Proponent's Environmental Assessment for the

Salt Creek Substation Project

Application 13-09-xxxx
Volume II of II, Part A: PEA

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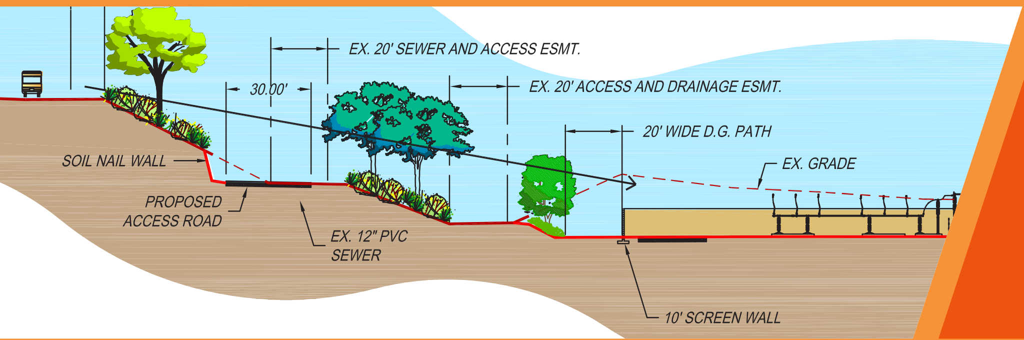

Submitted by

SDGE
A Sempra Energy utility

PROPONENT'S ENVIRONMENTAL ASSESSMENT

FOR THE

SALT CREEK SUBSTATION PROJECT

APPLICATION 13-09-xxxx

VOLUME II OF II, Part A: PEA

SEPTEMBER 2013

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CHAPTER 1 – PEA SUMMARY

1.1 Introduction

This Proponent's Environmental Assessment (PEA) was prepared by San Diego Gas & Electric Company (SDG&E) and is intended to support SDG&E's application for a Permit to Construct (PTC) the Salt Creek Substation Project and associated 69-kilovolt (kV) power tie-lines (TL) (Proposed Project). This PEA includes information required by the California Public Utilities Commission's (CPUC) CEQA Information and Criteria List (State of California Public Utilities Commission Information and Criteria List, Appendix B, Section V), as well as the CPUC's requirements for a PTC pursuant to General Order 131-D (D.94-06-014, Appendix A, as modified by D.95-08- 038). Both PEA format and content are consistent with the CPUC guidance document titled Proponent's Environmental Assessment (PEA) Checklist.

Chapter 4 of this PEA provides an assessment of potential environmental impacts resulting from construction and operation of the Proposed Project. Potential environmental impacts associated with these components were evaluated, consistent with the requirements of the California Environmental Quality Act (CEQA). CEQA Guideline 15101 requires the agency responsible for approving a project to assess the completeness of the project proponent's application.

The CPUC must use the adopted CEQA "Information and Criteria List" to determine whether the application for a project is complete. The CPUC's CEQA Information and Criteria List specifies the information required from any applicant for a project subject to CEQA or for any development project subject to the Permit Streamlining Act (California Government Code section 65920 et seq.). CPUC's Energy Division developed the PEA Checklist as additional guidance for determining the adequacy of the PEA. For CPUC reference, SDG&E provided a table that identifies where each of the criteria within the CPUC's PEA Checklist may be found in this PEA. This information is provided in Appendix 1-A.

The CPUC's Information and Criteria List states that the independently reviewed and evaluated PEA can be adopted as the CPUC's CEQA document. This PEA was prepared in accordance with the provisions of CEQA and the CPUC's Information and Criteria List, and, as such, could serve as the CPUC's CEQA document.

1.2 Project Components

The Proposed Project includes both substation and power line components. Primary components of the Proposed Project are listed below:

- Salt Creek Substation: Construction and operation of a new 120-megavolt ampere (MVA) 69/12-kV substation, known as the Salt Creek Substation, including construction and operation of underground 12-kV distribution circuits on 11.64 acres of undeveloped land.

- TL 6965: Construction and operation of a 5-mile-long 69-kV power line (TL 6965) within the existing transmission corridor, from the Existing Miguel Substation (herein referred to as the Existing Substation) to the proposed Salt Creek Substation. The majority of TL 6965 would be located above ground; the final 1,000 linear feet in the vicinity of the Salt Creek Substation would be installed underground.
- TL 6910 Loop-In: Construction and operation of an underground 69-kV power line loop-in (TL 6910) to Salt Creek Substation. Trench installation would total approximately 1,000 linear feet from the cable pole to the substation terminal equipment.
- Existing Substation Modifications: Installation of a new 69-kV power line position at the Existing Substation to connect to TL 6965.

These components are described in greater detail in Section 3.4, Project Components, and are shown in Figure 3-3, Project Overview. Refer also to Chapter 3.0, Project Description, for additional detailed discussion of the components of the Proposed Project.

1.3 Project Location

The proposed Salt Creek Substation site, the TL 6910 loop-in, and the majority of the TL 6965 would be located in the eastern portion of the City of Chula Vista, California. A small segment (approximately 4,700 linear feet) of the northernmost portion of TL 6965 would be located in unincorporated San Diego County on SDG&E fee-owned land surrounding the Existing Substation. The Existing Substation is on SDG&E fee-owned land in unincorporated San Diego County.

The majority of the Proposed Project would be located east of State Route (SR) 125 in the southwesterly portion of San Diego County (refer to Figure 3-1, Regional Map; Figure 3-2, Vicinity Map; and Figure 3-3, Project Overview). A small segment of the proposed TL 6965 (approximately 6,100 linear feet) would be located on the west side of SR-125, with two overhead crossings over SR-125. The Proposed Project would be situated approximately 15 miles southeast of downtown San Diego and 5 miles north of the international border with Mexico.

1.4 Project Need and Alternatives

The Proposed Project would consist of construction of a new 69/12-kV substation and a new 69-kV power line from the Existing Substation to the proposed Salt Creek Substation (TL 6965), and the looping of TL 6910 into the proposed Salt Creek Substation. The Proposed Project would provide additional capacity to serve existing area load and future customer-driven electrical load growth. In addition, it would provide the necessary distribution and power network to prevent long-term outages or disruptions of service to existing customers in the southeastern portion of SDG&E's service territory.

Basic objectives of the Proposed Project are the following:

1. Meet the area's projected long-term electric distribution capacity needs by constructing the proposed Salt Creek Substation near planned load growth to maximize system efficiency.
2. Provide three 69-kV circuits into the Salt Creek Substation to serve load growth in the region and meet the regulatory requirements of the North American Electric Reliability Corporation (NERC), Western Electric Coordinating Council (WECC), and California Independent System Operator (CAISO).
3. Provide substation and circuit tie capacity that would provide additional reliability for existing and future system needs.
4. Reduce loading on area substations to optimum operating conditions, providing greater operational flexibility to transfer load between substations within the proposed Salt Creek Substation service territory.
5. Comply with and respect the outcome of the extensive community-based public process to select a site for a new substation in the Otay Ranch area, as evidenced by City of Chula Vista City Council Resolution 2011-073.
6. Meet Proposed Project needs while minimizing environmental impacts by siting the substation on property designated for future development that is located outside of the City of Chula Vista's Multiple Species Conservation Program (MSCP) Preserve.
7. Locate proposed new power facilities, as appropriate and as needed, within existing utility rights-of-ways (ROWs), access roads, and utility-owned property.

Refer also to Chapter 2.0, Project Purpose and Need, for additional discussion of the Proposed Project's various components and objectives.

Proposed Project components, their locations, preliminary configurations, and the existing and proposed system configuration are presented in Chapter 3.0, Project Description.

Although various substation site alternatives, power route alternatives, and system alternatives were considered during development of the Proposed Project, the Proposed Project was ultimately selected because it best meets all of the objectives and is more cost effective than the alternatives. A discussion of the alternatives to the Proposed Project is located in Chapter 5.0, Alternatives.

1.5 Agency Coordination and Public Outreach

1.5.1 City of Chula Vista

SDG&E coordinated with the City of Chula Vista during the 10-year planning of this Proposed Project. Activities associated with the City of Chula Vista planning interactions are summarized below:

- Approximately one decade ago, SDG&E initially identified the need to construct a new substation within the Otay Ranch area. SDG&E spent approximately 10 years on the site selection process for the new substation.
- In 2002, SDG&E began working with the City of Chula Vista and the University Framework Committee to identify a suitable location for a new substation as part of the early planning efforts for a proposed university within Chula Vista's Otay Ranch area.
- In early 2007, after extensive discussion and consideration of several substation site alternatives, consensus was reached by SDG&E, the City of Chula Vista, and members of the University Framework Committee on Hunte West (the Proposed Project location) as the preferred substation location.
- SDG&E spent approximately 2 years working on the substation design with the City of Chula Vista. The site acquisition process was suspended in 2008, when the City entered into a Land Offer Agreement with the adjacent property owner, and the Hunte West property was no longer available for development of a substation.
- This resulted in the need to re-analyze alternative site locations for the Salt Creek Substation. SDG&E worked with the City of Chula Vista to analyze three alternative site locations. Based on changes in circumstances in early 2011, Hunte West became available again as a viable location for the proposed Salt Creek Substation.
- In June 2011, SDG&E purchased the 11.64-acre Hunte West site for future development of the Salt Creek Substation to service existing and future development in the surrounding area.
- SDG&E continued meeting with the City of Chula Vista in 2011 and 2012 to discuss development plans for the proposed Salt Creek Substation.

1.5.2 San Diego County Water Authority

The San Diego County Water Authority owns and operates underground facilities in proximity to SDG&E's proposed construction site. SDG&E has been working with the San Diego County Water Authority to coordinate construction between the two groups to minimize disruption for both utilities. This includes discussion on where SDG&E's electric lines are to show where excavation must occur.

1.5.3 Community Outreach

Between 2002 and 2011, SDG&E worked with major stakeholders, including the City of Chula Vista, the University Framework Committee, Baldwin Company, and Brookfield Homes, to identify and select a suitable site for the Salt Creek Substation. As a result of coordination and discussions with the City of Chula Vista, in 2011, the City Council approved a land exchange agreement for the proposed substation site. See the City of Chula Vista Council Resolution 2011-073 included in Appendix 1-B.

SDG&E met with the Winding Walk Home Owners Association (HOA) (residences located north of Hunte Parkway and the Salt Creek Substation) in June 2012. SDG&E will continue to work with the City of Chula Vista and the nearby HOAs to keep them apprised of the evolution of the Proposed Project and to address their concerns and questions. SDG&E will work with the City of Chula Vista to coordinate on land use and permitting issues, such as grading and other ministerial permits, required for construction of the proposed Salt Creek Substation. SDG&E may conduct future community workshops, as appropriate.

1.5.4 Letters of Support

The City of Chula Vista provided a letter of support of the Proposed Project. A copy of this letter is included in Appendix 1-B.

1.6 PEA Contents

In accordance with the PEA Checklist for Transmission Line and Substation Projects prepared by the CPUC on November 24, 2008, the Salt Creek Substation PEA was written to include the following main areas of discussion:

- Chapter 1.0 – *PEA Summary*. This chapter provides a summary of the Proposed Project components, agency coordination, PEA contents, major conclusions, major issues to be resolved, and public outreach efforts.

- Chapter 2.0 – *Project Purpose, Need, and Objectives*. This chapter provides a brief system overview and explains the objectives of the Proposed Project, analyzing why attainment of these objectives is necessary.

- Chapter 3.0 – *Project Description*. This chapter contains the anticipated location and boundaries of the Proposed Project, and a general description of the Proposed Project's technical, economic, and environmental characteristics. This chapter also provides a detailed description of the Proposed Project components and the specific construction activities for installation of the facilities. Additionally, a description of the anticipated construction schedule, anticipated operations and maintenance activities, federal, state, and local permits required, Proposed Project design features and ordinary construction/operations restrictions, and a summary of the Applicant Proposed Measures (APMs) to be implemented as part of the Proposed Project are provided.

- Chapter 4.0 – *Environmental Impact Assessment Summary*. This chapter includes an environmental impact assessment summary and a discussion of the existing environmental setting and potential impacts of the Proposed Project. The chapter discusses Proposed Project design features and ordinary construction/operations restrictions relevant to each impact area. It also introduces APMs that reduce impacts from the Proposed Project to less than significant.

  The following resource areas are addressed in Chapter 4.0:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural and Paleontological Resources
- Geology, Soils, and Seismicity
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Utilities and Service Systems

- Chapter 5.0 – *Alternatives*. This chapter describes alternatives to the Proposed Project that were identified, evaluates those alternatives in relation to Proposed Project objectives and environmental impacts, and explains why those alternatives were rejected.

- Chapter 6.0 – *Other CEQA Considerations*. This chapter includes a cumulative impacts analysis, which discusses past, present, and reasonably foreseeable future projects within the Proposed Project area, and the potential for the Proposed Project to contribute a significant cumulative effect. Additionally, this chapter identifies the potential growth-inducing impacts of the Proposed Project.

- Chapter 7.0 – *List of Preparers*. This chapter identifies the preparers of various chapters of the PEA document.

- The PEA also includes technical appendices in support of Chapters 1 through 6, as well as other items required by General Order 131-D and identified in the CPUC PEA Checklist. Specifically, the PEA includes the following appendices:
  - Appendix 1-A — CPUC Checklist Reference Table
  - Appendix 1-B — City of Chula Vista Council Resolution 2011-073 and Letter of Support
  - Appendix 1-C — Affected Property Owners: Parcel and Mailing Information and Figure for Properties within 300 Feet of the Proposed Project
  - Appendix 1-D — Existing Power Line Map
  - Appendix 3-A — Technical Figures

- o Appendix 3-B Detailed Route Maps
- o Appendix 4.1-A Aesthetic Technical Analysis
- o Appendix 4.3-A Air Quality Methodology
- o Appendix 4.3-B Air Quality Construction Emissions
- o Appendix 4.4-A Biological Resources Technical Report
- o Appendix 4.5-A Paleontological Resource Assessment
- o Appendix 4.6-A Geotechnical Investigation 2008
- o Appendix 4.6-B Geotechnical Investigation 2012
- o Appendix 4.7-A Greenhouse Gas Emissions
- o Appendix 4.8-A EDR Data Map Area Study
- o Appendix 4.8-B Salt Creek Project Fire Plan
- o Appendix 4.12-A Noise Monitoring Datasheets

1.7 PEA Major Conclusions

1.7.1 Resource Areas with No Impact or Less Than Significant Impact

The PEA analyzes the potential environmental impacts resulting from construction and operation/maintenance of the Proposed Project. Fifteen of the 17 resource areas would not have environmental impacts or would result in less-than-significant impacts. In certain instances, the impacts resulting from the Proposed Project would be less than significant in light of compliance with polices/standards/regulations and Proposed Project design features. These resource areas are as follows:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Geology, Soils, and Seismicity
- Greenhouse Gas Emissions
- Hazards and Hazardous Material
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Utilities and Service Systems

1.7.2 Resource Areas Requiring Applicant Proposed Measures (APMs)

Potential impacts were identified for biological resources and cultural and paleontological resources. However, through implementation of APMs, such impacts would remain less than significant. The proposed APMs are discussed within Chapter 4, Environmental Impact Assessment, and are summarized in Table 3-6, Applicant Proposed Measures. In the event that the CPUC determines that further consideration of mitigation measures and alternatives to the Proposed Project are required, the CPUC may review the estimated costs of the Proposed Project (among other factors) to determine whether such mitigation measures or alternatives are "feasible" as defined by CEQA. The estimated costs of the Proposed Project is approximately $62.5 million.

1.8 Areas of Controversy and Major Issues to be Resolved

The CPUC's PEA Checklist for Transmission and Substation Projects calls for a discussion of "any areas of controversy" and "any major issues that must be resolved including the choice among reasonably feasible alternatives and mitigation measures, if any." There are no known areas of controversy or major issues that must be resolved.

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CHAPTER 2 – PROJECT PURPOSE, NEED, AND OBJECTIVES

2.0 Introduction

The following section identifies the purpose, need, and objectives for SDG&E's proposed Salt Creek 120-MVA 69/12-kV Substation and associated tie lines. The following information is provided in accordance with the CPUC's Information and Criteria List (Appendix B, Section V); the PEA Checklist for Transmission Line and Substation Projects prepared by CPUC's Energy Division, dated October 7, 2008; and CEQA, including the CEQA Guidelines. In accordance with CPUC General Order 131-D, additional data pertaining to the purpose and need for the Proposed Project is provided in SDG&E's PTC application prepared for the CPUC.

2.1 Overview

SDG&E is a regulated public utility that provides electric service to 1.4 million customers within a 4,100-square-mile service area that encompasses 25 cities and unincorporated areas within San Diego County and a portion of Orange County. The Proposed Project would consist of construction of a new substation and associated 69-kV power tie lines. The primary objective of the Proposed Project is to meet existing and anticipated customer-driven electrical load growth, and to provide the necessary distribution and power network to avoid potential long-term outages or disruptions of service to existing and future customers in SDG&E's service territory in the southeastern Chula Vista area.

The proposed Salt Creek Substation would add capacity in the southeastern Chula Vista area. Expected electrical load growth, the desire to avoid extended outages and disruption of services to new and existing customers in the area, and the need to maintain reliable service to SDG&E customers are primary driving factors in determining the need to construct a new substation in the area.

In providing electrical service to the southeastern Chula Vista area, SDG&E currently operates two substations: Proctor Valley Substation and Telegraph Canyon Substation. Residential and commercial growth in the area has brought the Telegraph Canyon Substation to its ultimate capacity. The ultimate planned load for southeastern Chula Vista is 286 megawatts (MW), which consists of Telegraph Canyon Substation at 84% loading, Proctor Valley Substation at 83% loading, and the new Salt Creek Substation at 87% loading. Proctor Valley Substation is planned to serve the northern portion of southeastern Chula Vista, Telegraph Canyon Substation is planned to serve the western section, and the proposed Salt Creek Substation is planned to serve the eastern section.

The 2016 substation forecast has Telegraph Canyon Substation loaded at 86% with all four transformer banks in-service, and Proctor Valley Substation at 90% loaded with two transformer banks in-service. A 15 to 20% reserve capacity is desired for each substation to handle outages and routine maintenance by transferring load to avoid disruption of customer service. This reserve capacity is not possible with only the two existing substations.

An additional benefit of developing a new substation is to ensure reliability of service to customers. SDG&E designs and develops substations to meet this objective. SDG&E considers additional substation transformer capacity when the loss of a single transformer may cause an interruption to major commercial/industrial load that cannot be restored through use of 12-kV circuit ties to other substations. The proposed Salt Creek Substation meets this requirement, as it would provide needed capacity and additional 12-kV distribution circuit ties with the substations currently serving the area to avoid service interruptions.

The existing power network (TL 6910) provides only two 69-kV sources with the loop-in of TL 6910 into the new 120-MVA Salt Creek Substation. This falls short of NERC/WECC/CAISO regulatory requirements (NERC/WECC 2007). Without an additional power line, the region is vulnerable to bulk power system failures, such as outages of lines, transformers, or busses, which may lead to the interruption of power to customers. An additional source from the Miguel Substation (herein referred to as the Existing Substation) into the proposed Salt Creek Substation would provide the third power line necessary to meet NERC/WECC/CAISO regulatory requirements (NERC/WECC 2007) and ensure reliability.

The Proposed Project was designed to meet engineering and site design objectives to ensure feasibility of construction, operation, and maintenance. These objectives include adequate electric power and distribution system access, acceptable site development characteristics, community acceptance, and cost efficiency.

Over approximately 10 years, SDG&E's site selection team met with City of Chula Vista staff and the major property owners in the surrounding area to assist SDG&E in identifying an acceptable location for a new substation. The proposed substation site was identified as the preferred location for the new substation in two separate evaluations of alternative site locations (see further discussion in 2.2.5 below and in Chapter 5.4). The first evaluation occurred from 2002 through mid-2008, and a second evaluation of site locations occurred from mid-2008 through early 2011. Eight substation sites were considered for construction of the proposed Salt Creek Substation.

2.2 Project Objectives

The Proposed Project would achieve several objectives identified by SDG&E: to provide additional capacity to serve existing area load and future customer-driven electrical load growth, and to enhance the distribution and power network to minimize potential for long-term outages or service disruptions to existing customers in the SDG&E southeastern Chula Vista service territory. The main purpose of the Proposed Project is to build a new 69/12-kV substation to serve existing and planned residential and commercial development in the southeastern portion of the City of Chula Vista. Specifically, the Proposed Project has the following fundamental objectives:

1. Meet the area's projected long-term electric distribution capacity needs by constructing the proposed Salt Creek Substation near planned load growth to maximize system efficiency.
2. Provide three 69-kV circuits into the Salt Creek Substation to serve load growth in the region and meet the regulatory requirements of the North American Electric Reliability Corporation (NERC), Western Electric Coordinating Council (WECC), and California Independent System Operator (CAISO).
3. Provide substation and circuit tie capacity that would provide additional reliability for existing and future system needs.
4. Reduce loading on area substations to optimum operating conditions, providing greater operational flexibility to transfer load between substations within the proposed Salt Creek Substation service territory.
5. Comply with and respect the outcome of the extensive community-based public process to select a site for a new substation in the Otay Ranch area, as evidenced by City of Chula Vista City Council Resolution 2011-073.
6. Meet Proposed Project needs while minimizing environmental impacts by siting the substation on property designated for future development that is located outside of the City of Chula Vista's MSCP Preserve.
7. Locate proposed new power facilities, as appropriate and as needed, within existing utility ROWs, access roads, and utility-owned property.

The Proposed Project components, their locations, preliminary configurations, and existing and proposed system configurations are presented in Chapter 3.0, Project Description.

2.2.1 Meet the Area Electric Capacity Needs

The new Salt Creek Substation is required to serve the ultimate load for the area of 286 MW. The southeastern Chula Vista area is fed primarily from existing Telegraph Canyon and Proctor Valley Substations, both of which currently exceed the optimum maximum substation loading of 85%. The current 2013 load served by these two existing substations is 141 MW. Telegraph Canyon Substation is at its maximum four-bank transformer configuration, with an 86% substation loading forecasted for 2016. Proctor Valley Substation has a two-bank transformer configuration with a loading of 90%. The ultimate load cannot be cost-effectively or reliably met by expanding existing substations. Moreover, using existing substations would increase distribution circuit cost due to greater circuit distances. The existing two substations are 6 to 7 circuit miles away from the Otay Ranch load center, which is the area of major growth. Installation of new circuits from the two existing substations would cost an average of $5 million per circuit to serve the Otay Ranch new load. To maintain reliable substation tie capacity, substation loading should be no more than 85%. Installation of the new Salt Creek Substation would allow for new circuits to serve Otay Ranch, averaging a distance of 2.5 circuit miles at a more reasonable cost of $2 million per circuit, and providing increased circuit and substation reliability with capacity available for the existing two substations.

Installation of additional Proctor Valley transformer banks to serve the Telegraph Canyon Substation area load growth is not cost effective, at an additional $5 million per circuit. Such a change would also reduce capacity available for the area currently served by the Proctor Valley Substation. The existing residential and commercial growth rate in the Telegraph Canyon Substation area is currently 2-MW per year, which is a low rate due to the current slow economy. At a more moderate (and anticipated) growth rate of 5-MW per year, Telegraph Canyon Substation would be at maximum capacity in 2016.

The proposed Salt Creek Substation would add necessary capacity in the eastern section of the southeastern Chula Vista area to off-load the Telegraph Canyon and Proctor Valley Substations. The location of the proposed Salt Creek Substation would allow for lower distribution circuit cost due to shorter circuit distances.

2.2.2 Meet NERC/WECC/CAISO Regulatory Requirements

NERC/WECC/CAISO regulations require protections against Category B scenarios.[1] The existing power network provides only two 69-kV sources with the loop-in of existing TL 6910 into the proposed Salt Creek Substation. For full build-out of the 120-MVA substation, this would leave the region vulnerable to Category B scenarios, including bulk power system failures and system outages. Line, transformer, or bus outages may lead to the interruption of power to customers. Assuming a new Salt Creek Substation to meet capacity needs, SDG&E’s Transmission Planning department identified the need for an additional source to the new substation to mitigate five potential overload conditions caused by Category B scenarios identified on the 69-kV power system: TL 649G (Border Tap–Border), TL 649F (Border Tap–Otay Lakes Tap), TL 623C (Otay Tap–San Ysidro), TL 645 (Otay–South Bay), and TL 646 (Otay–South Bay). An additional source from the Existing Substation on the east side of the existing transmission corridor is the most effective solution to alleviate overload conditions and protect against Category B scenarios.

2.2.3 Provide Improved Substation and Circuit Reliability with Added Tie Capacity

Installation of a new substation would provide additional new substation transformer banks and circuits, and offer an increased number of circuit ties. Reliability improves with balanced circuit loading and more circuits to transfer load in the event of a circuit or branch outage. The proposed Salt Creek Substation would add two new transformer banks to the system, which would enhance the ability to transfer load between area substations.

Additionally, the Proposed Project would include a new 69-kV power tie-line (TL 6965) and three distribution circuits (installed underground) from the proposed Salt Creek Substation. The new power line and distribution circuits would further enhance reliability by tying the new transformer banks into the existing circuits within the Proposed Project area.

[1] According to the WECC reliability criteria, a Category B scenario is an event resulting in the loss of a single element.

2.2.4 Reduce Area Substation Loading to Optimum Operating Conditions

The optimum maximum substation loading is 85%, which allows transformer bank load transfer in the event of a transformer bank outage. Optimum operating conditions improve substation reliability and reduce outage time. This is important in the highly commercial area served by the Proposed Project. The Proposed Project would reduce existing and anticipated substation overloading, as described in Section 2.2.1.

2.2.5 Respect Results of Lengthy Community-Based Process to Select and Secure a Substation Site

Approximately a decade ago, SDG&E initially identified the need to construct a new substation in southeastern Chula Vista within the Otay Ranch area. SDG&E spent approximately 10 years on the site selection process for the new substation. In 2002, SDG&E began working with the City of Chula Vista and the University Framework Committee to identify a suitable location for a new substation as part of the early planning efforts for a proposed university within Chula Vista's Otay Ranch area. In early 2007, after extensive discussion and consideration of several substation site alternatives, SDG&E and the City of Chula Vista reached consensus on the preferred substation location, which was the Proposed Project location (Hunte West). SDG&E spent approximately 2 years working on substation design with the City of Chula Vista.

The site acquisition process was suspended in 2008, when the City of Chula Vista entered into a Land Offer Agreement with the adjacent property owner, and the Hunte West property was no longer available for development of a substation. This resulted in the need to re-analyze alternative site locations for the proposed Salt Creek Substation. Based on changes in circumstances in early 2011, Hunte West became available again as a viable location for the proposed Salt Creek Substation. In June 2011, SDG&E purchased the 11.64-acre Salt Creek Substation site for future development of a substation to service existing and future development in the surrounding area.

Using property that SDG&E already owns decreases the cost of new facilities and respects the lengthy public process leading to site selection.

2.2.6 Meet Project Need While Minimizing Environmental Impacts

The proposed Salt Creek Substation site was chosen, in part, because it could be constructed with minimal impacts to the environment. One of the primary environmental criteria is selecting a substation site that is outside of the City of Chula Vista MSCP Preserve (City of Chula Vista 1997) and within an area designated for development. The proposed substation site is outside of the MSCP Preserve and is designated for development by the City of Chula Vista's MSCP (City of Chula Vista 1997). In addition, portions of the Proposed Project have been previously disturbed, and the proposed substation was designed to avoid impacts to adjacent wetlands. No known cultural resources are located within the proposed substation site.

The proposed substation pad is situated approximately 45 to 50 feet south of Hunte Parkway and the residences to the north of Hunte Parkway. This location provides both a horizontal and vertical land and visual buffer from Hunte Parkway and residents to the north. The site is located adjacent to an existing transmission corridor, which would accommodate construction of the proposed new 69-kV power line within its footprint.

2.2.7 Locate New Power Facilities within Existing ROWs and Utility-Owned Property

Locating new power facilities within existing ROWs and utility-owned property would decrease the cost of the new facilities, to the benefit of ratepayers. All new power facilities would be located within either existing SDG&E ROWs or on SDG&E fee-owned property. A minor portion of the new power line would be located on utility-owned property that surrounds SDG&E's Existing Substation. The balance of the new power line would be located within SDG&E's 120-foot-wide transmission corridor ROW.

2.3 Conclusion

The Proposed Project would involve construction of a new substation and a new 69-kV power line from the Existing Substation to the proposed Salt Creek Substation, and looping TL 6910 into the proposed Salt Creek Substation. The proposed Salt Creek Substation would be a 120-MVA 69/12-kV substation to serve the southeastern Chula Vista region. Anticipated load growth in this region requires an additional power line to provide another source to meet NERC/WECC/CAISO regulatory criteria.

After evaluating other engineering options to meet projected load demand (discussed in Chapter 5, Alternatives), SDG&E selected the Proposed Project because it would provide a robust and reliable distribution system well into the future. In addition, the Proposed Project would meet all of the stated objectives, including minimizing environmental impacts.

2.4 References

City of Chula Vista. 1997. City of Chula Vista Multiple Species Conservation Plan (MSCP). Available at http://www.chulavistaca.gov/city_services/development_services/planning_building/Planning/Environmental/Habitat.asp. Accessed 2012.

North American Electric Reliability Corporation and Western Electric Coordinating Council (NERC/WECC). Revised April 10, 2003. Revised September 2007. WECC Planning Standards, Table 1 (Transmission System Standards). Available at http://www.wecc.biz/library/Library/Planning%20Committee%20Handbook/WECC-NERC%20Planning%20Standards.pdf.

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CHAPTER 3 – PROJECT DESCRIPTION

3.0 Project Location and Overview

SDG&E is a regulated public utility that provides electric service to 1.4 million customers within a 4,100-square-mile service area, spanning parts of two counties and 25 cities in the San Diego area. The Proposed Project includes the construction of a new substation and associated 69-kV power lines. 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 enhance the distribution and power network to minimize potential for long-term outages or service disruptions to existing customers in the SDG&E southeastern Chula Vista service territory.

The Proposed Project is located in southwestern San Diego County. The proposed Salt Creek Substation site, the power tie-line (TL) 6910 loop-in, and the majority of TL 6965 are located in the eastern portion of the City of Chula Vista, California. A small segment (approximately 4,700 linear feet) of the northernmost portion of TL 6965 is located in an unincorporated portion of San Diego County on SDG&E fee-owned land surrounding the Existing Miguel Substation (herein referred to as the Existing Substation). The Existing Substation is on SDG&E fee-owned land in unincorporated San Diego County.

The majority of the Proposed Project is located east of SR-125, in the southwesterly portion of San Diego County; refer to Figure 3-1, Regional Map; Figure 3-2, Vicinity Map; and Figure 3-3, Project Overview. A small segment (approximately 6,100 linear feet) of the proposed TL 6965 is located on the west side of SR-125, with two overhead crossings over SR-125. The Proposed Project area is situated approximately 15 miles southeast of downtown San Diego and 5 miles north of the international border with Mexico.

The Proposed Project includes the following primary components:

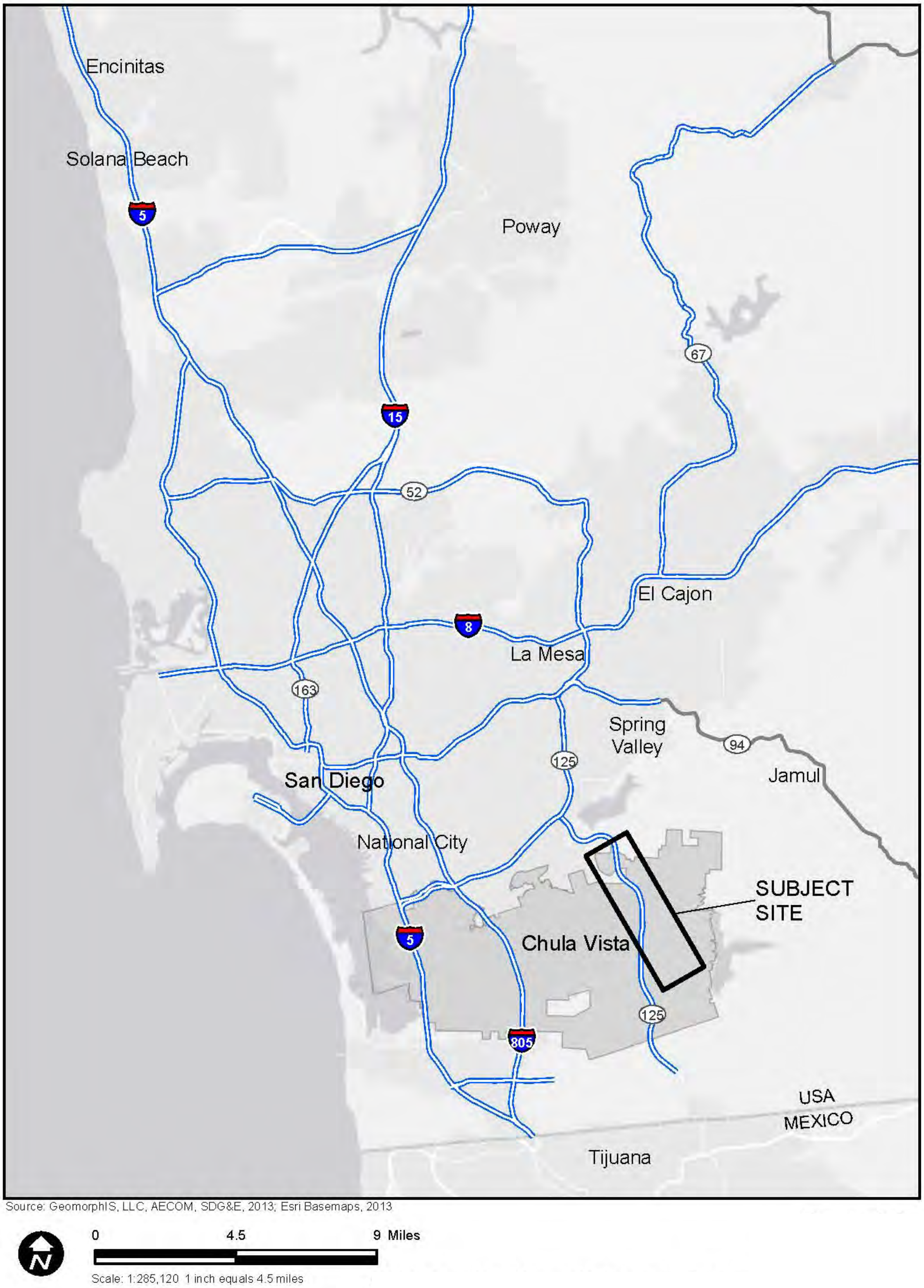
- Salt Creek Substation: Construction and operation of a new 120-MVA 69/12-kV substation, known as Salt Creek Substation, including construction and operation of underground 12-kV distribution circuits on 11.64 acres of undeveloped land.

- TL 6965: Construction and operation of a 5-mile-long 69-kV power line (TL 6965) within the existing Transmission Corridor, from the Existing Substation to the proposed Salt Creek Substation. The majority of TL 6965 would be located above ground; the final 1,000 linear feet in the vicinity of the Salt Creek Substation would be installed underground.

- TL 6910 Loop-In: Construction and operation of an underground 69-kV power line loop-in (TL 6910) to the proposed Salt Creek Substation. Trench installation would total approximately 1,000 linear feet from the cable pole to the substation terminal equipment.

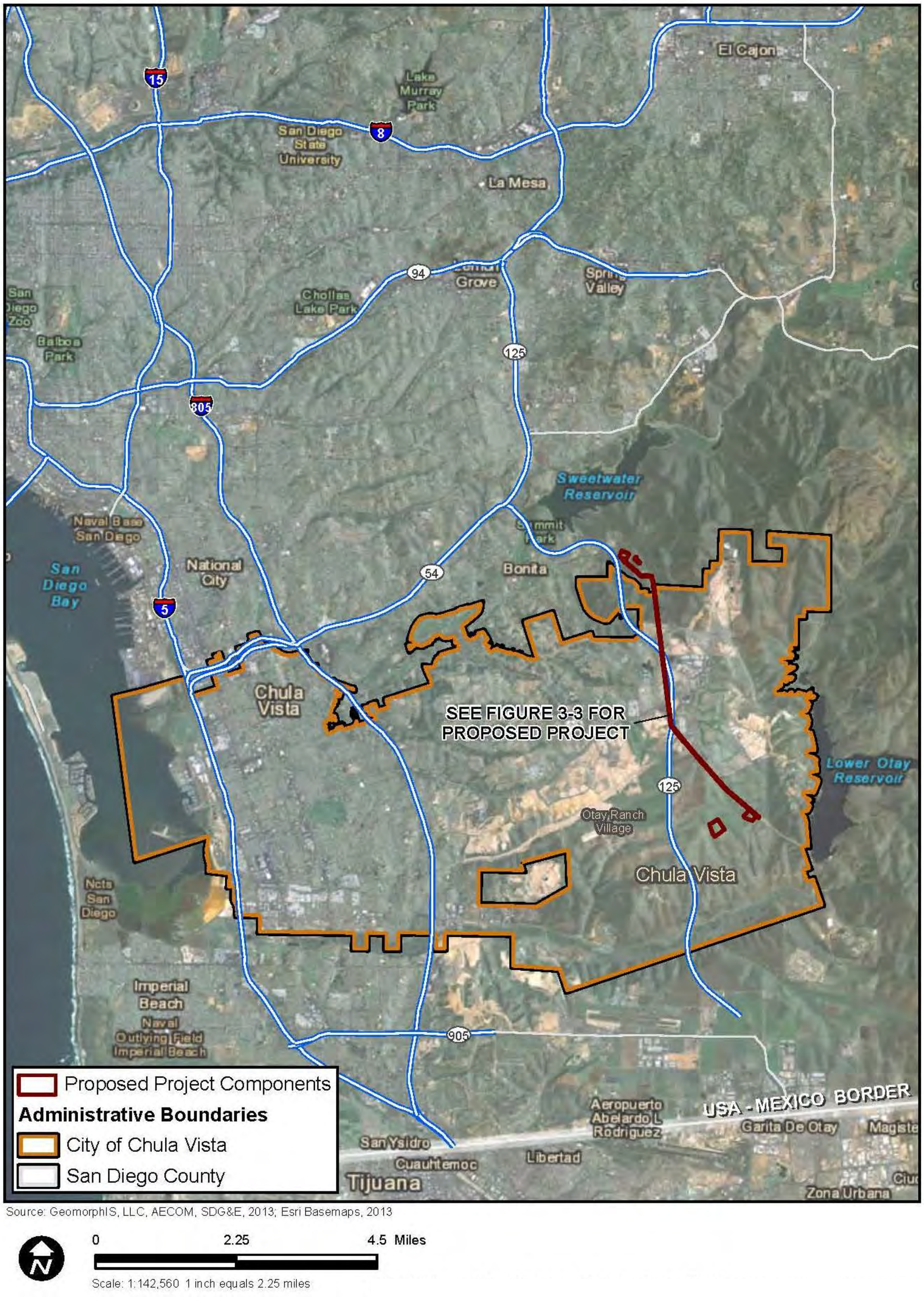
- Existing Substation Modifications: Installation of a new 69-kV power line position at the Existing Substation to connect to TL 6965.

