Isocoma menziesii</i> var. <i>decumbens</i>	Decumbent goldenbush	None/ None	1B.2	Chaparral, coastal scrub (sandy, often disturbed areas)/ shrub/ April–November	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Iva hayesiana</i>	San Diego marsh-elder	None/ None	2.2	Marshes and swamps, playas/ perennial herb/ April–September	Approximately 1,860 plants mapped onsite along the perennial stream channels traversing the northern and southern regions of the project survey area.
<i>Juncus acutus</i> spp. <i>leopoldii</i>	Southwestern spiny rush	None/ None	4.2	Coastal dunes, meadows and seeps (alkaline), saltwater marsh and swamp/ rhizomatous herb/ May–June	There were 130 individuals mapped onsite along stream channels in the northern and southern regions of the project survey area.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter's goldfields	None/ None	1B.1	Saltwater marsh and swamps, playas, vernal pools/ annual herb/ February–June	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Lepechinia ganderi</i>	Gander's pitcher sage	None/ None	1B.3	Closed-cone conifer forest, chaparral, coastal scrub, valley and foothill grassland; gabbroic and metavolcanic/ shrub/ June–July	Not observed onsite. If present onsite, this perennial species would have been observed.
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	None/ None	1B.2	Chaparral, coastal scrub/ annual herb/ January–July	There were 37 individuals mapped in coastal sage scrub in the northern and southern regions of the project survey area.

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Scientific Name	Common Name	Status Federal/ State	California Rare Plant Rank	Primary Habitat Associations/ Life Form/ Blooming Period	Status Onsite or Potential to Occur
<i>Leptosyne maritima</i>	Sea dahlia	None/ None	2.2	Coastal bluff scrub, coastal scrub/ perennial herb/ March–May	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Lilium humboldtii</i> ssp. <i>ocellatum</i>	Ocellated Humboldt lily	None/ None	4.2	Coastal scrub, chaparral, cismontane woodland, lower montane conifer forest, riparian; openings/ bulbiferous herb/ March–July	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed. If present onsite, this perennial species would have been observed.
<i>Lotus nuttallianus</i>	Nuttall's lotus	None/ None	1B.1	Coastal dunes, coastal scrub/ annual herb/ March–June	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Lycium californicum</i>	California box-thorn	None/ None	4.2	Coastal bluff scrub, coastal scrub/ perennial shrub/ December–August	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Mimulus clevelandii</i>	Cleveland's bush monkeyflower	None/ None	4.2	Chaparral, lower montane conifer forest; often in disturbed areas, openings/ perennial herb/ May–July	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Monardella hypoleuca</i> ssp. <i>lanata</i>	Felt-leaved monardella	None/ None	1B.2	Chaparral, cismontane woodland/ rhizomatous herb/ May–August	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Monardella stoneana</i>	Jennifer's monardella	None/ None	1B.2	Closed-cone coniferous forest, chaparral, coastal scrub, riparian scrub/ usually rocky intermittent streambeds/ Perennial herb/ June–September	Not observed onsite. If present onsite, this perennial species would have been observed.
<i>Monardella viminea</i>	Willow monardella	FE/ SE	1B.1	Closed-cone conifer forest, chaparral, coastal scrub, riparian forest, woodland, and scrub/ perennial herb/ June–August	Not observed onsite. If present onsite, this perennial species would have been observed.

Scientific Name	Common Name	Status Federal/ State	California Rare Plant Rank	Primary Habitat Associations/ Life Form/ Blooming Period	Status Onsite or Potential to Occur
<i>Myosurus minimus</i> ssp. <i>apus</i>	Little mousetail	None/ None	3.1	Vernal pools, valley and foothill grassland; alkaline/ annual herb/ March–June	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Nama stenocarpum</i>	mud nama	None/ None	2.2	Marsh and swamps, lake margins and riverbanks/annual-perennial herb/January–July	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Navarretia fossalis</i>	Spreading navarretia	FT/ None	1B.1	Chenopod scrub, shallow freshwater marsh and swamps, vernal pools/annual herb/ April–June	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Navarretia prostrata</i>	Prostrate navarretia	None/ None	1B.1	Coastal scrub, valley and foothill grassland (alkaline), vernal pools; mesic/annual herb/ April–July	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Nemacaulis denudata</i> var. <i>denudata</i>	Coast woolly-heads	None/ None	1B.2	Coastal dunes/ herb/ April–September	Not observed onsite. Not expected to occur onsite due to lack of suitable habitat.
<i>Nemacaulis denudata</i> var. <i>gracilis</i>	Slender woolly-heads	None/ None	2.2	Coastal dunes, desert dunes, Sonoran desert scrub/ annual herb/ (March)–May	Not observed onsite. Not expected to occur onsite due to lack of suitable habitat.
<i>Nolina interrata</i>	Dehesa nolina	None/ SE	1B.1	Chaparral; gabbroic, metavolcanic or serpentinite/ perennial herb/ June–July	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Orcuttia californica</i>	California Orcutt grass	FE/ SE	1B.1	Vernal pools/ annual herb/ April–August	Not observed onsite. Not expected onsite due to lack of suitable habitat.
<i>Ornithostaphylos oppositifolia</i>	Baja California birdbrush	None/ SE	2.1	Chaparral/ evergreen shrub/ January–April	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Orobranche parishii</i> ssp. <i>brachyloba</i>	Short-lobed broom-rape	None/ None	4.2	Coastal bluff scrub, coastal dunes, coastal scrub; sandy/ perennial herb parasitic/ April–October	Not observed onsite. Not expected onsite due to lack of suitable habitat.

Scientific Name	Common Name	Status Federal/ State	California Rare Plant Rank	Primary Habitat Associations/ Life Form/ Blooming Period	Status Onsite or Potential to Occur
<i>Packera ganderi</i>	Gander's ragwort	None/ SR	1B.2	Chaparral (burns and gabbroic outcrops)/ perennial herb/ April–May	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Phacelia stellaris</i>	Brand's phacelia	None/ None	1B.1	Coastal dunes, coastal scrub/ annual herb/ March–June	Not observed onsite. Not expected onsite due to lack of suitable habitat.
<i>Pickeringia montana</i> var. <i>tomentosa</i>	Woolly chaparral-pea	None/ None	4.3	Chaparral (gabbroic, granitic, clay)/ evergreen shrub/ May–August	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Piperia cooperi</i>	Chaparral rein-orchid	None/ None	4.2	Chaparral, Cismontane woodland, valley and foothill grassland/ perennial herb/ March–June	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Pogogyne abramsii</i>	San Diego mesa mint	FE/ SE	1B.1	Vernal pools/ annual herb/ April–July	Not observed onsite. Not expected onsite due to lack of suitable habitat.
<i>Pogogyne nudiuscula</i>	Otay Mesa mint	FE/ SE	1B.1	Vernal pools/ annual herb/ May–July	Not observed onsite. Not expected onsite due to lack of suitable habitat.
<i>Polygala cornuta</i> var. <i>fishiae</i>	Fish's milkwort	None/ None	4.3	Chaparral, cismontane woodland, riparian woodland/ deciduous shrub/ May–August	Not observed onsite. If present onsite, this perennial species would have been observed.
<i>Quercus cedrocensis</i>	Cedros Island oak	None/ None	2.2	Closed-cone coniferous forest, chaparral, coastal scrub/ perennial evergreen tree/ April–May	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Quercus dumosa</i>	Nuttall's scrub oak	None/ None	1B.1	Chaparral, coastal scrub, closed-cone coniferous forest; sandy and clay loam/ evergreen shrub/ February–March	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Quercus engelmannii</i>	Engelmann oak	None/ None	4.2	Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland/ deciduous tree/ March–June	Six individuals of an Engelmann oak X Torrey's scrub oak hybrid were mapped in the northern portion of the project survey area in coastal sage scrub.

Scientific Name	Common Name	Status Federal/ State	California Rare Plant Rank	Primary Habitat Associations/ Life Form/ Blooming Period	Status Onsite or Potential to Occur
<i>Ribes canthariforme</i>	Moreno currant	None/ None	1B.3	Chaparral, riparian scrub/ perennial deciduous shrub/ February–April	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Ribes viburnifolium</i>	Santa Catalina Island currant	None/ None	1B.2	Chaparral, cismontane woodland/ perennial evergreen shrub/ February–April	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Rosa minutifolia</i>	Small-leaved rose	None/ SE	2.1	Chaparral, coastal scrub/ deciduous shrub/ January–June	Not observed onsite. If present onsite, this perennial species would have been observed.
<i>Salvia munzii</i>	Munz's sage	None/ None	2.2	Chaparral, coastal scrub/ perennial evergreen shrub/ February–April	Two individuals mapped in coastal sage scrub in the southern region of the project study area.
<i>Selaginella cinerascens</i>	Ashy spike-moss	None/ None	4.1	Chaparral, coastal scrub (in openings)/perennial herb/ March	Approximately 1.75 occupied acres mapped onsite within coastal sage scrub in the northern region of the project study area.
<i>Senecio aphanactis</i>	Rayless ragwort	None/ None	2.2	Chaparral, cismontane woodland, coastal scrub; alkaline/ annual herb/ January–April	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Sibaropsis hammittii</i>	Hammitt's clay-cress	None/ None	1B.2	Chaparral (openings), valley and foothill grassland/ annual herb/ March–April	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Stemodia durantifolia</i>	Purple stemodia	None/ None	2.1	Sonoran desert scrub (often mesic, sandy) / perennial herb / January–December	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Stipa diegoensis</i>	San Diego County needlegrass	None/ None	4.2	Chaparral, coastal scrub/ rocky, often mesic/ perennial herb/ February–June	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Streptanthus bernardinus</i>	Laguna Mountains jewel-flower	None/ None	4.3	Chaparral, lower montane coniferous forest/ perennial herb/ May–August	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.
<i>Suaeda esteroa</i>	Estuary seablite	None/ None	1B.2	Coastal salt marshes and swamps/ perennial herb/ May–(January)	Not observed onsite. If present onsite, this large perennial species would have been observed.



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Scientific Name	Common Name	Status Federal/ State	California Rare Plant Rank	Primary Habitat Associations/ Life Form/ Blooming Period	Status Onsite or Potential to Occur
<i>Tetradloccus dioicus</i>	Parry's tetradloccus	None/ None	1B.2	Chaparral, coastal scrub/ deciduous shrub/ April–May	Not observed onsite. If present onsite, this large perennial species would have been observed.
<i>Xanthisma</i> [= <i>Macharantha juncea</i>] <i>juncea</i>	Rush-like bristleweed	None/ None	4.3	Chaparral, coastal scrub/ perennial herb/ June–January	Not observed onsite. Surveys were conducted at the appropriate time to allow for detection of this species, and the species was not observed.

Legend

Status (Federal/State):

- FE: Federally listed as endangered
- FT: Federally listed as threatened
- SCE: State candidate for listing as endangered
- SE: State-listed as endangered
- ST: State-listed as threatened
- SR: State rare

California Rare Plant Ranks:

- 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere
- 2: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
- 3: Plants About Which We Need More Information - A Review List
- 4: Plants of Limited Distribution - A Watch List

California Rare Plant Threat Ranks:

- 0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- 0.2-Fairly threatened in California (20–80% occurrences threatened / moderate degree and immediacy of threat)
- 0.3-Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

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This diminutive annual in the Convolvulaceae (Morning-Glory Family) blooms between February and July with tiny lavender flowers and occurs in central and southern California and in Baja California, Mexico.

Otay tarplant (*Deinandra* [=*Hemizonia*] *conjugens*; Federally-listed Threatened and State-listed Endangered)

Within the project survey area, 934 individuals of Otay tarplant were mapped. The majority of individuals were concentrated in the northern region, from the San Miguel Substation area south until the Mountain Ridge Road crossing (just south of Proctor Valley Road) (Figures 4a, b). Several additional individuals were mapped in a small area in the southernmost region of the project site just south of Hunte Parkway (Figure 3e). Plants were observed within grasslands and in large grassy openings in coastal sage scrub. This annual in the Asteraceae is found only in southern San Diego County and in Baja California, Mexico.

Variegated dudleya (*Dudleya variegata*; CRPR 1B.2)

A small occurrence of 60 individuals of variegated dudleya was observed within a grassy, clay opening in coastal sage scrub in the southern portion of the project survey area just south of Hunte Parkway (Figure 3e). This species is known only from San Diego County and Baja California, Mexico. It belongs to the Crassulaceae (Stonecrop Family) and blooms in the late spring with small, yellow, star-shaped flowers.

San Diego barrel cactus (*Ferocactus viridescens*; CRPR 2.1)

San Diego barrel cactus was mapped in the northern and southern areas of the project site, generally in coastal sage scrub (Figures 4a, e). Onsite, the species is most concentrated in scrub with a south-facing aspect. A total of approximately 140 plants were observed. Of these, 17 plants were in black plastic pots left behind from incomplete restoration activities. These 17 plants, also mapped previously during surveys of the proposed Salt Creek Substation (AECOM 2011), have rooted into the ground through the decaying pots. San Diego barrel cactus, a perennial in the Cactaceae (Cactus Family), occurs only in coastal and foothill areas of San Diego County and Baja California, Mexico.

Palmer's grapplinghook (*Harpagonella palmeri*; CRPR 4.2)

Two large and three small polygons, plus two points of a single individual each, of Palmer's grapplinghook were mapped in the southern region of the project site south of Hunte Parkway (Figure 3e). A total of 1,065,044 individuals were estimated present onsite via a quadrat sampling method. This number is slightly below the approximately 1.2 million plants observed during 2011 surveys (AECOM 2011), despite the approximately 2.17 additional occupied acres mapped in 2012. Population sizes of annual plants are known to fluctuate widely from year to year with fluctuations in rainfall and temperatures, among other factors.

Palmer's grapplinghook occurs onsite on heavy clay soils in areas mapped as wildflower field, non-native grassland, and coastal sage scrub. This tiny annual plant in the Boraginaceae (Borage Family) blooms in early spring and is present in scattered locations

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throughout Southern California and Baja California, Mexico, though it is most concentrated in western Riverside County and coastal and foothill regions of San Diego County.

Graceful tarplant (*Holocarpha virgata* ssp. *elongata*); CRPR 4.2)

A total of 13,061 graceful tarplant individuals were mapped onsite. Plants generally occur as single individuals or as small groups of two to 75 individuals within a small area, but two larger polygons of 250 and 12,408 individuals were also mapped. Plants are most abundant in the northern region of the survey area, just east of the materials storage yard near the San Miguel Substation (Figures 4a, b). The species occurs generally in grasslands with clay soils but also may be found in openings in coastal sage scrub, chaparral, woodlands, and coastal scrubs. This annual plant in the Asteraceae generally blooms in the summer.

San Diego marsh elder (*Iva hayesiana*); CRPR 2.2)

San Diego marsh elder is a spring-to-summer-blooming shrub in the Asteraceae. It occurs in marshes and swamps, on playas, and along stream channels in San Diego County and Baja California, Mexico. Within the project survey area, it grows in nearly uninterrupted thickets along the perennial stream traversing the eastern edge of the site in the north, and along Salt Creek in the south (Figures 4a, b, e). Since it often grows in clumps, counts of individuals are difficult. For this study, a density estimate was made and multiplied by the area occupied to arrive at an approximate number of 1,859 plants.

Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*); CRPR 4.2)

A total of 130 individuals of southwestern spiny rush were mapped onsite. With one exception, all individuals are associated with the perennial stream channels and marshes traversing the north and south portions of the site (Figures 4a and 3e). Two individuals were also observed in an ephemeral channel on the north end of the site just south of the San Miguel Substation (See Figure 4a). This large, perennial, herbaceous plant in the Juncaceae (Rush Family) is also found on coastal dunes and in meadows and seeps. In the United States, it is most common in San Diego County, but it also may be found as far north as San Luis Obispo County, west into Nevada and Arizona, and south into Baja California, Mexico and South America.

Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*); CRPR 1B.2)

Although Robinson's pepper-grass is now thought by leading authorities to be a synonym of the nonsensitive *Lepidium virginicum* ssp. *menziesii* (Baldwin et al. 2012), occurrences of this taxon were nevertheless recorded, since the CNPS continues to recognize the plant as a distinct entity. A total of 37 individuals of this small, annual plant in the Brassicaceae (Mustard Family) were mapped onsite, in the northern and southern ends of the project survey area (Figures 4a, 3e). The plant is restricted to openings in coastal sage scrub, generally on south- or west-facing slopes. It occurs in Southern California and in Baja California, Mexico.

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Engelmann oak X Torrey's scrub oak hybrid (*Quercus engelmannii* X *Quercus xacutidens*: CRPR 4.2)

One small group (six individuals) of an Engelmann oak X Torrey's scrub oak hybrid were mapped in the northern portion of the project survey area southeast of the San Miguel Substation, in coastal sage scrub (Figure 4a). Hybridization is very common in oaks, and the individuals showed characteristics intermediate between the two parent species. While Torrey's scrub oak is not considered a special-status species, Engelmann oak is a CRPR 4.2 species; for the purposes of this study, the individuals in question are also treated as special-status. Engelmann oak occurs in Los Angeles, Orange, Riverside, and San Diego Counties and in Baja California, Mexico, in a variety of vegetation communities.

Munz's sage (*Salvia munzii*; CRPR 2.2)

Two individuals of Munz's sage were mapped in the southeastern region of the project site, in coastal sage scrub (Figure 3e). This perennial evergreen shrub in the Lamiaceae (Mint Family) occurs in chaparral and coastal scrub in southern San Diego County and Baja California.

Ashy spike-moss (*Selaginella cinerascens*; CRPR 4.1)

Ashy spike-moss was mapped in the easternmost portions of the northern end of the site, in coastal sage scrub (Figure 4a). It is found in Orange and San Diego Counties and Baja California and also may be found in chaparral. This perennial, rhizomatous herb in the Selaginellaceae (Spike-Moss Family) grows as a flat groundcover on the soil surface. As such, it is difficult to estimate the number of plants at a particular location, so estimates of area occupied were instead made for the purposes of this study. A total of 1.75 acres (76,275 square feet) of ashy spike-moss was mapped onsite.

If you have any questions or comments regarding this letter report, please contact me at (619) 764.6889.

Sincerely,



Erin Riley

Senior Biologist
erin.riley@aecom.com

Attachments:

- Figure 1 – Regional Map
- Figure 2 – Vicinity Map
- Figure 3 -- Project Components Map
- Figure 4a-f – Rare Plant Survey Results Maps
- Attachment – List of Plants Observed Onsite

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Certification Statement

The qualified botanist who conducted rare plant surveys for SDG&E's proposed 69-kV Transmission Line Installation project survey area certifies that the information in this survey report fully and accurately represents the work performed. The signature of the botanist (i.e., Michelle Balk) who conducted surveys (March 26 through July 25, 2012) is included below.



Michelle Balk
Senior Botanist
760.672.4559
mlbalk@gmail.com

Literature Cited

- AECOM. 2011. Vegetation and Rare Plant Summary Report for the Proposed Salt Creek Substation for SDG&E. December 22.
- AECOM. 2012. Biological Constraints Evaluation and Survey for the Salt Creek Transmission Line from the Miguel Substation to the Proposed Salt Creek Substation. April 2.
- Baldwin, B. G., Douglas H. Goldman, David J., Robert Patterson, Thomas J. Rosatti. 2012. The Jepson Manual: Vascular Plants of California, Second Edition. University of California Press, Berkeley. 1568 pp.
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- California Native Plant Society (CNPS). 2012. Inventory of Rare and Endangered Plants (online edition, v8-01a). California Native Plant Society. Sacramento, CA.

FIGURES



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2011

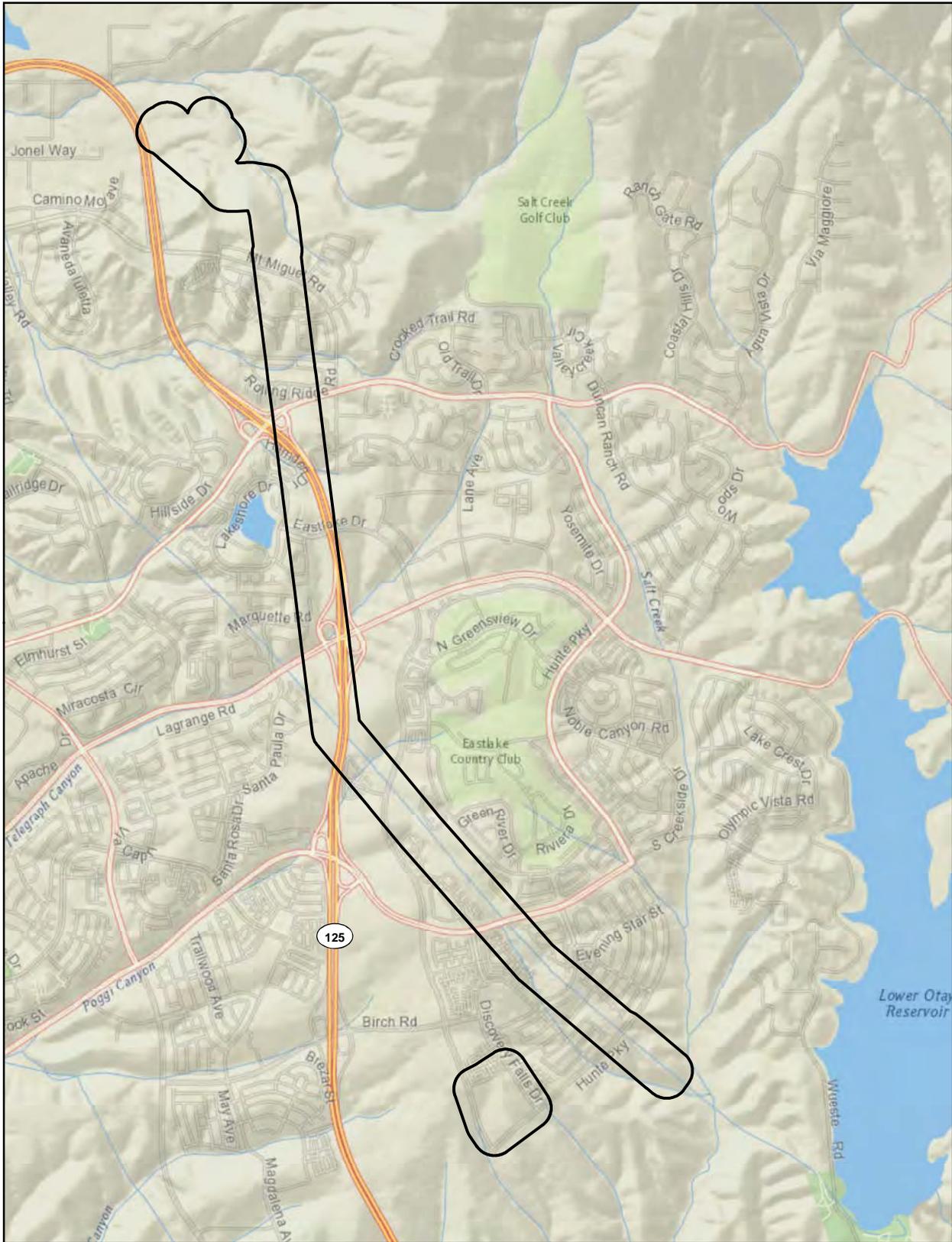


0 4 8 Miles



Scale: 1:250,000 1 inch = 4 miles

Figure 1
Regional Map



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2011

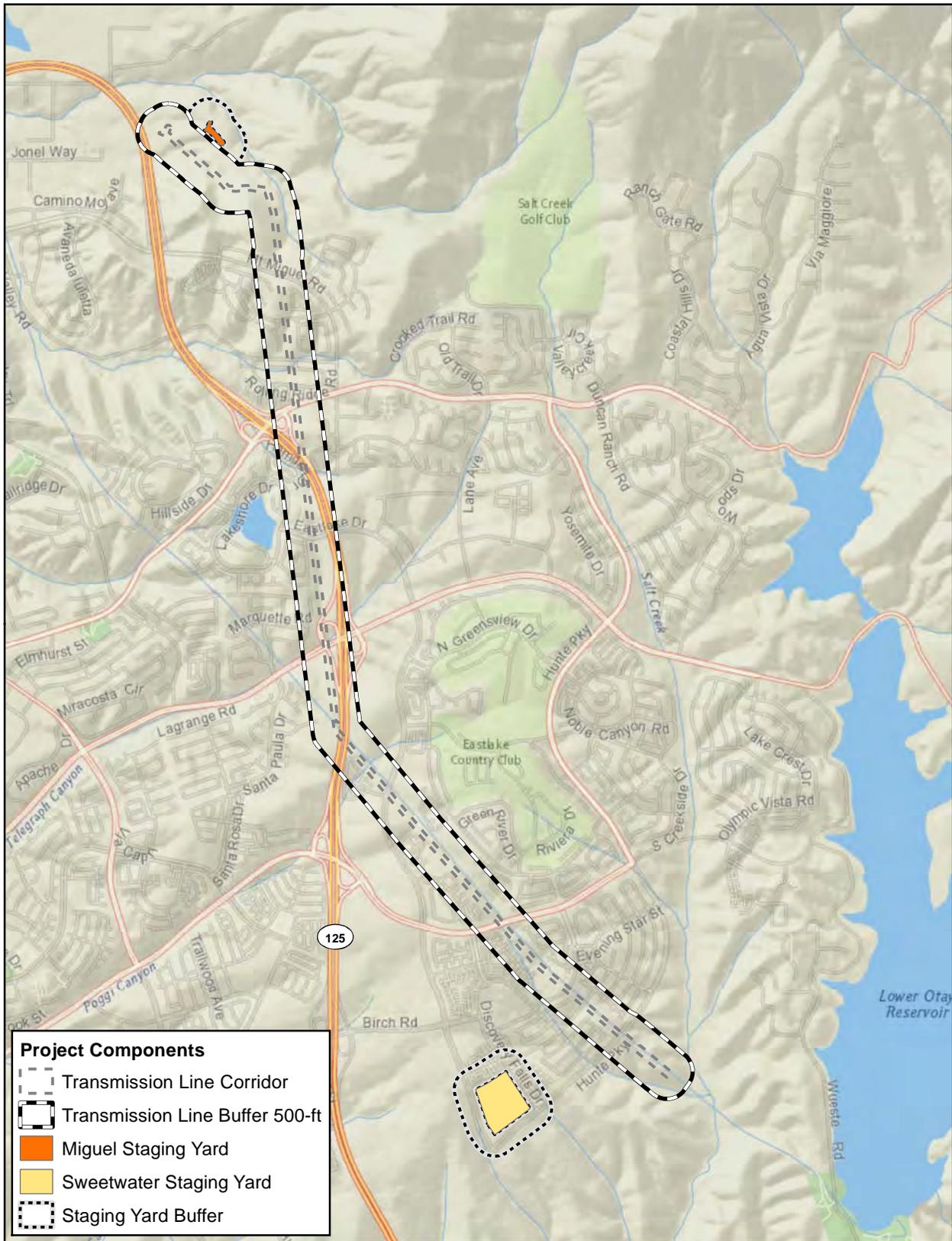


0 3,400 6,800 Feet



Scale: 1:40,800 1 inch = 3,400 feet

Figure 2
Vicinity Map



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2011

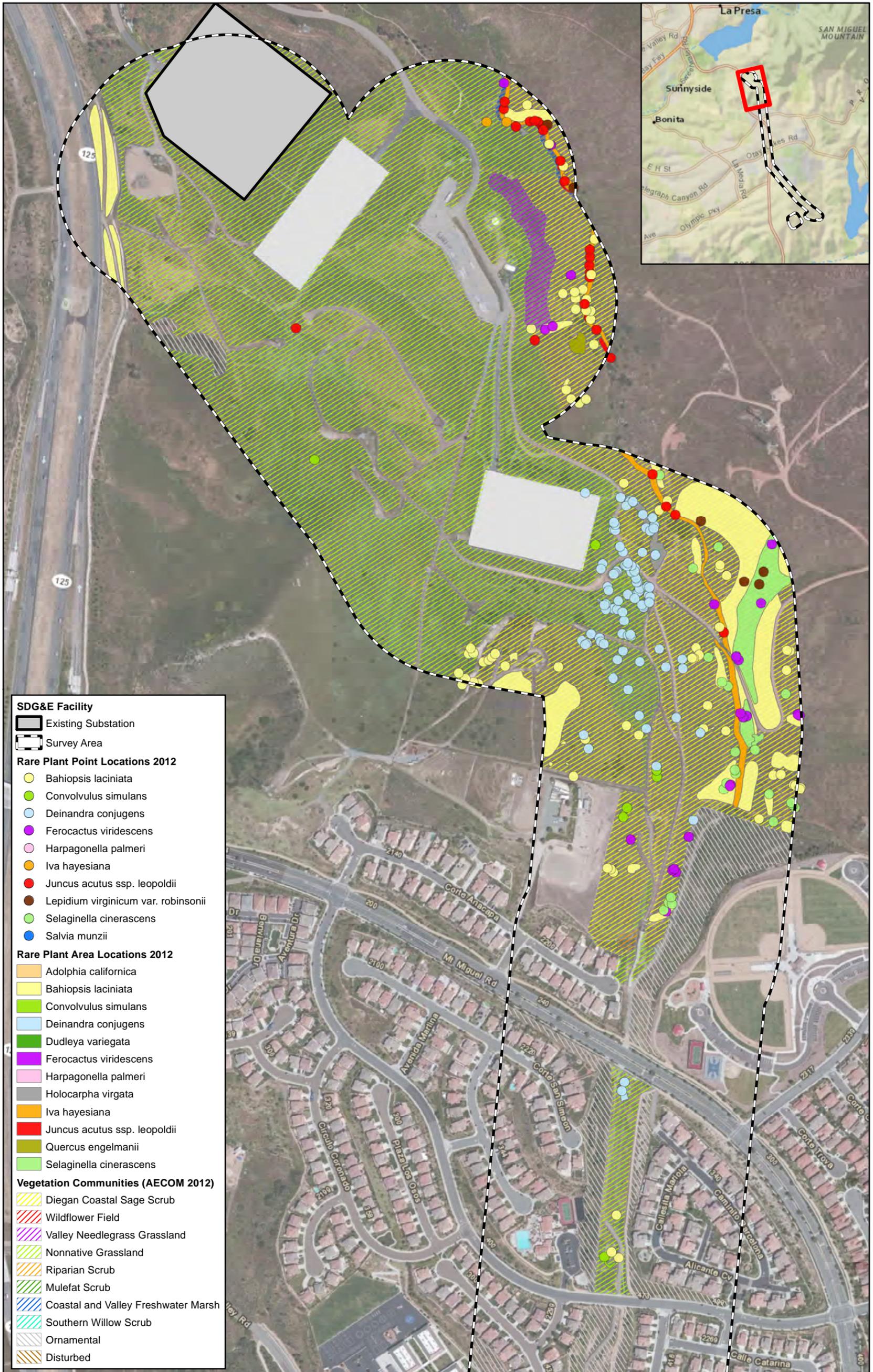


0 3,400 6,800 Feet



Scale: 1:40,800 1 inch = 3,400 feet

Figure 3
Project Components



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2012

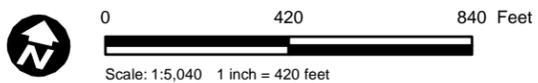


Figure 4a
Rare Plant Locations



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2011

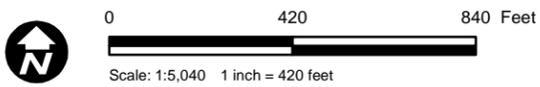


Figure 4b
Rare Plant Locations



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2011

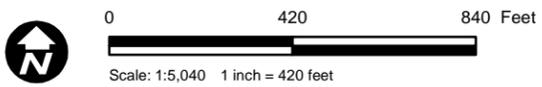


Figure 4c
Rare Plant Locations

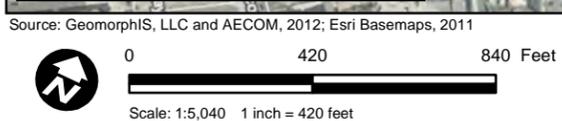


Figure 4d
Rare Plant Locations



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2011

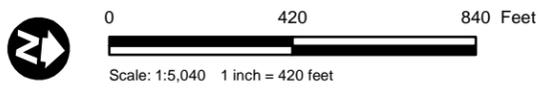


Figure 4e
Rare Plant Locations

ATTACHMENT
LIST OF PLANTS OBSERVED ONSITE

List of Plants Observed Onsite

Latin Name	Common Name	Status
LYCOPHYTES		
Selaginellaceae - Spike-moss family		
<i>Selaginella bigelovii</i>	Bushy spike-moss	
<i>Selaginella cinerascens</i>	Ashy spike-moss	CRPR 4.1
FERNS		
Pteridaceae - Brake family		
<i>Cheliantes newberryi</i>	Newberry's lip fern	
<i>Pellaea andromedifolia</i>	Coffee fern	
<i>Pentagramma triangularis</i>	Goldback fern	
EUDICOTS		
Adoxaceae - Muskroot family		
<i>Sambucus nigra</i> ssp. <i>caerulea</i>	Blue elderberry	
Aizoaceae - Fig-marigold family		
* <i>Aptenia cordifolia</i>	Baby sun-rose	
* <i>Carpobrotus edulis</i>	Freeway iceplant	
* <i>Mesembryanthemum crystallinum</i>	Crystalline iceplant	
<i>Sesuvium verrucosum</i>	Western sea-purslane	
Anacardiaceae - Sumac or Cashew family		
<i>Malosma laurina</i>	Laurel sumac	
<i>Rhus integrifolia</i>	Lemonade berry	
* <i>Schinus molle</i>	Pepper tree	
Apiaceae - Carrot family		
<i>Apiastrum angustifolium</i>	Mock parsley	
* <i>Apium graveolens</i>	Celery	
<i>Bowlesia incana</i>	Hoary bowlesia	
<i>Daucus pusillus</i>	American wild carrot	
* <i>Foeniculum vulgare</i>	Fennel	
<i>Sanicula bipinnatifida</i>	Purple sanicle, shoe buttons	
Apocynaceae - Dogbane family		
* <i>Nerium oleander</i>	Common oleander	
Asteraceae - Sunflower family		
<i>Achillea millefolium</i>	Common yarrow	
<i>Acourtia microcephala</i>	Sacapellote	
<i>Ambrosia psilostachya</i>	Western ragweed	
* <i>Anthemis cotula</i>	Mayweed	
<i>Artemisia californica</i>	California sagebrush	
<i>Artemisia douglasiana</i>	Mugwort	

Latin Name	Common Name	Status
<i>Baccharis pilularis</i>	Coyote brush	
<i>Baccharis salicifolia</i> ssp. <i>salicifolia</i>	Mule fat	
<i>Baccharis sarothroides</i>	Broom baccharis	
<i>Bahiopsis laciniata</i>	San Diego sunflower	CRPR 4.2
<i>Brickellia californica</i>	California brickellbush	
* <i>Carduus pycnocephalus</i> ssp. <i>pycnocephalus</i>	Italian thistle	
* <i>Centaurea cyanus</i>	Bachelor's button, cornflower	
* <i>Centaurea melitensis</i>	Tocalote	
* <i>Cirsium vulgare</i>	Bull thistle	
<i>Corethrogyne filaginifolia</i>	Common sand aster	
* <i>Cotula australis</i>	Australian cotula	
* <i>Cynara cardunculus</i> ssp. <i>cardunculus</i>	Artichoke	
<i>Deinandra conjugens</i>	Otay tarplant	FT, SE, CRPR 1B.1
<i>Deinandra fasciculata</i>	Clustered tarweed	
<i>Encelia californica</i>	California brittlebush	
<i>Encelia farinosa</i>	Brittlebush	
<i>Erigeron canadensis</i>	Horseweed	
<i>Eriophyllum confertiflorum</i>	Golden-yarrow, yellow-yarrow	
<i>Euryops</i> sp.	Bush daisy	
* <i>Gazania linearis</i>	Treasureflower	
<i>Grindelia camporum</i>	Great Valley gumweed	
<i>Gutierrezia californica</i>	California matchweed	
<i>Hazardia squarrosa</i>	Saw-toothed goldenbush	
* <i>Hedypnois cretica</i>	Crete weed	
<i>Helianthus annuus</i>	Common sunflower	
* <i>Helminthotheca echioides</i>	Bristly ox-tongue	
<i>Heterotheca grandiflora</i>	Telegraph weed	
<i>Holocarpha virgata</i> ssp. <i>elongata</i>	Graceful tarplant	CRPR 4.2
* <i>Hypochaeris glabra</i>	Smooth cat's-ear	
<i>Isocoma menziesii</i> var. <i>menziesii</i>	Menzies' goldenbush	
<i>Isocoma menziesii</i> var. <i>vernonoides</i>	Menzies' goldenbush	
<i>Iva hayesiana</i>	San Diego marsh-elder	CRPR 2.2
* <i>Lactuca serriola</i>	Prickly lettuce	
<i>Laennecia coulteri</i>	Coulter's horseweed	
<i>Lasthenia californica</i> ssp. <i>californica</i>	California goldfields	

Latin Name	Common Name	Status
<i>Logfia arizonica</i>	Arizona cottonrose	
* <i>Logfia gallica</i>	Daggerleaf cottonrose	
<i>Osmadenia tenella</i>	Osmadenia	
<i>Pluchea odorata</i> var. <i>odorata</i>	Saltmarsh-fleabane	
<i>Pseudognaphalium biolettii</i>	Two-color rabbit-tobacco	
<i>Pseudognaphalium californicum</i>	Ladies' tobacco	
* <i>Pseudognaphalium luteoalbum</i>	Jersey cudweed	
* <i>Senecio vulgaris</i>	Common groundsel	
* <i>Silybum marianum</i>	Blessed milkthistle	
* <i>Sonchus asper</i> ssp. <i>asper</i>	Prickly sow thistle	
* <i>Sonchus oleraceus</i>	Common sow thistle	
<i>Stebbinsoseris heterocarpa</i>	Grassland silverpuffs	
<i>Stephanomeria exigua</i>	Small wire-lettuce	
<i>Symphotrichum subulatum</i> var. <i>parviflorum</i>	Southwestern annual saltmarsh aster	
<i>Uropappus lindleyi</i>	Silver puffs	
Boraginaceae - Borage family		
<i>Amsinckia menziesii</i>	Common fiddleneck	
<i>Cryptantha microstachys</i>	Tejon cryptantha	
<i>Emmenanthe penduliflora</i>	Whispering bells	
<i>Eucrypta chrysanthemifolia</i>	Spotted hideseed	
<i>Harpagonella palmeri</i>	Palmer's grapplinghook	CRPR 4.2
<i>Heliotropium curassavicum</i> var. <i>oculatum</i>	Seaside heliotrope, alkali heliotrope	
<i>Pectocarya linearis</i> ssp. <i>ferocula</i>	Narrow-toothed pectocarya	
<i>Phacelia cicutaria</i>	Caterpillar phacelia	
<i>Pholistoma racemosum</i>	Racemed fiestaflower	
<i>Plagiobothrys collinus</i> var. <i>gracilis</i>	San Diego popcornflower	
Brassicaceae - Mustard family		
* <i>Brassica nigra</i>	Black mustard	
* <i>Diptotaxis muralis</i>	Wall-rocket	
* <i>Lepidium didymum</i>	Lesser swine cress	
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	CRPR 1B.2
* <i>Lobularia maritima</i>	Sweet alyssum	
* <i>Sinapis arvensis</i>	Charlock	
* <i>Sisymbrium irio</i>	London rocket	
* <i>Sisymbrium orientale</i>	Indian hedgemustard	

Latin Name	Common Name	Status
Cactaceae - Cactus family		
<i>Cylindropuntia prolifera</i>	Coast cholla	
<i>Ferocactus viridescens</i>	San Diego barrel cactus	CRPR 2.1
<i>Opuntia littoralis</i>	Coastal prickly-pear	
Caryophyllaceae - Pink family		
* <i>Cerastium glomeratum</i>	Sticky mouse-ear chickweed	
<i>Polycarpon depressum</i>	California polycarp	
* <i>Polycarpon tetraphyllum</i> var. <i>tetraphyllum</i>	Four-leaved allseed	
* <i>Silene gallica</i>	Small-flower catchfly, windmill pink	
* <i>Spergularia bocconi</i>	Boccone's sand-spurrey	
<i>Spergularia</i> sp.	Sand-spurry	
Chenopodiaceae - Goosefoot family		
* <i>Atriplex amnicola</i>	Swamp saltbush	
<i>Atriplex argentea</i>	Silverscale	
<i>Atriplex canescens</i>	Four-wing saltbush	
* <i>Atriplex semibaccata</i>	Australian saltbush	
* <i>Bassia hyssopifolia</i>	Fivehorn smotherweed	
* <i>Beta vulgaris</i> ssp. <i>maritima</i>	Sea beet	
* <i>Chenopodium murale</i>	Nettleleaf goosefoot	
<i>Chenopodium</i> sp.	Goosefoot	
* <i>Salsola tragus</i>	Russian thistle, tumbleweed	
Cleomaceae - Spiderflower family		
<i>Peritoma arborea</i>	Bladderpod	
Convolvulaceae - Morning-glory family		
<i>Calystegia longipes</i>	Paiute false bindweed	
* <i>Convolvulus arvensis</i>	Bindweed, orchard morning-glory	
<i>Convolvulus simulans</i>	Small-flowered morning-glory	CRPR 4.2
Crassulaceae - Stonecrop family		
<i>Crassula connata</i>	Pygmy-weed	
<i>Dudleya pulverulenta</i>	Chalk dudleya	
<i>Dudleya variegata</i>	Variiegated dudleya	CRPR 1B.2
Cucurbitaceae - Gourd family		
<i>Marah macrocarpa</i>	Chilicothe	
Euphorbiaceae - Spurge family		
<i>Chamaesyce albomarginata</i>	Rattlesnake weed	
* <i>Chamaesyce maculata</i>	Spotted spurge	
<i>Croton setigerus</i>	Turkey-Mullein	

Latin Name	Common Name	Status
* <i>Euphorbia peplus</i>	Petty spurge	
* <i>Ricinus communis</i>	Castorbean	
Fabaceae - Legume family		
* <i>Acacia cyclops</i>	Western coastal wattle	
<i>Acmispon glaber</i>	Deerweed, California broom	
<i>Acmispon micranthus</i>	San Diego bird's-foot trefoil	
<i>Acmispon strigosus</i>	Strigose bird's-foot trefoil	
<i>Astragalus trichopodus</i> var. <i>lonchus</i>	Santa Barbara milkvetch	
<i>Lupinus bicolor</i>	Miniature lupine	
<i>Lupinus hirsutissimus</i>	Stinging lupine	
<i>Lupinus succulentus</i>	Arroyo lupine	
* <i>Medicago polymorpha</i>	California burclover	
* <i>Melilotus albus</i>	White sweetclover	
* <i>Melilotus indicus</i>	Sourclover	
* <i>Vicia ludoviciana</i> ssp. <i>ludoviciana</i>	Deerpea vetch	
* <i>Vicia sativa</i> ssp. <i>nigra</i>	Narrow-leaved vetch	
* <i>Vicia tetrasperma</i>	Sparrow vetch	
* <i>Vicia villosa</i>	Hairy vetch, winter vetch	
Fagaceae - Oak family		
<i>Quercus engelmannii</i> x <i>Quercus acutidens</i>	Engelmann oak hybrid	CRPR 4.2
Gentianaceae - Gentian family		
<i>Zeltnera venusta</i>	California centaury, charming centaury	
Geraniaceae - Geranium family		
* <i>Erodium botrys</i>	Longbeak stork's bill	
* <i>Erodium cicutarium</i>	Redstem filaree	
* <i>Erodium moschatum</i>	Greenstem filaree	
<i>Erodium texanum</i>	Texas filaree	
<i>Pelargonium</i> sp.	Geranium	
Lamiaceae - Mint family		
* <i>Marrubium vulgare</i>	Horehound	
<i>Salvia apiana</i>	White sage	
<i>Salvia leucophylla</i>	Purple sage	
<i>Salvia mellifera</i>	Black sage	
<i>Salvia munzii</i>	Munz's sage	CRPR 2.2
Malvaceae - Mallow family		
<i>Malacothamnus fasciculatus</i>	Chaparral mallow	

Latin Name	Common Name	Status
* <i>Malva parviflora</i>	Cheeseweed, little mallow	
Montiaceae - Miner's Lettuce family		
<i>Calandrinia ciliata</i>	Red maids	
Myrsinaceae - Myrsine family		
* <i>Anagallis arvensis</i>	Scarlet pimpernel	
Myrtaceae - Myrtle family		
* <i>Eucalyptus camaldulensis</i>	Red gum, river red gum	
Nyctaginaceae - Four O'clock family		
<i>Mirabilis laevis</i> var. <i>crassifolia</i>	Wishbone bush	
Oleaceae - Olive family		
* <i>Olea europaea</i>	Olive	
Onagraceae - Evening Primrose family		
<i>Clarkia epilobioides</i>	Canyon clarkia	
<i>Epilobium canum</i>	California fuchsia, zauschneria	
<i>Epilobium ciliatum</i>	Fringed willowherb	
* <i>Oenothera speciosa</i>	Pinkladies	
Orobanchaceae - Broom-rape family		
<i>Castilleja exserta</i>	Purple owl's-clover	
Oxalidaceae - Oxalis family		
<i>Oxalis californica</i>	California wood-sorrel	
* <i>Oxalis pes-caprae</i>	Bermuda buttercup	
Papaveraceae - Poppy family		
<i>Eschscholzia californica</i>	California poppy	
Phrymaceae - Lopseed family		
<i>Mimulus aurantiacus</i>	Sticky monkeyflower	
Plantaginaceae - Plantain family		
<i>Antirrhinum nuttallianum</i>	Nuttall's snapdragon	
<i>Plantago erecta</i>	Dotseed plantain	
* <i>Plantago major</i>	Common plantain	
Plumbaginaceae - Leadwort family		
* <i>Limonium perezii</i>	Perez's sea lavender	
* <i>Plumbago auriculata</i>	Cape leadwort	
Polemoniaceae - Phlox family		
<i>Gilia angelensis</i>	Chaparral gilia	
<i>Linanthus dianthiflorus</i>	Fringed linanthus	
Polygonaceae - Buckwheat family		
<i>Chorizanthe fimbriata</i>	Fringed spineflower	
<i>Eriogonum fasciculatum</i> var. <i>foliolosum</i>	Leafy California buckwheat	
<i>Pterostegia drymarioides</i>	Woodland pterostegia	

Latin Name	Common Name	Status
* <i>Rumex crispus</i>	Curly dock	
Proteaceae – Protea family		
* <i>Grevillea robusta</i>	Silk oak	
Rhamnaceae - Buckthorn family		
<i>Adolphia californica</i>	California adolphia	CRPR 2.1
<i>Rhamnus crocea</i>	Spiny redberry	
Rosaceae - Rose family		
<i>Heteromeles arbutifolia</i>	Toyon	
Rubiaceae - Madder family		
<i>Galium angustifolium</i>	Narrow-leaved bedstraw	
<i>Galium aparine</i>	Goose grass	
Salicaceae - Willow family		
<i>Populus fremontii</i> ssp. <i>fremontii</i>	Alamo or fremont cottonwood	
<i>Salix exigua</i>	Narrowleaf willow	
<i>Salix gooddingii</i>	Goodding's black willow	
<i>Salix laevigata</i>	Red willow	
<i>Salix lasiolepis</i>	Arroyo willow	
Scrophulariaceae - Figwort family		
* <i>Myoporum laetum</i>	Myoporum, ngaio tree	
<i>Scrophularia californica</i>	California figwort	
Simmondsiaceae - Jojoba family		
<i>Simmondsia chinensis</i>	Jojoba	
Solanaceae - Nightshade family		
<i>Datura wrightii</i>	Sacred thorn-apple	
* <i>Nicotiana glauca</i>	Tree tobacco	
<i>Solanum americanum</i>	Small-flowered nightshade	
Tamaricaceae - Tamarisk family		
* <i>Tamarix ramosissima</i>	Saltcedar	
Urticaceae - Nettle family		
<i>Parietaria hespera</i>	Rillita pellitory	
<i>Urtica dioica</i>	Stinging nettle	
* <i>Urtica urens</i>	Dwarf nettle	
Verbenaceae - Vervain family		
* <i>Lantana camara</i>	Lantana	
<i>Verbena lasiostachys</i>	Western vervain	
Violaceae - Violet family		
<i>Viola pedunculata</i>	Johnny-jump-up	

Latin Name	Common Name	Status
MONOCOTS		
Agavaceae - Century Plant family		
<i>Chlorogalum parviflorum</i>	Smallflower soap plant	
<i>Yucca schidigera</i>	Mojave yucca	
Alliaceae - Onion or Garlic family		
<i>Allium</i> sp.	Onion	
Areaceae - Palm family		
* <i>Phoenix canariensis</i>	Canary Island palm	
* <i>Washingtonia robusta</i>	Mexican fan palm	
Asphodelaceae - Asphodel family		
* <i>Asphodelus fistulosus</i>	Onionweed	
Cyperaceae - Sedge family		
<i>Cyperus eragrostis</i>	Tall flatsedge	
<i>Schoenoplectus americanus</i>	Olney's three-square bulrush	
Iridaceae - Iris family		
<i>Sisyrinchium bellum</i>	Western blue-eyed-grass	
Juncaceae - Rush family		
<i>Juncus acutus</i> ssp. <i>leopoldii</i>	Southwestern spiny rush	CRPR 4.2
Poaceae - Grass family		
<i>Aristida adscensionis</i>	Sixweeks three-awn	
* <i>Avena barbata</i>	Slender wild oat	
<i>Bothriochloa barbinodis</i>	Cane bluestem	
* <i>Brachypodium distachyon</i>	Purple false brome	
* <i>Bromus catharticus</i> var. <i>catharticus</i>	Rescue grass	
* <i>Bromus diandrus</i>	Ripgut grass	
* <i>Bromus hordeaceus</i>	Soft chess	
* <i>Bromus madritensis</i>	Compact brome	
* <i>Cortaderia selloana</i>	Pampas grass	
* <i>Cynodon dactylon</i>	Bermuda grass	
* <i>Echinochloa crus-galli</i>	Barnyardgrass	
<i>Festuca californica</i>	California fescue	
<i>Festuca microstachys</i>	Pacific fescue	
* <i>Festuca myuros</i>	Rattail sixweeks grass	
* <i>Festuca perennis</i>	Rye grass	
* <i>Gastridium phleoides</i>	Nit grass	
<i>Hordeum depressum</i>	Low barley, alkali barley	
* <i>Hordeum murinum</i> ssp. <i>leporinum</i>	Hare barley	
* <i>Lamarckia aurea</i>	Goldentop grass	

Latin Name	Common Name	Status
<i>Melica frutescens</i>	Woody melic	
<i>Melica imperfecta</i>	Little California melica	
<i>Muhlenbergia microsperma</i>	Littleseed muhly	
<i>Muhlenbergia rigens</i>	Deer grass	
* <i>Paspalum dilatatum</i>	Dallis grass	
* <i>Pennisetum setaceum</i>	Crimson fountain grass	
* <i>Phalaris paradoxa</i>	Hood canary grass	
* <i>Polypogon monspeliensis</i>	Annual beard grass, rabbitfoot grass	
* <i>Schismus barbatus</i>	Common mediterranean grass	
<i>Stipa lepida</i>	Foothill needle grass	
* <i>Stipa miliacea</i> var. <i>miliacea</i>	Smilo grass	
<i>Stipa pulchra</i>	Purple needle grass	
Themidaceae - Brodiaea family		
<i>Bloomeria crocea</i>	Common goldenstar	
<i>Brodiaea terrestris</i> ssp. <i>kernensis</i>	Kern brodiaea	
<i>Dichelostemma capitatum</i>	Blue dicks	
Typhaceae - Cattail family		
<i>Typha</i> sp.	Cattail	

Legend

* = Non-native or invasive species

Status (Federal/State):

FT: Federally-listed as threatened

SE: State-listed as endangered

California Rare Plant Rank:

1B: Plants Rare, Threatened, or Endangered in California and Elsewhere

2: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

4: Plants of Limited Distribution - A Watch List

California Rare Plant Threat Ranks:

0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

0.2-Fairly threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

0.3-Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

APPENDIX F

**45-DAY REPORTS FOR THE
QUINO CHECKERSPOT BUTTERFLY**

APPENDIX F-1
2011 RESULTS REPORT

October 4, 2011

Ms. Erin McCarthy
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

RE: 45-Day Summary Report of Focused Surveys for the Quino Checkerspot Butterfly for the Proposed Salt Creek Substation for SDG&E

Dear Ms. McCarthy:

In compliance with the Special Terms and Conditions for Endangered and Threatened Wildlife Species Permit TE-820658-4, AECOM submits this letter report summarizing the results of focused surveys conducted in 2011 for the federally endangered Quino checkerspot butterfly (*Euphydryas editha quino*; QCB) for the proposed Salt Creek Substation site (project site). AECOM currently holds an Endangered and Threatened Species Permit issued by the U.S. Fish and Wildlife Service (USFWS) under Section 10(a) of the Federal Endangered Species Act. This permit authorizes AECOM to conduct presence/absence surveys for QCB and other species. Surveys were conducted on behalf of San Diego Gas and Electric (SDG&E),

Project Description

The Salt Creek Substation is proposed by SDG&E for meeting the electrical infrastructure needs of the Otay Ranch community. The approximately 19-acre site is located on Otay Mesa in Chula Vista, California, south of the intersection of Hunte Parkway and Exploration Way (Figure 1).

Site Description

For purposes of this report, the term "project survey area" refers to the proposed Salt Creek Substation site plus a 500-foot survey buffer. The project survey area occurs within the City of Chula Vista's Multiple Species Conservation Planning (MSCP) Subarea Plan (Subarea Plan) Otay Ranch Planning Area, within areas planned for development (e.g., outside of the Otay Ranch Preserve). The proposed project survey area contains a variety of native habitats, including coastal sage scrub, riparian scrub, grassland, and open clay soils throughout the grasslands and coastal sage scrub. Several dirt access roads cross the project survey area. The majority of the project survey area is grassland on a mesa top (with a small section of coastal sage scrub), with adjacent coastal sage scrub along the slopes of the mesa (within the 500-foot survey buffer). The site contains suitable QCB habitat and consists of a hilltop with clay soils and patches of dwarf plantain (*Plantago erecta*), the QCB host plant in this area. Approximately 13 acres of suitable QCB habitat occurs within the project survey area.

Ms. Erin McCarthy
Recovery Permit Coordinator
October 4, 2011
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Background Information

QCB was added by USFWS to the Federal Endangered Species List on January 16, 1997 (USFWS 1997). The species (*E. editha*) has a range extending from British Columbia and Alberta, Canada, south through Colorado and Utah, and west along the coast to northern Baja California. It is divided into 20 subspecies, each of which has its own range and biological and morphological characteristics. In California, there are 12 subspecies (Garth and Tilden 1986). Three other subspecies of *E. editha* are currently known to occur in Southern California. QCB is the southwesternmost subspecies of *E. editha* (Mattoni et al. 1997).

QCB is known to occur in association with a variety of plant communities, soil types, and elevations (up to 5,000 feet). The plant communities include clay soil meadows, open grasslands, coastal sage scrub, chaparral, and semidesert scrub (Ballmer et al. 2001). QCB is also associated with clay soils that possess cryptogamic crusts and vernal pools (USFWS 2002).

QCB is a medium-sized butterfly (approximately 0.8- to 1.1-inch wingspan) belonging to the family Nymphalidae. The adults are primarily orange-red with white and have black markings on the dorsal wing surface. They are active primarily in March and April. This active period may vary depending on weather conditions (Ballmer et al. 2001). The adult butterfly feeds on nectar, which it obtains from spring annuals such as popcorn flower (*Cryptantha* sp.), Layia (*Layia* sp.), goldenbush (*Ericameria* spp.), onion (*Allium* sp.), fiddleneck (*Amsinckia intermedia*), chia (*Salvia columbariae*), and blue dicks (*Dichelostemma pulchella*). It cannot use flowers that possess deep corolla tubes, such as monkeyflower (*Mimulus* spp.), or those that can be opened by bees, such as snapdragons (USFWS 2002). Adult males and virgin females sometimes “hilltop,” or travel to elevated locations to find mates. While waiting for females to arrive, the males will often exhibit “territorial behavior” and will chase other butterflies that approach them. Frequently, the butterflies are observed in meadows or clearings where their host plants occur (Ballmer et al. 2001).

A female may lay 20 to 75 eggs at one time and may produce up to 1,200 eggs in her lifetime. The eggs hatch in approximately 10 days under favorable weather conditions and the young larvae will immediately begin to feed on a host plant. The feeding larvae use the dot-seed plantain (*Plantago erecta*) as their primary host plant in the coastal and inland valley areas (e.g., Otay Mesa area). In higher elevation areas, QCB has been known to use Patagonia plantain (*Plantago patagonica*), white snapdragon (*Antirrhinum coulterianum*), and Chinese houses (*Collinsia concolor*) as their host plants (Pratt 2009). Bird’s-beak (*Cordylanthus rigidus*) and owl’s clover (*Castilleja exserta*) are considered secondary hosts (USFWS 2002). After feeding, the early larva enters an obligatory aestival diapause (a dormant stage), which may be broken after fall or winter rains (Murphy and White 1984; Osborne 1998). If adverse weather conditions occur, the emergent larva may reenter a diapause stage repeatedly, for up to 5 or 6 years, until favorable weather conditions permit sufficient growth of the host plant to allow the larva to complete its development.

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QCB was once common in Southern California. It ranged north into Ventura County, west to the Pacific Ocean, east to the deserts, and south into northern Baja California. Currently, it is known to occur only in a few, probably isolated, colonies in southwestern Riverside County, San Diego County, and northern Baja California. Reasons for the butterfly's reduction in population are not well known.

Habitat loss due to degradation and fragmentation caused by urban and rural development, agricultural conversion, off-road-vehicular use, the invasion of nonnative plants and insects, fire management practices, overcollecting, and adverse weather conditions have likely contributed to the species' decline (USFWS 1997).

Survey Methodology

Protocol-level surveys were determined necessary by the presence of suitable QCB habitat throughout the project survey area. A habitat assessment was conducted on March 14, 2011, by AECOM biologist Bonnie Hendricks. Approximately 13 acres of suitable QCB habitat, located on the hilltop and slopes, were identified within the project survey area (Figures 2 and 3).

A focused search for QCB host plants was conducted during the project site assessment on March 14, 2011, and in a 500-foot buffer area surrounding the project site on April 22, 2011.

USFWS recommends that focused QCB surveys be conducted a minimum of five times during the adult flight season by biologists possessing a recovery permit for this species, pursuant to Section 10(a)(1)(A) of the Endangered Species Act. The QCB flight season within a given area is determined by the activity of known QCB populations that are monitored annually by USFWS.

Although QCB was first reported in flight in the West Otay Mountain area on February 10, 2011, the flight season was determined to be protracted by several weeks because of weather conditions, alternating between warm and sunny and cool and rainy (USFWS 2011):

“As of 3/15/2011 adult Quino checkerspot butterflies have been reported flying from all areas of the subspecies' range. It is not clear when the flight season will end anywhere, and it may not be easy to detect the end. The weather has been alternating between warm and sunny and cool and rainy ever since the first adults were observed in the end of January. What this means is that there has likely been adult mortality due to inclement weather, which lowers abundance and detectability; however, it may also have resulted in continuous emerging of larvae from diapause during warm spells that had not emerged earlier (that would have otherwise undergone multiple-year diapause). This hypothesis is supported by the presence of abundant plantago at most locations in every stage of development (just germinating to in seed and drying down). A protracted low-abundance adult flight season

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means surveys of areas where no adults have been detected yet should continue as long as there is a possibility adults are flying. One indicator of adult flight season duration is host plant phenology, although butterfly phenology does not always correlate the same way every year with that, when host plants are still germinating, caterpillars may still be emerging from diapause and developing into adults” (USFWS 2011).

Focused presence/absence QCB surveys within the project survey area were conducted for 6 weeks during the flight season between March 14, 2011, and April 20, 2011 (Table 1). Surveys were conducted by permitted AECOM biologists Bonnie Hendricks (TE-820658-4) and Erin Bergman (TE-820658-4). Because project surveys were not initiated until March 14, a modified QCB protocol survey was proposed to USFWS on March 14, 2011:

1. Doubling the protocol survey rate (two surveys per week instead of one survey per week for the remainder of the flight season), and
2. Conducting a thorough QCB host plant search, both within the project boundaries and on adjacent parcels where access can be obtained.

Table 1
Quino Checkerspot Butterfly Survey Schedule

Survey Week	Date	Time	% Cloud Cover	Temp. (°F)	Wind (mph)	Survey Team
					Avg./Max.	
1	3/14/11	2:00 p.m.- 3:30 p.m.	15-60%	73-76	4.5/12	Bonnie Hendricks
1	3/15/11	2:00 a.m.- 4:00 p.m.	10-20%	72-74	1.5/4.0	Bonnie Hendricks, Erin Bergman
2	3/22/11	2:30 p.m.- 4:00 p.m.	10%	70-72	1.0/3.0	Bonnie Hendricks, Erin Bergman
2	3/23/11	11:30 p.m.- 1:30 p.m.	0-5%	66-70	1.0/7.0	Bonnie Hendricks
3	3/28/11	1:00 p.m.- 2:00 p.m.	40%	66-69	2.0/8.0	Bonnie Hendricks
3	3/31/11	3:15 p.m.- 4:30 p.m.	0%	89-91	1.7/7.7	Bonnie Hendricks
4	4/4/11	10:30 a.m.- 11:30 a.m.	0%	77-78	1.5/5.0	Bonnie Hendricks
4	4/6/11	12:30 p.m.- 2:00 p.m.	0%	70-72	2.6/6.3	Bonnie Hendricks, Erin Bergman
5	4/11/11	12:40 p.m.- 2:10 p.m.	0%	70-72	2.0/5.0	Bonnie Hendricks, Erin Bergman
5	4/13/11	2:00 p.m.- 3:30 p.m.	15-25%	68-69	1.5/4.0	Bonnie Hendricks
6	4/20/11	12:00 noon- 1:30 p.m.	20-30%	74-75	1.2/4.1	Bonnie Hendricks

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The modified QCB protocol was approved via email by Erin McCarthy and Alison Anderson on March 16, 2011. Approval of the modified QCB protocol did not include acceptance of the survey results, only approval to modify the survey protocol methods. Acceptance of the survey results is pending receipt of this report by USFWS. Surveys were terminated after April 20 because dot-seed plantain was observed to be drying up and no further observations of adult QCB had been reported on the USFWS website in the lower elevation reference sites (USFWS 2011).

The habitat assessment and presence/absence surveys followed the current USFWS survey protocol for the species (USFWS 2002), with the above noted modifications. All butterfly species and flowering plant species with potential as a nectar source were recorded during surveys. All suitable QCB habitat within the project survey area was surveyed 11 times over a 6-week period.

Results

A summary of the survey schedule, personnel, and weather conditions is presented in Table 1. Field notes are available in Appendix A.

Butterfly species observed within the project survey area are summarized in Table 2. A list of potential nectaring plant species in flower each week is presented in Appendix B.

No QCB were observed within the project survey area or adjacent property. Several populations of primary host plants were detected within the project survey area (Figure 2). Flowering populations of QCB's primary larval host plant, dot-seed plantain, were observed in several locations within the project survey area throughout the survey period (Figure 3). Most dot-seed plantain populations were beginning to dry and drop seed by survey week 5.

Three plant species listed as sensitive by the California Native Plant Society (CNPS)—Palmer's grappling-hook (*Harpagonella palmeri*; CNPS List 4), San Diego barrel cactus (*Ferrocactus viridescens*; CNPS List 2.1), and San Diego sunflower (*Bahiopsis laciniata*; CNPS List 4.1)—were observed throughout the project survey area. Also, the California gnatcatcher, federally listed as threatened, and the rufous-crowned sparrow, state species of special concern, were detected during QCB focused surveys.

Results of Focused Host Plant Surveys in Buffer Area

The 500-foot buffer area surrounding the project site was evaluated for its potential to support QCB. Suitable QCB habitat was present in the areas north and east of the project site within grassland and coastal sage scrub habitats in the 500-foot buffer. Similar to the project site, open clay soils were present, though not as abundant. One area with a patch of dot-seed plantain was located north of the project site in the 500-foot buffer. A diversity of nectaring resources was also present.

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Table 2
Summary of Butterfly Species Observed during Quino Checkerspot Butterfly
Surveys for the Proposed Salt Creek Substation Project Survey Area¹

Common Name	Scientific Name	Survey Week											Totals
		1	2	3	4	5	6	7	8	9	10	11	
		3/14/11	3/15/11	3/22/11	3/23/11	3/28/11	3/31/11	4/4/11	4/6/11	4/11/11	4/13/11	4/20/11	
Acmon Blue	<i>Icaria acmon</i>								1			2	3
Anise swallowtail	<i>Papilo zelicoan</i>		1										1
Behr's metalmark	<i>Apodemia virgulti</i>							1	1				2
Cabbage white	<i>Pieris rapae</i>						2					4	6
Common buckeye	<i>Junonia coenia grisea</i>									3			3
Common California ringlet	<i>Ceononympha tullia</i>				2				1				3
Duskywing sp.	<i>Erynnis funeralis</i> or <i>E. tristis</i>		1		1								2
Lady sp.	<i>Vanessa</i> sp.					1							1
Painted lady	<i>Vanessa cardui</i>						3						3
Sarah's orangetip	<i>Anthocharis sara</i>		1		2		2	1				2	8
Southern Blue	<i>Glaucopsyche lygdamus</i>		1		2	1					1		5
Sulphur sp.	<i>Colias</i> sp.					1					2	2	5
West coast lady	<i>Vanessa anabella</i>				1			2	1	1			5
Western tailed blue	<i>Cupida amyntula</i>											1	1
	Totals	0	4	0	8	3	7	4	4	4	3	11	48

¹ Unidentified moths were also detected during QCB surveys but are not included in this list.

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Discussion

USFWS monitors several reference sites for QCB larvae and adult presence, and provides information on the QCB 2011 Season Reference Site website (USFWS 2011). Within San Diego County, the monitoring website reported at least 422 adult observations (as of April 2011) of QCB, with records within 11 reported localities (USFWS 2011). The two reference sites closest to the Salt Creek Substation site are Otay Lakes and west Otay Mountain, approximately 2 to 5 miles southeast of the project survey area, respectively. Fifteen QCB sightings occurred in the Otay Mountain vicinity February 4 through March 23.

A total of 11 butterfly species were detected during protocol QCB surveys in the Salt Creek Substation project survey area. The most commonly observed species were Sarah's orangetip (*Anthocaris sara*) and cabbage white (*Pieris rapae*) (Table 2). Relatively small numbers of these more common species were detected during surveys, and diversity of nectar sources was moderate. Overall, butterfly abundance and species diversity were moderate during the 6-week survey period.

Additionally, other species outside of the two most commonly detected species were observed in relatively low densities (Table 2). Given the protracted low-abundance flight season for 2011 and the twice weekly focused adult surveys, we consider the surveys to be adequate with the modified (later) starting date.

If you have any questions or comments regarding this letter report, please contact me at (619) 925-0010.

Sincerely,



Bonnie Hendricks
Senior Biologist
bonnie.hendricks@aecom.com

Attachments:

- Figure 1 – Regional Map
- Figure 2 – Site Assessment and Host Plant Location Map for Salt Creek Substation
- Figure 3 – Vegetation Map and Sensitive Biological Resources for Salt Creek Substation and Surrounding 500-foot Buffer Zone
- Appendix A – Field Data Sheets from Quino Checkerspot Butterfly Protocol Surveys
- Appendix B – Flowering Plant Observations at Salt Creek Substation Site

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Certification Statement

Qualified AECOM biologists who conducted Quino checkerspot butterfly surveys for the Salt Creek Substation project survey area certify that the information in this survey report fully and accurately represents the work performed by AECOM biologists. Signatures of current permitted AECOM biologists (i.e., Bonnie Hendricks and Erin Bergman) who conducted protocol surveys (March, 14, 2011–April 20, 2011) are included below. The results of focused surveys for listed species are typically considered valid for 1 year by the resource agencies.



Bonnie Hendricks
Senior Biologist



Erin Bergman
Biologist/Botanist

Ms. Erin McCarthy
Recovery Permit Coordinator
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FIGURES



Source: Bing Maps 2011

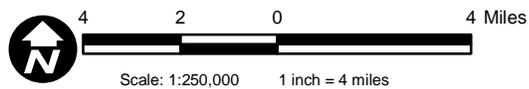
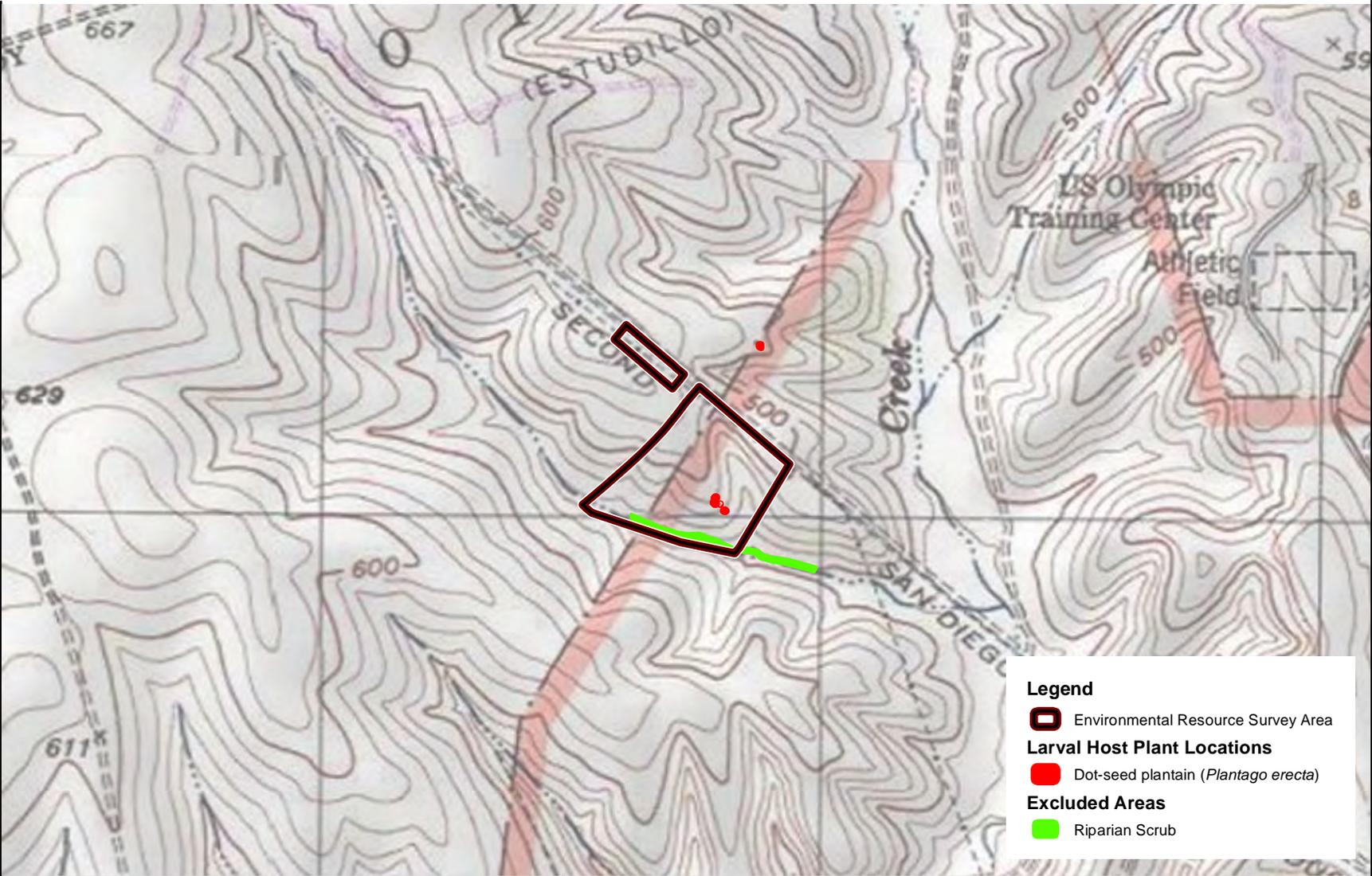


Figure 1
Regional Map

Salt Creek Substation QCB 45-Day Report

Path: P:\2009\09080065 SDGE Widget Bio Svcs\6.0 GIS\6.3 Layout\ets_3845\45-day report\QCB 2011\fig1_regional.mxd, 6/24/2011, Lee I



Source: USGS Quad Jamul Mountains 1975; Otay Mesa 1975

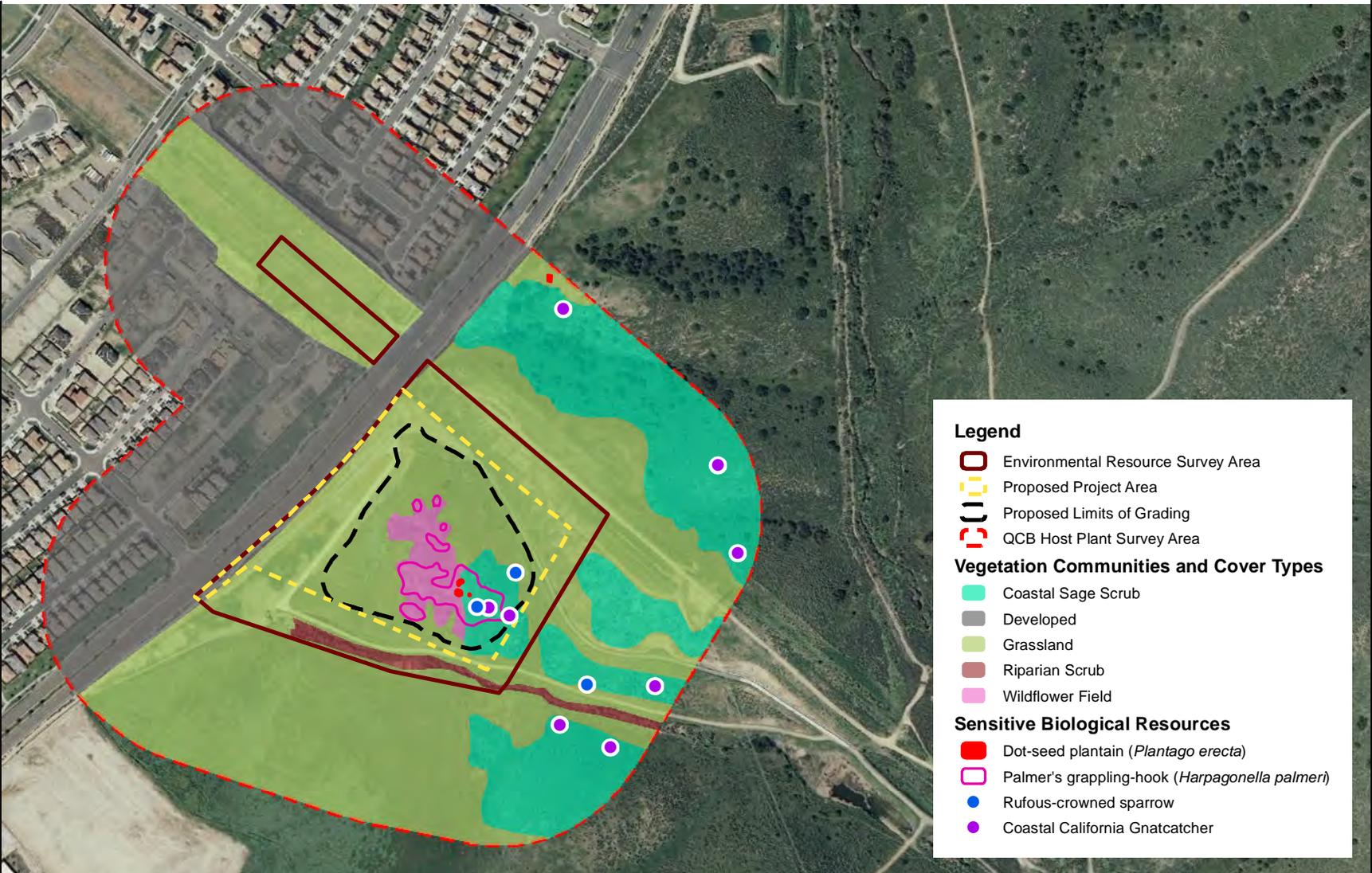


1,000 0 1,000 Feet



Scale: 1:12,000; 1 inch = 1,000 feet

Figure 2
Site Assessment and Host Plant
Location Map for Salt Creek Substation



Source: Aerials Express 2010



500 0 500 Feet



Scale: 1:6,000; 1 inch = 500 feet

Figure 3
Vegetation Map and Sensitive Biological Resources
for Salt Creek Substation and Surrounding
500-foot Buffer Zone

APPENDIX A

FIELD DATA SHEETS FROM QUINO CHECKERSPOT BUTTERFLY PROTOCOL SURVEYS

Quino Checkerspot Butterfly Protocol Survey — Field Data Sheet

Recorder: Bonnie Hendrick Add'l Person: Evan Beynon Date: 4/6/11 GPS Unit: _____

Project: SDGE Otay Map #: _____ Survey Sxn: _____ QCB Protocol Survey # 8 of 5+

TIME (24-hour)	Temp (F°)	Wind (avg/max)	% CC	Sky
Start				clear patchy overcast drizzle shower
12:30	71.6°	ave 2.6 S. 3 max 4		clear patchy overcast drizzle shower
2:00	70	2.6 4.3 max 8		clear patchy overcast drizzle shower
				clear patchy overcast drizzle shower
				clear patchy overcast drizzle shower
				clear patchy overcast drizzle shower
End				clear patchy overcast drizzle shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources Plantago

	Total		Total
Nymphalidae (Brushfooted Butterflies)		Hesperiidae (Skippers)	
<i>Euphydryas editha</i> (Quino Checkerspot)		<i>Erynnis funeralis</i> (Funereal Duskywing)	
<i>Euphydryas chalcedona</i> (Henne's Checkerspot)		<i>Erynnis tristis</i> (Sad Duskywing)	
<i>Thessalia leanira</i> (Wright's Checkerspot)		<i>Erynnis propertius</i> (Propertius Duskywing)	
<i>Chlosyne californica</i> (California Patch)		<i>Erynnis brizo</i> (Sleepy Duskywing)	
<i>Chlosyne gabbii</i> (Gabb's Checkerspot)		<i>Pyrgus albescens</i> (Checkered Skipper)	
<i>Phyciodes mylitta</i> (Mylitta Crescent)		<i>Hesperia jubia</i> (Jubia Skipper)	
<i>Junonia coenia</i> (Common Buckeye)		<i>Polites sabuleti</i> (Sandhill Skipper)	
<i>Vanessa annabella</i> (West Coast Lady)		Megathymidae (Giant Skippers)	
<i>Vanessa atalanta</i> (Red Admiral)		<i>Megathymus yuccae</i> (Yucca Giant Skipper)	
<i>Vanessa cardui</i> (Painted Lady)		Other Butterflies:	
<i>Vanessa virginiensis</i> (Virginia Lady)			
<i>Nymphalis californica</i> (California Tortoiseshell)			
Danaidae (Milkweed Butterflies)		See previous sheet for nectar	
<i>Danaus plexippus</i> (Monarch)			
<i>Danaus gilippus</i> (Queen)			
Satyridae (Satyrs)		Cal ringlet	1
<i>Coenonympha californica</i> (Common California Ringlet)			
Pieridae (Whites, Sulphurs)			
<i>Pieris rapae</i> (Cabbage White)			
<i>Pontia sisymbrii</i> (Spring White)			
<i>Pontia beckerii</i> (Beker's White)			
<i>Pontia protodice</i> (Common White)			
<i>Anthocharis sara</i> (Sara Orangetip)			
<i>Anthocharis cethura</i> (Felder's Orangetip)			
<i>Euchloe hyantis</i> (Desert Pearly Marble)			
<i>Colias eurytheme</i> (Orange Sulphur)			
<i>Colias harfordii</i> (Harford's Sulphur)			
<i>Nathalis iole</i> (Dainty Sulphur)			
Papilionidae (Swallowtails)		Notes:	
<i>Papilio polyxenes</i> (Desert Black Swallowtail)		Annals hummingbird	
<i>Papilio eurymedon</i> (Pale swallowtail)		meadow lark	
<i>Papilio rutulus</i> (Western Tiger Swallowtail)		house finch	
Riodiniade (Metalmarks)		black chachalaca	
<i>Apodemia mormo</i> (Behr's Metalmark)	1	monarch chow	
Lycaenidae (Hairstreaks and Blues)		Raven	
<i>Celastrina ladon</i> (Spring Azure)			
<i>Leptotes marina</i> (Marine Blue)			
<i>Brephidium exile</i> (Western Pygmy Blue)			
<i>Glaucopsyche lygdamus</i> (Southern Blue/Silvery blue)			
<i>Hemiargus ceraunus</i> (Edward's Blue)			
<i>Icaria acmon</i> (Acmon Blue)	1		
<i>Philotes sonorensis</i> (Sonoran Blue)			
<i>Callophrys augustinus</i> (Brown Elfin)			
<i>Callophrys perplexa</i> (Perplexing Green Hairstreak)			
<i>Strymon melinus</i> (Gray Hairstreak)			
<i>Atlides halesus</i> (Great Purple Hairstreak)			

Quino Checkerspot Butterfly Protocol Survey — Field Data Sheet

Recorder: Evan Bergman Add'l Person: Bonnie Hendricks Date: April 11/11 GPS Unit: —

Project: Concentrix-Solar-Project Map #: — Survey Sxn: — QCB Protocol Survey # 9 of 5+

TIME (24-hour)	Temp (F°)	Wind (avg/max)	% CC	Sky
Start <u>12:40</u>	<u>72°</u>	<u>2-5</u>	<u>0</u>	<u>clear</u> patchy overcast drizzle shower
<u>12:55</u>	<u>70°</u>	<u>2-5</u>	<u>0</u>	<u>clear</u> patchy overcast drizzle shower
<u>1:30</u>	<u>70°</u>	<u>2-5</u>	<u>0</u>	<u>clear</u> patchy overcast drizzle shower
<u>2:07</u>	<u>72°</u>	<u>2-5</u>	<u>0</u>	<u>clear</u> patchy overcast drizzle shower
				clear patchy overcast drizzle shower
				clear patchy overcast drizzle shower
End				clear patchy overcast drizzle shower

Habitat On-site (circle): open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, various nectar sources Plantago

	Total		Total
Nymphalidae (Brushfooted Butterflies)		Hesperiidae (Skippers)	
<i>Euphydryas editha</i> (Quino Checkerspot)		<i>Erynnis funeralis</i> (Funereal Duskywing)	
<i>Euphydryas chalcedona</i> (Henne's Checkerspot)		<i>Erynnis tristis</i> (Sad Duskywing)	
<i>Thessalia leanira</i> (Wright's Checkerspot)		<i>Erynnis propertius</i> (Propertius Duskywing)	
<i>Chlosyne californica</i> (California Patch)		<i>Erynnis brizo</i> (Sleepy Duskywing)	
<i>Chlosyne gabbii</i> (Gabb's Checkerspot)		<i>Pyrgus albescens</i> (Checkered Skipper)	
<i>Phyciodes mylitta</i> (Mylitta Crescent)		<i>Hesperia jubia</i> (Jubia Skipper)	
<i>Junonia coenia</i> (Common Buckeye)	3	<i>Polites sabuleti</i> (Sandhill Skipper)	
<i>Vanessa annabella</i> (West Coast Lady)	1	Megathymidae (Giant Skippers)	
<i>Vanessa atalanta</i> (Red Admiral)		<i>Megathymus yuccae</i> (Yucca Giant Skipper)	
<i>Vanessa cardui</i> (Painted Lady)			
<i>Vanessa virginiensis</i> (Virginia Lady)		Other Butterflies:	
<i>Nymphalis californica</i> (California Tortoiseshell)			
Danaidae (Milkweed Butterflies)			
<i>Danaus plexippus</i> (Monarch)			
<i>Danaus gilippus</i> (Queen)			
Satyridae (Satyrs)			
<i>Coenonympha californica</i> (Common California Ringlet)			
Pieridae (Whites, Sulphurs)			
<i>Pieris rapae</i> (Cabbage White)			
<i>Pontia sisymbrii</i> (Spring White)			
<i>Pontia beckerii</i> (Baker's White)			
<i>Pontia protodice</i> (Common White)			
<i>Anthocharis sara</i> (Sara Orangetip)			
<i>Anthocharis cethura</i> (Felder's Orangetip)			
<i>Euchloe hyantis</i> (Desert Pearly Marble)			
<i>Colias eurytheme</i> (Orange Sulphur)			
<i>Colias harfordii</i> (Harford's Sulphur)			
<i>Nathalis iole</i> (Dainty Sulphur)			
Papilionidae (Swallowtails)		Notes:	
<i>Papilio polyxenes</i> (Desert Black Swallowtail)		<u>Mourning dove</u>	
<i>Papilio eurymedon</i> (Pale swallowtail)		<u>White crown sparrow</u>	
<i>Papilio rutulus</i> (Western Tiger Swallowtail)		<u>meadow lark</u>	
Riodinidae (Metalmarks)		<u>house finch</u>	
<i>Apodemia mormo</i> (Behr's Metalmark)		<u>Arctic hummingbird</u>	
Lycaenidae (Hairstreaks and Blues)		<u>black phoebe</u>	
<i>Celastrina ladon</i> (Spring Azure)		<u>raven</u>	
<i>Leptotes marina</i> (Marine Blue)			
<i>Brephidium exile</i> (Western Pygmy Blue)			
<i>Glaucopsyche lygdamus</i> (Southern Blue/Silvery blue)			
<i>Hemiargus ceraunus</i> (Edward's Blue)			
<i>Icaria acmon</i> (Acmon Blue)			
<i>Philotes sonorensis</i> (Sonoran Blue)			
<i>Callophrys augustinus</i> (Brown Elfin)			
<i>Callophrys perplexa</i> (Perplexing Green Hairstreak)			
<i>Strymon melinus</i> (Gray Hairstreak)			
<i>Atides halesus</i> (Great Purple Hairstreak)			

Quino Checkerspot Butterfly Protocol Surveys

Recorder: Bonnie H. Add'l Person: NA Date: 3/14/11
 Project: SDGE Olay Sub. Survey Sxn: 11 Map #: 11
 GPS Unit: NA Survey Type: Habitat Ass. QCB Survey 1 of 1

TIME (24-hour)	Temp (F°)	Wind (avg/max)	% CC	Sky					
START	12:00	75°	3/7	30%	clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
					clear	patchy	overcast	drizzle	shower
END	2:00	73°	4.5/4	60%	clear	patchy	overcast	drizzle	shower

Habitat On-site (circle) open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, Plantago, Castilleja, nectar sources

Butterfly Species	Tally	Total
<u>Habitat Assessment</u>		
<u>Large fill slopes with DIS habitat / ORNamental</u>		
<u>DIS/ORN</u>		
<u>+ Gazania sp.</u>	<u>~ 80% cover</u>	<u>Steep slopes</u>
<u>+ Nelotus ind.</u>		<u>DIS/ORN area</u>
<u>+ Bare</u>	<u>~ 20%</u>	<u>Excluded Areas</u>
<u>NING on hilltop - this is most of site; however</u>		
<u>not the highest hill/ridge in the area</u>		
<u>not an important hilltopping resource</u>		
<u>for butterflies.</u>		
<u>+ Bromus diandrus</u>		
<u>+ Avena fatua</u>		
<u>Hedyscra cretica</u>	<u>Some clay soils</u>	
<u>Salsola tragus</u>	<u>Suitable Habitat</u>	
<u>Bromus mad.</u>		
<u>Euphorbia/Cham. sp.</u>		
<u>Centarea mel.</u>		
<u>Erod cicutarium</u>		
<u>Feniculum vulgare</u>		
<u>Chlorogalum sarv.</u>		
<u>* Harpagonella palmeri</u>		
<u>Quinandra fase - not in bloom</u>		
<u>CSS/NING</u>	<u>Suitable Habitat</u>	
<u>+ Avena</u>		
<u>+ Brom mad</u>		
<u>art cal</u>		
<u>Vig lac</u>	<u>Suit. clay soils</u>	
<u>Lupinus</u>		
<u>Opuntia parryi</u>		
<u>Bacch sarv.</u>		
<u>Calyst macro.</u>		
<u>Lotus scop.</u>	<u>+ Plantago erecta</u>	
<u>Eriog fasc.</u>		
<u>Marrub macro</u>	<u>Harpag palm</u>	
<u>SWS</u>		
<u>++ Salix lasiol.</u>		
<u>+ Tamarix sp.</u>		
<u>Bacch alut.</u>		
<u>Picris echinoides</u>		
<u>Salix laev. + Typha sp.</u>		

APPENDIX B

FLOWERING PLANT OBSERVATIONS AT THE SALT CREEK SUBSTATION SITE

**APPENDIX B
FLOWERING PLANT OBSERVATIONS AT
SALT CREEK SUBSTATION SITE**

Scientific Name	Common Name
<i>Acmispon glaber</i>	deerweed
<i>Artemisia californica</i>	coastal sagebrush
<i>Baccharis pilularis</i>	Coyote bush
<i>Baccharis sarothroides</i>	Broom baccharis
<i>Baccharis salicifolia</i>	mulefat
<i>Bahiopsis laciniata</i> ²	San Diego sunflower
<i>Bloomeria crocea</i>	Bloomeria
<i>Brassica nigra</i> ³	Black mustard
<i>Calochortus splendens</i>	lilac mariposa lily
<i>Calystegia macrostegia</i>	Morning-glory
<i>Centaurium venustum</i>	canchalagua
<i>Chlorogalum sp.</i>	Soap plant
<i>Conyza canadensis</i> ³	horseweed
<i>Cryptantha intermedia</i>	nievitas cryptantha
<i>Cylindropuntia prolifera</i>	Coast cholla
<i>Deinandra fasciculata</i>	fascicled tarplant
<i>Dichelostemma capitatum</i>	blue dicks
<i>Diplotaxis muralis</i>	Wall rocket
<i>Dudleya pulverulenta</i>	Chalk dudleya
<i>Encelia californica</i>	California encelia
<i>Encelia farinosa</i>	brittlebush
<i>Eriogonum fasciculatum</i>	coast California buckwheat
<i>Erodium botrys</i> ³	filaree
<i>Eriophyllum confertiflorum</i>	Golden yarrow
<i>Ferocactus viridescens</i> ²	Coast barrel cactus
<i>Galium angustifolium</i>	Narrow-leaf bedstraw
<i>Gazania sp.</i> ³	African daisy
<i>Gnaphalium canescens</i>	white everlasting
<i>Harpegonella palmeri</i> ²	Palmer's grappling-hook
<i>Hirschfeldia incana</i> ³	Short-pod mustard
<i>Hypochoeris glabra</i> ³	Cat's ear
<i>Isocoma menziesii</i>	goldenbush
<i>Lasthenia sp.</i>	goldfields
<i>Lepidium sp.</i>	peppergrass
<i>Microseris sp.</i>	microseris

Scientific Name	Common Name
<i>Osmodenia tenella</i>	osmadenia
<i>Plagiobothrys</i> sp.	popcornflower
<i>Plantago erecta</i> ¹	dot-seed plantain
<i>Peritoma arborea</i>	bladderpod
<i>Rhus integrifolia</i>	lemonadeberry
<i>Sambucus nigra</i>	Mexican elderberry
<i>Salvia apiana</i>	White sage
<i>Salvia mellifera</i>	Black sage
<i>Silybum marrianum</i> ³	Milk thistle
<i>Sisyrinchium bellum</i>	blue-eyed grass
<i>Sonchus oleraceous</i> ³	Sow-thistle
<i>Stipa lepida</i>	Foothill needlegrass
<i>Stipa pulchra</i>	Purple needlegrass

¹ QCB Primary Host Plant

² Sensitive Plant Species

³ Nonnative Plant Species

APPENDIX F-2
2012 RESULTS REPORT

May 15, 2012

Ms. Susie Tharratt
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

RE: 45-Day Summary Report of 2012 Focused Surveys for the Quino Checkerspot Butterfly for the Proposed 69-kV Transmission Line Installation Project for SDG&E

Dear Ms. McCarthy:

In compliance with the Special Terms and Conditions for Endangered and Threatened Wildlife Species Permits TE820658-4 (AECOM), TE-027736-5 (Erik LaCoste), and TE-800930-10 (Viviane Marquez), AECOM submits this letter report summarizing the results of focused surveys conducted in 2012 for the federally endangered Quino checkerspot butterfly (*Euphydryas editha quino*; QCB) for the a new 69kV distribution line site associated with the proposed Salt Creek Substation (project site). These biologists currently hold Endangered and Threatened Species Permits issued by the U.S. Fish and Wildlife Service (USFWS) under Section 10(a) of the Federal Endangered Species Act. These permits provide authorization to conduct presence/absence surveys for QCB and other species. Surveys were conducted on behalf of San Diego Gas and Electric (SDG&E).

Project Description

The linear project is located in East Lake and Otay Mesa, California (Figure 1). The project would include the installation of a new 69-kV transmission line along an existing 5-mile-long transmission corridor east of the existing Miguel Substation south to the proposed Salt Creek Substation (Figures 2a and 2b). The transmission line corridor is 120 feet in width for the northern portion of the alignment and 150 feet in width south of Hunte Parkway. The corridor includes an existing 69-kV transmission line and two 230-kV transmission lines mutually located on a single steel lattice tower line. The new 69-kV transmission line is expected to be built approximately 15 feet in from the eastern edge of the 120-foot-wide easement. Based on preliminary design, approximately 53 new structures would be erected on the new 69-kV transmission line, including 46 galvanized steel poles, six engineered foundation poles, and one cable pole. Two staging yards have been identified for the project: one at the Miguel Substation and another on the north side of Hunte Parkway between Discovery Falls, Eastlake Parkway, and Crossroads Street. The proposed Salt Creek Substation site would be located on an 11.6-acre site directly south of Hunte Parkway, near the southern terminus of Exploration Falls Drive and adjacent to the Miguel to Mexico transmission line corridor. A QCB survey for the proposed Salt Creek Substation was completed in 2011 (AECOM 2011).

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Site Description

For purposes of this report, the term “project survey area” refers to the transmission line corridor (which contains an existing wood pole alignment) and two staging yards plus a 500-foot survey buffer around each of these areas. The project survey area occurs within the City of Chula Vista’s Multiple Species Conservation Planning (MSCP) Subarea Plan (Subarea Plan) Otay Ranch Planning Area, within areas planned for development (e.g., outside of the Otay Ranch Preserve). The project survey area contains a variety of developed areas, along with native habitats, including coastal sage scrub, riparian scrub, grassland, and non-native habitats including non-native grassland and disturbed areas. Several existing dirt access roads, that serve the existing substation and the power pole alignment, cross the project survey area.

Habitat at the northern end of the transmission line corridor, near the existing Miguel Substation, consists of non-native grassland, coastal sage scrub, and riparian scrub. Habitat along the central portion of the transmission line corridor consists of non-native grassland, disturbed areas with very little native vegetation, and native vegetation consists of small patches of coastal sage scrub. Habitat at the southern end of the transmission line corridor, near the proposed Salt Creek Substation, consists of non-native grassland, coastal sage scrub, riparian scrub, and disturbed areas.

Suitable QCB habitat, as defined by the USFWS Survey Protocol, occurs throughout the project area. Small patches of dwarf plantain (*Plantago erecta*), a primary QCB host plant, occur within the buffer of the transmission line corridor at the southern end of the alignment and a small patch of purple owl's clover (*Castilleja exserta*), also a QCB host plant, was observed in the central portion of the alignment, south of Otay Lakes Road. Approximately 280.5 acres of suitable QCB habitat occurs within the project survey area (Figure 3a, 3b, and 3c).

Background Information

QCB was added by USFWS to the Federal Endangered Species List on January 16, 1997 (USFWS 1997). The species (*E. editha*) has a range extending from British Columbia and Alberta, Canada, south through Colorado and Utah, and west along the coast to northern Baja California. It is divided into 20 subspecies, each with its own range and biological and morphological characteristics. In California, there are 12 subspecies (Garth and Tilden 1986). Three other subspecies of *E. editha* are currently known to occur in Southern California. QCB is the southwesternmost subspecies of *E. editha* (Mattoni et al. 1997).

QCB is known to occur in association with a variety of plant communities, soil types, and elevations (up to 5,000 feet). The plant communities include clay soil meadows, open grasslands, coastal sage scrub, chaparral, and semidesert scrub (Ballmer et al. 2001). QCB is also associated with clay soils that possess cryptogamic crusts and vernal pools (USFWS 2002).

QCB is a medium-sized butterfly (approximately 0.8- to 1.1-inch wingspan) belonging to the family Nymphalidae. The adults are primarily orange-red with white and have black markings

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on the dorsal wing surface. They are active primarily in March and April. This active period may vary depending on weather conditions (Ballmer et al. 2001). The adult butterfly feeds on nectar, which it obtains from spring annuals such as popcorn flower (*Cryptantha* sp.), Layia (*Layia* sp.), goldenbush (*Ericameria* spp.), onion (*Allium* sp.), fiddleneck (*Amsinckia intermedia*), chia (*Salvia columbariae*), and blue dicks (*Dichelostemma pulchella*). It cannot use flowers that possess deep corolla tubes, such as monkeyflower (*Mimulus* spp.), or those that can be opened by bees, such as snapdragons (USFWS 2002). Adult males and virgin females sometimes “hilltop,” or travel to elevated locations to find mates. While waiting for females to arrive, the males will often exhibit “territorial behavior” and will chase other butterflies that approach them. Frequently, the butterflies are observed in meadows or clearings where their host plants occur (Ballmer et al. 2001).

A female may lay 20 to 75 eggs at one time and may produce up to 1,200 eggs in her lifetime. The eggs hatch in approximately 10 days under favorable weather conditions and the young larvae will immediately begin to feed on a host plant. The feeding larvae use the dot-seed plantain (*Plantago erecta*) as their primary host plant in the coastal and inland valley areas (e.g., Otay Mesa area). In higher elevation areas, QCB has been known to use Patagonia plantain (*Plantago patagonica*), white snapdragon (*Antirrhinum coulterianum*), and Chinese houses (*Collinsia concolor*) as their host plants (Pratt 2009). Bird’s-beak (*Cordylanthus rigidus*) and owl’s clover (*Castilleja exserta*) are considered secondary hosts (USFWS 2002). After feeding, the early larva enters an obligatory aestival diapause (a dormant stage), which may be broken after fall or winter rains (Murphy and White 1984; Osborne 1998). If adverse weather conditions occur, the emergent larva may reenter a diapause stage repeatedly, for up to 5 or 6 years, until favorable weather conditions permit sufficient growth of the host plant to allow the larva to complete its development.

QCB was once common in Southern California. It ranged north into Ventura County, west to the Pacific Ocean, east to the deserts, and south into northern Baja California. Currently, it is known to occur only in a few, probably isolated, colonies in southwestern Riverside County, San Diego County, and northern Baja California. Reasons for the butterfly’s reduction in population are not well known.

Habitat loss due to degradation and fragmentation caused by urban and rural development, agricultural conversion, off-road-vehicular use, the invasion of nonnative plants and insects, fire management practices, overcollecting, and adverse weather conditions have likely contributed to the species’ decline (USFWS 1997).

Survey Methodology

Protocol-level surveys were determined necessary by the presence of suitable QCB habitat throughout the project survey area. A habitat assessment was conducted on February 8, 2012, by wildlife biologist Erik LaCoste and AECOM biologist Brynne Mulrooney. Approximately 280.5 acres of suitable QCB habitat, located throughout the project area, were identified for surveys.

USFWS recommends that focused QCB surveys be conducted a minimum of five times during the adult flight season by biologists possessing a recovery permit for this species,

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pursuant to Section 10(a)(1)(A) of the Endangered Species Act. The QCB flight season within a given area is determined by the activity of known QCB populations that are monitored annually by USFWS.

Nearby QCB Reference populations were used to establish a start and end date for surveys. QCB was first reported in flight in the West Otoy Mountain Reference population area on February 3, 2012, with continued reports of flying adults through March 21. QCB were also reported from the Rancho Jamul Reference population between March 4 and March 28, 2012. Adult QCB were also reported independently from an east Otoy Mesa area between February 22 and March 23, 2012 (USFWS Carlsbad 2012 QCB Monitoring Website).

Focused presence/absence QCB surveys within the project survey area were conducted for 7 weeks during the flight season between February 17, 2012, and March 30, 2012 (Table 1). Surveys were conducted by permitted wildlife biologists Erik LaCoste (TE-027736-5) and Viviane Marquez (TE-800930-10).

Table 1
Quino Checkerspot Butterfly Survey Schedule

Survey Week	Date	Time	% Cloud Cover	Temp. (°F)	Wind (mph)	Survey Team
					Avg./Max.	
1	2/17/12	0935-1545	2-10%	67-72	2-6	Erik LaCoste, Viviane Marquez
2a	2/24/12	1100-1600	0-30%	61-65	2-6	Erik LaCoste, Viviane Marquez
2b	2/25/12	1020-1535	0	65-73	2-6	Erik LaCoste, Viviane Marquez
3a	3/2/12	0930-1430	0	62-73	2-4	Erik LaCoste, Viviane Marquez
3b	3/3/12	0830-1300	0	61-84	2-6	Erik LaCoste, Viviane Marquez
4a	3/8/12	0850-1410	0	64-75	4-9	Erik LaCoste, Viviane Marquez
4b	3/9/12	0830-1330	0-5%	68-82	3-10	Erik LaCoste
4b	3/10/12	1015-1525	0-20	69-76	3-6	Viviane Marquez
5a	3/13/12	1045-1545	0-5%	63-66	3-8	Erik LaCoste, Viviane Marquez
5b	3/14/12	1030-1530	0	64-67	3-10	Erik LaCoste
5b	3/15/12	1050-1550	0-5	64-71	2-6	Viviane Marquez
6a	3/21/12	1000-1505	0-3%	69-77	2-6	Viviane Marquez
6a, 6b	3/22/12	0950-1525	0	67-72	2-4	Erik LaCoste, Viviane Marquez
6b	3/23/12	1130-1600	10-50	67-70	3-8	Erik LaCoste
7a	3/28/12	1030-1530	10-15%	63-69	4-10	Erik LaCoste

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Survey Week	Date	Time	% Cloud Cover	Temp. (°F)	Wind (mph)	Survey Team
					Avg./Max.	
7a, 7b	3/29/12	1055-1555	0-15%	65-72	3-9	Erik LaCoste, Viviane Marquez
7b	3/30/12	1115-1615	0-2	66-72	2-5	Viviane Marquez

Surveys were terminated after week 7 surveys on March 30 because no further observations of adult QCB had been reported on the USFWS website in the lower elevation reference sites after March 28 (USFWS 2011).

The habitat assessment and presence/absence surveys followed the current USFWS survey protocol for the species (USFWS 2002). All butterfly species and flowering plant species with potential as a nectar source were recorded during surveys. All suitable QCB habitat within the project survey area was surveyed a total of 7 times over a 7-week period.

Results

A summary of the survey schedule, personnel, and weather conditions is presented in Table 1. Field notes are available in Appendix A.

Butterfly species observed within the project survey area are summarized in Table 2. A list of potential nectaring plant species in flower each week is presented in Appendix B.

No QCB were observed within the project survey area. Three populations of dot-seed plantain, the QCB primary host plant species, were detected within the project survey area (Figures 2 and 3). Most dot-seed plantain populations were beginning to dry and drop seed by survey week 7. A population of purple owl's clover was detected on February 27 and some individuals were still fresh on March 30.

The coastal California gnatcatcher (*Polioptila californica californica*), federally listed as threatened, and the rufous-crowned sparrow, a state species of special concern, were detected during QCB focused surveys.



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Table 2
Summary of Butterfly Species Observed during Quino Checkerspot Butterfly
Surveys for the Proposed 69-kV Transmission Line Installation Project Survey Area¹

Common Name	Scientific Name	Survey Week							Totals
		1	2	3	4	5	6	7	
		Feb 17	Feb 24, 25	Mar 2, 3	Mar 8, 9, 10	Mar 13, 14, 15	Mar 21, 22, 23	Mar 28, 29, 30	
Acmon blue	<i>Icaria acmon</i>							3	3
Anise swallowtail	<i>Papilio zelicoan</i>				2	5	1		8
Behr's metalmark	<i>Apodemia virgulti</i>	8	16	14	47	18	23	14	140
Blue sp.	<i>Icarcia sp.</i>				1	1		3	5
Checkered skipper sp.	<i>Pyrgus sp.</i>	1	1		2	1		1	6
Common buckeye	<i>Junonia coenia grisea</i>				1		1	1	3
Common white	<i>Pontia protodice</i>	1		2	3	1	1	2	10
Common California ringlet	<i>Cecononympha tullia</i>	1	6	16	2	11	20	13	69
Fritillary sp.	<i>Speyeria sp.</i>		1	5					6
Funereal duskywing	<i>Erynnis funeralis</i>	1	11	1	4	8	15	11	51
Grey hairstreak	<i>Strymon melinus</i>		3		2	1		2	8
Harford's sulphur	<i>Colias harfordii</i>						1		1
Marine blue	<i>Leptotes marina</i>						1	1	2
Monarch	<i>Danaus plexippus</i>		1		1		1		3
Mourning cloak	<i>Nymphalis antiopa</i>		1		1				2
Orange sulphur	<i>Colias eurytheme</i>				1				1
Painted lady	<i>Vanessa cardui</i>	4	27	27	325+	36	50	7	476+
Pale swallowtail	<i>Papilio eurymedon</i>				1				1
Perplexing hairstreak	<i>Callophrys perplexa</i>			1	2	6	1		10



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Common Name	Scientific Name	Survey Week							Totals
		1	2	3	4	5	6	7	
		Feb 17	Feb 24, 25	Mar 2, 3	Mar 8, 9, 10	Mar 13, 14, 15	Mar 21, 22, 23	Mar 28, 29, 30	
Pygmy blue	<i>Brephidium exilis</i>	1	10	6	1	11	4	3	36
Red admiral	<i>Vanessa annabella</i>		1		1	3			5
Sara's orangetip	<i>Anthocharis sara</i>	4	5		10	2	2	1	24
Southern blue	<i>Glaucopsyche lygdamus</i>	8	7	7	19	5	3		49
Sulphur sp.	<i>Colias</i> sp.				2			1	3
West coast lady	<i>Vanessa anabella</i>		3	3	1	1	1	4	13
Western tailed blue	<i>Cupida amyntula</i>			3	10	10	19	26	68
White sp.	<i>Pontia</i> sp.				1				1
	Totals	29	93	85	440	120	144	93	

¹ Unidentified moths were also detected during QCB surveys but are not included in this list.

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Discussion

The USFWS monitors several reference sites for QCB larvae and adult presence, and provides information on the 2012 QCB Monitoring website (USFWS 2012). Within San Diego County, the monitoring website reported at least 73 adult observations (as of April 11, 2012) of QCB, with records within 9 localities (USFWS 2012). The two reference sites closest to the project site are Otay Lakes and west Otay Mountain, approximately 2 and 5 miles southeast of the project survey area, respectively. Fifteen QCB sightings occurred in the Otay Mountain vicinity February 4 through March 23. These observations indicate that AECOM's surveys were conducted during a suitable time period to detect QCB on-site, had they been present.

A total of 27 butterfly species were detected during protocol QCB surveys in the survey area. The most commonly observed species were painted lady (*Vanessa cardui*) and Behr's metalmark (*Apodemia virgulti*) (Table 2). Relatively small numbers of the more common species were detected during surveys, and diversity of nectar sources was moderate. Overall, butterfly abundance and species diversity were moderate during the 7 week survey period.

If you have any questions or comments regarding this letter report, please contact me at (760) 500-8802 or Cecilia Meyer Lovell of AECOM at (619) 233-1454.

Sincerely,



Erik LaCoste
Wildlife Biologist
On behalf of AECOM and GeomorphIS

Attachments:

- Figure 1 – Regional Map
- Figure 2 – Site Assessment and Host Plant Location Map
- Figure 3 – Vegetation Map and Sensitive Biological Resources f
- Appendix A – Field Data Sheets
- Appendix B – Flowering Plant Observations

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Recovery Permit Coordinator
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Certification Statement

Qualified wildlife biologists who conducted Quino checkerspot butterfly surveys for SDG&E's proposed 69-kV Transmission Line Installation project survey area certify that the information in this survey report fully and accurately represents the work performed. Signatures of current permitted biologists (i.e., Erik LaCoste and Viviane Marquez) who conducted protocol surveys (February 17 through March 30, 2012) are included below. The results of focused surveys for listed species are typically considered valid for 1 year by the resource agencies.