Figure 3-1: Regional Map



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

Figure 3-2: Vicinity Map



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

The locations of these components based on the preliminary design, along with the staging yards necessary for construction of these components, are described in greater detail in Section 3.4, Project Components, and are shown in Figures 3-4 and 3-4A through 3-4D, Key Map and Transmission Corridor Route Maps, and Figure 3-5, Salt Creek Substation Layout. Typical drawings of the types of structures to be installed are included in Appendix 3-A; detailed route maps are included in Appendix 3-B.

3.0.1 Salt Creek Substation

The proposed Salt Creek Substation site is located adjacent to and southeast of Hunte Parkway, where SDG&E's Transmission Corridor crosses Hunte Parkway. The proposed Salt Creek Substation site consists of 11.64 acres of undeveloped land, as shown in Figure 3-3, Project Overview. The substation pad would be approximately 45 to 50 feet below the general Hunte Parkway elevation.

3.0.1.1 Distribution

The underground distribution circuits would be located within the proposed Salt Creek Substation site; therefore, throughout this PEA document, underground distribution circuits are discussed in association with the proposed Salt Creek Substation.

The ultimate conduit facility would be installed underground in the improved substation access road from the proposed Salt Creek Substation up to the manhole/vault installation located in the Hunte Parkway public ROW. Three distribution circuits would be installed underground in the conduit facility. Distribution circuits would then be extended from these vaults, known by SDG&E Distribution as manholes, to tie in to existing distribution circuits, also located in existing public ROW, consistent with SDG&E's franchise agreement with the City of Chula Vista. Refer to Appendix 3-A.

3.0.2 TL 6965

A new overhead 69-kV power line, approximately 5 miles long, would be constructed from the Existing Substation and extending southerly to the proposed Salt Creek Substation, as shown in Figure 3-3, Project Overview. The northernmost 4,700 linear feet would be located on SDG&E's fee-owned property in an unincorporated portion of San Diego County. The remainder of the power line would be constructed overhead within SDG&E's existing 120-foot-wide Transmission Corridor within the City of Chula Vista, where it would terminate on a new cable pole located approximately 1,200 feet southeast of Hunte Parkway. The final approximately 1,000-foot-long segment of TL 6965 would be undergrounded from the cable pole to the substation rack.

Seven existing structures along a portion of TL 643 and one existing structure on TL 6910, which are located on SDG&E's Existing Substation property, would be used to complete the TL 6965 connection to the Existing Substation. Pole-top work would be required to add insulators and conductors to connect TL 6965.

Figure 3-3: Project Overview

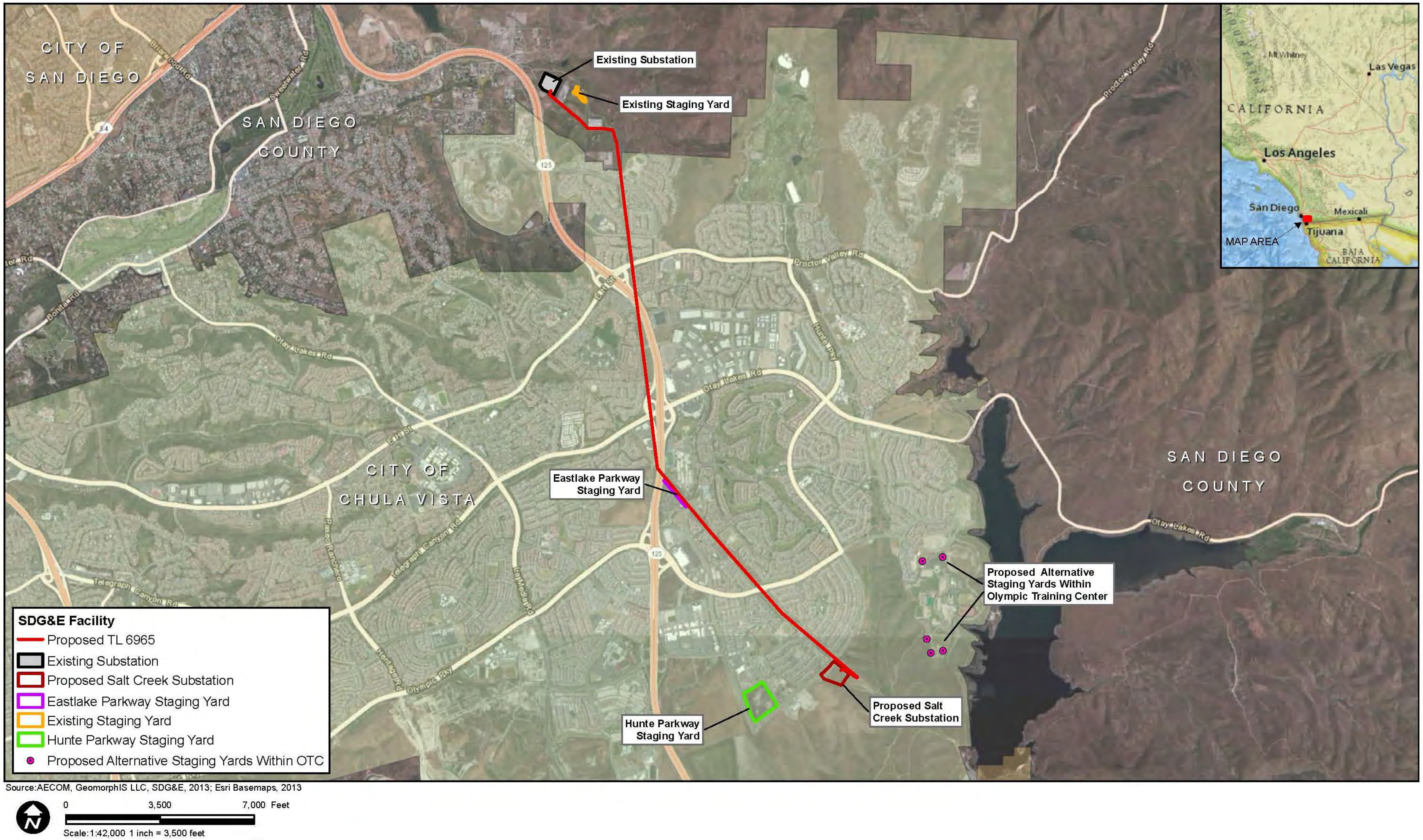


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Figure 3-4: Transmission Corridor Key Map

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Figure 3-4A: Transmission Corridor Route Map

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Figure 3-4B: Transmission Corridor Route Map

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Figure 3-4C: Transmission Corridor Route Map

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Figure 3-4D: Transmission Corridor Route Map

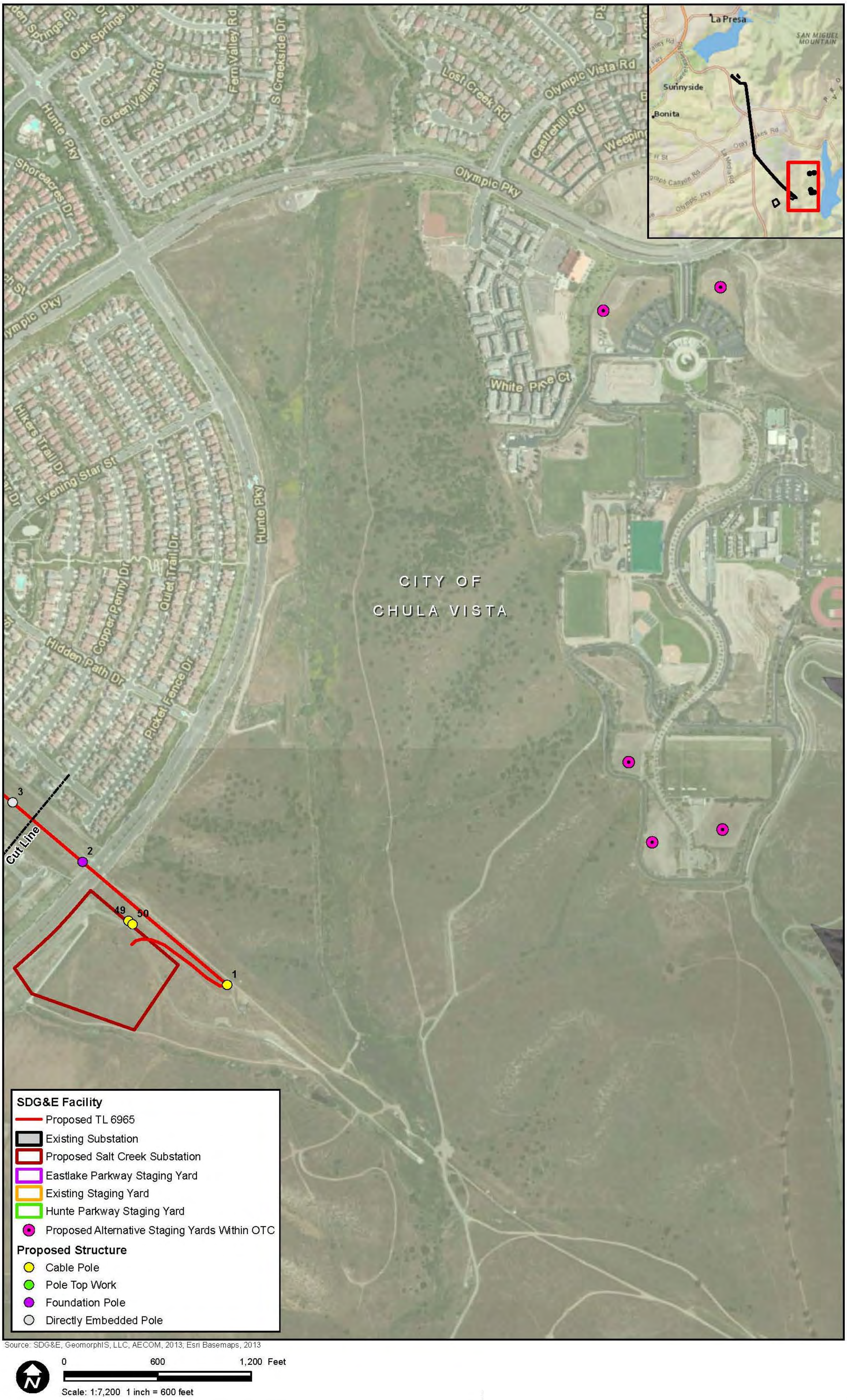

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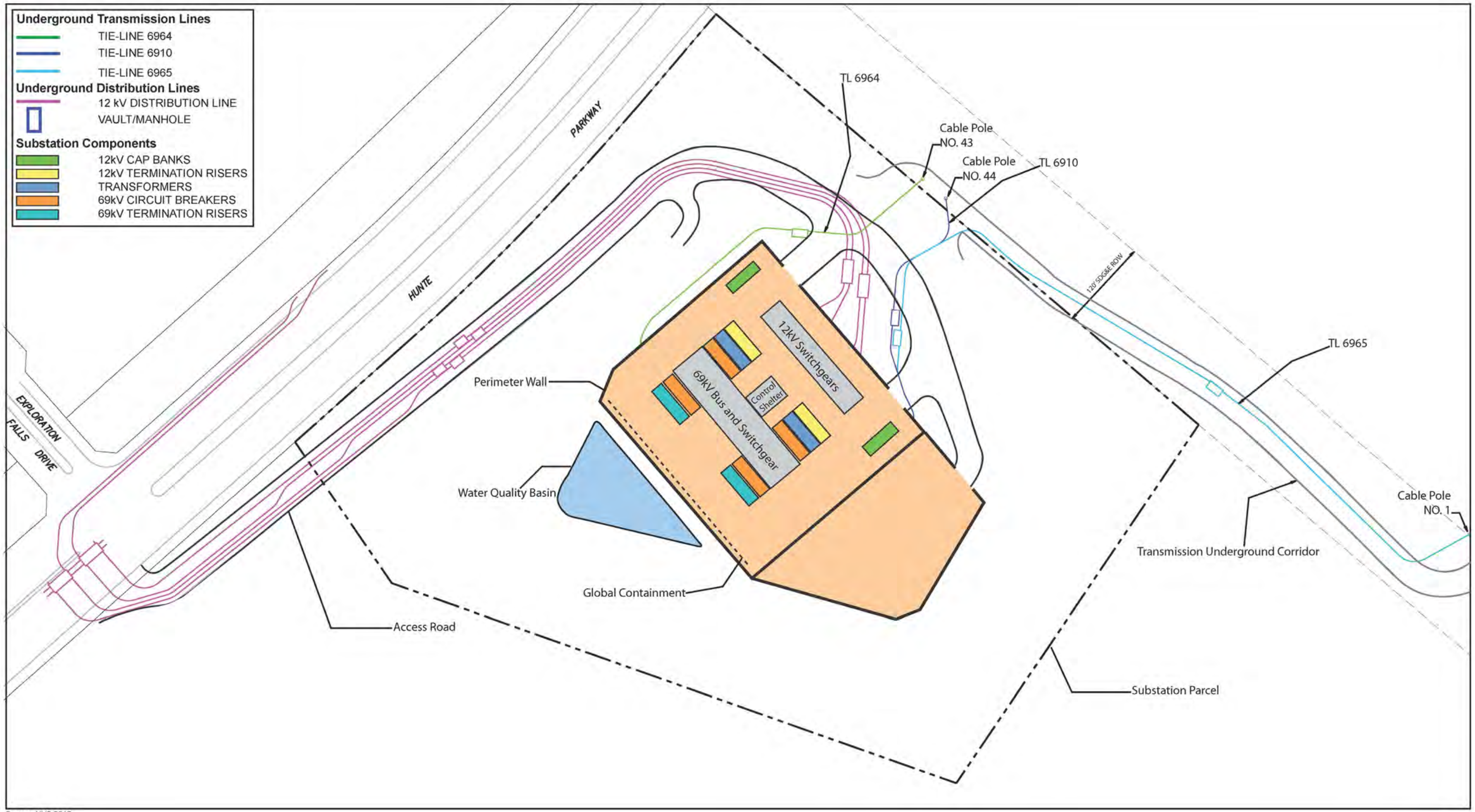
Figure 3-5: Salt Creek Substation Layout



Source: NV5 2012

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

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3.0.3 TL 6910 Loop-In

TL 6910 is an existing 69-kV circuit with terminal points at SDG&E's Existing Substation and Border Substation. Border Substation is located on Otay Mesa in the City of San Diego. As part of the Proposed Project, SDG&E would open TL 6910 by installing two new steel cable poles, and intercepting and looping the power line underground via two new 69-kV duct packages. The new 69-kV duct packages would be installed in two separate 300-foot-long trench alignments, originating at the existing Transmission Corridor and extending into the proposed Salt Creek Substation. The existing TL 6910 would then be re-configured as TL 6910 (Border - Salt Creek) and TL 6964 (Existing Substation – Salt Creek). Refer to Appendix 3-A for a figure showing the schematic power line configuration. The fiber-optic line on TL 6910 would also be looped into the proposed Salt Creek Substation via the same cable poles and duct packages. The fiber-optic line would be available when the Proposed Project goes into construction.

3.0.4 Existing Substation Modifications

The Existing Substation is located east of SR-125 in an unincorporated portion of San Diego County, bounded by San Miguel Road on the north and the City of Chula Vista on the south. The Existing Substation is located on an approximately 200-acre parcel owned by SDG&E. The proposed modification would consist of extending the 69-kV rack to accommodate space for TL 6965. An existing power line (TL 643) would be relocated to the new rack position, and the vacant position left by TL 643 would accommodate the new TL 6965 line. Due to the location of the overhead poles allowing both lines to exit the substation, shifting the transmission positions is necessary. This modification would be located in the Existing Substation.

3.1 Existing Transmission System

Currently, three overhead transmission circuits are located in the Transmission Corridor between the Existing Substation and the proposed Salt Creek Substation, as provided in Appendix 3-A, Existing Transmission System. Existing TL 6910 is located on a combination of wood and steel poles along the west side of the 120-foot-wide Transmission Corridor connecting the Existing Substation to the Border Substation in Otay Mesa. TL 23041 and TL 23042 are located on double-circuit steel lattice towers along the centerline of the Transmission Corridor, connecting the Existing Substation to SDG&E's Otay Mesa Substation. Seven structures along a portion of TL 643 and one structure on TL 6910, which are located on SDG&E's Existing Substation property, would be used to complete the TL 6965 connection to the 69-kV bay position at the Existing Substation.

3.2 Project Objectives

The main purpose of the Proposed Project is to build a new distribution 69/12-kV substation to serve existing and planned residential and commercial development in the southeastern portion of the City of Chula Vista, and to provide the required power network to serve this region. Specifically, the Proposed Project has the following fundamental objectives:

8. Meet the area's projected long-term electric distribution capacity needs by constructing the proposed Salt Creek Substation near planned load growth to maximize system efficiency.
9. Provide three 69-kV circuits into the Salt Creek Substation to serve load growth in the region and meet the regulatory requirements of the North American Electric Reliability Corporation (NERC), Western Electric Co-ordinating Council (WECC), and the California Independent System Operator (CAISO).
10. Provide substation and circuit tie capacity that would provide additional reliability for existing and future system needs.
11. Reduce loading on area substations to optimum operating conditions, providing greater operational flexibility to transfer load between substations within the proposed Salt Creek Substation service territory.
12. Comply with and respect the outcome of the extensive community-based public process to select a site for a new substation in the Otay Ranch area, as evidenced by City of Chula Vista City Council Resolution 2011-073.
13. Meet Proposed Project needs while minimizing environmental impacts by siting the substation on property designated for future development that is located outside of the City of Chula Vista's MSCP Preserve.
14. Locate proposed new power facilities, as appropriate and as needed, within existing utility rights-of-ways (ROWs), access roads, and utility-owned property.

Refer also to Chapter 2.0, Project Purpose and Need, for additional discussion of the Proposed Project's various components and objectives.

3.3 Proposed Project Components

3.3.1 Salt Creek Substation

3.3.1.1 Electrical Facilities

The Proposed Project includes construction and operation of the proposed 120-MVA 69/12-kV Salt Creek Substation. The proposed Salt Creek Substation would be unattended and automated. The preliminary substation layout is provided in Figure 3-5, Salt Creek Substation Layout. In addition, a profile view of the Salt Creek Substation is provided in Figure 4.1-15, Landscape Concept Plan Cross-Section. Substation electrical facilities are as follows:

- Two 69/12-kV low-profile 30-MVA transformer banks
- Steel 69-kV bus and associated disconnects
- Six 69-kV gas circuit breakers
- 12-kV switchgear with four 12-kV circuit positions each
- Two 12-kV metal-enclosed capacitor banks

- 69-kV and 12-kV associated relays, controls, and station batteries inside a 40-foot-long by 20-foot-wide enclosed, all-weather structure
- Three 69-kV power lines
- Three distribution circuits

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. The layout of the proposed Salt Creek Substation is shown in Figure 3-5, Salt Creek Substation Layout.

3.3.1.2 Additional Infrastructure and Improvements

Salt Creek Substation oil containment would be provided globally by a concrete containment basin along the southwesterly substation masonry wall. In addition, local containment would be provided around each transformer. The containment system would be designed to hold the total volume of oil from the transformers, the largest oil-containing substation equipment. The maximum amount of oil required for the transformers at the proposed Salt Creek Substation would be approximately 5,500 gallons per transformer.

A water-quality detention basin is proposed in the southwest corner of the substation pad, outside the substation wall. The water-quality basin would be designed to meet volume, area, depth, and detention time objectives of the Regional Water Quality Control Board (RWQCB) and City of Chula Vista. The preliminary substation layout features 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 hydro-modification requirements. Approximately 75,000 square feet of impervious area is proposed for substation improvements. The preliminary calculation of required hydro-modification area is approximately 10,000 square feet.

The landscaping and irrigation system would be installed in conjunction with the proposed Salt Creek Substation construction, after site development construction activities are complete. The Proposed Project would use reclaimed water for irrigation, upon availability.

3.3.1.3 Access Roads and Improvements

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

Retaining walls would be required to widen the existing sewer access road. Concrete, masonry, or soil nail walls would be used on the uphill side of the access road. Concrete, masonry, or mechanically stabilized earth (MSE) walls would be installed on the downhill side of the road. The retaining walls would be constructed in accordance with the Proposed Project's

Geotechnical Report and Recommendations, in accordance with standard construction practices, and pursuant to structural requirements from the City of Chula Vista. A site plan depicting the substation layout and access roads is included as Figure 3-5, Salt Creek Substation Layout.

3.3.1.4 Substation Lighting and Security

Lighting at the proposed Salt Creek Substation would follow SDG&E lighting standards, which provide for enough light for a safe entry to and exit from the substation; allow for safe driving around buses/racks, corners, and roadways; and allow for 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 lights required for nighttime work and/or an emergency.

A mixture of high-pressure sodium (typically used for gate entry lights) and metal halide lights may be used. One light would be installed at the main gate, one light would be installed on each side of the enclosed all-weather structure, and a minimum of two lights would be installed on each wall. If required, lights may also be installed on the end of the steel rack. All lights would be shielded and pointed down to minimize glare onto surrounding properties and natural habitats.

Two 8-foot-high chain-link gates would provide access to the substation from the existing sewer access road extending to the substation from Hunte Parkway. The gates would be locked and monitored remotely to restrict access. Warning signs would be posted in accordance with SDG&E guidelines. The perimeter wall and gates would be consistent with SDG&E's operational and safety guidelines.

3.3.1.5 Distribution

The ultimate conduit facility would be installed initially from the substation up to the Hunte Parkway electrical vaults, known by SDG&E Distribution as manholes. Initially, three new distribution circuits would be extended underground from the proposed Salt Creek Substation to intercept existing circuits in Hunte Parkway and adjacent streets. The underground circuits would be routed along and within the substation driveway to Hunte Parkway. Load would be transferred from existing circuits to new Salt Creek Substation circuits. Ultimately, 13 additional circuits could be installed underground as the residential and commercial area load develops. Distribution engineering design would be completed closer to the time of construction based on load demands.

The 12-kV duct package carrying the distribution circuits from the substation to Hunte Parkway would have a standard depth of approximately 5 feet to the bottom of the package (see Appendix 3-A). The distribution configuration includes four duct packages. Each duct package consists of six 5-inch-diameter conduits arranged in two columns, spaced vertically and horizontally from the conduit centerline by 7.5 inches. The horizontal separation between the two adjacent duct packages would be 5 feet, from centerline to centerline. A concrete slurry mix would be installed to protect each duct package.

Two 12-kV distribution manholes would be installed in the improved substation access road, two distribution manholes would be installed in Hunte Parkway, and additional manholes would be installed as required along the access road. Distribution manholes measure approximately 9 feet wide, 21 feet long, and 13 feet deep. In addition, installation of associated manhole racking, terminations, and approximately 1,400 feet of a 1,000-circular-mils (kcmil) copper underground cable would be required for each of the three initial distribution circuits from the substation to Hunte Parkway.

3.3.2 TL 6965

SDG&E is proposing to construct a new, approximately 5-mile-long, single-circuit 69-kV power line along the easterly edge of SDG&E's existing Transmission Corridor from the Existing Substation to the proposed Salt Creek Substation. Figures 3-4, Transmission Corridor Key Map, and Figures 3-4A through 3-4D, Transmission Corridor Route Maps, show the location of the proposed 69-kV power line based on the preliminary design. The existing Transmission Corridor is 120 feet wide and includes an existing 69-kV power line (TL 6910) and two 230-kV power lines (TL 23041/42) mutually located on double-circuit steel lattice towers. The new 69-kV line would be built within the existing ROW, approximately 15 feet in from the eastern edge of the 120-foot-wide easement.

Power Poles

TL 6965 would use approximately 49 poles (48 pole structures), including eight existing poles (seven associated with TL 643[2] and one associated with TL 6910). Approximately 41 new dulled, galvanized steel power poles would be erected on the new 69-kV power line. Table 3-1 provides a summary of the power poles. Directly embedded, galvanized steel poles would be used for tangent structures where the power line is generally straight, and engineered poles would be used for heavy angles and freeway crossings. An engineered cable pole is required where the power line transitions from overhead to underground. TL 6965 would include approximately 41 new poles, consisting of the following:

- 30 directly embedded galvanized steel poles (29 pole structures, including one two-pole H-frame structure)
- 10 galvanized engineered foundation poles
- One engineered foundation cable pole

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[2] At this time, several poles along TL 643 are currently in the process of being replaced as part of a separate project that should be completed by the end of 2013. This PEA analysis is based on the poles that will be in place at the time the Proposed Project is constructed. Seven existing poles are part of TL 643. Refer to Section 3.0.2, TL 6965.

Table 3-1: Power Pole Summary*

Pole Structure #	Tie Line No.	Pole Type	Approximate Height of Structure Above Ground Level (AGL)	Proposed Action	Notes and Additional Work Areas
1	6965	Cable Pole	103	Install New Pole	Stringing Site #14 (4,500 square feet [SF])
2	6965	Foundation Pole	108	Install New Pole	Guard Structure #32 and #33, Hunte Parkway, pole brushing (314 SF)
3	6965	Directly Embedded	48	Install New Pole	Permanent work pad and access road
4	6965	Directly Embedded	61	Install New Pole	Permanent work pad and access road; Guard Structure #30 and #31, Crossroads Street
5	6965	Directly Embedded	70	Install New Pole	Overland travel required; Guard Structure #28 and #29, Windingwalk Street
6	6965	Directly Embedded	52	Install New Pole	Permanent work pad and access road
7	6965	Directly Embedded	61	Install New Pole	Permanent work pad and access road
8	6965	Directly Embedded	48	Install New Pole	Permanent work pad and access road
9	6965	Directly Embedded	61	Install New Pole	Permanent work pad and access road
10	6965	Directly Embedded	66	Install New Pole	Permanent work pad and access road; Guard Structure #27, Olympic Parkway
11	6965	Directly Embedded	57	Install New Pole	Permanent work pad and access road; Stringing Site #13 (3,000 SF); Guard Structure #26, Olympic Parkway

Pole Structure #	Tie Line No.	Pole Type	Approximate Height of Structure Above Ground Level (AGL)	Proposed Action	Notes and Additional Work Areas
12	6965	Directly Embedded	48	Install New Pole	Permanent work pad and access road
13	6965	Directly Embedded	52	Install New Pole	Permanent work pad and access road; Stringing Site #12 (4,500 SF)
14	6965	Directly Embedded	57	Install New Pole	Permanent work pad and access road
15	6965	Directly Embedded	61	Install New Pole	Permanent work pad and access road
16	6965	Directly Embedded	52	Install New Pole	Permanent work pad and access road
17	6965	Directly Embedded	57	Install New Pole	Permanent work pad and access road
18	6965	Directly Embedded	57	Install New Pole	Permanent work pad and access road
19	6965	Directly Embedded	52	Install New Pole	Guard Structure #25, Eastlake Parkway, pole brushing (314 SF)
20	6965	Directly Embedded	66	Install New Pole	Permanent work pad and access road; Guard Structure #24, Eastlake Parkway
21	6965	Directly Embedded	70	Install New Pole	Stringing Site #11 (4,500 SF), pole brushing (314 SF)
22	6965	Foundation Pole	58	Install New Pole	Guard Structure #23, SR-125, pole brushing (314 SF)
23	6965	Foundation Pole	113	Install New Pole	Stringing Site #10 (3,000 SF); Guard Structure #22, SR-125, pole brushing (314 SF)

Pole Structure #	Tie Line No.	Pole Type	Approximate Height of Structure Above Ground Level (AGL)	Proposed Action	Notes and Additional Work Areas
24	6965	Foundation Pole	108	Install New Pole	Stringing Site #9 (4,500 SF); Guard Structure #21, Otay Lakes Road
25	6965	Foundation Pole	123	Install New Pole	Guard Structures #18 and #19, SR-125 ramps; Guard Structure #20, Otay Lakes Road
26	6965	Foundation Pole	118	Install New Pole	Permanent work pad
27	6965	Foundation Pole	93	Install New Pole	Permanent work pad; Stringing Sites #7 (4,500 SF) and #8 (4,500 SF); Guard Structure #15, SR-125; Guard Structures #16 and #17, Eastlake Drive
28	6965	Foundation Pole	93	Install New Pole	Permanent work pad; Stringing Site #6 (9,000 SF); Guard Structures #13 and #14, SR-125
29	6965	Foundation Pole	88	Install New Pole	Guard Structure #9 and #10, Rolling Ridge Road and Guard Structures #11 and #12, Proctor Valley Road, pole brushing (314 SF)
30	6965	Directly Embedded	70	Install New Pole	Permanent work pad; Guard Structures #5 and #6, Proctor Valley Road; Guard Structures #7 and #8, Mountain Ridge Road
31	6965	Directly Embedded	70	Install New Pole	Permanent work pad; Guard Structures #3 and #4, Calle La Marina

Pole Structure #	Tie Line No.	Pole Type	Approximate Height of Structure Above Ground Level (AGL)	Proposed Action	Notes and Additional Work Areas
32	6965	Directly Embedded	52	Install New Pole	Permanent work pad
33	6965	Directly Embedded	52	Install New Pole	Overland travel required, pole brushing (314 SF)
34	6965	Directly Embedded	57	Install New Pole	Permanent work pad; Guard Structures #1 and #2, Mount Miguel Road
35	6965	Directly Embedded	61	Install New Pole	Permanent work pad
36	6965	Directly Embedded	52	Install New Pole	Footpath required
37	6965	Directly Embedded	66	Install New Pole	Pole brushing (314 SF)
38	6965	Existing TL 6910	87	Pole Top Work Only	Stringing Site #5 (1,920 SF), pole brushing (314 SF)
39.P1	6965	Directly Embedded H-Frame (South Pole)	34	Install New Pole	Pole brushing (314 SF)
39.P2	6965	Directly Embedded H-Frame (North Pole)	34	Install New Pole	Stringing Sites #3 (5,700 SF) and #4 (1,920 SF), pole brushing (314 SF).
40	6965	Directly Embedded	61	Install New Pole	New access road required (4,064 SF), pole brushing (157 SF)
41	6965	Existing TL 643	61**	Pole Top Work Only	Only requires access for pole-top work; footpath required

Pole Structure #	Tie Line No.	Pole Type	Approximate Height of Structure Above Ground Level (AGL)	Proposed Action	Notes and Additional Work Areas
42	6965	Existing TL 643	63**	Pole Top Work Only	Only requires access for pole-top work; footpath required
43	6965	Existing TL 643	74**	Pole Top Work Only	Only requires access for pole-top work
44	6965	Existing TL 643	61**	Pole Top Work Only	Only requires access for pole-top work
45	6965	Existing TL 643	70**	Pole Top Work Only	Only requires access for pole-top work
46	6965	Existing TL 643	75**	Pole Top Work Only	Only requires access for pole-top work
47	6965	Existing TL 643	61**	Pole Top Work Only	Only requires access for pole-top work; Stringing Site #2 (2,000 SF)
48	6965	Foundation Pole	61	Install New Pole	Overland travel required; String Site #1 (3,750 SF), pole brushing (314 SF)
49	6910	TL 6910 North Cable Pole	86	Install New Pole	TL 6910 Loop-In (north)
50	6910	TL 6910 South Cable Pole	86	Install New Pole	TL 6910 Loop-In (south)

Source: SDG&E

* Based on preliminary design

** Height is based on new TL 643 replacement poles to be installed by the end of 2013

These structures would have an average height above ground of approximately 68 feet, and would range in height from approximately 34 feet to 123 feet. At the proposed Salt Creek Substation, one approximately 103-foot-high cable pole would be erected to transition the line from overhead to underground. Proposed pole locations are shown in Figures 3-4A through 3-4D, Transmission Corridor Route Maps. Drawings of a typical directly embedded steel pole, a typical engineered foundation pole, and a typical cable pole structure are provided in Appendix 3-A. All transmission poles meet raptor safety requirements, because of phase spacing.

Directly Embedded Steel Poles

Light-duty, directly embedded steel poles are secured using a concrete backfill. These dulled galvanized poles would have above-grade heights of approximately 34 to 70 feet. The pole diameter at ground level would be approximately 16 to 28 inches, requiring a 40- to 52-inch-diameter hole approximately 6 to 17 feet deep. This type of pole would be used at 30 structure locations (including one H-frame structure that would have two poles).

Engineered Foundation Steel Poles

Heavy-duty engineered steel poles would be directly bolted to a reinforced concrete pier foundation. An exposed concrete foundation would extend approximately 2 feet above grade. These dulled galvanized poles would have heights above grade of approximately 58 to 123 feet. The diameter of the pole foundation at ground level would be approximately 6 to 7 feet. This type of pole would be used at approximately 10 locations.

Engineered Foundation Cable Poles

Cable poles are heavy-duty, engineered steel poles that would be bolted to a reinforced concrete pier foundation and include underground connections. An exposed concrete foundation would extend approximately 2 feet above grade. The one dulled galvanized cable pole for TL 6965 would have a height above grade of approximately 103 feet. The diameter of the pole foundation at ground level would be approximately 6 to 8 feet. This pole type would also require a trench from the base to the associated underground package.

Access Roads and Improvements

Permanent work pad areas would be required at approximately 24 pole locations to provide a safe work area and to provide access during construction and for post-construction operations and maintenance work. At approximately 16 of these locations, the proposed pole structure would be located in the existing access road to meet engineering design requirements; therefore, the existing access road would be adjusted at these locations to allow for access around the pole and to allow for a safe work area. Approximately 1.2 acres of total land would be required for these new permanent work pads, including access road adjustments. For work pads requiring manufactured slopes to create the work pad, the manufactured slopes would be revegetated with a native seed mix. In addition, construction of the proposed TL 6965 would require a new access road to one pole, the temporary use of overland travel for access to three poles, stringing sites, guard structures at road crossings, and staging yards for construction materials and vehicles, as discussed in more detail in Section 3.5, Construction.

A more detailed route map showing the preliminary design of the proposed TL 6965, as well as the work pads, access roads, stringing sites, guard structures, and staging yards, is provided in Appendix 3-B, Detailed Route Maps.

Underground Duct Bank

The final approximately 1,000-foot-long segment of this 69-kV power line would be installed underground in a concrete-encased duct bank from the cable pole to the substation rack. The duct bank would measure approximately 30 inches wide by 33 inches high for a vertical configuration, or 72 inches wide by 15 inches high for a horizontal configuration. Either configuration would contain six 6-inch-diameter conduits for a transmission cable and one 4-inch-diameter conduit for telecommunication. One steel engineered cable pole, approximately 103 feet high, would be installed at the end of the overhead segment to connect overhead conductors to the underground substation getaways. Drawings of typical underground concrete duct banks are provided in Appendix 3-A. Approximately six vaults would be installed to connect and join the underground cables. Underground vaults would be approximately 9.5 feet wide, 17.5 feet long, and 11 feet deep. Drawings of a typical vault are provided in Appendix 3-A.

Conductor

The majority of the poles would be tangent structures. The typical pole top arrangement is provided in Appendix 3-A. The distance from the ground to the lowest conductor and the distance between the conductors would meet General Order (GO) 95 requirements. The span lengths between poles would vary with terrain, but would generally range between 250 and 2,000 feet.

Typical tangent 69-kV steel poles would have three post insulators to carry conductors. Typical structures at heavy angles would have three post insulators and six suspension insulators. Conductors would be supported by each insulator. Circuits typically consist of three phases, with one conductor per phase, and a total of three conductors supported by the typical transmission poles.

Insulators would be constructed of a gray polymer and overhead conductors would be made from dulled aluminum.

Within the underground concrete duct bank between the cable riser pole and proposed Salt Creek Substation, SDG&E would install a cross-linked polyethylene cable. The underground concrete duct bank would also accommodate the fiber-optic line.

3.3.3 TL 6910 Loop-In

TL 6910 is an existing overhead 69-kV circuit traversing approximately 10 miles, with terminal points at the Existing Substation and Border Substation. The Proposed Project would “open” TL 6910, allowing SDG&E to loop the line into the proposed Salt Creek Substation, as shown in Figure 3-5, Salt Creek Substation Layout. The portion of existing TL 6910 between the Border Substation and the proposed Salt Creek Substation would retain the TL 6910 designation. The portion of existing TL 6910 between the proposed Salt Creek Substation and the Existing Substation would carry the new designation TL 6964.

Two cable poles (approximately 86 feet in height) would be erected east of the proposed Salt Creek Substation to loop-in existing TL 6910 to the proposed Salt Creek Substation. TL 6910 and TL 6964 would proceed approximately 300 feet underground from the cable poles via a conduit package to the proposed Salt Creek Substation. Each 69-kV duct package would have a standard depth of approximately 6 to 9 feet below grade to the bottom of the package. See a typical drawing of an underground duct bank in Appendix 3-A.