Erik LaCoste
Wildlife Biologist



Viviane Marquez
Wildlife Biologist

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FIGURES



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2010

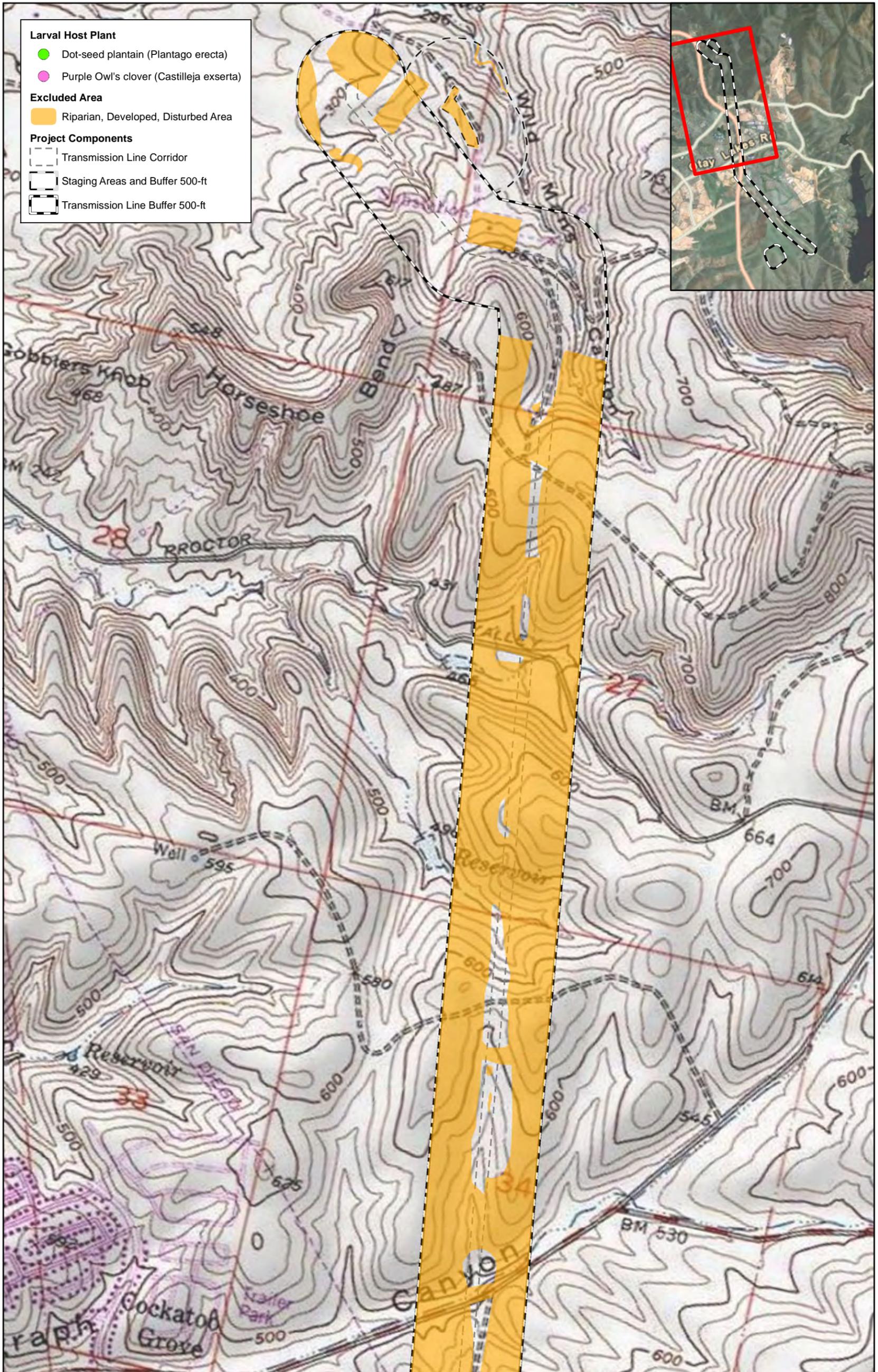


0 4 8 Miles



Scale: 1:250,000 1 inch = 4 miles

Figure 1
Regional Map



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2010

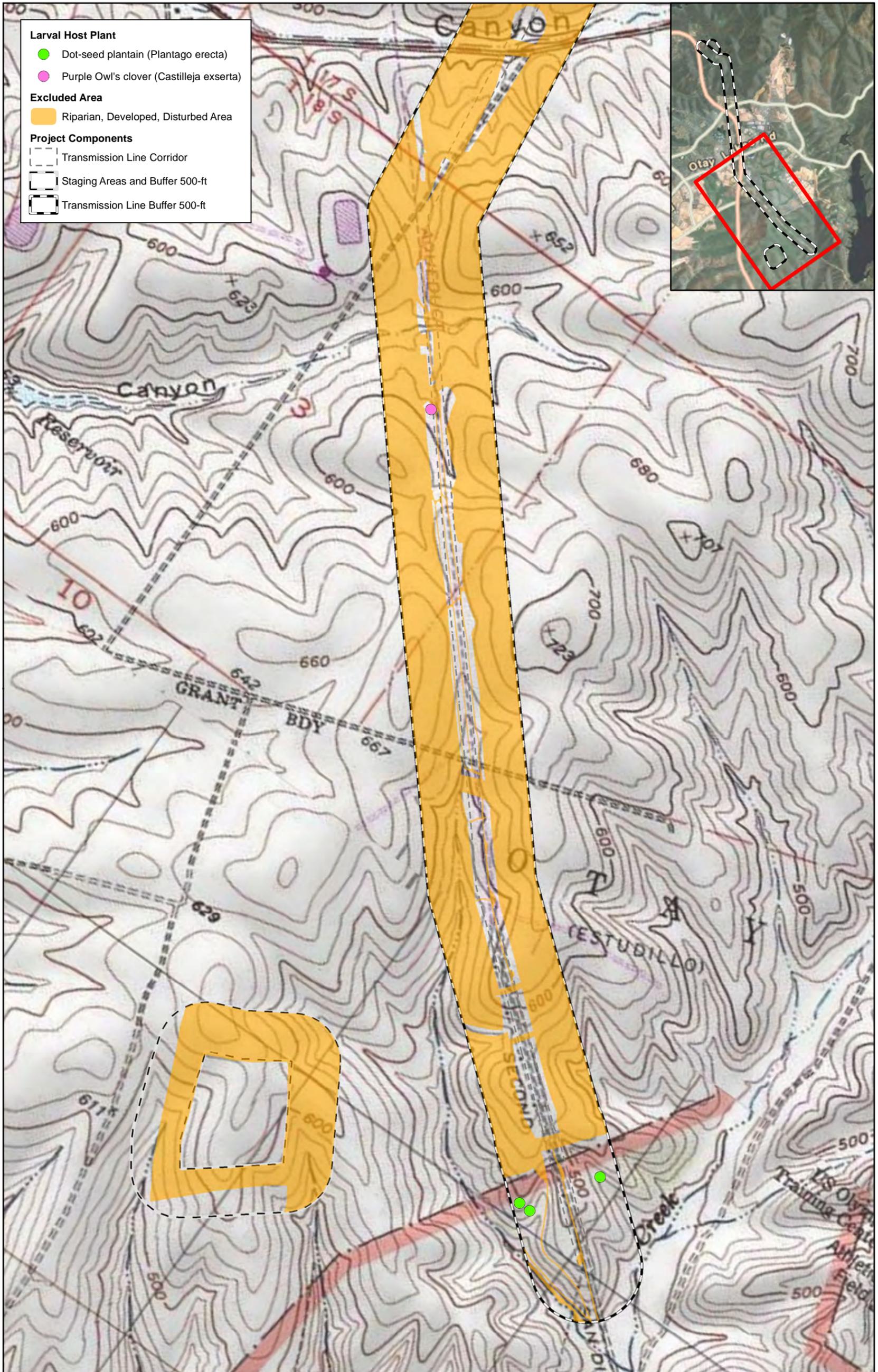


0 1,000 2,000 Feet



Scale: 1:12,000 1 inch = 1,000 feet

Figure 2a
Site Assessment and Host Plant
Location for Salt Creek Substation



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2010

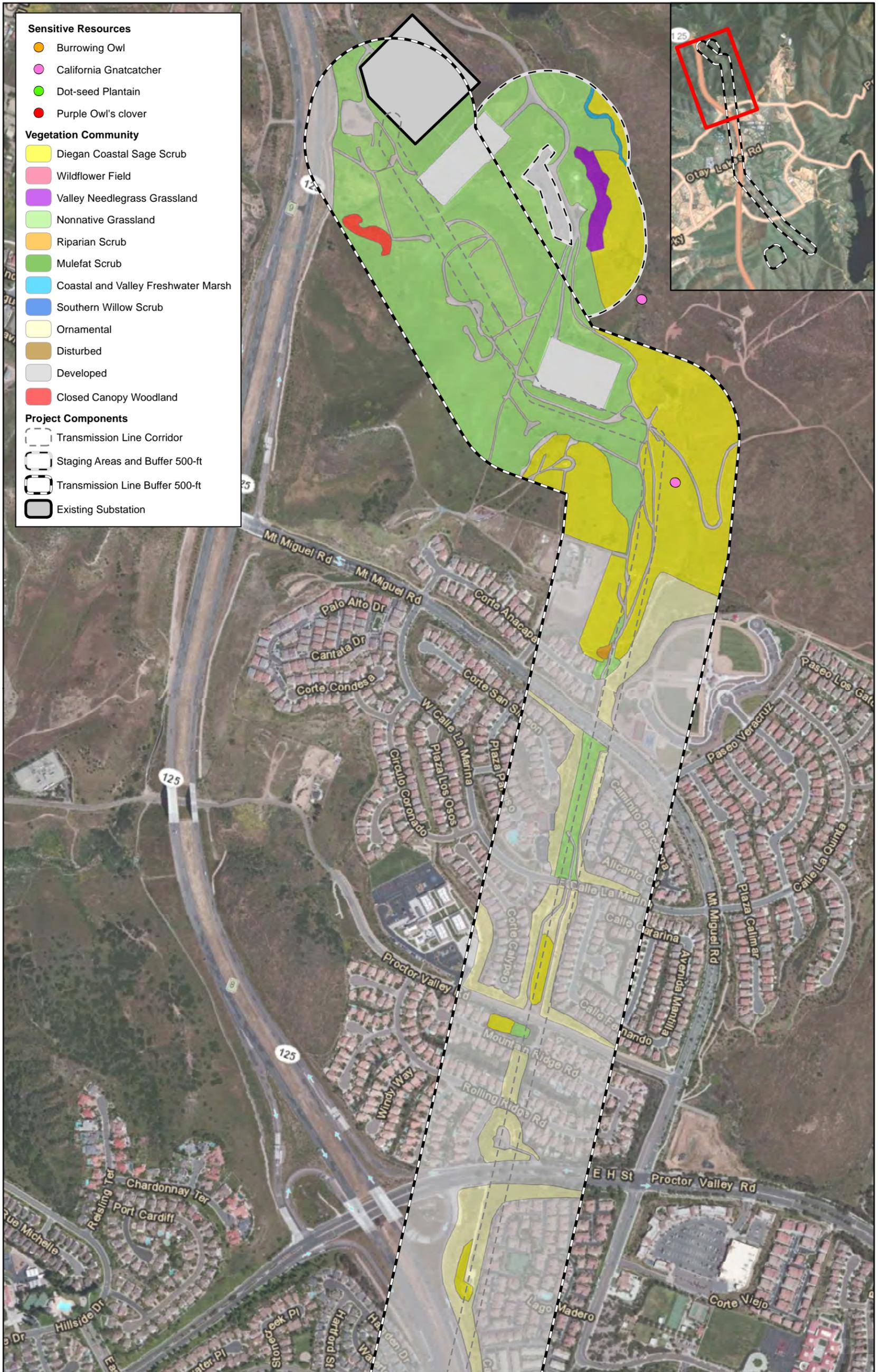


0 1,000 2,000 Feet

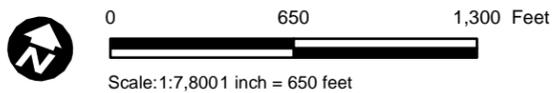


Scale: 1:12,000 1 inch = 1,000 feet

Figure 2b
Site Assessment and Host Plant
Location for Salt Creek Substation



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2012



Scale: 1:7,8001 inch = 650 feet

Figure 3a
Vegetation and Sensitive Biological Resources for
Salt Creek Substation and 500-foot Buffer Zone



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2010



0 650 1,300 Feet

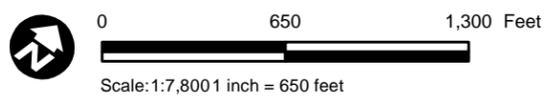


Scale: 1:7,8001 inch = 650 feet

Figure 3b
Vegetation and Sensitive Biological Resources for
Salt Creek Substation and 500-foot Buffer Zone



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2010



Scale: 1:7,8001 inch = 650 feet

Figure 3c
Vegetation and Sensitive Biological Resources for
Salt Creek Substation and 500-foot Buffer Zone

APPENDIX A

FIELD DATA SHEETS FROM QUINO CHECKERSPOT BUTTERFLY PROTOCOL SURVEYS

Quino Checkerspot General Form

Surveyor Viviana Marquez-Waller Date Feb. 17, 2012 Site Visit Number 1
 Survey Partner(s) Erik LaCoste Site Location Salt Creek
 Total Acres: 280ac Portion Surveyed: all Elevation: Max 640 Min 289
U54

Time (24 hr)	% Cloud	Sky	Wind (aver/max)	Temp (F)
Start 9:35	10%	clear patchy overcast drizzle shower	0.9 / 1.0 mph	67.1°
		clear patchy overcast drizzle shower		
11:00	10%	clear patchy overcast drizzle shower	1.8 / 2.5 mph	71.2°
		clear patchy overcast drizzle shower		
13:00	2%	clear patchy overcast drizzle shower	5.0 / 6.0 mph	72°
		clear patchy overcast drizzle shower		
Stop 15:45	5%	clear patchy overcast drizzle shower	1 / 2.0 mph	68.2°

Habitat onsite: open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, *Plantago*, *Castilleja*, nectar sources.

Butterfly Species	Count (Total)	Hill-topping	Butterfly Species	Count (Total)	Hill-topping
Nymphalidae (Brush Footed Butterflies)			Lycaenidae (Blues)		
<i>Euphydryas editha quino</i> (Quino Checkerspot)			<i>Brephidium exilis</i> (Pygmy Blue)	1	
<i>Adelpha bredowii</i> (California Sister)			<i>Celastrina ladon echo</i> (Echo Blue)		
<i>Basilarchia lorquini</i> (Lorquin's Admiral)			<i>Everes amyntula</i> (Western Tailed Blue)		
<i>Charidryas gabbii</i> (Gabb's Checkerspot)			<i>Glaucopsyche lygdamus</i> (Southern Blue)	3	
<i>Euphydryas chalcedona</i> (Chalcedon Checkerspot)			<i>Hemiargus ceraunus</i> (Edward's Blue)		
<i>Junonia coenia</i> (Buckeye)			<i>Icarcia acmon</i> (Acmon Blue)		
<i>Nymphalis antiopa</i> (Mourning Cloak)			<i>Leptotes marina</i> (Marine Blue)		
<i>Nymphalis californica</i> (California Tortoiseshell)			<i>Philotes sonorensis</i> (Sonoran Blue)		
<i>Phycoides mylitta</i> (Mylitta Crescent)			<i>Plebejus melissa</i> (Melissa Blue)		
<i>Polygonia satyrus</i> (Satyr Anglewing)			Papilionidae (Swallowtails)		
<i>Speyeria callippe</i> (Callippe Fritillary)			<i>Papilio eurymedon</i> (Pale Swallowtail)		
<i>Thessalia leanira wrighti</i> (Leanira Checkerspot)			<i>Papilio rutulus</i> (Western Tiger Swallowtail)		
<i>Vanessa annabella</i> (West Coast Lady)			<i>Papilio zelicaon</i> (Anise Swallowtail)		
<i>Vanessa atalanta</i> (Red Admiral)			Pieridae (Whites and Orangetips)		
<i>Vanessa cardui</i> (Painted Lady)	2		<i>Anthocharis cethura</i> (Felder's Orangetip)		
<i>Vanessa virginiensis</i> (Virginia Lady)			<i>Anthocharis lanceolata</i> (Grinnell's Marble)		
Danaidae (Milkweed Butterflies)			<i>Anthocharis sara</i> (Sara Orangetip)		
<i>Danaus gilippus</i> (Queen)			<i>Artogeia rapae</i> (Cabbage White)		
<i>Danaus plexippus</i> (Monarch)			<i>Colias eurytheme</i> (Alfalfa Butterfly)		
Hesperiidae			<i>Colias harfordii</i> (Harford's Sulfur)		
<i>Erynnis funeralis</i> (Funeral Dusky-wing)	1		<i>Euchloe hyantis lotta</i> (Southern Marble)		
<i>Heliopetes ericetorum</i> (Great White Skipper)			<i>Eurema nicippe</i> (Sleepy Orange)		
<i>Hylephila phyleus</i> (Fiery Skipper)			<i>Pontia protodice</i> (Common White)	1	
<i>Pyrgus albescens</i> (Checkered Skipper)			<i>Zerene eurydice</i> (California Dogface)		
Lycaenidae (Hairstreaks)			Riodinidae (Metalmarks)		
<i>Atalides halesus</i> (Great Purple Hairstreak)			<i>Apodemia mormo</i> (Behr's Metalmark)	6	
<i>Callophrys perplexa = dumetorum</i> (Perplexing Hairstreak)			<i>Calephelis wrighti</i> (Wright's Metalmark)		
<i>Incisalia augustinus</i> (Brown Elf)			Satyridae (Satyrids)		
<i>Mitoura thornei</i> (Thorne's Hairstreak)			<i>Coenonympha californica</i> (California Ringlet)	1	
<i>Strymon melinus</i> (Gray Hairstreak)			OTHERS:		
OTHERS:			OTHERS:		

Surveyor Viviane Marquez Area # All

Date: 2/17/2012

Comments:
Animal species detected include: mule deer (scat), Audubon rabbit, California ground squirrel, Greater roadrunner, Northern mockingbird, California towhee, Lesser goldfinch, American crow, Bush tit, Bewick's wren, Red-tailed hawk, House finch, Mourning dove, Song sparrow, House wren, Rufous-crowned sparrow, Anna's hummingbird, Black phoebe, Red-winged blackbird, American coot, Ruddy duck, Audubon warbler, American pipit, Western meadowlark, Say's phoebe, White-crowned sparrow, American kestrel.
Nest on first metal pole-north of Hunte Parkway.

Plant Communities and Habitat Information:
Nice Diegoan Coastal Sage Scrub at either end (north and south) of the project area. Nice native grasslands at northern end of project area. Most of rest is non-native grassland.

Host Plants Present: None

Nectar Plants Present:

Photographs Taken:

1.	2.	3.
4.	5.	6.
7.	8.	9.
10.	11.	12.

Quino Checkerspot General Form

Surveyor Viviane Marquez-Waller Date 2/24/12 Site Visit Number 2a
 Survey Partner(s) Erk LaBiste Site Location Salt Creek Project
 Total Acres: _____ Portion Surveyed: substation Area Elevation: Max 6544 Min 289 feet

Time (24 hr)	% Cloud	Sky					Wind (aver/max)	Temp (F)
Start 11:00	30%	clear	patchy	overcast	drizzle	shower	4mph/6mph	61.5°
		clear	patchy	overcast	drizzle	shower		
11:10	15%	clear	patchy	overcast	drizzle	shower	1mph/1mph	62.4°
		clear	patchy	overcast	drizzle	shower		
13:10	0%	clear	patchy	overcast	drizzle	shower	1.5mph/3mph	65°
		clear	patchy	overcast	drizzle	shower		
Stop 16:00	5%	clear	patchy	overcast	drizzle	shower	1.2mph/2.5mph	62°

Habitat onsite: open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, *Plantago*, *Casilleja*, nectar sources.

Butterfly Species	Count (Total)	Hill-topping	Butterfly Species	Count (Total)	Hill-topping
Nymphalidae (Brush Footed Butterflies)			Lycaenidae (Blues)		
<i>Euphydryas editha quino</i> (Quino Checkerspot)			<i>Brephidium exilis</i> (Pygmy Blue)		
<i>Adelpha bredowii</i> (California Sister)			<i>Celastrina ladon echo</i> (Echo Blue)		
<i>Basilarchia lorquini</i> (Lorquin's Admiral)			<i>Everes amyntula</i> (Western Tailed Blue)		
<i>Charidryas gabbii</i> (Gabb's Checkerspot)			<i>Glaucopsyche lygdamus</i> (Southern Blue)	2	
<i>Euphydryas chalcedona</i> (Chalcedon Checkerspot)			<i>Hemiargus ceraunus</i> (Edward's Blue)		
<i>Junonia coenia</i> (Buckeye)			<i>Icarcia acmon</i> (Acmon Blue)		
<i>Nymphalis antiopa</i> (Mourning Cloak)	1		<i>Leptotes marina</i> (Marine Blue)		
<i>Nymphalis californica</i> (California Tortoiseshell)			<i>Philotes sonorensis</i> (Sonoran Blue)		
<i>Phycoides mylitta</i> (Mylitta Crescent)			<i>Plebejus melissa</i> (Melissa Blue)		
<i>Polygonia satyrus</i> (Satyr Anglewing)			Papilionidae (Swallowtails)		
<i>Speyeria callippe</i> (Callippe Fritillary)			<i>Papilio eurymedon</i> (Pale Swallowtail)		
<i>Thessalia leanira wrighti</i> (Leanira Checkerspot)			<i>Papilio rutulus</i> (Western Tiger Swallowtail)		
<i>Vanessa annabella</i> (West Coast Lady)			<i>Papilio zelicaon</i> (Anise Swallowtail)		
<i>Vanessa atalanta</i> (Red Admiral)			Pieridae (Whites and Orangetips)		
<i>Vanessa cardui</i> (Painted Lady)	1		<i>Anthocharis cethura</i> (Felder's Orangetip)		
<i>Vanessa virginiensis</i> (Virginia Lady)			<i>Anthocharis lanceolata</i> (Grinnell's Marble)		
Danaidae (Milkweed Butterflies)			<i>Anthocharis sara</i> (Sara Orangetip)	2	
<i>Danaus gilippus</i> (Queen)			<i>Artogeia rapae</i> (Cabbage White)		
<i>Danaus plexippus</i> (Monarch)			<i>Colias eurytheme</i> (Alfalfa Butterfly)		
Hesperiidae			<i>Colias harfordii</i> (Harford's Sulfur)		
<i>Erynnis funeralis</i> (Funeral Dusky-wing)			<i>Euchloe hyantis lotta</i> (Southern Marble)		
<i>Heliopetes ericetorum</i> (Great White Skipper)			<i>Eurema nicippe</i> (Sleepy Orange)		
<i>Hylephila phyleus</i> (Fiery Skipper)			<i>Pontia protodice</i> (Common White)		
<i>Pyrgus albescens</i> (Checkered Skipper)			<i>Zerene eurydice</i> (California Dogface)		
Lycaenidae (Hairstreaks)			Riodinidae (Metalmarks)		
<i>Atlides halesus</i> (Great Purple Hairstreak)			<i>Apodemia mormo</i> (Behr's Metalmark)	3	
<i>Callophrys perplexa = dumetorum</i> (Perplexing Hairstreak)			<i>Calephelis wrighti</i> (Wright's Metalmark)		
<i>Incisalia augustinus</i> (Brown Elf)			Satyridae (Satyrids)		
<i>Mitoura thornei</i> (Thorne's Hairstreak)			<i>Coenonympha californica</i> (California Ringlet)		
<i>Strymon melinus</i> (Gray Hairstreak)			OTHERS:		
OTHERS:					

Surveyor Viviane Marquez Area # Substation Area Date: 2/24/12

Comments: birds species and other animal species detected:

<u>Rufous-sided towhee,</u>	<u>Say's Phoebe</u>
<u>California Quail</u>	<u>California towhee</u>
<u>California Gnatcatcher</u>	<u>Lesser goldfinch</u>
<u>Penduline Tanager</u>	<u>Turkey vulture</u>
<u>Orange-crowned warbler</u>	<u>Ruddy duck</u>
<u>Audubon warbler</u>	<u>Red-winged blackbird</u>
<u>California Thrasher</u>	<u>Red-tailed hawk</u>
<u>Black Phoebe</u>	<u>House Finch</u>
<u>White crowned sparrow</u>	<u>American Kestrel</u>
<u>Killdeer</u>	<u>American crow</u>
<u>Anna's hummingbird</u>	
<u>Common yellowthroat</u>	<u>Audubon rabbit</u>
<u>Mourning dove</u>	<u>California ground squirrel</u>
<u>Alligator lizard</u>	<u>Southern Pacific rattlesnake</u>
	<u>Turtle sp.</u>

Plant Communities and Habitat Information:

Coastal sage scrub, native grassland and non-native grassland habitats and developed areas present
some open sage scrub with telegraphia and red soils

Host Plants Present:

Nectar Plants Present:

detected some ground pink and
some cryptantha blooming today

Photographs Taken: Various

1.	2.	3.
4.	5.	6.
7.	8.	9.
10.	11.	12.

Quino Survey Field Data Sheet

For: Salt Creek

Date of Survey: 2/24/12

Survey Number: 26 of 5

Personnel: Erik LaCoste w/ Viviane Marquez

Survey Area: Vegetation Area

	Time	Temp (°F)	Wind (mph)	Sky (% clouds)
Start	1100	61	1-2	30%
	1130	62	1-2	0
	1300	65	1-2	0
End	1600	62	1-3	0

Species	Numbers	Blooming Species
Southern Blue	4	Bur clover
Funereal Duskywing	4	Mustard sp.
Painted Lady	4	Elder sp.
Behrs metalmark	7	Common Sow thistle
West Coast Lady	1	False Dandelion
Sarae Orange tip (Red Admiral)	1	Lupine sp.
		Sun Diego Sunflower
		Wishbone Bush
		Blue Dicks
		Red Skin Onion
		Blue eye Grass
		California Buckwheat
		Ground Pink
		Shooting Star
		Star Lily
		Checker Bloom
		Golden Yarrow
		Caterpillar Phacelia
		Rattlesnake Spurge
		Popcorn Flower
		California Poppy
		Chaparral Gilia
		Goldfields
		Monkey flower
		Black Sage

Notes:

Surveyor Viviane Marquez Alignment Area # 1/4 hr Salt Creek Date: 2/25/12

Comments:

American Crow building nest on Tower # 19
 Only 1 Behr's metal mark seen in Salt Creek area possibly to higher winds and lateness in the day. All other butterfly species seen in Alignment area.

Note: Eastlake Parkway crosses alignment area in two locations.

American pipit	Gull sp.	Northern harrier
Say's Phoebe	European starling	Anna's hummingbird
Black Phoebe	American kestrel	Song sparrow
House Finch	Red-tailed hawk	Northern mockingbird
Western meadowlark	California quail	Common yellowthroat
House wren	American coot	Bush tit
American Crow	Greater roadrunner	California ground squirrel
Lesser goldfinch		

Plant Communities and Habitat Information:

Primarily mowed alignment with some sage scrub and some horticultural plantings along slopes. Otherwise non-native grasslands and exotic invasive species present.

Host Plants Present:

15 individuals of owls clover seen approximately 250 ft south of Eastlake PKway in median vegetation north east of first tower.
 location N 32 38 08.9
 W 116 57 59.6 elev. 615 ft.

Nectar Plants Present:

fiddleneck

Photographs Taken: various

1.	2.	3.
4.	5.	6.
7.	8.	9.
10.	11.	12.

Quino Checkerspot General Form

Surveyor Viviane Marquez-Waller Date 3/2/12 Site Visit Number 3a
 Survey Partner(s) Erik LaCoste Site Location Salt Creek Project
 Total Acres: _____ Portion Surveyed: Substation Area Elevation: Max 654 Min 284

Time (24-hr)	% Cloud	Sky				Wind (aver/max)	Temp (F)
Start 9:30	0	(clear)	patchy	overcast	drizzle shower	1.7mph/3.2	61.5°
10:55	0	(clear)	patchy	overcast	drizzle shower	3.6/4.7	64.5°
12:50	0	(clear)	patchy	overcast	drizzle shower	5.8/8.0	73.5
14:05	0	(clear)	patchy	overcast	drizzle shower	0.9/1.9	74.0
14:30	0	(clear)	patchy	overcast	drizzle shower	3.6/4.6	73.0
		clear	patchy	overcast	drizzle shower		
Stop 15:25	0	(clear)	patchy	overcast	drizzle shower	3.2/5.1	72.7

hill ridge top

Habitat onsite: open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, *Plantago*, *Castilleja*, nectar sources.

Butterfly Species	Count (Total)	Hill-topping	Butterfly Species	Count (Total)	Hill-topping
Nymphalidae (Brush Footed Butterflies)			Lycaenidae (Blues)		
<i>Euphydras editha quino</i> (Quino Checkerspot)			<i>Brephidium exilis</i> (Pygmy Blue)	1	
<i>Adelpha bredowii</i> (California Sister)			<i>Celastrina ladon echo</i> (Echo Blue)		
<i>Basilarchia lorquini</i> (Lorquin's Admiral)			<i>Everes amyntula</i> (Western Tailed Blue)	1	
<i>Charidryas gabbii</i> (Gabb's Checkerspot)			<i>Glaucopsyche lygdamus</i> (Southern Blue)	3	
<i>Euphydras chalcedona</i> (Chalcedon Checkerspot)			<i>Hemiargus ceraunus</i> (Edward's Blue)		
<i>Junonia coenia</i> (Buckeye)			<i>Icarcia acmon</i> (Acmon Blue)		
<i>Nymphalis antiopa</i> (Mourning Cloak)			<i>Leptotes marina</i> (Marine Blue)		
<i>Nymphalis californica</i> (California Tortoiseshell)			<i>Philotes sonorensis</i> (Sonoran Blue)		
<i>Phycoides mylitta</i> (Mylitta Crescent)			<i>Plebejus melissa</i> (Melissa Blue)		
<i>Polygonia satyrus</i> (Satyr Anglewing)			Papilionidae (Swallowtails)		
<i>Speyeria callippe</i> (Callippe Fritillary)			<i>Papilio eurymedon</i> (Pale Swallowtail)		
<i>Thessalia leanira wrighti</i> (Leanira Checkerspot)			<i>Papilio rutulus</i> (Western Tiger Swallowtail)		
<i>Vanessa annabella</i> (West Coast Lady)			<i>Papilio zelicaon</i> (Anise Swallowtail)		
<i>Vanessa atalanta</i> (Red Admiral)			Pieridae (Whites and Orangetips)		
<i>Vanessa cardui</i> (Painted Lady)	13		<i>Anthocharis cethura</i> (Felder's Orangetip)		
<i>Vanessa virginiensis</i> (Virginia Lady)			<i>Anthocharis lanceolata</i> (Grinnell's Marble)		
Danaidae (Milkweed Butterflies)			<i>Anthocharis sara</i> (Sara Orangetip)		
<i>Danaus gilippus</i> (Queen)			<i>Artogeia rapae</i> (Cabbage White)		
<i>Danaus plexippus</i> (Monarch)			<i>Colias eurytheme</i> (Alfalfa Butterfly)		
Hesperiidae			<i>Colias harfordii</i> (Harford's Sulfur)		
<i>Erynnis funeralis</i> (Funeral Dusky-wing)			<i>Euchloe hyantis lotta</i> (Southern Marble)		
<i>Heliopetes ericetorum</i> (Great White Skipper)			<i>Eurema nicippe</i> (Sleepy Orange)		
<i>Hylephila phyleus</i> (Fiery Skipper)			<i>Pontia protodice</i> (Common White)		
<i>Pyrgus albescens</i> (Checkered Skipper)			<i>Zerene eurydice</i> (California Dogface)		
Lycaenidae (Hairstreaks)			Riodinidae (Metalmarks)		
<i>Atlides halesus</i> (Great Purple Hairstreak)			<i>Apodemia mormo</i> (Behr's Metalmark)	3	
<i>Callophrys perplexa = dumetorum</i> (Perplexing Hairstreak)			<i>Calephelis wrighti</i> (Wright's Metalmark)		
<i>Incisalia augustinus</i> (Brown Elfin)			Satyridae (Satyrids)		
<i>Mitoura thornei</i> (Thorne's Hairstreak)			<i>Coenonympha californica</i> (California Ringlet)		
<i>Strymon melinus</i> (Gray Hairstreak)					
OTHERS: <i>Fritillary sp</i>	1		OTHERS:		

Quino Survey Field Data Sheet

For: Salt Creek

Date of Survey: 3/2/12 Survey Number: 3_a of 5
 Personnel: Erk LaCoste w/ Viviane Marquez
 Survey Area: SUBSTATION

	Time	Temp (°F)	Wind (mph)	Sky (% clouds)
Start	0930	62	1-3	0
	1100	65	3-4	0
	1400	72	1-2	0
End	1430	73	3-4	0

Species	Numbers	Blooming Species	
Pygmy Blue	1	MUSTARD SP.	Arroyo Lupine
Southern Blue	2	Bursage	Monkey flower
Western tailed BLUE	2 1	Filaree sp.	Mariposa Lily
Funereal Duskywing	1	Crete weed	
Painted Lady	3	Blue Eye Grass	
Perplexing hairstreak	1	Blue Dicks	
Fritillary species	1	S. D. Sunflower	
Behr's METALMARK	1	Sun Cup	
		DEER WEED	
		SANICLE	
		WISHBONE	
		RED LEAF ONION	
		Bladderpod	
		Ground Pink	
		Shooting Stars	
		checker bloom	
		CAL. Buckwheat	
		Chocolate Lily	
		Everlasting	
		Golden Yarrow	
		Rattlesnake Scurge	
		Caterpillar Phacelia	
		Popcorn Flower	
		Bush mallow	
		Scarlett pimpernel	

Notes:

No host plants observed anywhere in the Substation Area.

Quino Checkerspot General Form

Surveyor Viviane Marquez-Waller Date 3/3/12 Site Visit Number 3B
 Survey Partner(s) Erik LaCoste Site Location Salt Creek Project
 Total Acres: _____ Portion Surveyed: Alignment Salt Creek Elevation: Max 654 Min 289
wre

Time (24 hr)	% Cloud	Sky				Wind (aver/max)	Temp (F)
Start 8:20	0	clear	patchy	overcast	drizzle	1.8 mph / 2.1	61.3°
9:45	0	clear	patchy	overcast	drizzle	2.1 / 3.3	69.2°
11:05	0	clear	patchy	overcast	drizzle	2.6 / 4.6	74.3°
		clear	patchy	overcast	drizzle		
		clear	patchy	overcast	drizzle		
		clear	patchy	overcast	drizzle		
Stop 13:05	0	clear	patchy	overcast	drizzle	2.8 / 3.8	84.3°

Habitat onsite: open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, *Plantago*, *Castilleja*, nectar sources.

Butterfly Species	Count (Total)	Hill-topping	Butterfly Species	Count (Total)	Hill-topping
Nymphalidae (Brush Footed Butterflies)			Lycaenidae (Blues)		
<i>Euphydras editha quino</i> (Quino Checkerspot)			<i>Brephidium exilis</i> (Pygmy Blue)	4	
<i>Adelpha bredowii</i> (California Sister)			<i>Celastrina ladon echo</i> (Echo Blue)		
<i>Basilarchia lorquini</i> (Lorquin's Admiral)			<i>Everes amyntula</i> (Western Tailed Blue)		
<i>Charidryas gabbii</i> (Gabb's Checkerspot)			<i>Glaucopsyche lygdamus</i> (Southern Blue)	1	
<i>Euphydras chalcedona</i> (Chalcedon Checkerspot)			<i>Hemiargus ceraunus</i> (Edward's Blue)		
<i>Junonia coenia</i> (Buckeye)			<i>Icarcia acmon</i> (Acmon Blue)		
<i>Nymphalis antiopa</i> (Mourning Cloak)			<i>Leptotes marina</i> (Marine Blue)		
<i>Nymphalis californica</i> (California Tortoiseshell)			<i>Philotes sonorensis</i> (Sonoran Blue)		
<i>Phycoides mylitta</i> (Mylitta Crescent)			<i>Plebejus melissa</i> (Melissa Blue)		
<i>Polygonia satyrus</i> (Satyr Anglewing)			Papilionidae (Swallowtails)		
<i>Speyeria callippe</i> (Callippe Fritillary)			<i>Papilio eurymedon</i> (Pale Swallowtail)		
<i>Thessalia leanira wrighti</i> (Leanira Checkerspot)			<i>Papilio rutulus</i> (Western Tiger Swallowtail)		
<i>Vanessa annabella</i> (West Coast Lady)	3		<i>Papilio zelicaon</i> (Anise Swallowtail)		
<i>Vanessa atalanta</i> (Red Admiral)			Pieridae (Whites and Orangetips)		
<i>Vanessa cardui</i> (Painted Lady)	8		<i>Anthocharis cethura</i> (Felder's Orangetip)		
<i>Vanessa virginiensis</i> (Virginia Lady)			<i>Anthocharis lanceolata</i> (Grinnell's Marble)		
Danaidae (Milkweed Butterflies)			<i>Anthocharis sara</i> (Sara Orangetip)		
<i>Danaus gilippus</i> (Queen)			<i>Artogeia rapae</i> (Cabbage White)		
<i>Danaus plexippus</i> (Monarch)			<i>Colias eurytheme</i> (Alfalfa Butterfly)		
Hesperiidae			<i>Colias harfordii</i> (Harford's Sulfur)		
<i>Erynnis funeralis</i> (Funeral Dusky-wing)			<i>Euchloe hyantis lotta</i> (Southern Marble)		
<i>Heliopetes ericetorum</i> (Great White Skipper)			<i>Eurema nicippe</i> (Sleepy Orange)		
<i>Hylephila phyleus</i> (Fiery Skipper)			<i>Pontia protodice</i> (Common White)	2	
<i>Pyrgus albescens</i> (Checkered Skipper)			<i>Zerene eurydice</i> (California Dogface)		
Lycaenidae (Hairstreaks)			Riodinidae (Metalmarks)		
<i>Atlides halesus</i> (Great Purple Hairstreak)			<i>Apodemia mormo</i> (Behr's Metalmark)	5	
<i>Callophrys perplexa</i> = <i>dumetorum</i> (Perplexing Hairstreak)			<i>Calephelis wrighti</i> (Wright's Metalmark)		
<i>Incisalia augustinus</i> (Brown Elfín)			Satyridae (Satyrids)		
<i>Mitoura thornei</i> (Thorne's Hairstreak)			<i>Coenonympha californica</i> (California Ringlet)	15	
<i>Strymon melinus</i> (Gray Hairstreak)			OTHERS:		
OTHERS: <i>Fritillary sp</i>	3				

Quino Survey Field Data Sheet

For: Salt Creek

Date of Survey: 3/3/12 Survey Number: 3 of 5
 Personnel: Eric LaCoste w/ Viviane Murovez
 Survey Area: Alignment

	Time	Temp (°F)	Wind (mph)	Sky (% clouds)
Start	830	61	1-3	0
	1100	69	4-6	0
				0
End	1300	84	2-4	0

Species	Numbers	Blooming Species
Painted Lady	9	Chrysanthium
Behr's Metalmark	5	Mustard sp.
Southern Blue	1	Filicee sp.
Common Ringlet	1	Lemonade Berry
Western tailed Blue	1	Bursage
		Crook weed
		Cal. Encelia
		Arroyo Lupine
		Desert marigold
		Coast Loloweed
		S.D. Sunflower
		Popcorn Flower
		DEER WEED
		Dwarf Plantain
		Cal Buckwheat
		Blue Dicks
		Wild Radish
		shooting star
		Redleaf onion

Notes:

Plantago erecta - still in bloom - pictures taken

GPS coordinates already taken.

Quino Checkerspot General Form

Surveyor Viviane Marquez-Waller Date 3/8/12 Site Visit Number 4a
 Survey Partner(s) Erik La Caste Site Location Salt Creek Project
 Total Acres: _____ Portion Surveyed: Substation Area Elevation: Max 654 Min 289

Time (24-hr)	% Cloud	Sky	Wind (aver/max)	Temp (F)
Start 8:50	0	(clear) patchy overcast drizzle shower	0.5 / 0.7 mph	63.7°
10:50	0	(clear) patchy overcast drizzle shower	4.3 / 7.1	71.4°
12:30	0	(clear) patchy overcast drizzle shower	0.7 / 2.3	71.0°
		clear patchy overcast drizzle shower		
		clear patchy overcast drizzle shower		
Stop 14:10	0	(clear) patchy overcast drizzle shower	3.5 / 5.2	75.0°

Habitat onsite: open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, *Plantago*, *Castilleja*, nectar sources.

Butterfly Species	Count (Total)	Hill-topping	Butterfly Species	Count (Total)	Hill-topping
Nymphalidae (Brush Footed Butterflies)			Lycaenidae (Blues)		
<i>Euphydryas editha quino</i> (Quino Checkerspot)			<i>Brephidium exilis</i> (Pygmy Blue)		
<i>Adelpha bredowii</i> (California Sister)			<i>Celastrina ladon echo</i> (Echo Blue)		
<i>Basilarchia lorquini</i> (Lorquin's Admiral)			<i>Everes amyntula</i> (Western Tailed Blue)		
<i>Charidryas gabbii</i> (Gabb's Checkerspot)			<i>Glaucoopsyche lydamus</i> (Southern Blue)	8	
<i>Euphydryas chalcedona</i> (Chalcedon Checkerspot)			<i>Hemiargus ceraunus</i> (Edward's Blue)		
<i>Junonia coenia</i> (Buckeye)			<i>Icarcia acmon</i> (Acmon Blue)		
<i>Nymphalis antiopa</i> (Mourning Cloak)			<i>Leptotes marina</i> (Marine Blue)		
<i>Nymphalis californica</i> (California Tortoiseshell)			<i>Philotes sonorensis</i> (Sonoran Blue)		
<i>Phycoides mylitta</i> (Mylitta Crescent)			<i>Plebejus melissa</i> (Melissa Blue)		
<i>Polygonia satyrus</i> (Satyr Anglewing)			Papilionidae (Swallowtails)		
<i>Speyeria callippe</i> (Callippe Fritillary)			<i>Papilio eurymedon</i> (Pale Swallowtail)		
<i>Thessalia leanira wrightii</i> (Leanira Checkerspot)			<i>Papilio rutulus</i> (Western Tiger Swallowtail)		
<i>Vanessa annabella</i> (West Coast Lady)	1		<i>Papilio zelicaon</i> (Anise Swallowtail)	1	
<i>Vanessa atalanta</i> (Red Admiral)			Pieridae (Whites and Orangetips)		
<i>Vanessa cardui</i> (Painted Lady)	13		<i>Anthocharis cethura</i> (Felder's Orangetip)		
<i>Vanessa virginiensis</i> (Virginia Lady)			<i>Anthocharis lanceolata</i> (Grinnell's Marble)		
Danaidae (Milkweed Butterflies)			<i>Anthocharis sara</i> (Sara Orangetip)	1	
<i>Danaus gilippus</i> (Queen)			<i>Artogeia rapae</i> (Cabbage White)		
<i>Danaus plexippus</i> (Monarch)			<i>Colias eurytheme</i> (Alfalfa Butterfly)		
Hesperiidae			<i>Colias harfordii</i> (Harford's Sulfur)		
<i>Erynnis funeralis</i> (Funeral Dusky-wing)	1		<i>Euchloe hyantis lotta</i> (Southern Marble)		
<i>Heliopetes ericetorum</i> (Great White Skipper)			<i>Eurema nicippe</i> (Sleepy Orange)		
<i>Hylephila phyleus</i> (Fiery Skipper)			<i>Pontia protodice</i> (Common White)	1	
<i>Pyrgus albescens</i> (Checkered Skipper)	1		<i>Zerene eurydice</i> (California Dogface)		
Lycaenidae (Hairstreaks)			Riodinidae (Metalmarks)		
<i>Atitides halesus</i> (Great Purple Hairstreak)			<i>Apodemia mormo</i> (Behr's Metalmark)	17	
<i>Callophrys perplexa = dumetorum</i> (Perplexing Hairstreak)			<i>Calephelis wrightii</i> (Wright's Metalmark)		
<i>Incisalia augustinus</i> (Brown Elf)			Satyridae (Satyrids)		
<i>Mitoura thornei</i> (Thorne's Hairstreak)			<i>Coenonympha californica</i> (California Ringlet)	2	
<i>Strymon melinus</i> (Gray Hairstreak)	1		OTHERS: Blue sp		
OTHERS:				1	

Salt Creek

Surveyor Viviane Marquez

Area # Substation Area

Date: 3/8/12

Comments:

Animals detected include:

Bush tit

Anna's hummingbird

California ground squirrel

Red-tailed hawk

Black Phoebe

Wrentit

House Finch

Song's phoebe

California towhee

California gnatcatcher

Audubon warbler

Song sparrow

Common yellowthroat

Cooper's hawk

American crow

Coyote (2 individuals)

Northern mockingbird

Lesser gold finch

Buff-breasted sparrow

Plant Communities and Habitat Information:

Host Plants Present: none

Nectar Plants Present:

Photographs Taken:

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

Quino Survey Field Data Sheet

For: Salt Creek

Date of Survey: 3/8/12 Survey Number: 4a of 5

Personnel: Erik LaCoste w/ Viviane Marquez

Survey Area: Substation

	Time	Temp (°F)	Wind (mph)	Sky (% clouds)
Start	0850	64	0-1	0
	1100	71	4-7	0
	1230	71	7-9	0
End	1410	75	3-5	0

Species	Numbers	Blooming Species	
Anise Swallowtail	1	Crete Weed	Cal encelia
Behr's metalmark	15	Mustard SP.	Bladderpod
Southern Blue	4	Deer Weed	Wishbone
White SP.	1	Filicee SP.	
Red Admiral	1	Cal Buckwheat	
Painted Lady	50+	Chocolate Lily	
Sara orangetip	2	Blue dicks	
Funereal Duskywing	1	S. D. Sunflower	
Perplexing Hairstreak	1	everlasting	
Common Ringlet	1	Golden Yarrow	
		Caterpillar Phacelia	
		Ground Pink	
		Bush mallow	
		Pepper grass SP.	
		Cal Poppy	
		Tocobate	
		Angel Gilia	
		wreath plant	
		Popcorn Flower	
		Bur sage	
		Mariposa Lily	
		Blue eyed grass	
		Red Leaf Onion	
		Star Lily	
		Checkerbloom	

Notes:

NO host plant species observed.

Quino Checkerspot General Form

Surveyor Viviane Marquez-Waller Date 3/10/12 Site Visit Number 43
 Survey Partner(s) - Site Location Salt Creek Project
 Total Acres: Portion Surveyed: Salt Creek Area Elevation: Max 654 Min 289

Time (24-hr)	% Cloud	Sky	Wind (aver/max)	Temp (F)
Start 10:15	0	(clear) patchy overcast drizzle shower	2.9/4.8 mph	74°
13:20	0	(clear) patchy overcast drizzle shower	1.9/4.0	75.5°
14:35	10	(clear) patchy overcast drizzle shower	4.1/5.7	71.5°
		clear patchy overcast drizzle shower		
		clear patchy overcast drizzle shower		
		clear patchy overcast drizzle shower		
Stop 15:25	20	(clear) patchy overcast drizzle shower	3.2/4.4	69°

Habitat onsite: open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, *Plantago*, *Castilleja*, nectar sources.

Butterfly Species	Count (Total)	Hill-topping	Butterfly Species	Count (Total)	Hill-topping
Nymphalidae (Brush Footed Butterflies)			Lycaenidae (Blues)		
<i>Euphydras editha quino</i> (Quino Checkerspot)			<i>Brephidium exilis</i> (Pygmy Blue)	1	
<i>Adelpha bredowii</i> (California Sister)			<i>Celastrina ladon echo</i> (Echo Blue)		
<i>Basilarchia lorquini</i> (Lorquin's Admiral)			<i>Everes amyntula</i> (Western Tailed Blue)	8	
<i>Charidryas gabbii</i> (Gabb's Checkerspot)			<i>Glaucopsyche lygdamus</i> (Southern Blue)	7	
<i>Euphydras chalcedona</i> (Chalcedon Checkerspot)			<i>Hemiargus ceraunus</i> (Edward's Blue)		
<i>Junonia coenia</i> (Buckeye)	1		<i>Icarcia acmon</i> (Acmon Blue)		
<i>Nymphalis antiopa</i> (Mourning Cloak)			<i>Leptotes marina</i> (Marine Blue)		
<i>Nymphalis californica</i> (California Tortoiseshell)			<i>Philotes sonorensis</i> (Sonoran Blue)		
<i>Phycoides mylitta</i> (Mylitta Crescent)			<i>Plebejus melissa</i> (Melissa Blue)		
<i>Polygonia satyrus</i> (Satyr Anglewing)			Papilionidae (Swallowtails)		
<i>Speyeria callippe</i> (Callippe Fritillary)			<i>Papilio eurymedon</i> (Pale Swallowtail)		
<i>Thessalia leanira wrighti</i> (Leanira Checkerspot)			<i>Papilio rutulus</i> (Western Tiger Swallowtail)		
<i>Vanessa annabella</i> (West Coast Lady)			<i>Papilio zelicaon</i> (Anise Swallowtail)		
<i>Vanessa atalanta</i> (Red Admiral)			Pieridae (Whites and Orangetips)		
<i>Vanessa cardui</i> (Painted Lady)	125		<i>Anthocharis cethura</i> (Felder's Orangetip)		
<i>Vanessa virginiensis</i> (Virginia Lady)			<i>Anthocharis lanceolata</i> (Grinnell's Marble)		
Danaidae (Milkweed Butterflies)			<i>Anthocharis sara</i> (Sara Orangetip)	6	
<i>Danaus gilippus</i> (Queen)			<i>Artogeia rapae</i> (Cabbage White)		
<i>Danaus plexippus</i> (Monarch)			<i>Colias eurytheme</i> (Alfalfa Butterfly)		
Hesperiidae			<i>Colias harfordii</i> (Harford's Sulphur)		
<i>Erynnis funeralis</i> (Funeral Dusky-wing)	1		<i>Euchloe hyantis lotta</i> (Southern Marble)		
<i>Heliopetes ericetorum</i> (Great White Skipper)			<i>Eurema nicippe</i> (Sleepy Orange)		
<i>Hylephila phyleus</i> (Fiery Skipper)			<i>Pontia protodice</i> (Common White)	2	
<i>Pyrgus albescens</i> (Checkered Skipper)	1		<i>Zerene eurydice</i> (California Dogface)		
Lycaenidae (Hairstreaks)			Riodinidae (Metalmarks)		
<i>Atlides halesus</i> (Great Purple Hairstreak)			<i>Apodemia mormo</i> (Behr's Metalmark)	14	
<i>Calliphrys perplexa = dumetorum</i> (Perplexing Hairstreak)	1		<i>Calephelis wrighti</i> (Wright's Metalmark)		
<i>Incisalia augustinus</i> (Brown Elf)			Satyridae (Satyrids)		
<i>Mitoura thornei</i> (Thorne's Hairstreak)			<i>Coenonympha californica</i> (California Ringlet)		
<i>Strymon melinus</i> (Gray Hairstreak)	1		OTHERS: Sulfur species		
OTHERS:				1	

Surveyor Viviane Marquez Area # Salt Creek Area Date: 3/10/12

Comments: animals detected include:

Lesser goldfinch	Red-winged blackbird
American crow	California towhee
American kestrel	Common yellowthroat
Anna's hummingbird	Audubon warbler
California quail	Bush tit
Western meadow lark	Sea gull sp.
Spotted towhee	Greater roadrunner
Song sparrow	Say's phoebe
White-crowned sparrow	Rock dove
Copper's hawk	California gnatcatcher
American coot	California ground squirrel
Black phoebe	Fence lizard
House finch	Northern harrier (pair)
	Woodrat (nest) - have gps.

Many painted ladies seen nectaring on S.D. San flower and buckwheat in morning. Southern blue nectaring on deerweed.

Plant Communities and Habitat Information:

Host Plants Present: checked plantago patch found by Erik on prior visit located new patch of fresh plantago erecta:
 N 37° 37' 15.5
 W 116° 56' 50.8
 northwest facing slope within native grassland habitat - 3 inch high is the average height within this 3 foot by 3 foot patch.

Nectar Plants Present:

Photographs Taken: Various including plantago in Salt Creek area:

1.	2.	3.
4.	5.	6.
7.	8.	9.
10.	11.	12.

Quino Checkerspot General Form

Surveyor Viviana Marquez Date 3/13/12 Site Visit Number 5a
 Survey Partner(s) Erik La Costa Site Location Salt Creek Project
 Total Acres: _____ Portion Surveyed: Substation Area Elevation: Max 654 Min 289

Time (24 hr)	% Cloud	Sky					Wind (aver/max)	Temp (F)
Start 12:00	0	clear	patchy	overcast	drizzle	shower	.9 / 1.2	70°
13:00	0	clear	patchy	overcast	drizzle	shower	6.2 / 8.1	66.1°
16:00	0	clear	patchy	overcast	drizzle	shower	2.6 / 4.4	70°
		clear	patchy	overcast	drizzle	shower		
		clear	patchy	overcast	drizzle	shower		
Stop 17:15	0	clear	patchy	overcast	drizzle	shower	2.8 / 6.2	64.5°

Habitat onsite: open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, *Plantago*, *Castilleja*, nectar sources.

Butterfly Species	Count (Total)	Hill-topping	Butterfly Species	Count (Total)	Hill-topping
Nymphalidae (Brush Footed Butterflies)			Lycaenidae (Blues)		
<i>Euphydras editha quino</i> (Quino Checkerspot)			<i>Brephidium exilis</i> (Pygmy Blue)		
<i>Adelpha bredowii</i> (California Sister)			<i>Celastrina ladon echo</i> (Echo Blue)		
<i>Basilarchia lorquini</i> (Lorquin's Admiral)			<i>Everes amyntula</i> (Western Tailed Blue)		
<i>Charidryas gabbii</i> (Gabb's Checkerspot)			<i>Glaucopsyche lygdamus</i> (Southern Blue)		
<i>Euphydras chalcedona</i> (Chalcedon Checkerspot)			<i>Hemiargus ceraunus</i> (Edward's Blue)		
<i>Junonia coenia</i> (Buckeye)			<i>Icarcia acmon</i> (Acmon Blue)		
<i>Nymphalis antiopa</i> (Mourning Cloak)			<i>Leptotes marina</i> (Marine Blue)		
<i>Nymphalis californica</i> (California Tortoiseshell)			<i>Philotes sonorensis</i> (Sonoran Blue)		
<i>Phycoides mylitta</i> (Mylitta Crescent)			<i>Plebejus melissa</i> (Melissa Blue)		
<i>Polygonia satyrus</i> (Satyr Anglewing)			Papilionidae (Swallowtails)		
<i>Speyeria callippe</i> (Callippe Fritillary)			<i>Papilio eurymedon</i> (Pale Swallowtail)		
<i>Thessalia leanira wrighti</i> (Leanira Checkerspot)			<i>Papilio rutulus</i> (Western Tiger Swallowtail)		
<i>Vanessa annabella</i> (West Coast Lady)			<i>Papilio zelicaon</i> (Anise Swallowtail)		
<i>Vanessa atalanta</i> (Red Admiral)	1		Pieridae (Whites and Orangetips)		
<i>Vanessa cardui</i> (Painted Lady)	3		<i>Anthocharis cethura</i> (Felder's Orangetip)		
<i>Vanessa virginiensis</i> (Virginia Lady)			<i>Anthocharis lanceolata</i> (Grinnell's Marble)		
Danaidae (Milkweed Butterflies)			<i>Anthocharis sara</i> (Sara Orangetip)		
<i>Danaus gilippus</i> (Queen)			<i>Artogeia rapae</i> (Cabbage White)		
<i>Danaus plexippus</i> (Monarch)			<i>Colias eurytheme</i> (Alfalfa Butterfly)		
Hesperiidae			<i>Colias harfordii</i> (Harford's Sulfur)		
<i>Erynnis funeralis</i> (Funeral Dusky-wing)	1		<i>Euchloe hyantis lotta</i> (Southern Marble)		
<i>Heliopetes ericetorum</i> (Great White Skipper)			<i>Eurema nicippe</i> (Sleepy Orange)		
<i>Hylephila phyleus</i> (Fiery Skipper)			<i>Pontia protodice</i> (Common White)	1	
<i>Pyrgus albescens</i> (Checkered Skipper)			<i>Zerene eurydice</i> (California Dogface)		
Lycaenidae (Hairstreaks)			Riodinidae (Metalmarks)		
<i>Atlides halesus</i> (Great Purple Hairstreak)			<i>Apodemia mormo</i> (Behr's Metalmark)	10	
<i>Callophrys perplexa</i> = <i>dumetorum</i> (Perplexing Hairstreak)		1	<i>Calephelis wrighti</i> (Wright's Metalmark)		
<i>Incisalia augustinus</i> (Brown Elfin)			Satyridae (Satyrids)		
<i>Mitoura thornei</i> (Thorne's Hairstreak)			<i>Coenonympha californica</i> (California Ringlet)	2	
<i>Strymon melinus</i> (Gray Hairstreak)					
OTHERS:			OTHERS: <i>Blue sp.</i>	1	

Surveyor Viviane Marquez Area # Substation

Date: 3/13/12

Comments: Daylight Savings time started last Sunday

Animals detected include:

<u>Red-tail hawk</u>	<u>White-crowned sparrow</u>
<u>American kestrel</u>	<u>House finch</u>
<u>Northern mockingbird</u>	<u>Song sparrow</u>
<u>Lesser goldfinch</u>	<u>Red-winged blackbird</u>
<u>Mourning dove</u>	<u>American crow</u>
<u>Common yellowthroat</u>	<u>Wren tit</u>
<u>Anna's hummingbird</u>	<u>Say's phoebe</u>
<u>Audubon's warbler</u>	<u>House wren</u>
<u>Bush tit</u>	<u>Spotted towhee</u>
<u>California towhee</u>	<u>California ground squirrel</u>
	<u>Alligator lizard</u>
	<u>Audubon rabbit</u>

Plant Communities and Habitat Information:

Host Plants Present: None

Nectar Plants Present: See attached list for flowering species

Photographs Taken: Various

1.	2.	3.
4.	5.	6.
7.	8.	9.
10.	11.	12.

Quino Survey Field Data Sheet

For: Salt Creek

Date of Survey: 3/14/12

Survey Number: 56 of 5

Personnel: Eric LaCoste

Survey Area: Salt creek Area

	Time	Temp (°F)	Wind (mph)	Sky (% clouds)
Start	1030	65	2-4	0
	1200	67	2-4	0
End	1530	64	7-10	0

Species	Numbers	Blooming Species
PYBMY BLUE	9	BURSAGE
FUNERAL DUSKYWING	4	MUSTARD SP.
WESTERN TAILED BLUE	4	CAPE MARIGOLD
COMMON KINGLET	7	SALSIFY
PAINTED LADY	5	FILICEE SP.
BEHR'S METALMARK	5	PRICKLY SAWTHISTLE
SARA ORANGELIP	1	W/ SCARLETT PIMPERNEL
SOUTHERN BLUE	1	COAST LOCOWEED
RED ADMIRAL	1	CAL ENCELIA
PERPLEXING HAIRSTREAK	1	W/IN RADDLISH
		WISHBONE
		BLUE DICKS
		S.P. SUNFLOWER
		FILAGO
		PLANTAGO ERECTA *
		FIDDLENECK (amsinkia menziesii)
		POPCORN FLOWER
		DEER WOOD
		JOHNNY JUMP UPS
		SHOOTING STARS
		RED LEAF ONION
		ARROYO LUPINE

Notes:

No Oca Observed

New Plantago patch - Good condition - 2 # meters - 1-2" high.

GPS: 32.61903, 116.94870

→ Burrowing owl observed underneath wood pole alignment - Adult - single

GPS: 32.61955, 116.94805

Quino Checkerspot General Form

Surveyor Viviane Marquez Date 3/15/12 Site Visit Number 5B
 Survey Partner(s) _____ Site Location Salt Creek Project
 Total Acres: _____ Portion Surveyed: Alignment + Salt Creek Elevation: Max 654 Min 289
same

Time (24-hr)	% Cloud	Sky	Wind (aver/max)	Temp (F)
Start 10:50	0	(clear) patchy overcast drizzle shower	1.2 / 1.8 mph	63.5°
12:10	0	(clear) patchy overcast drizzle shower	3.4 / 5.6	70.8°
14:00	5	(clear) patchy overcast drizzle shower	2.8 / 4.9	67°
14:40	2	(clear) patchy overcast drizzle shower	2.3 / 5.1	68°
		clear patchy overcast drizzle shower		
		clear patchy overcast drizzle shower		
Stop 15:50	0	(clear) patchy overcast drizzle shower	0.7 / 1.4	68°

Habitat onsite: open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, *Plantago*, *Castilleja*, nectar sources.

Butterfly Species	Count (Total)	Hill-topping	Butterfly Species	Count (Total)	Hill-topping
Nymphalidae (Brush Footed Butterflies)			Lycaenidae (Blues)		
<i>Euphydras editha quino</i> (Quino Checkerspot)			<i>Brephidium exilis</i> (Pygmy Blue)	2	
<i>Adelpha bredowii</i> (California Sister)			<i>Celastrina ladon echo</i> (Echo Blue)		
<i>Basilarchia lorquini</i> (Lorquin's Admiral)			<i>Everes amyntula</i> (Western Tailed Blue)	5	
<i>Charidryas gabbii</i> (Gabb's Checkerspot)			<i>Glaucopsyche lygdamus</i> (Southern Blue)		
<i>Euphydras chalcedona</i> (Chalcedon Checkerspot)			<i>Hemiargus ceraunus</i> (Edward's Blue)		
<i>Junonia coenia</i> (Buckeye)			<i>Icaricia acmon</i> (Acmon Blue)		
<i>Nymphalis antiopa</i> (Mourning Cloak)			<i>Leptotes marina</i> (Marine Blue)		
<i>Nymphalis californica</i> (California Tortoiseshell)			<i>Philotes sonorensis</i> (Sonoran Blue)		
<i>Phycoides mylitta</i> (Mylitta Crescent)			<i>Plebejus melissa</i> (Melissa Blue)		
<i>Polygonia satyrus</i> (Satyr Anglemwing)			Papilionidae (Swallowtails)		
<i>Speyeria callippe</i> (Callippe Fritillary)			<i>Papilio eurymedon</i> (Pale Swallowtail)		
<i>Thessalia leanira wrighti</i> (Leanira Checkerspot)			<i>Papilio rutulus</i> (Western Tiger Swallowtail)		
<i>Vanessa annabella</i> (West Coast Lady)	1		<i>Papilio zelicaon</i> (Anise Swallowtail)		
<i>Vanessa atalanta</i> (Red Admiral)	1		Pieridae (Whites and Orangetips)		
<i>Vanessa cardui</i> (Painted Lady)	13		<i>Anthocharis cethura</i> (Felder's Orangetip)		
<i>Vanessa virginiensis</i> (Virginia Lady)			<i>Anthocharis lanceolata</i> (Grinnell's Marble)		
Danaidae (Milkweed Butterflies)			<i>Anthocharis sara</i> (Sara Orangetip)	1	
<i>Danaus gilippus</i> (Queen)			<i>Artogeia rapae</i> (Cabbage White)		
<i>Danaus plexippus</i> (Monarch)			<i>Colias eurytheme</i> (Alfalfa Butterfly)		
Hesperiidae			<i>Colias harfordii</i> (Harford's Sulfur)		
<i>Erynnis funeralis</i> (Funeral Dusky-wing)	1		<i>Euchloe hyantis lotta</i> (Southern Marble)		
<i>Heliopetes ericetorum</i> (Great White Skipper)			<i>Eurema nicippe</i> (Sleepy Orange)		
<i>Hylephila phyleus</i> (Fiery Skipper)			<i>Pontia protodice</i> (Common White)		
<i>Pyrgus albescens</i> (Checkered Skipper)	1		<i>Zerene eurydice</i> (California Dogface)		
Lycaenidae (Hairstreaks)			Riodinidae (Metalmarks)		
<i>Atlides halesus</i> (Great Purple Hairstreak)			<i>Apodemia mormo</i> (Behr's Metalmark)	1	
<i>Callophrys perplexa = dumetorum</i> (Perplexing Hairstreak)			<i>Calephelis wrighti</i> (Wright's Metalmark)		
<i>Incisalia augustinus</i> (Brown Elfín)			Satyridae (Satyrids)		
<i>Mitoura thornei</i> (Thorne's Hairstreak)			<i>Coenonympha californica</i> (California Ringlet)	1	
<i>Strymon melinus</i> (Gray Hairstreak)			OTHERS:		
OTHERS:			OTHERS:		

Salt Creek Project

Surveyor Viviane Marquez-Waller Area # Alignment - Salt Creek w/ some salt creek Date: 3/15/12

Comments: Animals detected include:

<u>Mourning dove</u>	<u>Rock dove</u>
<u>American crow</u>	<u>European starling</u>
<u>Western meadowlark</u>	<u>Song's phoebe</u>
<u>Black phoebe</u>	<u>Cassin's Kingbird</u>
<u>Northern mockingbird</u>	<u>House finch</u>
<u>Red-tailed hawk</u>	<u>American pipit</u>
<u>White crowned sparrow</u>	<u>Turkey vulture</u>
<u>Lesser goldfinch</u>	<u>Greater roadrunner</u>
<u>Bush tit</u>	<u>House sparrow</u>
<u>Common yellowthroat</u>	<u>American kestrel</u>
<u>California quail</u>	<u>Gull sp.</u>
<u>Wren tit</u>	<u>Audubon rabbit</u>
<u>Common raven</u>	<u>California ground squirrel</u>
<u>California gnatcatcher</u>	

Plant Communities and Habitat Information: Non-native grassland is dominant habitat in adjacent area with horticultural species along slopes and limited amount of dry grass coastal sage scrub in distinct areas. Non-native grassland habitat includes several species of Bromo, Arena, yellow star thistle, yellow clover and mustard. Sage scrub is California exuberant dominated with some sages. Included horticultural species are Acacia

Host Plants Present: Over 100 individuals of Owl's Clover (Castilleja exarata) seen in location just south of Eastlake Parkway at the Alignment Segment just northeast of tower #17 where located before. GPS taken before location

and Pepper Trees.

Nectar Plants Present: See attached list for flowering plants

Photographs Taken: Various including owl's clover

1.	2.	3.
4.	5.	6.
7.	8.	9.
10.	11.	12.

Quino Checkerspot General Form

Surveyor Viviane Marquez-Waller Date 3/21/12 Site Visit Number 66
 Survey Partner(s) — Site Location Salt Creek Project
 Total Acres: — Portion Surveyed: Salt Creek & Alignment portion Elevation: Max 654 Min 289

Time (24 hr)	% Cloud	clear	patchy	overcast	drizzle	shower	Wind (aver/max)	Temp (F)
Start 10:00	0	(clear)	patchy	overcast	drizzle	shower	0.6 / 1.4 mph	68.5°
11:10	0	(clear)	patchy	overcast	drizzle	shower	1.1 / 1.9 mph	74.8°
13:35	0	(clear)	patchy	overcast	drizzle	shower	3.6 / 6.3 mph	73.6°
		clear	patchy	overcast	drizzle	shower		
		clear	patchy	overcast	drizzle	shower		
		clear	patchy	overcast	drizzle	shower		
Stop 15:05	3%	(clear)	patchy	overcast	drizzle	shower	2.4 / 5.4 mph	77.2°

Habitat onsite: open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, *Plantago*, *Castilleja*, nectar sources.

Butterfly Species	Count (Total)	Hill-topping	Butterfly Species	Count (Total)	Hill-topping
Nymphalidae (Brush Footed Butterflies)			Lycaenidae (Blues)		
<i>Euphydryas editha quino</i> (Quino Checkerspot)			<i>Brephidium exilis</i> (Pygmy Blue)	3	
<i>Adelpha bredowii</i> (California Sister)			<i>Celastrina ladon echo</i> (Echo Blue)		
<i>Basilarchia lorquini</i> (Lorquin's Admiral)			<i>Everes amyntula</i> (Western Tailed Blue)	8	
<i>Charidryas gabbii</i> (Gabb's Checkerspot)			<i>Glaucopsyche lygdamus</i> (Southern Blue)	2	
<i>Euphydryas chalcedona</i> (Chalcedon Checkerspot)			<i>Hemiargus ceraunus</i> (Edward's Blue)		
<i>Junonia coenia</i> (Buckeye)			<i>Icarcia acmon</i> (Acmon Blue)		
<i>Nymphalis antiopa</i> (Mourning Cloak)			<i>Leptotes marina</i> (Marine Blue)	1	
<i>Nymphalis californica</i> (California Tortoiseshell)			<i>Philotes sonorensis</i> (Sonoran Blue)		
<i>Phycoides mylitta</i> (Mylitta Crescent)			<i>Plebejus melissa</i> (Melissa Blue)		
<i>Polygonia satyrus</i> (Satyr Anglewing)			Papilionidae (Swallowtails)		
<i>Speyeria callippe</i> (Callippe Fritillary)			<i>Papilio eurymedon</i> (Pale Swallowtail)		
<i>Thessalia leanira wrightii</i> (Leanira Checkerspot)			<i>Papilio rutulus</i> (Western Tiger Swallowtail)		
<i>Vanessa annabella</i> (West Coast Lady)			<i>Papilio zelicaon</i> (Anise Swallowtail)		
<i>Vanessa atalanta</i> (Red Admiral)			Pieridae (Whites and Orangetips)		
<i>Vanessa cardui</i> (Painted Lady)	24		<i>Anthocharis cethura</i> (Felder's Orangetip)		
<i>Vanessa virginiensis</i> (Virginia Lady)			<i>Anthocharis lanceolata</i> (Grinnell's Marble)		
Danaidae (Milkweed Butterflies)			<i>Anthocharis sara</i> (Sara Orangetip)	2	
<i>Danaus gilippus</i> (Queen)			<i>Artogeia rapae</i> (Cabbage White)		
<i>Danaus plexippus</i> (Monarch)			<i>Colias eurytheme</i> (Alfalfa Butterfly)		
Hesperiidae			<i>Colias harfordii</i> (Harford's Sulfur)		
<i>Erynnis funeralis</i> (Funeral Dusky-wing)	3		<i>Euchloe hyantis lotta</i> (Southern Marble)		
<i>Heliopetes ericetorum</i> (Great White Skipper)			<i>Eurema nicippe</i> (Sleepy Orange)		
<i>Hylephila phyleus</i> (Fiery Skipper)			<i>Pontia protodice</i> (Common White)		
<i>Pyrgus albescens</i> (Checkered Skipper)			<i>Zerene eurydice</i> (California Dogface)		
Lycaenidae (Hairstreaks)			Riodinidae (Metalmarks)		
<i>Atlixes halesus</i> (Great Purple Hairstreak)			<i>Apodemia mormo</i> (Behr's Metalmark)	5	
<i>Callophrys perplexa = dumetorum</i> (Perplexing Hairstreak)			<i>Calephelis wrightii</i> (Wright's Metalmark)		
<i>Incisalia augustinus</i> (Brown Elfin)			Satyridae (Satyrids)		
<i>Mitoura thornei</i> (Thome's Hairstreak)			<i>Coenonympha californica</i> (California Ringlet)	14	
<i>Strymon melinus</i> (Gray Hairstreak)			OTHERS:		
OTHERS:			OTHERS:		

Surveyor Viviane Martinez-Waller Alignment # Salt Creek Date: 3/21/12

Comments:

Animals detected include

- | | |
|------------------------|----------------------------|
| American Crow | Fence lizard |
| Western meadowlark | Gull sp. |
| Northern hammer ♂ + ♀ | California quail |
| Song sparrow | White-crowned sparrow |
| Lesser goldfinch | Black phoebe |
| Say's phoebe | Red-winged blackbird |
| House finch | Common yellow throat |
| Red-tailed Hawk | American kestrel |
| California thrasher | European starling |
| Wren tit | Northern mockingbird |
| Anna's hummingbird | House wren |
| Bush tit | American pipit |
| Mourning dove | California ground squirrel |
| California gnatcatcher | |

Northern hammers are regularly seen at the lot at the inter-section of Eastlake Parkway & Hank Parkway. They roost near some tobacco plants at the west end of the site - should be checked

Plant Communities and Habitat Information:

for nesting there during breeding season

Large lot at intersection of Eastlake and Hank Parkway has weedy species including tumbleweed, yellow star thistle, mustard, exotic grasses including hardenms, bromes and avenas large areas of atriplex semibaccata and some bare ground, some tobacco and some tamarisk as well.

Host Plants Present:

Plantago site to the east of southern portion of alignment is still fresh with some unopened flowers. Extent of coverage still small. No plantago seen either uphill or downhill from original sighting

Nectar Plants Present:

see adjoining flowering plant sheet

Photographs Taken:

1.	2.	3.
4.	5.	6.
7.	8.	9.
10.	11.	12.

Quino Checkerspot General Form

Surveyor Viviane Marquez-Waller Date 3/22/12 Site Visit Number 66
 Survey Partner(s) Frick La Costa Site Location Salt Creek Project
 Total Acres: _____ Portion Surveyed: Substation Elevation: Max 659 Min 284

Time (24 hr)	% Cloud	Sky					Wind (aver/max)	Temp (F)
Start 9:50	0	clear	patchy	overcast	drizzle	shower	1.8/2.3	67°
11:50	0	clear	patchy	overcast	drizzle	shower	1.8/4.3	72.1
		clear	patchy	overcast	drizzle	shower		
		clear	patchy	overcast	drizzle	shower		
		clear	patchy	overcast	drizzle	shower		
Stop 15:25	0	clear	patchy	overcast	drizzle	shower	1.8/2.7	71°

Habitat onsite: open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, *Plantago*, *Castilleja*, nectar sources.

Butterfly Species	Count (Total)	Hill-topping	Butterfly Species	Count (Total)	Hill-topping
Nymphalidae (Brush Footed Butterflies)			Lycaenidae (Blues)		
<i>Euphydryas editha quino</i> (Quino Checkerspot)			<i>Brephidium exilis</i> (Pygmy Blue)	1	
<i>Adelpha bredowii</i> (California Sister)			<i>Celastrina ladon echo</i> (Echo Blue)		
<i>Basilarchia lorquini</i> (Lorquin's Admiral)			<i>Everes amyntula</i> (Western Tailed Blue)		
<i>Charidryas gabbii</i> (Gabb's Checkerspot)			<i>Glaucopsyche lygdamus</i> (Southern Blue)	1	
<i>Euphydryas chalcedona</i> (Chalcedon Checkerspot)			<i>Hemiargus ceraunus</i> (Edward's Blue)		
<i>Junonia coenia</i> (Buckeye)	1		<i>Icarcia acmon</i> (Acmon Blue)		
<i>Nymphalis antiopa</i> (Mourning Cloak)			<i>Leptotes marina</i> (Marine Blue)		
<i>Nymphalis californica</i> (California Tortoiseshell)			<i>Philotes sonorensis</i> (Sonoran Blue)		
<i>Phycoides mylitta</i> (Mylitta Crescent)			<i>Plebejus melissa</i> (Melissa Blue)		
<i>Polygonia satyrus</i> (Satyr Anglewing)			Papilionidae (Swallowtails)		
<i>Speyeria callippe</i> (Callippe Fritillary)			<i>Papilio eurymedon</i> (Pale Swallowtail)		
<i>Thessalia leanira wrighti</i> (Leanira Checkerspot)			<i>Papilio rutulus</i> (Western Tiger Swallowtail)		
<i>Vanessa annabella</i> (West Coast Lady)			<i>Papilio zelicaon</i> (Anise Swallowtail)		
<i>Vanessa atalanta</i> (Red Admiral)			Pieridae (Whites and Orangetips)		
<i>Vanessa cardui</i> (Painted Lady)	13		<i>Anthocharis cethura</i> (Felder's Orangetip)		
<i>Vanessa virginiensis</i> (Virginia Lady)			<i>Anthocharis lanceolata</i> (Grinnell's Marble)		
Danaidae (Milkweed Butterflies)			<i>Anthocharis sara</i> (Sara Orangetip)		
<i>Danaus gilippus</i> (Queen)			<i>Artogeia rapae</i> (Cabbage White)		
<i>Danaus plexippus</i> (Monarch)	1		<i>Colias eurytheme</i> (Alfalfa Butterfly)		
Hesperiidae			<i>Colias harfordii</i> (Harford's Sulfur)	1	
<i>Erynnis funeralis</i> (Funeral Dusky-wing)	7		<i>Euchloe hyantis lotta</i> (Southern Marble)		
<i>Heliopetes ericetorum</i> (Great White Skipper)			<i>Eurema nicippe</i> (Sleepy Orange)		
<i>Hylephila phyleus</i> (Fiery Skipper)			<i>Pontia protodice</i> (Common White)	1	
<i>Pyrgus albescens</i> (Checkered Skipper)			<i>Zerene eurydice</i> (California Dogface)		
Lycaenidae (Hairstreaks)			Riodinidae (Metalmarks)		
<i>Atlides halesus</i> (Great Purple Hairstreak)			<i>Apodemia mormo</i> (Behr's Metalmark)	1	
<i>Callophrys perplexa = dumetorum</i> (Perplexing Hairstreak)			<i>Calephelis wrighti</i> (Wright's Metalmark)		
<i>Incisalia augustinus</i> (Brown Elf)			Satyridae (Satyrids)		
<i>Mitoura thornei</i> (Thorne's Hairstreak)			<i>Coenonympha californica</i> (California Ringlet)	1	
<i>Strymon melinus</i> (Gray Hairstreak)					
OTHERS:			OTHERS:		

Surveyor Viviane Marquez Miller Area # Substation

Date: 3/22/12

Comments: Animals detected include:

<u>Killdeer</u>	<u>Song sparrow</u>
<u>California towhee</u>	<u>American crow</u>
<u>Northern mockingbird</u>	<u>California gnatcatcher</u>
<u>House wren</u>	<u>Western meadowlark</u>
<u>Mourning dove</u>	<u>House finch</u>
<u>Red tail hawk</u>	<u>Greater Roadrunner</u>
<u>Common yellowthroat</u>	<u>Turkey vulture</u>
<u>Lesser goldfinch</u>	<u>Western Kingbird</u>
<u>Audubon warbler</u>	<u>Anna's hummingbird</u>
<u>Audubon rabbit</u>	<u>Bush tit</u>
<u>American kestrel</u>	<u>Black phoebe</u>
<u>Red-winged blackbird</u>	<u>Pied-bill grebe</u>
<u>Cassin's Kingbird</u>	<u>Ruddy duck</u>
<u>Crow sp</u>	<u>Spotted towhee</u>
	<u>California ground squirrel</u>

Plant Communities and Habitat Information:

Host Plants Present: none

Nectar Plants Present: see adjoining sheets

Photographs Taken:

1.	2.	3.
4.	5.	6.
7.	8.	9.
10.	11.	12.

Quino Checkerspot General Form

Surveyor Viviane Marquez Date 3/29/12 Site Visit Number 76
 Survey Partner(s) Erik La Caste Site Location Salt Creek Project
 Total Acres: _____ Portion Surveyed: Substation Area Elevation: Max 654 Min 289

Time (24 hr)	% Cloud	Sky					Wind (aver/max)	Temp (F)
Start 10:55	15	(clear)	patchy	overcast	drizzle	shower	0.9 / 1.6 mph	67°
11:30	5	(clear)	patchy	overcast	drizzle	shower	0.9 / 1.4	67.5°
12:50	0	clear	patchy	overcast	drizzle	shower	2.2 / 3.5	72°
		clear	patchy	overcast	drizzle	shower		
		clear	patchy	overcast	drizzle	shower		
		clear	patchy	overcast	drizzle	shower		
Stop 3:55	10 ^{hazy}	(clear)	patchy	overcast	drizzle	shower	3.8 / 7.0	67°

Habitat onsite: open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, *Plantago*, *Casilleja*, nectar sources.

Butterfly Species	Count (Total)	Hill-topping	Butterfly Species	Count (Total)	Hill-topping
Nymphalidae (Brush Footed Butterflies)			Lycaenidae (Blues)		
<i>Euphydryas editha quino</i> (Quino Checkerspot)			<i>Brephidium exilis</i> (Pygmy Blue)	2	
<i>Adelpha bredowii</i> (California Sister)			<i>Celastrina ladon echo</i> (Echo Blue)		
<i>Basilarchia lorquini</i> (Lorquin's Admiral)			<i>Everes amyntula</i> (Western Tailed Blue)	2	
<i>Charidryas gabbii</i> (Gabb's Checkerspot)			<i>Glaucopsyche lygdamus</i> (Southern Blue)	2	
<i>Euphydryas chalcedona</i> (Chalcedon Checkerspot)			<i>Hemiargus ceraunus</i> (Edward's Blue)		
<i>Junonia coenia</i> (Buckeye)	1		<i>Icarcia acmon</i> (Acmon Blue)		
<i>Nymphalis antiopa</i> (Mourning Cloak)			<i>Leptotes marina</i> (Marine Blue)		
<i>Nymphalis californica</i> (California Tortoiseshell)			<i>Philotes sonorensis</i> (Sonoran Blue)		
<i>Phycoides mylitta</i> (Mylitta Crescent)			<i>Plebejus melissa</i> (Melissa Blue)		
<i>Polygonia satyrus</i> (Satyr Anglewing)			Papilionidae (Swallowtails)		
<i>Speyeria callippe</i> (Callippe Fritillary)			<i>Papilio eurymedon</i> (Pale Swallowtail)		
<i>Thessalia leanira wrighti</i> (Leanira Checkerspot)			<i>Papilio rutulus</i> (Western Tiger Swallowtail)		
<i>Vanessa annabella</i> (West Coast Lady)			<i>Papilio zelicaon</i> (Anise Swallowtail)		
<i>Vanessa atalanta</i> (Red Admiral)			Pieridae (Whites and Orangetips)		
<i>Vanessa cardui</i> (Painted Lady)	1		<i>Anthocharis cethura</i> (Felder's Orangetip)		
<i>Vanessa virginiensis</i> (Virginia Lady)			<i>Anthocharis lanceolata</i> (Grinnell's Marble)		
Danaidae (Milkweed Butterflies)			<i>Anthocharis sara</i> (Sara Orangetip)		
<i>Danaus gilippus</i> (Queen)			<i>Artogeta rapae</i> (Cabbage White)		
<i>Danaus plexippus</i> (Monarch)			<i>Colias eurytheme</i> (Alfalfa Butterfly)		
Hesperiidae			<i>Colias harfordii</i> (Harford's Sulfur)		
<i>Erynnis funeralis</i> (Funeral Dusky-wing)	1		<i>Euchloe hyantis lotta</i> (Southern Marble)		
<i>Heliopetes ericetorum</i> (Great White Skipper)			<i>Eurema nicippe</i> (Sleepy Orange)		
<i>Hylephila phyleus</i> (Fiery Skipper)			<i>Pontia protodice</i> (Common White)		
<i>Pyrgus albescens</i> (Checkered Skipper)			<i>Zerene eurydice</i> (California Dogface)		
Lycaenidae (Hairstreaks)			Riodinidae (Metalmarks)		
<i>Atlides halesus</i> (Great Purple Hairstreak)			<i>Apodemia mormo</i> (Behr's Metalmark)	6	
<i>Callophrys perplexa = dumetorum</i> (Perplexing Hairstreak)			<i>Calephelis wrighti</i> (Wright's Metalmark)		
<i>Incisalia augustinus</i> (Brown Elf)			Satyridae (Satyrids)		
<i>Mitoura thornei</i> (Thorne's Hairstreak)			<i>Coenonympha californica</i> (California Ringlet)		
<i>Strymon melinus</i> (Gray Hairstreak)			OTHERS: Blue species		
OTHERS:				2	

Surveyor Viviane Marquez Area # Salt Creek Substation Area Date: 3/29/12

Comments: <u>Animal species detected include:</u>	
<u>Spotted towhee</u>	<u>Rufous-crowned sparrow</u>
<u>Common yellowthroat</u>	<u>Common raven</u>
<u>Greater roadrunner</u>	<u>Copper's hawk</u>
<u>California towhee</u>	<u>California quail</u>
<u>House finch</u>	<u>House Wren</u>
<u>Mourning dove</u>	<u>Brewer's wren</u>
<u>Red-tail hawk</u>	<u>Audubon warbler</u>
<u>American crow</u>	<u>European starling</u>
<u>Lesser gold finch</u>	<u>California gnatcatcher</u>
<u>Red-winged blackbird</u>	<u>Black phoebe</u>
<u>American coot</u>	<u>Western meadowlark</u>
<u>Ruddy duck</u>	<u>Anna's hummingbird</u>
<u>song sparrow</u>	<u>Bush tit</u>
<u>American kestrel</u>	<u>Western kingbird</u>
<u>Wren tit</u>	<u>White-crowned sparrow</u>
<u>Northern mockingbird</u>	<u>California ground squirrel</u>
Plant Communities and Habitat Information:	<u>Western fence lizard</u>

Host Plants Present: still none

Nectar Plants Present: see attached list

Photographs Taken:		
1.	2.	3.
4.	5.	6.
7.	8.	9.
10.	11.	12.

Quino Checkerspot General Form

Surveyor Viviane Marquez Date 3/30/12 Site Visit Number 7b
 Survey Partner(s) _____ Site Location Salt Creek Project
 Total Acres: _____ Portion Surveyed: Alignment + Salt Creek Elevation: Max 654 Min 284

Time (24 hr)	% Cloud	Sky	Wind (aver/max)	Temp (F)
Start 11:15	0	clear patchy overcast drizzle shower	1.0/1.8	71.5°
13:00	2 haze	clear patchy overcast drizzle shower	3.0/15.2	70
14:35	2	clear patchy overcast drizzle shower	1.7/2.0	70.2
		clear patchy overcast drizzle shower		
		clear patchy overcast drizzle shower		
		clear patchy overcast drizzle shower		
Stop 16:15	5 haze	clear patchy overcast drizzle shower	1.2/2.8	66.4

Habitat onsite: open soils, hilltops, ridges, rock outcrops, soil crusts, clay soils, old roads, *Plantago*, *Casilleja*, nectar sources.

Butterfly Species	Count (Total)	Hill-topping	Butterfly Species	Count (Total)	Hill-topping
Nymphalidae (Brush Footed Butterflies)			Lycaenidae (Blues)		
<i>Euphydryas editha quino</i> (Quino Checkerspot)			<i>Brephidium exilis</i> (Pygmy Blue)		
<i>Adelpha bredowii</i> (California Sister)			<i>Celasirina ladon echo</i> (Echo Blue)		
<i>Basilarchia lorquini</i> (Lorquin's Admiral)			<i>Everes amyntula</i> (Western Tailed Blue)	13	
<i>Charidryas gabbii</i> (Gabb's Checkerspot)			<i>Glaucopsyche lygdamus</i> (Southern Blue)		
<i>Euphydryas chalcedona</i> (Chalcedon Checkerspot)			<i>Hemiargus ceraunus</i> (Edward's Blue)		
<i>Junonia coenia</i> (Buckeye)			<i>Icarcia acmon</i> (Acmon Blue)		
<i>Nymphalis antiopa</i> (Mourning Cloak)			<i>Leptotes marina</i> (Marine Blue)	1	
<i>Nymphalis californica</i> (California Tortoiseshell)			<i>Philotes sonorensis</i> (Sonoran Blue)		
<i>Phycoides mylitta</i> (Mylitta Crescent)			<i>Plebejus melissa</i> (Melissa Blue)		
<i>Polygonia satyrus</i> (Satyr Anglewing)			Papilionidae (Swallowtails)		
<i>Speyeria callippe</i> (Callippe Fritillary)			<i>Papilio eurymedon</i> (Pale Swallowtail)		
<i>Thessalia leanira wrighti</i> (Leanira Checkerspot)			<i>Papilio rutulus</i> (Western Tiger Swallowtail)		
<i>Vanessa annabella</i> (West Coast Lady)			<i>Papilio zelicaon</i> (Anise Swallowtail)		
<i>Vanessa atalanta</i> (Red Admiral)			Pieridae (Whites and Orangetips)		
<i>Vanessa cardui</i> (Painted Lady)	4		<i>Anthocharis cethura</i> (Felder's Orangetip)		
<i>Vanessa virginiensis</i> (Virginia Lady)			<i>Anthocharis lanceolata</i> (Grinnell's Marble)		
Danaidae (Milkweed Butterflies)			<i>Anthocharis sara</i> (Sara Orangetip)	1	
<i>Danaus gilippus</i> (Queen)			<i>Artogeia rapae</i> (Cabbage White)		
<i>Danaus plexippus</i> (Monarch)			<i>Colias eurytheme</i> (Alfalfa Butterfly)		
Hesperiidae			<i>Colias harfordii</i> (Harford's Sulfur)		
<i>Erynnis funeralis</i> (Funeral Dusky-wing)	4		<i>Euchloe hyantis lotta</i> (Southern Marble)		
<i>Heliopetes ericetorum</i> (Great White Skipper)			<i>Eurema nicippe</i> (Sleepy Orange)		
<i>Hylephila phyleus</i> (Fiery Skipper)			<i>Pontia protodice</i> (Common White)	2	
<i>Pyrgus albescens</i> (Checkered Skipper)	1		<i>Zerene eurydice</i> (California Dogface)		
Lycaenidae (Hairstreaks)			Riodinidae (Metalmarks)		
<i>Atlides halesus</i> (Great Purple Hairstreak)			<i>Apodemia mormo</i> (Behr's Metalmark)		
<i>Callophrys perplexa = dumetorum</i> (Perplexing Hairstreak)			<i>Calephelis wrighti</i> (Wright's Metalmark)		
<i>Incisalia augustinus</i> (Brown Elfin)			Satyridae (Satyrids)		
<i>Mitoura thornei</i> (Thorne's Hairstreak)			<i>Coenonympha californica</i> (California Ringlet)	8	
<i>Strymon melinus</i> (Gray Hairstreak)	2		OTHERS: <u>Blue-sp</u>		
OTHERS:					

Surveyor Virgine Marquez

Area # Alignment + Salt Creek Date: 3/30/12
Week

Comments: <u>Animal species detected include:</u>	
<u>Cassin's Kingbird</u>	<u>American kestrel</u>
<u>Northern mockingbird</u>	<u>House finch</u>
<u>American crow</u>	<u>Black phoebe</u>
<u>Western meadowlark</u>	<u>White-crowned sparrow</u>
<u>Red-winged blackbird</u>	<u>Great egret</u>
<u>Song sparrow</u>	<u>Western Kingbird</u>
<u>Common yellowthroat</u>	<u>Say's phoebe</u>
<u>Lesser goldfinch</u>	<u>Gull sp</u>
<u>Greater roadrunner</u>	<u>Wilson's warbler</u>
<u>California towhee</u>	<u>House wren</u>
<u>Bush tit</u>	<u>Mourning dove</u>
<u>Anna's hummingbird</u>	<u>Brewer's blackbird</u>
<u>Wren tit</u>	<u>Scrub jay</u>
<u>European starling</u>	<u>Rock dove</u>
<u>Red-tail hawk</u>	<u>Audubon rabbit</u>
<u>Common Raven</u>	<u>alligator lizard</u>
	<u>California ground squirrel</u>

Plant Communities and Habitat Information:

Host Plants Present: Plantago on east facing slope at Salt Creek remains fresh and flowering

Owl's clover south of Eastlake Parkway within alignment remains fresh although some plants have dried up.

Nectar Plants Present: See attached list

Photographs Taken: various - some of owl's clover and plantago

1.	2.	3.
4.	5.	6.
7.	8.	9.
10.	11.	12.

APPENDIX B

FLOWERING PLANT OBSERVATIONS AT THE SALT CREEK SUBSTATION SITE

Appendix B

Flowering Plant Observations

Common Name	Scientific Name
Acacia species	<i>Acacia sp.</i>
Annual lotus	<i>Lotus sp.</i>
Barrel cactus ²	<i>Ferocactus viridescens</i>
Bedstraw	<i>Galium sp.</i>
Black sage	<i>Salvia mellifera</i>
Bladderpod	<i>Isomeris arborea</i>
Blue dicks	<i>Dichelostemma capitatum</i>
Blue-eyed grass	<i>Sisyrinchium bellum</i>
Brass buttons	<i>Cotula coronopifolia</i>
Bull thistle	<i>Cirsium vulgare</i>
Bush mallow	<i>Malacothamnus fasciculatus</i>
California bee plant	<i>Scrophularia californica</i>
California encelia	<i>Encelia californica</i>
Chocolate lily	<i>Fritillaria biflora</i>
Crete hedypnois	<i>Hedypnois cretica</i>
Cryptantha sp.	<i>Cryptantha sp.</i>
Dot-seed plantain ¹	<i>Plantago erecta</i>
Fiddleneck	<i>Amsinkia intermedia</i>
Filaree	<i>Erodium sp.</i>
Fiesta flower	<i>Pholistima auritum</i>
Flat-topped buckwheat	<i>Eriogonum fasciculatum</i>
Garland chrysanthemum	<i>Chrysanthemum coronarium</i>
Golden yarrow	<i>Eriophyllum confertiflorum</i>
Ground pink	<i>Linanthus dianthiflorus</i>
Horehound	<i>Marrubium vulgare</i>
Ice plant	<i>Carpobrotus sp.</i>
Lemonadeberry	<i>Rhus integrifolia</i>
Locoweed	<i>Astragalus sp.</i>
Lupine sp.	<i>Lupinus sp.</i>
Mariposa lily	<i>Calochortus sp.</i>
Matchweed	<i>Gutierrezia sarothrae</i>

Monkey flower	<i>Mimulus aurantiacus</i>
Popcorn flower sp.	<i>Plagiobothrys sp.</i>
Purple owls clover	<i>Castilleja exerta</i>
Prickly sow thistle	<i>Sonchus asper</i>
Rattlesnake weed	<i>Chamaesyce albomarginata</i>
San Diego sunflower	<i>Viguiera laciniata</i>
Scarlet pimpernel	<i>Anagalis arvensis</i>
Shooting stars	<i>Dodocatheon clevelandii</i>
Short-pod mustard	<i>Hirschfeldia incana</i>
Slender wild oat	<i>Avena barbata</i>
Tidy tips	<i>Layia sp.</i>
Twining snapdragon	<i>Antirrhinum kelloggii</i>
Wild morning glory	<i>Calystegia macrostegia</i>
Wild onion	<i>Allium sp.</i>
Wishbone bush	<i>Mirabilis laevis var. crassifolius</i>
Yellow sweetclover	<i>Mellilotus officinalis</i>

¹ QCB Primary Host Plant

² Sensitive Plant Species

APPENDIX G

45-DAY REPORTS FOR THE COASTAL CALIFORNIA GNATCATCHER

APPENDIX G-1
2011 RESULTS REPORT



AECOM
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Suite 500
San Diego, CA 92101
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619.233.1454 tel
619.233.0952 fax

October 4, 2011

Ms. Erin McCarthy
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

RE: 45-Day Summary Report of 2011 Protocol Surveys for Coastal California Gnatcatcher for the Proposed Salt Creek Substation for SDG&E, Otay Mesa, San Diego County, California

Dear Ms. McCarthy:

In compliance with the Special Terms and Conditions for Endangered Species Permit TE-820658-4, AECOM biologists conducted focused surveys April through June 2011 to determine the presence or absence of the federally threatened coastal California gnatcatcher (*Polioptila californica californica*; CAGN) within the proposed Salt Creek Substation site (project site) in San Diego County, California (Figure 1). Surveys were conducted on behalf of San Diego Gas and Electric (SDG&E).

Project Description

The Salt Creek Substation is proposed by SDG&E for meeting the electrical infrastructure needs of the Otay Ranch Community. The approximately 19-acre project site is located on Otay Mesa in Chula Vista, California, south of the intersection of Hunte Parkway and Exploration Way (Figure 2).

Site Description

For purposes of this report, the term "project survey area" refers to the proposed Salt Creek Substation site plus a 500-foot survey buffer. The project survey area occurs within the City of Chula Vista's Multiple Species Conservation Planning (MSCP) Subarea Plan (Subarea Plan) Otay Ranch Planning Area, within areas planned for development (e.g., outside of the Otay Ranch Preserve). The project survey area contains a variety of native habitats, including coastal sage scrub, a thin band of riparian scrub, grassland, and open clay soils throughout the grasslands and coastal sage scrub. The survey area also contains significant areas of nonnative, ornamental flowering plants and trees. Several dirt access roads cross the project survey area. The majority of the project survey area is grassland on a mesa top (with a small section of coastal sage scrub), with adjacent coastal sage scrub along the slopes of the mesa (within the 500-foot survey buffer). The total CAGN survey area within the project survey area, consisting of coastal sage scrub, is approximately 15 acres.

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Recovery Permit Coordinator
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Background Information

CAGN, a subspecies of the California gnatcatcher (*Poliophtila californica*), is federally listed as threatened by the U.S. Fish and Wildlife Service (USFWS 1993) and is considered a species of special concern by the California Department of Fish and Game (CDFG) (State of California 2011). No recovery plan has been drafted for CAGN. CAGN is an uncommon year-round resident of Southern California. This species is declining proportionately with the continued loss of coastal sage scrub habitat in the six Southern California counties (San Bernardino, Ventura, Los Angeles, Orange, San Diego, and Riverside) located within the coastal plain.

The primary cause of the decline of CAGN is the cumulative loss of coastal sage scrub vegetation to urban and agricultural development. Studies suggest that CAGN may be highly sensitive to the effects of habitat fragmentation and development activity (Atwood 1990; ERCE 1990). The U.S. Fish and Wildlife Service (USFWS) has estimated that coastal sage scrub habitat has been reduced by 70 to 90% of its historical extent (USFWS 1991), and little of what remains is protected in natural open space.

CAGN generally inhabits Diegan coastal sage scrub and Riversidian coastal sage scrub dominated by California sagebrush (*Artemisia californica*) and flat-topped buckwheat (*Eriogonum fasciculatum*), generally lower than 1,500 feet in elevation along the coastal slope. When nesting, CAGN typically avoids slopes greater than 25% with tall, dense vegetation. CAGN pairs will attempt several nests each year, each placed in a different location inside their breeding territory, but most nest attempts are unsuccessful due to depredation by a variety of species (Atwood and Bontrager 2001). Clutch size ranges from one to five eggs, with three or four eggs most common. CAGNs will remain paired through the nonbreeding season and will generally expand their home range when not breeding.

CAGN is particularly vulnerable to habitat destruction and fragmentation because of poor dispersal, reliance on a specific habitat type, and difficulty in successful breeding. Juvenile CAGNs tend to remain close to their natal territories. On average, juveniles disperse less than 1.2 miles from their natal territories, making colonization of distant habitat patches difficult. CAGN is closely tied to coastal sage scrub and has been described as “obligate residents of coastal sage scrub” (Atwood and Bontrager 2001). CAGN typically experiences a high rate of nest failure, with an annual mean number of four nest attempts per pair in San Diego County (Grishaver et al. 1998). CAGN tends to have slightly smaller clutches in years with poor rainfall and will experience a higher rate of mortality during cold winters (Atwood and Bontrager 2001; Grishaver et al. 1998).

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Critical habitat was originally designated by USFWS for CAGN in 2000, but was revised, and a final rule was published in 2007 (USFWS 2007). No critical habitat for CAGN occurs within the proposed project survey area.

Survey Methodology

Prior to surveying the project survey area, AECOM biologists conducted vegetation mapping and a habitat assessment of all areas within the project survey area. The CAGN survey area was limited to all coastal sage scrub habitat within the project survey area. CAGN surveys followed the most recent USFWS guidelines (USFWS 1997) and consisted of walking through all suitable CAGN habitat within the project survey area. This area amounted to approximately 15 acres of suitable CAGN habitat, which was surveyed by one biologist.

Since SDG&E is a participant in the Natural Community Conservation Plan (NCCP) process, only three CAGN surveys were conducted (USFWS 1997). Three breeding-season protocol-level surveys were conducted between April and June 2011. According to protocol, all surveys took place between the hours of 6:00 a.m. and 12:00 noon. The surveys consisted of walking meandering transects through potential CAGN habitat, including all scrub associations. AECOM wildlife biologist Bonnie Hendricks conducted surveys under TE-820658-4. The biologist conducted passive surveillance (i.e., listening and looking for the species) in all habitats with potential to support CAGN. If an observation was not made after approximately 5 to 10 minutes of passive survey activity, a taped vocalization of CAGN was played for approximately 5 to 10 seconds (i.e., active survey activity), followed by another period of passive observation. The taped vocalization was discontinued with any positive CAGN response. Surveys were not conducted during periods of inclement weather such as extreme wind or during a rain event.

As allowed under AECOM's endangered species permit, the survey activity "takes" CAGN through harassment with playback of taped CAGN vocalizations. No individual CAGNs were captured.

Results

Protocol-level surveys were conducted between April 20 and June 24, 2011, within suitable habitat in the project survey area (Figure 3). A summary of survey data is presented in Table 1, including date of survey, time, weather conditions, field biologist, and CAGN observations. Field notes are presented in Attachment A. During surveys, temperatures ranged from 59.8 to 78 degrees Fahrenheit (°F), and average wind speed ranged from 1.2 to 8.5 miles per hour (mph).

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One CAGN individual was heard within the 500-foot survey buffer during the first survey on April 20, 2011. This bird was never seen and, therefore, it was not possible to determine its age or sex. No CAGNs were detected during the second survey on May 17, 2011. Two CAGN pairs plus two juveniles, representing two different family groups, were observed on the third survey on June 24, 2011. Juvenile birds seen during the third survey could not be identified to sex. The locations of these CAGN are depicted in Figure 3.

In addition to CAGN, two wildlife species with state special status (State of California 2011) were detected during focused CAGN surveys within the project survey area: southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*; state watch list) and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*; state species of special concern). Both of these species are also included in the SDG&E NCCP list of covered species (SDG&E 1995). Locations of these species are depicted in Figure 3. Field data sheets are presented in Attachment A, and a list of all wildlife species detected during protocol CAGN surveys is presented in Attachment B.

Table 1
Coastal California Gnatcatcher Surveys
Dates, Time, Weather, Biologist, and Observations

Date	Time	Weather	Biologist	LBV Observations
20 April 11	1140-1200	Start: 72°F, wind 3 mph, 40% clouds End: 75°F, wind 1.2 mph, 20% clouds	Bonnie Hendricks	1 CAGN individual
17 May 11	0930-1200	Start: 59.8°F, wind 8.5 mph, 100% clouds End: 66.7°F, wind 7.2 mph, 100% clouds	Bonnie Hendricks	no CAGN observed
24 June 11	0950-1200	Start: 78°F, wind 2 mph, 0% clouds End: N/R°F, wind 4.2 mph, N/R% clouds	Bonnie Hendricks	2 CAGN pairs and 2 CAGN juveniles

Discussion

Two CAGN pairs are known to use the habitat surrounding the project site, and one of the pair’s territory overlaps into the project site. The highest quality coastal sage scrub habitat was located along the slopes within the 500-foot survey buffer and along the eastern toe of slope within the project site where CAGNs were observed. Due to the presence of two juvenile CAGNs, breeding in the general area was confirmed.

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Recovery Permit Coordinator
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If you have any questions or require additional information, please feel free to contact me at (619) 925-0010.

Sincerely,



Bonnie Hendricks
Senior Biologist
bonnie.hendricks@aecom.com

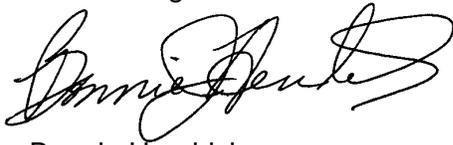
Attachments:

- Figure 1 – Regional Map
- Figure 2 – Vicinity Map
- Figure 3 – Coastal California Gnatcatcher and Other Sensitive Species Observations
- Appendix A – Field Data Sheets from Coastal California Gnatcatcher Protocol Surveys
- Appendix B – Wildlife Species Detected during Coastal California Gnatcatcher Surveys

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Recovery Permit Coordinator
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Certification Statement

Qualified AECOM biologist Bonnie Hendricks, who conducted CAGN surveys for the Salt Creek Substation site, certifies that the information in this survey report fully and accurately represents the work performed. Ms. Hendricks' signature is included below. The results of protocol-level surveys for listed species are typically considered valid for 1 year by the resource agencies.

A handwritten signature in black ink, appearing to read "Bonnie Hendricks". The signature is fluid and cursive, with a large initial "B" and "H".

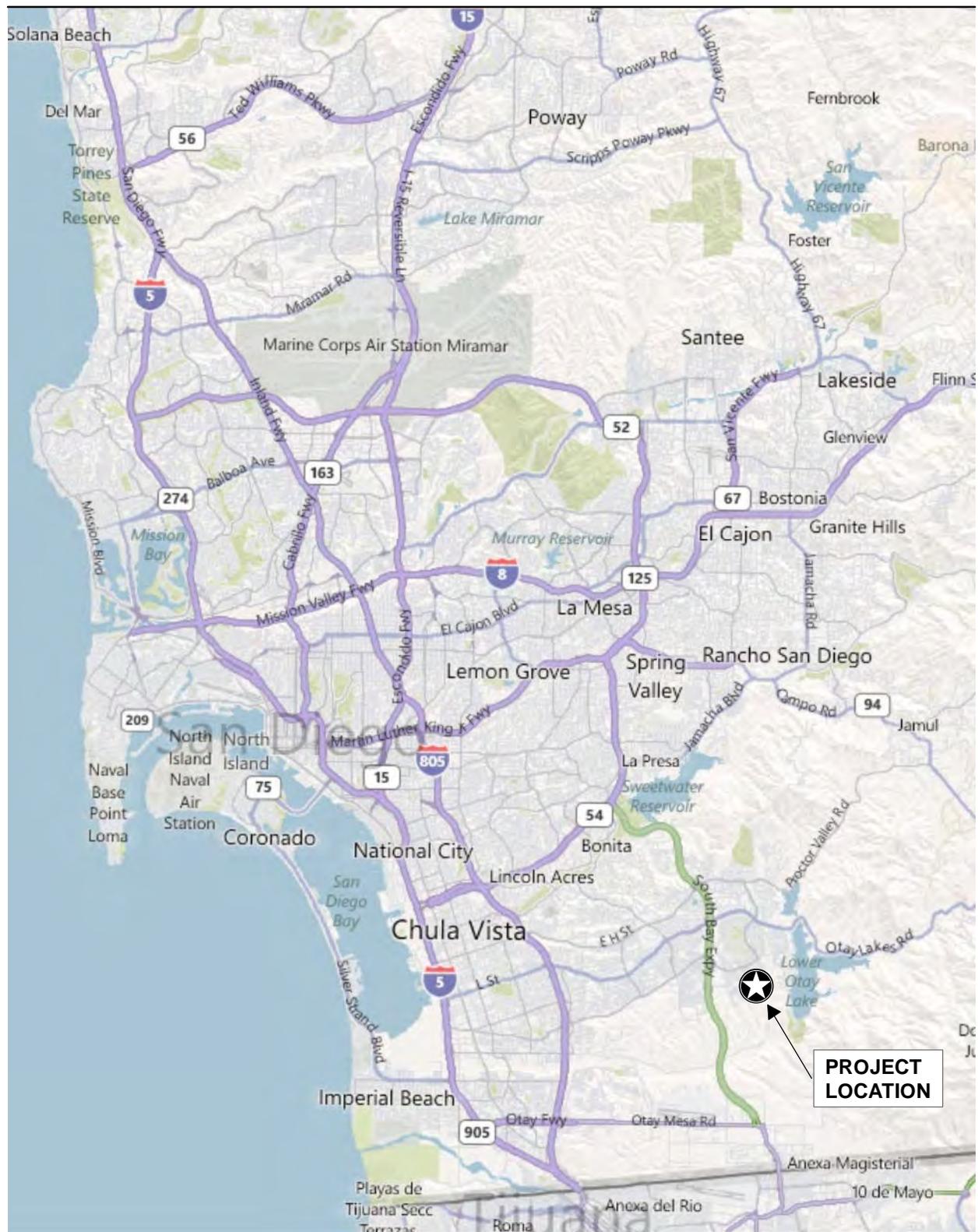
Bonnie Hendricks
Wildlife Biologist

Ms. Erin McCarthy
Recovery Permit Coordinator
October 4, 2011
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- U.S. Fish and Wildlife Service (USFWS). 2007. Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Coastal California Gnatcatcher (*Polioptila californica californica*); Final Rule. Federal Register 72:72009–72213.