Installation of approximately two 69-kV vaults would be required along this trench alignment, as well as associated vault racking, underground cable, cable joints, and terminations.

Telecommunications would enter into the proposed Salt Creek Substation via the 69-kV underground duct package. The fiber-optic cable would be installed in the new transmission conduit from the proposed Salt Creek Substation to the proposed cable pole.

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.

3.3.4 Existing Substation Modification

At the Existing Substation, a new 69-kV 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 re-tagged with its new designated circuit name (TL 6964), and TL 643 would be relocated to provide a circuit position for TL 6965. The following modifications would be installed at the Existing Substation:

- Steel supports and associated bus work to extend the 69-kV rack
- Four 69-kV disconnect switches
- Two 69-kV gas circuit breakers
- Associated relays and controls

3.4 Permanent Land/Right-of-Way Requirements

The Proposed Project would be developed on land that is either already owned by SDG&E or within existing SDG&E easements. No additional land purchase or easements are required at this time to implement the Proposed Project.

3.4.1 Substations

SDG&E purchased, in fee, an 11.64-acre site in June 2011 for construction of the proposed Salt Creek Substation. All improvements for the proposed Salt Creek Substation would occur on SDG&E's fee-owned property or within easements acquired in conjunction with acquiring the substation property. All proposed modifications at the Existing Substation would also occur on SDG&E's existing fee-owned property.

Distribution facilities associated with the proposed Salt Creek Substation would be located within existing SDG&E easements, fee-owned property, or the existing Hunte Parkway public ROW, consistent with SDG&E's franchise agreement with the City of Chula Vista. From Hunte Parkway, the distribution circuit would connect to facilities along adjacent streets.

3.4.2 TL 6965 and TL 6910 Loop-In

No property acquisition would be required for work related to the power lines. All facilities related to the proposed TL 6965 would be located within the existing 120-foot-wide Transmission Corridor easement extending between the Existing Substation and the proposed Salt Creek Substation, or on SDG&E's fee-owned property surrounding the Existing Substation and the proposed Salt Creek Substation.

Looping-in of TL 6910 would also occur entirely within the Salt Creek Substation parcel owned by SDG&E and/or within the existing 120-foot-wide Transmission Corridor adjacent to the Salt Creek Substation property.

3.5 Construction

This section describes the construction methods, required access, work areas and requirements, and vegetation clearing for the Proposed Project components. Table 3-2, Land Disturbance, provides a summary of permanent and temporary impacts to land, and Table 3-3, Estimated Grading Quantities, provides a summary of the estimated grading quantities for each of the Proposed Project's components based on preliminary engineering. SDG&E's construction methods are subject to implementation of SDG&E's standard environmental procedures and protocols, including SDG&E's Subregional Natural Community Conservation Plan (NCCP), which is described in greater detail in Section 4.4, Biological Resources, and below (see Sections 3.7 and 3.8). For nearly two decades, SDG&E has successfully implemented the NCCP for projects such as the Proposed Project.

Table 3-2: Land Disturbance*

Proposed Project Component	Permanently Disturbed Area	Additional Temporarily Disturbed Area	Total Disturbance Area
Salt Creek Substation			
• Substation and access road (includes 12-kV distribution and 69-kV underground duct packages for TL 6965 and TL 6910 within the substation property)	362,725 square feet (SF) (8.33 acres)	73,125 SF (1.68 acres)	435,850 (10 acres)
• Driveway and access road to Hunte Parkway (includes 12-kV distribution duct packages up to Hunte Parkway outside of the substation property)	18,650 SF (0.43 acre)	6,950 SF (0.16 acre)	25,600 SF (0.59 acre)
• Drainage to discharge at existing dissipator (outside of the substation property)	500 SF (0.01 acre)	2,200 SF (0.05 acre)	2,700 SF (0.06 acre)
69k-V TL 6965 & TL 6910 Loop-In			
• TL 6965 overhead work pad/modified access/pole work areas	52,390 SF (1.2 acres)	75,508 SF (1.73 acres)	(127,898 SF) (2.94 acres)

Proposed Project Component	Permanently Disturbed Area	Additional Temporarily Disturbed Area	Total Disturbance Area
• TL 6965 underground grading and access (off-site in Transmission Corridor; includes cable poles 1, 43, and 44, and a portion of TL 6910 loop-in)	50,714 SF (1.16 acres)	32,528 SF (0.75 acre)	83,242 SF (1.91 acres)
• Stringing sites	0	57,290 SF (1.32 acres)	57,290 SF (1.32 acres)
• Guard structures	0	2,376 SF (0.55 acre)	2,376 SF (0.55 acre)
Existing Substation Modifications			
• 69-kV rack extension and 69-kV breaker foundations	203 SF (0.004 acre)	0	203 SF (0.004 acre)
Staging Yards			
• Hunte Parkway	0	348,480 SF (8.00 acres)	348,480 SF (8.00 acres)
• Existing Substation	0	87,120 SF (2.00 acres)	87,120 SF (2.00 acres)
• Eastlake Parkway	0	74,052 SF (1.70 acres)	74,052 SF (1.70 acres)
• Olympic Training Center	**	**	**
TOTAL	485,182 SF (11.14 acres)	759,629 SF (17.44 acres)	1,244,811 SF (28.58 acres)

Source: SDG&E

* Based on preliminary engineering. Estimates may change based on final design and construction.

** Alternate staging yard sites are not proposed for use at this time and would involve a commensurate reduction in square footage at the three proposed staging yards, depending on circumstances at the time of construction.

Table 3-3: Estimated Grading Quantities*

Proposed Project Component	Earthwork Quantity (cubic yards)	
	Cut	**Fill**
Salt Creek Substation		
• Substation and access road (on-site)**	89,800	137,100
• Driveway and access road to Hunte Parkway (off-site)**	100	800
• Drainage to discharge at existing dissipator (off-site)**	100	100
TL 6965 and TL 6910 Loop-In		
• 69-kV TL 6965 overhead	2,500	1,400
• TL 6965 underground grading and access (off-site in Transmission Corridor, includes cable poles 1, 43, and 44 and a portion of TL 6910 loop-in) **	4,000	0
Existing Substation Modification		
• 69-kV rack extension and 69-kV breaker foundations	127	230
Staging Yards		
• Hunte Parkway	30	30
• Existing Substation	N/A	N/A
• Eastlake Parkway	1,300	600
• Olympic Training Center	N/A	N/A
TOTAL	97,957	140,260

Source: SDG&E

* Based on preliminary engineering.

** These quantities, totaling 94,000 cubic yards of cut and 138,000 cubic yards of fill, are associated with substation site development, described in Section 3.5.1.1.

N/A = not applicable; no grading anticipated

3.5.1 Salt Creek Substation

3.5.1.1 Construction Methods

Construction activities would be completed in two stages. Stage 1 would consist of site grading and below-grade construction, as shown in Figure 3-6, Preliminary Grading and Drainage Plan. Site grading would include 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 construction of the perimeter site wall. Stage 2 would include erection of Salt Creek Substation structures. Figure 3-7, Land Disturbance, depicts land disturbance in the Salt Creek Substation site.

Stage 1 – Site Preparation

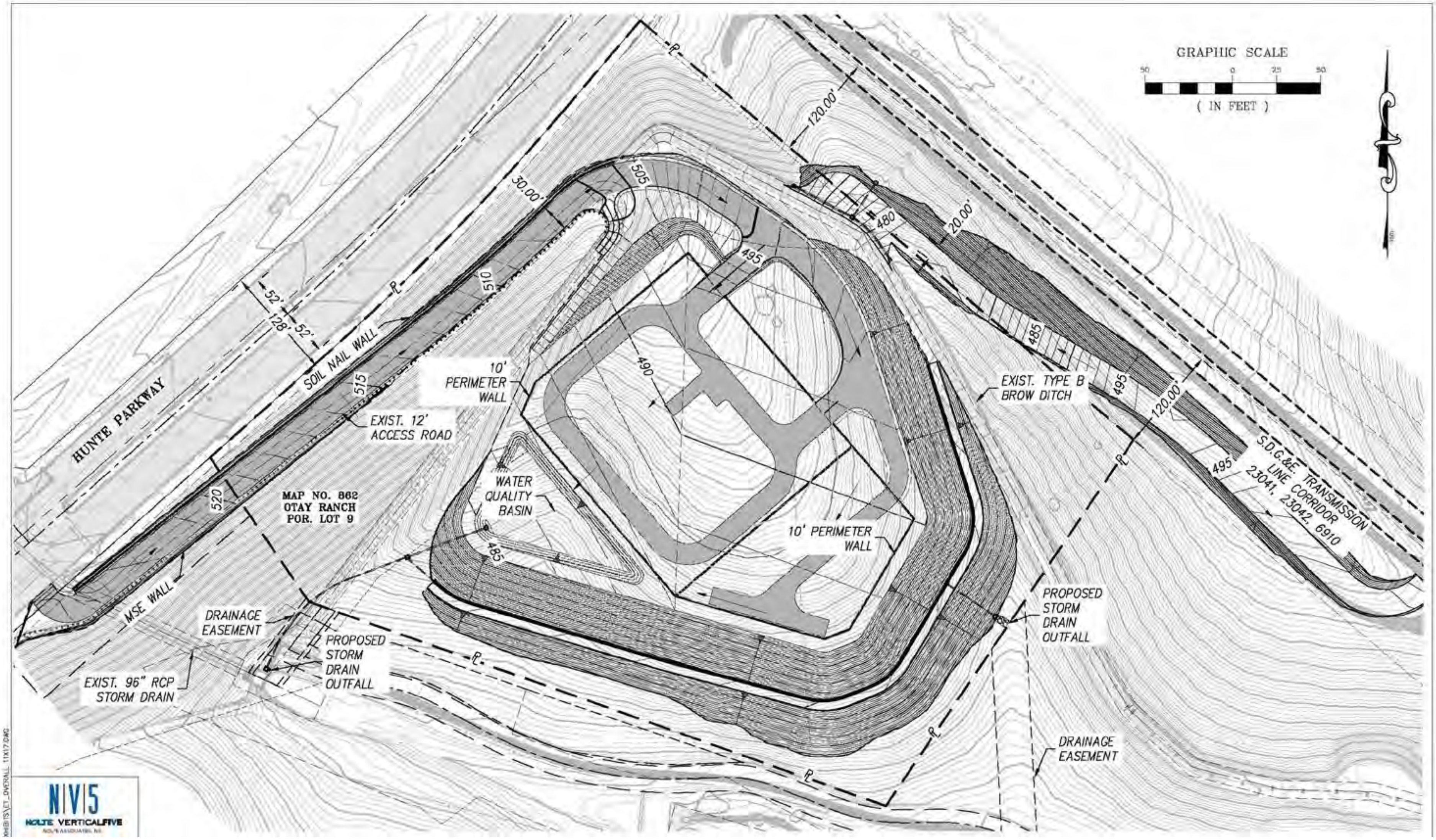
Prior to construction, site preparation activities would include clearing and vegetation removal. Clearing activities would use mowers, excavators, front-end loaders, and/or bulldozers.

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 would include installing the retaining walls, storm water conveyances, a containment basin, a water quality detention basin, electrical underground conduits, a perimeter screen wall, and entry gates, and paving internal and external operational and maintenance access roads.

Earthwork associated with the proposed Salt Creek Substation site and access road improvements would require both cut and fill, estimated at approximately 94,000 cubic yards (CY) of cut and approximately 138,000 CY of fill. This includes remedial cut and fill of alluvium and colluvium, as outlined in the Proposed Project’s Geotechnical Report and Recommendations, and cut associated with the 69-kV TL 6965 underground grading alignment. In total, it is estimated that up to 44,000 CY of structural fill and class 2 aggregate would be imported for construction. A summary of the anticipated grading quantities for the proposed Salt Creek Substation is provided in Table 3-3, Estimated Grading Quantities. Haul trucks, with an approximate 13-CY capacity, would be required to transport fill material to the site, resulting in approximately 3,400 haul truckloads. Borrow sites will be identified based on availability and in accordance with SDG&E procedures. Estimated total and daily truck trips are presented in Section 4.3, Air Quality.

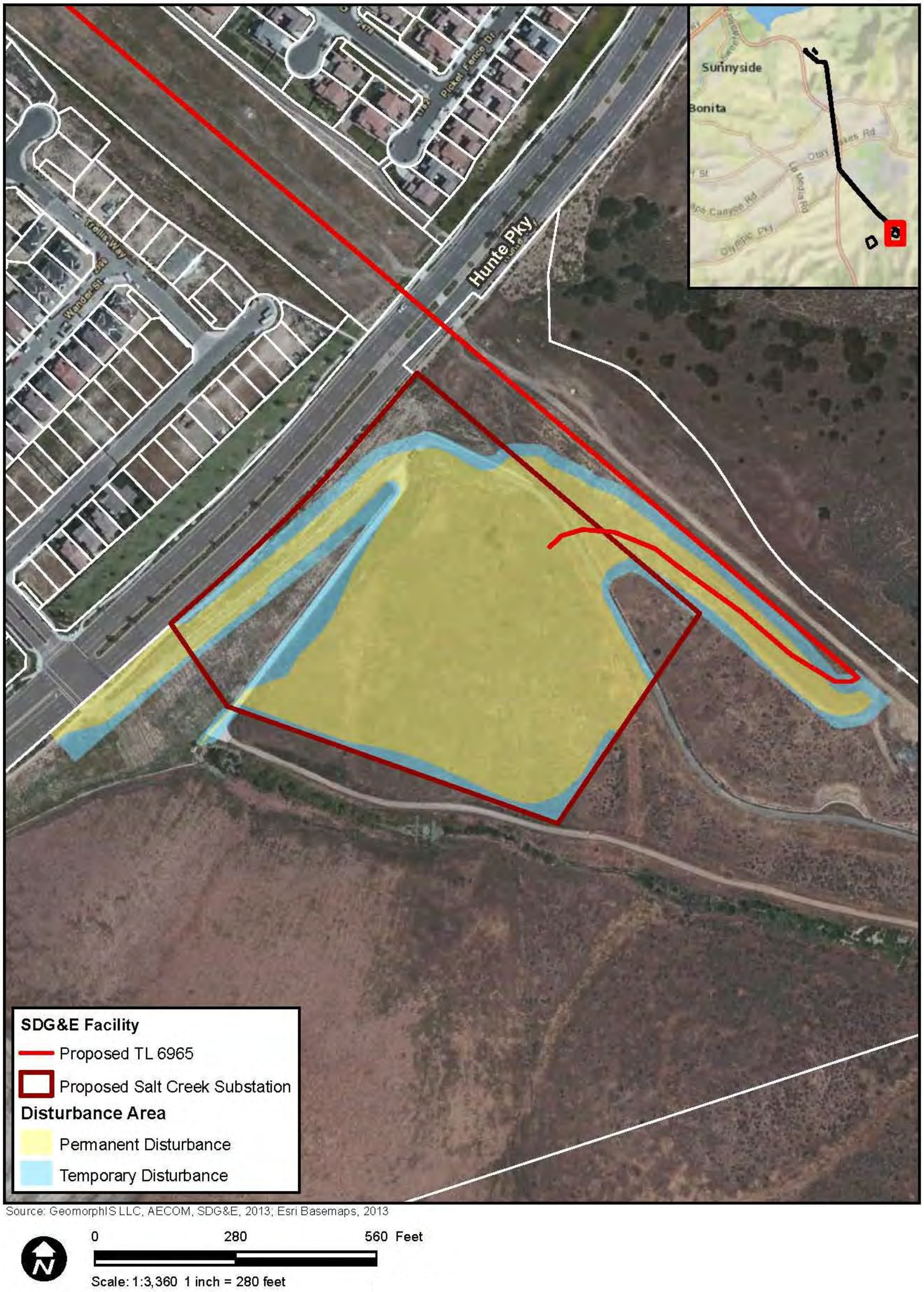
SDG&E would design drainage elements to minimize surface runoff and erosion. In general, the Salt Creek Substation pad drainage would be directed to a water quality detention basin in the southwest corner. A storm drain from the water quality basin would convey runoff discharge to the existing 96-inch-diameter storm drain dissipater southwest of the site.

Figure 3-6: Preliminary Grading and Drainage Plan



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

Figure 3-7: Land Disturbance



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

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's Storm Water Pollution Prevention Plan (SWPPP), as discussed in more detail in Section 3.5.6. Landscaping would also be installed as outlined in the Proposed Project's Conceptual Landscape Plan (see Section 4.1, Aesthetics). 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 all-weather structure (control shelter). Construction of the distribution circuits and tie lines surrounding the Proposed Project would begin 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 foundations. The following steps would be associated with installing above-grade equipment:

- 69-kV rack erected
- 69-kV circuit breakers installed on their foundations
- Relay panels, controls, and batteries installed within the control shelter
- Ground grid, control, communication, and power ducts installed, with wiring of the equipment controls and protection devices to follow
- Two 69/12-kV transformers installed on their foundations, assembled, and filled with oil
- 12-kV 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 12-kV circuits are ready to be energized and are tested outside the substation.

An AT&T telephone line would be brought inside the enclosed, all-weather structure via one underground 4-inch-diameter duct coming from AT&T's existing facilities on Hunte Parkway. The 4-inch-diameter duct would intercept AT&T's existing underground facilities and continue in an underground trench into the substation.

Fiber-optic lines would be pulled along TL 6910 as a separate project that would be completed before construction of the proposed Salt Creek Substation. The fiber-optic component of the Proposed Project would be limited to the loop-in to the proposed Salt Creek Substation as part of the TL 6910 loop-in component.

Portable cranes and heavy hauling trucks would be employed to transport and unload the 69/12-kV transformers. Substation crews, 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 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.

A temporary tap to an existing distribution line would be installed to provide electrical service to the proposed Salt Creek Substation site during construction. This temporary tap would be used to power construction trailers, lighting, or small hand-held machinery or tools until the substation is energized. The temporary tap would connect a distribution line from the existing distribution line to the proposed Salt Creek Substation site. For a description of underground distribution construction, see Section 3.6.2.1, below.

3.5.1.2 Dewatering

No dewatering is anticipated during construction of the proposed underground distribution utilities. However, in the event that groundwater is encountered, dewatering activities would be conducted in accordance with all existing regulations and requirements.

3.5.1.3 Access

The existing sewer access road from Hunte Parkway would provide primary access to the proposed Salt Creek Substation site during construction. During road improvements that include pavement widening, retaining wall construction, and construction of 12-kV distribution packages, temporary access to the substation site would be provided from the Transmission Corridor. Temporary access from the Transmission Corridor to the substation site would follow the 69-kV 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 site is approximately 16 feet. The paved portion of the roadway averages approximately 12 feet wide. The remaining 4 feet is 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 (AC) pavement to an approximate width of 30 feet, installing guardrails 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 would be installed and maintained in accordance with the requirements of the City of Chula Vista and RWQCB.

No changes are proposed to the existing street light and signal directly southwest of the existing driveway apron for the sewer access road. This street light/signal limits the access of large construction vehicles. From Hunte Parkway, large vehicles would drive over the curb and gutter that is immediately westerly of the street light/signal. As mentioned above, approximately 120 feet of the existing unreinforced concrete curb and gutter would be removed and replaced with a reinforced concrete curb and gutter. Improvements to the existing driveway, curb, and gutter would require a public improvement permit and traffic control plans.

The access roads are shown in Figure 3-5, Salt Creek Substation Layout.

3.5.1.4 Work Areas

Figure 3-7, Land Disturbance, depicts the limits of temporary and permanent disturbance areas for Salt Creek Substation site development. Table 3-2 includes disturbance area calculations for the substation. Salt Creek Substation site development includes portions of the proposed underground 69-kV (TL 6965 and TL 6910 loop-in) and underground 12-kV distribution. Therefore, work areas associated with underground duct and vault construction are included within the work area for Salt Creek Substation site development.

3.5.1.5 Landscaping

The proposed landscape plan is provided in Figures 4.1-2A and 4.1-2B, in Section 4.1, Aesthetics. The proposed planting scheme would screen public views of the proposed Salt Creek Substation site and enhance the aesthetic quality of the site. The proposed landscape plan includes street trees, slope and perimeter trees, and shrubs. All trees would be planted at a distance equal to their maximum height or half of their width, whichever is greater, from the substation walls and overhead transmission lines. The proposed landscape plan would be compatible with the existing environment and would conform to the City of Chula Vista's landscape standards. Landscaped areas would be maintained by SDG&E. The landscape plan proposes an irrigation system for vegetation maintenance. The Proposed Project would use reclaimed water upon availability.

3.5.2 TL 6965 and TL 6910 Loop-In

3.5.2.1 Construction Method

Overhead Power Line Construction

Clearing and Grading

Mowers and bulldozers would be used to clear and/or grade the areas required for pole/structure installation and at work pads. 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 and access during construction, as well as for post-construction operations and maintenance work. At approximately 16 of these locations, the proposed pole structure would be located in the existing access road to meet engineering design requirements; therefore, the access road would be adjusted at these locations to route access around the pole. Approximately 3 acres of land would be required for permanent and temporary work areas, as indicated in Table 3-2. For work pads requiring manufactured slopes, the manufactured slopes would be revegetated with a native seed mix.

Soil may be imported, as necessary, to raise the elevation of work areas. Borrow sites would be identified based on availability and in accordance with SDG&E procedures. Material removed during the process or subsequent excavation would be spread over existing access roads and work pads as appropriate, or disposed of off-site in accordance with all applicable laws. Approximately 200 CY of soil would be exported for TL 6965 grading. If deemed suitable, this soil may be used for the proposed Salt Creek Substation; otherwise, this material would be disposed of at an SDG&E-approved disposal site (i.e., landfill).

Access to these work areas would be provided by the existing access roads or by overland travel within or adjacent to SDG&E's existing ROW.

Steel Pole Installation

Light-Duty Directly Embedded Steel Pole Installation

Installing directly embedded galvanized steel poles would begin with excavating 40- to 52-inch-diameter holes. Depending on pole type and height, excavated holes would be approximately 6 to 17 feet deep. Holes would be drilled using a truck-mounted auger or similar equipment, and would result in the excavation of 2 to 10 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 the poles and holes would then be backfilled with concrete. Any remaining excavated material would be placed around the holes, spread onto adjacent access roads and properly compacted, or disposed of off-site at an approved facility. The permanent footprint required to install each of these new steel poles would be approximately 5 square feet.

Foundations for Engineered and Cable Pole Installation

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 8 feet in diameter and 20 to 30 feet in depth, resulting in the excavation of between approximately 21 and 56 CY of soil, depending on conditions and pole type (foundation pole or cable pole). Following excavation of the foundation hole, a reinforcing steel cage and anchor bolts would be installed. Following cage installation, a form would be built and concrete would be poured to a height of approximately 6 to 24 inches above grade. Each foundation would require between approximately 22 and 60 CY of concrete to be delivered to the foundation location. Concrete would be delivered directly to the pole's location in concrete trucks with a capacity of up to 10 CY. If access is limited, concrete may be pumped from several hundred feet away from the pole location. Table 3-4, 69-kV Steel Pole Summary, provides a summary of the pole dimensions, disturbance areas, and concrete requirements for the poles that would be installed as part of the Proposed Project. Steel plating would be placed over excavated areas, where appropriate, to maintain vehicular and pedestrian traffic.

Engineered Pole Installation

Steel poles would be delivered in two or more sections to the pole site via flatbed trucks. A large crane would be used to lift and set the poles into place on the anchor bolts imbedded into the concrete foundation. The nuts on the foundation would then be tightened and secured.

Grounding Rods

All steel poles, regardless of foundation type, would require installing two grounding rods and a copper ground wire connecting the steel pole and rods. Grounding rods would be approximately 8 feet in length and installed vertically approximately 6 feet apart with the top of the rod approximately 18 inches below grade. Copper ground wire would be installed in a trench from the pole to the rods. After installation, the trench would be backfilled to the original grade. Grounding rods and wire would be installed within the established temporary work areas described above. Permanent impacts associated with grounding rod installation would be negligible (e.g., less than 1 square foot per structure).

Overhead Conductor Installation

Conductor installation procedures would be similar for all overhead portions of the proposed power lines. Prior to stringing the new overhead line, temporary guard structures would be installed at crossings above roadways and freeways, and also at crossings of energized electric and communication facilities, preventing the conductors from sagging onto other lines during conductor installation. Typically, guard structures consist of vertical wood poles with cross arms. In some cases, bucket or boom trucks may also be used for guard structures.

Conductor stringing operations would be facilitated by installing sheaves or “rollers” on the structure prior to conductor installation, using aerial manlifts (bucket trucks). The sheaves would allow the conductor to be pulled past each structure prior to being pulled up to the final tension position. Following installation of the sheaves, a pull rope (a small cable used to pull the conductor) would be pulled onto the sheaves using a helicopter. Once the pull rope is in place, it would be attached to a steel cable and pulled back through the sheaves. The conductor would be attached to the cable and pulled back through the sheaves using conventional tractor-trailer pulling equipment located at the pull sites. This process would be repeated for each conductor and line segment (pull site to pull site).

Table 3-4: 69-kV Steel Pole Summary*

Foundation Type	Approximate Quantity	Approximate Individual Footprint Pole Holes (square feet)	Total Approximate Footprint Pole Holes (acres)	Approximate Pole Diameter	Approximate Pole/Foundation Depth (feet)	Approximate Excavation Volume (CY) (Per Pole)	Approximate Concrete Volume (CY) (Per Pole)
Directly Embedded	29	5	0.003	16 to 28 inches	6 to 17	2 to 10	2 to 7
Foundation Pole –Drilled Pier	11	39	0.01	6 to 7 feet	20 to 30	21 to 43	22 to 46
Cable Pole	3 (2 on TL 6910)	39	0.01	6 to 8 feet	20 to 30	21 to 56	22 to 60

Source: SDG&E

* Based on preliminary engineering

Approximately 14 designated stringing sites would be required to tension the conductor to a pre-calculated level. Each stringing site would range in size from approximately 2,000 to 9,000 square feet, with a total of approximately 58,000 square feet of temporary impacts from construction equipment and vehicles within the Proposed Project area. As described previously, depending on topography, some incidental grading may be required at pulling and tensioning sites to create level areas for equipment.

After the conductor is pulled into place, the sags between the structures would be adjusted to a pre-calculated level. The line would be installed with minimum ground clearances dictated by the surrounding land uses, typically 30 feet of vertical clearance above drivable surfaces and 25 feet above non-drivable surfaces. The conductor would then be clipped into the end of each insulator, the sheaves would be removed, and vibration dampers and other accessories would be installed. This process would be repeated for each conductor and line segment.

Underground Power Line Construction

SDG&E plans to install four 12-kV distribution duct banks within the Salt Creek Substation property, continuing out within the access road to Hunte Parkway. TL 6965, TL 6910, and TL 6964 would be placed underground from the cable pole to the substation rack for the new underground connections. Trenching would occur within the Salt CreekSubstation property and Transmission Corridor, and would cross the City of Chula Vista's sewer access road.

Typical trench dimensions for installing a transmission duct bank are approximately 6 to 8 feet deep and 3 to 7 feet wide. Typical trench dimensions for installing a distribution duct bank are 3 to 6 feet deep and 2 to 7 feet wide. 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 Safety and Health Administration (OSHA) requirements. If trench water is encountered, trenches would be dewatered using a portable pump and disposed of in accordance with existing regulations and requirements.

Prior to trenching, SDG&E would notify other utility companies to locate and mark existing underground utilities along the proposed underground alignment. SDG&E would also conduct exploratory excavations (potholing) to verify the locations of existing facilities in the ROW. Four duct packages would cross the existing City of Chula Vista sewer in the existing access road. Sewer crossings would be designed and constructed in accordance with City of Chula Vista requirements. SDG&E would coordinate with the City of Chula Vista to secure encroachment permits for trenching in City of Chula Vista ROWs, as required. Although the Proposed Project would not result in any road closures, some roads may be limited to one-way traffic at times. In these cases, one-way-traffic controls would be implemented as required by the traffic control plan approved by the City of Chula Vista and/or the California Department of Transportation (Caltrans).

The majority of the duct bank would be installed using open-cut trenching techniques. Trench construction would be staged in intervals, consistent with any applicable permit requirements. This would generate approximately 200 to 300 CY per day of excavated material, which would be exported to an SDG&E-approved disposal site. At any one time, open trench lengths would not exceed that required to facilitate the installation of the duct bank. Steel plating would be placed over the trenches for safety and to maintain vehicular access over the existing sewer access road.

Duct Bank Installation

As the trench for the underground duct banks is completed, SDG&E would install the cable conduits (separated by spacers) and pour concrete around the conduits to form the duct banks. Once the PVC conduits are installed, slurry backfill would be imported, placed, and compacted. A road base backfill or slurry concrete cap would be installed, and the disturbed road surface would be restored in compliance with local permits. While the completed trench sections are being restored, additional trench lines would be opened. This process would continue until the underground portion of the work is complete.

Manhole/Vault Installation

SDG&E would excavate and install concrete vaults/manholes during trenching for the duct banks. These vaults/manholes would be used to pull cable through the conduits and splice the cables together during construction. During operation, vaults/manholes would provide access to the underground cables for maintenance, inspections, and repairs.

Vaults/manholes would be constructed of concrete and designed to withstand the maximum credible earthquake in the area and heavy truck-traffic loading.

Cable Pulling, Splicing, and Termination

After completing conduit construction, SDG&E would install cable. To pull the cable through the ducts, a cable reel is placed at one end of the section, and a pulling rig is placed at the other end. Each segment of cable would be pulled into the duct using a pull rope. A lubricant would be applied to the cable as it enters the duct to decrease friction during pulling. Mobile equipment including trucks and generators would be positioned adjacent to the vault/manhole openings to facilitate cable splicing.

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 and may be used for installation of poles. Helicopter operation would occur during specific daytime construction activities. The Existing Substation staging yard would be used for helicopter take-offs and landings, storage, and refueling. Helicopter use would be compliant with all applicable usage permits, including the Federal Aviation Administration (FAA) and Caltrans.

3.5.2.2 Access

TL 6965

Existing dirt access roads within and along SDG&E's Transmission Corridor would be used to the maximum extent feasible during construction of the new 69-kV 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. In addition, overland travel to approximately three structures (poles 5, 33, and 48) would occur during construction; construction vehicles would 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 and a width of approximately 12 feet. Additionally, 2-foot-wide footpaths would be required to poles 36, 41, and 42. The footpaths would be 30 feet, 60 feet, and 45 feet long, respectively. A new permanent access road would be required to pole 40. The access road would be approximately 330 feet long and range in width from 12 to 14 feet.

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 Salt Creek Substation site to accommodate the 69-kV underground package. This access road would provide secondary temporary construction access to the Salt Creek Substation site.

SDG&E's Transmission Construction & Maintenance (TCM) personnel maintain existing access roads within the Transmission Corridor and on SDG&E's fee-owned land around the Existing Substation. Annual road maintenance enables crew and equipment access to associated poles. Depending on the timing of TCM's annual maintenance activities in this area, construction activities for the Proposed Project may include resurfacing access roads (minor grading) and/or vegetation clearing to maintain some or all of the existing access roads that serve the proposed improvements.

Pursuant to SDG&E's NCCP, SDG&E is not required to mitigate for impacts to vegetation resulting from road maintenance (i.e., re-establishing) to existing access roads. Cleared vegetation would be removed from the Proposed Project area and disposed of at an approved off-site facility. Vehicles would remain within existing access roads, previously disturbed areas, and designated temporary work areas, where feasible. Only a small amount of overland travel would be required, as detailed above. At drainage crossing locations along the access roads, the blade of the equipment would be lifted 25 feet on either side of the drainage to avoid impacts to the drainage. Temporary bridging of drainage crossings may be used wherever feasible or necessary.

TL 6910 Loop-In

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

3.5.2.3 Work Areas

Table 3-2 summarizes the permanent and temporary workspaces for TL 6965 and the TL 6910 loop-in. As identified in Table 3-2, the workspace requirements for the TL 6910 loop-in are included within the disturbance areas for the TL 6965 undergrounding and the proposed Salt Creek Substation. No additional disturbance would result from TL 6910 loop-in work.

All work areas for TL 6965 overhead work would be accessed by construction equipment using existing access roads, new work pads, and/or adjusted access roads, or by overland travel. The work areas for the TL 6965 underground component are illustrated in Figure 3-7, Salt Creek Substation Temporary and Permanent Impact Areas. All temporary work areas for TL 6965 would be restored to pre-construction conditions, as needed and as appropriate, following completion of construction. Further discussion of the restoration process is provided in Section 4.4, Biological Resources.

3.5.2.4 Poles and Structures

To accommodate construction equipment and activities during installation of power poles and structures, temporary construction areas would be cleared and/or graded at each location to provide a safe working space for placing equipment, vehicles, and materials. Work areas for each pole type would vary. Approximately 24 pole locations would require creation of a permanent work pad, of which approximately 16 would involve adjusting the existing access road to accommodate the new pole and to maintain necessary vehicular access. Work areas with an approximately 10-foot radius would be established at the directly embedded galvanized steel pole structures that do not require establishment of a permanent work pad. Approximately 75-foot by 75-foot work areas would be established at each of the 10 pier foundation poles. An approximately 150-foot by 150-foot work area would be established at each of the three cable poles that would be installed east of the proposed Salt Creek Substation. However, the work areas would occur within the work area for TL 6965 undergrounding, and would not result in additional disturbance. Furthermore, an additional area for staging and operation of vehicles and equipment may be required around the cleared work area.

3.5.2.5 Guard Structures

Temporary guard structures would be required at locations where stringing work would cross existing facilities, such as other utilities, roadways, and highways, to ensure minimum clearances are maintained while conductors are being pulled. Different types of guard structures may be used, depending on site conditions. Guard structures may consist of a single wood pole with a cross-beam attached to side extensions, or a two-pole wood structure with a cross-beam. In some locations, such as paved areas, a bucket or boom truck may be used as a guard structure. Guard structures using poles would require excavating holes using a truck-mounted auger. Poles would be installed using a line truck, and the soil would be backfilled around each pole. Upon completion of overhead construction, these guard structures would be pulled and removed, and holes would be backfilled.

Along the 5-mile-long alignment, approximately 33 wooden guard structures would be used at locations where the power line crosses public roads or existing utility lines. As mentioned above, bucket or boom trucks may be used, which would decrease this number. Guard structures are necessary to provide for safety while the conductor is pulled through the line.

3.5.2.6 Stringing Sites

Approximately 14 stringing sites would be established to provide a safe working space while installing overhead conductors and underground cables. These stringing sites would generally be located near designated 69-kV poles, as indicated in Table 3-1. The majority of these stringing site areas would be located within the existing 120-foot-wide Transmission Corridor. Stringing sites would be located along existing access roads where feasible, and would range in size from approximately 2,000 to 9,000 square feet. Stringing sites would typically be located at a distance of approximately four times the height of the pole away from the base of the pole, in line with the conductor's alignment. The anticipated 14 stringing sites would require approximately 1.3 acres of land. Stringing sites would be located along TL 6965 as necessary to accommodate installation of the overhead conductor, and would be located within existing disturbed areas. Some incidental grading of the stringing sites may occur if necessary.

Temporary work areas used to install the underground duct banks would be used to facilitate pulling of the underground cables.

3.5.3 Existing Substation Modification

3.5.3.1 Construction Method

There would be no site development work at the Existing Substation. The existing 69-kV 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 69-kV 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 in the vacant position previously occupied by TL 643.

Below-Grade Construction

Below-grade work would include foundations for the steel structure and equipment. Concrete trucks, backhoes, and loaders would be used for the foundation and below-grade work.

Above-Grade Construction

Once 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 above-grade equipment:

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

The power lines would be completed and connected inside the Existing Substation following final installation of substation structures and equipment.

3.5.3.2 Access

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.

3.5.3.3 Work Area

Proposed Existing Substation modifications would occur within the Existing Substation footprint, and no additional work areas would be required.

3.5.4 Staging Yards/Helicopter Fly Yard

Three temporary staging areas were identified that would be used for the Proposed Project: one at the Existing Substation on SDG&E fee-owned property; one on the west side of Eastlake Parkway within the Transmission Corridor between SR-125 and Eastlake Parkway; and another on the north side of Hunte Parkway between Discovery Falls, Eastlake Parkway, and Crossroads Street. Alternative staging area locations were identified within the Olympic Training Center, which would include five potential alternative staging yards. Staging yard locations are illustrated in Figure 3-3, Project Overview.

Based on the three staging yards, approximately 11.7 acres of temporary impacts for staging would occur. The staging yards would be used for pole assemblage, open storage of material and equipment, construction trailers, portable restrooms, parking, refueling areas for vehicles and construction equipment by a mobile fueling truck, and temporary overhead power for construction. Construction workers would typically meet at the staging yard each morning and park their vehicles at the yard. The helicopter fly yard/incidental landing area would be used for helicopter take-offs and landings.

The substation pad would also be used for staging during construction of the Salt Creek Substation. An approximately 6-foot-high chain-link security fence (with screening slats or mesh at the Hunte Parkway and Eastlake Parkway staging yards) and a locking gate would enclose each staging yard.

3.5.4.1 Salt Creek Substation

After the substation pad is graded, the pad area would be used for staging the majority of construction materials, equipment, and vehicles used to construct the proposed Salt Creek Substation facilities. No additional grading or disturbance would be required to use the substation pad as a temporary staging area during construction.

Temporary security fencing would be required during construction. The site would have an 8-foot-tall chain-link fence and gate locked for security purposes. Following site development, a masonry perimeter wall would be installed to secure the site.

3.5.4.2 Hunte Parkway Staging Yard

Additional staging would be located at the proposed Hunte Parkway Yard, approximately 0.5 mile west of the proposed Salt Creek Substation site, as depicted in Figure 3-3, Project Overview. Approximately 8 acres of a 22-acre previously graded pad would be used for staging during construction of the Proposed Project. A temporary overhead power line would be installed at this staging yard. The entire Hunte Parkway yard would be enclosed by an approximately 6-foot-high chain-link security fence with screening slats or mesh and locking gate. Minor grading of approximately 30 CY of cut and fill is estimated to occur for access only.