FIGURES



Source: Bing Maps 2011

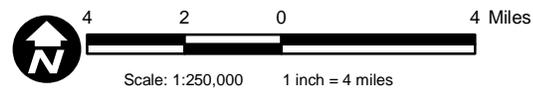
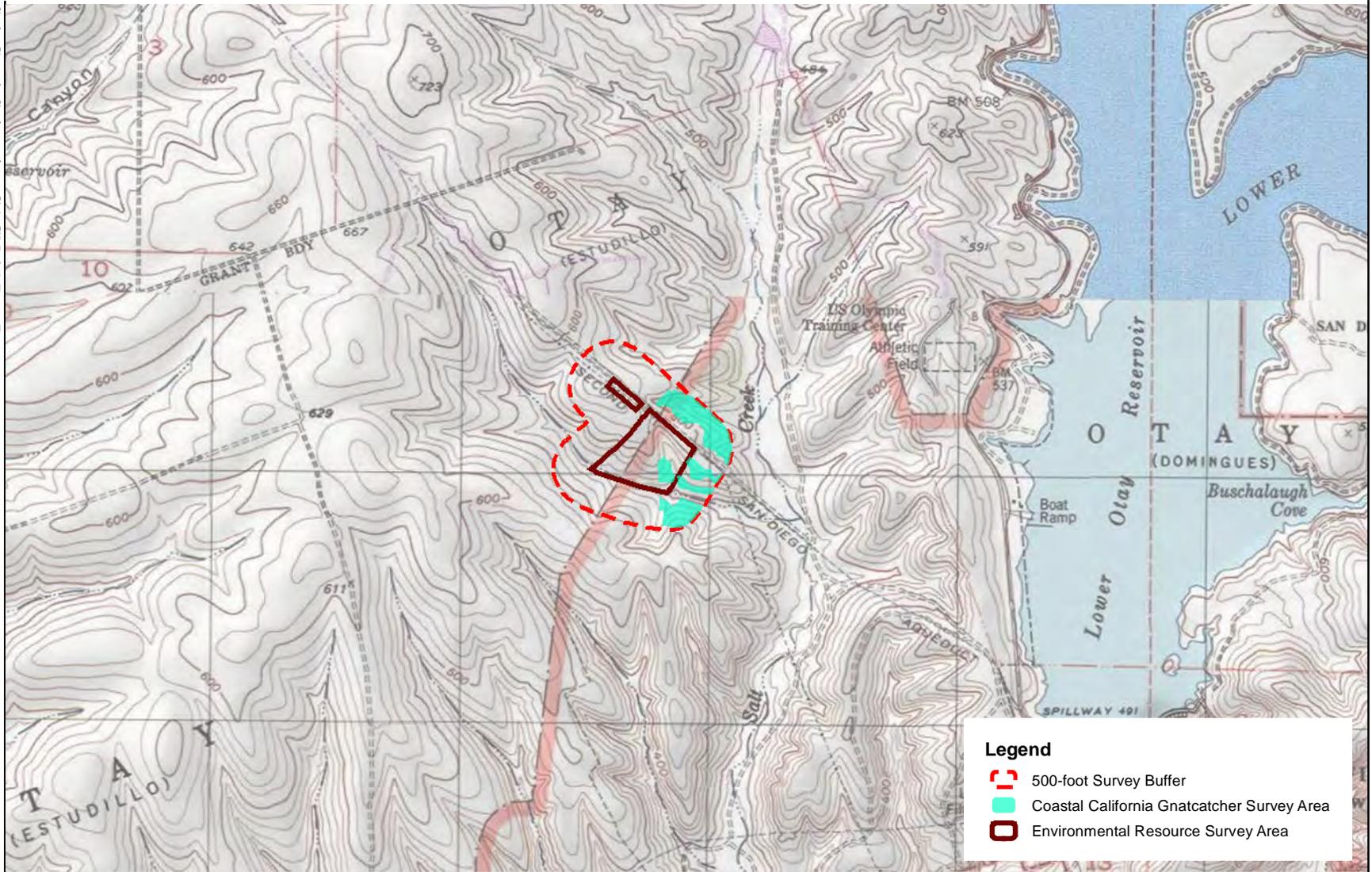


Figure 1
Regional Map

Salt Creek Substation CAGN 45-Day Report

Path: P:\2009\09080065 SDGE Widget Bio Svcs\6.0 GIS\6.3 Layout\ets_3845\45-day report\fig1_regional.mxd, 9/16/2011, leej



Source: USGS Quad Jamul Mountains 1975; Otay Mesa 1975



Figure 2
Vicinity Map



Legend

- 500-foot Survey Buffer
- Coastal California Gnatcatcher Survey Area
- Environmental Resource Survey Area
- Proposed Project Area
- Proposed Limits of Grading

Sensitive Species Observed

Survey 1 (April 20, 2011)

- Coastal California gnatcatcher, Individual
- San Diego Black-tailed Jackrabbit, Individual
- Southern California Rufous-crowned sparrow, Individual

Survey 3 (June 24, 2011)

- Coastal California gnatcatcher, Juvenile
- Coastal California gnatcatcher, Pair
- Southern California Rufous-crowned sparrow, Individual

Source: Aerials Express 2010

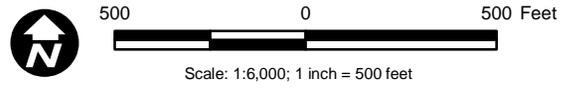


Figure 3
Coastal California Gnatcatcher and
Other Sensitive Species Observations

APPENDIX A

FIELD DATA SHEETS FROM COASTAL CALIFORNIA GNATCATCHER PROTOCOL SURVEYS

SD&E Otay Ranch Subst. 5/17/11 Bonnie Hendricks
 CAGN Survey # 2 of 3

	Time	Temp.	Wind (Avg./max)	cloud cover	Precip.
<u>Start</u>	9:30 am	59.8°	8.5/11.6	100%	light rain
<u>End</u>	12:00 pm	66.7	7.2/9.8	100%	none

CSS in 500' buffer to N., (E. + S.) W. is NNG + DEV

- | | |
|--------------------|------------------------------------------------------------------|
| + Arte cali | EUST |
| + Salv mell | HOFI |
| + Rhus inte | CORA |
| Bacc pilu | MODD |
| Isoc vene | CAQU |
| Bacc salic | WREN * BTJ Rabbit |
| Erio conf. | BLGR |
| * Bahi lacin (~50) | ANHU |
| Cylin prolif | LEGO |
| Bacc saru | CATO |
| Ence calif | WREN |
| Salv apia | SPTO |
| + Erio fasc | * RCSP - heard in S-facing
CSS - pt. on map
in 500' buffer |
| Dein fasc | |
| Cent venu | CATH |
| Dudl pulv | BUSH |
| Stipa lepi | RTHA |
| Silyb mari | RWSL |
| Calo splen | |
| B/oo croc | |
| Peri arbo | |
| * Osma tene | |
| Gali angu | |

No CAGN detected

CAGN SURVEYS

Recorder: Bonnie Hendrick Add'l Person: Salt Creek Subst. GPS Unit: —
 Date: 6/24/11 Project: Salt Creek Subst. Survey 3 of 3
 Time Start: 9:50 Time End: 12:00 Map #: 1 (in 500' buffer)
 Start T: 78° CC: 0 Wind Sp/Dir: 2.0/42 NW General Weather Condition: Warm
 End T: — CC: — Wind Sp/Dir: — General Weather Condition: —

Map/ GPS #	Time	Species	Age	Sex	Point Type	Comments
—	9:50	HOP1	AJU	MFU	—	Calif Gr Squirr.
		CORA	AJU	MFU		Botta's palatgoth.
		WREN	AJU	MFU		Desert Cottontail
		SPTD	AJU	MFU		Cicadas!
		CATO	AJU	MFU		BT-Jack-rabbit
		BUSH	AJU	MFU		Bobcat scat
		MOPO	AJU	MFU		Coyote tracks in crab
		CLSW	AJU	MFU		
		RTHA	AJU	MFU		
		ANNU	AJU	MFU		
CAGN-Juv 6	11:05	CAGN	AJU	MFU	Map pt.	Juv in artical, flew to
	to	LEGO	AJU	MFU		patch of Rhus int. tree.
	11:25	AM60	AJU	MFU		flew across CSS slope of
			AJU	MFU		crny toward tower
CAGN-pair 2	11:25	CAGN	ⓐJU	ⓂFU	Map pt.	pair offsite near
		WEKI	AJU	MFU		tower.
CAGN-pair 3	11:40	CAGN	ⓐJU	ⓂFU	Map pt.	pair calling to each
RCSP 01	11:45	RCSP	AJU	MFU	Map pt.	other. Located in
			AJU	MFU		same area as previous
			AJU	MFU		surveys.
CAGN- 01	11:50	CAGN	AJU	MFU	Map pt.	♀ / Juv in proximity
♀/JUV 04		ROPU	AJU	MFU		of others. Assumed
		SAPH	AJU	MFU		Family group
			AJU	MFU		onsite in buffer
			AJU	MFU		
			AJU	MFU		
			AJU	MFU		
			AJU	MFU		
			AJU	MFU		
			AJU	MFU		
			AJU	MFU		

APPENDIX B

WILDLIFE SPECIES DETECTED DURING COASTAL CALIFORNIA GNATCATCHER SURVEYS

APPENDIX B
Wildlife Species Detected during Coastal California Gnatcatcher Surveys

	Scientific Name	Common Name
INVERTEBRATES		
Order Hemiptera		Insects and Butterflies
	Family Cicadidae	
	Cicada species	cicada species
Order Lepidoptera		Insects and Butterflies
	Family Pieridae	
	<i>Anthocharis sara sara</i>	Pacific Sara orangetip
	Sulphur species	sulphur species
	<i>Pontia</i> species	white species
BIRDS		
Order Falconiformes		Diurnal Birds of Prey
	Family Accipitridae	
	<i>Buteo jamaicensis</i>	red-tailed hawk
	Family Falconidae	
	<i>Falco sparverius</i>	American kestrel
Order Galliformes		Magapodes, Curassows, Pheasants, and Relatives
	Family Odontophoridae	
	<i>Callipepla californica</i>	California quail
Order Columbiformes		Pigeons and Doves
	Family Columbidae	
	<i>Zenaida macroura</i>	mourning dove
Order Cuculiformes		Cuckoos and Relatives
	Family Cuculidae	
	<i>Geococcyx californianus</i>	greater roadrunner
Order Apodiformes		Hummingbirds and Swifts
	Family Trochilidae	
	<i>Calypte anna</i>	Anna's hummingbird
	<i>Calypte costae</i>	Costa's hummingbird
Order Passeriformes		Song birds
	Family Tyrannidae	
	<i>Sayornis nigricans</i>	black phoebe
	<i>Sayornis saya</i>	Say's phoebe
	<i>Tyrannus verticalis</i>	western kingbird
	Family Corvidae	
	<i>Corvus brachyrhynchos</i>	American crow
	<i>Corvus corax</i>	common raven
	Family Hirundinidae	
	<i>Petrochelidon pyrrhonota</i>	cliff swallow
	Family Aegithalidae	
	<i>Psaltriparus minimus</i>	bushtit
	Family Troglodytidae	
	<i>Thryomanes bewickii</i>	Bewick's wren

	Scientific Name	Common Name
	Family Sylviidae	
	<i>Polioptila californica californica</i> ^{1*}	coastal California gnatcatcher
	Family Timaliidae	
	<i>Chamaea fasciata</i>	wrentit
	Family Mimidae	
	<i>Toxostoma redivivum</i>	California thrasher
	Family Sturnidae	
	<i>Sturnus vulgaris</i>	European starling
	Family Parulidae	
	<i>Geothlypis trichas</i>	common yellowthroat
	Family Emberizidae	
	<i>Aimophila ruficeps canescens</i> ^{3*}	southern California rufous-crowned sparrow
	<i>Melospiza melodia</i>	song sparrow
	<i>Zonotrichia leucophrys</i>	white-crowned sparrow
	<i>Pipilo crissalis</i>	California towhee
	<i>Pipilo maculatus</i>	spotted towhee
	Family Cardinalidae	
	<i>Passerina caerulea</i>	blue grosbeak
	Family Icteridae	
	<i>Agelaius phoeniceus</i>	red-winged blackbird
	Family Fringillidae	
	<i>Spinus psaltria</i>	lesser goldfinch
	<i>Spinus tristis</i>	American goldfinch
	<i>Carpodacus mexicanus</i>	house finch
MAMMALS		
	Order Lagomorpha	Rabbits, Hares, and Pikas
	Family Leporidae	
	<i>Sylvilagus audubonii</i>	Audobon's cottontail
	<i>Lepus californicus bennettii</i> ^{2*}	San Diego black-tailed jackrabbit
	Order Rodentia	Rodents
	Family Geomyidae	
	<i>Thomomys bottae</i>	Botta's pocket gopher
	Family Scuriidae	
	<i>Spermophilus beecheyi</i>	California ground squirrel
	Order Carnivora	Carnivores
	Family Canidae	
	<i>Canis latrans</i>	coyote (tracks)
	Family Felidae	
	<i>Lynx rufus</i>	bobcat (scat)

¹ Federally threatened or endangered species

² State species of special concern

³ State watch list species

* SDG&E NCCP List
(State of California 2011)

APPENDIX G-2
2012 RESULTS REPORT

January 3, 2013

Ms. Susie Tharratt
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

RE: 45-Day Summary Report of 2012 Focused Surveys for the Coastal California Gnatcatcher for the Proposed 69-kV Transmission Line Installation Project for SDG&E

Dear Ms. Tharratt:

In compliance with the Special Terms and Conditions for Endangered Species Permit TE-820658-4, AECOM conducted focused surveys from May 2012 through August 2012 to determine the presence or absence of the federally threatened coastal California gnatcatcher (*Polioptila californica californica*) (CAGN) for a proposed 69-kilovolt (kV) distribution line site associated with the proposed Salt Creek Substation (project site).

Project Description

The linear project is located in East Lake and Otay Mesa, California (Figure 1). The project would include installation of a new 69-kV transmission line along an existing 5-mile-long transmission corridor east of the existing Miguel Substation south to the proposed Salt Creek Substation (Figure 2). The transmission line corridor is 120 feet in width in the northern portion of the alignment and 150 feet in width south of Hunte Parkway. The corridor includes an existing 69-kV transmission line and two 230-kV transmission lines mutually located on a single steel lattice tower line. The new 69-kV transmission line is expected to be built approximately 15 feet in from the eastern edge of the 120-foot-wide easement. Based on preliminary design, approximately 53 new structures would be erected on the new 69-kV transmission line: 46 galvanized steel poles, six engineered foundation poles, and one cable pole. Two staging yards have been identified for the project: one at the Miguel Substation and another on the north side of Hunte Parkway between Discovery Falls, Eastlake Parkway, and Crossroads Street. The proposed Salt Creek Substation site would be located on an 11.6-acre site directly south of Hunte Parkway, near the southern terminus of Exploration Falls Drive and adjacent to the Miguel to Mexico transmission line corridor.

Site Description

For purposes of this report, the term "project survey area" refers to the transmission line corridor (which contains an existing wood pole alignment) and two staging yards, plus a 500-foot survey buffer around each of these areas. The project survey area occurs within the City of Chula Vista's Multiple Species Conservation Planning (MSCP) Subarea Plan (Subarea Plan) Otay Ranch Planning Area, within areas planned for development (e.g., outside of the Otay Ranch Preserve). The project survey area contains a variety of developed areas and native habitats, including coastal sage scrub, riparian scrub,

Ms. Susie Tharratt
Recovery Permit Coordinator
January 3, 2013
Page 2

grassland, and nonnative habitats (nonnative grassland and disturbed areas). Several existing dirt access roads that serve the existing substation and the power pole alignment cross the project survey area.

Habitat at the northern end of the transmission line corridor, near the existing Miguel Substation, consists of nonnative grassland, coastal sage scrub, and riparian scrub. Habitat along the central portion of the transmission line corridor consists of nonnative grassland, disturbed areas with very little native vegetation, and native vegetation consisting of small patches of coastal sage scrub. Habitat at the southern end of the transmission line corridor near the proposed Salt Creek Substation consists of nonnative grassland, coastal sage scrub, riparian scrub, and disturbed areas.

Background Information

CAGN, a subspecies of California gnatcatcher (*Polioptila californica*), is federally listed as threatened by the U.S. Fish and Wildlife Service (USFWS 1993), and is considered a species of special concern by the California Department of Fish and Game (CDFG 2011). Critical habitat was originally designated by the U.S. Fish and Wildlife Service (USFWS) for CAGN in 2000, but was revised; a final rule was published in 2007 (USFWS 2007). No recovery plan has been drafted for CAGN. CAGN is an uncommon year-round resident of Southern California. This species is declining proportionately with the continued loss of coastal sage scrub habitat in the six Southern California counties located within the coastal plain (San Bernardino, Ventura, Los Angeles, Orange, San Diego, and Riverside).

The primary cause of the decline of CAGN is the cumulative loss of coastal sage scrub vegetation to urban and agricultural development, poor dispersal, reliance on a specific habitat type, and difficulty in successful breeding. Studies suggest that CAGN may be highly sensitive to the effects of habitat fragmentation and development activity (Atwood 1990; ERCE 1990). USFWS has estimated that coastal sage scrub habitat has been reduced by 70% to 90% from its historical extent (USFWS 1991), and little of what remains is protected in natural open space.

CAGN generally inhabits Diegan coastal sage scrub and Riversidian coastal sage scrub dominated by California sagebrush and flat-topped buckwheat, generally below 1,500 feet in elevation along the coastal slope. When nesting, CAGN typically avoids slopes greater than 25% that have tall, dense vegetation. CAGN pairs will attempt several nests each year, each placed in a different location inside of their breeding territory, but most nest attempts are unsuccessful due to depredation by a variety of species (Atwood and Bontrager 2001). Clutch size ranges from one to five eggs, with three or four eggs most common. CAGN tends to have slightly smaller clutches in years with poor rainfall and will experience a higher rate of mortality during cold winters (Atwood and Bontrager 2001; Grishaver et al. 1998). CAGN will remain paired through the non-breeding season and will generally expand their home range when not breeding. Juvenile CAGNs tend to remain close to their natal territories. On average, juveniles disperse less than 1.2 miles from their natal territories, making colonization of distant habitat patches difficult.



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Recovery Permit Coordinator
January 3, 2013
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Survey Methodology

Prior to beginning CAGN surveys in 2012, AECOM consulted historical biological information, including the California Natural Diversity Database (CDFG 2012a), and conducted a biological reconnaissance survey in 2012 to determine the extent of suitable CAGN habitat within the project survey area (Figure 2). Approximately 66 acres were considered potentially suitable CAGN habitat within the project survey area (Figures 3a and 3b). This area was considered reasonable to survey in 1 person day by permitted biologists.

Surveys were completed within the project survey area between May 11, 2012 and August 16, 2012, in all areas of suitable CAGN habitat between 6 a.m. and 12 noon. These surveys followed the *Coastal California Gnatcatcher Presence/Absence Survey Guidelines* (USFWS 1997, dated February 28, 1997, and amended July 28, 1997).

The project is located within San Diego Gas & Electric's Natural Community Conservation Plan (NCCP). According to protocol, if the project is located within the jurisdiction of an NCCP, a minimum of three surveys must be conducted at least 1 week apart between February 15 and August 30 to determine the presence/absence of CAGN. The NCCP is a program of the California Department of Fish and Game (CDFG) that identifies and provides for the regional or area-wide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity. The primary objective of the NCCP program is to conserve natural communities at the ecosystem level while accommodating compatible land use. The program seeks to anticipate and prevent the controversies and gridlock caused by species' listings by focusing on the long-term stability of wildlife and plant communities and including key interests in the process (CDFG 2012b).

The surveys consisted of walking meandering transects through suitable CAGN habitat, including all scrub associations. AECOM biologist James McMorrان conducted the surveys under permit TE-820658-4. One supervised individual accompanied Mr. McMorrان during the surveys, AECOM biologist Brynne Mulrooney. The biologists conducted passive surveillance (i.e., listening and looking for the species) in all habitats with potential to support CAGN. If an observation was not made after approximately 5 to 10 minutes of passive survey activity, a digital vocalization of CAGN was broadcast for approximately 5 to 10 seconds (i.e., active survey activity), followed by another period of passive observation. The digital vocalization was discontinued with any positive CAGN response. Surveys were not conducted during periods of inclement weather such as extreme wind or during a rain event.

As allowed under AECOM's endangered species permit, this survey method "takes" CAGN through harassment with playback (of any form) of CAGN vocalizations. No individual CAGNs were captured.

Ms. Susie Tharratt
Recovery Permit Coordinator
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Results

A summary of survey dates, times, weather conditions, permitted biologists, and observations are presented in Table 1. During surveys, temperature ranged from 63 to 83 degrees Fahrenheit (°F) and wind speed ranged from an average of 0 to 7 miles per hour (mph). Datasheets can be found in Appendix A.

CAGNs were detected within the project survey area during all three surveys. Detections of CAGN pairs/individuals fluctuated per survey period, with the lowest detection rate occurring during the final CAGN survey. Many individuals were neither aged nor sexed, as the difference between male, female, and immature CAGNs can pose an identification problem, especially during the time period when the final two surveys occurred. Therefore, CAGNs were only sexed when obvious characteristics and/or behavior were present. Locations of all CAGN detections are depicted in Figures 3a and 3b.

Results for Survey 1:

- Two CAGN pairs, three individual males, and nestlings (heard near one of the males)
- A total of seven CAGNs detected (nestlings not included; the nest area was not approached)

Results for Survey 2:

- One family group containing at least one fledgling; one adult associating with one fledgling; one male associating with one female/fledgling; two individuals not aged or sexed; and one male with another individual heard only
- A total of 11 CAGNs detected

Results for Survey 3:

- Two family groups, each containing one or two fledglings
- A total of six CAGNs detected

In addition to CAGN, three wildlife species with special status (CDFG 2011) were detected during CAGN surveys within or adjacent to the project survey area: least Bell's vireo (*Vireo bellii pusillus*; federally and state endangered), white-tailed kite (*Elanus leucurus*; state fully protected species), burrowing owl (*Athene cunicularia*; species of special concern, CDFG), and yellow-breasted chat (*Icteria virens*; species of special concern, CDFG). A list of wildlife species observed during surveys can be found in Appendix B.



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Recovery Permit Coordinator
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Table 1
Coastal California Gnatcatcher Survey
Dates, Time, Weather Conditions, Permitted Biologists, and Observations

Survey	Date	Time	% Cloud Cover (Start-End)	Temperature (°F) (Start-End)	Average Wind Speed (mph) (Start-End)	Permitted Biologist*	CAGN Observations
1	May 11, 2012	0700-1200	80-10	64-73	2-7	James McMorran	2 CAGN pairs; 3 individuals
2	Jul 24, 2012	0700-1200	100-10	63-74	2-5	James McMorran	1 family group; 7 individuals; 2 fledglings
3	Aug 16, 2012	0700-1200	90-0	76-83	0-2	James McMorran	2 family groups

* Brynne Mulrooney assisted on all surveys.

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Discussion

Overall, the habitat quality for CAGN varied throughout the project survey area. A variety of topography, development, and habitats are found within this area, including areas of chaparral, nonnative grasslands, disturbed and/or developed areas, and both large and isolated areas of coastal sage scrub. It is difficult to know the exact number of CAGNs using the project survey area and abutting territories off-site. However, observations of CAGN, from individuals to family groups with fledglings, confirms that areas of the project survey area are used by and are suitable for breeding CAGNs.

If you have any questions or require additional information, please feel free to contact James McMorran at (619) 233-1454, ext. 6929.

Sincerely,



James McMorran
Wildlife Biologist

Certification Statement

Qualified AECOM biologists who conducted CAGN surveys for the a new 69-kV distribution line site associated with the proposed Salt Creek Substation certify that the information in this survey report fully and accurately represents the work performed by AECOM biologists. Signatures of current AECOM biologist James McMorran, who conducted the protocol surveys, is included below. The results of focused surveys for listed species are typically considered valid for 1 year by the resource agencies.

Attachments: Figure 1 – Regional Map
Figure 2 – Vicinity Map
Figure 3a – CAGN Detections and other Sensitive Wildlife Species (North)
Figure 3b – CAGN Detections and other Sensitive Wildlife Species (South)
Appendix A – Field Datasheets
Appendix B – Wildlife Species Detected during CAGN Surveys

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Recovery Permit Coordinator
January 3, 2013
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FIGURES



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2011

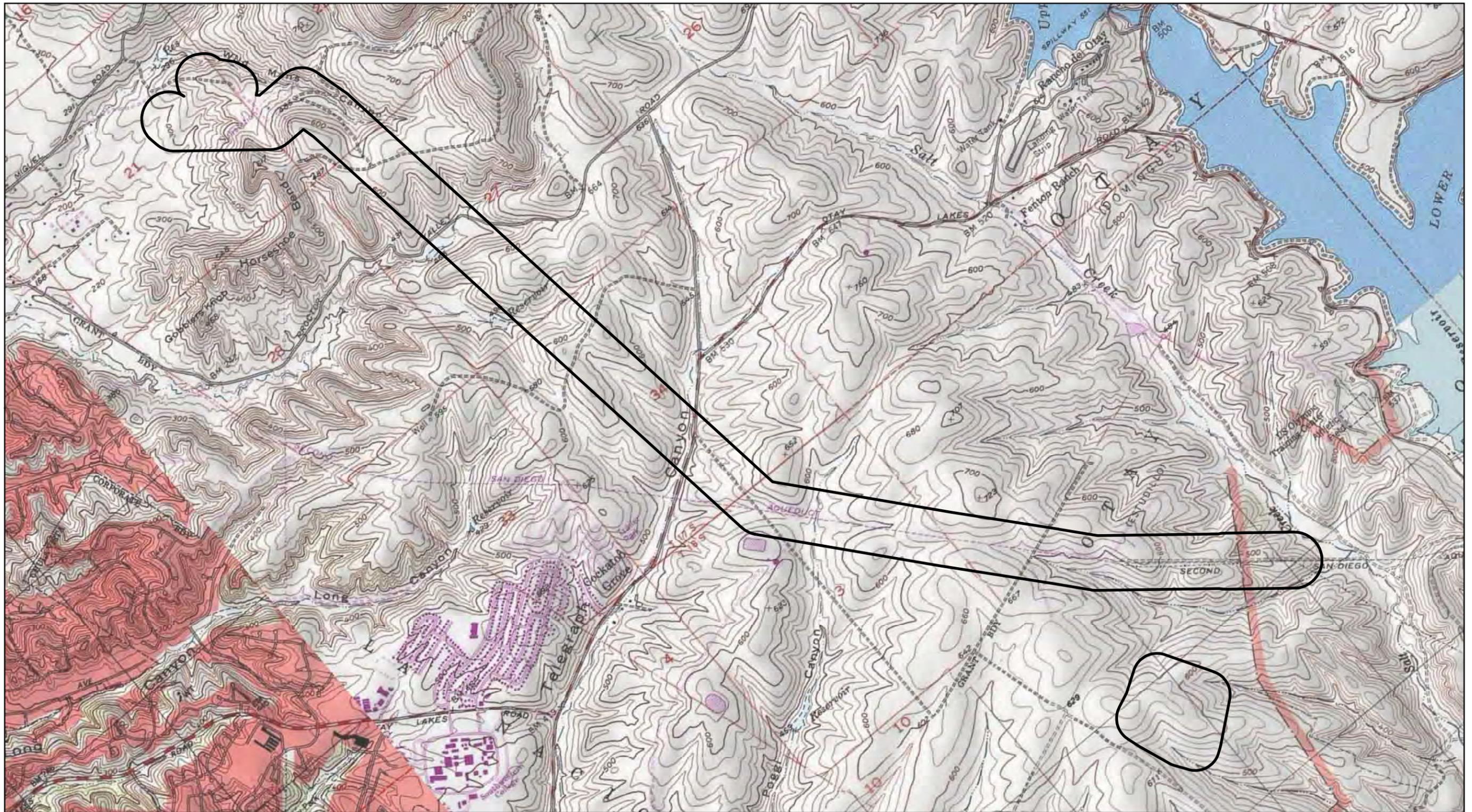


0 5 10 Miles



Scale: 1:316,800 1 inch = 5 miles

Figure 1
Regional Map



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2011

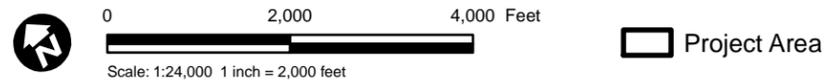


Figure 2
Vicinity Map



- Coastal California Gnatcatcher (CAGN)**
- CAGN Suitable Habitat
- CAGN and Other Special-Status Species**
- Survey 1**
- CAGN, 1 male
 - CAGN, pair
 - Yellow-breasted chat, 1 individual
- Survey 2**
- CAGN, 1 individual and 1 fledgling
 - CAGN, 1 male and 1 individual
 - CAGN, 2 individuals
- Survey 3**
- CAGN, family group
- Survey Area**
- Transmission Line Corridor
 - Transmission Line 500-Foot Buffer
 - Staging Area and 500-Foot Buffer
 - Existing Substation

Source: GeomorphIS, LLC, AECOM, SDG&E 2012; Esri Basemaps, 2012

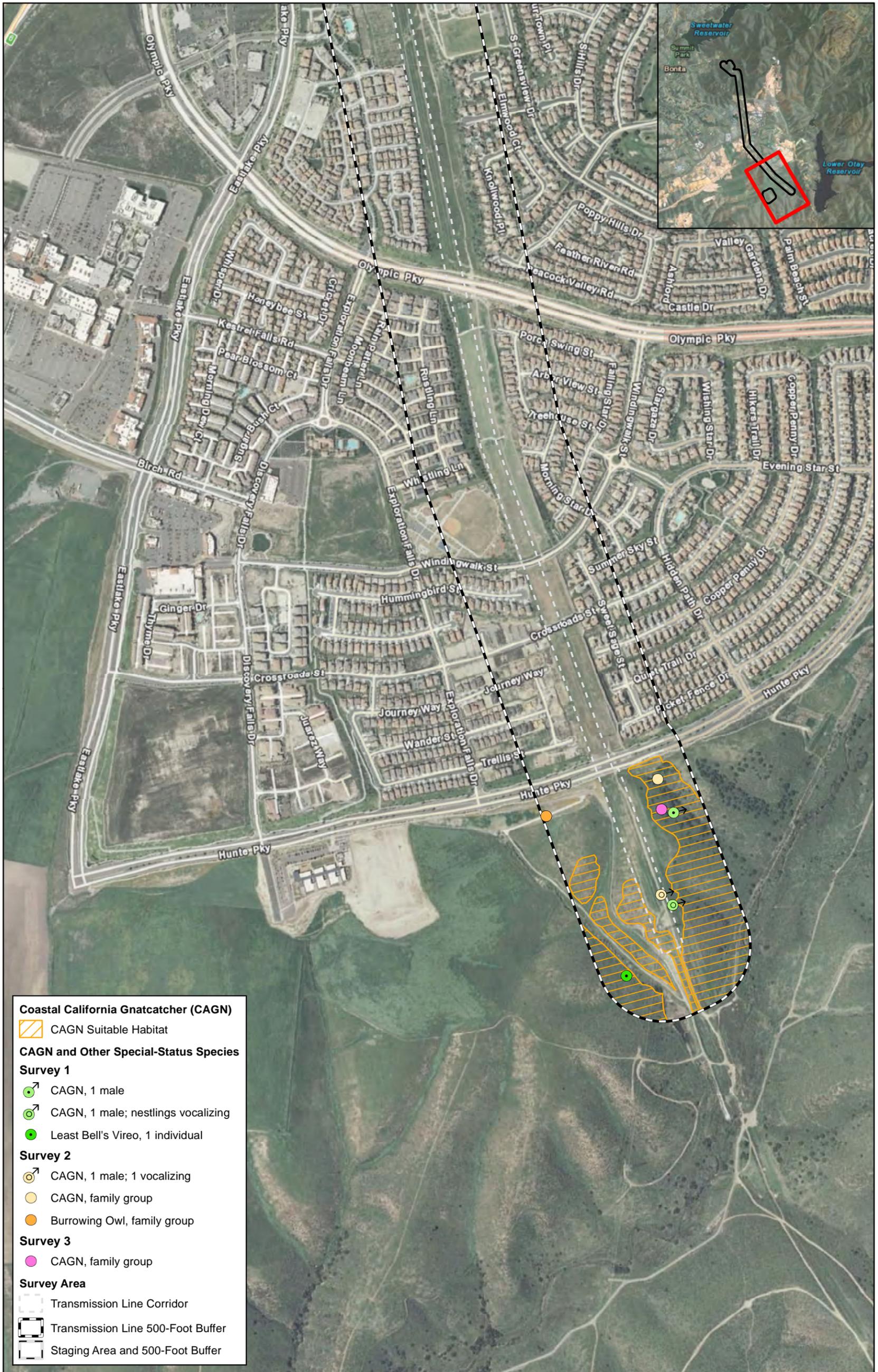


0 725 1,450 Feet



Scale: 1:8,700 1 inch = 725 feet

Figure 3a
Coastal California Gnatcatcher Detections and
Other Special-Status Species



Source: GeomorphIS, LLC, AECOM, SDG&E 2012; Esri Basemaps, 2011



0 725 1,450 Feet



Scale: 1:8,700 1 inch = 725 feet

Figure 3b
Coastal California Gnatcatcher Detections and
Other Special-Status Species

APPENDIX A
FIELD DATASHEETS

~~CAGN~~ SURVEYS

CAGN

Surveyor: JMC Add'l Person: BRYANNE Mulrooney GPS Unit: _____
 Project: SALT CREEK Survey Section: _____ Map #: _____
 Date: 5/11/12 Survey Type: ~~CAGN~~ CAGN Survey 1 of 3
 Time Start: 0700 Time End: 1200

Start: T: 64° CC: 80% Wind Sp/Dir: 0-2 W General Weather Condition: _____

Map/ GPS #	Time	Species	Age	Sex	Point Type	Comments
		BUOR	AJU	MFU		
		PARL	AJU	MFU		
		CAUT	AJU	MFU		
		BLGR	AJU	MFU		
		WTKI	AJU	MFU		
		COYE	AJU	MFU		
		SOSP	AJU	MFU		
		LEGO	AJU	MFU		
		COHU	AJU	MFU		
		MOBO	AJU	MFU		
		ECSP	AJU	MFU		
SC-CAGN-01	0830	CAGN	ⓐJU	ⓓFU		
		CAGU	AJU	MFU		
		NOMO	AJU	MFU		
SC-CAGN-02	0902	CAGN	ⓐJU	ⓓFU		
SC-CAGN-03	0912	CAGN	ⓐJU	ⓓFU		
		CLSW	AJU	MFU		
		RTHA	AJU	MFU		
		WEKI	AJU	MFU		
		OCWA	AJU	MFU		
		SAPH	AJU	MFU		
		WEME	AJU	MFU		
SC-CAGN-04	1047	CAGN	ⓐJU	ⓓFU		
SC BTJA-01	1050	BTJA	AJU	MFU		Black-tailed Jack <u>PARRO</u>
SC CAGN-05	1100	CAGN	ⓐJU	ⓓFU		Young heard calling in addition
SC-LBVI-01	1119	LBVI	ⓐJU	MFU		
			AJU	MFU		
			AJU	MFU		
			AJU	MFU		
			AJU	MFU		

End: T: 73 CC: 10% Wind Sp/Dir: 3-7 W General Weather Condition: Sunny

APPENDIX B

WILDLIFE SPECIES DETECTED DURING CAGN SURVEYS

WILDLIFE SPECIES LIST

<i>Family</i>	<i>Scientific Name</i>	<i>Common Name</i>
GALLIFORMES: Odontophoridae		
	<i>Callipepla californica</i>	California Quail
ACCIPITRIFORMES: Cathartidae		
	<i>Cathartes aura</i>	Turkey Vulture
ACCIPITRIFORMES: Accipitridae		
	<i>Elanus leucurus</i> ²	White-Tailed Kite
	<i>Accipiter cooperii</i>	Cooper's Hawk
	<i>Buteo jamaicensis</i>	Red-Tailed Hawk
FALCONIFORMES: Falconidae		
	<i>Falco sparverius</i>	American Kestrel
CHARADRIIFORMES: Charadriidae		
	<i>Charadrius vociferus</i>	Killdeer
COLUMBIFORMES: Columbidae		
	<i>Zenaida macroura</i>	Mourning Dove
CUCULIFORMES: Cuculidae		
	<i>Geococcyx californianus</i>	Greater Roadrunner
APODIFORMES: Trochilidae		
	<i>Calypte anna</i>	Anna's Hummingbird
	<i>Calypte costae</i>	Costa's Hummingbird
PASSERIFORMES: Tyrannidae		
	<i>Sayornis nigricans</i>	Black Phoebe
	<i>Sayornis saya</i>	Say's Phoebe
	<i>Tyrannus verticalis</i>	Western Kingbird
PASSERIFORMES: Vireonidae		
	<i>Vireo bellii pusillus</i> ¹	Least Bell's Vireo
PASSERIFORMES: Corvidae		
	<i>Aphelocoma californica</i>	Western Scrub-Jay
	<i>Corvus corax</i>	Common Raven
PASSERIFORMES: Hirundinidae		
	<i>Petrochelidon pyrrhonota</i>	Cliff Swallow
PASSERIFORMES: Aegithalidae		
	<i>Psaltriparus minimus</i>	Bushtit

<i>Family</i>	<i>Scientific Name</i>	<i>Common Name</i>
PASSERIFORMES: Troglodytidae		
	<i>Thryomanes bewickii</i>	Bewick's Wren
	<i>Troglodytes aedon</i>	House Wren
PASSERIFORMES: Polioptilidae		
	<i>Polioptila californica californica</i> ^{1*}	Coastal California Gnatcatcher
PASSERIFORMES: Sylviidae		
	<i>Chamaea fasciata</i>	Wrentit
PASSERIFORMES: Mimidae		
	<i>Mimus polyglottos</i>	Northern Mockingbird
	<i>Toxostoma redivivum</i>	California Thrasher
PASSERIFORMES: Sturnidae		
	<i>Sturnus vulgaris</i>	European Starling
PASSERIFORMES: Parulidae		
	<i>Oreothlypis celata</i>	Orange-Crowned Warbler
	<i>Geothlypis trichas</i>	Common Yellowthroat
	<i>Icteria virens</i> *	Yellow-Breasted Chat
PASSERIFORMES: Emberizidae		
	<i>Pipilo maculatus</i>	Spotted Towhee
	<i>Aimophila ruficeps canescens</i>	Southern California Rufous-Crowned Sparrow
	<i>Melospiza crissalis</i>	California Towhee
	<i>Melospiza melodia</i>	Song Sparrow
PASSERIFORMES: Cardinalidae		
	<i>Pheucticus melanocephalus</i>	Black-Headed Grosbeak
PASSERIFORMES: Icteridae		
	<i>Agelaius phoeniceus</i>	Red-Winged Blackbird
	<i>Sturnella neglecta</i>	Western Meadowlark
	<i>Icterus bullockii</i>	Bullock's Oriole
PASSERIFORMES: Fringillidae		
	<i>Carpodacus mexicanus</i>	House Finch
	<i>Spinus psaltria</i>	Lesser Goldfinch

¹ State and/or federally threatened or endangered species

² State fully protected species

* State species of special concern

APPENDIX H

**45-DAY REPORT FOR THE
LEAST BELL'S VIREO**



AECOM
1420 Kettner Boulevard
Suite 500
San Diego, CA 92101
www.aecom.com

619.233.1454 tel
619.233.0952 fax

October 4, 2011

Ms. Erin McCarthy
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

RE: 45-Day Summary Report of 2011 Protocol Surveys for Least Bell's Vireo for the Proposed Salt Creek Substation for SDG&E, Otay Mesa, San Diego County, California

Dear Ms. McCarthy:

This letter summarizes results of protocol surveys conducted during 2011 by AECOM to determine the presence or absence of the federally threatened least Bell's vireo (*Vireo bellii pusillus*; LBV) within the proposed Salt Creek Substation site (project site) in San Diego County (Figure 1). Surveys were conducted on behalf of San Diego Gas and Electric (SDG&E).

Project Description

The Salt Creek Substation is proposed by SDG&E for meeting the electrical infrastructure needs of the Otay Ranch Community. The approximately 19-acre site is located on Otay Mesa in Chula Vista, California, south of the intersection of Hunte Parkway and Exploration Way (Figure 2).

Site Description

For purposes of this report, the term "project survey area" refers to the proposed Salt Creek Substation site, plus a 500-foot survey buffer. The project survey area occurs within the City of Chula Vista's Multiple Species Conservation Planning (MSCP) Subarea Plan (Subarea Plan) Otay Ranch Planning Area, within areas planned for development (e.g., outside of the Otay Ranch Preserve). The proposed project survey area contains a variety of native habitats, including coastal sage scrub, riparian scrub, grassland, and open clay soils throughout the grasslands and coastal sage scrub. Several dirt access roads cross the project survey area. The majority of the project survey area is grassland on a mesa top (with a small section of coastal sage scrub), with adjacent coastal sage scrub along the slopes of the mesa (within the 500-foot survey buffer). The proposed project survey area contains suitable LBV habitat that consists of a narrow strip of southern willow scrub of approximately 1 acre.

Background Information

The LBV was listed as endangered by the U.S. Fish and Wildlife Service (USFWS) on May 2, 1986 (Federal Register 51[85]:16474–16481), with designated critical habitat (Federal Register 59[22]:4845–4867). This listing status applies to the entire population of LBV. A

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draft recovery plan was written by USFWS and circulated for review in 1998 (USFWS 1998). No critical habitat occurs within the biological study area. The California Department of Fish and Game (CDFG) listed this subspecies as endangered on October 2, 1980.

Historically, this subspecies was a common summer visitor to riparian habitat throughout much of California. Currently, LBV is found only in riparian woodlands in Southern California, with the majority of breeding pairs in San Diego, Santa Barbara, and Riverside Counties. Substantial LBV populations are currently found on five rivers in San Diego County (Tijuana, Sweetwater, San Diego, San Luis Rey, and Santa Margarita Rivers), with smaller populations on other drainages. During 1996, there were 1,423 territorial males recorded within San Diego County (Unitt 2004). From 2001 through 2005, there were 1,609 pairs recorded in San Diego County, which accounts for approximately 54% of the total LBV population within California (USFWS 2006).

LBV is migratory and arrives in San Diego County in late March through early April and leaves for its wintering grounds in September. LBV primarily occupies riparian woodlands that include dense to moderately open cover within 3 to 7 feet of the ground and a dense, stratified canopy. The subspecies inhabits low, dense riparian growth along water or along dry parts of intermittent streams. The understory is typically dominated by species of willow (*Salix* sp.) and mulefat (*Baccharis salicifolia*). Overstory species typically include cottonwood (*Populus* sp.), western sycamore (*Platanus racemosa*), and mature willows. The subspecies typically builds nests in vegetation 3 to 4 feet above the ground (Salata 1984) where moderately open midstory cover occurs with an overstory of willows, cottonwoods, sycamores, or coast live oaks (*Quercus agrifolia*). Nests are also often placed along internal or external edges of riparian thickets at an average of 3.3 feet above the ground (Unitt 2004). Riparian plant succession is an important factor in maintaining vireo habitat.

LBV's decline is attributed to loss, degradation, and fragmentation of riparian habitat, combined with brood and nest parasitism by the brown-headed cowbird (*Molothrus ater*; BICO). LBVs are known to be sensitive to many forms of disturbance, including noise, night-lighting, and consistent human presence. Due to concerted programs focused on preserving, enhancing, and creating suitable nesting habitat, the LBV population has steadily increased in size along several of its breeding drainages in Southern California. Significant increases in breeding populations have occurred along the Santa Ana River at Prado Basin and on the Santa Margarita River on Marine Corps Base Camp Pendleton, as well as at several other sites throughout the region.

Survey Methodology

Prior to surveying the project survey area, AECOM biologists conducted vegetation mapping and a habitat assessment of all areas within the project survey area. The LBV survey area was limited to all riparian scrub habitat within the project survey area, totaling approximately 1 acre. LBV surveys followed the current USFWS survey protocol for the subspecies (USFWS 2001). The surveys consisted of walking through all potential LBV habitat. Qualified AECOM biologists conducted passive surveillance (i.e., listening and looking for

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the species) in all areas of suitable habitat for LBV. Per the current USFWS protocol, suitable habitat within the project survey area was surveyed eight times, at least 10 days apart, during the 2011 breeding season. Surveys were completed between dawn and 11 a.m. In addition to any LBV observations/detections, all avian species detected were recorded on field datasheets.

Results

Protocol-level surveys were conducted between 5 May and 27 July 2011 within suitable habitat in the project survey area (Table 1). A summary of survey data is presented in Table 1, including date of survey, time, weather conditions, field biologist, and LBV observations. Field notes are presented in Appendix A. No LBVs were detected within the project survey area during these surveys.

Table 1
Least Bell's Vireo Survey
Dates, Time, Weather, Biologist, and Observations

Date	Time	Weather	Biologist	LBV Observations
05 May 11	0630-0715	Start: 55.7°F, wind 0-1 mph, 0% clouds End: 65.5°F, wind 0-1 mph, 0% clouds	Brennan Mulrooney	no LBV observed
19 May 11	0745-0830	Start: 59.2°F, wind 0-2 mph, 80% clouds End: 64.3°F, wind 0-5 mph, 80% clouds	Brennan Mulrooney	no LBV observed
31 May 11	0700-0830	Start: 58.1°F, wind 0 mph, 0% clouds End: 65.7°F, wind 0 mph, 0% clouds	Brennan Mulrooney	no LBV observed
10 June 11	0730-0850	Start: 56°F, wind 0-1 mph, 100% clouds End: 56°F, wind 0-1 mph, 100% clouds	Brennan Mulrooney	no LBV observed
21 June 11	0730-0843	Start: 61°F, wind 0 mph, 100% clouds End: 62°F, wind 0 mph, 100% clouds	Brennan Mulrooney	no LBV observed
2 July 11	0715-0803	Start: 62°F, wind 0 mph, 100% clouds End: 63°F, wind 0 mph, 100% clouds	Brennan Mulrooney	no LBV observed
12 July 11	0800-0930	Start: 63°F, wind 3 mph, 50% clouds End: 68°F, wind 2 mph, 0% clouds	Brennan Mulrooney	no LBV observed
27 July 11	0835-0950	Start: 65.5°F, wind 1 mph, 100% clouds End: 67.0°F, wind 0 mph, 100% clouds	Brennan Mulrooney	no LBV observed

While no LBVs were detected within the project survey area, the following state special-status (CDFG) species were found on or near the survey area: San Diego black-tailed jackrabbit (*Lepus californicus bennettii*; CDFG Species of Special Concern [SSC]), white-tailed kite (*Elanus leucurus*; CDFG Fully Protected Species), Cooper's hawk (*Accipiter cooperii*; CDFG Watch List), northern harrier (*Circus cyaneus*; SSC), coastal California gnatcatcher (*Polioptila californica californica*; federally threatened), yellow warbler (*Setophaga petechia*; SSC), yellow-breasted chat (*Icteria virens*; SSC), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*; CDFG Watch List), and grasshopper sparrow (*Ammodramus savannarum*; SSC). Locations of these species are depicted in Figure 3. No BHCO were observed during surveys.

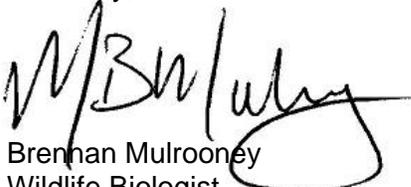
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Discussion

Protocol-level surveys for LBV did not yield any sign of this subspecies within the project survey area or adjacent suitable habitat. The suitable habitat within the project survey area only occurs as a very narrow strip surrounded by upland habitat, and it is possible that this habitat is currently too narrow and/or fragmented for LBV to nest. A 500-foot buffer surrounding the project site contained suitable habitat for LBV and was surveyed during burrowing owl surveys. The habitat within the buffer is similarly narrow, and no LBV were detected within this buffer. On 21 June 2011, an LBV was detected in the riparian corridor downstream of the site at the confluence with Salt Creek, approximately 530 meters from the project border (Figure 3). This is the closest to the site that an LBV was detected during the spring of 2011. This riparian corridor off-site has a better habitat quality than the riparian corridor within the project survey area, with a longer width of intact riparian vegetation relative to the narrow strip that occurs within the project survey area.

If you have any questions or require additional information, please feel free to contact me at (619) 233-1454, ext. 6967.

Sincerely,



Brennan Mulrooney
Wildlife Biologist
brennan.mulrooney@aecom.com

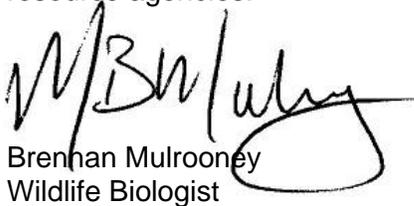
Attachments:

- Figure 1 – Regional Map
- Figure 2 – Vicinity Map
- Figure 3 – Least Bell's Vireo and Other Sensitive Species Observations
- Appendix A – Field Data Sheets from Least Bell's Vireo Protocol Surveys
- Appendix B – Wildlife Species Observed during Least Bell's Vireo Surveys

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Certification Statement

Brennan Mulrooney, a qualified biologist who conducted LBV surveys for the Salt Creek Substation site, certifies that the information in this survey report fully and accurately represents the work performed. Mr. Mulrooney's signature is included below. The results of protocol-level surveys for listed species are typically considered valid for 1 year by the resource agencies.

A handwritten signature in black ink, appearing to read 'Brennan Mulrooney', is written over the printed name and title.

Brennan Mulrooney
Wildlife Biologist

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Literature Cited

Salata, L. R. 1984. Status of the least Bell's vireo on Camp Pendleton, California: Report on research done in 1984. Unpublished Report. U.S. Fish and Wildlife Service, Laguna Niguel, California.

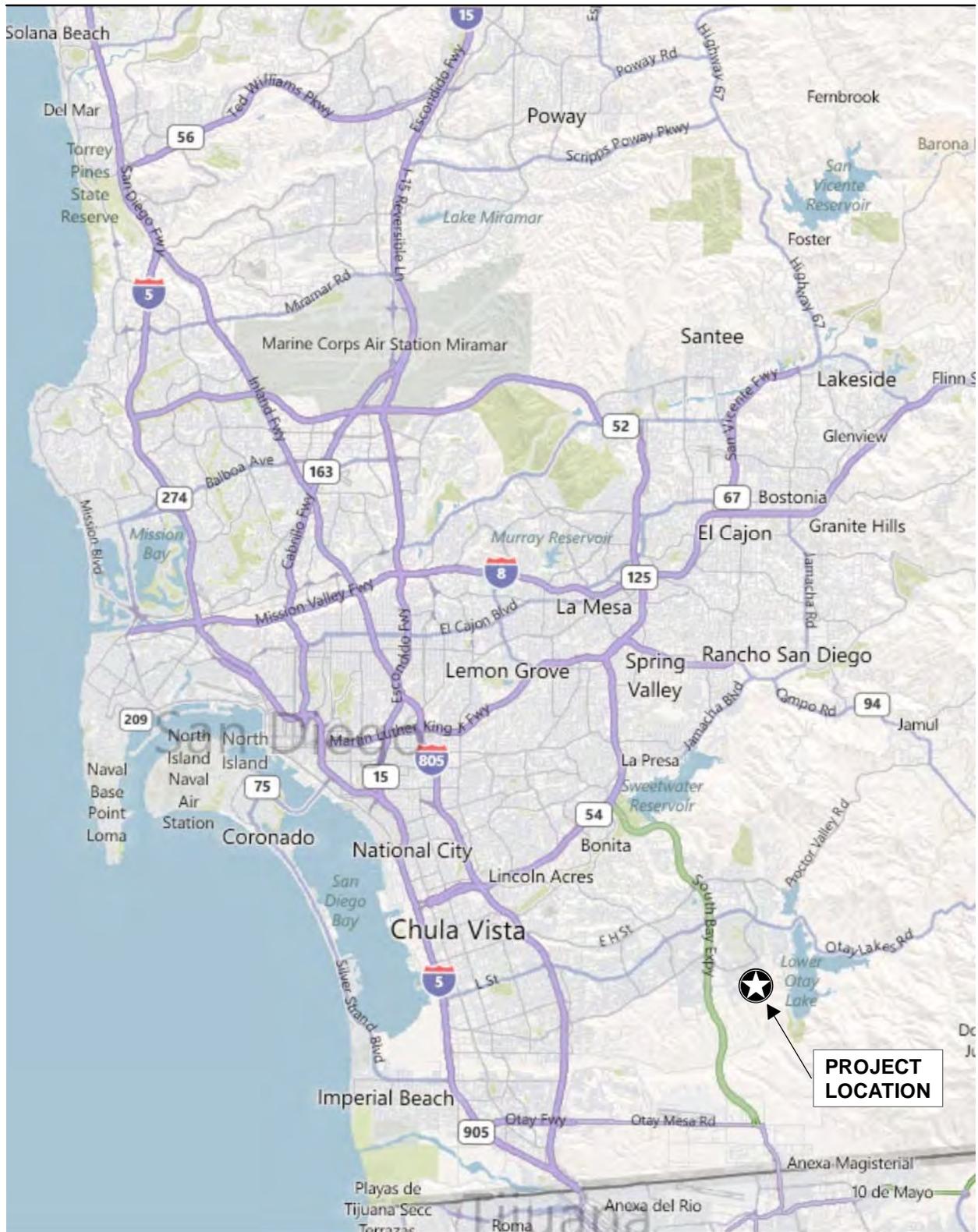
Unitt, Phillip. 2004. *San Diego County Bird Atlas*. San Diego Natural History Museum, P.O. Box 121390 San Diego, CA 92112-1390. Ibis Publishing Company.

U.S. Fish and Wildlife Service (USFWS). 1998. Draft Recovery Plan for the Least Bell's Vireo. Fish and Wildlife Service, Portland, Oregon. 139 pp.

U.S. Fish and Wildlife Service (USFWS). 2001. Least Bell's Vireo Survey Guidelines. Carlsbad Fish and Wildlife Office. January 19, 2001.

U.S. Fish and Wildlife Service (USFWS). 2006. Least Bell's Vireo (*Vireo bellii pusillus*) 5-year Review Summary and Evaluation. Carlsbad Fish and Wildlife Office, Carlsbad, California. September.

FIGURES



Source: Bing Maps 2011

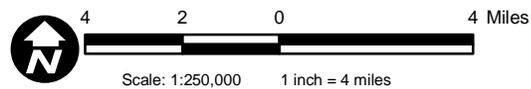
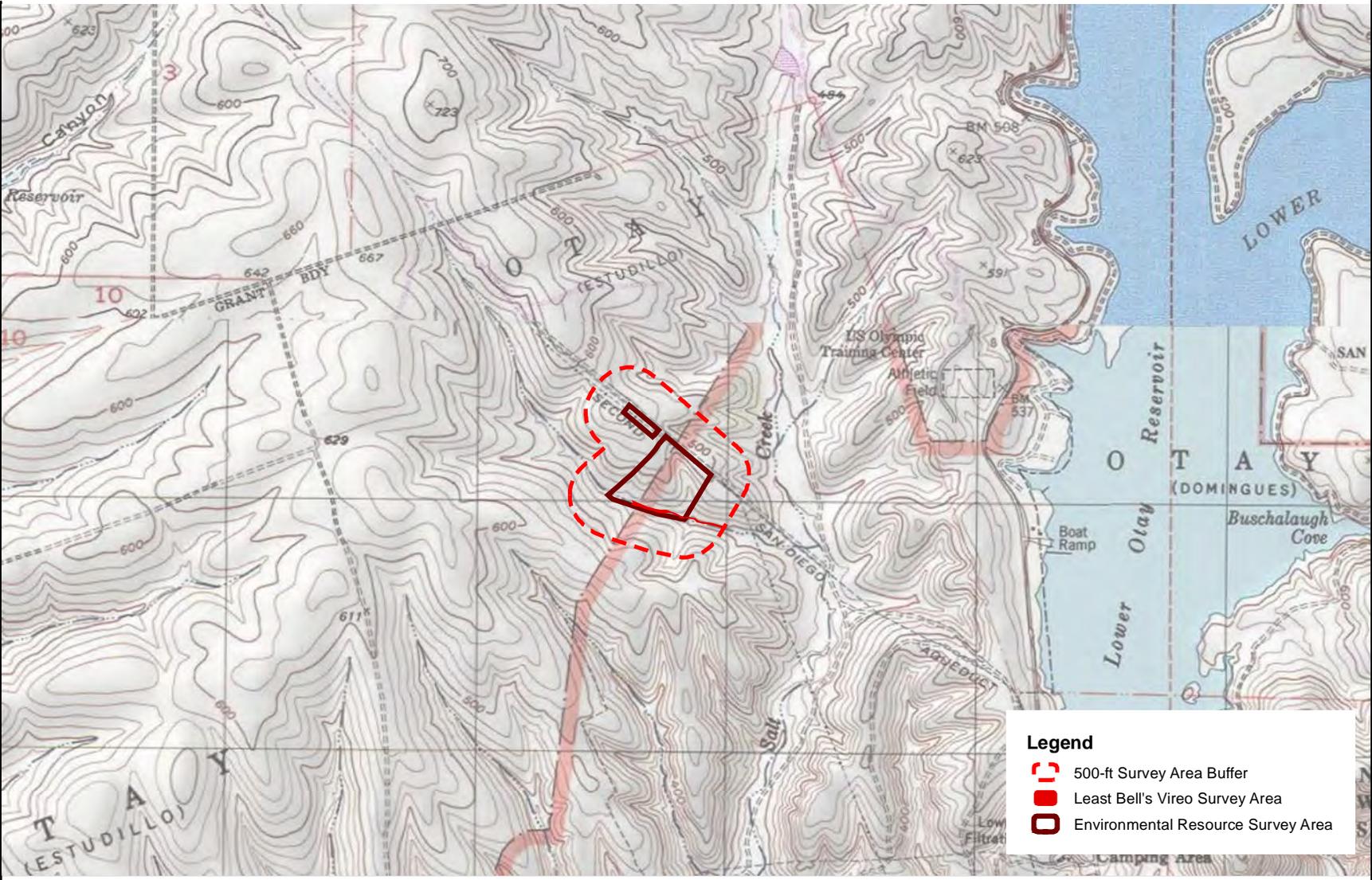


Figure 1
Regional Map

Salt Creek Substation LBV 45-Day Report

Path: P:\2009\09080065 SDGE Widget Bio Svcs\6.0 GIS\6.3 Layout\ets_3845\45-day report\fig1_regional.mxd, 9/16/2011, leej



Source: USGS Quad Jamul Mountains 1975; Otay Mesa 1975

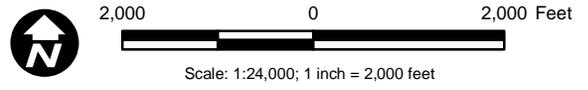


Figure 2
Vicinity Map



Source: Aerials Express 2010
 300 150 0 300 Feet
 Scale: 1:3,600; 1 inch = 300 feet

- Legend**
- 500-ft Survey Area Buffer
 - Least Bell's Vireo Survey Area
 - Environmental Resource Survey Area
 - Proposed Project Area
 - Proposed Limits of Grading
- Species Observed**
- Survey 1 (May 3, 2011)**
- San Diego Black-tailed Jackrabbit, Individual
 - Northern Harrier, Individual
 - Southern California Rufous-crowned Sparrow, Individual
 - Yellow Warbler, Individual
 - Yellow-breasted Chat, Individual
- Survey 2 (June 10, 2011)**
- San Diego Black-tailed Jackrabbit, Individual
 - Cooper's Hawk, Individual
 - Grasshopper Sparrow, Family Group
 - Least Bell's Vireo, Individual
 - Southern California Rufous-crowned Sparrow, Family Group
 - White-tailed Kite, Individual
- Survey 3 (May 19, 2011)**
- Southern California Rufous-crowned Sparrow, Individual
 - Yellow Warbler, Individual
 - Yellow-breasted Chat, Individual
- Survey 4 (May 31, 2011)**
- Coastal California Gnatcatcher, Individual
 - Grasshopper Sparrow, Individual
 - White-tailed Kite, Individual
 - Yellow Warbler, Individual
 - Yellow-breasted Chat, Individual
- Survey 5 (June 21, 2011)**
- San Diego Black-tailed Jackrabbit, Individual
 - Southern California Rufous-crowned Sparrow, Pair
- Survey 6 (July 2, 2011)**
- San Diego Black-tailed Jackrabbit, Individual
 - Southern California Rufous-crowned Sparrow, Individual
- Survey 7 (July 12, 2011)**
- San Diego Black-tailed Jackrabbit, Individual
 - Coastal California Gnatcatcher, Individual
 - Cooper's Hawk, Individual
 - Southern California Rufous-crowned Sparrow, Family Group
 - White-tailed Kite, Individual
- Survey 8 (July 27, 2011)**
- Southern California Rufous-crowned Sparrow, Individual
 - White-tailed Kite, Individual

Figure 3
Least Bell's Vireo and
Other Sensitive Species Observations

APPENDIX A

FIELD DATA SHEETS FROM LEAST BELL'S VIREO PROTOCOL SURVEYS

LBVI SURVEYS

Recorder: BMJ Add'l Person: GPS Unit: SM-C
 Project: OTAY HUNTE Survey Section: Map #:
 Date: 5/19/11 Survey Type: LBVI Survey 2 of
 Time Start: 0745 Time End: 0830

Start: T: 89.2 CC: 80 Wind Sp/Dir: 0-2 SE General Weather Condition: cool, calm
 End: T: 84.3 CC: 80 Wind Sp/Dir: 0-5 W General Weather Condition: cool, cloudy

Map/ GPS #	Time	Species	Age	Sex	Point Type	Comments
04YWAR001	0817	YWAR	AJU	MPFU	Singing Male	
04YBCN001	0848	YBCH	AJU	MPFU	Singing ♂	just outside Area
04RCSP001	0854	RCSP	AJU	MFU	Pair	acting like they had a nest
		COOP	AJU	MFU		
		EUST	AJU	MFU		
		BUSH	AJU	MFU		
		COHU	AJU	MFU		
		CORA	AJU	MFU		
		LEGO	AJU	MFU		
		HOPI	AJU	MFU		
		NOMO	AJU	MFU		
		WLSA	AJU	MFU		
		CALT	AJU	MFU		
		BLGR	AJU	MFU		
		AMGO	AJU	MFU		
		BLPI	AJU	MFU		
		ANBU	AJU	MFU		
		CLSW	AJU	MFU		
		HOWR	AJU	MFU		
		AMKE	AJU	MFU		
		RTIA	AJU	MFU		
		CAQU	AJU	MFU		
		COYE	AJU	MFU		
		GRRD	AJU	MFU		
		MOOD	AJU	MFU		
		WEME	AJU	MFU		
		CARI	AJU	MFU		
			AJU	MFU		
			AJU	MFU		
			AJU	MFU		

LBVI SURVEYS

Recorder: BMU Add'l Person: _____ GPS Unit: Campa-8
 Project: OTAY-HUNTER Survey Section: _____ Map #: _____
 Date: 5/31/11 Survey Type: LBVI Survey 3 of 8
 Time Start: 0700 Time End: 0825

Start: T: 58.1CC: 0 Wind Sp/Dir: 0 General Weather Condition: clear, calm
 End: T: 65.7CC: 0 Wind Sp/Dir: 0 General Weather Condition: clear, calm

Map/ GPS #	Time	Species	Age	Sex	Point Type	Comments
		LEBO	AJU	MFU		
		BLR	AJU	MFU		
		SAR	AJU	MFU		
		COYE	AJU	MFU		
		CAKI	AJU	MFU		
		SOSP	AJU	MFU		
		HOPI	AJU	MFU		
		ANHU	AJU	MFU		
		CLSW	AJU	MFU		
OHYWARD1	0739	YLAR	AJU	MFU	Indiv.	not singing
		BLR	AJU	MFU		
		CAQJ	AJU	MFU		
		RTNA	AJU	MFU		
		COHU	AJU	MFU		
		BUSH	AJU	MFU		
		HOWR	AJU	MFU		Feeding young
OHGRSP01	0743	GRSP	AJU	MFU	singing male	
OHWTKI01	0745	WTKI	AJU	MFU	Indiv	transiting over site
#		KILL	AJU	MFU		
		CALT	AJU	MFU		
		NDMD	AJU	MFU		
		CAT4	AJU	MFU		Feeding young
		MIDO	AJU	MFU		
		WAVL	AJU	MFU		
		LAZB	AJU	MFU		
		WIWA	AJU	MFU		
		NRWS	AJU	MFU		
		AMBO	AJU	MFU		
		WELU	AJU	MFU		
		COXA	AJU	MFU		

LBV SURVEY

* Species Observed *

Date: 6/10/11

Surveyor: BMU

Area: STAY HUNTS

X	Abrev.	SPECIES
	ALHU	Allen's hummingbird
	AMCO	American coot
	AMCR	American crow
X	AMGO	American goldfinch
X	AMKE	American kestrel
	AMPI	American pipit
X	ANHU	Anna's hummingbird
	ATFL	ash-throated flycatcher
	BARS	barn swallow
	BCHU	black-chinned humm.
	BEWR	Bewick's wren
	BHCO	brown-headed cowbird
	BHGR	black-headed grosbeak
X	BLGR	blue grosbeak
X	BLPH	black phoebe
	BRBL	Brewer's blackbird
X	BUSH	bushtit
	CAGO	Canada goose
	CAGU	California gull
X	CALT	California towhee
	CATH	California thrasher
X	CLSW	cliff swallow
	COGD	common ground dove
X	COHA	Cooper's hawk
	COMO	common moorhen
X	CORA	common raven
X	COYE	common yellowthroat
	DCCO	double-crested cormorant
	DOWO	downy woodpecker
	ECDO	Eurasian collared-dove
X	EUST	European starling
	GADW	gadwall
	GBHE	great blue heron
X	GREG	great egret
	GRHE	green heron
	GWTE	green-winged teal
X	HOFI	house finch
X	HOOR	hooded oriole
	HOWR	house wren
	HUVI	Hutton's vireo
	KILL	killdeer
	LAGO	Lawrence's goldfinch
X	LEGO	lesser goldfinch
	MALL	mallard
	MAWR	marsh wren
	MOCH	mountain chickadee
X	MODO	mourning dove

X	Abrev.	SPECIES
	NOFL	northern flicker
X	NOMO	northern mockingbird
	NRWS	N. rough-winged swallow
	NUWO	Nuttall's woodpecker
	OCWA	orange-crowned warbler
	OSPR	osprey
	PBGR	pie-billed grebe
	PEFA	peregrine falcon
	PHAI	phainopepla
	PISI	pine siskin
	RBGU	ring-billed gull
	RCKI	ruby-crowned kinglet
	RODO	rock dove
	RSHA	red-shouldered hawk
	RTHA	red-tailed hawk
X	RWBL	red-winged blackbird
X	SAPH	Say's phoebe
	SNEG	snowy egret
	SORA	sora
X	SOSP	song sparrow
X	SPTO	spotted towhee
	SWHA	Swainson's hawk
	SWTH	Swainson's thrush
	TUVU	turkey vulture
	VIRA	Virginia rail
	WAVI	warbling vireo
	WCSP	white-crowned sparrow
	WEBL	western bluebird
	WEKI	western kingbird
	WETA	western tanager
	WFIB	white-faced ibis
	WIWA	Wilson's warbler
	WODU	wood duck
X	WREN	wrenit
	WREN SP.	wren sp.
	WSJA	western scrub jay
	WTSW	white-throated swift
X	GRSP	
X	WREW	

Coyote, Aud COTTONTAIL, black-tailed Jackrabbit

LBVI SURVEYS

Recorder: BMU Add'l Person: _____ GPS Unit: Campo-8
 Project: OTM HUNTER Survey Section: _____ Map #: _____
 Date: 6/21/11 Survey Type: LBVI Survey 3 of 4
 Time Start: 0730 Time End: 0843

Start: T: 61° CC: 100 Wind Sp/Dir: 0 - General Weather Condition: cool, calm
 End: T: 62° CC: 100 Wind Sp/Dir: 0 - General Weather Condition: cool, calm

Map/ GPS #	Time	Species	Age	Sex	Point Type	Comments
		SOSP	AJU	MFU		
		BUSH	AJU	MFU		
		HDFI	AJU	MFU		
		LEGO	AJU	MFU		
		DCCO	AJU	MFU		
		CLSW	AJU	MFU		
		MADD	AJU	MFU		
		RTKA	AJU	MFU		
		CORA	AJU	MFU		
		AMKE	AJU	MFU		
		CALT	AJU	MFU		
		USEFL	AJU	MFU		silent -
		CATLH	AJU	MFU		
		CAGU	AJU	MFU		
		BLGR	AJU	MFU		
		EUST	AJU	MFU		
		HOOZ	AJU	MFU		
		ANKU	AJU	MFU		
		SAPH	AJU	MFU		
DHRCSP02	0811	RSP	AJU	MFU	pair	
DHBTJRO2	0800	BTJA	AJU	MFU		
		COYE	AJU	MFU		
		GRRO	AJU	MFU		
		AMSD	AJU	MFU		
		BLPH	AJU	MFU		
			AJU	MFU		
			AJU	MFU		
			AJU	MFU		
			AJU	MFU		
			AJU	MFU		
			AJU	MFU		

APPENDIX B

WILDLIFE SPECIES OBSERVED DURING LEAST BELL'S VIREO SURVEYS

APPENDIX B
Wildlife Species Observed during Least Bell's Vireo Surveys

Scientific Names	Common Names
Arthropods	
Order Lepidoptera	Butterflies and Moths
Family Nymphalidae	
<i>Danaus plexippus</i>	Monarch
Reptiles	
Order Squamata	Lizards and Snakes
Family Colubridae	
<i>Pituophis catenifer</i>	Gopher Snake
<i>Crotalus oreganus</i>	Western Rattlesnake
Birds	
Order Galliformes	Megapodes, Curassows, Pheasants, Quail, and Relatives
Family Phasianidae	
<i>Callipepla californica</i>	California Quail
Order Suliformes	Boobies, Cormorants, and Frigatebirds
Family Phalacrocoracidae	
<i>Phalacrocorax auritus</i>	Double-crested Cormorant
Order Ciconiiformes	Hérons, Storks, Vultures, and Relatives
Family Ardeidae	
<i>Ardea alba</i>	Great Egret
<i>Nycticorax nycticorax</i>	Black-crowned Night-heron
Order Accipitriformes	Hawks, Eagles, Kites, and Allies
Family Accipitridae	
<i>Elanus leucurus</i> ⁺	White-tailed Kite
<i>Circus cyaneus</i> [*]	Northern Harrier
<i>Accipiter cooperii</i> ⁺	Cooper's Hawk
<i>Buteo jamaicensis</i>	Red-tailed Hawk
Order Falconiformes	Falcons and Allies
Family Falconidae	
<i>Falco sparverius</i>	American Kestrel
Order Charadriiformes	Shorebirds and Allies
Family Charadriidae	
<i>Charadrius vociferous</i>	Killdeer
Family Laridae	
<i>Larus occidentalis</i>	Western Gull
<i>Hydroprogne caspia</i>	Caspian Tern
Order Columbiformes	Doves and Pigeons
Family Columbidae	
<i>Zenaida macroura</i>	Mourning Dove
Order Cuculiformes	Cuckoos and Relatives
Family Cuculidae	
<i>Geococcyx californianus</i>	Greater Roadrunner
Order Apodiformes	Swifts and Hummingbirds
Family Trochilidae	
<i>Calypte anna</i>	Anna's Hummingbird
<i>Calypte costae</i> ⁺	Costa's hummingbird
Order Passeriformes	Perching Birds
Family Tyrannidae	
<i>Empidonax difficilis/occidentalis</i>	Western Flycatcher
<i>Sayornis nigricans</i>	Black Phoebe
<i>Sayornis saya</i>	Say's Phoebe
<i>Myiarchus cinerascens</i>	Ash-throated Flycatcher
<i>Tyrannus vociferans</i>	Cassin's Kingbird
Family Vireonidae	
<i>Vireo gilvus</i>	Warbling Vireo

Scientific Names	Common Names
Family Corvidae	
<i>Corvus brachyrhynchos</i>	American Crow
<i>Corvus corax</i>	Common Raven
Family Hirundinidae	
<i>Stelgidopteryx serripennis</i>	Northern Rough-winged Swallow
<i>Petrochelidon pyrrhonota</i>	Cliff Swallow
Family Aegithalidae	
<i>Psaltriparus minimus</i>	Bushtit
Family Troglodytidae	
<i>Thryomanes bewickii</i>	Bewick's Wren
<i>Troglodytes aedon</i>	House Wren
Family Sylviidae	
<i>Polioptila californica californica</i> ¹	Coastal California Gnatcatcher
Family Mimidae	
<i>Mimus polyglottos</i>	Northern Mockingbird
<i>Toxostoma redivivum</i>	California Thrasher
Family Sturnidae	
<i>Sturnus vulgaris</i>	European Starling
Family Motacillidae	
<i>Anthus rubescens</i>	American pipit
Family Parulidae	
<i>Setophaga petechia</i>	Yellow Warbler
<i>Geothlypis trichas</i>	Common Yellowthroat
<i>Wilsonia pusilla</i>	Wilson's Warbler
<i>Icteria virens</i> *	Yellow-breasted Chat
Family Emberzidae	
<i>Aimophila ruficeps canescens</i> ⁺	Southern California Rufous-crowned Sparrow
<i>Pipilo maculatus</i>	Spotted Towhee
<i>Melospiza crissalis</i>	California Towhee
<i>Ammodramus savannarum</i> *	Grasshopper Sparrow
<i>Melospiza melodia</i>	Song Sparrow
Family Cardinalidae	
<i>Passerina caerulea</i>	Blue Grosbeak
<i>Passerina amoena</i>	Lazuli Bunting
Family Icteridae	
<i>Agelaius phoeniceus</i>	Red-winged Blackbird
<i>Sturnella neglecta</i>	Western Meadowlark
<i>Euphagus cyanocephalus</i>	Brewer's Blackbird
<i>Icterus cucullatus</i>	Hooded Oriole
<i>Icterus bullockii</i>	Bullock's Oriole
Family Fringillidae	
<i>Carpodacus mexicanus</i>	House Finch
<i>Spinus psaltria</i>	Lesser Goldfinch
<i>Spinus tristis</i>	American Goldfinch
Mammals	
Order Carnivora	Carnivores
Family Canidae	
<i>Canis latrans</i>	Coyote
Order Lagomorpha	Rabbits, Hares, and Pikas
Family Leporidae	
<i>Lepus californicus bennettii</i> ⁺	Black-tailed Jackrabbit
<i>Sylvilagus audubonii</i>	Desert Cottontail
Order Rodentia	Gnawing Mammals
Family Sciuridae	
<i>Spermophilus beecheyi</i>	California Ground Squirrel

¹Federally Threatened or Endangered Species

⁺State Species of Special Concern

*State Special Animal

APPENDIX I

30-DAY REPORTS FOR THE WESTERN BURROWING OWL

APPENDIX I-1
2011 RESULTS REPORT

December 22, 2011

Ms. Debbie Collins
San Diego Gas & Electric
8315 Century Park Court - CP21E
San Diego, CA 92123

RE: Western Burrowing Owl Presence/Absence Surveys for the Proposed Salt Creek Substation for SDG&E

Dear Ms. Collins:

The purpose of this letter report is to present the findings of breeding and winter season presence/absence surveys for western burrowing owl (*Athene cunicularia hypugaea*; WBO) for the proposed Salt Creek Substation. The purpose of the surveys was to determine if WBO inhabit the project site during the breeding and/or winter season. Surveys were conducted on behalf of San Diego Gas and Electric (SDG&E).

Project Description

The Salt Creek Substation is proposed by SDG&E for meeting the electrical infrastructure needs of the Otay Ranch community. The approximately 11.7-acre site is located on Otay Mesa in Chula Vista, California, south of the intersection of Hunte Parkway and Exploration Way (Figure 1).

For purposes of this report, the term "project survey area" refers to the proposed Salt Creek Substation site plus a 500-foot survey buffer. The project survey area occurs within the City of Chula Vista's Multiple Species Conservation Planning (MSCP) Subarea Plan Otay Ranch Planning Area, within areas planned for development. The site lies outside of the Otay Ranch Preserve, which is located approximately 1,200 feet southeast of the site (Figure 2).

The project survey area contains a variety of native habitats, including coastal sage scrub, a thin band of riparian scrub, grassland, and open clay soils throughout the grasslands and coastal sage scrub. The survey area also contains significant areas of nonnative, ornamental flowering plants and trees. Several dirt access roads cross the project survey area. The majority of the project survey area is grassland on a mesa top (with a small section of coastal sage scrub), with adjacent coastal sage scrub along the slopes of the mesa (within the 500-foot survey buffer). Suitable WBO habitat identified within the project survey area is approximately 50 acres.

Western Burrowing Owl Background Information

Regulatory Status

The WBO is considered a species of special concern by the California Department of Fish and Game (CDFG) due to intensive development pressure on the habitat of the species (CDFG 2009).

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Habitat Status

WBO habitat consists of annual and perennial grasslands, deserts, and scrublands characterized by low-growing vegetation (Zarn 1974; CBOC 1993). Suitable WBO habitat may also include trees and shrubs if the canopy covers less than 30 percent of the ground surface. Burrows are the essential component of WBO habitat, and both natural and artificial burrows provide protection, shelter, and nests for WBO. WBO typically use burrows made by mammals, such as California ground squirrels (*Spermophilus beecheyi*), but may also use human-made structures such as cement culverts; riprap; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement. WBO may use a site for migratory stopovers or year-round for breeding and foraging. Suitable habitat is considered occupied if there is an observation of at least one WBO occupying a burrow within the last 3 years, or WBO sign, including molted feathers, cast pellets, prey remains, eggshell fragments, or feces, around a burrow. WBO tend to exhibit high site fidelity, reusing the same site year after year (Rich 1984; Feeney 1992).

Population Status

WBO in California are generally nonmigratory and occur mostly in the Central and Imperial Valleys, primarily in agricultural areas. Small, scattered populations occur in the Mojave Desert. Population density seems to be correlated with prey availability, particularly small mammals (Klute et al. 2003).

WBO in San Diego County mostly occur as overwintering migrants. Very few resident breeding pairs remain in the County year round, and the number of WBO is greater in winter than during the breeding season (Unitt 2004).

Survey Methodology

Surveys for WBO were conducted per California Burrowing Owl Consortium (CBOC) protocol and mitigation guidelines (CBOC 1993) and were focused to determine the presence or absence, abundance, and breeding status of the species.

The habitat assessment Phase I WBO survey was conducted by AECOM biologists during previous surveys for sensitive species in the project site and buffer zones.

AECOM biologists conducted Phase II WBO surveys between May 3 and May 31, 2011. Surveys were conducted by walking through WBO suitable habitat within the project survey area and a 150-meter (500-foot) buffer zone using 100 percent visual coverage, focusing on visual signs of WBO (burrows, pellets, owl splash, etc.). Distance between transects was no greater than 30 meters (100 feet). All data were recorded with a Global Positioning System (GPS) Garmin 60 CSx in UTM NAD 83 and are presented in Table 1.

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Table 1
Locations of Suitable Burrows and Notes on Sign or Owl Presence

Burrow #	Latitude	Longitude	Notes
1	32.619856	-116.948923	whitewash in burrow during winter surveys
2	32.620163	-116.949311	no WBO sign
3	32.620066	-116.949350	no WBO sign
4	32.620639	-116.947976	no WBO sign
5	32.621959	-116.950239	no WBO sign
6	32.622446	-116.950974	no WBO sign
7	32.622615	-116.952345	no WBO sign
8	32.620970	-116.949873	no WBO sign
9	32.618676	-116.951672	no WBO sign
10	32.618509	-116.951949	no WBO sign
11	32.618333	-116.952268	no WBO sign
12	32.618202	-116.952366	no WBO sign
13	32.618103	-116.952503	no WBO sign
14	32.618034	-116.952608	no WBO sign
15	32.618012	-116.952728	no WBO sign
16	32.617830	-116.952639	no WBO sign
17	32.617775	-116.952423	no WBO sign
18	32.617924	-116.952291	no WBO sign
19	32.617306	-116.951494	prey remains (bones) at burrow during winter surveys
20	32.616416	-116.949604	no WBO sign
21	32.617863	-116.949764	no WBO sign
22	32.617930	-116.950169	no WBO sign
23	32.618048	-116.950757	no WBO sign
24	32.619320	-116.947965	no WBO sign
25	32.619221	-116.948280	no WBO sign
26	32.618399	-116.949089	no WBO sign
27	32.618578	-116.949249	no WBO sign
28	32.618411	-116.949695	no WBO sign
29	32.618522	-116.949269	no WBO sign
30	32.618644	-116.950359	no WBO sign
31	32.618750	-116.950539	no WBO sign
32	32.619167	-116.949704	no WBO sign
33	32.619168	-116.950087	no WBO sign
34	32.619404	-116.949691	no WBO sign
35	32.617034	-116.948815	no WBO sign
36	32.617686	-116.949783	no WBO sign
37	32.618009	-116.950725	no WBO sign
38	32.619592	-116.949819	occupied by WBO during winter surveys

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AECOM biologists conducted Phase III breeding surveys between June 10 and July 12, 2011. Surveys were conducted from as few vantage points as necessary to achieve full visual coverage of all suitable burrows and habitat. A vehicle was used as a blind when possible to minimize disturbance to any owls that may have been present. After observation indicated no WBO presence, all burrows were checked for sign that might indicate recent activity.

Because suitable burrows were found, but no owls were observed during the breeding season, winter season surveys were required according to CBOC guidelines. AECOM biologists conducted Phase III winter surveys between December 2 and December 8, 2011. Surveys followed the same protocol as Phase III breeding season surveys.

Results

Phase I habitat assessment surveys resulted in approximately 50 acres of the project survey area being identified as suitable for WBO, the entire proposed substation site, and 38 additional acres within the 500-foot survey buffer. Phase II burrow surveys subsequently identified 37 suitable burrows. An additional burrow (#38) was located during winter Phase III surveys, discussed below. Locations of all burrows can be found in Table 1.

Phase III surveys during the breeding season detected no WBO and found no sign of WBO at any of the suitable burrows. According to CBOC guidelines, winter season Phase III surveys were conducted and detected one WBO occupying at least one burrow. The burrow being occupied by the WBO was not a burrow previously marked during the Phase II surveys. The burrow was either a completely new burrow or one that had been deemed too small during Phase II, and then was subsequently enlarged later by California ground squirrels or WBO. During winter Phase III surveys, WBO sign was detected at two other burrows on-site, but was not of sufficient quantity to indicate an actively occupied burrow and no WBO were detected at the burrows. Phase III survey dates, observer, weather data, times, and observations are presented in Table 2. Copies of field data sheets are provided in Appendix A.

**Table 2
 Dates, Times, Personnel, Weather Conditions,
 and Observations for WBO Phase III Surveys**

Survey #	Date	Time	Personnel	Weather	Observations
Breeding Season 1	06/10/2011	0600-0715	Brennan Mulrooney	Start: 53°F, 100% clouds, wind 0 mph End: 56°F, 100% clouds, wind SW 1 mph	No WBO sign
Breeding Season 2	06/21/2011	0600-0730	Brennan Mulrooney	Start: 60°F, 100% clouds, wind 0 mph End: 61°F, 100% clouds, wind W 0 mph	No WBO sign
Breeding Season 3	07/02/2011	0600-0715	Brennan Mulrooney	Start: 62°F, 100% clouds, wind 0 mph End: 62°F, 100% clouds, wind 0 mph	No WBO sign

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 San Diego Gas & Electric
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Survey #	Date	Time	Personnel	Weather	Observations
Breeding Season 4	07/12/2011	0630-0750	Brennan Mulrooney	Start: 63°F, 100% clouds, wind S 2 mph End: 63°F, 50% clouds, wind S 2 mph	No WBO sign
Winter Season 1	12/02/2011	0600-0830	Brennan Mulrooney	Start: 50°F, 30% clouds, wind 0 mph End: 60°F, 30% clouds, wind 0 mph	1 occupied burrow
Winter Season 2	12/05/2011	0600-0830	Brennan Mulrooney	Start: 39°F, 0% clouds, wind NE 5-10 mph End: 52°F, 0% clouds, wind S 0-5 mph	1 occupied burrow
Winter Season 3	12/06/2011	0600-0830	Brennan Mulrooney	Start: 37°F, 0% clouds, wind E 6-10 mph End: 47°F, 0% clouds, wind E 1-5 mph	1 occupied burrow
Winter Season 4	12/08/2011	0610-0800	Brennan Mulrooney	Start: 37°F, 0% clouds, wind 0 mph End: 40°F, 0% clouds, wind 0 mph	1 occupied burrow

Discussion

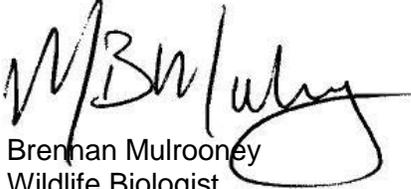
Results of the Phase III surveys indicate that the project site is currently being used by WBO as a wintering, post-breeding dispersal, or migratory stopover site. Because no sign of WBO activity was found at any burrow from May through July of 2011, it can be assumed that no breeding took place on-site in 2011. It is likely that the WBO observed on December 2 and seen through December 8 is spending the winter on-site. The burrows found to contain sign (burrows 1 and 19) during the winter surveys were most likely alternate burrows being used by the one observed individual in instances where it was flushed from its primary burrow. Only burrow 38 showed any significant or fresh sign during the duration of the winter surveys. During survey 2 of the winter period, December 5, 2011, the WBO was initially not in burrow 38 but later returned to the burrow when grounds crews turned sprinklers on in a different portion of the site. The owl might move around on-site in response to irrigation activities in addition to the presence of grounds crews. Burrow 38's location, at the top of an irrigated embankment, makes it likely that it will receive regular disturbance from sprinklers and grounds crews. The high concentration of California ground squirrels (evidenced by the 38 suitable burrows observed) will allow any WBO on-site a wide selection of shelters so that any disturbance is not likely to flush the owl a great distance away.

During WBO surveys, nine other sensitive animal species (eight birds and one mammal) were observed within the survey area. The eight birds were white-tailed kite (*Elanus leucurus*; CDFG Fully Protected Species), northern harrier (*Circus cyaneus*; CDFG Species of Special Concern [SSC]), cooper's hawk (*Accipiter cooperii*; CDFG Watch List), coastal California gnatcatcher (*Polioptila californica californica*; federally threatened), yellow warbler (*Setophaga petechia*; SSC), yellow-breasted chat (*Icteria virens*; SSC), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*; CDFG Watch List), and grasshopper sparrow (*Ammodramus savannarum*; SSC). The one mammal was San Diego black-tailed jackrabbit (*Lepus californicus bennettii*; SSC). Locations of the observations of these species are shown in Figure 4. All wildlife species observed during WBO surveys are listed in Appendix B.

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San Diego Gas & Electric
December 22, 2011
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If you have any questions or comments regarding this letter report, please contact me or Cecilia Meyer Lovell at (619) 233-1454.

Sincerely,



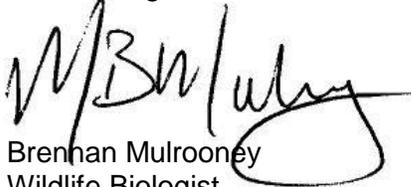
Brennan Mulrooney
Wildlife Biologist
brennan.mulrooney@aecom.com

Attachments:

- Figure 1 – Regional Map
- Figure 2 – Vicinity Map
- Figure 3 – Burrow Locations and WBO observations
- Figure 4 – Other Sensitive Species Observations
- Appendix A – Field Data Sheets from WBO Surveys
- Appendix B – Wildlife Species Observed During WBO Surveys

Certification Statement

Brennan Mulrooney, a qualified biologist who conducted WBO surveys for the Salt Creek Substation site, certifies that the information in this survey report fully and accurately represents the work performed. Mr. Mulrooney's signature is included below. The results of protocol-level surveys for listed species are typically considered valid for 1 year by the resource agencies.



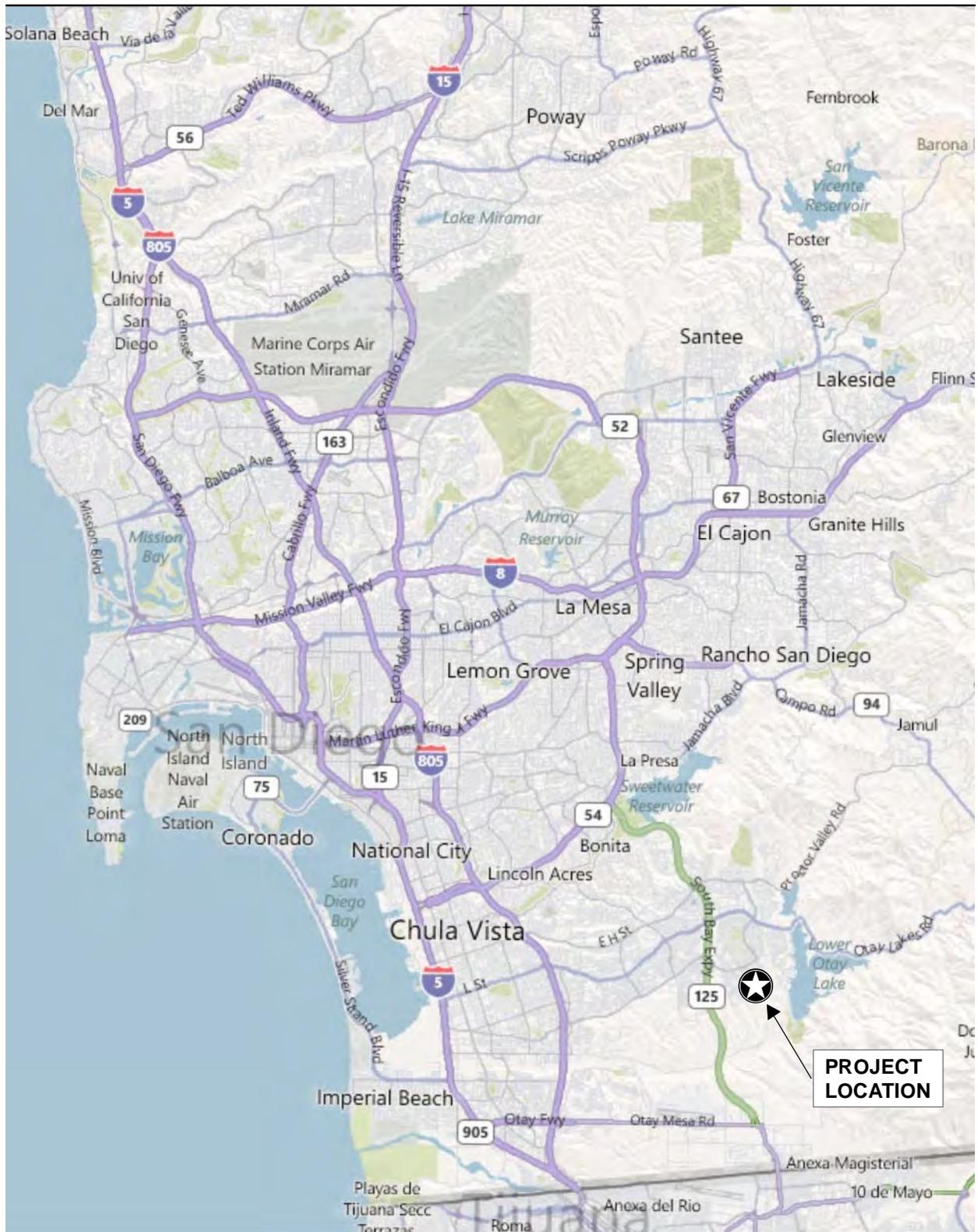
Brennan Mulrooney
Wildlife Biologist

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FIGURES



Source: Bing Maps 2011

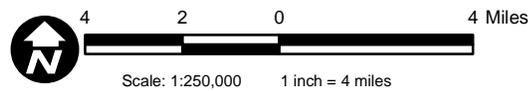
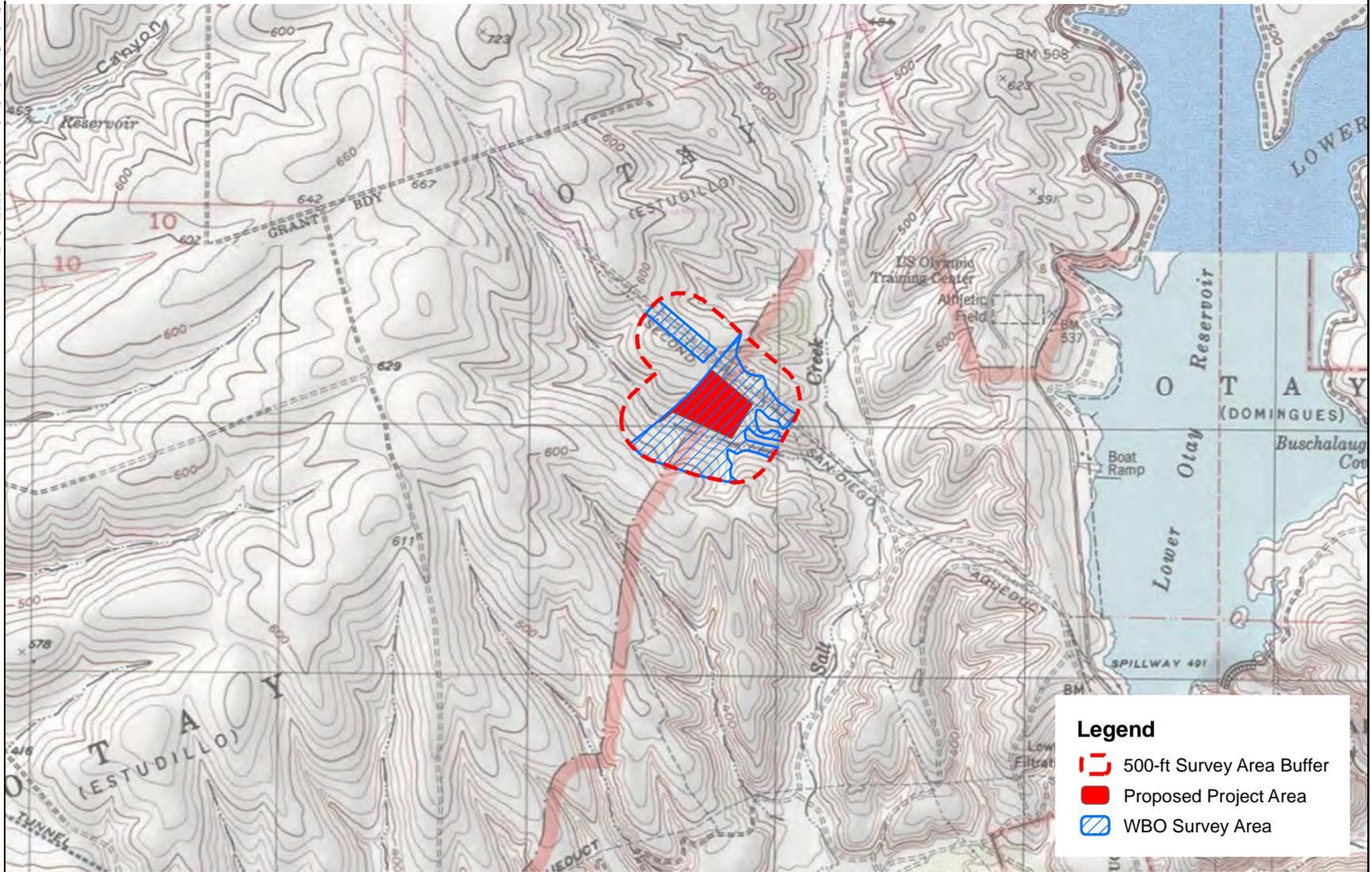


Figure 1
Regional Map

Salt Creek Substation WBO Report

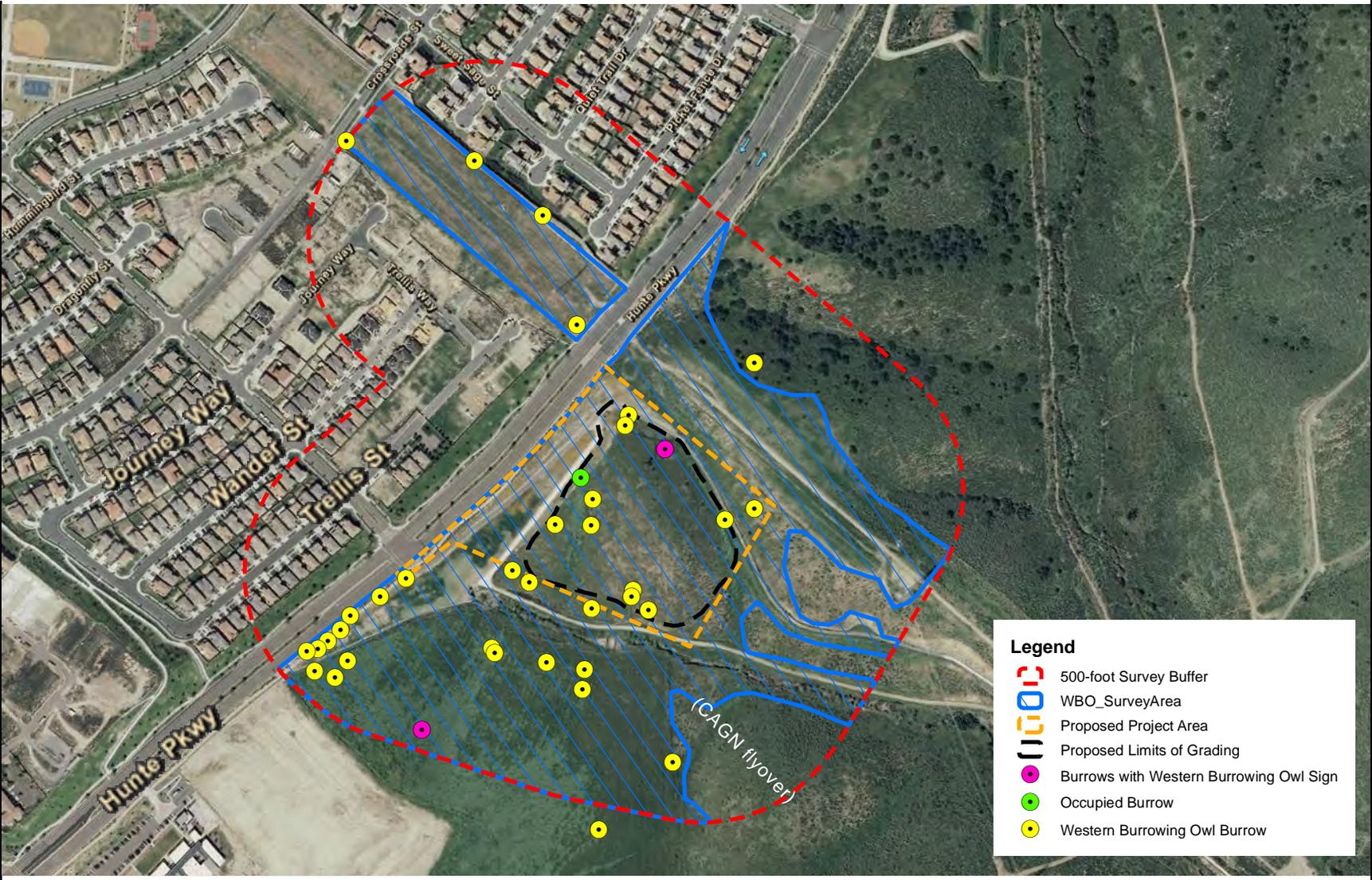
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Source: USGS Quad Jamul Mountains 1975; Otay Mesa 1975



Figure 2
Vicinity Map



Legend

- 500-foot Survey Buffer
- WBO_SurveyArea
- Proposed Project Area
- Proposed Limits of Grading
- Burrows with Western Burrowing Owl Sign
- Occupied Burrow
- Western Burrowing Owl Burrow

Source: Aerials Express 2010

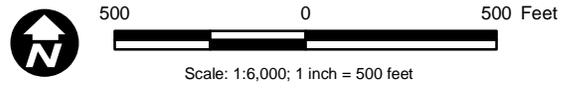
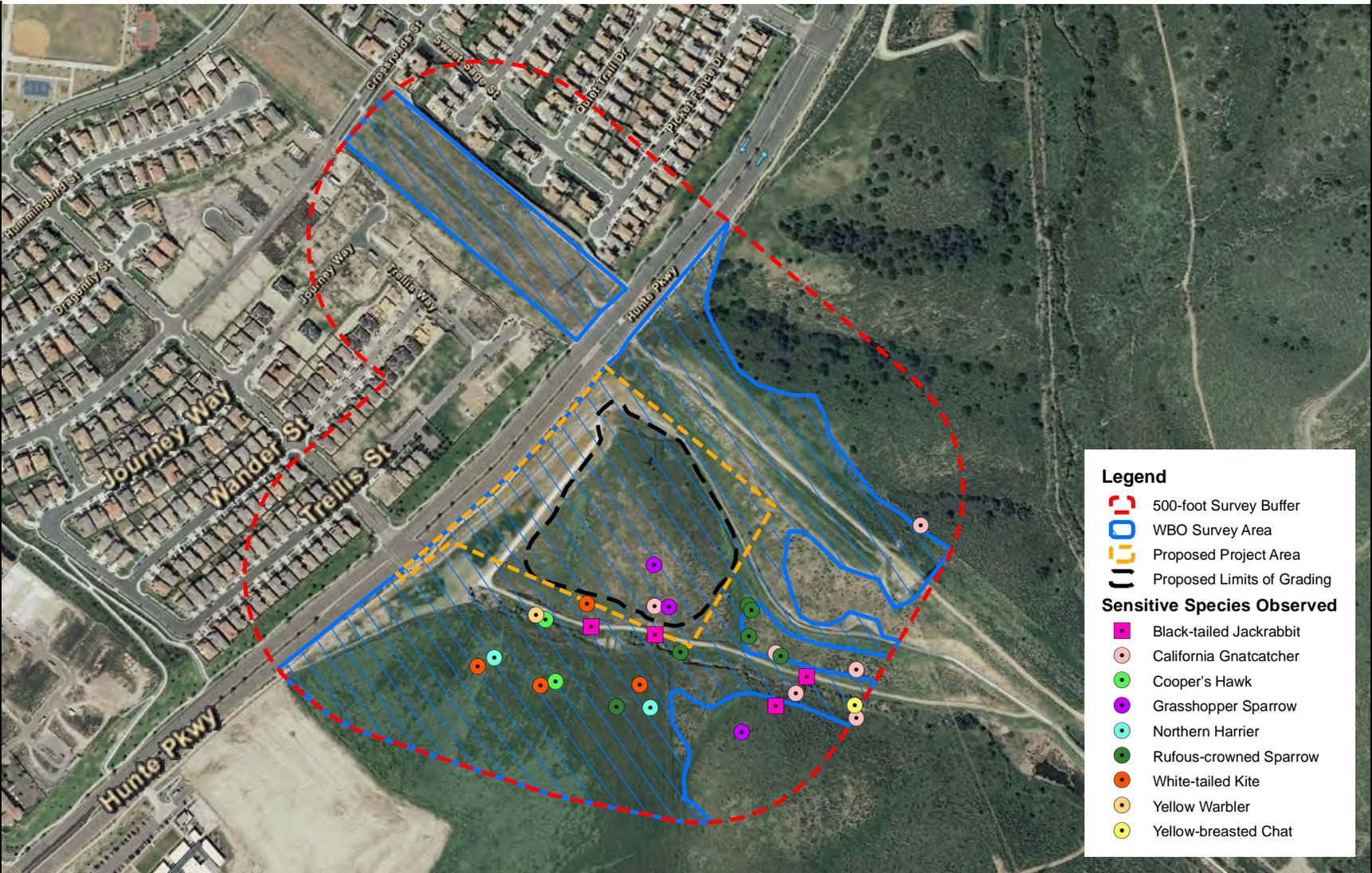


Figure 3
Burrow Locations and WBO observations



Legend

- 500-foot Survey Buffer
- WBO Survey Area
- Proposed Project Area
- Proposed Limits of Grading

Sensitive Species Observed

- Black-tailed Jackrabbit
- California Gnatcatcher
- Cooper's Hawk
- Grasshopper Sparrow
- Northern Harrier
- Rufous-crowned Sparrow
- White-tailed Kite
- Yellow Warbler
- Yellow-breasted Chat

Source: Aerials Express 2010



Figure 4
Other Sensitive Species Observations

APPENDIX A

**FIELD DATA SHEETS FROM THE
SALT CREEK SUBSTATION WBO SURVEYS**

Burrowing Owl (BW) Survey

Recorder: BMJ
 Project: GRAY HUNTE
 GPS Unit: C-8
 START Time: 9:00
 END Time: 07:15

Add'l Person: _____
 Survey Sxn: _____
 Survey Type: Phase III
 Temp (F°): 62
 Temp (F°): 62

Date: 7/2/11
 Map #: _____
 Survey: 2 of 4
 Wind/Dir: 0- % CC/Pcp: 100
 Wind/Dir: 0- % CC/Pcp: 100

Burrow Number	BW Presence	BW Sign Presence* (circle)	Observations (note Burrow Condition, or note BW-# activity)
1	NO	W P T B S Other	No Burrow Sign
2		W P T B S Other	
3		W P T B S Other	
4		W P T B S Other	
5		W P T B S Other	
6		W P T B S Other	
7		W P T B S Other	
8		W P T B S Other	
9		W P T B S Other	
10		W P T B S Other	
11		W P T B S Other	
12		W P T B S Other	
13		W P T B S Other	
14		W P T B S Other	
15		W P T B S Other	
16		W P T B S Other	
17		W P T B S Other	
18		W P T B S Other	
19		W P T B S Other	
20		W P T B S Other	
21		W P T B S Other	
22		W P T B S Other	
23		W P T B S Other	
24		W P T B S Other	
25		W P T B S Other	
26		W P T B S Other	
27		W P T B S Other	
28		W P T B S Other	
29		W P T B S Other	
30		W P T B S Other	
31		W P T B S Other	
32		W P T B S Other	
33		W P T B S Other	
34		W P T B S Other	
35		W P T B S Other	
36		W P T B S Other	
37		W P T B S Other	
		W P T B S Other	
		W P T B S Other	

Comments

AUDUBON'S COTTONTAIL
 BT JACK RABBIT OR BT JACOBI

*BW Sign =W-Whitewash, P-Pellets, T- BW Tracks, B- Bones (from degraded pellets), S-Sticks

Burrowing Owl (BW) Survey

Recorder: BW
 Project: DAY HIRE
 GPS Unit: _____
 START Time: 0630
 END Time: 0150

Add'l Person: _____
 Survey Sxn: _____
 Survey Type: Phase III
 Temp (F°): 63°F
 Temp (F°): 63°F

Date: 7/12/11
 Map #: _____
 Survey 4 of 4
 Wind/Dir: 2-S % CC/Pcp: 100%
 Wind/Dir: 2-S % CC/Pcp: 50%

Burrow Number	BW Presence	BW Sign Presence* (circle)	Observations (note Burrow Condition, or note BW-# activity)
1	NO	W P T B S Other	No Burrow Sign
2		W P T B S Other	
3		W P T B S Other	
4		W P T B S Other	
5		W P T B S Other	
6		W P T B S Other	
7		W P T B S Other	
8		W P T B S Other	
9		W P T B S Other	
10		W P T B S Other	
11		W P T B S Other	
12		W P T B S Other	
13		W P T B S Other	
14		W P T B S Other	
15		W P T B S Other	
16		W P T B S Other	
17		W P T B S Other	
18		W P T B S Other	
19		W P T B S Other	
20		W P T B S Other	
21		W P T B S Other	
22		W P T B S Other	
23		W P T B S Other	
24		W P T B S Other	
25		W P T B S Other	
26		W P T B S Other	
27		W P T B S Other	
28		W P T B S Other	
29		W P T B S Other	
30		W P T B S Other	
31		W P T B S Other	
32		W P T B S Other	
33		W P T B S Other	
34		W P T B S Other	
35		W P T B S Other	
36		W P T B S Other	
37		W P T B S Other	

Comments

*BW Sign =W-Whitewash, P-Pellets, T- BW Tracks, B- Bones (from degraded pellets), S-Slicks

Burrowing Owl (BW) Survey - Other Species Observations

Recorder: BMO
 Project: OTM HUPR

Add'l Person: _____
 Survey Sxn: _____

Date: 7/12/11
 Map #: _____

Species Abb.	Observations
CAYTE	
BTJA	OHBTJA 01
AUPCOTDRAIL	
HOFI	
BLPH	
BLR	
AMKE	
WTKI	OHWTKI 01
RTHA	
CORA	
LOGD	
SAPH	

Comments

WINTER SURVEY
Burrowing Owl (BW) Survey

Recorder: BMU Add'l Person: _____ Date: 12/2/11
 Project: SALT CREEK SUBSTATION Survey Sxn: _____ Map #: _____
 GPS Unit: _____ Survey Type: WINTER Survey: 1 of 4
 START Time: 0600 Temp (F°): 50 Wind/Dir: _____ % CC/Pop: 30%
 END Time: 0830 Temp (F°): 60 Wind/Dir: _____ % CC/Pop: 35%

38

Burrow Number	BW Presence	BW Sign Presence ¹ (circle)	Observations (note Burrow Condition, or note BW# activity)
001	Yes	(W) P (T) B S Other	new burrow - not marked during breeding season surveys
001	N	(W) P T B S Other	white wash
002		W P T B S Other	no sign
3		W P T B S Other	
4		W P T B S Other	
5		W P T B S Other	
6		W P T B S Other	
7		W P T B S Other	
8		W P T B S Other	
9		W P T B S Other	
10		W P T B S Other	
11		W P T B S Other	
12		W P T B S Other	
13		W P T B S Other	
14		W P T B S Other	
15		W P T B S Other	
16		W P T B S Other	
17		W P T B S Other	
18		W P T B S Other	
19		W P T B S Other	
20		W P T B S Other	
21		W P T B S Other	
22		W P T B S Other	
23		W P T B S Other	
24	✓	W P T B S Other	✓
25		W P T B S Other	
26		W P T B S Other	
27		W P T B S Other	
28		W P T B S Other	
29		W P T B S Other	
30		W P T B S Other	
31		W P T B S Other	
32		W P T B S Other	
33		W P T B S Other	
34		W P T B S Other	
35		W P T B S Other	
36	✓	W P T B S Other	

Comments ↓

new burrow is # 38 32.61959
-116.94982

Burrowing Owl (BW) Survey

Recorder: BMU Add'l Person: _____ Date: 12/5/11
 Project: SALT Creek Substation Survey Sxn: _____ Map #: _____
 GPS Unit: _____ Survey Type: WINTER Survey 2 of 4
 START Time: 0600 Temp (F°): 39 Wind/Dir: 6-10 NE % CC/Pcp: 0
 END Time: 0830 Temp (F°): 32 Wind/Dir: 0-5 S % CC/Pcp: 0

Burrow Number	BW Presence	BW Sign Presence ¹ (circle)	Observations (note Burrow Condition, or note BW-# activity)
1	NONE	W P T B S Other	
2		W P T B S Other	
3		W P T B S Other	
4		W P T B S Other	
5		W P T B S Other	
6		W P T B S Other	
7		W P T B S Other	
8		W P T B S Other	
9		W P T B S Other	
10		W P T B S Other	
11		W P T B S Other	
12		W P T B S Other	
13		W P T B S Other	
14		W P T B S Other	
15		W P T B S Other	
16		W P T B S Other	
17		W P T B S Other	
18		W P T B S Other	
19		W P T (B) S Other	NO obviously fresh sign
20		W P T B S Other	
21		W P T B S Other	
22		W P T B S Other	
23		W P T B S Other	
24		W P T B S Other	
25		W P T B S Other	
26		W P T B S Other	
27		W P T B S Other	
28		W P T B S Other	
29		W P T B S Other	
30		W P T B S Other	
31		W P T B S Other	
32		W P T B S Other	
33		W P T B S Other	
34		W P T B S Other	
35		W P T B S Other	
36		W P T B S Other	
37	✓	W P T B S Other	
38	yes	(W) P (T) (B) S Other	owl was not initially present, then flew to burrow after end of survey from unknown location
Comments			

Burrowing Owl (BW) Survey

Recorder: BMU Add'l Person: _____ Date: 12/6/11
 Project: SALT CREEK Substation Survey Sxn: _____ Map #: _____
 GPS Unit: _____ Survey Type: WINTER Survey 3 of 4
 START Time: 0600 Temp (F°): 37 Wind/Dir: 6-10 E % CC/Pcp: 0%
 END Time: 0830 Temp (F°): 47 Wind/Dir: 1-5 E % CC/Pcp: 0%

Burrow Number	BW Presence	BW Sign Presence ¹ (circle)	Observations (note Burrow Condition, or note BW-# activity)
1	NONE	W P T B S Other	NO BURROW PRESEN
2		W P T B S Other	
3		W P T B S Other	
4		W P T B S Other	
5		W P T B S Other	
6		W P T B S Other	
7		W P T B S Other	
8		W P T B S Other	
9		W P T B S Other	
10		W P T B S Other	
11		W P T B S Other	
12		W P T B S Other	
13		W P T B S Other	
14		W P T B S Other	
15		W P T B S Other	
16		W P T B S Other	
17		W P T B S Other	
18		W P T B S Other	
19		W P T <u>(B)</u> S Other	NO NEW SIGN
20		W P T B S Other	
21		W P T B S Other	
22		W P T B S Other	
23		W P T B S Other	
24		W P T B S Other	
25		W P T B S Other	
26		W P T B S Other	
27		W P T B S Other	
28		W P T B S Other	
29		W P T B S Other	
30		W P T B S Other	
31		W P T B S Other	
32		W P T B S Other	
33		W P T B S Other	
34		W P T B S Other	
35		W P T B S Other	
36		W P T B S Other	
37	no	W P T B S Other	owl @ burrow entrance entire period
38	yes	W P T B S Other	

Comments

Burrowing Owl (BW) Survey - Other Species Observations

Recorder: BMJ
Project: SALT CREEK SUBST.