A temporary 30-foot-wide concrete driveway would be installed on the southern side of Crossroads Street, approximately 300 feet east of its intersection with Eastlake Parkway. Installing the driveway would require minor saw cutting and off-site removal of existing asphalt pavement, sidewalk, and concrete curb. This driveway may require minor temporary modifications to parkway landscape irrigation. After completion of all construction activities, the driveway would be removed, and the sidewalk and curb would be reinstalled, approximating its original condition.

3.5.4.3 Existing Substation Staging Yard and Helicopter Fly Yard

Staging for construction would also occur at an existing SDG&E-owned staging yard located at the Existing Substation. This staging yard would also be used as the helicopter fly yard/incidental landing area during construction to allow for take-off and landings, refueling, and other related activities.

The staging yard at the Existing Substation would occupy approximately 2 acres. It was used by SDG&E for staging purposes during previous projects. This site was previously disturbed; therefore, no grading and/or slope stabilization is anticipated. The Existing Substation is presently enclosed by an access road gate requiring valid badge access. An 8-foot-high chain-link security fence with security gate encloses the facility.

3.5.4.4 Eastlake Parkway Staging Yard

A staging yard would be located on the west side of Eastlake Parkway. The Eastlake Parkway staging yard would be approximately 1.7 acres and be located between Eastlake Parkway and SR-125. The southeastern portion of this site was previously used as a staging yard for other projects and would not require additional grading. The entire Eastlake Parkway staging yard would be enclosed by an approximately 6-foot-high chain-link security fence with screening slats or mesh and locking gate. The northwestern portion of the staging yard may require minimal grading, including approximately 1,300 CY of cut and 600 CY of fill, as noted in Table 3-3, Estimated Grading Quantities.

3.5.4.5 Olympic Training Center Staging Yard

Five potential alternative staging yards within the Olympic Training Center were evaluated to provide backup and flexibility during construction if staging yard availability changes prior to construction. The five potential staging yards were previously disturbed; therefore, no grading is anticipated. The staging yards would be enclosed by chain-link fencing with one or more security gates.

3.5.5 Traffic Control

The Proposed Project would require approval of traffic control plans and Encroachment Permits from the City of Chula Vista and Caltrans for work within the public ROW prior to the start of such construction. Compliance with traffic control plans and the conditions of the Encroachment Permits would ensure the safe movement of vehicle traffic during construction near public streets and freeways.

3.5.6 Erosion and Sediment Control and Pollution Prevention during Construction

Projects that disturb 1 acre or more of soil are required to obtain coverage under the California State Water Resources Control Board's (SWRCB) General Permit for Storm Water Discharges Associated with Construction Activity Order No. 2009-0009-DWQ (General Permit). To obtain coverage under the General Permit, permit registration documents, including a Notice of Intent, SWPPP, risk assessment, site map, certification, and annual fee must be submitted electronically to the SWRCB prior to initiating construction activities. Two SWPPPs would be prepared for the Proposed Project: a traditional SWPPP for the Salt Creek Substation component and a linear SWPPP for the TL 6965 and distribution facilities outside of the Salt Creek Substation property. The SWPPPs would include the following:

- Identification of pollutant sources and non-storm-water discharges associated with construction activity.
- Specifications for BMPs that would be implemented, inspected, and maintained during construction of the Proposed Project to minimize erosion and the potential for accidental releases, and to minimize pollutants in the runoff from the construction areas, including pollutants from storage and maintenance areas and building materials laydown areas.
- Specifications for spill response and implementation.
- A record of training provided to persons responsible for implementing the SWPPP.
- Requirements for reporting and record keeping.
- A plan for water sampling and analyzing pollutants to ensure that the Numeric Action Levels are met and that Numeric Effluent Limitations are not exceeded.

In addition, as the weather dictates, a specific Rain Event Action Plan would be prepared for all phases of construction. During construction, the San Diego RWQCB would oversee and inspect for compliance with the Construction General Permit for the SWRCB. Refer to Section 4.7, Hydrology and Water Quality, for additional discussion. In addition, a Spill Prevention, Control, and Countermeasure (SPCC) Plan would be prepared prior to Proposed Project construction and would be implemented to ensure that any potential release or spill of hazardous materials during construction is properly handled to reduce potential impacts to a less-than-significant level. All construction waste (i.e., refuse, spoils, trash, oil, fuels, poles, pole structures) would be disposed of in accordance with all applicable federal, state, and local laws.

3.5.7 Clean-Up and Post-Construction Restoration

SDG&E would restore all areas that are temporarily disturbed by Proposed Project activities (including stringing sites, structure removal sites, and staging areas) to approximate pre-construction conditions following completion of construction, as needed and appropriate. Revegetation in certain areas would not be possible due to vegetation management requirements related to fire safety. Restoration could include reseeding, planting replacement vegetation, or replacement of structures (such as fences), as appropriate. In addition, all construction materials and debris would be removed from the Proposed Project area and recycled or properly disposed of off-site. SDG&E would conduct a final survey to ensure that clean-up activities are successfully completed as required.

3.5.8 Equipment

On-road and off-road equipment required during construction of the Proposed Project are presented in the following section. For a list of construction equipment and usage, refer to Table 3-5.

Table 3-5: Standard Construction Equipment and Usage

Equipment Type	Equipment Use
Air Compressor	• Operate air tools
Asphalt Grinder	• Grind asphalt
Backhoe	• Excavate, construct, backfill
Bobcat	• Excavate trenches
Boom Truck	• Use as guard structure • Lift/set steel
Boom Truck with Trailer	• Deliver steel, disc, panels, insulators
Bucket Truck/Manlift	• Set steel • Install equipment • Use as guard structure
Bulldozer	• Demolition • Grade pads and access roads • Excavate and backfill walls
Bull Wheel Tensioner	• Control conductor at pulling tension during pulling operation
Cable Dolly	• Pull cable
Cable Dolly (trailer)	• Transport reels of conductor (no engine; can be pulled by assist truck)
Compactor	• Compact soil • Clear • Grub • Finish

Equipment Type	Equipment Use
Concrete Saw	• Cut and saw concrete
Concrete Truck	• Footing fill (665 cubic yards [CY]; 9 CY per trip)
Construction Truck	• Transport trenching and conduit installation crew
Crane	• Lift • Place materials • Position structures
Crane (30T)	• Handle material • Load/set galvanized poles • Manlift
Cat Track Hoe	• Excavate
Pick-Up Truck	• Transport workers
Delivery Trucks	• Transport equipment
Digger/Boom Truck with Material Trailer	• Dig holes • Set galvanized poles • Install anchors • Handle material • Store tools
Drill Rig with Augers	• Excavate trenches • Construct foundation
Dump/Haul Truck	• Transport demo, import and export material
Dump Truck with Compressor & Emulsion Sprayer	• Street repair
Excavator	• Demolition • Excavate • Load material
Flatbed Truck	• Haul materials (including poles)
Flatbed Truck (2-ton)	• Deliver poles to site
Foreman Pick-Up Truck	• Transport foreman and light materials • Provide communication with radio
Fork Lift/Skid Steer Loader	• Move rebar, equipment, masonry, and other material
Handheld Compactor	• Compact soil
HD Flatbed with Reel Carriers	• Pull cable

Equipment Type	Equipment Use
Helicopter	• Transport, place, and install transmission line and overhead conductor
Large Crane	• Set transformer and switchgear • Erect tower
Line Assist Truck	• Pull cable/connections
Loader	• Demolition • Load dump trucks
Material/Crew Truck	• Transport crew, tools, and materials
Mechanic Truck	• Maintain and refuel equipment
Oil Processing Rig	• Used for transformer oil processing
Pickup Truck	• Transport construction personnel • Assist trenching and conduit crew
Pick-Up Truck (¾-ton or 1-ton)	• Transport and support construction personnel and workers • Assist trenching and conduit crew
Pickup with Saw Cut Trailer	• Saw cut pavement
Puller	• Pull conductor into position or duct and secure it at the correct tension
Reel Trailer	• Feed new conductor to the pulling and tensioner • Collect old conductor
Relay/Telecommunication Van	• Transport and support construction personnel
Road Grader/Blade	• Upgrade roads
Roller	• Repair street
Scraper	• Grade pads and access roads
Splice Trailer	• Store splicing supplies
Splice Trailer (UG Cable)	• Store splicing supplies
Spreader	• Spread asphalt
UG Combo Truck	• Pull cable and connections
UG Puller Trailer (7,000-pound)	• Pull cable
Vacuum Pump	• Removes moisture from transformer oil
Water Truck	• Suppress dust and condition soil

Equipment Type	Equipment Use
Wiring Truck	• Hold spools of wire • Transport workers

UG = Underground

Source: SDG&E

On-road vehicles required during construction would include haul trucks for material delivery and import/export of fill material. For details on the total number of truck trips required to construct each of the Proposed Project's components, refer Section 4.3, Air Quality, of this PEA. During construction, delivery and maintenance trucks are anticipated to travel to and from the staging areas approximately one to two times per week during peak construction activities.

Anticipated off-road equipment that would be used to construct each Proposed Project component, along with its approximate duration of use, is provided in Section 4.3, Air Quality.

3.5.9 Personnel

It is anticipated that approximately 15 to 35 workers would be employed to support construction of the various Proposed Project components. Approximately 35 workers would be on-site during site development. Approximately 10 to 25 workers could be on-site during the balance of the foundation and below-grade work, as well as during construction of the Salt Creek Substation, power line, and distribution facilities. Up to 35 workers would be on-site at any one time during peak construction times. Final testing and checkout would require approximately six to eight electricians and/or engineers.

3.5.10 Schedule

Construction of the Proposed Project is anticipated to require approximately 18 to 24 months from initial site development through energization and testing. Table 3-6, Proposed Construction Schedule, identifies the estimated length of time anticipated to complete construction for each component of the Proposed Project.

Table 3-6: Proposed Construction Schedule

Project Components and Activities	Approximate Duration (work days)	Approximate Start Date*
Salt Creek Substation Site Development		
• Demolition	15	9/4/2014
• Grading and Road Improvements	90	9/4/2014
• Retaining Walls	30	9/11/2014

Project Components and Activities	Approximate Duration (work days)	Approximate Start Date*
• Storm Drain System and Erosion Control	40	10/20/14
• Public Improvements and Access Road Paving	20	12/22/14
• Substation Concrete Masonry Walls	20	11/24/2014
Substation Facility Construction		
• 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
• 69-kV Riser Pedestal	18	7/1/2015
• Terminate Underground 69-kV	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
TL 6965		
• 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
TL 6910 Loop-In		
• Foundation Installations	45	2/9/2015
• Pole Installations	10	4/13/2015
• Trench and Conduit	30	8/10/2015

Project Components and Activities	Approximate Duration (work days)	Approximate Start Date*
• Cable Installation	30	9/21/2015
Distribution Getaways		
• Underground Trench/Conduit/Substructure	94	6/30/2015
• Cable/Conductor Pulling and Tensioning	38	10/22/2015
Existing Substation Modification		
• 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 TL 6965 Energization	5	2/21/2016
• 69kV Substation Cutover	15	3/8/2016

Source: SDG&E

* Pending acquisition of all required approvals.

Construction of the proposed Salt Creek Substation would generally occur during normal work hours, Monday through Friday, 7 a.m. to 7 p.m., and between 8 a.m. and 7 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 that require 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 on 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.

3.5.10.1 Salt Creek Substation

Construction of the proposed Salt Creek Substation is anticipated require approximately 18 to 24 months. Site development is proposed to begin as soon as grading permits are obtained; energization is expected in February/March 2016. See Table 3-6, Proposed Construction Schedule.

Distribution

Construction on underground distribution circuits is anticipated to last 6 to 8 months. Underground trenching is estimated to require 5 months and cable pulling is expected to take 2 months. The tasks will overlap, for a total distribution schedule of approximately 8 months.

3.5.10.2 TL 6965

Construction of TL 6965 is anticipated to last 8 to 12 months. Overhead line work is estimated to require approximately 6 to 9 months, and underground trenching and cabling is estimated to take an additional 2 to 4 months.

3.5.10.3 TL 6910 Loop-In

Construction of the TL 6910 loop-in is anticipated to require approximately 2 to 6 months. It is estimated that trench work would take approximately 4 to 6 weeks, and cable installation would require an additional 4 to 6 weeks.

3.5.10.4 Existing Substation Modification

Proposed modifications at the Existing Substation are anticipated to take approximately 5 months. It is estimated that extension of the 69-kV rack and construction of the disconnects and circuit breakers would require approximately 6 to 8 weeks. Changing over the circuits would take approximately 3 weeks, with an additional 4 weeks for testing the equipment and relay settings.

3.6 Operation and Maintenance (Existing and Proposed Substations)

The Proposed Project would consist of construction of a new substation and associated distribution and TL 6910 loop-in facilities, a new power line within an existing transmission corridor, and modifications to the Existing Substation. SDG&E currently operates and maintains the Existing Substation and existing power lines within the existing Transmission Corridor consistent with SDG&E’s standard protocols and procedures, including SDG&E’s Subregional NCCP, which is described in greater detail in Section 4.4, Biological Resources, and below. No change in SDG&E’s typical operations and maintenance protocols and procedures is anticipated or included as part of the Proposed Project. SDG&E’s existing protocols and procedures, including SDG&E’s Subregional NCCP, were incorporated into the design of the Proposed Project.

Specific SDG&E Subregional NCCP operational protocols, habitat enhancement measures, and mitigation measures incorporated into the Proposed Project are as follows:

- Vehicles would be kept on access roads and limited to 15 miles per hour (mph) (NCCP Section 7.1.1, 1).
- No wildlife, including rattlesnakes, may be harmed, except to protect life and limb (NCCP Section 7.1.1, 2).
- Feeding of wildlife is not allowed (NCCP Section 7.1.1, 4).

- No pets are allowed within the ROW (NCCP Section 7.1.1, 5).
- Plant or wildlife species may not be collected for pets or any other reason (NCCP Section 7.1.1, 7).
- Littering is not allowed, and no food or waste would be left on the ROW or adjacent properties (NCCP Section 7.1.1, 8).
- Measures to prevent or minimize wild fires would be implemented, including exercising care when driving and not parking vehicles where catalytic converters can ignite dry vegetation (NCCP Section 7.1.1, 9).
- Field crews shall refer all environmental issues, including wildlife relocation, dead or sick wildlife, or questions regarding environmental impacts to the Environmental Surveyor. Biologists or experts in wildlife handling may be necessary to assist with wildlife relocations (NCCP Section 7.1.1, 10).
- All SDG&E personnel would participate in an environmental training program conducted by SDG&E, with annual updates (NCCP Section 7.1.2, 11).
- The Environmental Surveyor shall conduct pre-activity studies for all activities occurring in natural areas, and shall complete a pre-activity study form, including recommendations for review by a biologist and construction monitoring, if appropriate. The form shall be provided to the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS), but does not require their approval (NCCP Section 7.1.3, 13).
- The Environmental Surveyor shall flag boundaries of habitats to be avoided and, if necessary, the construction work boundaries (NCCP Section 7.1.3, 14).
- The Environmental Surveyor shall approve activity prior to working in sensitive areas where disturbance to habitat may be unavoidable (NCCP Section 7.1.4, 25).
- In the event SDG&E identifies a covered species (listed as threatened or endangered by federal or state agencies) of plant within the temporary work area (10-foot radius) surrounding a power pole, SDG&E shall notify USFWS (for Federal Endangered Species Act [ESA] listed plants) and CDFW (for California ESA listed plants) (NCCP Section 7.1.4, 28).
- The Environmental Surveyor shall conduct monitoring as recommended in the pre-activity study form (NCCP Section 7.1.4, 35).
- Supplies, equipment, or construction excavations where wildlife could hide (e.g., pipes, culverts, pole holes, trenches) shall be inspected prior to moving or working on/in them (NCCP Section 7.1.4, 37 and 38).
- Fugitive dust shall be controlled by regular watering and speed limits (NCCP Section 7.1.4, 39).

- During the nesting season, the presence or absence of nesting species (including raptors) shall be determined by a biologist who would recommend appropriate avoidance and minimization measures (NCCP Section 7.1.6, 50).
- Maintenance or construction vehicle access through shallow creeks or streams is allowed. However no filling for access purposes in waterways is allowed (NCCP Section 7.1.7, 52).
- Staging/storage areas for equipment and materials shall be located outside of riparian areas (NCCP Section 7.1.7, 53).

The following discussion describes the activities required for the long-term operation and maintenance of the Proposed Project once it is in service.

3.6.1 Salt Creek Substation

Once construction is complete, the proposed Salt Creek Substation would be unattended. The substation 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. A perimeter wall would enclose the proposed Salt Creek Substation, 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 Salt Creek Substation.

SDG&E would regularly inspect, maintain, and repair the Salt Creek Substation, power line, and distribution facilities following completion of Proposed Project construction. Typical operation and maintenance activities would involve routine inspections and preventive maintenance to ensure service reliability, as well as emergency work to maintain or restore service. SDG&E would perform aerial and ground inspections of the Salt Creek Substation facilities and patrols above ground components annually.

Routine maintenance is expected to require approximately six trips per year by crews composed of two to four people. Routine operations would require one or two workers in a light utility truck to visit the Salt Creek Substation on a daily or weekly basis. It is anticipated that one annual major maintenance inspection would occur, requiring an estimated 10 personnel. This inspection would take approximately 1 week to complete. Nighttime maintenance activities are not expected to occur more than once per year.

3.6.1.1 Distribution

Maintenance may include replacement of damaged cables or connectors. Maintenance crews may consist of four to six personnel and require a tool truck, cable truck, assist truck, and/or troubleshooter truck. Routine inspections would occur annually to identify connection problems or inspection for equipment degradation.

3.6.2 TL 6965 and TL 6910 Loop-In

Existing TL 6910 is routinely inspected, maintained, and repaired as needed. These on-going activities would continue and would also include new transmission facilities associated with the Proposed Project. Operation and maintenance activities for the TL 6965 and TL 6910 loop-in would involve routine preventive maintenance and emergency procedures to maintain service continuity.

Aerial and ground inspections of Proposed Project facilities would be performed in conjunction with inspections of existing lines within the Transmission Corridor. Above-ground components would be inspected routinely for corrosion, equipment misalignment, loose fittings, and other mechanical problems. SDG&E would use helicopters to visually inspect overhead facilities. SDG&E patrols each electric power line annually, or as required, via helicopter. SDG&E may also use helicopters to deliver equipment, position poles and structures, string lines, and position aerial markers, as required by FAA regulations.

SDG&E's Transmission Department would perform aerial patrols biannually and ground patrols every 3 years for the power line, not including substation maintenance. For maintenance activities, a light to medium lift helicopter, such as a Hughes 500 or AStar, would be used to fly over the power line.

New structures on TL 6965 would be constructed using standardized polymer insulators. This would reduce estimated facility maintenance, maximize equipment life span potential, and ultimately reduce outage potential.

For new construction or maintenance, the helicopter would need a flat staging area for fueling, as well as for picking up material, equipment, and personnel. The area required for small helicopter staging is generally 100 feet by 100 feet. The crew size needed varies from four to 10 crew members, two helicopter staff, and a water truck driver to apply water for dust control at the staging area. Most helicopter operations require only 1 day.

3.6.2.1 Pole or Structure Brushing

SDG&E maintains a clear working space around certain poles, pursuant to requirements found within GO 95 and Public Resources Code (PRC) Section 4292. SDG&E keeps working areas clear of shrubs and other obstructions for fire prevention purposes. Although the majority of the facilities for the Proposed Project would be located within an urbanized area, pole or structure brushing may be needed periodically to reduce the risk of fire or to allow for aerial inspection. These areas would be kept clear of shrubs and other obstructions for inspection and maintenance purposes. Inspection for brushing needs would typically occur on an annual basis. Such clearing activities would generally be achieved through the use of chain saws, weed trimmers, rakes, shovels, and/or brush-clearing hooks. Poles fitted with specific non-exempt hardware (e.g., fuses, switches) would be brushed to a radius of 10 feet from the base of the pole. Power poles with external grounds would be brushed to a radius of 5 feet from the pole base. Pole brushing is anticipated to be required at approximately 12 poles that are part of the Proposed Project.

3.6.2.2 Equipment Repair and Replacement

Conductors, insulators, switches, transformers, lightning arrest devices, line junctions, or other electrical equipment may be supported on various SDG&E poles or structures. Repairs or replacement activities to such components may be required to ensure that SDG&E is able to continue to provide uniform, adequate, safe, and reliable service. Such repairs may include removing or replacing certain components (i.e., existing transmission structures) with similar equipment that is larger or stronger, generally at the same location or a nearby location. Such repairs or replacements may be needed as the result of age, damage, or necessary change in the size of a conductor. Repair or replacement of such equipment would generally require a crew composed of four personnel and two to three trucks (a boom or line truck, an aerial lift truck, and an assist truck) to gain access to the area of the equipment in need of repair or replacement.

3.6.3 Existing Substation Modification

Once modifications are complete, the Existing Substation would continue to be unattended. The substation is currently 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.

SDG&E would continue to regularly inspect, maintain, and repair the Existing Substation, power line, and distribution facilities following completion of Proposed Project construction. Operations and maintenance activities would not increase in intensity, frequency, or duration with implementation of the Proposed Project, and would be substantially similar to existing operations and maintenance activities. Typical activities involve routine inspections and preventive maintenance to ensure service reliability, as well as emergency work to maintain or restore service continuity. SDG&E performs aerial and ground inspections of Existing Substation facilities and patrols aboveground components annually. Inspection for corrosion, equipment misalignment, loose fittings, and other common mechanical problems is performed at least every 3 years (per GO 165) for power lines.

Routine maintenance would continue as scheduled and would typically include six trips per year by a two- to four-person crew. Routine operations would continue and typically requires one or two workers in a light utility truck to visit the substation on a daily or weekly basis. It is anticipated that one annual major maintenance inspection would occur, requiring an estimated 10 personnel. Nighttime maintenance activities are not expected to occur more than once a year.

3.6.4 Vegetation Maintenance

Routine vegetation clearing would continue to occur at each substation on an as-needed basis for purposes of safety, access, and aesthetics. Vegetation clearing activities would typically involve the presence of one to two small maintenance vehicles and one or more personnel to clear or trim vegetation to achieve the minimum working space around substation facilities.

SDG&E conducts annual inspection of areas where trees exist within proximity to its electrical facilities. If necessary, tree trimming is conducted using a two-person crew, a one-person aerial lift truck, and a chipper trailer. Due to the urban nature of the area of the Proposed Project, it is anticipated that vehicular access would be available. If vehicle access is not available, the crew would walk to the location where trimming is needed. It is anticipated that annual tree trimming activities can be completed in 1 day, if needed. In addition, vegetation that has a mature height of 15 feet or taller is not allowed to grow within 10 horizontal feet of any conductor within the ROW for safety and reliability reasons.

3.6.4.1 Application of Herbicides

Herbicides may be used to prevent vegetation that is cleared during brushing activities from re-establishing itself. This activity is currently occurring on a regular basis where permitted within the existing Transmission Corridor. SDG&E typically applies one or more of 16 standard herbicides recommended by the U.S. Fish and Wildlife Service (USFWS) specifically for use by SDG&E.

Herbicide application currently occurs within the Transmission Corridor over a short time duration, and generally involves one person in a pick-up truck. Herbicides are generally applied within the 5- to 10-foot radius around the base of the poles, as needed. It is anticipated that the person performing the work would either walk from the nearest available location to park or would drive a pick-up truck directly to each pole location, if such access is available.

3.7 Anticipated Permits and Approvals

CPUC is the lead California agency for this Proposed Project. SDG&E must comply with CPUC's General Order No. 131-D Section III-B (GO 131-D), which contains the permitting requirements for construction of the Proposed Project. This PEA was prepared as part of an application to obtain a PTC for the Proposed Project. In addition to the PTC, SDG&E may be required to obtain a number of other permits from federal, state, and local agencies. Table 3-7, Anticipated Permit, Approval, and Consultation Requirements, lists the permits, approvals, and licenses that SDG&E anticipates obtaining from jurisdictional agencies.

Table 3-7: Anticipated Permit, Approval, and Consultation Requirements

Permit/Approval/Consultation	Agency	Jurisdiction/Purpose
Federal Agencies		
Implementation of SDG&E's Subregional Natural Community Conservation Plan (NCCP)	U.S. Fish and Wildlife Service	Activities within NCCP coverage areas that impact biological resources (required only for review of Proposed Project; no approval or permit is involved)
State Agencies		
Permit to Construct	California Public Utilities Commission	Authority to construct electric facilities; CEQA lead agency review
National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (NPDES No. CAS000002); Order No. 2009-0009-DWQ	California State Water Resources Control Board (SWRCB)	Storm water discharges associated with construction activities disturbing more than 1 acre of land

Permit/Approval/Consultation	Agency	Jurisdiction/Purpose
General NPDES Permit for Discharges from Utility Vaults & Underground Structures to Surface Waters (NPDES No. CAG990002); Order No. 2006-0008-DWQ	SWRCB	Used to discharge water from utility vaults during operation
Implementation of SDG&E NCCP	California Department of Fish and Wildlife (CDFW)	Activities within NCCP coverage areas (required only for review of Proposed Project; no approval or permit is involved)
Encroachment Permit and Traffic Control Plan	Caltrans	Stringing conductor across SR-125
California Department of Fish and Wildlife Notification	CDFW	Notification of any proposed activity that may substantially modify a river, lake, or stream
Local Agencies		
Encroachment Permit and Traffic Control Plan	City of Chula Vista	Construction within, under, or over city or county road ROWs (ministerial)
Structural Permit	City of Chula Vista	Walls for the access road and substation
Storm Water Management Plan	City of Chula Vista	Storm water discharges associated with construction projects that require a ministerial or discretionary permit within a jurisdiction subject to a Municipal Separate Stormwater Sewer System (MS4) permit from the local Regional Water Quality Control Board (RWQCB); Chula Vista is a co-permittee in the Region 9 RWQCB MS4 permit
Grading/Public Improvement Permit	City of Chula Vista	Grading plans and permit required for Salt Creek Substation and TL 6965 undergrounding

Source: SDG&E

3.8 Project Design Features and Ordinary Construction/ Operations Restrictions

SDG&E has extensive experience constructing, operating, and maintaining electric facilities. Over time, SDG&E has developed standard practices and protocols that are ordinarily incorporated into project design, construction, operation, and maintenance activities. These ordinary construction and operating restrictions have been developed and refined over time, reflecting SDG&E's experience managing electric facilities in the communities SDG&E serves. Among other things, restrictions are designed to comply with applicable regulations, conform to BMPs within the industry, avoid potential environmental impacts, meet internal SDG&E goals and standards, and respond to community input. These restrictions, which are designed to avoid and minimize potential environmental impacts before they occur, are incorporated into the design of the Proposed Project.

Many of these practices are applied to all of SDG&E's projects and activities to ensure compliance with relevant laws, regulations, and ordinances, as well as to minimize adverse effects on the surrounding environment. SDG&E maintains an environmental compliance management program to allow for implementation of these activities including documentation, monitoring, and enforcement during each phase of project development, as appropriate. SDG&E and its contractors are required to implement the measures described below.

The following project design features and ordinary construction and operating restrictions identified by SDG&E are part of the Proposed Project's design, and would be implemented during construction, operation, and maintenance of the Proposed Project.

- **Air Quality Management**

  The Proposed Project would avoid and minimize impacts to air quality through implementation of the following measures:

  - All unpaved demolition and construction areas shall be wetted at least three times daily during construction, and temporary dust covers shall be used to reduce dust emissions and meet San Diego Air Pollution Control District (SDAPCD) Rule 55 requirements.
  - SDG&E or its contractor shall keep the construction area sufficiently dampened to control dust caused by construction and hauling, and at all times provide reasonable dust control of areas subject to windblown erosion.
  - All loads shall be secured by covering or use of at least 2 feet of freeboard to avoid carry-over.
  - All materials transported off-site shall be either sufficiently watered or securely covered.
  - All earthmoving or excavation activities shall be discontinued during period of high winds (i.e., greater than 25 mph) to prevent excessive amounts of fugitive dust generation.
  - All equipment shall be properly tuned and maintained in accordance with manufacturer specifications.
  - SDG&E or its contractor shall maintain and operate construction equipment to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues will have their engines turned off after 5 minutes when not in use. Construction activities will be phased and scheduled to avoid emissions peaks, and equipment use will be curtailed during second-stage smog alerts.
  - To the extent possible, power will be obtained from power poles (the electrical grid) rather than the use of large generators on-site.
  - Low- and non-volatile organic compound (VOC)-containing coatings, sealants, adhesives, solvents, asphalt, and architectural coatings shall be used to reduce VOC emissions.
  - All areas where construction vehicles are parked, staged, or operating shall be visibly posted with signs stating "No idling in excess of 5 minutes."

- Catalytic converters shall be installed on all heavy construction equipment, where feasible.
- Deliveries will be scheduled during off-peak traffic periods to reduce trips during the most congested periods of the day, where feasible.
- Construction sites will be posted with signs providing a contact number for complaints. All complaints will be addressed in a timely and effective manner.

- **SDG&E's Natural Community Conservation Plan**

  The Proposed Project would avoid and minimize impacts to biological resources through implementation of the SDG&E Subregional NCCP, which is a comprehensive conservation-based approach that provides more effective species protection than project-by-project conservation planning would achieve. The SDG&E Subregional NCCP establishes a mechanism for addressing biological resource impacts incidental to the development, maintenance, and repair of SDG&E facilities within the SDG&E Subregional NCCP coverage area. The Proposed Project is located within the SDG&E Subregional NCCP coverage area.

  The SDG&E Subregional NCCP includes a Federal ESA Section 10(A) permit and a California ESA Section 2081 Memorandum of Understanding (for incidental take) with an Implementation Agreement with USFWS and CDFW, respectively, for the management and conservation of multiple species and their associated habitats, as established according to the federal and state ESAs and California's NCCP Act. The NCCP's Implementing Agreement confirms that the mitigation, compensation, and enhancement obligations contained in the Agreement and SDG&E Subregional NCCP meet all relevant standards and requirements of the California ESA, the federal ESA, the NCCP Act, and the Native Plant Protection Act with regard to SDG&E's activities in the Subregional NCCP Plan Area.

  Pursuant to the SDG&E Subregional NCCP, SDG&E conducted pre-construction studies for all activities occurring off of existing access roads in natural areas. An independent biological consulting firm surveyed all Proposed Project impact areas and prepared a Pre-Activity Study Report (PSR) outlining all anticipated impacts related to the Proposed Project. The Proposed Project would include monitoring for all components, as recommended by the PSR and outlined in the SDG&E Subregional NCCP, as well as other avoidance and minimization measures outlined in the NCCP's Operational Protocols. Prior to the commencement of construction, a verification survey of the Proposed Project disturbance areas will be conducted, as required by the SDG&E Subregional NCCP.

  Biological monitors will be present during construction to ensure implementation of the avoidance and minimization measures set forth in the NCCP. If the previously delineated work areas must be expanded or modified during construction, the monitors will survey the additional impact area to determine if any sensitive resources will be impacted by the proposed activities, to identify avoidance and minimization measures, and to document any additional impacts. Any additional impacts would be included in a Post-Construction Report (PCR) to calculate the appropriate mitigation, which generally includes site enhancement or credit withdrawal from SDG&E mitigation bank credits. When construction is complete, the biological monitor will conduct a survey of the entire Proposed Project area to determine actual impacts from construction. The PCR will determine how much site enhancement and credit withdrawal from the SDG&E mitigation bank would be required to address impacts from activities related to the Proposed Project. These impact and mitigation credit calculations will be submitted to USFWS and CDFW as part of the NCCP Annual Report, pursuant to requirements of the NCCP and the NCCP Implementing Agreement.

- **SDG&E Water Quality Construction BMP Manual**

  SDG&E's Water Quality Construction BMPs Manual (BMP Manual) was created to organize SDG&E's standard water quality protection procedures for various specific actions that routinely occur as part of SDG&E's ongoing construction, operations, and maintenance activities. The primary focus of most BMPs is the reduction and/or elimination of water quality impacts during construction. The BMPs described within the BMP Manual were derived from several sources, including California guidelines and Caltrans Water Quality BMPs. The BMP Manual will be used during construction (by way of preparation and implementation of the SWPPPs), operation, and maintenance of the Proposed Project to ensure that all SDG&E and relevant government-mandated water quality standards are fully complied with.

- **Storm Water Pollution Prevention Plan**

  The SWPPPs prepared for construction of the Proposed Project, per the state's General Construction Permit, include provisions for identifying hazardous materials, reporting spills, and training workers. Section 4.9, Hydrology and Water Quality, provides detail on SWPPP requirements. Post-construction drainage and water quality impacts will be addressed in the site design and Storm Water Management Plan (SWMP) in accordance to the City of Chula Vista's Standard Urban Storm Water Mitigation Plan (SUSMP) to comply with the Regional Municipal Separate Storm Water Sewer System (MS4) Permit (i.e., Clean Water Act [CWA] Section 402, National Pollutant Discharge Elimination System [NPDES] Permit). Any long-term maintenance activities required in the Water Quality Technical Report prepared for the Proposed Project would be in accordance with the City's SUSMP.

- **Spill Prevention, Control, and Countermeasure (SPCC) Plans**

  When the transformers at the proposed Salt Creek Substation site contain more than 1,320 gallons of mineral oil, an SPCC Plan for the facility is required. This plan establishes procedures, methods, equipment requirements, and worker training to prevent spilled or leaked oil from reaching navigable waters.

- **Visual Screening of Staging Yards**

  The Hunte Parkway and Eastlake Parkway staging yards will have opaque mesh installed along the fence to screen the view of the staging yard from public vantage points, such as roads and residences.

- **Restoring Appearance of Temporarily Disturbed Areas**

  When Proposed Project construction is complete, all temporarily disturbed terrain will be restored, as needed and as appropriate, to approximate pre-construction conditions. Revegetation would be used, where appropriate (revegetation in certain areas is not possible due to vegetation management requirements related to fire safety) to re-establish a natural-appearing landscape and reduce potential visual contrast between disturbed areas and the surrounding landscape.

- **Soil Stabilization**

  Once temporary surface disturbances are complete, areas that would not be subject to additional disturbance would be stabilized to control soil erosion.

- **Mufflers**

  Functioning mufflers will be maintained on all equipment.

- **Helicopter Use**

  Helicopter usage will occur during daylight hours and conform to acceptable hours for construction activities, as outlined within the San Diego County Noise Code and the City of Chula Vista Noise Ordinance. All helicopter use will comply with local, state, and federal regulations.

- **Resident Notification**

  Residents within 50 feet of Proposed Project activities will receive notification of the start of construction at least 1 week prior to the start of construction activities within that area.

- **Construction Noise**

  During construction, SDG&E will conform to the San Diego County Noise Code for work within unincorporated San Diego County, and the City of Chula Vista Noise Ordinance for work within the City of Chula Vista, to the extent practicable. SDG&E will meet and confer with County of San Diego and/or City of Chula Vista staff, as needed, to discuss any anticipated deviations from these requirements.

- **Unanticipated Discovery of Human Remains**

  If human remains are encountered during construction, SDG&E staff comply with California law (Health and Safety Code Section 7050.5; PRC Sections 5097.94, 5097.98, and 5097.99). This law specifies that work stop immediately in any areas where human remains or suspected human remains are encountered. The appropriate agency and SDG&E will be notified of any such discovery. SDG&E will contact the Medical Examiner at the county coroner's office. The Medical Examiner has two 2 working days to examine the remains after being notified by SDG&E. Under some circumstances, a determination may be made without direct input from the Medical Examiner. When the remains are determined to be Native American, the Medical Examiner has 24 hours to notify the Native American Heritage Commission (NAHC).

The NAHC will immediately notify the identified Most Likely Descendant (MLD), and the MLD has 24 hours to make recommendations to the landowner or representative for the respectful treatment or disposition of the remains and grave goods. If the MLD does not make recommendations within 24 hours, the area of the property must be secured from further disturbance. If there are disputes between the landowner and the MLD, the NAHC will mediate the dispute to attempt to find a resolution. If mediation fails to provide measures acceptable to the landowner, the landowner or his/her authorized representative shall re-inter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance.

- **Temporary Trail Detours**

  Where feasible, temporary detours will be provided for trail users. Signs will be provided to direct trail users to temporary trail detours. If a trail detour is not feasible, the trail will be closed and signs will alert trail users of the closure.

- **Hazardous Materials Management**

  SDG&E will follow its Management of Contaminated Equipment and Materials, Hazardous Materials Business Plan, which addresses the evaluation of potentially hazardous materials that may be present due to former or present on-site uses, as well as hazardous waste that may be generated during construction or operation of proposed land uses.

- **Standard Traffic Control Procedures**

  Standard traffic control procedures are measures to address potential disruption of traffic circulation during construction activities and address safety issues. SDG&E will implement a traffic control plan, prepared by the Proposed Project’s engineer or contractor and subject to approval by the City of Chula Vista and Caltrans, which will ensure that potential construction-related traffic impacts remain at a level below significance.

- **Encroachment Permits**

  SDG&E will obtain the required Encroachment Permits from the City of Chula Vista and Caltrans, and will ensure that proper safety measures are in place while construction work is occurring near public roadways. (No encroachment onto County of San Diego roads is anticipated.) These safety measures include flagging, proper signage, and orange cones to alert the public to construction activities near the roadway.

- **City of Chula Vista Ministerial Permits**

  SDG&E will obtain ministerial permits from the City of Chula Vista that are applicable to the proposed Salt Creek Substation. (No ministerial permits from the County of San Diego are anticipated.)