Add'l Person: _____
Survey Sxn: _____

Date: 12/6/11
Map #: _____

Species Abb.	Observations
CORA	
BTHA	
MIKE	
AMCR	
WCSP	
HDFI	
LEBO	
URWA	
CUST	
BLPH	
BUON	
AMPI	
COYE	
SALT	
BUSH	

Comments

Burrowing Owl (BW) Survey

Recorder: BMU
 Project: SALT CREEK SUBSTATION
 GPS Unit:
 START Time: 0610
 END Time: 0800

Add'l Person: _____
 Survey Sxn: _____
 Survey Type: WINTER
 Temp (F°): 37°
 Temp (F°): 40

Date: 12/08/11
 Map #: _____
 Survey: 4 of 4
 Wind/Dir: Calm % CC/Pop: 0
 Wind/Dir: Calm % CC/Pop: 0

Burrow Number	BW Presence	BW Sign Presence ¹ (circle)	Observations (note Burrow Condition, or note BW-# activity)
1	NO	W P T B S Other	NO NEW SIGN
2		W P T B S Other	
3		W P T B S Other	
4		W P T B S Other	
5		W P T B S Other	
6		W P T B S Other	
7		W P T B S Other	
8		W P T B S Other	
9		W P T B S Other	
10		W P T B S Other	
11		W P T B S Other	
12		W P T B S Other	
13		W P T B S Other	
14		W P T B S Other	
15		W P T B S Other	
16		W P T B S Other	
17		W P T B S Other	
18		W P T B S Other	
19		W P T <u>B</u> S Other	NO NEW SIGN
20		W P T B S Other	
21		W P T B S Other	
22		W P T B S Other	
23		W P T B S Other	
24		W P T B S Other	
25		W P T B S Other	
26		W P T B S Other	
27		W P T B S Other	
28		W P T B S Other	
29		W P T B S Other	
30		W P T B S Other	
31		W P T B S Other	
32		W P T B S Other	
33		W P T B S Other	
34		W P T B S Other	
35		W P T B S Other	
36		W P T B S Other	
37	NO	W P T B S Other	bird remained at burrow during entire survey
38	YES	W P T B S Other	
		W P T B S Other	

Comments

APPENDIX B

WILDLIFE SPECIES OBSERVED DURING THE SALT CREEK SUBSTATION WBO SURVEYS

APPENDIX B
Wildlife Species Observed during Western Burrowing Owl Surveys

Scientific Names	Common Names
Arthropods	
Order Lepidoptera	Butterflies and Moths
Family Lycaenidae	
<i>Brephidium exilis exilis</i>	Western Tailed-Blue
<i>Euphilotes b. bernardino</i>	San Bernardino Blue
Reptiles	
Order Squamata	Lizards and Snakes
Family Phrynosomatidae	
<i>Sceloporus occidentalis</i>	Western Fence Lizard
Family Colubridae	
<i>Pituophis catenifer</i>	Gopher Snake
<i>Croatalus oreganus helleri</i>	Southern Pacific Rattlesnake
Birds	
Order Galliformes	Megapodes, Curassows, Pheasants, Quail, and Relatives
Family Phasianidae	
<i>Callipepla californica</i>	California Quail
Order Suliformes	Boobies, Cormorants, and Frigatebirds
Family Phalacrocoracidae	
<i>Phalacrocorax auritus</i>	Double-crested Cormorant
Order Ciconiiformes	Hérons, Storks, Vultures, and Relatives
Family Ardeidae	
<i>Ardea alba</i>	Great Egret
<i>Nycticorax nycticorax</i>	Black-crowned Night-heron
Order Accipitriformes	Hawks, Eagles, Kites, and Allies
Family Accipitridae	
<i>Elanus leucurus</i> ⁺	White-tailed Kite
<i>Circus cyaneus</i> [*]	Northern Harrier
<i>Accipiter cooperii</i> [†]	Cooper's Hawk
<i>Buteo jamaicensis</i>	Red-tailed Hawk
Order Falconiformes	Falcons and Allies
Family Falconidae	
<i>Falco sparverius</i>	American Kestrel
<i>Falco columbarius</i>	Merlin
Order Charadriiformes	Shorebirds and Allies
Family Charadriidae	
<i>Charadrius vociferous</i>	Killdeer
Family Laridae	
<i>Larus occidentalis</i>	Western Gull
<i>Hydroprogne caspia</i>	Caspian Tern
Order Columbiformes	Doves and Pigeons
Family Columbidae	
<i>Columba livia</i>	Rock Pigeon
<i>Zenaida macroura</i>	Mourning Dove
Order Cuculiformes	Cuckoos and Relatives
Family Cuculidae	
<i>Geococcyx californianus</i>	Greater Roadrunner
Order Strigiformes	Typical Owls
Family Strigidae	
<i>Athene cunicularia hypugaea</i> [*]	Western Burrowing Owl
Order Apodiformes	Swifts and Hummingbirds
Family Trochilidae	
<i>Calypte anna</i>	Anna's Hummingbird

Scientific Names	Common Names
Order Passeriformes	Perching Birds
Family Tyrannidae	
<i>Empidonax difficilis/occidentalis</i>	Western Flycatcher
<i>Sayornis nigricans</i>	Black Phoebe
<i>Sayornis saya</i>	Say's Phoebe
<i>Myiarchus cinerascens</i>	Ash-throated Flycatcher
<i>Tyrannus vociferans</i>	Cassin's Kingbird
<i>Tyrannus verticalis</i>	Western Kingbird
Family Vireonidae	
<i>Vireo gilvus</i>	Warbling Vireo
Family Corvidae	
<i>Corvus brachyrhynchos</i>	American Crow
<i>Corvus corax</i>	Common Raven
Family Hirundinidae	
<i>Stelgidopteryx serripennis</i>	Northern Rough-winged Swallow
<i>Petrochelidon pyrrhonota</i>	Cliff Swallow
Family Aegithalidae	
<i>Psaltriparus minimus</i>	Bushtit
Family Troglodytidae	
<i>Salpinctes obsoletus</i>	Rock Wren
<i>Thryomanes bewickii</i>	Bewick's Wren
<i>Troglodytes aedon</i>	House Wren
Family Polioptilidae	
<i>Polioptila californica californica</i> ¹	Coastal California Gnatcatcher
Family Sylviidae	
<i>Chamaea fasciata</i>	Wrentit
Family Mimidae	
<i>Mimus polyglottos</i>	Northern Mockingbird
<i>Toxostoma redivivum</i>	California Thrasher
Family Sturnidae	
<i>Sturnus vulgaris</i>	European Starling
Family Motacillidae	
<i>Anthus rubescens</i>	American pipit
Family Bombycillidae	
<i>Bombycilla cedrorum</i>	Cedar Waxwing
Family Parulidae	
<i>Setophaga petechia</i>	Yellow Warbler
<i>Setophaga coronata</i>	Yellow-rumped Warbler
<i>Geothlypis trichas</i>	Common Yellowthroat
<i>Wilsonia pusilla</i>	Wilson's Warbler
<i>Icteria virens</i> *	Yellow-breasted Chat
Family Emberzidae	
<i>Aimophila ruficeps canescens</i> *	Southern California Rufous-crowned Sparrow
<i>Melospiza crissalis</i>	California Towhee
<i>Ammodramus savannarum</i> *	Grasshopper Sparrow
<i>Melospiza melodia</i>	Song Sparrow
<i>Zonotrichia leucophrys</i>	White-crowned Sparrow
Family Cardinalidae	
<i>Passerina caerulea</i>	Blue Grosbeak
<i>Passerina amoena</i>	Lazuli Bunting
Family Icteridae	
<i>Sturnella neglecta</i>	Western Meadowlark
Family Fringillidae	
<i>Carpodacus mexicanus</i>	House Finch
<i>Spinus psaltria</i>	Lesser Goldfinch
<i>Spinus tristis</i>	American Goldfinch

Scientific Names	Common Names
Mammals	
Order Carnivora	Carnivores
Family Canidae	
<i>Canis latrans</i>	Coyote
Order Lagomorpha	Rabbits, Hares, and Pikas
Family Leporidae	
<i>Lepus californicus bennettii</i> *	San Diego Black-tailed Jackrabbit
<i>Sylvilagus audubonii</i>	Desert Cottontail
Order Rodentia	Gnawing Mammals
Family Sciuridae	
<i>Spermophilus beecheyi</i>	California Ground Squirrel

¹ Federally Threatened or Endangered Species

* State Species of Special Concern

+ State Special Animal

APPENDIX I-2
2012 RESULTS REPORT



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October 15, 2012

Ms. Debbie Collins
San Diego Gas & Electric
8315 Century Park Court - CP21E
San Diego, CA 92123

RE: Western Burrowing Owl Presence/Absence Surveys for the Transmission Line Installation Project, Chula Vista, California

Dear Ms. Collins:

The purpose of this letter report is to present the findings of a 2012 breeding season presence/absence survey for western burrowing owl (*Athene cunicularia hypugaea*; WBO) for the proposed 69-kV Transmission Line Installation Project (project) in the City of Chula Vista, California. The purpose of the surveys was to determine if WBOs inhabit the project site during the breeding season. Surveys were conducted on behalf of San Diego Gas and Electric (SDG&E).

Project Description

The linear SDG&E project is located in East Lake and Otay Mesa, California (Figure 1). The project would include the installation of a new 69-kilovolt (kV) transmission line along an existing 5-mile-long transmission corridor east of the existing Miguel Substation and south to the proposed Salt Creek Substation (Figure 2). The transmission line corridor is 120 feet in width for the northern portion of the alignment and 150 feet in width south of Hunte Parkway. The corridor includes an existing 69-kV transmission line and two 230-kV transmission lines mutually located on a single steel lattice tower line. The new 69-kV transmission line is expected to be built approximately 15 feet in from the eastern edge of the 120-foot-wide easement.

Based on preliminary design, approximately 53 new structures would be erected on the new 69-kV transmission line, including 46 galvanized steel poles, six engineered foundation poles, and one cable pole. Two staging yards have been identified for the project: one at the existing Miguel Substation and another on the north side of Hunte Parkway between Discovery Falls, Eastlake Parkway, and Crossroads Street. The proposed Salt Creek Substation site would be located on an 11.6-acre site directly south of Hunte Parkway, near the southern terminus of Exploration Falls Drive and adjacent to the Miguel to Mexico transmission line corridor.

Site Description

For purposes of this report, the term "project survey area" refers to the proposed transmission line corridor (which contains an existing wood pole alignment) and two staging yards plus a 150-meter (500-foot) survey buffer around each of these areas. The project survey area occurs within the City of Chula Vista's Multiple Species Conservation Planning (MSCP) Subarea Plan (Subarea Plan) Otay Ranch Planning Area, within areas planned for development (i.e., outside of the Otay Ranch Preserve).

The majority of the project survey area is developed/ornamental, non-native grassland, and Diegan coastal sage scrub, with minor amounts of coast and valley freshwater marsh, disturbed habitat,

riparian scrub, valley needlegrass, wildflower fields, mulefat scrub, and southern willow scrub. Several dirt access roads occur on the project survey area, mostly paralleling the transmission line axis.

Habitat at the northern end of the transmission line corridor, near the existing Miguel Substation, consists of non-native grassland, coastal sage scrub, and riparian scrub. Habitat along the central portion of the transmission line corridor consists of non-native grassland, disturbed areas with very little native vegetation, and native vegetation consisting of small patches of coastal sage scrub. Habitat at the southern end of the transmission line corridor, near the proposed Salt Creek Substation, consists of non-native grassland, coastal sage scrub, riparian scrub, and disturbed areas.

Western Burrowing Owl Background Information

Regulatory Status

WBO is protected under the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-712). The MBTA makes it unlawful to take this species, its eggs, or its nest. Sections 3505, 3503.5, and 3800 of the California Department of Fish and Game (CDFG) Code prohibit the take or destruction of the bird, its nests, or eggs. WBO is also a Species of Special Concern to California (CDFG 2009) and, as such, the California Environmental Quality Act (CEQA) requires mandatory findings of significance (i.e., significant or not significant) if impacts are likely to occur to this species. It is a Species of Special Concern in California because of declines in suitable habitat and both localized and statewide population declines (DeSante et al. 1997).

Habitat Status

WBO habitat consists of annual and perennial grasslands, deserts, agricultural areas, disturbed habitat, and scrublands, characterized by low-growing vegetation (Zarn 1974; CBOC 1993, 1997). Suitable WBO habitat may also include trees and shrubs if the canopy covers less than 30 percent of the ground surface. Burrows are an essential component of WBO habitat, and both natural and artificial burrows provide protection, shelter, and nests for WBO. WBOs typically use burrows made by mammals, such as California ground squirrels (*Spermophilus beecheyi*) in southern California, but may also use human-made structures such as cement culverts; riprap; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement. WBO may use a site for migratory stopovers, wintering, or year-round activities, including breeding and foraging. WBO tends to exhibit high site fidelity, reusing the same site year after year (Rich 1984; Feeney 1992).

Population Status

The WBO is found sparsely distributed in southern California; including San Diego County (DeSante et al. 1997, Klute et al. 2003, Lincer and Bloom 2007). The vast majority of the California breeding population of WBOs occurs in the Central and Imperial Valleys, primarily in agricultural areas, often associated with canals and drainages (and their berms). Small, scattered populations occur in the Mojave Desert. Population density seems to be correlated with prey availability, particularly small mammals (Klute et al. 2003). Burrowing owls have disappeared or declined in several southern California counties and in coastal areas, including San Diego County (DeSante et al. 1997, Klute et al. 2003, Kidd et al. 2007, Lincer and Bloom 2007). This trend is not, however, limited to California; in 1992, 16 (67 %) of 24 states and provinces polled reported burrowing owl population declines and none reported an increase (James and Espie 1997).

WBOs in southern California are generally assumed to be nonmigratory. A relatively small population of resident breeding pairs remains in San Diego County and the number of WBOs is greater in winter than during the breeding season (Unitt 2004). Within San Diego County, a drastic decrease in the WBO population has occurred in the last few decades and it is very possible that the owl population decreased by roughly 85 percent between the early 1900s and 2003 (Lincer and Bloom 2007).

Survey Methodology

Jeffrey L. Lincer, PhD, consulting biologist, conducted a WBO habitat assessment and breeding season WBO surveys of the project site in spring 2012. Surveys for WBO were conducted per the current California Department of Fish and Game (CDFG 2012) guidelines. The WBO surveys were conducted to determine the presence or absence, abundance, and breeding status of the species within suitable habitat within the larger project survey area. In this report, the sub-area surveyed for WBO is referred to as the “study area.”

An initial habitat assessment of the entire survey area and buffer (within 150 meters of the survey area) was conducted by AECOM biologists during previous surveys for sensitive species. Dr. Lincer, with AECOM staff, conducted a follow-up habitat assessment for burrowing owl on March 16, 2012 prior to initiating burrow and burrowing owl surveys. Figure 3 depicts suitable habitat for burrowing owl within the survey area. After suitable WBO habitat was mapped, breeding season WBO surveys (CDFG 2012) within the study area (suitable WBO habitat) were conducted in 2012 and the methodology of those surveys is described below.

Visits and Timing

Burrowing owls are more detectable during the breeding season with detection probabilities being highest during the nestling stage (Conway et al. 2008). In California, the WBO breeding season extends generally from February 1 to August 31 (Haug et al. 1993, Thomsen 1971) with some variances by geographic location and climatic conditions. As indicated by CDFG (2012), several researchers suggest three or more survey visits during daylight hours (Haug and Diduik 1993, CBOC 1997, Conway and Simon 2003) and recommend each visit occur at least three weeks apart during the peak of the breeding season, commonly accepted in California as between April 15 and July 15 (CBOC 1997).

Per CDFG 2012 requirements, where suitable WBO habitat exists, WBO breeding season surveys should consist of four survey visits based on the following timing:

- One survey visit between February 1 and April 15
- Two survey visits, at least three weeks apart, between April 15 and July 15
- One survey visit after June 15 but prior to the end of the breeding season (August 31), at least three weeks after previous survey

The first survey was conducted on April 21 and 28, 2012. The second and third surveys were conducted on May 8 and June 7, 2012 and the fourth WBO survey on July 4 and 5, 2012. All survey dates except the first survey were conducted according to current CDFG (2012) guidelines and all surveys were at least three weeks apart. Breeding season survey dates, observer, weather data, times, and observations are presented in Table 1. Copies of field data sheets are provided in Attachment 1.

Survey Method

Dr. Lincer conducted the Burrowing Owl Burrow Survey and the Burrowing Owl Surveys by walking through WBO suitable habitat. Pedestrian surveys were spaced so as to allow 100 percent coverage, with transects spaced no greater than 20 meters apart. These were conducted by walking through

suitable habitat over the entire survey area, including the 150 meter buffer zone and viewing burrows and burrow clusters from appropriate viewing locations, within the study area, including the 150-meter buffer zone using 100 percent visual coverage. He focused on visual signs of WBO (burrows, pellets, owl white wash, owl feathers, and prey remains). He recorded all burrow locations with a Global Positioning System (GPS) Garmin 60 CS device. Some locations for observed wildlife were not GPS'd. These were, primarily, those that were observed at a considerable distance or would have required walking through sensitive breeding habitat, such as the riparian areas. A vehicle or vegetation was used as a blind when appropriate to minimize disturbance to any owls that may have been present. After observations indicated no WBO presence, all burrows were checked for sign that might indicate recent activity. Occupancy of burrowing owl habitat is confirmed at a site when at least one burrowing owl, or its sign at or near a burrow entrance, is observed within the previous three years (Rich 1984).

Weather Conditions

Weather data is included in Table 1. Surveys were not conducted when wind speeds exceeded 20 kilometers per hour (km/hr) or when it was raining or during the presence of dense fog.

Time of Day

Survey times are included in Table 1. Surveys were conducted only between morning civil twilight and 10:00 AM and two hours before sunset until evening civil twilight.

Table 1. Dates, Times, Personnel, Weather Conditions, and Observations for WBO Surveys

Survey #	Date	Time	Personnel	Weather	Observations
Breeding Season # 1a	4/21/2012	0800-1930	J. L. Lincer; D. Palmer	Start: 62°F, 100% clouds, wind 1 mph; End: 60°F, 100% clouds, wind NNW 2-4 mph	No WBO or WBO sign
Breeding Season # 1b	4/28/2012	1115-1700	J. L. Lincer; D. Palmer	Start: 74°F, clear, wind N 2-5 mph; End: 70°F, clear, wind W 5-9 mph	No WBO or WBO sign
Breeding Season # 2	5/8/2012	0615-1149	J. L. Lincer	Start: 57°F, 100% clouds, wind 1-3 mph; End: 74°F, 10% clouds, wind 3-5 mph	No WBO or WBO sign
Breeding Season # 3	6/7/2012	0518-1340	J. L. Lincer	Start: 54°F, 100% clouds, wind 1-2 mph; End: 73°F, clear, wind 2-6 mph	No WBO or WBO sign
Breeding Season # 4a	7/4/2012	1745-2045	J. L. Lincer	Start: 65°F, 100% clouds, wind 3-5 mph; End: 64°F, 100% clouds, wind 1-2 mph	No WBO or WBO sign
Breeding Season # 4b	7/5/2012	0600-1000	J. L. Lincer; B. Mulrooney	Start: 64°F, 100% clouds, wind 1 mph; End: 64°F, 100% clouds, wind 4-5 mph	No WBO or WBO sign

Regarding minor deviations from the new CDFG (2012) guidelines, the first survey was conducted 6 days after the suggested latest start date (April 21 vs. April 15) because the work was, originally, scheduled by Dr. Lincer to comply with the CDFG (1995) guidelines, which said “the nesting season survey should be conducted between April 15 and July 15 (the peak of the breeding season).” When the new CDFG (2012) guidelines were distributed, a scheduling conflict prevented Dr. Lincer from technically complying with the requirement to conduct the first survey by April 15.

As indicated in the CDFG (2012) guidelines, “Daily timing of surveys varies according to the literature, latitude, and survey method.” It goes on to say, “...surveys between morning civil twilight and 10:00 AM and two hours before sunset until evening civil twilight provide the highest detection probabilities (Barclay pers. comm. 2012, Conway et al. 2008).” One of the impacts of latitude and longitude is that the temperature conditions can vary widely from site to site. In the desert, temperatures can be extreme in the middle of the day, while on the coast, conditions can be much cooler and less extreme throughout the day. When the mid-day conditions are so hot that it drives the owls into the burrows for thermal regulation, it is preferable to limit the surveys to early morning and early evening. But, when the daily temperatures are mild throughout the day, as they were for all of the survey days (Table 1), it is appropriate to extend the survey throughout the day for purposes of efficiency and minimizing ones carbon footprint. Dr. Lincer conducted surveys 1 through 3 using this approach and extended the survey periods beyond the above temporal limits. He conducted survey 4 under the more strict interpretation of the CDFG (2012) guidelines at my request.

It should also be noted that surveys 2 and 3 took one day each but surveys 1 and 4 took 2 days each. Survey 1 took 2 days because it was more complicated; it also included a search for potentially suitable burrows and Dr. Lincer had to return to the site to confirm some locations. Survey 4 took 2 days because, as indicated above, I requested Dr. Lincer to conduct the survey under a more strict interpretation of the CDFG 2012 guidelines, which required one evening and one morning survey.

Results and Discussion

A total of 86 potentially suitable burrows, or burrow clusters, were documented on the study site (Table 2 and Figure 4). Although, a burrowing owl was noted during a previous winter survey (AECOM 2011), this breeding season field work, including all WBO surveys, detected no WBO and no recent sign of WBO within the survey area.

Table 2. Locations of Suitable Burrows, Burrow Complexes, and Notes on WBO Sign or Presence.

Burrow #	Latitude	Longitude	WBO Sign or Presence
1	32.680083	-116.980453	none
2	32.681136	-116.980973	none
3	32.648565	-116.97185	none
4	32.649236	-116.971794	none
5	32.649224	-116.972205	none
6	32.64935	-116.97285	none
7	32.649347	-116.972955	none
8	32.649396	-116.97299	none
9	32.649209	-116.973201	none
10	32.649281	-116.972984	none
11	32.649368	-116.972223	none
12	32.649608	-116.972154	none
13	32.649606	-116.972036	none
14	32.649718	-116.971737	none
15	32.649769	-116.971858	none
16	32.64978	-116.972067	none

Burrow #	Latitude	Longitude	WBO Sign or Presence
17	32.649871	-116.972419	none
18	32.649907	-116.972334	none
19	32.64993	-116.972236	none
20	32.649908	-116.972	none
21	32.650117	-116.971838	none
22	32.650052	-116.972283	none
23	32.650113	-116.972384	none
24	32.650145	-116.972192	none
25	32.650245	-116.971943	none
26	32.65038	-116.97187	none
27	32.650505	-116.97238	none
28	32.65049	-116.971855	none
29	32.650597	-116.971817	none
30	32.650626	-116.972037	none
31	32.650528	-116.972424	none
32	32.65087	-116.972122	none
33	32.650779	-116.972567	none
34	32.65086	-116.972528	none
35	32.650938	-116.972336	none
36	32.650988	-116.97211	none
37	32.65109	-116.97204	none
38	32.651225	-116.971988	none
39	32.651198	-116.972297	none
40	32.651365	-116.97223	none
41	32.651469	-116.972044	none
42	32.651408	-116.97225	none
43	32.651414	-116.972529	none
44	32.651543	-116.97248	none
45	32.65162	-116.972375	none
46	32.651691	-116.972253	none
47	32.651708	-116.972152	none
48	32.651921	-116.972539	none
49	32.651967	-116.972521	none
50	32.651998	-116.972333	none
51	32.652238	-116.972316	none
52	32.651812	-116.972914	none
53	32.636463	-116.966817	none
54	32.636383	-116.966751	none
55	32.636171	-116.966573	none
56	32.636045	-116.966469	none
57	32.63597	-116.966409	none
58	32.635847	-116.966342	none
59	32.635702	-116.966247	none

Burrow #	Latitude	Longitude	WBO Sign or Presence
60	32.635081	-116.965401	none
61	32.635539	-116.96519	none
62	32.634764	-116.965212	none
63	32.633773	-116.964492	none
64	32.633766	-116.964833	none
65	32.632457	-116.963095	none
66	32.631867	-116.962743	none
67	32.631554	-116.962572	none
68	32.631267	-116.961244	none
69	32.630849	-116.960815	none
70	32.630555	-116.960484	none
71	32.629743	-116.959774	none
72	32.622085	-116.950674	none
73	32.621189	-116.950131	none
74	32.619514	-116.948132	none
75	32.61958	-116.948091	none
76	32.619721	-116.948118	none
77	32.619991	-116.948543	none
78	32.620259	-116.949016	none
79	32.619872	-116.948943	none
80	32.619981	-116.949091	none
81	32.620066	-116.949339	none
82	32.61952	-116.949544	none
83	32.619615	-116.949683	none
84	32.619525	-116.949765	none
85	32.619577	-116.949841	none
86	32.619284	-116.950141	none

In conclusion, WBO surveys did not reveal any evidence that would suggest that WBOs used the project site during the 2012 breeding season.

During WBO surveys, 7 other sensitive animal species (all birds) were observed within, or adjacent to, the survey area: white-tailed kite (*Elanus leucurus*, CDFG Fully Protected Species; CDFG 2009); northern harrier (*Circus cyaneus*, CDFG Species of Special Concern [SSC]); Cooper's hawk (*Accipiter cooperii*, CDFG Watch List); coastal California gnatcatcher (*Polioptila californica californica*, federally threatened); yellow-breasted chat (*Icteria virens*, SSC); potentially clapper rail (*Rallus longirostris*, federally endangered); and Bell's sage sparrow (*Amphispiza belli belli*, SSC). Locations of the observations of these species are shown in Figure 5. Common ravens are also included in these observations because they are known predators of WBO. All wildlife species observed during WBO surveys are documented by date in Attachment 1 and listed in Attachment 2 with all wildlife noted.

Ms. Debbie Collins
San Diego Gas & Electric
October 15, 2012
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Conclusion

Although Phase 3 surveys did not reveal any evidence of WBO using the site during the 2012 breeding season, since a WBO was documented in suitable habitat during a winter WBO survey in December 2011 (i.e., within the last 3 years; AECOM 2011), CDFG will likely consider the site occupied.

If you have any questions or comments regarding this letter report, please contact me at 619.233.1454.

Sincerely,



Erin Riley
Senior Biologist
erin.riley@aecom.com

Attachments:

- Figure 1 – Regional Map
- Figure 2 – Project Component and Vicinity Map
- Figure 3 – Suitable WBO Habitat
- Figure 4 – Burrow Locations
- Figure 5 -- Other Sensitive Species Observations
- Attachment 1 – Field Data Sheets from WBO Surveys
- Attachment 2 – Wildlife Species Observed During WBO Surveys

Certification Statement

The qualified wildlife biologist who conducted western burrowing owl surveys for SDG&E's proposed 69-kV Transmission Line Installation project survey area certifies that the information in this survey report fully and accurately represents the work performed. The signature of the wildlife biologist who conducted surveys (April 21 through July 5, 2012) is included below.



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FIGURES



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2010

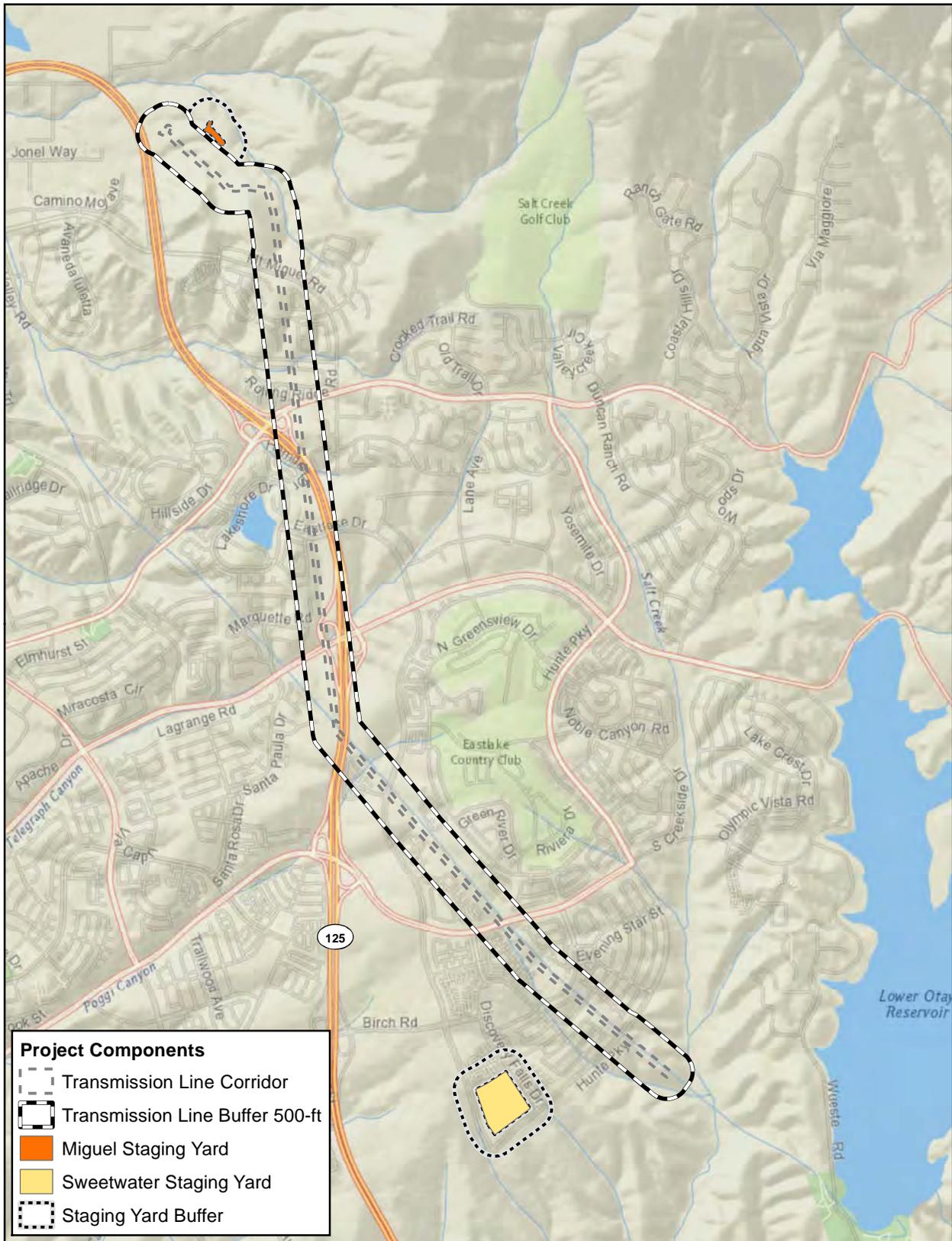


0 4 8 Miles



Scale: 1:250,000 1 inch = 4 miles

Figure 1
Regional Map



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2011

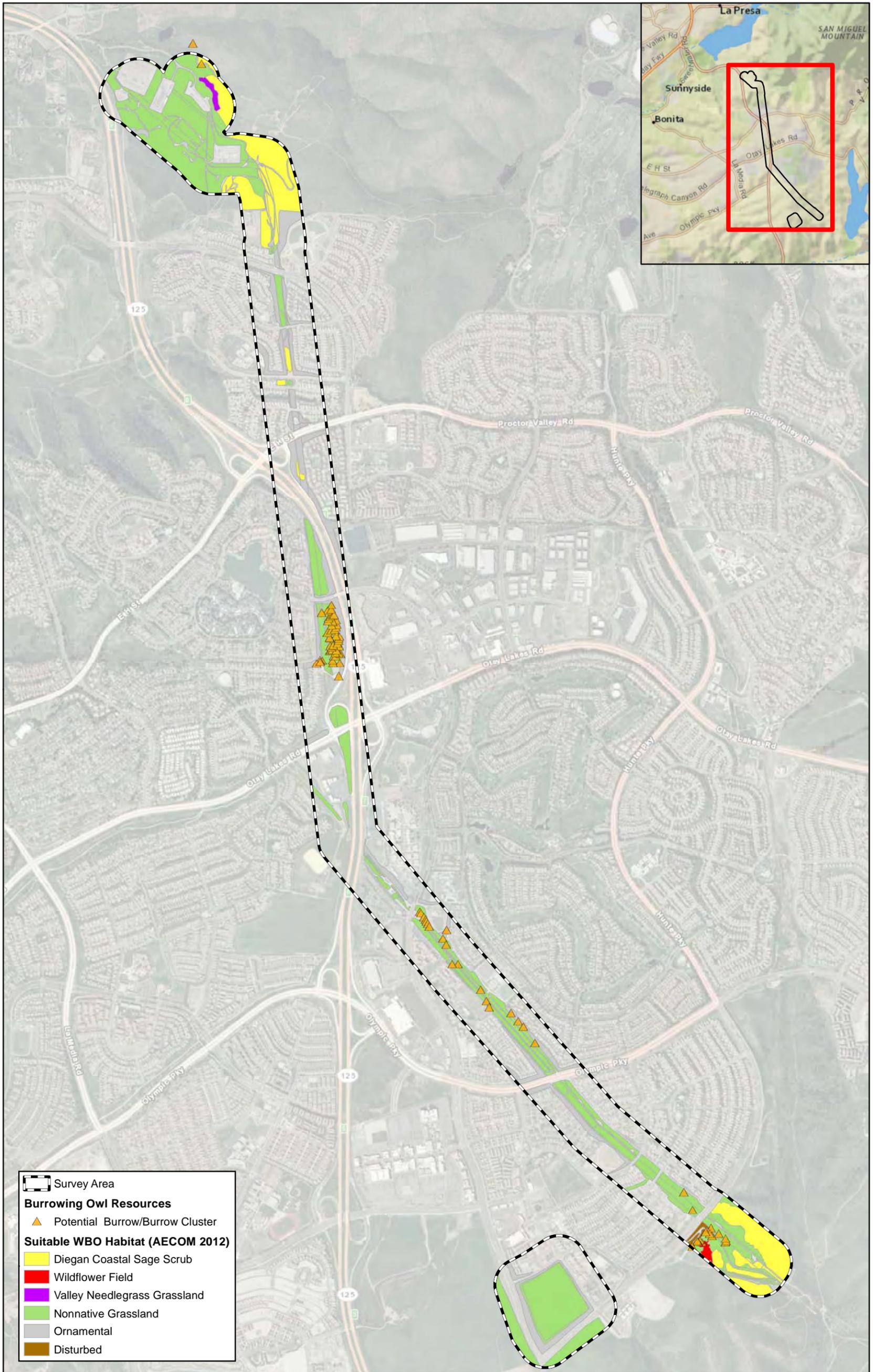


0 3,400 6,800 Feet



Scale: 1:40,800 1 inch = 3,400 feet

Figure 2
Project Components and Vicinity Map

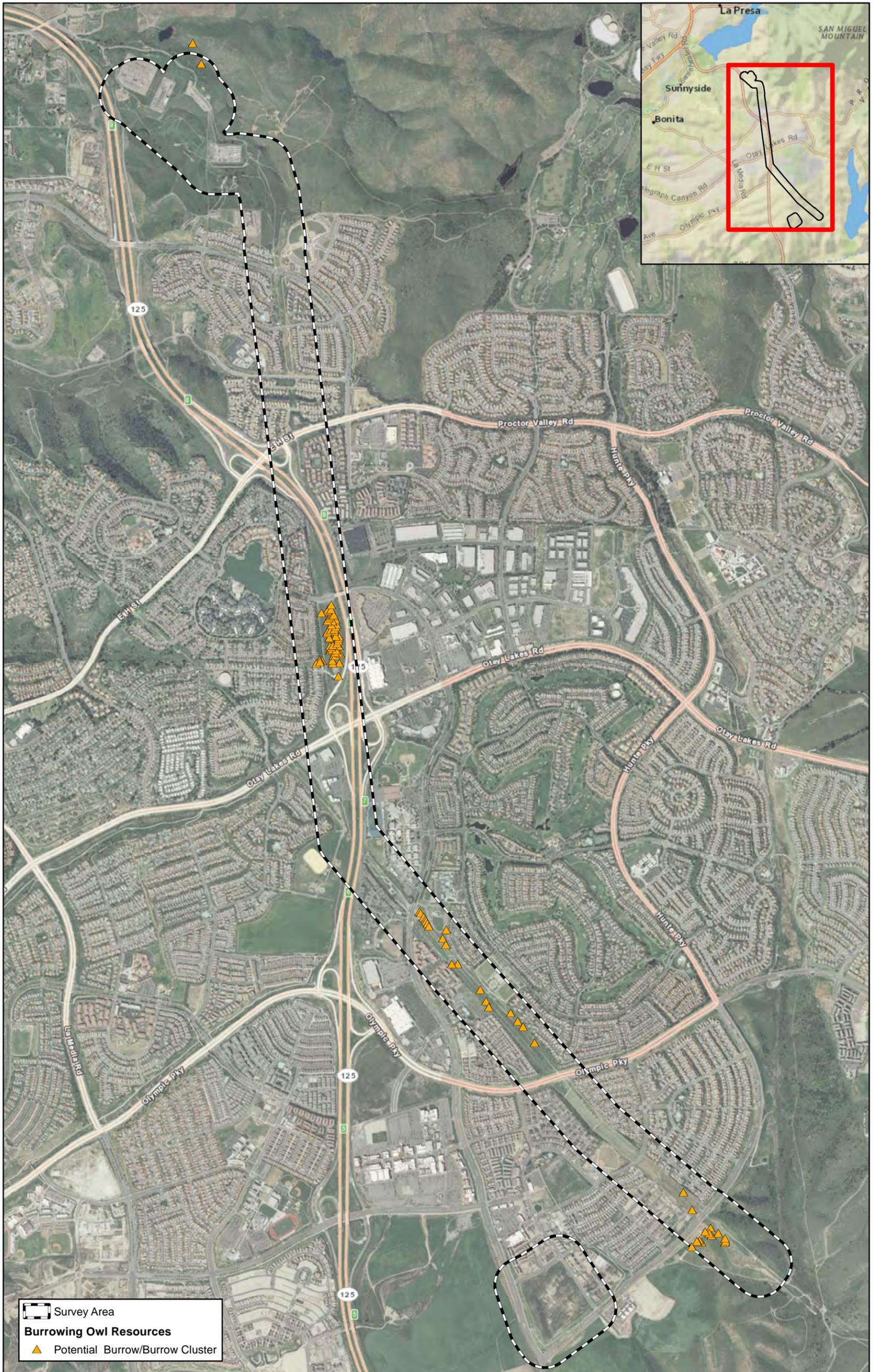


Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2010



0 1,800 3,600 Feet
Scale: 1:21,600 1 inch = 1,800 feet

Figure 3
Suitable WBO Habitat

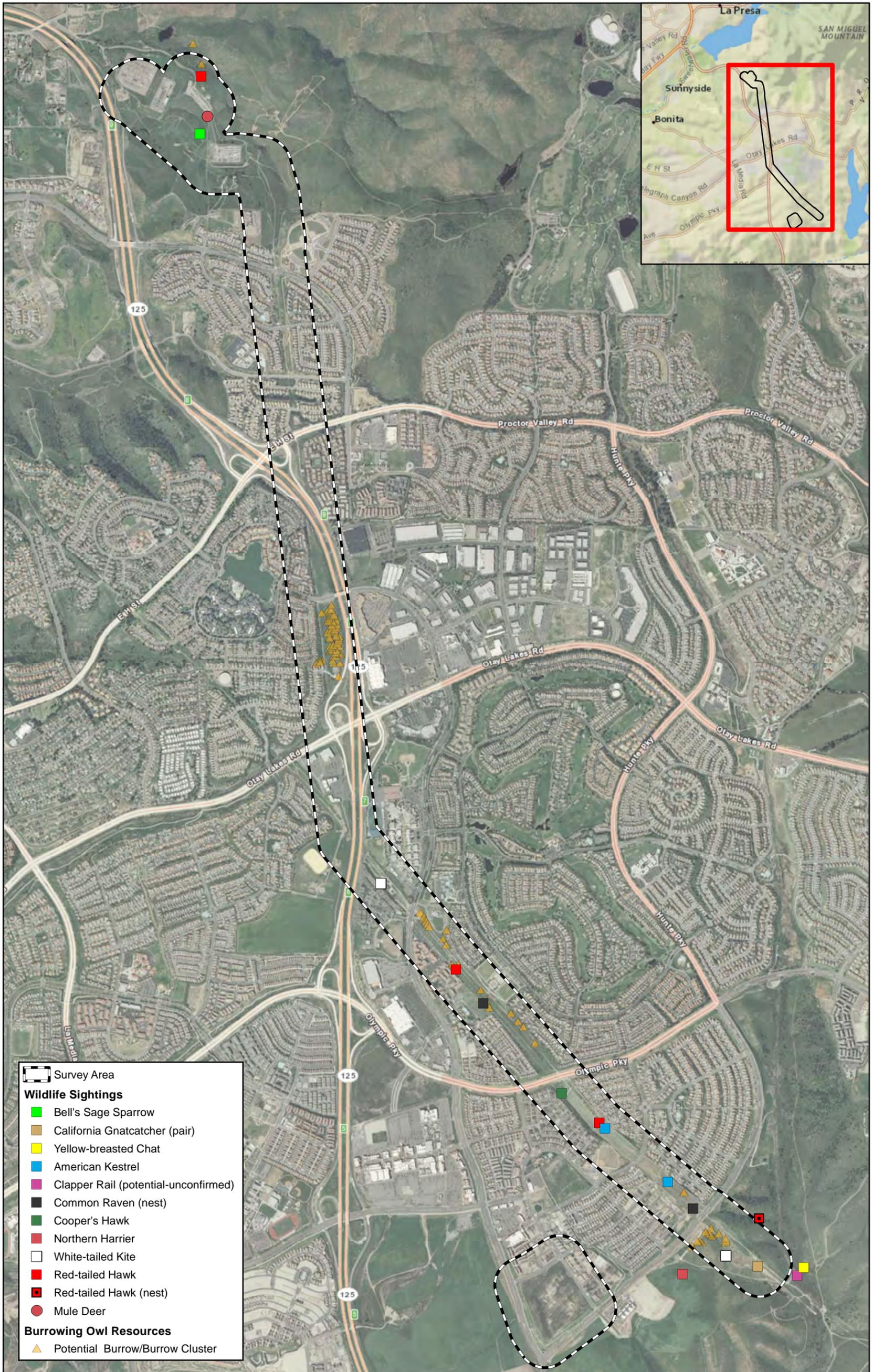


Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2010



0 1,800 3,600 Feet
Scale: 1:21,600 1 inch = 1,800 feet

Figure 4
Burrow Locations



Source: GeomorphIS, LLC and AECOM, 2012; Esri Basemaps, 2010

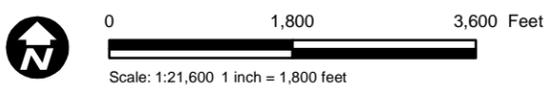


Figure 5
Other Sensitive Species Observations

ATTACHMENT 1

FIELD DATA SHEETS

SALT CREEK TRANSMISSION LINE AND STAGING AREA

WESTERN BURROWING OWL SURVEYS - 2012

ATTACHMENT 2

**WILDLIFE RESOURCES OBSERVED DURING
SALT CREEK TRANSMISSION LINE AND STAGING AREA
WESTERN BURROWING OWL SURVEYS - 2012**

Wildlife Species Observed During Western Burrowing Owl Presence/Absence Surveys for the 69-kV Transmission Line Installation Project, Chula Vista, California - 2012

<u>Taxonomic Group (1)</u>	<u>Scientific Name (1, 3)</u>	<u>Status (2)</u>
Reptiles		
Phrynosomatidae - Horned Lizards, Spiny Lizards and Sand Lizards		
Western fence lizard	<i>Sceloporus occidentalis</i>	B
Viperidae - Pit Vipers		
Southern Pacific rattlesnake	<i>Crotalus viridis helleri</i>	B
Birds		
Anatidae		
Mallard duck	<i>Anas platyrhynchos</i>	B
Cathartidae - American Vultures		
Turkey vulture	<i>Cathartes aura</i>	V
Accipitridae - Hawks, Old World Vultures, and Harriers		
Red-tailed hawk	<i>Buteo jamaicensis</i>	B
White-tailed kite	<i>Elanus leucurus</i> †	B
Cooper's hawk	<i>Accipiter cooperii</i> †	B
Northern harrier	<i>Circus cyaneus</i> †	W
Falconidae - Caracaras and Falcons		
American kestrel	<i>Falco sparverius</i>	B, V
Rallidae		
American Coot	<i>Fulica americana</i>	B
Clapper Rail	<i>Rallus longirostris</i> †	B
Black rail	<i>Laterallus jamaicensis</i>	
Phasianidae - Quails, Pheasants, and Relatives		
California quail	<i>Callipepla californica</i>	B
Columbidae - Pigeons and Doves		
Mourning dove	<i>Zenaida macroura</i>	B
Rock dove	<i>Columba livia</i>	B
Cuculidae - Typical Cuckoos		
Greater roadrunner	<i>Geococcyx californianus</i>	B
Trochilidae - Hummingbirds		
Anna's hummingbird	<i>Calypte anna</i>	B
Tyrannidae - Flycatchers		
Pacific-slope flycatcher	<i>Epidonax difficilis</i>	B
Ash-throated flycatcher	<i>Myiarchus c. cinerascens</i>	B, V
Western kingbird	<i>Tyrannus crassirostris</i>	B, V
Cassin's kingbird	<i>Tyrannus vociferans</i>	B
Tyrannidae - Tyrant Flycatchers		
Black phoebe	<i>Sayornis nigricans</i>	B
Say's phoebe	<i>Sayornis saya</i>	B
Hirundinidae - Swallows		
Cliff swallow	<i>Hirundo pyrrhonota tachina</i>	B
Corvidae - Jays, Magpies, and Crows		
Common crow	<i>Corvus brachyrhynchos</i>	B
Common raven	<i>Corvus corax</i>	B
Aegithalidae - Bushtit		
Bushtit	<i>Psaltriparus minimus</i>	B

Troglitidae - Wrens		
Bewick's wren	<i>Thryomanes bewickii</i>	B
House wren	<i>Troglodytes aedon</i>	B
Muscicapidae - Old World Warblers, Gnatcatchers, Kinglets, Thrushes, Bluebirds, and Wrenit		
Coastal California gnatcatcher	<i>Poliopitila californica californica</i> †	B
Wrenit	<i>Chamaea fasciata</i>	B
Mimidae - Mockingbirds and Thrashers		
Northern mockingbird	<i>Mimus polyglottos</i>	B
Parulidae – Warblers, Chat		
Yellow-breasted chat	<i>Icteria virens</i> †	
Emberizidae - Warblers, Sparrows, and Relatives		
California towhee	<i>Pipilo crissalis</i>	B, V
Spotted towhee	<i>Pipilo maculatus</i>	B, V
Bell's sage sparrow	<i>Amphispiza belli belli</i> †	B
Song sparrow	<i>Melospiza melodia</i>	B, V
Savannah sparrow	<i>Passerculus sandwichensis</i>	B
White-crowned sparrow	<i>Zonotrichia leucophrys</i>	B, V
Western meadowlark	<i>Sturnella neglecta</i>	B, V
Cardinalidae – Grosbeaks, Buntings		
Blue grosbeak	<i>Passerina caerulea</i>	B
Icterinae - Blackbirds and Orioles		
Hooded oriole	<i>Icterus cucullatus</i>	B, V
Brewer's blackbird	<i>Euphagus cyanocephalus</i>	B
Fringillidae - Finches		
House finch	<i>Carpodacus mexicanus</i>	B, V
Lesser goldfinch	<i>Carduelis psaltria</i>	B, V
Mammals		
Canidae - Foxes, Wolves, and Relatives		
Coyote	<i>Canis latrans</i>	B, V
Sciuridae - Squirrels		
California ground squirrel	<i>Spermophilus beecheyi</i>	B
Geomyidae - Pocket Gophers		
Botta's pocket gopher	<i>Thomomys bottae</i>	B
Leporidae - Rabbits and Hares		
Desert cottontail	<i>Sylvilagus auduboni</i>	B
Cervidae - Deer, Elk, and Relatives		
Mule deer	<i>Odocoileus hemionus</i>	B, V

(1) Nomenclature from American Ornithologists' Union (1983); Collins (1990); Jones, et al. (1982). (2) Status (in county) acronyms: B, breeding on site; V, visitor, migrant, or transient; W, winter observation. (3) †=Sensitive species.

APPENDIX J

**LIST OF PLANT SPECIES
OBSERVED**

Appendix J

List of Plant Species Observed within the BSA

Latin Name	Common Name	Status
Adoxaceae - Muskroot family		
<i>Sambucus nigra</i> ssp. <i>caerulea</i>	Blue elderberry	
Agavaceae - Century Plant family		
<i>Chlorogalum parviflorum</i>	Smallflower soap plant	
<i>Yucca schidigera</i>	Mojave yucca	
Aizoaceae - Fig-marigold family		
* <i>Aptenia cordifolia</i>	Baby sun-rose	
* <i>Carpobrotus edulis</i>	Freeway iceplant	
* <i>Mesembryanthemum crystallinum</i>	Crystalline iceplant	
<i>Sesuvium verrucosum</i>	Western sea-purslane	
Alliaceae - Onion or Garlic family		
<i>Allium</i> sp.	Onion	
Anacardiaceae - Sumac or Cashew family		
<i>Malosma laurina</i>	Laurel sumac	
<i>Rhus integrifolia</i>	Lemonade berry	
* <i>Schinus molle</i>	Pepper tree	
Apiaceae - Carrot family		
<i>Apiastrum angustifolium</i>	Mock parsley	
* <i>Apium graveolens</i>	Celery	
<i>Bowlesia incana</i>	Hoary bowlesia	
<i>Daucus pusillus</i>	American wild carrot	
* <i>Foeniculum vulgare</i>	Fennel	
<i>Sanicula bipinnatifida</i>	Purple sanicle, shoe buttons	
Apocynaceae - Dogbane family		
* <i>Nerium oleander</i>	Common oleander	
Arecaceae - Palm family		
* <i>Phoenix canariensis</i>	Canary Island palm	
* <i>Washingtonia robusta</i>	Mexican fan palm	
Asphodelaceae - Asphodel family		
* <i>Asphodelus fistulosus</i>	Onionweed	
Asteraceae - Sunflower family		
<i>Achillea millefolium</i>	Common yarrow	
<i>Acourtia microcephala</i>	Sacapellote	
<i>Ambrosia psilostachya</i>	Western ragweed	
* <i>Anthemis cotula</i>	Mayweed	
<i>Artemisia californica</i>	California sagebrush	
<i>Artemisia douglasiana</i>	Mugwort	
<i>Baccharis pilularis</i>	Coyote brush	
<i>Baccharis salicifolia</i> ssp. <i>salicifolia</i>	Mule fat	
<i>Baccharis sarothroides</i>	Broom baccharis	
<i>Bahiopsis laciniata</i>	San Diego sunflower	CRPR 4.2
<i>Brickellia californica</i>	California brickellbush	
* <i>Carduus pycnocephalus</i> ssp.	Italian thistle	

Latin Name	Common Name	Status
<i>pycnocephalus</i>		
* <i>Centaurea cyanus</i>	Bachelor's button, cornflower	
* <i>Centaurea melitensis</i>	Tocalote	
* <i>Cirsium vulgare</i>	Bull thistle	
<i>Corethrogyne filaginifolia</i>	Common sand aster	
* <i>Cotula australis</i>	Australian cotula	
* <i>Cynara cardunculus</i> ssp. <i>cardunculus</i>	Artichoke	
<i>Deinandra conjugens</i>	Otay tarplant	FT, SE, CRPR 1B.1
<i>Deinandra fasciculata</i>	Clustered tarweed	
<i>Encelia californica</i>	California brittlebush	
<i>Encelia farinosa</i>	Brittlebush	
<i>Erigeron canadensis</i>	Horseweed	
<i>Eriophyllum confertiflorum</i>	Golden-yarrow, yellow-yarrow	
* <i>Euryops</i> sp.	Bush daisy	
* <i>Gazania linearis</i>	Treasureflower	
<i>Grindelia camporum</i>	Great Valley gumweed	
<i>Gutierrezia californica</i>	California matchweed	
<i>Gutierrezia sarothrae</i>	Matchweed	
<i>Hazardia squarrosa</i>	Saw-toothed goldenbush	
* <i>Hedypnois cretica</i>	Crete weed	
<i>Helianthus annuus</i>	Common sunflower	
* <i>Helminthotheca echioides</i>	Bristly ox-tongue	
<i>Heterotheca grandiflora</i>	Telegraph weed	
<i>Holocarpha virgata</i> ssp. <i>elongata</i>	Graceful tarplant	CRPR 4.2
* <i>Hypochaeris glabra</i>	Smooth cat's-ear	
<i>Isocoma menziesii</i> var. <i>menziesii</i>	Menzies' goldenbush	
<i>Isocoma menziesii</i> var. <i>vernonoides</i>	Coastal goldenbush	
<i>Iva hayesiana</i>	San Diego marsh-elder	CRPR 2.2
* <i>Lactuca serriola</i>	Prickly lettuce	
<i>Laennecia coulteri</i>	Coulter's horseweed	
<i>Lasthenia californica</i> ssp. <i>californica</i>	California goldfields	
<i>Logfia arizonica</i>	Arizona cottonrose	
* <i>Logfia gallica</i>	Daggerleaf cottonrose	
<i>Microseris</i> sp.	Microseris	
<i>Osmadenia tenella</i>	Osmadenia	
<i>Pluchea odorata</i> var. <i>odorata</i>	Saltmarsh-fleabane	
<i>Pseudognaphalium biolettii</i>	Two-color rabbit-tobacco	
<i>Pseudognaphalium californicum</i>	Ladies' tobacco	
<i>Pseudognaphalium canescens</i>	White everlasting	
* <i>Pseudognaphalium luteoalbum</i>	Jersey cudweed	
* <i>Senecio vulgaris</i>	Common groundsel	
* <i>Silybum marianum</i>	Blessed milkthistle	
* <i>Sonchus asper</i> ssp. <i>asper</i>	Prickly sow thistle	
* <i>Sonchus oleraceus</i>	Common sow thistle	

Latin Name	Common Name	Status
<i>Stebbinsoseris heterocarpa</i>	Grassland silverpuffs	
<i>Stephanomeria exigua</i>	Small wire-lettuce	
<i>Symphytotrichum subulatum</i> var. <i>parviflorum</i>	Southwestern annual saltmarsh aster	
<i>Uropappus lindleyi</i>	Silver puffs	
Boraginaceae - Borage family		
<i>Amsinckia menziesii</i>	Common fiddleneck	
<i>Cryptantha intermedia</i>	Nievitans cryptantha	
<i>Cryptantha microstachys</i>	Tejon cryptantha	
<i>Emmenanthe penduliflora</i>	Whispering bells	
<i>Eucrypta chrysanthemifolia</i>	Spotted hideseed	
<i>Harpagonella palmeri</i>	Palmer's grapplinghook	CRPR 4.2
<i>Heliotropium curassavicum</i> var. <i>oculatum</i>	Seaside heliotrope, alkali heliotrope	
<i>Pectocarya linearis</i> ssp. <i>ferocula</i>	Narrow-toothed pectocarya	
<i>Phacelia cicutaria</i>	Caterpillar phacelia	
<i>Pholistoma racemosum</i>	Racemed fiestaflower	
<i>Plagiobothrys collinus</i> var. <i>gracilis</i>	San Diego popcornflower	
Brassicaceae - Mustard family		
* <i>Brassica nigra</i>	Black mustard	
* <i>Diplotaxis muralis</i>	Wall-rocket	
* <i>Hirschfeldia incana</i>	Short-pod mustard	
* <i>Lepidium didymum</i>	Lesser swine cress	
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	CRPR 1B.2
* <i>Lobularia maritima</i>	Sweet alyssum	
* <i>Raphanus sativus</i>	Wild radish	
* <i>Rapistrum rugosum</i>	Bastard cabbage	
* <i>Sinapis arvensis</i>	Charlock	
* <i>Sisymbrium irio</i>	London rocket	
* <i>Sisymbrium orientale</i>	Indian hedgemustard	
Cactaceae - Cactus family		
<i>Cylindropuntia prolifera</i>	Coast cholla	
<i>Ferocactus viridescens</i>	San Diego barrel cactus	CRPR 2.1
<i>Opuntia littoralis</i>	Coastal prickly-pear	
Caryophyllaceae - Pink family		
* <i>Cerastium glomeratum</i>	Sticky mouse-ear chickweed	
<i>Polycarpon depressum</i>	California polycarp	
* <i>Polycarpon tetraphyllum</i> var. <i>tetraphyllum</i>	Four-leaved allseed	
* <i>Silene gallica</i>	Small-flower catchfly, windmill pink	
* <i>Spergularia bocconi</i>	Boccone's sand-spurrey	
<i>Spergularia</i> sp.	Sand-spurry	
Chenopodiaceae - Goosefoot family		
* <i>Atriplex amnicola</i>	Swamp saltbush	
<i>Atriplex argentea</i>	Silverscale	
<i>Atriplex canescens</i>	Four-wing saltbush	

Latin Name	Common Name	Status
* <i>Atriplex semibaccata</i>	Australian saltbush	
* <i>Bassia hyssopifolia</i>	Fivehorn smotherweed	
* <i>Beta vulgaris</i> ssp. <i>maritima</i>	Sea beet	
* <i>Chenopodium murale</i>	Nettleleaf goosefoot	
<i>Chenopodium</i> sp.	Goosefoot	
* <i>Salsola tragus</i>	Russian thistle, tumbleweed	
Cleomaceae - Spiderflower family		
<i>Peritoma arborea</i>	Bladderpod	
Convolvulaceae - Morning-glory family		
<i>Calystegia macrostegia</i>	Morning-glory	
<i>Calystegia longipes</i>	Paiute false bindweed	
* <i>Convolvulus arvensis</i>	Bindweed, orchard morning-glory	
<i>Convolvulus simulans</i>	Small-flowered morning-glory	CRPR 4.2
Crassulaceae - Stonecrop family		
<i>Crassula connata</i>	Pygmy-weed	
<i>Dudleya pulverulenta</i>	Chalk dudleya	
<i>Dudleya variegata</i>	Variiegated dudleya	CRPR 1B.2
Cucurbitaceae - Gourd family		
<i>Marah macrocarpa</i>	Chilicothe	
Cyperaceae - Sedge family		
<i>Cyperus eragrostis</i>	Tall flatsedge	
<i>Schoenoplectus americanus</i>	Olney's three-square bulrush	
Euphorbiaceae - Spurge family		
<i>Chamaesyce albomarginata</i>	Rattlesnake weed	
* <i>Chamaesyce maculata</i>	Spotted spurge	
<i>Croton setigerus</i>	Turkey-Mullein	
* <i>Euphorbia peplus</i>	Petty spurge	
* <i>Ricinus communis</i>	Castorbean	
Fabaceae - Legume family		
* <i>Acacia cyclops</i>	Western coastal wattle	
<i>Acmispon glaber</i>	Deerweed, California broom	
<i>Acmispon micranthus</i>	San Diego bird's-foot trefoil	
<i>Acmispon strigosus</i>	Strigose bird's-foot trefoil	
<i>Astragalus trichopodus</i> var. <i>lonchus</i>	Santa Barbara milkvetch	
<i>Lupinus bicolor</i>	Miniature lupine	
<i>Lupinus hirsutissimus</i>	Stinging lupine	
<i>Lupinus succulentus</i>	Arroyo lupine	
* <i>Medicago polymorpha</i>	California burclover	
* <i>Medicago sativa</i>	Alfalfa	
* <i>Melilotus albus</i>	White sweetclover	
* <i>Melilotus indicus</i>	Sourclover	
* <i>Vicia ludoviciana</i> ssp. <i>ludoviciana</i>	Deerpea vetch	
* <i>Vicia sativa</i> ssp. <i>nigra</i>	Narrow-leaved vetch	
* <i>Vicia tetrasperma</i>	Sparrow vetch	
* <i>Vicia villosa</i>	Hairy vetch, winter vetch	
Fagaceae - Oak family		
<i>Quercus engelmannii</i> x <i>Quercus</i>	Engelmann oak hybrid	CRPR 4.2

Latin Name	Common Name	Status
<i>acutidens</i>		
Gentianaceae - Gentian family		
<i>Zeltnera venusta</i>	California centaury, charming centaury	
Geraniaceae - Geranium family		
* <i>Erodium botrys</i>	Longbeak stork's bill	
* <i>Erodium cicutarium</i>	Redstem filaree	
* <i>Erodium moschatum</i>	Greenstem filaree	
<i>Erodium texanum</i>	Texas filaree	
<i>Pelargonium sp.</i>	Geranium	
Iridaceae - Iris family		
<i>Sisyrinchium bellum</i>	Western blue-eyed-grass	
Juncaceae - Rush family		
<i>Juncus acutus ssp. leopoldii</i>	Southwestern spiny rush	CRPR 4.2
Liliaceae - Lily Family		
<i>Calochortus splendens</i>	lilac mariposa lily	
Lamiaceae - Mint family		
* <i>Marrubium vulgare</i>		
<i>Salvia apiana</i>	White sage	
<i>Salvia leucophylla</i>	Purple sage	
<i>Salvia mellifera</i>	Black sage	
<i>Salvia munzii</i>	Munz's sage	CRPR 2.2
<i>Trichostemma lanceolatum</i>	Vinegarweed	
Malvaceae - Mallow family		
<i>Malacothamnus fasciculatus</i>	Chaparral mallow	
* <i>Malva parviflora</i>	Cheeseweed, little mallow	
Montiaceae - Miner's Lettuce family		
<i>Calandrinia ciliata</i>	Red maids	
Myrsinaceae - Myrsine family		
* <i>Anagallis arvensis</i>	Scarlet pimpernel	
Myrtaceae - Myrtle family		
* <i>Eucalyptus camaldulensis</i>	Red gum, river red gum	
Nyctaginaceae - Four O'clock family		
<i>Mirabilis laevis var. crassifolia</i>	Wishbone bush	
Oleaceae - Olive family		
* <i>Olea europaea</i>	Olive	
Onagraceae - Evening Primrose family		
<i>Clarkia epilobioides</i>	Canyon clarkia	
<i>Epilobium canum</i>	California fuchsia, zauschneria	
<i>Epilobium ciliatum</i>	Fringed willowherb	
* <i>Oenothera speciosa</i>	Pinkladies	
Orobanchaceae - Broom-rape family		
<i>Castilleja exserta</i>	Purple owl's-clover	
Oxalidaceae - Oxalis family		
<i>Oxalis californica</i>	California wood-sorrel	
* <i>Oxalis pes-caprae</i>	Bermuda buttercup	
Papaveraceae - Poppy family		
<i>Eschscholzia californica</i>	California poppy	

Latin Name	Common Name	Status
Phrymaceae - Lopseed family		
<i>Mimulus aurantiacus</i>	Sticky monkeyflower	
Plantaginaceae - Plantain family		
<i>Antirrhinum nuttallianum</i>	Nuttall's snapdragon	
<i>Plantago erecta</i>	Dotseed plantain	
* <i>Plantago major</i>	Common plantain	
Plumbaginaceae - Leadwort family		
* <i>Limonium perezii</i>	Perez's sea lavender	
* <i>Plumbago auriculata</i>	Cape leadwort	
Poaceae - Grass family		
<i>Aristida adscensionis</i>	Sixweeks three-awn	
* <i>Avena barbata</i>	Slender wild oat	
<i>Bothriochloa barbinodis</i>	Cane bluestem	
* <i>Brachypodium distachyon</i>	Purple false brome	
* <i>Bromus catharticus</i> var. <i>catharticus</i>	Rescue grass	
* <i>Bromus diandrus</i>	Ripgut grass	
* <i>Bromus hordeaceus</i>	Soft chess	
* <i>Bromus madritensis</i>	Compact brome	
* <i>Cortaderia selloana</i>	Pampas grass	
* <i>Cynodon dactylon</i>	Bermuda grass	
<i>Distichlis spicata</i>	Saltgrass	
* <i>Echinochloa crus-galli</i>	Barnyardgrass	
<i>Festuca californica</i>	California fescue	
<i>Festuca microstachys</i>	Pacific fescue	
* <i>Festuca myuros</i>	Rattail sixweeks grass	
* <i>Festuca perennis</i>	Rye grass	
* <i>Gastridium phleoides</i>	Nit grass	
<i>Hordeum depressum</i>	Low barley, alkali barley	
* <i>Hordeum murinum</i> ssp. <i>leporinum</i>	Hare barley	
* <i>Lamarckia aurea</i>	Goldentop grass	
<i>Melica frutescens</i>	Woody melic	
<i>Melica imperfecta</i>	Little California melica	
<i>Muhlenbergia microsperma</i>	Littleseed muhly	
<i>Muhlenbergia rigens</i>	Deer grass	
* <i>Paspalum dilatatum</i>	Dallis grass	
* <i>Pennisetum setaceum</i>	Crimson fountain grass	
* <i>Phalaris paradoxa</i>	Hood canary grass	
* <i>Polypogon monspeliensis</i>	Annual beard grass, rabbitfoot grass	
* <i>Schismus barbatus</i>	Common mediterranean grass	
<i>Stipa cernua</i>	Nodding needlegrass	
<i>Stipa lepida</i>	Foothill needle grass	
* <i>Stipa miliacea</i> var. <i>miliacea</i>	Smilo grass	
<i>Stipa pulchra</i>	Purple needle grass	
Polemoniaceae - Phlox family		
<i>Gilia angelensis</i>	Chaparral gilia	
<i>Linanthus dianthiflorus</i>	Fringed linanthus	

Latin Name	Common Name	Status
Polygonaceae - Buckwheat family		
<i>Chorizanthe fimbriata</i>	Fringed spineflower	
<i>Eriogonum fasciculatum</i> var. <i>foliolosum</i>	Leafy California buckwheat	
<i>Pterostegia drymarioides</i>	Woodland pterostegia	
* <i>Rumex crispus</i>	Curly dock	
Proteaceae – Protea family		
* <i>Grevillea robusta</i>	Silk oak	
Pteridaceae - Brake family		
<i>Cheliantes newberryi</i>	Newberry's lip fern	
<i>Pellaea andromedifolia</i>	Coffee fern	
<i>Pentagramma triangularis</i>	Goldback fern	
Rhamnaceae - Buckthorn family		
<i>Adolphia californica</i>	California adolphia	CRPR 2.1
<i>Rhamnus crocea</i>	Spiny redberry	
Rosaceae - Rose family		
<i>Heteromeles arbutifolia</i>	Toyon	
Rubiaceae - Madder family		
<i>Galium angustifolium</i>	Narrow-leaved bedstraw	
<i>Galium aparine</i>	Goose grass	
Salicaceae - Willow family		
<i>Populus fremontii</i> ssp. <i>fremontii</i>	Alamo or fremont cottonwood	
<i>Salix exigua</i>	Narrowleaf willow	
<i>Salix gooddingii</i>	Goodding's black willow	
<i>Salix laevigata</i>	Red willow	
<i>Salix lasiolepis</i>	Arroyo willow	
Scrophulariaceae - Figwort family		
* <i>Myoporum laetum</i>	Myoporum, ngaio tree	
<i>Scrophularia californica</i>	California figwort	
Selaginellaceae - Spike-moss family		
<i>Selaginella bigelovii</i>	Bushy spike-moss	
<i>Selaginella cinerascens</i>	Ashy spike-moss	CRPR 4.1
Simmondsiaceae - Jojoba family		
<i>Simmondsia chinensis</i>	Jojoba	
Solanaceae - Nightshade family		
<i>Datura wrightii</i>	Sacred thorn-apple	
* <i>Nicotiana glauca</i>	Tree tobacco	
<i>Solanum americanum</i>	Small-flowered nightshade	
Tamaricaceae - Tamarisk family		
* <i>Tamarix ramosissima</i>	Saltcedar	
Themidaceae - Brodiaea family		
<i>Bloomeria crocea</i>	Common goldenstar	
<i>Brodiaea terrestris</i> ssp. <i>kernensis</i>	Kern brodiaea	
<i>Dichelostemma capitatum</i>	Blue dicks	
Typhaceae - Cattail family		
<i>Typha domingensis</i>	Southern cattail	

Latin Name	Common Name	Status
Urticaceae - Nettle family		
<i>Parietaria hespera</i>	Rillita pellitory	
<i>Urtica dioica</i>	Stinging nettle	
* <i>Urtica urens</i>	Dwarf nettle	
Verbenaceae - Vervain family		
* <i>Lantana camara</i>	Lantana	
<i>Verbena lasiostachys</i>	Western vervain	
Violaceae - Violet family		
<i>Viola pedunculata</i>	Johnny-jump-up	

*Nonnative species

Status:

FE: Federally listed as endangered

FT: Federally listed as threatened

SCE: State candidate for listing as endangered

SE: State-listed as endangered

ST: State-listed as threatened

SR: State rare

California Rare Plant Ranks:

1B: Plants Rare, Threatened, or Endangered in California and Elsewhere

2: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

3: Plants About Which We Need More Information - A Review List

4: Plants of Limited Distribution - A Watch List

0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

0.2-Fairly threatened in California (20–80% occurrences threatened / moderate degree and immediacy of threat)

0.3-Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

SDG&E Natural Community Conservation Plan Covered Species (NCCP)

NE = SDG&E Narrow Endemic Species

APPENDIX K

**LIST OF WILDLIFE SPECIES
OBSERVED**

Appendix K

List of Wildlife Species Observed within the BSA

Order	Family	Scientific Name	Common Name
Reptiles & Amphibians			
Squamata	Anguidae	<i>Elgaria multicarinata</i>	Southern Alligator Lizard
Squamata	Colubridae	<i>Pituophis catenifer</i>	Gopher Snake
Squamata	Phrynosomatidae	<i>Sceloporus occidentalis</i>	Western Fence Lizard
Squamata	Viperidae	<i>Crotalus oreganus</i>	Western Rattlesnake
Birds			
Accipitriformes	Accipitridae	<i>Accipiter cooperii</i>	Cooper's Hawk
Accipitriformes	Accipitridae	<i>Buteo jamaicensis</i>	Red-tailed Hawk
Accipitriformes	Accipitridae	<i>Circus cyaneus</i>	Northern Harrier ⁵
Accipitriformes	Accipitridae	<i>Elanus leucurus</i>	White-tailed Kite ⁶
Accipitriformes	Cathartidae	<i>Cathartes aura</i>	Turkey Vulture
Anseriformes	Anatidae	<i>Anas platyrhynchos</i>	Mallard
Anseriformes	Anatidae	<i>Oxyura jamaicensis</i>	Ruddy Duck
Apodiformes	Trochilidae	<i>Calypte anna</i>	Anna's Hummingbird
Apodiformes	Trochilidae	<i>Calypte costae</i>	Costa's Hummingbird
Charadriiformes	Charadriidae	<i>Charadrius vociferus</i>	Killdeer
Charadriiformes	Laridae	<i>Hydroprogne caspia</i>	Caspian Tern
Charadriiformes	Laridae	<i>Larus occidentalis</i>	Western Gull
Columbiformes	Columbidae	<i>Columba livia</i>	Rock Pigeon
Columbiformes	Columbidae	<i>Zenaida macroura</i>	Mourning Dove
Cuculiformes	Cuculidae	<i>Geococcyx californianus</i>	Greater Roadrunner
Falconiformes	Falconidae	<i>Falco columbarius</i>	Merlin
Falconiformes	Falconidae	<i>Falco peregrinus</i>	Peregrine Falcon

Order	Family	Scientific Name	Common Name
Falconiformes	Falconidae	<i>Falco sparverius</i>	American Kestrel
Galliformes	Odontophoridae	<i>Callipepla californica</i>	California Quail
Gruiformes	Rallidae	<i>Fulica americana</i>	American Coot
Passeriformes	Aegithalidae	<i>Psaltriparus minimus</i>	Bushtit
Passeriformes	Bombycillidae	<i>Bombycilla cedrorum</i>	Cedar Waxwing
Passeriformes	Cardinalidae	<i>Passerina amoena</i>	Lazuli Bunting
Passeriformes	Cardinalidae	<i>Passerina caerulea</i>	Blue Grosbeak
Passeriformes	Cardinalidae	<i>Pheucticus melanocephalus</i>	Black-headed Grosbeak
Passeriformes	Corvidae	<i>Aphelocoma californica</i>	Western Scrub-Jay
Passeriformes	Corvidae	<i>Corvus brachyrhynchos</i>	American Crow
Passeriformes	Corvidae	<i>Corvus corax</i>	Common Raven
Passeriformes	Emberizidae	<i>Aimophila ruficeps</i>	Rufous-crowned Sparrow
Passeriformes	Emberizidae	<i>Ammodramus savannarum</i>	Grasshopper Sparrow ⁵
Passeriformes	Emberizidae	<i>Artemisiospiza belli</i>	Sage Sparrow
Passeriformes	Emberizidae	<i>Melospiza melodia</i>	Song Sparrow
Passeriformes	Emberizidae	<i>Melospiza crissalis</i>	California Towhee
Passeriformes	Emberizidae	<i>Passerculus sandwichensis</i>	Savannah Sparrow
Passeriformes	Emberizidae	<i>Pipilo maculatus</i>	Spotted Towhee
Passeriformes	Emberizidae	<i>Zonotrichia leucophrys</i>	White-crowned Sparrow
Passeriformes	Fringillidae	<i>Haemorhous mexicanus</i>	House Finch
Passeriformes	Fringillidae	<i>Spinus psaltria</i>	Lesser Goldfinch
Passeriformes	Fringillidae	<i>Spinus tristis</i>	American Goldfinch
Passeriformes	Hirundinidae	<i>Petrochelidon pyrrhonota</i>	Cliff Swallow
Passeriformes	Hirundinidae	<i>Stelgidopteryx serripennis</i>	Northern Rough-winged Swallow
Passeriformes	Icteridae	<i>Agelaius phoeniceus</i>	Red-winged Blackbird
Passeriformes	Icteridae	<i>Euphagus cyanocephalus</i>	Brewer's Blackbird
Passeriformes	Icteridae	<i>Icterus bullockii</i>	Bullock's Oriole

Order	Family	Scientific Name	Common Name
Passeriformes	Icteridae	<i>Icterus cucullatus</i>	Hooded Oriole
Passeriformes	Icteridae	<i>Sturnella neglecta</i>	Western Meadowlark
Passeriformes	Mimidae	<i>Mimus polyglottos</i>	Northern Mockingbird
Passeriformes	Mimidae	<i>Toxostoma redivivum</i>	California Thrasher
Passeriformes	Motacillidae	<i>Anthus rubescens</i>	American Pipit
Passeriformes	Parulidae	<i>Cardellina pusilla</i>	Wilson's Warbler
Passeriformes	Parulidae	<i>Geothlypis trichas</i>	Common Yellowthroat
Passeriformes	Parulidae	<i>Icteria virens</i>	Yellow-breasted Chat ⁵
Passeriformes	Parulidae	<i>Oreothlypis celata</i>	Orange-crowned Warbler
Passeriformes	Parulidae	<i>Setophaga coronata</i>	Yellow-rumped Warbler
Passeriformes	Parulidae	<i>Setophaga petechia</i>	Yellow Warbler ⁵
Passeriformes	Passeridae	<i>Passer domesticus</i>	House Sparrow
Passeriformes	Poliopitilidae	<i>Poliopitila californica californica</i>	Coastal California Gnatcatcher ²
Passeriformes	Sturnidae	<i>Sturnus vulgaris</i>	European Starling
Passeriformes	Sylviidae	<i>Chamaea fasciata</i>	Wrentit
Passeriformes	Troglodytidae	<i>Salpinctes obsoletus</i>	Rock Wren
Passeriformes	Troglodytidae	<i>Thryomanes bewickii</i>	Bewick's Wren
Passeriformes	Troglodytidae	<i>Troglodytes aedon</i>	House Wren
Passeriformes	Tyrannidae	<i>Empidonax difficilis</i>	Pacific-slope Flycatcher
Passeriformes	Tyrannidae	<i>Myiarchus cinerascens</i>	Ash-throated Flycatcher
Passeriformes	Tyrannidae	<i>Sayornis nigricans</i>	Black Phoebe
Passeriformes	Tyrannidae	<i>Sayornis saya</i>	Say's Phoebe
Passeriformes	Tyrannidae	<i>Tyrannus verticalis</i>	Western Kingbird
Passeriformes	Tyrannidae	<i>Tyrannus vociferans</i>	Cassin's Kingbird
Passeriformes	Vireonidae	<i>Vireo gilvus</i>	Warbling Vireo
Pelecaniformes	Ardeidae	<i>Ardea alba</i>	Great Egret
Pelecaniformes	Ardeidae	<i>Nycticorax nycticorax</i>	Black-crowned Night-heron

Order	Family	Scientific Name	Common Name
Podicipediformes	Podicipedidae	<i>Podilymbus podiceps</i>	Pied-billed Grebe
Strigiformes	Strigidae	<i>Athene cunicularia hypugaea</i>	Western Burrowing Owl ⁵
Suliformes	Phalacrocoracidae	<i>Phalacrocorax auritus</i>	Double-crested Cormorant
Mammals			
Artiodactyla	Cervidae	<i>Odocoileus hemionus</i>	Mule Deer
Carnivora	Canidae	<i>Canis latrans</i>	Coyote
Carnivora	Felidae	<i>Lynx rufus</i>	Bobcat
Lagomorpha	Leporidae	<i>Lepus californicus bennettii</i>	San Diego Black-tailed Jackrabbit ⁵
Lagomorpha	Leporidae	<i>Sylvilagus audubonii</i>	Desert Cottontail
Rodentia	Geomyidae	<i>Thomomys bottae</i>	Botta's Pocket Gopher
Rodentia	Muridae	<i>Neotoma</i> sp.	Woodrat sp.
Rodentia	Sciuridae	<i>Spermophilus beecheyi</i>	California Ground Squirrel
Butterflies			
Lepidoptera	Hesperiidae	<i>Erynnis funeralis</i>	Funereal Duskywing
Lepidoptera	Hesperiidae	<i>Pyrgus</i> sp.	Checkered Skipper sp.
Lepidoptera	Lycaenidae	<i>Brephidium exilis</i>	Western Pygmy-Blue
Lepidoptera	Lycaenidae	<i>Callophrys perplexa</i>	Perplexing Hairstreak
Lepidoptera	Lycaenidae	<i>Cupida amyntula</i>	Western Tailed-Blue
Lepidoptera	Lycaenidae	<i>Euphilotes bernardino</i>	Bernardino Dotted-Blue
Lepidoptera	Lycaenidae	<i>Glaucopsyche lygdamus</i>	Silvery Blue
Lepidoptera	Lycaenidae	<i>Icaria acmon</i>	Acmon Blue
Lepidoptera	Lycaenidae	<i>Leptotes marina</i>	Marine Blue
Lepidoptera	Lycaenidae	<i>Strymon melinus</i>	Gray Hairstreak
Lepidoptera	Nymphalidae	<i>Ceononympha tullia</i>	Common Ringlet
Lepidoptera	Nymphalidae	<i>Danaus plexippus</i>	Monarch
Lepidoptera	Nymphalidae	<i>Junonia coenia</i>	Common Buckeye
Lepidoptera	Nymphalidae	<i>Nymphalis antiopa</i>	Mourning Cloak

Order	Family	Scientific Name	Common Name
Lepidoptera	Nymphalidae	<i>Speyeria</i> sp.	Fritillary sp.
Lepidoptera	Nymphalidae	<i>Vanessa anabella</i>	West Coast Lady
Lepidoptera	Nymphalidae	<i>Vanessa annabella</i>	Red Admiral
Lepidoptera	Nymphalidae	<i>Vanessa cardui</i>	Painted Lady
Lepidoptera	Papilionidae	<i>Papilio eurymedon</i>	Pale Swallowtail
Lepidoptera	Papilionidae	<i>Papilo zelicoan</i>	Anise Swallowtail
Lepidoptera	Pieridae	<i>Anthocharis sara</i>	Pacific Orangetip
Lepidoptera	Pieridae	<i>Colias eurytheme</i>	Orange Sulphur
Lepidoptera	Pieridae	<i>Colias harfordii</i>	Harford's Sulphur
Lepidoptera	Pieridae	<i>Pieris rapae</i>	Cabbage White
Lepidoptera	Pieridae	<i>Pontia protodice</i>	Checkered White
Lepidoptera	Riodinidae	<i>Apodemia virgulti</i>	Behr's Metalmark

¹Federally Endangered

²Federally Threatened

³State Endangered

⁴State Threatened

⁵Species of Special Concern

⁶Fully Protected Species

APPENDIX L

SDG&E NCCP AND OPERATIONAL PROTOCOLS

7.1 Operational Protocols

Operational protocols represent an environmentally sensitive approach to traditional utility construction, maintenance and repair Activities recognizing that slight adjustments in construction techniques can yield major benefits for the environment. The appropriate Operational Protocols for each individual project will be determined and documented by the Environmental Surveyor. The information regarding the qualifications and responsibilities of the environmental surveyor is contained in Appendix B. The following mitigation measures shall be adhered to by SDG&E.

7.1.1 General Behavior for All Field Personnel

1. Vehicles must be kept on access roads. A 15 mile-per-hour speed limit shall be observed on dirt access roads to allow reptile species to disperse. Vehicles must be turned around in established or designated areas only.
2. No wildlife, including rattlesnakes, may be harmed, except to protect life and limb.
3. Firearms shall be prohibited on the rights-of-way except for those used by security personnel.
4. Feeding of wildlife is not allowed.
5. SDG&E personnel are not allowed to bring pets on the rights-of-way in order to minimize harassment or killing of wildlife and to prevent the introduction of destructive domestic animal diseases to native wildlife populations.
6. Parking or driving underneath oak trees is not allowed in order to protect root structures except in established traffic areas.

7. Plant or wildlife species may not be collected for pets or any other reason.
8. Littering is not allowed. SDG&E shall not deposit or leave any food or waste on the rights-of-way or adjacent property.
9. Wild Fires shall be prevented or minimized by exercising care when driving and by not parking vehicles where catalytic converters can ignite dry vegetation. In times of high fire hazard, it may be necessary for trucks to carry water and shovels, or fire extinguishers in the field. The use of shields, protective mats, or other fire prevention methods shall be used during grinding and welding to prevent or minimize the potential for fire. Care should be exhibited when smoking in natural habitats.
10. Field crews shall refer environmental issues including wildlife relocation, dead or sick wildlife, hazardous waste, or questions about avoiding environmental impacts to the Environmental Surveyor. Biologists or experts in wildlife handling may need to be brought in by Environmental Surveyor for assistance with wildlife relocations.

7.1.2 Training

11. All SDG&E personnel working within the project area shall participate in an employee training program conducted by SDG&E, with annual updates. The program will consist of a brief discussion of endangered species biology and the legal protections afforded to Covered Species; a discussion of the biology of the Covered Species protected under this Subregional Plan; the habitat requirements of these Covered Species; their status under the Endangered Species Acts; measures being taken for the protection of Covered Species and their habitats under this Subregional Plan; and a review of the Operational Protocols. A fact sheet conveying this information will also be distributed to all employees working in the project area.
12. Designated SDG&E staff will conduct selected reviews of SDG&E operations. Any proposed modifications to Operational Protocols, procedures or conditions will be promptly provided to CDFG and USFWS for their review and input for required permit or Subregional Plan amendments.

7.1.3 Preactivity Studies

13. The Environmental Surveyor shall conduct preactivity studies for all activities occurring off of access roads in natural areas. The scope of these studies is included in Appendix A. The Environmental Surveyor will complete a preactivity study form contained in Appendix A, including recommendations for review by a biologist and construction monitoring as appropriate. Biologists should be called in when there is the potential for unavoidable impacts to Covered Species. The forms are for information only, and will not require CDFG or USFWS approval. These forms shall be faxed to CDFG and USFWS, along with phone notification, who will reply within 5 working days, indicating if they would like to review the project and/or suggest recommendations for post project monitoring. If a biologist is required, he/she will be contacted concurrent to notification to CDFG and USFWS. SDG&E's project may proceed during this time if necessary, in compliance with the recommendations of the biologist (For narrow endemic species see mitigation IV following Table 3.1). USFWS survey protocols performed by qualified biologists will be required for new projects which are defined as projects requiring CEQA review.

In those situations where the Environmental Surveyor cannot make a definitive species

identification, an on-call biologist will be brought in. When the biologist is called, he or she will be contacted concurrently with CDFG and USFWS. The biologist will make the determination of the species in question and recommend avoidance or mitigation approaches to the Environmental Surveyor and a decision will be made. In those situations where more than one visit may be necessary to identify a given species, such as certain birds, no more than three site visits shall be required. It is expected that the typical USFWS search protocols will not be utilized in most situations due to the Plan's avoidance priority. Background information necessary to complete the annual report shall be collected on the preactivity study form and used by SDG&E to prepare the annual report.

14. In order to ensure that habitats are not inadvertently impacted, the Environmental Surveyor shall determine the extent of habitat and flag boundaries of habitats which must be avoided. When necessary, the Environmental Surveyor should also demark appropriate equipment laydown areas, vehicle turn around areas, and pads for placement of large construction equipment such as cranes, bucket trucks, augers, etc. When appropriate, the Environmental Surveyor shall make office and/or field presentations to field staff to review and become familiar with natural resources to be protected on a project specific basis.
15. SDG&E will maintain a library of rare plant locations known to SDG&E occurring within easements and fee owned properties. "Known" means a verified population, either extant or documented using record data. Information on known sites may come from a variety of record data sources including local agency Habitat Conservation Plans, pre-activity surveys, or biological surveys conducted for environmental compliance on a project site (e.g. initial study), but there is no requirement for development of original biological data. Plant inventories shall be consulted as part of pre-activity survey procedures.

7.1.4 Maintenance, Repair and Construction of Facilities

16. Maintenance, repair and construction Activities shall be designed and implemented to minimize new disturbance, erosion on manufactured and other slopes, and off-site degradation from accelerated sedimentation, and to reduce maintenance and repair costs.
17. Routine maintenance of all Facilities includes visual inspections on a regular basis, conducted from vehicles driven on the access roads where possible. If it is necessary to inspect areas which cannot be seen from the roads, the inspection shall be done on foot, or from the air.
18. When the view of a gas transmission line marker becomes obscured by vegetation on a regular basis requiring repeated habitat removal, consideration shall be given to the replacement of markers with taller versions.
19. Erosion will be minimized on access roads and other locations primarily with water bars. The water bars are mounds of soil shaped to direct flow and prevent erosion.
20. Hydrologic impacts will be minimized through the use of state-of-the-art technical design and construction techniques to minimize ponding, eliminate flood hazards, and avoid erosion and siltation into any creeks, streams, rivers, or bodies of water by use of Best Management Practices.

21. When siting new facilities, every effort will be made to cross the wetland habitat perpendicular to the watercourse, spanning the watercourse to minimize the amount of disturbance to riparian areas (See Figure 4).
22. Gas and other facilities cross streambeds and require maintenance and repair. During such times water may be temporarily diverted as long as after disturbance natural drainage patterns are restored to minimize the impact of the disturbance and help to reestablish or enhance the native habitat. Erosion control during construction in the form of intermittent check dams and culverts should also be considered to prevent alteration to natural drainage patterns and prevent siltation.
23. Impacts to wetlands shall be minimized by avoiding pushing soil or brush into washes or ravines.
24. During work on facilities, all trucks, tools, and equipment should be kept on existing access roads or cleared areas, to the extent possible.
25. Environmental Surveyor must approve of activity prior to working in sensitive areas where disturbance to habitat may be unavoidable.
26. Insulator washing is allowed from access roads if other applicable protocols are followed.
27. Brush clearing around facilities for fire protection shall not be conducted from March through August without prior approval by the Environmental Surveyor. The Environmental Surveyor will make sure that the habitat contains no active nests, burrows, or dens prior to clearing.
28. In the event SDG&E identifies a covered species of plant within a 10' radius around power poles, which is the area required to be cleared for fire protection purposes, SDG&E shall notify USFWS (for ESA listed plants), and CDFG (for CESA listed plants), in writing, of the plant's identity and location and of the proposed Activity, which will result in a Take of such plant. Notification will occur ten (10) working days prior to such Activity, during which time USFWS or CDFG may remove such plant(s). If neither USFWS or CDFG have removed such plant(s) within the ten (10) working days following the notice, SDG&E may proceed to complete its fire clearing and cause a Take of such plant(s).

When fire clearing is necessary in instances other than around power poles, and the potential for impacts to Covered Species exists, SDG&E will follow the preactivity study and notification procedures in Operational Protocol number 13.
29. Wire stringing is allowed year round in sensitive habitats if conductor is not allowed to drag on ground or in brush and vehicles remain on access roads.
30. Maintenance of cut and fill slopes shall consist primarily of erosion repair. In situations where revegetation would improve the success of erosion control, planting or seeding with native hydroseed mix may be done on slopes.
31. Spoils created during maintenance operations shall be disposed of only on previously disturbed areas designated by the Environmental Surveyor or used immediately to fill eroded areas. Cleared vegetation shall be hauled off the rights-of-way to a permitted disposal location.

32. Within 6 months of Plan approval, environmentally sensitive tree trimming locations will be identified in the tree trim computer data base system utilized by tree trim contractors. (This data base also tracks the date of each tree trim, type of tree, where threatening dogs reside, etc.). The Environmental Surveyor should be contacted to perform a preactivity survey when trimming is planned in environmentally sensitive areas. Whenever possible, trees in environmentally sensitive areas (determined by CDFG and SDG&E) will be scheduled for trimming in the non-sensitive times.
33. No new Facilities and Activities shall be planned which disturb vernal pools, their watersheds, or impact their natural regeneration. Continued historic maintenance of existing infrastructure utilizing existing access roads is allowed to continue in areas containing vernal pool habitat. New construction of overhead infrastructure which spans vernal pool habitats is allowed as long as the placement of facilities or the associated construction activities in no way impact the vernal pools.
34. If any previously unidentified dens, burrows, or plants are located on any project site after the preactivity survey, the Environmental Surveyor shall be contacted. Environmental Surveyor will determine how to best avoid or minimize impacting the resource by considering such methods as project or work plan redevelopment, equipment placement or construction method modification, seasonal/time of day limitations, etc...
35. The Environmental Surveyor shall conduct monitoring as recommended in the preactivity survey report. At completion of work, the Environmental Surveyor shall check to verify compliance, including observing that flagged areas have been avoided and that reclamation has been properly implemented. Also at completion of work, the Environmental Surveyor is responsible for removing all habitat flagging from the construction site.
36. The Environmental Surveyor shall conduct checks on mowing procedures, to ensure that mowing is limited to a 12-foot wide area on straight portions of the road (slightly wider on radius turns), and that the mowing height is no less than 4 inches.
37. Supplies or equipment where wildlife could hide (e.g., pipes, culverts, pole holes) shall be inspected prior to moving or working on them to reduce the potential for injury to wildlife. Supplies or equipment that cannot be inspected or from which animals could not be removed shall be capped or otherwise covered at the end of each work day. Old piping or other supplies that have been left open, shall not be capped until inspected and any species found in it allowed to escape. Ramping shall be provided in open trenches when necessary. If an animal is found entrapped in supplies or equipment, such as a pipe section, the supplies or equipment shall be avoided and the animal(s) left to leave on its own accord, except as otherwise authorized by CDFG.
38. All steep-walled trenches or excavations used during construction shall be inspected twice daily (early morning and evening) to protect against wildlife entrapment. If wildlife are located in the trench or excavation, the Environmental Surveyor shall be called immediately to remove them if they cannot escape unimpeded.
39. Large amounts of fugitive dust could interfere with photosynthesis. Fugitive dust created during clearing, grading, earth-moving, excavation or other construction activities will be controlled by regular watering. At all times, fugitive dust emissions will be controlled by limiting on-site vehicle speed to 15 miles per hour.

40. Before using pesticides in areas where burrowing owls may be found, a pre-activity survey will be conducted.

7.1.5 Maintenance of access roads shall consist of:

41. Repair of erosion by grading, addition of fill, and compacting. In each case of repair, the total area of disturbance shall be minimized by careful access and use of appropriately sized equipment. Repairs shall be done after preactivity surveys conducted by the Environmental Surveyor and in accordance with the recommendations regarding construction monitoring and relevant protocols. Consideration should be given to source of erosion problem, when source is within control of SDG&E.
42. Vegetation control through grading should be used only where the vegetation obscures the inspection of facilities, access may be entirely lost, or the threat of Facility failure or fire hazard exists. The graded access road area should not exceed 12'-wide on straight portions (radius turns may be slightly wider) (See Figure 23).
43. Mowing habitat can be an effective method for protecting the vegetative understory while at the same time creating access to a work area. Mowing should be used when permanent access is not required since, with time, total revegetation is expected. If mowing is in response to a permanent access need, but the alternative of grading is undesirable because of downstream siltation potential, it should be recognized that periodic mowing will be necessary to maintain permanent access.
44. Maintenance work on access roads should not expand the existing road bed (See Figure 23).
45. Material for filling in road ruts should never be obtained from the sides of the road which contain habitat without approval from Environmental Surveyor..

7.1.6 Construction of new access roads shall comply with the following:

46. SDG&E access roads will be designed and constructed according to the *SDG&E Guide for Encroachment on Transmission Rights-of-Way (4/91)*.
47. Access roads will be made available to managers of the regional preserve system subject to coordination with SDG&E.
48. New access roads shall be designed to be placed in previously disturbed areas and areas which require the least amount of grading in sensitive areas during construction whenever possible (See Figure 5). Preference shall be given to the use of stub roads rather than linking facilities tangentially.
49. SDG&E will consider providing access control on access roads leading into the regional preserve system where such control provides benefit to sensitive resources.
50. New access road construction is allowed year round. Every effort shall be made to avoid constructing roads during the nesting season. During the nesting season, the presence or absence of nesting species shall be determined by a biologist and appropriate avoidance and minimization recommendations followed.

7.1.7 Construction and Maintenance of Access Roads Through Streambeds

51. Construction of new access roads through streambeds requires a Streambed Alteration Agreement from CDFG and/or consultation with the Army Corps of Engineers.
52. Maintenance or construction vehicle access through shallow creeks or streams is allowed. However, no filling for access purposes in waterways is allowed without the installation of appropriately sized culverts. The use of geotextile matting should be considered when it would protect wetland species.
53. Staging/storage areas for equipment and materials shall be located outside of riparian areas. (See Figure 23).

7.1.8 Survey Work

54. Brush clearing for foot paths or line-of-sight cutting is not allowed from March through August in sensitive habitats without prior approval from the Environmental Surveyor, who will ensure that activity does not adversely affect a sensitive species.
55. SDG&E survey personnel must keep vehicles on existing access roads. No clearing of brush for panel point placement is allowed from March through August without prior approval from the Environmental Surveyor.
56. Hiking off roads or paths for survey data collection is allowed year round so long as other protocols are met.

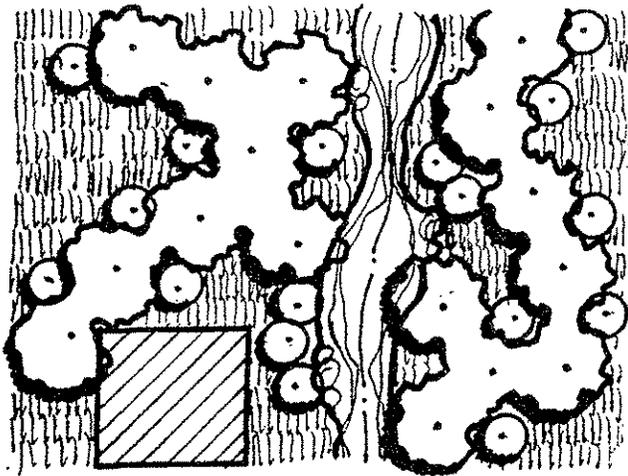
7.1.9 Emergency Repairs

57. During a system emergency, unnecessary carelessness which results in environmental damage is prohibited.
58. Emergency repair of facilities is required in situations which potentially or immediately threaten the integrity of the SDG&E system, such as pipe leaks, or downed lines, slumps, slides, major subsidence, etc. During emergency repairs the Operational Protocols contained in this Subregional Plan shall continued to be followed to fullest extent possible.
59. Once the emergency has stabilized, any unavoidable environmental damage will be reported to the Environmental Surveyor by the foreman. The Environmental Surveyor will develop a mitigation plan and ensure its implementation is consistent with this Subregional Plan.

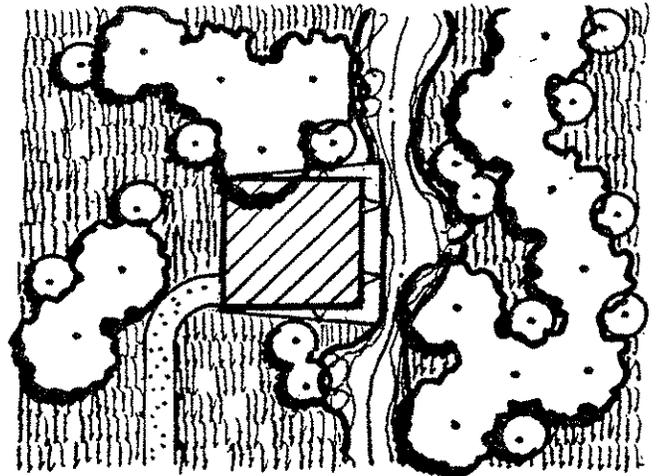
7.1.10 Activities of Underlying Fee Owners

60. Most SDG&E rights-of-way are held in easement only. The activities of underlying fee owners cannot be controlled by SDG&E and are not covered by this Subregional Plan.
61. When sensitive habitat exists on either side of a utility right-of-way, SDG&E will not oppose underlying fee owners dedicating said property to conservation purposes. Underlying fee owners are expected to comply with applicable federal, state, and local regulations.



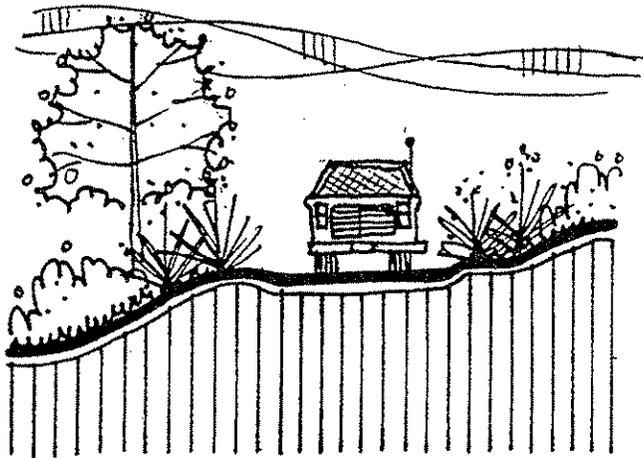


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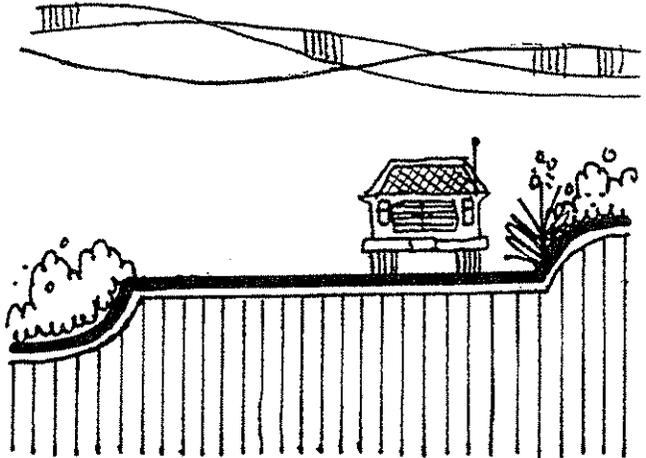


NOT THIS

CONSTRUCTION STAGING/STORAGE AREAS SHOULD BE LOCATED OUTSIDE OF STREAMS



THIS



NOT THIS

ACCESS ROAD MAINTENANCE SHOULD NOT EXPAND THE EXISTING ROAD BED

FIGURE

23

Operational Protocol Diagrams

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7.2 Habitat Enhancement Measures

The purpose of this section is to describe the techniques and permit the substitution of habitat enhancement measures when it is more beneficial than the use of mitigation credits. Habitat enhancement increases the value of biological resources in an impacted area, thereby improving the value of that habitat for Covered Species. Habitat enhancement activities shall occur under the direction of a Habitat Restoration Specialist. All disturbed areas, whether inside or outside of preserves, and which do not need to be maintained in a cleared state, shall be enhanced, either through vegetation restoration, habitat reclamation, or a combination of the two. Vegetation restoration entails a range of techniques.

For SDG&E Activities occurring within the Preserve, and for SDG&E Activities affecting riparian/wetland areas, the particular enhancement methodology will be proposed by SDG&E, with USFWS and CDFG concurring prior to implementation. For all other areas outside of the Preserve, SDG&E has discretion over the enhancement method selected, although it is expected that a standard coastal sage scrub seed mix will be used for reseeded many disturbed areas. For impacts both within and outside Preserve, if habitat enhancement is not selected, or is not successful according to the criteria specified in the mitigation flow chart (Figure 24), then a deduction from the SDG&E Mitigation Credits shall be made in accordance with ratios contained in Section 7.4. For all temporary impacts greater than 500 square feet, acreage not meeting success criteria shall be deducted from SDG&E mitigation credits at a 1:1 ratio. For areas of less than 500 square feet, success criteria will not be required to be met. In such areas, refer to erosion control measures contained in Section 7.1.

7.2.1 Vegetation Restoration

The Habitat Restoration Specialist has a range of vegetation restoration techniques from which to choose:

Hydroseeding

Vegetation restoration will typically be done using a native seed mix obtained from a commercial seed provider and shall be applied by hydroseeding. For hydroseeding inside the Preserve areas, seed will be obtained from the local gene-pool and similar composition to the reference site.

Vegetation restoration shall be conducted from mid-November through mid-January to take advantage of rainy season precipitation, and should not be artificially irrigated.

Seed mix specifications and application techniques shall be provided by the Habitat Restoration Specialist, who will be an acknowledged specialist in native habitat restoration or a plant ecologist with experience developing native restoration plans in Southern California. The Habitat Restoration Specialist will be responsible for restoration plans within the Preserve.

If restoration lands contain areas used for temporary roads, staging areas, or other intensive activities, the soil may become so compacted that revegetation is difficult. In cases such as this, disking and plowing the compacted soil will loosen it and improve the success of hydroseed revegetation. Disking may also foster weed growth and should only be used where an influx of weeds would not adversely affect adjacent native plant communities.

Consideration shall be given to supplemental planting of species of concern in areas where it is desirable to expand existing colonies. For example, supplemental planting may be highly desirable in areas containing chollas or prickly pear cactus. Supplemental planting and plant relocation should only be done in disturbed areas that are thought to be suitable. Habitat conversion and impacts to extant native vegetation should be avoided.

Hand-Seeding

Seed may be applied by hand and raked into the top inch of soil. This method is best suited for small areas and areas that are inaccessible to a hydroseed truck.

Imprinting

Imprinting is the mechanical formation of smooth-walled V-shaped furrows in the soil surface, application of seed and injection of beneficial mycorrhizal fungi into the soil surface. This method is best suited for areas that are accessible by bulldozer and where there is a potential problem with weeds.

Soil and Plant Salvage

Native vegetation from the area to be impacted should be removed, mulched and stockpiled separately. Top soil should also be removed and stockpiled separately. Following construction activities, the top soil should be replaced and covered with the mulch. The top soil and mulch both have native propagules and the mulch reduces the erosion potential. This method is well suited for temporary roads, staging areas, or other intensive activities.

Quality Assurance

Monitoring, involving visual inspection, shall be conducted on restoration sites after one year. A second application may be made. If, after one more year, restoration is deemed unsuccessful, the wildlife agencies, in cooperation with SDG&E, will determine whether the remaining loss shall be mitigated through a deduction from the SDG&E Mitigation Credits, or a third application would better achieve the intended purpose.

Coverage standards will be based on comparisons with established stands of the target vegetation, or another reference area. The means of determining success should be based on estimates of cover by native species, cover of exotic species, and diversity of native species. The cover of native species should increase and the cover of weed species should decrease, eventually approximating the reference area. The reference areas should be a nearby stand of vegetation that the restoration is attempting to emulate. It should have a similar aspect, slope, and soil type.

Cover for the restoration and references areas should be estimated using repeatable cover classes. One tested system is as follows:

Cover Class	1	2	3	4	5	6
% Cover	0-5	5-25	25-50	50-75	75-95	95-100
Mean Cover	2.5	15	37.5	62.5	85	97.5

SUCCESS CRITERIA MILESTONES

<u>Criteria*</u>	<u>Year 1</u>	<u>Year 2</u>
Cover by Exotic Species**	140%	130%
Cover by Native Species (trees shrubs and herbaceous species)	60%	70%

*Values are relative to reference area
**Percent total cover

7.2.2 Habitat Reclamation

Habitat reclamation techniques should be considered when re-seeding would be an ineffective habitat enhancement due to the presence of stronger and more prolific exotic vegetation in the proximity.

Habitat reclamation involves the elimination of existing exotic vegetation (weed abatement) to facilitate the natural re-colonization of a native habitat. An example of where habitat reclamation would be appropriate is in wetland areas containing tamarisk or giant reed.

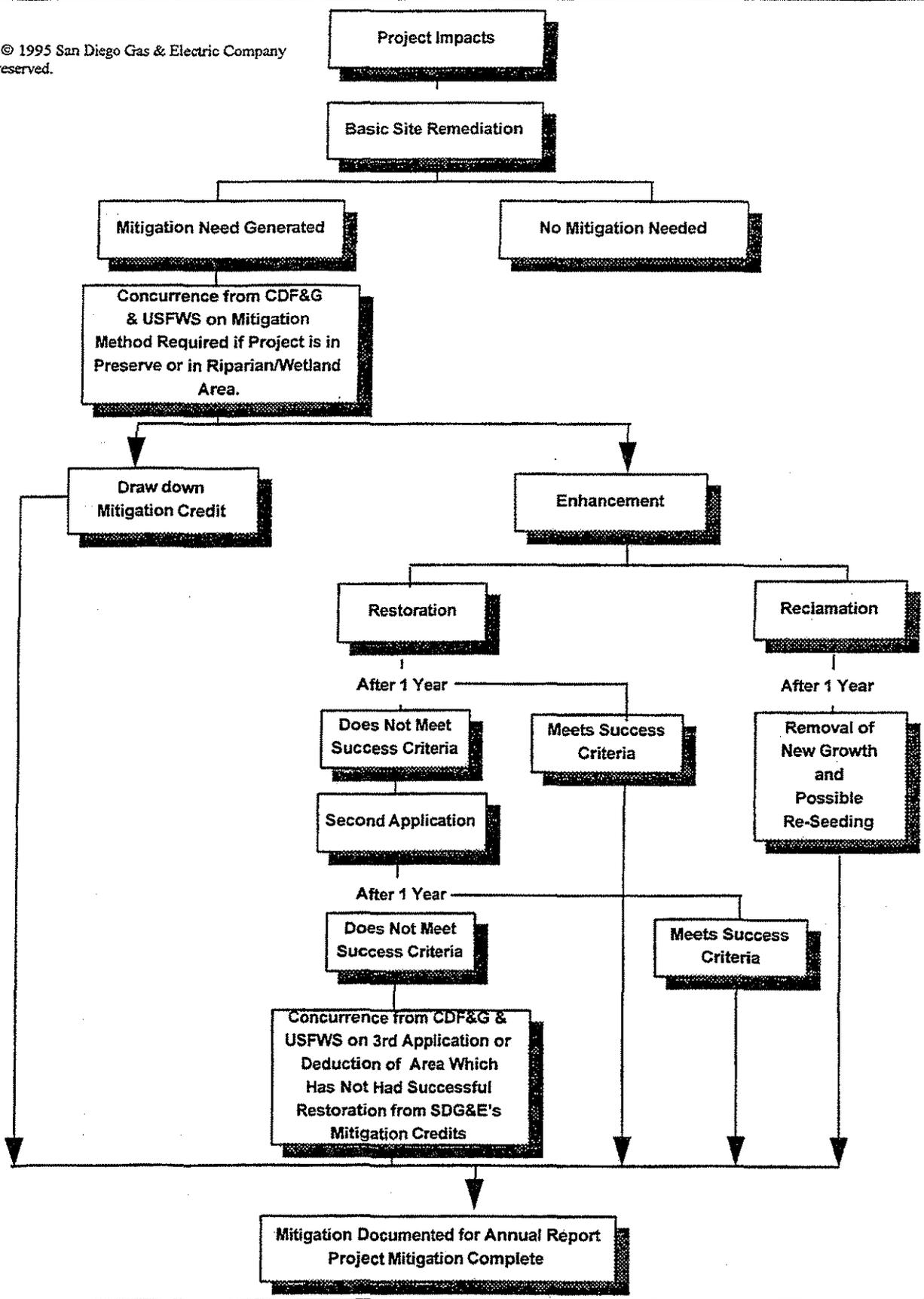
In order to avoid net loss of wetland and riparian habitat, exotic species should be removed at a 2:1 ratio. Exotics should be removed from the site and disposed of off-site. Soil should be prepared for new native growth to occur. In areas larger than 500 square feet, reseedling will supplement the recovery of native vegetation

Reclamation shall be limited to initial removal and one-time removal of new growth within one year if necessary. In certain cases, such as with *Arundo* removal, it may be necessary to clear invasive vegetation a third time. Once weeds are controlled, if extensive reclamation is undertaken, supplemental planting may be necessary to keep weeds out.

The habitat reclamation shall be done under the direction of the Habitat Restoration Specialist who will determine the abatement technique to be used and the area in the vicinity of the project site on which abatement would be most effective in facilitating reclamation on the project site.

7.2.3 Procedure

(Refer to Figure 24). Figure 24 -- Mitigation Flow Diagram



**SDG&E Mitigation Flow Diagram
(For Temporary Disturbances)**