- **Sulfur Hexafluoride (SF_6) Management**

  The proposed Salt Creek Substation would be an air-insulated substation. Equipment containing sulfur hexafluoride (SF_6) gas will only be used for transmission circuit breakers.

SDG&E SF_6 mitigation strategies will be implemented during operation and maintenance of SF_6-containing equipment installed as part of the Proposed Project. These strategies are as follows:

- Recording company-wide SF_6 purchases, use, and emissions rates to comply with the U.S. Environmental Protection Agency's (USEPA) rule on Electrical Transmission and Distribution Equipment Use (Mandatory Reporting of Greenhouse Gases, 40 Code of Federal Regulations [CFR] Part 98, Subpart DD) and the California Air Resources Board's Regulation for Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear (California Code of Regulations [CCR] Title 17, Sections 95350–95359).
- Continuing to participate in the USEPA Sulfur Hexafluoride Partnership.
- Implementing a recycling program.
- Training employees on safe and proper handling of SF_6.
- Continuing to report greenhouse gas emissions to The Climate Registry.
- Implementing SDG&E's SF_6 leak detection and repair program. This program includes monthly visual inspections of each gas circuit breaker (GCB), which includes checking pressure levels within the breaker and recording these readings in SDG&E's Substation Management System. During installation or major overhaul of any GCB, the unit is tested over a 24-hour period to ensure that no leaks are present. Minor overhauls of each GCB are conducted every 36 to 40 months to check overall equipment health. This process includes checking gas pressure, moisture ingress, and SF_6 decomposition. If the GCB fails any of these checks, the unit is checked for leaks and repaired. In addition, all GCBs are equipped with a gas monitoring device and alarm that automatically alerts SDG&E's Grid Operations Center. If gas pressure approaches minimum operating levels, an alarm is immediately reported to SDG&E's Substation Construction and Maintenance Department. The GCB is usually inspected for leaks within 24 hours of such an alarm. SDG&E's leak detection practice includes the following three methodologies:
    - spraying a leak-detection agent onto common leak points, including O rings, gaskets, and fittings;
    - using a field-monitoring device (sniffer) to detect the presence of SF_6 gas; and
    - Using a Flir's leak-detection camera to detect the presence of SF_6 gas when the above two methods are unsuccessful in finding a leak.

- **SDG&E's Wildland Fire Prevention and Fire Safety Standard Practice**

  The northern and southern portions of the Proposed Project alignment would be located within the "Very High" fire threat designation as indicated on the SDG&E Fire Threat Zone

Map (2011). The mapped areas are based on CALFIRE's Fire and Resource Assessment Program (FRAP) data. These areas would be constructed consistent with SDG&E's current design standards to improve service reliability in fire-prone areas during extreme weather conditions. SDG&E's current design standards include increasing conductor spacing to improve line clearances; installing steel poles to withstand extreme winds; installing self-supporting angle structures, which eliminate guying; and installing longer polymer insulators to minimize the potential of electrical faults caused by contamination, which would improve system reliability.

Fire threat ranking is based on relative fuel conditions, topography, and expected fire behavior. Weather plays an important role in fire risk as well. Extreme weather conditions do not occur all the time, and the status of the fire risk varies based on the daily conditions such as humidity, air temperature, winds, and fuel moisture. These conditions are monitored and assessed daily by SDG&E. Therefore, even though the Proposed Project may be located within the geographic boundaries of an area designated as a "Very High" fire threat zone, the fire risk may not be especially high. Proposed Project construction activities can occur on those days of less risk and be avoided on particularly high risk days. SDG&E is also pro-active in providing fire mitigation resources as needed, such as water tenders, engines, and fire patrols.

There is the risk of fires being accidentally initiated during construction activities. SDG&E's current operating protocol, Electric Standard Practice (ESP) 113.1, Wildland Fire Prevention and Fire Safety Standard Practice, includes requirements for carrying emergency fire suppression equipment; conducting "tailgate meetings" that cover fire safety discussions, restrictions on smoking, and idling vehicles; and restricting construction during red flag warnings. The Proposed Project will comply with SDG&E's project-specific Construction Fire Plan (Fire Plan), included in Appendix 4.8-B. The Fire Plan was developed by wildland fire professionals, and identifies appropriate avoidance and minimization measures and operating procedures. This plan takes into account local fuels, weather, and topography in the mitigation measures to reduce the threat of an ignition of a wildland fire.

The Fire Plan exceeds fire prevention measures required by the California Forest Practices Rules; Title 14, Article 8. Fire risk mitigation measures include training and briefing all personnel working on the Proposed Project in fire prevention and suppression methods, and conducting a fire prevention discussion at each morning's safety meeting. A "fire watch" or "fire patrol" will be assigned specifically to ensure that risk mitigation and fire preparedness measures are implemented, and to ensure immediate detection of a fire, which may include the nearby staging of a fire engine. Additionally, prescribed fire tools and backpack pumps with water will be kept within 50 feet of work activities, in accordance with SDG&E standard protocol, to ensure the capability for rapid extinguishment in the event of a fire.

Weather and fire danger will be monitored daily by company meteorologists and wildland fire specialists to provide timely and immediate communication of significant changes that could impact the Proposed Project. As noted above, no work will occur during times of high fire threat, and if conditions change after commencing construction, work will cease in periods of extreme fire danger, such as red flag warnings issued by the National Weather Service or other severe fire weather conditions as identified by SDG&E. Implementation of the Proposed Project's Fire Plan, in addition to standard SDG&E operational procedures and protocols, will ensure that the risk of fire during construction remains less than significant.

- **Other SDG&E Environmental Procedures and Protocols**

  SDG&E will also employ the following during construction, operation, and maintenance of the Proposed Project:

  - SDG&E's Approved Herbicides and Application Procedures, as necessary, to include identification and use of approved herbicides and adherence to measures for the proper application of herbicides during operation and maintenance activities.
  - Compliance with applicable state and local regulations covering grading, water quality, and erosion.
  - Implementation of engineering structural design specifications to withstand physical stresses from wind, geologic, and hydrologic conditions.

3.9 Applicant-Proposed Measures

In addition to SDG&E's ordinary operating restrictions, SDG&E has identified Proposed Project-specific Applicant-Proposed Measures (APMs) that will further avoid or minimize potential impacts to sensitive resources. As part of the Proposed Project, SDG&E plans to incorporate the APMs included in Table 3-8, Applicant-Proposed Measures. APMs are intended to allow for design flexibility by avoiding or minimizing environmental impacts as needed and as appropriate. SDG&E would conduct the design, construction, operation, and maintenance of the Proposed Project in accordance with these APMs. The various resource chapters detail how and when the APMs would be applied to ensure that impacts remain at a less-than-significant level.

Table 3-8: Applicant-Proposed Measures

APM Number	Description	Justification	Proposed Project Components: Salt Creek Substation	TL 6965 and TL 6910 Loop-In	Existing Substation Modifications	Staging Yards
Biological Resources						
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 California Department of Fish and Wildlife (CDFW) guidance (CDFG 2012b), as needed and as appropriate, to avoid impacts to western burrowing owl (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.	This measure would ensure that impacts to WBO are avoided, minimized, and mitigated in accordance with current CDFW guidance.	✓	✓		

APM Number	Description	Justification	Proposed Project Components: Salt Creek Substation	TL 6965 and TL 6910 Loop-In	Existing Substation Modifications	Staging Yards
Cultural Resources						
APM-CUL-1	A qualified archaeologist shall attend pre-construction meetings, as needed, to consult with the excavation contractor concerning excavation schedules, archaeological field techniques, and safety issues. Project personnel shall receive training regarding the appropriate work practices necessary to effectively implement the Applicant-Proposed Measures (APMs), including the potential for exposing subsurface cultural resources and paleontological resources. This training shall include procedures to be followed upon the discovery or suspected discovery of archaeological materials, including Native American remains, as well as paleontological resources. The requirements for archaeological monitoring shall be noted on the construction plans.	This measure would ensure that an archaeological construction-monitoring program is in place in the event that undiscovered buried archaeological resources are encountered during ground-disturbing activities.		✓	✓	
APM-CUL-2	Monitoring shall occur during proposed pole replacement/improvement activities for Poles 1, 28, 29, 30, 33, 36, 38, 39, 46, 47, and 48. These poles are located adjacent to previously recorded resources (CA-SDI-4529, CA-SDI- 4897, CA-SDI-7197, CA-SDI-12067, CA-SDI-12909, and CA-SDI-14225). Monitoring shall also occur during vegetation removal or ground-disturbing activities at Stringing Sites SS-1, -2, -3, -5, -6, and -14. These are located	This measure would ensure that an archaeological construction-monitoring program is in place in the event that undiscovered buried archaeological resources are encountered during ground-disturbing activities.		✓	✓	

APM Number	Description	Justification	Proposed Project Components: Salt Creek Substation	TL 6965 and TL 6910 Loop-In	Existing Substation Modifications	Staging Yards
	within sites CA-SDI-4527, CA-SDI-4897, and CA-SDI-14225. In the event cultural resources are encountered during ground-disturbing activities, the archaeologist shall have the authority to divert or temporarily suspend ground disturbance to allow evaluation of potentially significant cultural resources. The archaeologist shall contact SDG&E's Cultural Resources Specialist and Environmental Project Manager at the time of the discovery. The archaeologist, in consultation with SDG&E's Cultural Resource Specialist, shall determine the significance of the discovered resources. SDG&E's Cultural Resources Specialist and Environmental Project Manager must concur with the evaluation procedures to be performed before construction activities are allowed to resume. For significant cultural resources, preservation in place shall be the preferred manner of mitigating impacts. For resources that cannot be preserved in place, a Research Design and Data Recovery Program shall be prepared and carried out to mitigate impacts.					
APM-CUL-3	If ground-disturbing activities, such as grading, are to be conducted along access roads, monitoring shall occur where the access road crosses the site or is located with the boundaries of a site, and equipment blades shall be lifted when traversing the site. Monitoring shall occur for ground-	This measure would ensure that an archaeological construction-monitoring program is in place in the event that undiscovered buried archaeological resources		✓	✓	

APM Number	Description	Justification	Proposed Project Components: Salt Creek Substation	TL 6965 and TL 6910 Loop-In	Existing Substation Modifications	Staging Yards
	disturbing activities associated with access road improvements within the Existing Substation property. Additionally, all vehicles shall remain on existing dirt roads and new access identified for the Proposed Project. If needed, additional overland travel or access routes shall be reviewed, and appropriate avoidance measures and monitoring shall be implemented.	are encountered during ground-disturbing activities.				
APM-CUL-4	A qualified paleontologist shall attend pre-construction meetings, as needed, to consult with the excavation contractor concerning excavation schedules, paleontological field techniques, and safety issues. A qualified paleontologist is defined as an individual with a Master's of Science or Doctor of Philosophy in paleontology or geology who is experienced with paleontological procedures and techniques, who is knowledgeable in the geology and paleontology of Southern California, and who has worked as a paleontological mitigation project supervisor in the region for at least 1 year. The requirements for paleontological monitoring shall be noted on the construction plans.	This measure would ensure that paleontological monitoring occurs when ground-disturbing activities are undertaken.	✓	✓	✓	
APM-CUL-5	A paleontological monitor shall work under the direction of the qualified Proposed Project paleontologist, and shall be on-site to observe excavation operations that involve the original cutting of previously undisturbed deposits with high paleontological resource sensitivity (i.e., Mission Valley and	This measure would ensure that paleontological monitoring occurs when ground-disturbing activities are undertaken.	✓	✓	✓	

APM Number	Description	Justification	Proposed Project Components			
			Salt Creek Substation	TL 6965 and TL 6910 Loop-In	Existing Substation Modifications	Staging Yards
	Otay Formations). A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials.					
APM-CUL-6	In the event that fossils are encountered, the Proposed Project paleontologist shall have the authority to divert or temporarily halt construction activities in the area of discovery to allow recovery of fossil remains in a timely manner. The paleontologist shall contact SDG&E's Cultural Resource Specialist and Environmental Project Manager at the time of discovery. The paleontologist, in consultation with SDG&E's Cultural Resource Specialist, shall determine the significance of the discovered resources. SDG&E's Cultural Resource Specialist and Environmental Project Manager must concur with the evaluation procedures to be performed before construction activities are allowed to resume.	This measure would ensure that paleontological resources are recovered as necessary.	✓	✓	✓	

APM Number	Description	Justification	Proposed Project Components: Salt Creek Substation	TL 6965 and TL 6910 Loop-In	Existing Substation Modifications	Staging Yards
APM-CUL-7	Because of the potential for recovery of small fossil remains, it may be necessary to set up a screen-washing operation on-site. If fossils are discovered, the paleontologist (or paleontological monitor) shall recover them, along with pertinent stratigraphic data. Because of the potential for recovery of small fossil remains, such as isolated mammal teeth, recovery of bulk sedimentary matrix samples for off-site wet screening from specific strata may be necessary, as determined in the field. Fossil remains collected during monitoring and salvage shall be cleaned, repaired, sorted, cataloged, and deposited in a scientific institution with permanent paleontological collections. A final summary report shall be completed. This report shall include discussions of the methods used, stratigraphy exposed, fossils collected, and significance of recovered fossils. The report shall also include an itemized inventory of all collected and catalogued fossil specimens.	This measure would ensure that paleontological resources are recovered and catalogued as necessary.	✓	✓	✓	

Source: SDG&E

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CHAPTER 4 – ENVIRONMENTAL IMPACT ASSESSMENT SUMMARY

4.0 Introduction

Potential environmental impacts associated with construction and operation of the Proposed Project were evaluated consistent with the requirements of CEQA and the CPUC's Information and Criteria List. In addition, the CPUC's PEA Checklist (CPUC 2008) was used as a guidance. The CPUC's Information and Criteria List states that the independently reviewed and evaluated PEA can be adopted as the CPUC's CEQA document. This PEA was prepared in accordance with the provisions of CEQA and the CPUC's Information and Criteria List; as such, it can serve as the CPUC's CEQA document.

The sections (4.1 through 4.17) listed below provide an assessment of potential environmental impacts for the following resource areas:

- Aesthetics – *Section 4.1*
- Agriculture and Forestry Resources – *Section 4.2*
- Air Quality – *Section 4.3*
- Biological Resources – *Section 4.4*
- Cultural Resources – *Section 4.5*
- Geology and Soils – *Section 4.6*
- Greenhouse Gas Emissions – *Section 4.7*
- Hazards and Hazardous Materials – *Section 4.8*
- Hydrology and Water Quality – *Section 4.9*
- Land Use and Planning – *Section 4.10*
- Mineral Resources – *Section 4.11*
- Noise – *Section 4.12*
- Population and Housing – *Section 4.13*
- Public Services – *Section 4.14*
- Recreation – *Section 4.15*
- Transportation and Traffic – *Section 4.16*
- Utilities and Service Systems – *Section 4.17*

4.0.1 Environmental Analysis Procedures

Sections 4.1 through 4.17 provide a discussion of the environmental settings as they pertain to each resource area, and identify potential impacts associated with these resources anticipated with implementation of the Proposed Project. Each resource section is organized into the sections summarized below.

4.0.1.1 Checklist

Potential impacts are identified and evaluated based on the significance criteria outlined in Appendix G of the CEQA Guidelines. A completed CEQA checklist is provided at the beginning of each resource section to summarize the level of impact (i.e., No Impact, Less-than-Significant Impact, Potentially Significant Unless APMs Incorporated, and Potentially Significant Impact) to each respective resource area according to the significance criteria used for the analysis.

4.0.1.2 Introduction

The introduction in each resource section provides a synopsis of what is discussed in that particular section and an overall statement on whether that section includes separate discussions for Proposed Project components or if a general analysis is provided.

4.0.1.3 Methodology

Methodology is discussed for each resource section to identify the approach used to analyze any potential impacts in that section. A suitable approach is used in each resource area.

4.0.1.4 Environmental Setting

The environmental setting section includes a discussion of the resource setting, including a description of the physical environment in the vicinity of the Proposed Project to establish baseline conditions used for evaluation. The environmental setting also includes a description of the regulatory setting for each of the resource areas. The regulatory setting may include federal, state, regional, local, and other pertinent regulations, as appropriate.

4.0.1.5 Impacts

For each resource area, the analysis includes an evaluation of potential adverse and beneficial environmental consequences (also referred to as environmental impacts or effects) associated with construction, operation, and maintenance of the Proposed Project. In general, construction-related impacts discussed within the PEA are those temporary impacts that could occur as a result of construction activities. However, permanent impacts to biological resources are discussed as construction impacts (see Section 4.4, Biological Resources) to maximize consistency with SDG&E's Subregional NCCP, which addresses avoidance and minimization of biological resources for all of SDG&E's activities, including those relating to the Proposed Project. Operations and maintenance-related impacts discussed within the PEA are those permanent (or on-going) impacts that result from operation and maintenance of Proposed Project facilities following completion of construction. Given the nature of the Proposed Project, minimal operation and maintenance activities are anticipated following construction of the components and energizing the substation; therefore, no operational impacts were identified.

Where potential impacts related to construction are anticipated, the discussion of temporary construction impacts is separated into Proposed Project components: the proposed Salt Creek Substation, TL 6965 and the TL 6910 loop-in, Existing Substation modifications, and the staging yards. The transmission line components, TL 6965 and the TL 6910 loop-in, are analyzed together because they both originate within the existing Transmission Corridor and extend into the proposed Salt Creek Substation. Where it was determined that no impacts would result from construction activities, the analysis discusses the Proposed Project components in general terms and does not provide a further detailed discussion of separate components. A statement regarding the format of each section is included in the introduction.

The Proposed Project would result in no impacts to Mineral Resources or Public Services; it would result in less-than-significant impacts to Aesthetics, Agriculture and Forestry Resources, Air Quality, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Population and Housing, Recreation, Transportation and Traffic, and Utilities and Service Systems. The Proposed Project would result in potentially significant impacts to the remaining resource areas: Biological Resources and Cultural Resources.

4.0.1.6 Project Design Features and Ordinary Construction/Operations Restrictions

This section identifies the policies, standards, and regulations that would be applicable to the Proposed Project, and the design features that would be applied to help avoid potential impacts. These include responsible agency requirements and SDG&E standard practices that apply to all projects. Section 3.8, Project Design Features and Ordinary Construction/Operations Restrictions, lists the design features and ordinary construction and operating restrictions to be implemented during construction, operation, and maintenance of the Proposed Project.

4.0.1.7 Applicant-Proposed Measures

Applicant-Proposed Measures (APMs) are measures proposed by SDG&E if the impact analysis determines that the Proposed Project would result in significant impacts to a given resource area. APMs are provided to avoid, minimize, or reduce potential impacts to less-than-significant levels. Standard SDG&E processes, Proposed Project design features, ordinary construction/operations restrictions, and compliance with existing laws and regulations are not APMs.

APMs are proposed in the following resources areas to ensure that all potential significant impacts remain less than significant:

- Biological Resources – *APM-BIO-1*
- Cultural Resources –*APM-CUL-1 through APM-CUL-7*

The above APMs are discussed in detail in their relevant sections and are summarized in Table 3-8, Applicant Proposed Measures, in Chapter 3.0, Project Description.

4.0.1.8 Detailed Discussion of Significant Impacts

This section discusses any significant impacts identified in the impact analysis section and the APMs that are proposed to address those impacts.

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4.1 Aesthetics

Would the project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	❒	❒	☑	❒
b. Substantially degrade the existing visual character or quality of the site and its surroundings?	❒	❒	☑	❒
c. Substantially damage scenic resources, including, but not limited to, trees, rock out-croppings, and historic buildings within a state scenic highway?	❒	❒	❒	☑
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	❒	❒	☑	❒

4.1.1 Introduction

Visual or aesthetic resources include natural and built elements of the landscape that are visible and that contribute to the public's experience and appreciation of their environment. Impacts to aesthetic resources are generally defined in terms of a project's physical characteristics, potential for visibility, and the extent to which the presence or absence of project features would change the visual character or quality of the visual environment. This visual analysis follows the CEQA Guidelines for analyzing potential impacts on visual resources. These guidelines were further supplemented with guidance provided by the Federal Highway Administration (FHWA) in Visual Impact Assessment for Highway Projects (FHWA 1988). The analysis herein is further supplemented by a technical appendix, 4.1-A, Aesthetic Technical Analysis for Salt Creek Substation PEA.

The Proposed Project consists of the following main components: construction and operation of the proposed Salt Creek Substation, modifications to the Existing Miguel Substation (Existing Substation), construction and operation of a 5-mile-long power line (TL 6965) along an existing transmission corridor (Transmission Corridor) between the Existing Substation south to the proposed Salt Creek Substation, and three staging yards (see Figure 3-3). In addition, five potential alternative staging yards were identified within the Olympic Training Center (OTC).

As noted in Section 3.8, Project Design Features and Ordinary Construction/Operations Restrictions, several design features have been incorporated into the Proposed Project to minimize aesthetic impacts. These design features include selecting a site that would place the Salt Creek Substation 45 to 50 feet below the grade of Hunte Parkway (Figure 4.1-1), preparation of a conceptual landscape plan for the Salt Creek Substation (Figure 4.1-2), and locating TL 6965 within an existing transmission corridor.

4.1.2 Methodology

This visual analysis follows the CEQA Guidelines for analyzing potential impacts on visual resources. These guidelines were further supplemented with guidance provided by FHWA in Visual Impact Assessment for Highway Projects (FHWA 1988). This methodology was selected for its rigorous evaluation and applicability to the unique visual characteristics of the Proposed Project (e.g., long linear forms, spatially defined corridors, and vertical or overhead elements). Ultimately, the analysis sought to answer three primary questions:

1. What are the visual qualities and characteristics of the existing landscape in the Proposed Project area?
2. What are the potential effects of the Proposed Project on the area's visual quality and aesthetics?
3. Who would see the Proposed Project, and what is the likely level of concern about or reaction to how the Proposed Project visually fits within the existing landscape?

Analysis included a review of available technical data, maps, aerial and ground-level photographs, simulations, and Proposed-Project-specific technical drawings. Using the methodology noted above, existing visual resources, proposed visual changes, and the potential viewer response to those changes were also evaluated.

4.1.2.1 Evaluating Existing and Proposed Visual Resources

The quality and character of the existing visual environment were documented through field reconnaissance, photographic records, and aerial photograph interpretation according to the process described below. Elements of the Proposed Project were also evaluated to determine the potential level of change to existing conditions.

4.1.2.2 Predicting Viewer Response

The measure of quality in a given view must be tempered by an anticipated level of viewer response. Viewer sensitivity, or the extent to which the viewing public may notice or experience a substantial change in visual quality, is based on a number of factors that can differ in level of importance from one viewer to another. Because this sensitivity is important to understand, the Proposed Project was evaluated with consideration for the visibility of resources in the landscape, proximity of viewers to the visual resource, elevation of viewers relative to the visual resource, frequency and duration of views, number of viewers, and type of individual viewers or viewer groups.

Figure 4.1-1: Proposed Salt Creek Substation Cross-section

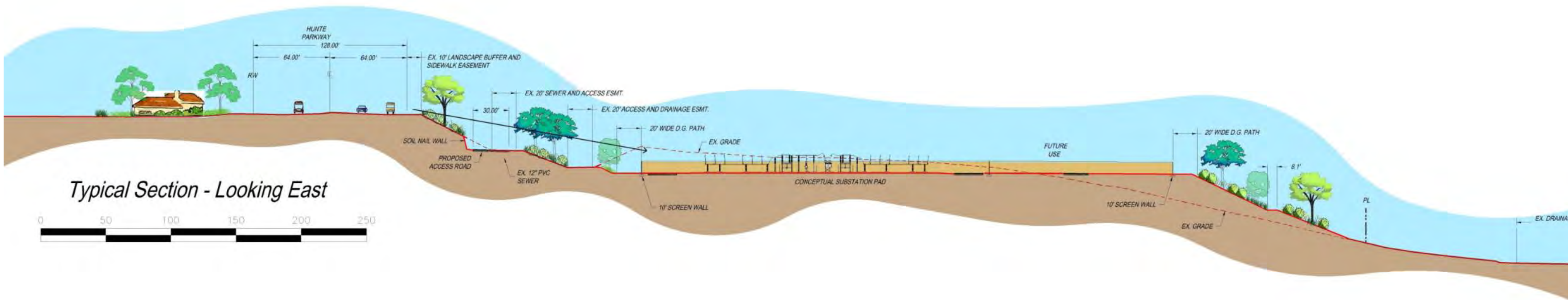

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Figure 4.1-2: Landscape Concept Plan

4.1.3 Existing Conditions

The proposed Salt Creek Substation site consists of 11.64 acres of vacant and undeveloped land directly south of Hunte Parkway in the City of Chula Vista. The proposed Salt Creek Substation site is located at the southern edge of development in the southeastern portion of the City of Chula Vista. This developed area is characterized by a mixture of residential, school, recreation, open space uses. Land uses surrounding the proposed Salt Creek Substation site include single- and multi-family residential uses to the north and west; institutional (High Tech K-8 and High Schools) uses to the southwest; and vacant, undeveloped land to the east and south.

Land south and southwest of the proposed Salt Creek Substation site is undeveloped, including part of the City of Chula Vista's University Campus Sectional Planning Area (SPA) (University SPA). The University SPA applies to four focus areas that are located on the site of a future university and surrounding properties. The undeveloped area located east of the Salt Creek Substation site is MSCP Preserve, which is habitat that is targeted for conservation within the City of Chula Vista's MSCP for the protection of sensitive species (City of Chula Vista 1997).

A distinct visual boundary exists between the urbanized and natural areas within the Proposed Project vicinity, as evident by aerial photos (see Figure 4.1-3). The proposed new poles and power line would occur within an urbanized environment, and the substation would be located at the boundary between urbanized and undisturbed open space.

4.1.3.1 Regional Viewshed Analysis

A viewshed is a subset of a landscape unit and comprises all of the surface areas visible from an observer's viewpoint. The viewshed includes the locations of viewers likely to be affected by visual changes brought about by project features. For the Proposed Project, the viewshed boundary was established to delineate the physical extent of the visual surroundings. From there, the Proposed Project viewshed was divided into smaller portions ("landscape units") of the larger landscape to illustrate areas of distinct visual character that encapsulate a unique visual element or that represent a typical visual experience. As illustrated in Figure 4.1-4, the Proposed Project would be visible from a number of locations within "foreground" viewing distance surrounding the Proposed Project area.

Landscape Units

A landscape unit is a portion of the regional landscape and can be thought of as an outdoor room that exhibits a distinct visual character. A landscape unit will often correspond to a place or district that is commonly known among local viewers.

Analysis of the Proposed Project viewshed determined that four distinct landscape units are present within the viewshed boundary, as shown in Figure 4.1-5. The urbanized area (Unit 1) can be thought of as one unit because its overall character, texture, color, and spatial characteristics are similar. The natural, largely undeveloped area (Unit 2) to the south is visually distinct, and its limited development makes it a visually unique landscape unit. The third landscape unit (Unit 3) is the natural background area spanning south to northeast. The final unit (Unit 4) consists of the immediate viewshed around the Existing Substation.

Figure 4.1-3: Aerial Photo

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

Figure 4.1-4: Viewshed Map

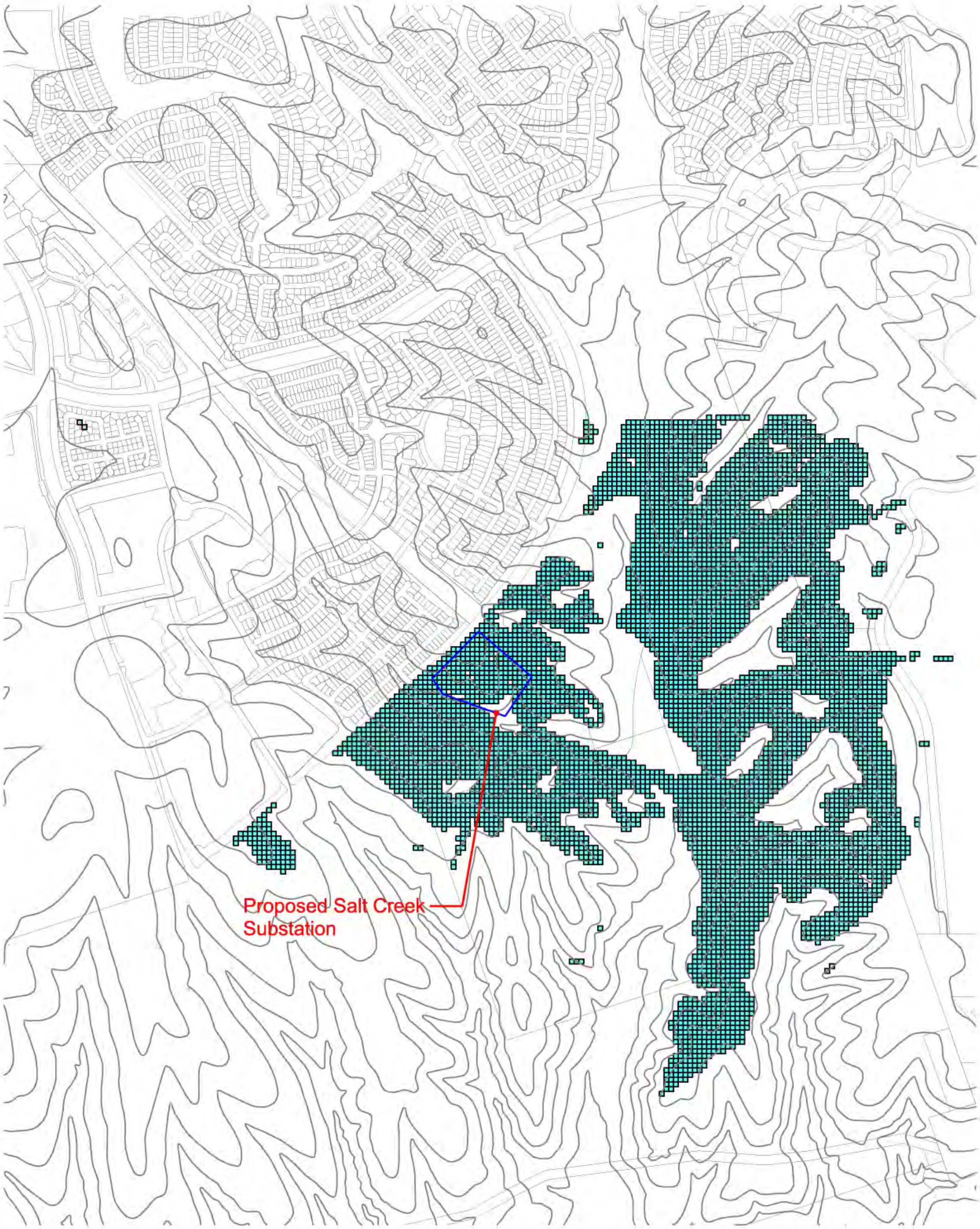
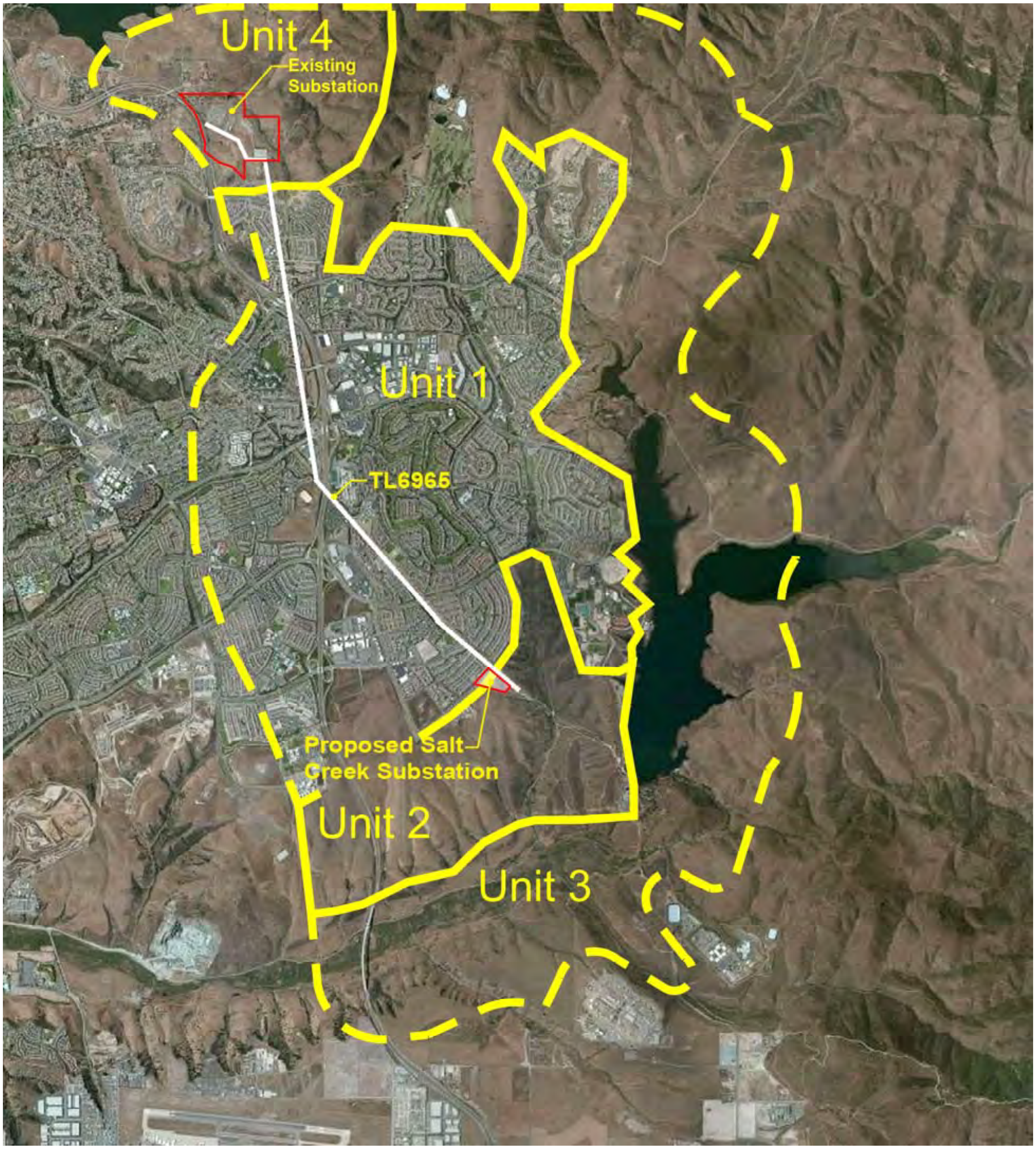


Figure 4.1-5: Landscape Units



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

Existing Visual Character

The proposed Salt Creek Substation site is located in the hills above Otay River Valley, with Otay River approximately 1.4 miles to the south. The site consists of gentle to moderately sloping hillsides that are covered with grasses and native scrub habitat. The color on the hillsides changes with the seasons, but generally consists of muted grays, greens, and browns. As illustrated in Figure 4.1-6, the Proposed Project abuts both open space and dense urban development.

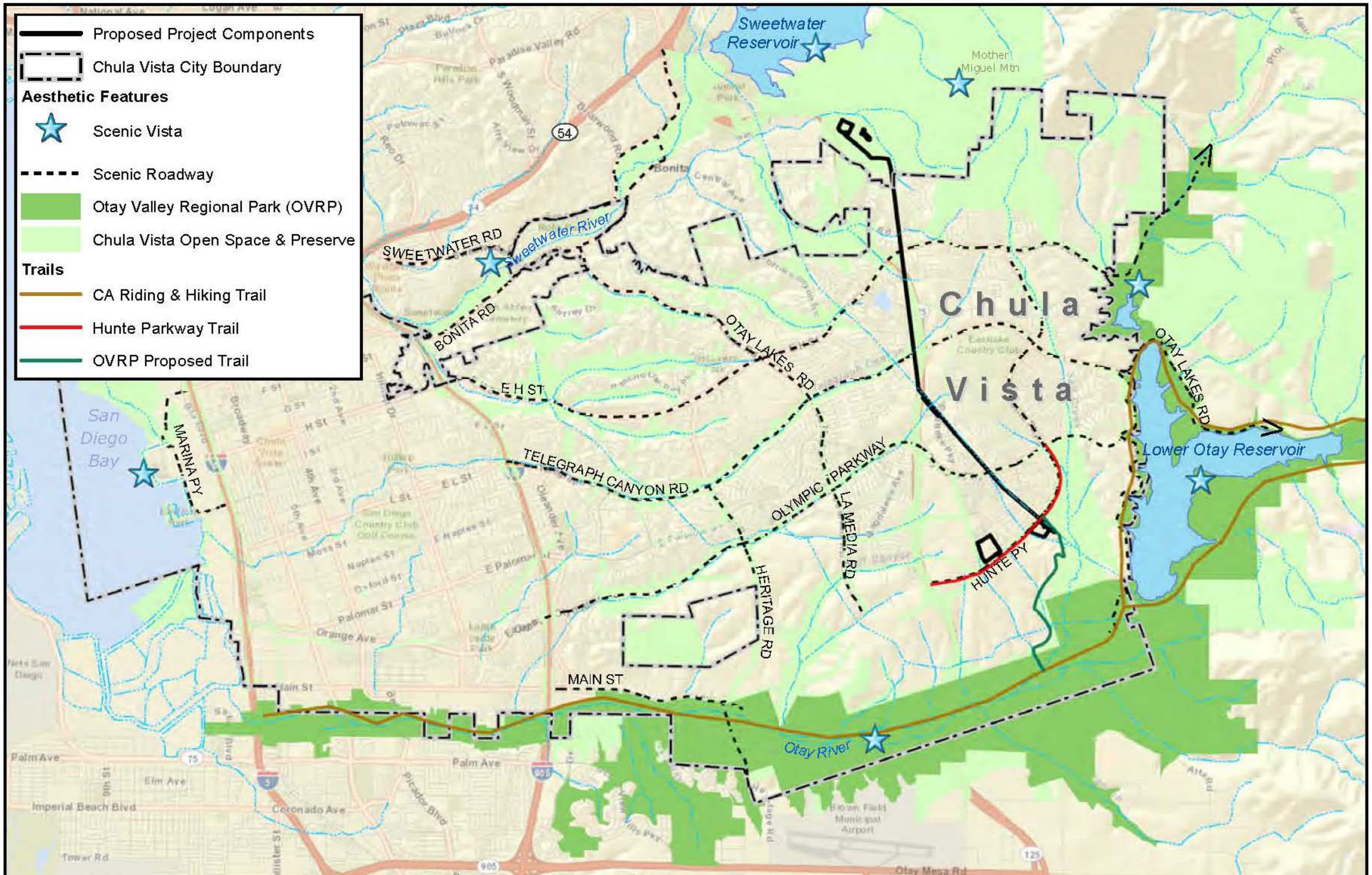
The Salt Creek Substation site is adjacent to Hunte Parkway, which is a thoroughfare traversing the region. The Hunte Parkway Trail is located directly adjacent to Hunte Parkway. The Otay Valley Regional Park (OVRP) Proposed Trail would be perpendicular to Hunte Parkway and would follow the existing Transmission Corridor. The California Riding and Hiking Trail is south of the proposed Salt Creek Substation within the OVRP. The Salt Creek Substation site is visible from a portion of the Hunte Parkway Trail, west-northwest of the substation site, and from the OVRP Proposed Trail. Long-distance views of San Miguel Mountain generally contribute to the scenic nature of views available from these trails; however, views available from the trails currently include the existing Transmission Corridor and other existing infrastructure and development that compromise the integrity of these views.

Land south and west of the proposed Salt Creek Substation site is currently undeveloped, but is part of the University SPA. The University SPA applies to four focus areas that are located on the future university site and surrounding properties. The four focus areas are the Eastern Urban Center, Regional Technology Park, University Campus, and University Village Focus Areas. Development of these focus areas would include high-density urban uses, office and business parks, retail centers, residential uses, and a major higher educational institution. These types of development would likely result in multi-story buildings located on a currently undeveloped area adjacent to the Proposed Project site. The existing rural character of the proposed University SPA site would likely become urbanized, even more so than the existing residential areas north of Hunte Parkway.

SR-125 runs north/south approximately 1 mile west of the proposed Salt Creek Substation site. The OVRP is adjacent to the proposed Salt Creek Substation site and includes various trails in the Proposed Project area. Three trails are specifically addressed in this section: one existing trail located parallel to Hunte Parkway south of the traveled way (Hunte Parkway Trail), one proposed trail that extends from Hunte Parkway (in the vicinity of the existing Transmission Corridor access road) down into the OVRP (OVRP Proposed Trail), and one existing trail that travels along Otay River south of the Proposed Project site (California Riding and Hiking Trail). The Hunte Parkway Trail is shown in Figure 4.1-7.

The Proposed Project would include an approximately 5-mile-long power line along the east side of SDG&E's existing Transmission Corridor from the Existing Substation to the proposed Salt Creek Substation. Existing infrastructure within this corridor includes a 69-kV power line on wood and steel poles and a 230-kV power line on steel lattice towers. As evident in the two figures below (Figures 4.1-8 and 4.1-9), these power lines dominate the foreground views adjacent to the Transmission Corridor.

Figure 4.1-6: Aesthetics Map



Source: SDG&E, GeomorphIS LLC, AECOM, 2013; Esri Basemaps, 2013
Data: City of Chula Vista, San Diego County, SanGIS/SANDAG Data Warehouse,

0 4,125 8,250 Feet

Scale: 1:99,000 1 inch equals 8,250 feet

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

Figure 4.1-7: Hunte Parkway Trail

Figure 4.1-8: Existing Foreground Views

Figure 4.1-9: Existing Middleground Views

Existing Visual Quality

Looking east while driving along Hunte Parkway, the subtle elevation changes and varying views of the scenic, rural background landscape provide a positive visual experience (see Figure 4.1-10). However, views to the west and north are predominately in an urbanized area and provide a minimally unique and minimally memorable visual experience. The predominance of urbanized landscape tempers the overall positive visual experience. The overall sense of the visual environment, with its variations and rural background, can be considered low to moderately vivid.

The Proposed Project viewshed is only low to moderately intact. It is an overall mixture of natural, rural, and human elements that occasionally blend quite well, but human elements tend to punctuate the horizon lines with fairly intrusive (although typical) vertical elements, such as steel lattice towers, traffic and street lights, and tract housing. See Figure 4.1-11 for a representative photo of existing intactness. Roads are simple and generally follow natural contours. Fence types tend to be diverse, with no set theme. The visibility of human elements and scale of this architecture introduce occasionally disparate visual elements within the landscape unit.

Although the urbanized area appears as a coherent unit within the regional landscape, and the natural/rural area also appears as a coherent unit, the regional landscape only has a moderate sense of compositional unity due to the variety of human elements. Although residential development has encroached on the open space, development has retained the integrity of the natural topographic, creating unity. The area south of Hunte Parkway is highly unified;

however, this is not enough to make the overall landscape unity more than moderate. See Figure 4.1-12 for a representative photo of existing unity along the Transmission Corridor.

Viewer Groups and Viewer Response

The existing rural quality of the area to the south and east of the proposed substation may be considered by viewers as a substantial asset. Viewers may choose to visit this area, or live here, because they are drawn to its open space qualities. The number of scenic roads in the area, as described below, indicates the attitudes and awareness of the community to visual surroundings, suggesting a moderate to high degree of viewer awareness to change.

Because of its nature and location, the Proposed Project would be visible to several different groups of people, but may or may not constitute a dramatic or highly noticeable change. Viewer groups who would experience the Proposed Project include pedestrians and park visitors, recreational viewers, and passing motorists. Under the applicable standards, aesthetic impacts are limited to those views that are visually or physically accessible to the public. Nonetheless, residents were considered as part of both viewer groups, as they are likely to be both recreational viewers and vehicular viewers. The public views were taken into consideration to identify 11 key views, as shown in Figures 4.1-17 through 4.1-32. A description of each viewer group follows.

Recreational Viewers

The OVRP is located adjacent to the Proposed Project site, particularly the proposed Salt Creek Substation site. Viewers walking, jogging, or cycling would experience views of the Proposed Project site primarily as they travel along the Hunte Parkway Trail. Additionally, an unimproved OVRP Proposed Trail follows the Transmission Corridor directly adjacent to the proposed Salt Creek Substation site. The proposed Salt Creek Substation would be directly adjacent and visible to viewers using this trail connection to the California Riding and Hiking Trail. Visual changes could be highly noticeable to these viewers. Their concern for scenic quality might be considered moderately high; however, the distant background view of San Miguel Mountain would be more visually dominant than the foreground view from the perspective of these viewers.

In addition to the recreational trail viewers, the Proposed Project would be visible to visitors of the local community parks, including neighborhood and regional parks. There are two improved neighborhood parks adjacent to the TL 6965 corridor. OVRP is also located adjacent to the Proposed Project site, particularly the proposed Salt Creek Substation site. The OVRP is predominantly viewed and used as a natural park. One reason visitors attend the park is to observe the area’s natural character. Visitors who frequent the park are considered to have a moderate sensitivity to changes within the Transmission Corridor, as proposed visual conditions would be similar to existing conditions. However, with the exception of trail users in the immediate vicinity of the proposed substation, recreational viewers of the Proposed Project site would be quite distant. For these reasons, viewer sensitivity to visual changes for recreational viewers at the Proposed Project site would be considered moderate.

Figure 4.1-10: View East from Hunte Parkway

Figure 4.1-11: View South along the Transmission Corridor

Figure 4.1-12: View North toward the Transmission Corridor

Passing Motorists

A majority of the Proposed Project would be visible to motorists traveling in the Proposed Project area. Motorists would be aware of the Proposed Project during construction; however, motorists' sensitivity overall would be considered low during operations. For motorists driving along the majority of Hunte Parkway, the proposed Salt Creek Substation site would not be visible. The site sits approximately 45 to 50 feet lower than Hunte Parkway. However, when traveling eastbound/northbound on Hunte Parkway from the southwest, the proposed Salt Creek Substation site is briefly visible. Middleground views of the OVRP and background views of distant Otay Mountain are the most prominent visual resources for motorists in this area. Because of the vertical separation between Hunte Parkway and the proposed substation, and because of the short duration of these views, motorists' sensitivity would be considered low to moderate.

4.1.3.2 Regulatory Background

Federal

There are no federal regulations applicable to the Proposed Project related to aesthetics and visual resources.

State

California Department of Transportation's (Caltrans) Scenic Highway Program

The Scenic Highway Program is aimed at the protection and long-term preservation of highway corridors with scenic value to ensure the aesthetic value of lands adjacent to highways. It includes highways that are either eligible for designation as scenic highways or have been designated as such. The status of a state scenic highway changes from eligible to officially designated when the local jurisdiction adopts a scenic corridor protection program, applies to Caltrans for scenic highway approval, and receives the designation. A city or county may propose adding routes with outstanding scenic elements to the list of eligible highways; however, state legislation is required for them to become a designated scenic highway. There are no eligible or officially designated state scenic highways located in the vicinity of the Proposed Project site (Caltrans 2012).

Local

Since CPUC has exclusive jurisdiction over the siting, design, and construction of the Proposed Project, the Proposed Project is not subject to local discretionary land use or zoning regulations, and permits are not required for construction or operation of the facilities. However, a review of local land use plans was conducted to identify any relevant local land use regulations relating to visual resources for informational purposes as part of the environmental review process.

County of San Diego General Plan

The County of San Diego General Plan Scenic Highway Element (August 1986) established a Scenic Highway Program to protect and enhance the county's scenic, historic, and recreational resources within a network of scenic highway corridors. The Scenic Highway Element of the General Plan recommends establishing design guidelines for scenic corridors. The Scenic Highway Element provides a list of county scenic highways. There are two county-designated scenic highways in the vicinity: Otay Lakes Road from the Chula Vista City limits to SR-94, and Proctor Valley Road from the Chula Vista City limits to SR-94.

City of Chula Vista General Plan

The General Plan identifies two types of scenic highways: urban and rural. Urban routes are those "that traverse an urban area with the scenic corridor offering a view of attractive and exciting urban scenes." Rural scenic highways provide for an enriched experience of natural scenic resources and aesthetic values, and may include large preserved canyons or natural areas, or areas within the Chula Vista Greenbelt.

The City of Chula Vista has several designated Scenic Roadways where views of unique natural features and roadway characteristics, including enhanced landscaping, adjoining natural slopes, or special design features, make traveling a pleasant visual experience. Scenic Roadways that traverse a portion of the Proposed Project are as follows (see also Figure 4.1-16):

- East H Street from Interstate 805 (I-805) to Mount Miguel Road
- Telegraph Canyon Road/Otay Lakes Road from I-805 to Lower Otay Lake
- Olympic Parkway from I-805 to Lower Otay Lake
- Hunte Parkway from Eastlake Parkway to East H Street

The City of Chula Vista General Plan includes the following applicable policies related to scenic resources in the Land Use and Transportation Element:

> **LUT 13.1:** Identify and protect important public viewpoints and viewsheds throughout the planning area, including features within and outside the planning area, such as mountains, native habitat areas, San Diego Bay, and historic resources.
>
> **LUT 13.2:** Continue to implement the City of Chula Vista's planned open space network.
>
> **LUT 13.4:** Any discretionary projects proposed adjacent to scenic routes, with the exception of individual single-family dwellings, shall be subject to design review to ensure that the design of the development proposal will enhance the scenic quality of the route. Review should include site design, architectural design, height, landscaping, signage, and utilities. Development adjacent to designated scenic routes should be designed to:
>
> - Create substantial open areas adjacent to scenic routes through clustering development;
> - Create a pleasing streetscape through landscaping and varied building setbacks; and
> - Coordinate signage, graphics and/or signage requirements, and standards.

The Proposed Project is exempt from the City of Chula Vista's design review requirements pursuant to CPUC General Order 131-D, Section XIV.B, which exempts electrical generation and transmission projects from regulation by the City of Chula Vista. SDG&E underwent an extensive evaluation of potential site locations for the proposed Salt Creek Substation with the City of Chula Vista over a period of 10 years that resulted in the selection of the proposed site as the preferred location for the substation, due, in part, to the reduced visual impact. SDG&E also met with City of Chula Vista staff to discuss the design of the substation, and would obtain a grading permit from the City of Chula Vista for the proposed Salt Creek Substation. Furthermore, the proposed TL 6965 would be located within the existing Transmission Corridor to reduce the visual impacts of installing a new power line.

4.1.4 Impacts

4.1.4.1 Significance Criteria

Pursuant to the CEQA Guidelines, the Proposed Project would have a significant effect on aesthetic resources if it would do any of the following:

- have a substantial adverse effect on a scenic vista;
- substantially degrade the existing visual character or quality of the site and its surroundings;
- substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway; and/or
- create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

In applying these criteria to determine significance, the following items were considered: visibility of the Proposed Project from sensitive public vantage points, degree to which the Proposed Project would contrast with or be consistent with the existing landscape, degree of change in composition and character of the existing landscape, and number and sensitivity of viewers. Visual simulations were prepared using computer modeling and rendering techniques to illustrate potential changes to the existing visual environment resulting from the Proposed Project.

4.1.4.2 Impact Analysis

Question 4.1(a) – Scenic Vista

For this evaluation, a scenic vista is defined as a distant public view along or through an opening or corridor that is recognized and valued for its scenic quality. Scenic vistas within the City of Chula Vista include Otay River and Sweetwater River Valleys, Upper and Lower Otay Lakes, Sweetwater Reservoir, San Miguel/Mother Miguel Mountains, and San Diego Bay (City of Chula Vista 2005).

Construction – Less than Significant

Salt Creek Substation

The nearest scenic vista is the valley surrounding Lower Otay Lake. It is located approximately 1 mile east of the proposed Salt Creek Substation site. However, the lake itself is not visible from the Proposed Project site. Likewise, the proposed Salt Creek Substation site is not visible from Lower Otay Lake due to its distance from the site and intervening topographic relief.

The OVRP is considered a scenic view in the City of Chula Vista General Plan. The OVRP is located adjacent to the Salt Creek Substation site, and views between portions of the OVRP and the substation site exist. Views of the substation from the OVRP Proposed Trail and Hunte Parkway Trail immediately to the north and west of the substation, respectively, would be more impacted than the distant views from the south, due to the shorter distance and relatively small scale of the overall visual experience. Trails in the immediate vicinity of the proposed substation are within a transitional urbanized area. Therefore, construction activities associated with the proposed Salt Creek Substation would have a less-than-significant impact on scenic vistas.

TL 6965 and TL 6910 Loop-In

Construction of TL 6965 would occur within the existing SDG&E Transmission Corridor, extending approximately 5 miles from its northwestern terminus at the Existing Substation to its southeastern terminus at the proposed Salt Creek Substation in the Otay Ranch area. Since construction would occur within the existing Transmission Corridor, and since there are no scenic vistas in the immediate vicinity of the proposed power lines or in sufficient proximity such that views from those vistas would be adversely affected by construction activities associated with the proposed power lines, no impact would occur. Three poles are proposed immediately east of the proposed substation. Construction equipment may include a crane, boom or bucket truck, and other construction-related vehicles. Construction would be temporary, and would move along the power line as work is completed. Therefore, construction of the proposed TL 6965 would have a less-than-significant impact on scenic vistas.

Existing Substation Modifications

The Existing Substation is located approximately 0.75 mile south of Sweetwater Reservoir. The existing site is situated on a relatively flat area located directly adjacent to and east of SR-125. In addition, the site is located west of low rolling hills. There are no unique visual features or views available from the site or its vicinity. Currently, the site exhibits a high level of visual clutter due to the presence of numerous existing power poles and lines, racks, and other related substation elements. No scenic vistas are in the immediate vicinity of the Existing Substation or in sufficient proximity such that views from those vistas would be adversely affected by modifications to the Existing Substation. In addition, proposed modifications at the Existing Substation for a new 69-kV circuit position and steel supports would be minimal. Therefore, no impact would occur.

Staging Yards

Staging yards would be used temporarily during construction. Temporary use of the staging yards would not adversely affect scenic vistas; therefore, no impact would occur.

Operation and Maintenance – No Impact

Routine maintenance crews would inspect the proposed power lines within the existing Transmission Corridor or travel to the proposed Salt Creek Substation only periodically throughout the year and for limited periods. There are no scenic vistas in the immediate vicinity of the Proposed Project or in sufficient proximity such that views from those vistas would be adversely affected during routine maintenance of the Proposed Project components. No impact would occur.

Question 4.1(b) – Existing Visual Character or Quality of the Site

Construction – Less-than-Significant Impact

Salt Creek Substation

Construction of the proposed Salt Creek Substation is anticipated to require approximately 18 to 24 months from initial site development through energization and testing. Construction activities would be completed in two stages. Stage 1 would consist of site grading and below-grade construction, and stage 2 would include erection of substation structures.

During site grading, the visual character of the proposed Salt Creek Substation site would change from existing conditions. The proposed Salt Creek Substation site would be fenced off with a chain-link fence. Grading activities would substantially alter topography at the site.

Viewers walking, jogging, or cycling would experience views of construction activities at the proposed Salt Creek Substation site, primarily as they travel along the trail/pathway on Hunte Parkway. The proposed Salt Creek Substation would be located at a lower elevation than the trail/pathway; however, the proposed substation would be visible from portions of the trail along Hunte Parkway. These viewers would experience a moderately high sensitivity to visual changes, because viewers traveling along the trail would have longer views of their surroundings and their awareness of changes to the scene could be heightened. However, as noted above, the substation would be located 45 to 50 feet below the roadway, and substation construction would be temporary. While viewer sensitivity may be moderately high, the effects of substation construction on recreational viewers would be less than significant.

The proposed Salt Creek Substation would be visible to passing motorists traveling east along a portion of Hunte Parkway. Although Hunte Parkway is a major roadway, this street currently experiences relatively low traffic volumes. Motorists may be aware of, and sensitive to, the view of the proposed Salt Creek Substation site during construction; however, because of the temporary nature and limited duration of these views, motorists' sensitivity to change is considered low.

In addition, no scenic resources, such as rock outcroppings or historic buildings, are located near the proposed Salt Creek Substation site that would be impacted during substation construction. The proposed Salt Creek Substation site is located below Hunte Parkway in elevation. Therefore, impacts would be less than significant.

TL 6965 and TL6910 Loop-In

Installation of power line structures would require clearing and removing vegetation. Some minor grading would occur to create work pads at approximately 24 locations. Installing steel poles and overhead conductors would occur throughout the existing Transmission Corridor. Trenching for construction of underground conduits would occur within SDG&E's property and along the Transmission Corridor adjacent to the Salt Creek Substation.

Construction activities would be visible to passing motorists traveling along roadways that traverse the Transmission Corridor. Motorists may be aware of construction within the Transmission Corridor; however, because of the short duration of these views and because of the existing power lines in the Transmission Corridor, motorists' sensitivity is considered low.

The presence of construction equipment within the existing Transmission Corridor is not uncommon and would not create an adverse contrast to the existing landscape. For these reasons, the viewer response would be low. Power line construction within the existing Transmission Corridor would be short term and would cease upon completion. Therefore, impacts from construction to visual resources would be less than significant.

Existing Substation Modifications

Minor modifications at the Existing Substation would occur within the existing SDG&E property that is not accessible to the public. Construction modifications at the Existing Substation would constitute a short-term condition and would create a limited temporary change in visual character and quality at the Existing Substation during construction. Motorists traveling northbound on SR-125 may have fleeting views of the Proposed Project site; however, because of the temporary nature and location of work within an existing substation, motorists' sensitivity to change is considered low. Therefore, impacts would be less than significant.

Staging Yards

Hunte Parkway Staging Yard

Approximately 8 acres of a 22-acre previously graded pad at the Hunte Parkway staging yard would be used for staging purposes during construction of the Proposed Project. Temporary power sources would be installed at this staging yard. The entire Hunte Parkway staging yard would be enclosed by an approximately 6-foot-high chain-link security fence, with screening slats or mesh and a locking gate. This staging yard would also include an office trailer(s) and portable restrooms. Minor grading may occur for access only.

Private views of the staging yard would be experienced from front yards, back yards, and some residential windows located along Discovery Falls Drive and Crossroads Street adjacent to the Hunte Parkway staging yard. Use of the Hunte Parkway staging yard would constitute a short-term condition (approximately 18 to 24 months), and would create a temporary change in visual character and quality of the site.

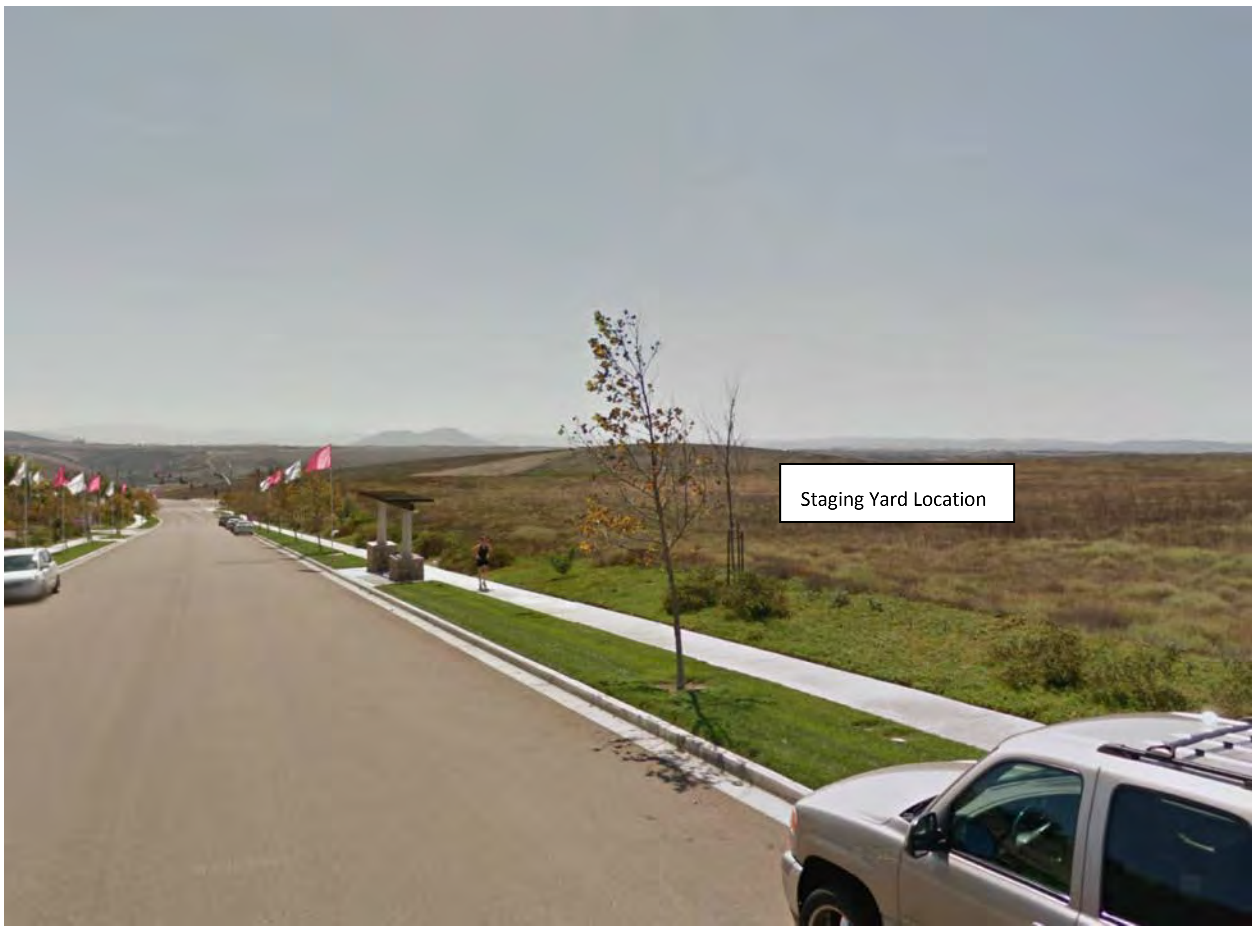
Since the staging yard would be above Hunte Parkway and Eastlake Parkway, only portions of the Hunte Parkway staging yard would be visible to passing motorists traveling along Hunte Parkway and Eastlake Parkway (Figure 4.1-13).

Figure 4.1-13: Existing View of the Staging Yard Location from Hunte Parkway

However, as seen in Figure 4.1-14, motorists traveling south along portions of Discovery Falls Drive and Crossroads Street would be above the Staging Yard, and, thus, it would be visible. Discovery Falls Drive and Crossroad Street are not busy streets, so relatively few passing motorists would be exposed to these temporary construction views.

Motorists may be aware of and sensitive to the view of the Hunte Parkway staging yard during construction. However, motorists' sensitivity is considered low because of the grade difference between some of the adjacent roadways and the temporary nature of the view. Therefore, impacts would be less than significant.

Figure 4.1-14: Existing View of the Staging Yard Location Looking South from Discovery Falls Drive



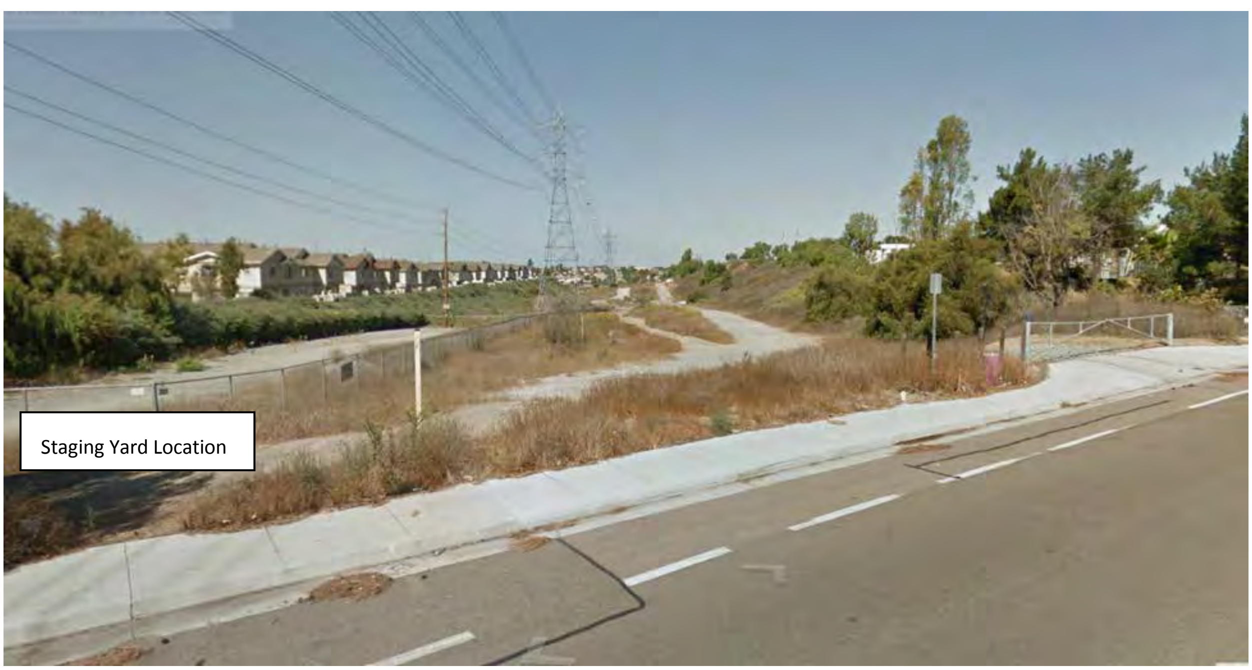
Eastlake Parkway Staging Yard

The Eastlake Parkway staging yard would be located along the west side of the Transmission Corridor between SR-125 and Eastlake Parkway. The staging yard would be used during construction of the proposed TL 6965, and may be used to store poles, construction materials, and equipment. As shown in Figure 4.1-15, the site has been previously disturbed and is visually dominated by existing power lines, poles, towers, and access roads. Minimal grading would be required on the northwest side of the staging yard, and the southwest portion would require no grading. This area is currently being used as a staging yard. The land immediately northwest of the proposed staging area is single-family residential, and Eastlake High School comprises the northeastern border of the staging yard.

The proposed staging yard would be visible from residential areas when viewers stand at the edge of residential property lines. The proposed staging area would be located below these residences, so it would not be visible from the bulk of the ground floor areas. Looking northwest from Eastlake Parkway, the proposed staging area would be visible to passing motorists. However, this site is currently used as a staging yard. As such, minimal to no change in visual character from the existing to the proposed staging area is anticipated.

The view from SR-125 is similar to that from Eastlake Parkway, with the duration of the view being even shorter due to the higher speeds on SR-125. Because it is an existing staging yard, because use of the site for the Proposed Project would be temporary, and because motorists views of the site would be short in duration, viewer sensitivity is considered low. Therefore, impacts would be less than significant.

Figure 4.1-15: View of Eastlake Parkway Staging Yard from Eastlake Parkway



Existing Substation 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 to the Existing Substation and to store materials and related construction equipment. This staging yard would also serve as the helicopter fly yard/incidental landing area. This site was previously disturbed; therefore, no grading and/or slope stabilization is anticipated. An office trailer(s) may be used at this staging yard.

This staging yard is used, as needed, for projects in the vicinity. Therefore, staging in this location would not result in a substantial change in the visual character of the area. The site is approximately 700 feet east of SR-125. Some motorists traveling on northbound SR-125 may have fleeting views, due to their high speed of travel, of the staging yard. However, the Existing Substation and related transmission lines dominate the foreground view for SR-125 motorists traveling toward the Existing Substation. Because it is an existing staging yard, because use of the site for the Proposed Project would be temporary, and because motorist views of the site would be short in duration, viewer sensitivity is considered low. Therefore, impacts would be less than significant.

Olympic Training Center Staging Yard

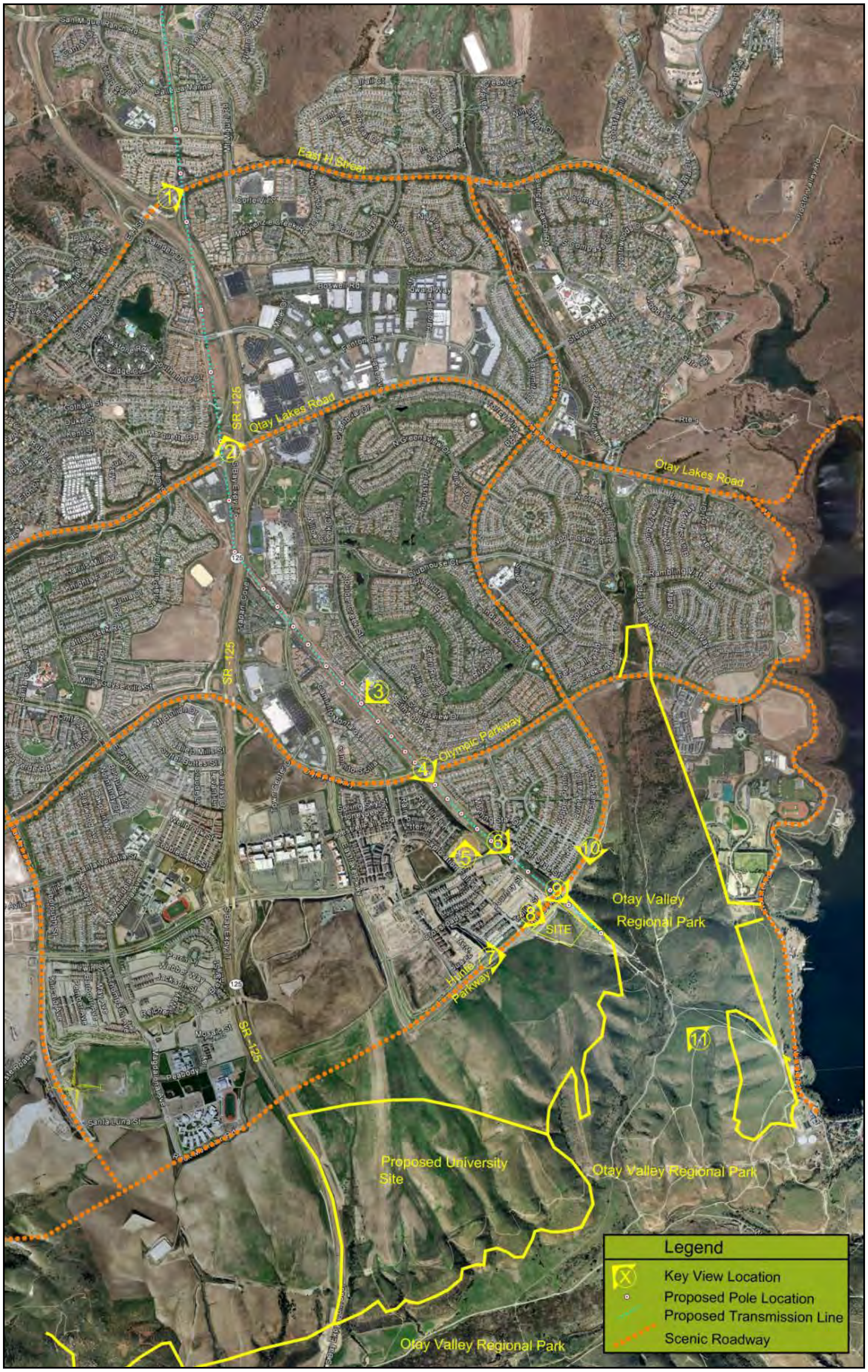
Five potential alternative staging yards within OTC were considered to provide backup and flexibility during construction if staging yard availability changes prior to construction. These staging yards may be used for assembling poles; storing material and equipment; refueling vehicles and construction equipment by a mobile fueling truck; and serving as a location for office trailer(s), portable restrooms, and parking. They would include lighting and temporary power. The five potential staging yards were previously disturbed; therefore, no grading is anticipated. Staging yards would be enclosed by chain-link fencing with a security gate.

OTC is a year-round athletic training facility located to the northeast of the proposed Salt Creek Substation site. Vehicles and materials required for Proposed Project construction would travel to/from the staging yard along Olympic Parkway. Two of the proposed lots on the property are located adjacent to Olympic Parkway; however, the lots would not be visible from Olympic Parkway due to screened landscaping and hillsides. The remaining three lots would be located at the southern portion of the property and would not be visible from public vantage points. Therefore, impacts would be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Visual analysis was conducted for the operation and maintenance phase of the Proposed Project for each of the 11 identified key views. Following each key view is an impact analysis summary that includes a rating on a scale of 0 to 4 for key elements of visual quality and viewer response. The total numerical scale of impact could range from -16 to 0, were 0 would constitute no visual impact and any number less than or equal to -9 would constitute significant impact. For more detailed numerical scoring, refer to Appendix 4.1-A. A key view location map (Figure 4.1-16) details the location and direction of the views.

Figure 4.1-16: Key View Location Map



Key View 1

Figure 4.1-17 shows the location of Key View 1. Figure 4.1-18 shows the "before" and "after" view looking east at the proposed Transmission Corridor from SR-125 and East H Street. East H Street at this location is a designated Scenic Roadway. This view of the Transmission Corridor is typically seen by residents, pedestrians, and passing motorists. The existing transmission tower is visible in the background and would remain with the Proposed Project.

The primary change in the "after" view would be the addition of a foundation pole near the existing transmission tower, along with its associated power lines. Since the pole addition occurs within the existing Transmission Corridor and is adjacent to an existing steel lattice tower, the Proposed Project would represent a minor visual change that would not substantially degrade the visual character or quality of the site. The proposed pole is essentially obscured by the existing steel lattice power.

Figure 4.1-17: Key View 1

Figure 4.1-18: Key View 1: View Looking East from SR-125/East H Street

BEFORE

AFTER*

*Based on preliminary engineering design. Exact pole heights may vary depending on field conditions.

Existing development is residential. Due to the developed nature of the surrounding area and the existing steel towers visible from the observation point, the inclusion of new poles would largely go unnoticed by motorists on East H Street. The curving nature of the road would help to minimize any impacts. As a result, the visual quality would remain unchanged, giving a neutral visual impact (0 = no impact). As such, impacts would be less than significant. See the analysis matrices in Appendix 4.1-A for numerical calculations.

Key View 2

Figure 4.1-19 shows the location of Key View 2. Figure 4.1-20 shows the "before" and "after" views looking north at the Transmission Corridor from SR-125 and Otay Lakes Road. At this location, Otay Lakes Road is a designated Scenic Roadway. This view of the Transmission Corridor is typically seen by residents, pedestrians, and passing motorists, and would remain with the Proposed Project. An existing transmission tower and a steel pole are shown in the middleground. A chain-link fence surrounding the Transmission Corridor is shown in the foreground along Otay Lakes Road.

The primary change in the "after" view would be the addition of steel poles near the existing transmission towers and their associated power lines. Since pole additions would occur within the existing Transmission Corridor, the Proposed Project would represent a minor visual change that would not substantially degrade the visual character or quality of the site. No changes to the foreground would occur.

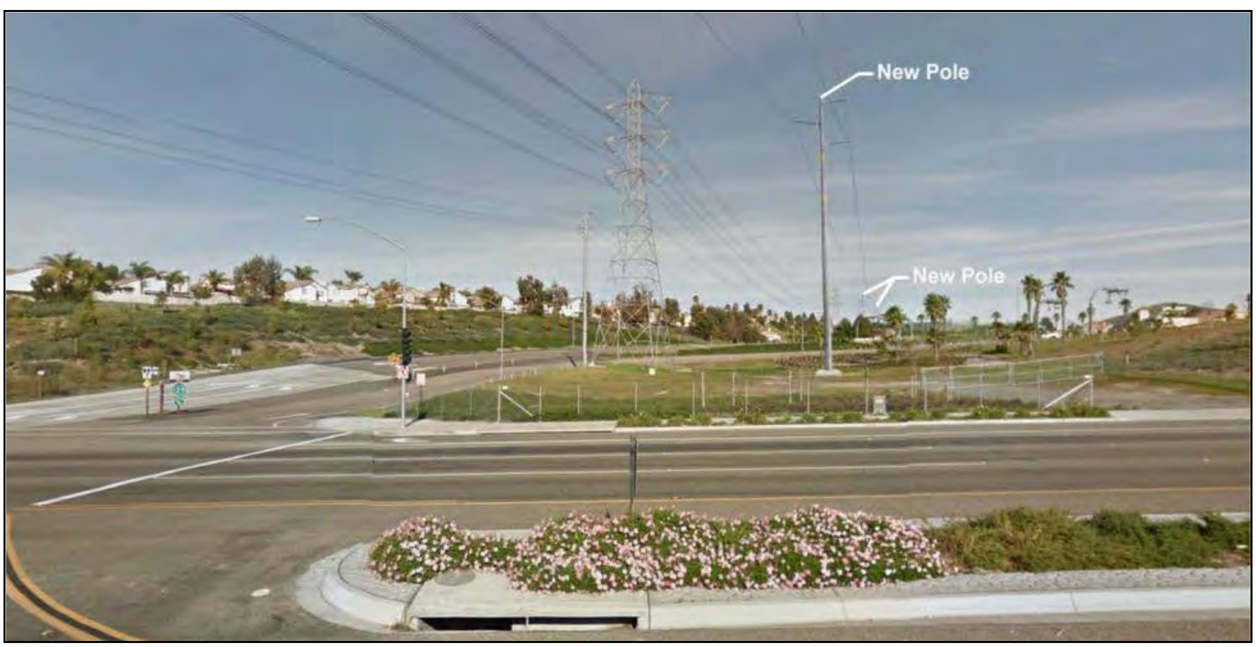
Views of existing development are residential to the west and commercial to the east. Due to the surrounding area's developed nature and existing steel towers visible from the observation point, inclusion of new poles and conductors would have a minimal impact on the visual quality.

Figure 4.1-19: Key View 2

Due to the distance from existing towers to new poles, poles would be visible but not out of place, as there are many existing poles, towers, and conductors. Proposed poles would extend into the skyline; however, this view would be perpendicular to the direction of travel, and exposure would be minimal. As a result, the visual quality would be slightly lower than what currently exists, resulting in a low visual impact (-0.75); impacts would be less than significant. See the analysis matrices in Appendix 4.1-A for numerical calculations.

Figure 4.1-20: Key View 2: View Looking North at SR-125/Otay Lakes Road

BEFORE



AFTER*

*Based on preliminary engineering design. Exact pole heights may vary depending on field conditions.

Key View 3

Figure 4.1-21 shows the location of Key Views 3 and 4. Figure 4.1-22 shows the "before" and "after" views of Key View 3, looking southwest at the proposed Transmission Corridor from Sunset View Park. This view of the Transmission Corridor is typically seen by recreational viewers, and would remain with the Proposed Project. Existing park facilities and fields are visible in the middleground and foreground, and would remain with the Proposed Project.

The primary change in the "after" view would be the addition of a directly embedded pole south of the existing transmission tower, along with its associated power lines. Recreational viewers who frequent the park are considered the viewer group with moderate sensitivity to changes within the Transmission Corridor.

Figure 4.1-21: Key Views 3 & 4

Views of existing development are improved park land in the foreground and residential to the north and south. No completely natural land views exist from this view point. Due to the developed nature of the foreground, along with surrounding development and existing steel towers and poles visible from the observation point, the inclusion of new poles would have a minimal impact on visual quality. There are already a considerable number of existing towers, poles, and conductors, so although the proposed poles would extend into the skyline, their impact on the quality of the view would be slight. Since this view would be from a park, viewing duration would be longer. As a result, the visual quality would be lower than what currently exists, resulting in a low visual impact (-2.25). Impacts would be less than significant. See the analysis matrices in Appendix 4.1-A for numerical calculations.

Figure 4.1-22: Key View 3: View Looking Southwest at Sunset View Park

BEFORE

AFTER*

*Based on preliminary engineering design. Exact pole heights may vary depending on field conditions.

Key View 4

Figure 4.1-23 shows the “before” and “after” views looking southeast at the proposed Transmission Corridor from Olympic Parkway. Olympic Parkway at this location is a designated Scenic Roadway. This view of the Transmission Corridor is typically seen by residents, pedestrians, and passing motorists. The existing access road to the Transmission Corridor from Olympic Parkway and the base of an existing transmission tower are visible in the foreground.

A proposed 69-kV power line and associated poles would be constructed east of the existing 230-kV steel lattice tower transmission line and the existing 69-kV power pole line. This would impact the background, middleground, and foreground. Since pole additions would occur within the existing Transmission Corridor, the Proposed Project would represent a minor visual change that would not substantially degrade the visual character or quality of the site. Although the proposed poles and power line appear fairly significant in this view, the reality is that most motorists would not perceive the proposed poles as much as the still image indicates. The average speed is approximately 35 miles per hour (mph), and motorists would need to look perpendicular to their direction of travel to see this view; even then, this view would only be perceivable for a few seconds.

Due to the surrounding area’s developed nature and existing steel towers visible from the observation point, inclusion of new poles and conductors would have a minimal impact on the visual quality. Due to the distance from existing towers to new poles, poles would be visible but would not seem out of place, as there are many existing poles, towers, and conductors. The proposed poles would extend into the already disrupted skyline view. A distant view of mountains would be slightly impacted; however, this view would be perpendicular to the direction of travel, so exposure would be minimal. As a result, visual quality would be slightly lower than what currently exists, resulting in a low visual impact (-2.25). Impacts would be less than significant. See the analysis matrices in Appendix 4.1-A for numerical calculations.

Figure 4.1-23: Key View 4: View Southeast at Olympic Parkway/Transmission Corridor

BEFORE

AFTER*

*Based on preliminary engineering design. Exact pole heights may vary depending on field conditions.

Key View 5

Figure 4.1-24 shows the locations of Key Views 5 through 10. Figure 4.1-25 shows the "before" and "after" views looking north at the proposed Transmission Corridor from Windingwalk Park. This view of the Transmission Corridor is typically seen by park visitors. Existing residential uses are visible in the background and would remain with the Proposed Project. The existing Transmission Corridor and park facilities are visible in the middleground and would remain with the Proposed Project. An existing ball field is visible in the foreground and would remain with for the Proposed Project.

The primary change in the "after" view would be the addition of directly embedded poles adjacent to the existing transmission towers and their associated power lines to the middleground. Since pole additions would occur within the existing Transmission Corridor, the Proposed Project would represent a minor visual change that would not substantially degrade the visual character or quality of the site. Recreational views of the Proposed Project would be temporary and would not be substantially different from the existing environment.

Figure 4.1-24: Key Views 5 through 10

Figure 4.1-25: Key View 5: View Looking North at Windingwalk Park

BEFORE

AFTER*

*Based on preliminary engineering design. Exact pole heights may vary depending on field conditions.

Existing development is improved park land in the foreground and residential to the northeast and east. A view of San Miguel Mountain is in the background. Due to the surrounding area's developed nature, along with existing steel towers and poles visible from the observation point, inclusion of new poles would have a minimal impact on the visual quality, and would not greatly impact the views of San Miguel Mountain. Proposed poles would extend into skyline views, but because there are already a considerable number of existing towers, poles, and conductors, the proposed poles would be congruent with the existing visual environment. As a result, the visual quality would be lower than what currently exists, resulting in a low visual impact (-2.50). Impacts would be less than significant. See the analysis matrices in Appendix 4.1-A for numerical calculations.

Key View 6

Figure 4.1-26 shows the “before” and “after” views of the Proposed Project looking southeast at the proposed Transmission Corridor from Windingwalk Street. This view of the Transmission Corridor is typically seen by residents, pedestrians, and passing motorists. San Miguel Mountain and the existing Transmission Corridor are visible in the background, and would remain with the Proposed Project. In the City of Chula Vista, views of San Miguel Mountain are designated as a scenic vista. The existing Transmission Corridor and residential uses are visible in the middleground and would remain with the Proposed Project. The existing dirt access road to the Transmission Corridor from Windingwalk Street and the base of an existing transmission tower are visible in the foreground. The proposed 69-kV power line and associated poles would be constructed east of the existing 230-kV steel lattice tower transmission line and the existing 69-kV power pole line. This would slightly impact the already disrupted background, middleground, and foreground.

Since pole additions would occur within the existing Transmission Corridor, the Proposed Project would represent a minor visual change that would not substantially degrade the visual character or quality of the site. Views of existing development are residential to the east and west. Due to the surrounding area’s developed nature and the existing steel towers visible from the observation point, adding new poles and conductors would have a minimal impact on visual quality. Due to the distance from existing towers to new poles, poles would be visible but not out of place, as there are many existing poles, towers, and conductors. Proposed poles would extend into the already disrupted skyline view. A distant view of mountains would be impacted; however, this view is perpendicular to the direction of travel, and exposure would be minimal. As a result, the visual quality would be slightly lower than what currently exists, resulting in a low visual impact (-2.25). Impacts would be less than significant. See the analysis matrices in Appendix 4.1-A for numerical calculations.

Figure 4.1-26: Key View 6: View Looking Southeast along Transmission Corridor

BEFORE

AFTER*

*Based on preliminary engineering design. Exact pole heights may vary depending on field conditions.

Key View 7

Figure 4.1-27 shows the “before” and “after” views of the Proposed Project looking east at the proposed Salt Creek Substation site and Transmission Corridor from Hunte Parkway and Journey Way. Hunte Parkway at this location is a designated Scenic Roadway. This view of the proposed Salt Creek Substation site and Transmission Corridor is typically seen by pedestrians and, to a lesser degree, passing motorists. This is one of the most highly visible and clear viewpoints of the proposed Salt Creek Substation site that currently exists from the perspective of pedestrians and motorists. A view of San Miguel Mountain and the existing Transmission Corridor is visible in the background and would remain with the Proposed Project. Hunte Parkway streetlights and undeveloped land are visible in the middleground and would remain with the Proposed Project. Hunte Parkway Trail and a landscaped slope are visible in the foreground and would remain with the Proposed Project.

The primary changes in the “after” view would occur in the middleground and foreground. The middleground would add the proposed Salt Creek Substation with its perimeter wall and landscaping; however, since the proposed Salt Creek Substation would be located below grade of Hunte Parkway, the residential viewers would have a limited view of the proposed Salt Creek Substation. Proposed landscaping in the foreground would assist in partially screening the proposed Salt Creek Substation from east-facing views along Hunte Parkway. However, a majority of the proposed Salt Creek Substation would be visible from this view. Viewers walking, jogging, or cycling would see the proposed Salt Creek Substation as they travel along Hunte Parkway Trail.

The middleground would include three new cable poles adjacent to the existing transmission towers and with their associated power lines; however, since these pole additions would occur within the existing Transmission Corridor, the Proposed Project would represent a minor visual change that would not substantially degrade the visual character or quality of the site. With implementation of Proposed Project design features (landscape concept plan and perimeter wall), adverse impacts to the visual character and quality of the site would be minimized. Natural colors and native landscaping would help minimize visual contrasts and provide some visual integration. Also, the distant background view of San Miguel Mountain would be more visually dominant than the foreground from the perspective of these viewers.

Views of existing development are residential to the east and west. Due to the surrounding area’s developed nature and existing steel towers visible from the observation point, new poles and conductors would have a minimal impact on visual quality. Due to the distance from existing towers to new poles, poles would be visible but not out of place, as there are many existing poles, towers, and conductors. The proposed poles would extend into the already disrupted skyline view. A distant view of mountains would be impacted; however, this view would be perpendicular to the direction of travel and exposure would be minimal. As a result, the visual quality would be slightly lower than what currently exists, resulting in a moderate visual impact (-4.88). Impacts would be less than significant. See the analysis matrices in Appendix 4.1-A for numerical calculations.

Figure 4.1-27: Key View 7: View Looking East at Hunte Parkway/Journey Way

BEFORE

AFTER*

*Based on preliminary engineering design. Exact pole heights may vary depending on field conditions.

Key View 8

Figure 4.1-28 shows the “before” and “after” views of the Proposed Project looking southeast at the proposed Salt Creek Substation site and Transmission Corridor from Hunte Parkway and Exploration Falls Drive. Hunte Parkway at this location is a designated Scenic Roadway. This view of the proposed Salt Creek Substation site and Transmission Corridor would typically be seen by residents, pedestrians, and passing motorists. A view of the hillsides is visible in the background and would remain with the Proposed Project. The existing Transmission Corridor and undeveloped land are visible in the middleground and would remain with the Proposed Project. Hunte Parkway Trail is visible in the foreground and would remain with the Proposed Project.

The “after” view illustrates that a minor change would occur to the view from this location. The proposed Salt Creek Substation would be located approximately 45 to 50 feet below grade of Hunte Parkway, and would not be visible from this location, but the upper portions of three proposed poles would be visible.

Views of existing development are residential to the east and west. Due to the surrounding area’s developed nature and existing steel towers visible from the observation point, new poles and conductors would have a minimal impact on the visual quality. Due to the distance from existing towers to new poles, poles would be visible but not out of place, as there are many existing poles, towers, and conductors. Proposed poles would extend into the already disrupted skyline view. A distant view of mountains would be impacted; however, this view would be perpendicular to the direction of travel, and exposure would be minimal. As a result, the visual quality would be slightly lower than existing, resulting in a low visual impact (-1.75). Impacts would be less than significant.

Figure 4.1-28: Key View 8: View Looking Southeast at Hunte Parkway/Exploration Falls Drive

BEFORE

AFTER*

*Based on preliminary engineering design. Exact pole heights may vary depending on field conditions.

Key View 9

Figure 4.1-29 shows the “before” and “after” views of the Proposed Project looking southeast at the proposed Transmission Corridor from Hunte Parkway. Hunte Parkway at this location is a designated Scenic Roadway. This view of the proposed Salt Creek Substation site and existing Transmission Corridor would typically be seen by residents, pedestrians, and passing motorists. San Miguel Mountain, a scenic vista, is visible in the background. The existing Transmission Corridor and undeveloped land are visible in the middleground and would remain with the Proposed Project. An existing access road to the Transmission Corridor from Hunte Parkway is visible in the foreground.

The primary change in this “after” view would be the addition of the proposed Salt Creek Substation and cable poles, along with their associated power lines, to the middleground and foreground. Pole additions would occur within the existing Transmission Corridor and would represent a minor visual change that would not substantially degrade the visual character or quality of the site. The middleground would exhibit a visual change by adding the proposed Salt Creek Substation with its perimeter wall and screened landscaping; however, since the proposed Salt Creek Substation would be located below grade of Hunte Parkway, residential viewers on the opposite side of Hunte Parkway would have a limited view of the substation. Recreational viewers walking, jogging, or cycling would see the proposed Salt Creek Substation primarily as they travel along the OVRP Proposed Trail and Hunte Parkway Trail. These viewers would experience moderate sensitivity to visual changes. Although the amount of time recreational viewers walking, jogging, or cycling along the trails and viewing the proposed Salt Creek Substation would be limited, these viewers would notice visual changes in this area, and viewer sensitivity is considered moderate. With implementation of Proposed Project design features (including contour grading, building material colors, a landscape concept plan, and perimeter wall), adverse impacts to the visual character and quality of the site would be minimized.

Existing views are predominantly of unimproved open space to the south, distant mountains, and Mexico beyond. The bulk of the substation improvements would be visible from this view, but would be minimized by use of natural contour grading on slopes, naturally colored building materials, and native landscaping that provides screening and blends in with the surrounding native environment. Due to the degree of landform change, impacts to the visual quality would occur, but with contour grading incorporated as the method of alteration, the change would only be moderate (-6.5). These impacts would be considered less than significant. See the analysis matrices in Appendix 4.1-A for numerical calculations.

Figure 4.1-29: Key View 9: View Looking Southeast at Hunte Parkway/Transmission Corridor

BEFORE

AFTER*

*Based on preliminary engineering design. Exact pole heights may vary depending on field conditions.

Key View 10

Figure 4.1-30 shows the “before” and “after” views of the Proposed Project looking south at the proposed Salt Creek Substation site and proposed Transmission Corridor from Hunte Parkway and Hidden Path Drive. Hunte Parkway at this location is a designated Scenic Roadway. This view of the Transmission Corridor is typically seen by pedestrians along the Hunte Parkway Trail. Hillsides and the existing Transmission Corridor are visible in the background. Undeveloped land is visible in the middleground. The Hunte Parkway trail is visible in the foreground.

The “after” view illustrates that the Proposed Project would not be visually incongruent or obtrusive from this viewpoint. As such, no impact would occur from this location. See the analysis matrices in Appendix 4.1-A for numerical calculations.

Figure 4.1-30: Key View 10: View Looking South at Hunte Parkway/Hidden Path Drive

BEFORE

AFTER*

*Based on preliminary engineering design. Exact pole heights may vary depending on field conditions.

Key View 11

Figure 4.1-31 shows the location of Key View 11. Figure 4.1-32 shows the “before” and “after” views of the Proposed Project looking northwest at the proposed Salt Creek Substation and Transmission Corridor from an access road within OVRP open space overlooking Salt Creek Canyon. This view of the Transmission Corridor is typically seen by pedestrians or hikers. However, the proposed substation site is not visible from the Salt Creek Canyon bottom where the California Riding and Hiking Trail is located. The existing Transmission Corridor and residential uses are visible in the background. An existing dirt access road to the Transmission Corridor is visible in the middleground. Hillsides and the existing Transmission Corridor are visible in the foreground.

Figure 4.1-31: Key View 11: View Looking Northwest from Elevated OVRP Access Road

Figure 4.1-32: Key View 11: View Looking Northwest at Access Road/Open Space

BEFORE

AFTER* (Only the substation is shown in color for clarity)

*Based on preliminary engineering design. Exact pole heights may vary depending on field conditions.

The primary change in this "after" view would be the addition of the proposed Salt Creek Substation within the middleground, approximately 3,200 feet away from the viewer. The Proposed Project would represent a minor visual change that would not substantially degrade the visual character or quality of the site because the substation and proposed poles would be quite a distance from the key view location. Pedestrians and hikers would have some sensitivity to the visual appearance of the substation and surrounding area. However, the color of the proposed building materials, landscaping, and natural contour grading around the substation would greatly minimize any visual intrusion. Poles would barely be visible from this distance.

Existing views are predominantly of unimproved open space (OVRP) to the north and distant developed areas (Otay Ranch) north of the OVRP. San Miguel Mountain is visible in the distance to the northeast. This is a scenic view from within the OVRP. Although the new substation would be visible from this view, it would be so far away, its visual impact would be minimal. In addition, the color of the proposed building materials, use of natural contour grading on slopes, and use of native landscaping that provides screening would blend in with the surrounding native environment. Because of the distance from the viewer to the substation, visual quality would only be slightly lower than what currently exists, resulting in a low visual impact (-1.88). Therefore, impacts would be less than significant. See the analysis matrices in Appendix 4.1-A for numerical calculations.

Question 4.1(c) – Scenic Resources within a State Scenic Highway

Construction and Operation and Maintenance – No Impact

There are no state-designated scenic highways in the immediate vicinity of the Proposed Project area. SR-125 between SR-94 and Interstate 8 (I-8) is the nearest identified officially designated state scenic highway, located more than 9 miles north of the Proposed Project site. Therefore, the Proposed Project would not lie within the viewshed of any state-designated scenic highway and no impacts would occur.

Question 4.1(d) – New Light or Glare

Construction – Less-than-Significant Impact

No night construction is proposed. However, the possibility exists that work would occasionally extend into the evening hours, necessitating temporary lighting. In this case, lighting would be used to the extent required by safety and operational needs. Lighting would consist of portable floodlights powered by a generator. The floodlights would be operated as needed in focused work areas, and would be directed away from adjacent land uses, particularly residential areas and native habitat. Therefore, impacts would be less than significant.

Operations and Maintenance – Less-than-Significant Impact

The Proposed Project area includes existing electric power, distribution, and substation facilities that are visible within the public viewshed. These existing facilities constitute the baseline from which impacts were measured. Neither the existing nor proposed power line facilities include any permanent lighting. Potential glare from overhead conductors would be similar to what currently exists within the Proposed Project area. The new weathering steel poles are made of dull, nonreflective steel that does not create glare.

Outdoor lighting for the Salt Creek Substation would be restricted to use of a high-pressure sodium light at the entry gate. The light would be pole-mounted at an approximate height of 8 feet. Other lighting would be used within the limits of the substation and would be used during emergencies only to allow for inspection and repairs. Lighting will follow SDG&E standards to provide safe entry and exit, and to allow for safe driving within the substation site. As such, the Proposed Project would not create a substantial new source of light or glare, and impacts would be considered less than significant.

4.1.5 Summary of Project Impacts

Overall, the Proposed Project would not substantially alter the area's visual character. The proposed Salt Creek Substation site would undergo the most visual change because the natural topography of this undeveloped site would be altered into a graded area, and it would be developed with new substation structures and elements. However, the natural color of building materials, contour grading, native landscaping, and a perimeter wall would all minimize the potential impacts from changes at the site. Pedestrians, hikers, and those walking along Hunte Parkway Trail and the OVRP Proposed Trail would have moderate sensitivity related to the visual changes implemented with the Proposed Project. However, the duration of their views would be relatively short. The Proposed Project area lies within an existing Transmission Corridor with overhead power lines and towers, and adding a new power line within the existing Transmission Corridor would have a relatively minor change in the corridor's visual character. Because one 230-kV transmission line with large steel lattice towers and one 69-kV power line exist within the Transmission Corridor, the addition of a third power line with narrow steel poles would be visually congruent within the urbanized area. Changes at the Existing Substation would be relatively minor and would occur within the current substation fenced area, resulting in a minor change on the existing visual character of the area. As such, impacts would be less than significant.

4.1.6 Project Design Features and Ordinary Construction/Operations Restrictions

With implementation of Project Design Features and Ordinary Construction/Operations Restrictions, including implementation of the conceptual landscape plan, and use of natural-colored building materials, contour grading, and perimeter screening wall, potential impacts to aesthetics would remain less than significant.

4.1.7 Applicant-Proposed Measures

Because implementation of the Proposed Project would result in less-than-significant impacts to aesthetics, no APMs are required.

4.1.8 Detailed Discussion of Significant Impacts

No significant impacts have been identified.

4.1.9 References

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4.2 Agriculture and Forestry Resources

Would the project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☑	☐
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☑
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☑
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☑
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☑

4.2.1 Introduction

This section describes the agricultural and forestry resources in the vicinity of the Proposed Project, and analyzes potential impacts to these resources from construction and operation of the Proposed Project. The proposed Salt Creek Substation site and the majority of the proposed TL 6965 and TL 6910 loop-in are located within the City of Chula Vista in southwestern San Diego County. The Proposed Project components would not cross any land under a Williamson Act contract. A portion of the proposed TL 6965 would cross Farmland of Local Importance; however, impacts to these lands would be minimal since construction of the power lines would occur within existing SDG&E ROW and would not change existing land uses. The proposed substation site would be located on vacant land formerly used for grazing and would not conflict with existing land use. As a result, impacts on agricultural and forestry resources would be less than significant.

4.2.2 Methodology

The Proposed Project analysis involved a review of the City of Chula Vista Vision 2020 General Plan and the Municipal Code (City of Chula Vista 2005a, 2005b, 2005c, 2010); the California Department of Conservation's (CDC) Farmland Mapping and Monitoring Program (FMMP) (CDC 2012a); the Joint Powers Agency of the City of San Diego and County of San Diego geographic information system (GIS) database (SANGIS) for Williamson Act parcels (SANGIS 2012); and general plan and zoning maps for the Proposed Project area. Additionally, a field visit to the site was conducted to confirm land uses.

In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model prepared by the CDC as an optional model to use in assessing impacts on agriculture and farmland (CDC 2007). In determining whether impacts on forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project, and forest carbon measurement methodology provided in the Forest Protocols adopted by the California Air Resources Board.

4.2.3 Existing Conditions

4.2.3.1 Regulatory Background

Federal and State

Department of Conservation Farmland Mapping and Monitoring Program

The CDC's Division of Land Resource Protection FMMP generates maps depicting Important Farmlands. These farmlands are categorized according to specific criteria, including soil quality and irrigation conditions. Approximately 94% of the FMMP study area is based on the U.S. Department of Agriculture Natural Resource Conservation Service soil classification system, which evaluates physical and chemical conditions, including soil temperature, moisture regime, the hydrogen ion concentration (pH), flooding, groundwater depth, erodibility, permeability, and sodium content. FMMP maps are updated every 2 years using aerial imagery review, field reconnaissance, computer mapping analyses, and public input. The FMMP map series uses a minimum land use mapping unit of 10 acres; smaller units of land are generally incorporated into surrounding map classifications. The FMMP map series identifies the following eight land classifications (CDC 2012a):

- **Prime Farmland:** Prime Farmland has the optimum combination of physical and chemical conditions that are able to sustain long-term agricultural production. The soil quality, growing season, and moisture supply on Prime Farmlands provide conditions to produce sustained high yields. Prime Farmlands must have been used for irrigated production within 4 years of the mapping date.
- **Farmland of Statewide Importance:** Farmland of Statewide Importance is similar to Prime Farmland; however, these farmlands have minor shortcomings, such as a higher slope or decreased ability to store soil moisture. Farmlands of Statewide Importance must have been used for irrigated production within 4 years of the mapping date.
- **Unique Farmland:** Unique Farmlands have lower-quality soils and are used for the production of California's leading agricultural products. Unique Farmlands are typically irrigated but may also include non-irrigated vineyards or orchards found in certain climatic zones. Unique Farmlands must have been cropped within 4 years of the mapping date.
- **Farmland of Local Importance:** Farmlands of Local Importance are farmlands that are vital to the local agricultural economy, as identified by each county's local advisory committee and board of supervisors.
- **Grazing Land:** Grazing Land is land on which existing vegetation is suitable for livestock grazing.
- **Urban and Built-Up Land:** Urban and Built-Up Land is defined as land that is occupied by buildings or other structures at a minimum density of 1 unit to 1.5 acres (or approximately 6 structures to 10 acres). This land is used for development purposes, including residential, commercial, industrial, construction, public administration, institutional, transportation yards, airports, cemeteries, golf courses, sewage treatment, sanitary landfills, and water control structures.
- **Other Land:** Other Land includes all lands that are not in any other map category, such as water bodies smaller than 40 acres; low-density rural developments; confined livestock, poultry, or aquaculture facilities; and brush, timber, wetland, and riparian areas not suitable for livestock grazing.
- **Water:** Perennial water bodies with an extent of at least 40 acres.

For the purposes of this section, "Important Farmlands" include Prime Farmland, Unique Farmland, Farmland of Statewide Importance, and Farmland of Local Importance.

As shown in Table 4.2-1, there are no Unique Farmlands or Farmlands of Statewide Importance within the City of Chula Vista General Plan area. There is approximately 51 acres of Farmland of Local Importance and approximately 19 acres of grazing land in the entire Proposed Project area. Figure 4.2-1 depicts the farmlands within the area.

Table 4.2-1: Farmland Inventory

	County of San Diego (acres)	City of Chula Vista General Plan Area (acres)	Salt Creek Substation (acres)	TL 6965 and TL 6910 loop-in (acres)	Existing Substation Modifications (acres)	Staging Yards (acres)
Prime Farmland	7,753	34	0	0	0	0
Farmland of Statewide Importance	10,411	0	0	0	0	0
Unique Farmland	51,975	0	0	0	0	0
Farmland of Local Importance	153,187	7,511	1	23	0	24[1]
IMPORTANT FARMLAND SUBTOTAL	223,326	7,545	1	23	0	24
Grazing Land	126,870	20,426	11	7	0	0

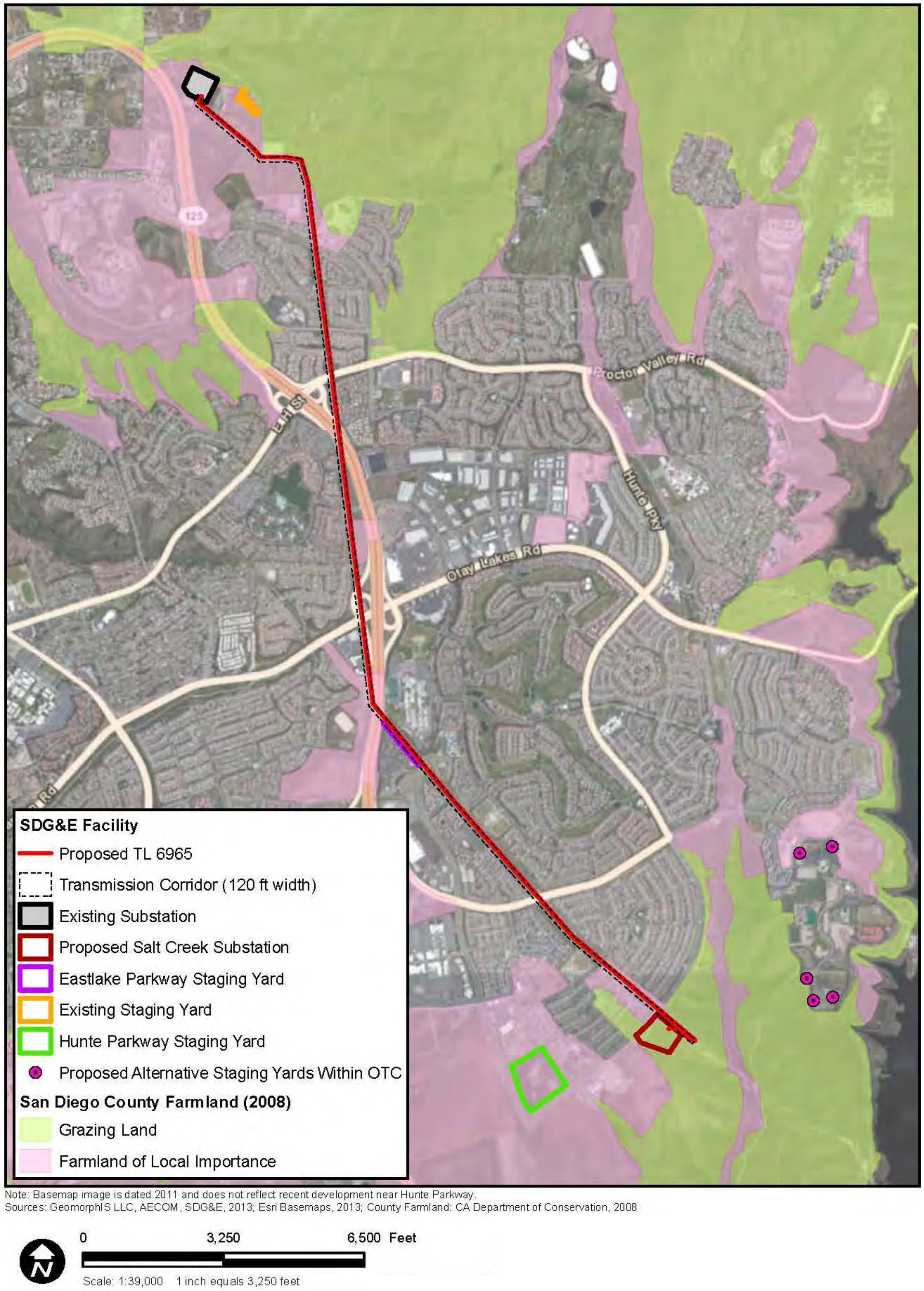
Sources: CDC 2012b; City of Chula Vista 2005a

[1] Hunte Parkway staging yard is 22 acres, the Existing staging yard is 2 acres, and Eastlake Parkway staging yard is 1.7 acres. However, SDG&E is proposing to use only 8 acres at Hunte Parkway for staging, for a total of 11.7 acres for staging purposes.

California Land Conservation Act of 1965 (Williamson Act)

The Williamson Act, also known as the California Land Conservation Act of 1965 (California Government Code [CGC] Section 51200 et seq.), preserves agricultural and open space lands from conversion to urban land uses by establishing a contract between local governments and private landowners to voluntarily restrict their land holdings to agricultural or open space use. In return, landowners receive property tax assessments based on farming or open space use rather than assessments based on the full market property value, which is typically 20 to 75% higher. Williamson Act contracts are valid for a minimum of 10 years and are automatically renewable after each 10-year term.

Figure 4.2-1: Farmlands in the Proposed Project Area



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

The Williamson Act also allows local governments to establish Agricultural Preserves, parcels of land for which cities or counties are willing to enter into Williamson Act contracts. Agricultural Preserves must include a minimum of 100 acres and typically avoid areas in which public utility improvements and associated land acquisitions may be necessary (CGC Section 51230). Although the Williamson Act does not specify compatible land uses for property located adjacent to contract lands or Agricultural Preserves, it does state that cities and counties must determine compatible land use types while recognizing that temporary or permanent population increases frequently impair or hamper agricultural operations (CGC Section 51220.5).

The Williamson Act authorizes the County of San Diego to establish Agricultural Preserves and enter into contracts with property owners. The County of San Diego has designated approximately 402,100 acres as Agricultural Preserves. More than 100 contracts within these Agricultural Preserves exist, totaling approximately 80,500 acres (County of San Diego 2010). There are no active Williamson Act contract properties within the City of Chula Vista General Plan area.

County of San Diego

General Plan and Zoning Ordinance

Farmland of Local Importance is land of value to the local economy, as defined by each county's local advisory committee and adopted by its board of supervisors. Farmland of Local Importance is either currently producing, or has the capability to produce, agricultural products, but does not meet the criteria of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. Authority to adopt or recommend changes to the category of Farmland of Local Importance rests with the County of San Diego Board of Supervisors.

The northern portion of the Proposed Project area, located within the County of San Diego, has a General Plan designation of Public/Semi-Public Facilities, which allows for major facilities to be built and maintained for public use. The zoning designation is Holding Area (S90), which allows for limited agricultural activities.

City of Chula Vista

General Plan and Zoning Ordinance

The City of Chula Vista Vision 2020 General Plan (City of Chula Vista 2005c) and Municipal Code (City of Chula Vista 2010) were reviewed for agricultural resource policies that are relevant to the Proposed Project. Agricultural activities in the city are allowed on lands zoned for Agriculture (A-8, A-X) and, on an interim basis, Planned Community (P-C). These zones are "intended to preserve in agricultural use land which may be suited for eventual development in urban uses and which will encourage proper timing for the economical provision of utilities, major streets and other facilities, so that orderly development will occur," per Section 19.20.010 of the Municipal Code (City of Chula Vista 2010).

4.2.3.2 Agricultural and Forestry Setting

No forest land, timberland, or timberland zoned Timberland Production exists on-site or in the surrounding area of the Proposed Project. The closest forest land is the Cleveland National Forest, located approximately 13 miles east of the proposed TL 6965. In addition, no Williamson Act contract exists for the Proposed Project area.

Salt Creek Substation

According to the CDC, the proposed Salt Creek Substation site is currently designated as Grazing Land (11 acres), as shown in Figure 4.2-1 (CDC 2012a). The proposed substation site is zoned Planned Community (P-C), which allows for agricultural activities on an interim basis. Less than 1 acre of the substation pad along Hunte Parkway is located on Farmland of Local Importance; however, no agricultural activities occur on this site.

TL 6965 and TL 6910 Loop-In

The majority of the proposed TL 6965 route is zoned Planned Community (P-C) and located adjacent to existing residential, education, recreation, undeveloped, and open space land uses. A total of 23 acres of Farmland of Local Importance and 7 acres of Grazing Land are located within the TL 6965 project area, as shown in Table 4.2-1. The northern limits of the proposed TL 6965 route, extending from the Existing Substation through San Diego County land and including a small portion of City of Chula Vista land, is located on Farmland of Local Importance. The San Diego County land is zoned Holding Area (S90), which allows for limited agricultural activities, and the city land is zoned Planned Community (P-C), which allows for interim agricultural use. Agricultural activity currently does not occur in this area.

The central portion of the proposed TL 6965 traverses two parcels of land designated as Farmland of Local Importance. These parcels are zoned Planned Community (P-C), and agricultural activity currently does not occur in this area.

The southern limits of the proposed power lines are located on Farmland of Local Importance and Grazing Land. This land, zoned Planned Community (P-C), is currently undeveloped. Agricultural activity currently does not occur in this area, but does occur to the south of this area.

Existing Substation Modifications

The Existing Substation is not located on any farmland; however, it is surrounded by Farmland of Local Importance. The Existing Substation is located in the northern portion of the Proposed Project on land zoned Holding Area (S90), which allows for limited agricultural activities (County of San Diego 2012). Agricultural activity currently does not occur in this area.

Staging Yards

Three temporary staging yards would be used for the Proposed Project: the Existing Substation staging yard at the Existing Substation on SDG&E fee-owned property; the Eastlake Parkway staging yard on the west side of Eastlake Parkway between SR-125 and Eastlake Parkway; and the Hunte Parkway staging yard on the north side of Hunte Parkway between Discovery Falls, Eastlake Parkway, and Crossroads Street. In addition, an alternative Olympic Training Center

(OTC) staging yard is proposed, located on Olympic Parkway to the east of Hunte Parkway. The Existing Substation staging yard is located on land zoned Holding Area (S90), which allows for limited agricultural activities. The Hunte Parkway and Eastlake Parkway staging yards would be located on land zoned Planned Community (P-C), which allows for agricultural activities on an interim basis. The OTC staging yard would be located on land zoned Recreation. Agricultural activity currently does not occur on any of the proposed staging yards. Per Table 4.2-1, 24 acres of Farmland of Local Importance exists at the Existing Substation staging yard and Hunte Parkway staging yard.

4.2.4 Impacts

4.2.4.1 Significance Criteria

Determination of impacts was derived from Appendix G of the CEQA Guidelines. Impacts to agriculture and forestry resources would be considered potentially significant if the Proposed Project would do any of the following:

- convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the FMMP, to non-agricultural use;
- conflict with existing zoning for agricultural use, or a Williamson Act contract;
- conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220[g]), timberland (as defined by PRC section 4526), or timberland zoned as Timberland Production (as defined by CGC section 51104[g]);
- result in the loss of forest land or conversion of forest land to non-forest use; or
- involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

4.2.4.2 Impact Analysis

Question 4.2(a) – Conversion of Farmland

Construction – Less-than-Significant Impact

Salt Creek Substation

Prime Farmland, Unique Farmland, or Farmland of Statewide Importance does not occur in the Proposed Project area; however, the proposed Salt Creek Substation site is located on Grazing Land (CDC 2012a). Less than 1 acre of the substation pad along Hunte Parkway is located on Farmland of Local Importance; however, no agricultural activities occur on this site. The proposed substation site currently consists of vacant, undeveloped land previously used for farming, and is not currently used for agricultural purposes. The Proposed Project would not change existing agricultural use or create additional impacts related to conversion of Farmland; therefore, no impact would occur.

TL 6965 and TL 6910 Loop-In

Prime Farmland, Unique Farmland, or Farmland of Statewide Importance does not occur in the Proposed Project area; however, the proposed TL 6965 traverses Farmland of Local Importance. Currently, no active agricultural lands occur within the route proposed for TL 6965 or the TL 6910 loop-in. Although the Proposed Project would be developed on land that is either owned by SDG&E or within existing SDG&E easements, these inactive farmlands may be temporarily disturbed during construction due to the installation of new poles and the use of construction equipment in the vicinity. However, the ability to use the land as farmlands would not be impeded or diminished. Therefore, impacts would be less than significant.

Existing Substation Modifications

The Existing Substation is not located on any Farmland, and no agricultural activity currently occurs in this area. Modifications to the Existing Substation would occur within the current substation site; therefore, no impact would occur.

Staging Yards

Agricultural activity currently does not occur on any of the areas proposed for staging yards. Up to 11.7 acres of land within the proposed staging yards (8 acres at Hunte Parkway, 1.7 acres at Eastlake Parkway, and 2 acres at the Existing Substation) would be used temporarily during construction and would not involve conversion of any Farmland; therefore, no impact would occur.

Operation and Maintenance – No Impact

The proposed Salt Creek Substation would be located on vacant, undeveloped land that is not currently used for agricultural activities. Operation and maintenance of the proposed substation would not result in temporary or permanent conversion of Farmland. Therefore, no impact would occur.

Operation and maintenance of the proposed TL 6965 and TL 6910 loop-in would include regular inspection, repair work, and vegetation removal activities, as needed. These activities would not result in temporary or permanent conversion of Farmland. Therefore, no impact would occur.

Question 4.2(b) – Conflict with zoning or Williamson Act Contracts

Construction – No Impact

Salt Creek Substation

The proposed Salt Creek Substation site would not be located on land that is currently zoned for agricultural use or under a Williamson Act contract. The proposed substation site is zoned Planned Community (P-C), which allows for agricultural activity on an interim basis. However, agricultural activities do not occur on the proposed site. The CPUC maintains jurisdiction to regulate the design, siting, installation, operation, maintenance, and repair of electric transmission facilities associated with the Proposed Project; therefore, SDG&E is not specifically subject to local planning or zoning ordinances. No impact would occur.

TL 6965 and TL 6910 Loop-In

Portions of the proposed power line are zoned Holding Area (S90) and Planned Community (P-C), which allow for agricultural activity on an interim basis and utility uses. Construction of the proposed power line would be temporary and would not conflict with existing zoning. No impact would occur.

Existing Substation Modifications

The Existing Substation site is zoned Holding Area (S90), which allows for limited agricultural activities. Agricultural activity currently does not occur in this area. No impact would occur.

Staging Yards

The Existing Substation staging yard is zoned Holding Area (S90), the Hunte Parkway and Eastlake Parkway staging yards are zoned Planned Community (P-C), and the OTC staging yard is zoned Recreation. Up to 11.7 acres of land within the staging yards would be used temporarily during construction and would not conflict with existing zoning; therefore, no impact would occur.

Operation and Maintenance – No Impact

The Proposed Project would be developed on land that is either owned by SDG&E or within existing SDG&E easements and is currently zoned for utilities. No impact would occur.

Question 4.2(c) – Loss or conversion of forest land; conflict with zoning of forest land

Construction – No Impact

The proposed Salt Creek Substation site, proposed TL 6965 and TL 6910 loop-in, Existing Substation, and staging yards would not be located on or near forest land, nor are they zoned for forest land use. No impact would occur.

Operation and Maintenance – No Impact

No forest land would be lost due to Proposed Project operation. No impact would occur.

4.2.5 Project Design Features and Ordinary Construction/Operations Restrictions

There are no specific policies, standards, regulations, or design features that are necessary to minimize impacts from the Proposed Project. Impacts to agricultural and forestry resources with Proposed Project implementation would be less than significant.

4.2.6 Applicant-Proposed Measures

The Proposed Project's impacts on agricultural and forestry resources would be less than significant; therefore, no APMs are required or proposed.

4.2.7 Detailed Discussion of Significant Impacts

Based on the analyses presented above, no significant impacts were identified for the Proposed Project, and no APMs are required or proposed.

4.2.8 References

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4.3 Air Quality

Would the project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☑
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☑	☐
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☑	☐
d. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☑	☐
e. Create objectionable odors affecting a substantial number of people?	☐	☐	☑	☐

4.3.1 Introduction

This section describes existing air quality resources in the vicinity of the Proposed Project and assesses potential air quality impacts that may occur as a result of Proposed Project implementation, particularly with regard to short-term construction activities (fugitive dust) and long-term operation. In addition, this section is intended to evaluate the Proposed Project for potential air quality impacts resulting from inconsistency with applicable air quality plans and violation of ambient air quality standards (AAQS).

For the purpose of the air quality analysis, all of the components of the Proposed Project are treated as a single project. These components include constructing the proposed Salt Creek Substation and other associated substation components, constructing TL 6965 and the TL 6910 loop-in, and installing a new 69-kV position at the Existing Substation. Because the entire Proposed Project would be located within the San Diego Air Basin, and because emissions from all of Proposed Project components have the potential to affect air quality within the San Diego Air Basin, it is appropriate to analyze total impacts from the entire Proposed Project rather than to separate out the analysis by component.

Construction and operation of the Proposed Project would not expose sensitive receptors to substantial pollutant concentrations, conflict with air quality plans or standards, or otherwise significantly affect air quality. None of the proposed improvements would result in significant impacts on air quality by contributing substantially to an existing or projected air quality violation, exposing sensitive receptors to substantial pollutant concentrations, or creating objectionable odors affecting a substantial number of people. Impacts on air quality as the result of construction, operation, and maintenance would be less than significant. Refer to Appendix 4.3-A, Air Quality Assessment.

4.3.2 Methodology

Federal, state, and regional/local regulations and policies were consulted to determine the Proposed Project's level of compliance with, and potential impacts to, applicable air quality plans and/or standards. Information for this section was obtained from Internet searches of federal, state, and regional/local websites. Refer also to Appendix 4.3-A, Air Quality Assessment, for additional discussion of the methods used to predict air quality impacts resulting from the Proposed Project.

This analysis of air quality impacts used the emissions factors from the California Air Resources Board (CARB)'s OFFROAD Model (CARB 2007) for heavy construction equipment and CARB's EMFAC2011 Model (CARB 2011) for on-road vehicles. This analysis covers construction in the short term and operation and maintenance in the long term. Emissions factors from the OFFROAD Model were based on the South Coast Air Quality Management District's (SCAQMD) composite off-road emissions factors (SCAQMD 2012), since these emissions factors are representative of the construction fleet for Southern California. The San Diego Air Pollution Control District (SDAPCD) does not provide San Diego-specific emissions factors from the OFFROAD Model.

4.3.3 Existing Conditions

This section describes the regulations and regulatory agencies that have jurisdiction over the Proposed Project, regional climate and meteorology, and existing air quality conditions in the area.

4.3.3.1 Regulatory Background

Federal

National air quality policies are regulated through the Federal Clean Air Act (FCAA) of 1970 and its 1977 and 1990 amendments. Pursuant to the FCAA, the U.S. Environmental Protection Agency (USEPA) has established National Ambient Air Quality Standards (NAAQS) for criteria air pollutants, which include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2, which is a form of nitrogen oxides known as NO_X), sulfur dioxide (SO_2, which is a form of sulfur oxides known as SO_X), particulate matter less than 10 and 2.5 microns in diameter (PM_{10} and $PM_{2.5}$, respectively), and lead. These pollutants are referred to as criteria pollutants because USEPA has established numerical criteria that define acceptable levels of exposure for each pollutant. USEPA has revised the NAAQS several times since their original implementation, and will continue to do so as the health effects of exposure to air pollution are better understood.

USEPA designates federal nonattainment areas if they have not achieved the NAAQS. Under the 1977 amendments to the FCAA, states with air quality that did not achieve the NAAQS were required to develop and maintain state implementation plans (SIPs). These SIPs constitute a federally enforceable definition of the state's approach and schedule for the attainment of the NAAQS. Air quality management areas were designated as attainment, nonattainment, or unclassified for individual pollutants, depending on whether they achieve the applicable NAAQS and California Ambient Air Quality Standards (CAAQS) for each pollutant. In addition, California can designate areas as transitional. Because the NAAQS and CAAQS differ in many cases, it is possible for an area to be designated attainment by USEPA (meets NAAQS) and nonattainment by California (does not meet CAAQS) for the same pollutant.

Areas that were designated as nonattainment in the past, but have since achieved the NAAQS, are further classified as attainment-maintenance. The maintenance classification remains in effect for 20 years from the date that the area is determined by USEPA to meet the NAAQS. There are numerous classifications of the nonattainment designation, depending on the severity of nonattainment. O_3 nonattainment designation has seven subclasses: transitional, marginal, moderate, serious, severe-15, severe-17, and extreme. Designation of nonattainment status is based on USEPA's "design value" for a given pollutant. The design value is a statistic that describes the air quality status of a given location relative to the level of the NAAQS. Design values are computed and published annually by USEPA's Office of Air Quality Planning and Standards, and reviewed in conjunction with USEPA Regional Offices. Nonattainment areas are then designated based on their design value. For O_3 nonattainment areas, the classifications are as follows:

Extreme:	Area has a design value of 0.175 parts per million (ppm) and higher
Severe 17:	Area has a design value of 0.119 up to but not including 0.175 ppm
Severe 15:	Area has a design value of 0.113 up to but not including 0.119 ppm
Serious:	Area has a design value of 0.100 up to but not including 0.113 ppm
Moderate:	Area has a design value of 0.086 up to but not including 0.100 ppm
Marginal:	Area has a design value of 0.076 up to but not including 0.086 ppm

Nonattainment areas under different classifications have different deadlines to achieve the NAAQS. Extreme nonattainment areas are subject to a deadline of June 2024 to attain the NAAQS for O_3. Severe-15 nonattainment areas are subject to a deadline of June 2019 to attain the NAAQS for O_3. Serious nonattainment areas were subject to a deadline of June 2013 to attain the NAAQS for O_3. There are no areas that are currently designated as "severe-17" nonattainment areas for the NAAQS for O_3. Areas that lack monitoring data are designated as unclassified areas. Unclassified areas are treated as attainment areas for regulatory purposes.

State

CARB was created in 1967 by merging the California Motor Vehicle Pollution Control Board with the Bureau of Air Sanitation and its Laboratory. Under the FCAA, states may enact their own statewide air quality regulations and standards, provided that they are at least as stringent as the FCAA. In 1988, the California Clean Air Act (CCAA) was enacted to regulate air quality within California. CARB, a department of the California Environmental Protection Agency (CalEPA), oversees air quality planning and control throughout California. Its responsibility lies with ensuring implementation of the CCAA, responding to FCAA requirements, and regulating pollutant emissions from motor vehicles sold in California. It also sets fuel specifications to further reduce vehicular emissions.

The CCAA established the CAAQS and a legal mandate to achieve these standards by the earliest practicable date. These standards apply to the same criteria pollutants as the NAAQS, but also include sulfate, visibility, hydrogen sulfide, and vinyl chloride.

San Diego Air Pollution Control District

CARB designated San Diego County as a discrete air basin under the jurisdiction of SDAPCD. In addressing its planning role with respect to the NAAQS, SDAPCD most recently developed an Ozone Redesignation Request and Maintenance Plan, which served as the basis for USEPA's re-designation of the San Diego Air Basin as an attainment zone for the 1-hour ozone standard on July 28, 2003. As of April 30, 2012, the San Diego Air Basin has been designated as a marginal nonattainment area for the 8-hour ozone standard.

The Regional Air Quality Strategy (RAQS) was established by SDAPCD in 1991 to address state air quality planning requirements (focusing on O_3). The latest revision was published on April 22, 2009. SDAPCD is responsible for overall development and implementation of the RAQS. RAQS control measures focus on emissions sources under SDAPCD's authority, specifically, stationary emissions sources and some area-wide sources. However, the emissions inventories and emissions projections in the RAQS reflect the impact of all emissions sources and all control measures, including those under the jurisdiction of CARB (e.g., on-road motor vehicles, off-road vehicles and equipment, and consumer products) and USEPA (e.g., aircraft, ships, trains, and pre-empted off-road equipment). While legal authority to control different pollution sources is separated, SDAPCD is responsible for reflecting federal, state, and regional/local measures in a single plan to achieve ambient air quality standards in San Diego County.

To evaluate the potential for stationary sources to cause or contribute to a violation of an air quality standard, SDAPCD established emissions thresholds in its Rules 20.2 and 20.3 on New

Source Review. If emissions from a stationary source exceed the thresholds established in these rules, further evaluation must be conducted to assess whether the source would cause or contribute to a violation of an air quality standard. SDAPCD has not established rules for characterizing impacts from construction. However, SDAPCD informally recommends quantifying construction emissions and comparing them to significance thresholds found in the SDAPCD regulations for stationary sources (Rule 20.2 et seq.) and shown in Table 4.3-1, Air Pollution Control District's Screening Level Thresholds. If construction-phase emissions exceed these thresholds for a stationary-source air-quality-impact analysis, then construction has the potential to violate air quality standards or to contribute substantially to existing violations. Significance thresholds are shown in Table 4.3-1. While this PEA uses these thresholds as a guide, this PEA also evaluates if other substantial evidence, in light of the whole record, indicates that the Proposed Project could have a significant air quality impact, including proximity of sensitive receptors. This additional evaluation provides a conservative analysis of the Proposed Project's air quality impacts.

Table 4.3-1: Air Pollution Control District's Screening Level Thresholds

Pollutant	Pounds per Day
Carbon Monoxide (CO)	550
Oxides of Sulfur (SO_X)	250
Volatile Organic Compounds (VOCs)	75
Oxides of Nitrogen (NO_X)	250
Particulate Matter (PM_{10})	100
Particulate Matter ($PM_{2.5}$)	55

Source: San Diego County Air Pollution Control District, Rule 1501, 20.2(d)(2), 1995

The San Diego County Air Pollution Control District does not have thresholds of significant for VOCs or $PM_{2.5}$. As such, VOC and $PM_{2.5}$ thresholds from the South Coast Air Quality Management District were used.

4.3.3.2 Meteorology and Climate

San Diego Air Basin Characteristics

One of the main determinants of the San Diego Air Basin's climatology is the Pacific High, a semi-permanent high-pressure center over the Pacific Ocean. In the summer, this pressure center is located well to the north, directing storm tracks north of California. This high-pressure cell maintains clear skies for much of the year. When the Pacific High moves southward during the winter, this pattern changes, and low-pressure storms are brought into the region, causing widespread precipitation.

San Diego Air Basin Climate

The San Diego Air Basin's climate is characterized by warm, dry summers and mild, wet winters. The climate of San Diego, as with all of Southern California, is largely controlled by the strength and position of the Pacific High. This high-pressure ridge over the West Coast creates a repetitive pattern of frequent early morning cloudiness, hazy afternoon sunshine, clean daytime onshore breezes, and little temperature change throughout the year. Limited rainfall occurs in the winter when the oceanic high-pressure center is weakest and farthest south, as the fringes of mid-latitude storms occasionally move through the area. The average temperatures in January range from 47 degrees Fahrenheit (°F) at night to 63°F during the day. The warmest month is August, when the high temperatures average 74°F. The average annual rainfall is approximately 10 inches.

Generation of Air Pollutants

The same atmospheric conditions that create a desirable living climate combine to limit the atmosphere's ability to disperse air pollution generated by the large population attracted to the pleasant climate. Onshore winds across the coastline diminish quickly when they reach the foothill communities east of San Diego. The sinking air within the offshore high-pressure system forms a massive temperature inversion that traps air pollutants near the ground. The resulting horizontal and vertical stagnation, in conjunction with ample sunshine, causes a number of reactive pollutants to undergo photochemical reactions and form smog, which degrades visibility and irritates human tear ducts and nasal membranes. While programs to control emissions of air pollutants have substantially improved regional air quality within the last several decades, some parts of the San Diego Air Basin do not meet clean air standards.

Local Climate

Local meteorological conditions in the Proposed Project vicinity conform to the regional pattern of strong onshore winds by day (especially in the summer) and weak offshore winds at night (particularly during the winter). These local wind patterns are driven by the temperature difference between the ocean and the warm interior topography. In the summer, moderate daytime breezes of 8 to 12 miles per hour blow onshore and up through the valley from the southwest. Light onshore breezes may continue throughout the night when the land remains warmer than the ocean. In the winter, the onshore flow is weaker and the wind flow reverses to blow from the northeast in the evening as the land becomes cooler than the ocean.

Temperature Inversions

The onshore flow of marine air and nocturnal winds are accompanied by two characteristic temperature inversion conditions that control the rate of air pollution dispersal throughout the San Diego Air Basin. The daytime cool onshore flow is capped by a deep layer of warm, sinking air. Along the coastline, the marine air layer beneath the inversion cap is deep enough to accommodate any locally generated emissions. However, as the layer moves inland, pollution sources (especially automobiles) add pollutants from below without any dilution from above through the inversion interface. When this polluted layer approaches foothill communities east of coastal developments, it becomes shallower and exposes residents in those areas to concentrated pollution by-products from coastal area sources.

4.3.3.3 Air Quality

CARB sets state air quality standards and monitors ambient air quality at approximately 250 air quality monitoring stations across the state. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level. Therefore, air quality is often referred to in terms of ground-level concentrations. Ambient air pollutant concentrations in the San Diego Air Basin are measured at 10 air quality monitoring stations operated by SDAPCD.

For the air quality evaluation, data from the Chula Vista Monitoring Station, located at 80 East J Street in the City of Chula Vista, was used. This data included CO, O_3, NO_2, SO_2, PM_{10}, and $PM_{2.5}$. Data collected at this monitoring station are representative of the air quality experienced on-site from 2009 through 2011; refer to Table 4.3-3, Local Air Quality Levels. The Chula Vista Monitoring Station is close enough to the Proposed Project area to provide accurate information about the environmental setting. The following air quality information briefly describes the various types of pollutants.

Ozone (O_3)

O_3 occurs in two layers of the atmosphere. The layer surrounding Earth's surface is the troposphere. The troposphere extends approximately 10 miles above ground level, where it meets the second layer, the stratosphere. The stratospheric layer extends upward from about 10 to 30 miles, and protects life on Earth from the sun's ultraviolet rays (UV-B). In the troposphere, O_3 is a photochemical pollutant formed from reactions between volatile organic compounds (VOCs) and NO_X with the presence of sunlight. Therefore, VOCs and NO_X are O_3 precursors. VOCs and NO_X are emitted from various sources throughout the San Diego Air Basin. Significant O_3 formation generally requires an adequate amount of precursors in the atmosphere and several hours in a stable atmosphere with strong sunlight. High O_3 concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.

Many respiratory ailments and cardiovascular disease are aggravated by exposure to high O_3 levels. O_3 also damages natural ecosystems (such as forests and foothill plant communities), agricultural crops, and some human-created materials (such as rubber, paint, and plastics). Societal costs from O_3 damage include increased healthcare costs, loss of human and animal life, accelerated replacement of industrial equipment, and reduced crop yields.

Carbon Monoxide (CO)

Carbon monoxide (CO) is an odorless, colorless toxic gas that is emitted by mobile and stationary sources. It is a result of incomplete combustion of hydrocarbons or other carbon-based fuels. In cities, automobile exhaust can cause as much as 95% of all CO emissions. At high concentrations, CO can reduce the oxygen-carrying capacity of the blood and cause headaches, dizziness, and unconsciousness.

Nitrogen Dioxide (NO_2)

Nitrogen oxides (NO_X) are a family of highly reactive gases that are a primary precursor to the formation of ground-level O_3, and react in the atmosphere to form acid rain. USEPA and CARB established AAQS for NO_2. NO_2 is a reddish-brown gas that can cause breathing difficulties at high levels. Peak readings of NO_2 occur in areas that have a high concentration of combustion sources (e.g., motor vehicle engines, power plants, refineries, and other industrial operations).

NO_2 can irritate and damage lungs, and lower resistance to respiratory infections, such as influenza. The health effects of short-term exposure are still unclear. However, continued or frequent exposure to NO_2 concentrations that are typically much higher than those normally found in the ambient air may increase acute respiratory illnesses in children and increase the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO_2 may aggravate eyes and mucus membranes and cause pulmonary dysfunction.

Sulfur Dioxide (SO_2)

Sulfur dioxide (SO_2) is a colorless reactive gas that is produced from burning sulfur-containing fuels such as coal and oil, and by other industrial processes. Generally, the highest SO_2 concentrations are found near large industrial sources. SO_2 is a respiratory irritant that can cause narrowing of airways, leading to wheezing and shortness of breath. Long-term exposure to SO_2 can cause respiratory illness and aggravate existing cardiovascular disease.

Coarse Particulate Matter (PM_{10})

Coarse particulate matter (PM_{10}) refers to suspended particulate matter, which is smaller than 10 microns, or 10 one-millionths of a meter. PM_{10} arises from sources such as road dust, diesel soot, combustion products, construction operations, and dust storms. PM_{10} scatters light and significantly reduces visibility. In addition, these particulates penetrate the lungs and can potentially damage the respiratory tract. On June 19, 2003, CARB adopted amendments to the statewide 24-hour particulate matter standards based on requirements set forth in the Children's Environmental Health Protection Act (Senate Bill 25).

Fine Particulate Matter ($PM_{2.5}$)

Due to increased concerns over health impacts related to fine particulate matter (particulate matter 2.5 microns in diameter or less), federal and state $PM_{2.5}$ standards were created. Particulate matter impacts primarily affect infants, children, older adults, and those with pre-existing cardiopulmonary disease. Due to its smaller size, $PM_{2.5}$ has the potential to lodge more deeply in the lungs than PM_{10}. USEPA and CARB have revised their AAQS for $PM_{2.5}$ to more stringent levels since the standards were originally proposed in 1997. Almost everyone in California is exposed to levels at or above the current state standards during some parts of the year, and the statewide potential for significant health impacts associated with particulate matter exposure was determined to be large and wide-ranging.

Reactive Organic Gases (ROGs) and Volatile Organic Compounds (VOCs)

Hydrocarbons are organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases, including reactive organic gases (ROGs) and VOCs. ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oilfueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).

Lead

Lead in the atmosphere occurs as particulate matter. Lead was historically emitted from vehicles combusting leaded gasoline, as well as from industrial sources. With the phase-out of leaded gasoline, large manufacturing facilities are now the primary sources of lead emissions. Lead has the potential to cause gastrointestinal, central nervous system, kidney, and blood diseases upon prolonged exposure. Lead is also classified as a probable human carcinogen.

Other Pollutants

CARB also set standards for four additional pollutants: sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These pollutants are generally not considered pollutants of concern in the San Diego Air Basin because there are no major sources that would contribute to ambient levels within the basin.

Toxic Air Contaminants (TACs)

Section 39655 of the California Health and Safety Code defines a toxic air contaminant (TAC) as an air pollutant that "may cause or contribute to an increase in mortality or an increase in serious illness, or [that] may pose a present or potential hazard to human health." Section 39657(b) of the California Health and Safety Code defines TACs to include 189 substances that have been listed as federal hazardous air pollutants under 42 U.S. Code [USC] Section 7412.

TACs can cause various cancers, depending on the particular chemicals, their type, and the duration of exposure. Additionally, some TACs may cause other health effects over the short or long term. The 10 TACs posing the greatest health risk in California are acetaldehyde, benzene, 1-3 butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchlorethylene, and diesel particulate matter.

Air Quality Designations

Three air quality designations can be given to an area for a criteria pollutant:

- Nonattainment: This designation applies when air quality standards have not been consistently achieved.
- Attainment: This designation applies when air quality standards have been achieved.
- Unclassified: This designation applies when insufficient monitoring data exists to determine a nonattainment or attainment designation.

Current NAAQS and CAAQS are summarized in Table 4.3-2, National and California Ambient Air Quality Standards*.* On April 15, 2004, USEPA formally replaced the 1979 one-hour ozone standard with a more stringent 8-hour standard as part of the Clean Air Rules of 2004. The San Diego Air Basin is currently designated as a nonattainment area for O_3 and PM.

Table 4.3-2: National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California[1]		Federal[2]	
		Standard[3]	Attainment Status	Standards[4]	Attainment Status
Ozone (O_3)	1 Hour	0.09 ppm (180 μg/m^3)	**Nonattainment**	NA	NA
	8 Hours	0.070 ppm (137 μg/m^3)	**Nonattainment**	0.075 ppm (147 μg/m^3)	**Marginal Nonattainment**
Particulate Matter (PM_{10})	24 Hours	50 μg/m^3	**Nonattainment**	150 μg/m^3	Attainment
	Annual Arithmetic Mean	20 μg/m^3	**Nonattainment**	NA	Attainment
Fine Particulate Matter ($PM_{2.5}$)	24 Hours	No Separate State Standard		35 μg/m^3	Attainment
	Annual Arithmetic Mean	12 μg/m^3	**Nonattainment**	15 μg/m^3	Unclassified
Carbon Monoxide (CO)	8 Hours	9.0 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Attainment
	1 Hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Attainment
Nitrogen Dioxide (NO_2)[5]	Annual Arithmetic Mean	0.030 ppm (56 μg/m^3)	NA	0.053 ppm (100 μg/m^3)	Attainment
	1 Hour	0.18 ppm (338 μg/m^3)	Attainment	100 ppb	Attainment
Lead (Pb)[7,8]	30 days average	1.5 μg/m^3	Attainment	N/A	NA
	Calendar Quarter	N/A	NA	1.5 μg/m^3	Attainment
Sulfur Dioxide (SO_2)[6]	24 Hours	0.04 ppm (105 μg/m^3)	Attainment	0.14 ppm (365 μg/m^3)	Attainment
	3 Hours	N/A	NA	0.5 ppm (1300 μg/m^3)	Attainment
	1 Hour	0.25 ppm (655 μg/m^3)	Attainment	75 ppb (196 μg/m^3)	NA
Visibility-Reducing Particles[9]	8 Hours (10 a.m. to 6 p.m., PST)	Extinction coefficient = 0.23 km@<70% RH	Unclassified	**No Federal Standards**	
Sulfates	24 Hour	25 μg/m^3	Attainment		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m^3)	Unclassified		
Vinyl Chloride[7]	24 Hour	0.01 ppm (26 μg/m^3)	Unclassified		

Sources: California Air Resources Board 2013a.

μg/m^3 = micrograms per cubic meter; ppm = parts per million; km = kilometer(s); RH = relative humidity; PST = Pacific Standard Time; N/A = Not Applicable

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility-reducing particles) are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in 17 CCR 70200.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.
3. Concentration is expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 millimeters (mm) of mercury. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 mm of mercury; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. The table presents primary standards with the exception of the 3-hour SO_2 standard, which is a secondary standard.
5. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
6. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
7. CARB has identified lead and vinyl chloride as “TACs” with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
8. The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
9. In 1989, CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and “extinction of 0.07 per kilometer” for the statewide and Lake Tahoe Air Basin standard, respectively.

Ambient Air Quality

Violations of NAAQS and CAAQS for O_3 and PM have occurred historically in the Proposed Project area. The frequency of violations and current air quality conditions at the Chula Vista Monitoring Station are summarized in Table 4.3-3, Local Chula Vista Air Quality Levels. The Chula Vista Monitoring Station is the site nearest to the Proposed Project area, although the Chula Vista Monitoring Station is located in a more developed area that has multiple emissions sources compared to the Salt Creek Substation, TL 6965, TL 6910 loop-in, and Existing Substation.

Table 4.3-3: Local Chula Vista Air Quality Levels

Pollutant	Standard (Maximum Allowable Amount) California	Standard (Maximum Allowable Amount) Federal Primary	Year[1]	Maximum Concentration[2]	Number of Days State/Federal Standard Exceeded
1-hour Ozone (O_3)[1]	0.09 ppm for 1 hour	NA	2009 2010 2011	0.098 ppm 0.107 0.083	1/NA 1/NA 0/NA
8-hour Ozone (O_3)[1]	0.070 ppm for 8 hours	0.075 ppm for 8 hours	2009 2010 2011	0.075 ppm 0.083 0.057	3/0 3/2 0/0
1-hour Carbon Monoxide (CO)	20 ppm for 1 hour	35 ppm for 1 hour	2009 2010 2011	2.1 ppm 2.1 NM	0/0 0/0 NM/NM
8-hour Carbon Monoxide (CO)	9.0 ppm for 8 hours	9 ppm for 8 hour	2009 2010 2011	1.43 ppm 1.56 NM	0/0 0/0 NM/NM
Nitrogen Dioxide (NO_2)	0.18 ppm for 1 hour	0.100 ppm For 1 hour	2009 2010 2011	0.065 ppm 0.060 0.057	0/0 0/0 0/0
1-hour Sulfur Dioxide (SO_2)	75 ppb for 1 hour	NA	2009 2010 2011	0.004 ppm 0.005 ppm 0.007 ppm	0/0 0/0 0/0
24-hour Sulfur Dioxide (SO_2)	0.04 ppm for 24 hours	NA	2009 2010 2011	0.003 ppm 0.002 ppm 0.002 ppm	0/NA 0/NA 0/NA
Fine Particulate Matter ($PM_{2.5}$)[1, 2]	No Separate Standard	35 µg/m^3 for 24 hours	2009 2010 2011	43.7 µg/m 22.7 27.9	NA/1 NA/0 NA/0
Particulate Matter (PM_{10})[1, 2]	50 µg/m^3 for 24 hours	150 µg/m^3 for 24 hours	2007 2008 2009	57.0 µg/m 43.0 45.0	2/0 0/0 0/0

Sources: CARB 2009–2011; San Diego Air Pollution Control District (SDAPCD) 2013.

ppm = parts per million; PM_{10} = particulate matter 10 microns in diameter or less; NM = not measured; µg/m^3 = micrograms per cubic meter; $PM_{2.5}$ = particulate matter 2.5 microns in diameter or less; NA = not applicable

Notes:

1. Maximum concentration is measured over the same period as the California standards.
2. PM_{10} and $PM_{2.5}$ exceedances are derived from the number of samples exceeded, not days.

Sensitive Receptors

Sensitive populations are more susceptible to the effects of air pollution than the general population. According to the City of San Diego CEQA Significance Determination Thresholds (City of San Diego 2011), citing SCAQMD (SCAQMD 1993), “a sensitive receptor is a person in the population who is particularly susceptible to health effects due to exposure to an air contaminant than is the population at large." Sensitive receptors include medical patients and older adults, athletes/children at public parks/playgrounds, long-term care/assisted living facilities, churches, schools, child care centers/homes, and athletic fields.

Sensitive populations (sensitive receptors) in proximity to localized sources of toxics and CO are of particular concern. Land uses that may include sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Table 4.3-4, Locations that May Include Sensitive Receptors, lists the distances and locations where sensitive receptors may be found and that lie within 1 mile of the areas that would be affected by construction and operation of the Proposed Project, including the Salt Creek Substation, TL 6965, TL 6960 loop-in, and Existing Substation. The closest land uses that may contain sensitive receptors would be the residential units located adjacent to the proposed TL 6965.

Table 4.3-4: Locations that May Include Sensitive Receptors

Type	Name	Distance from Proposed Project Site (miles)	Direction from Proposed Project Site
Salt Creek Substation			
Residential	Otay Ranch	0.1	North
Schools	High Tech High School	0.5	Northwest
	High Tech Middle School	0.5	Northwest
	High Tech Elementary School	0.4	Northwest
	Arroyo Vista Elementary School	0.9	North
	Veteran's Elementary School	1.0	West Northwest
	East Hills Academy	1.0	Southwest
	Olympian High School	1.0	West Southwest
Places of Worship	Parkway Hills Church of the Nazarene	0.9	Northwest
	Mater Dei Parish	1.0	West
Parks	Eastlake Country Club	0.8	North
	Sweetwater Regional Park	1.0	Northwest
	Mount San Miguel Community Park	0.8	Southeast
	Sunset View Park	0.0 (adjacent)	Southwest
	Windingwalk Park	0.4	Northwest

Source: http://maps.google.com

Note: Sensitive receptors used in this analysis are those within a 1-mile radius of the Proposed Project. The Proposed Project site includes the entire Proposed Project, including the Salt Creek Substation, TL 6965, TL 6910 loop-in, and Existing Substation, as well as the staging areas that would be used during construction.

4.3.4 Impacts

4.3.4.1 Significance Criteria

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in a significant impact on the environment. The following significance criteria are from Appendix G of the CEQA Guidelines. Air quality impacts resulting from implementation of the Proposed Project could be considered significant if they would do any of the following:

- conflict with or obstruct implementation of the applicable air quality plan,
- violate any air quality standard or contribute substantially to an existing or projected air quality violation,
- result in a cumulatively considerable net increase of any criteria pollutant for which the region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors),
- expose sensitive receptors to substantial pollutant concentrations, and/or
- create objectionable odors affecting a substantial number of people.

The Proposed Project would also be considered significant if it interfered with the attainment or maintenance of NAAQS or CAAQS.

4.3.4.2 SDAPCD Thresholds

Pursuant to SDAPCD, a project would result in a significant air quality impact if it generates total emissions (direct and indirect) that exceed their adopted thresholds; refer to Table 4.3-5, SDAPCD Pollutant Thresholds. A project that results in a significant impact must incorporate sufficient measures to reduce its impact to a level that is not significant. A project that results in impacts that cannot be mitigated to a level that is not significant must incorporate all feasible mitigation measures. Note that emissions thresholds are given as daily values and annual values; a multi-phased project (such as a project with a construction phase and a separate operational phase) with phases shorter than 1 year can be compared to the daily value.

Table 4.3-5: SDAPCD Pollutant Thresholds

Pollutant	SDAPCD Thresholds (pounds per day)[1]	SDAPCD Thresholds (tons per year)[1]
Carbon Monoxide (CO)	550	100
Oxides of Sulfur (SO_X)	250	40
Volatile Organic Compounds (VOCs)	75	40
Oxides of Nitrogen (NO_X)	250	40
Particulate Matter (PM_{10})	100	15
Particulate Matter ($PM_{2.5}$)[1]	55	Not Applicable

Source: SDAPCD Rule 20.2, Table 20.2-1, SDAPCD 2012.

[1] SDAPCD does not have thresholds of significance for VOCs or $PM_{2.5}$. As such, the VOC and $PM_{2.5}$ thresholds from SCAQMD were used.

Question 4.3a – Applicable Air Quality Plan Conflicts

Construction – No Impact

A potentially significant impact on air quality would occur if the Proposed Project would conflict with or obstruct implementation of the applicable air quality plan. Although the Proposed Project would contribute air emissions to the San Diego Air Basin, the primary concern is whether Proposed-Project-related impacts have been properly anticipated in the regional air quality planning process and reduced whenever feasible. Therefore, it is necessary to assess the Proposed Project's consistency with the RAQS. The Proposed Project's consistency with the RAQS is determined in terms of whether the Proposed Project would exceed the criteria pollutant threshold levels established by SDAPCD and whether the Proposed Project would result in growth that has been anticipated in a given subregion. As shown in Table 4.3-7, and as discussed under Question 4.3b, emissions would not exceed the criteria pollutant threshold levels established by SDAPCD. The need for a new substation is based on the anticipated buildout of the approved City of Chula Vista General Plan. Because construction of the Proposed Project serves the anticipated buildout of the General Plan, and because construction would result in short-term, temporary impacts, the Proposed Project would not conflict with implementation of the RAQS or SIP. Therefore, no impact would occur.

Operation and Maintenance – No Impact

As indicated in the long-term operational discussion under Operation and Management, below, the Proposed Project would not result in a significant increase in long-term air quality emissions. Additionally, the Proposed Project is not a trip-generating project such as a residential or commercial development. Once construction of the Proposed Project is complete, emissions would be relatively low, resulting only from scheduled maintenance. Therefore, the

Proposed Project would not conflict with or obstruct implementation of the applicable air quality plan. No impact would occur.

Question 4.3b – Air Quality Standard Violations

Construction – Less-than-Significant Impact

Constructing the proposed Salt Creek Substation and other associated substation components, constructing TL 6965 and the TL 6910 loop-in, and installing a new 69-kV position at the Existing Substation are anticipated to occur over approximately 24 months. Table 4.3-6, Preliminary Construction Schedule, includes a preliminary schedule for the Proposed Project. Construction of the Proposed Project is anticipated to begin in 2014 and be complete by 2016.

Table 4.3-6: Preliminary Construction Schedule

Proposed Project Segment	Days (Estimated)
CPUC approves Permit to Construct (PTC)	0
Obtain Construction Permits	60
Obtain Grading Permits from City of Chula Vista	60
Laydown Yard Preparation	15
Substation Construction	
Substation General Construction	
Demolition	15
Grading and Road Improvements	90
Retaining Walls	30
Storm Drain System and Erosion Control	40
Public Improvements and Access Road Grading	20
Substation Concrete Masonry Wall	20
Substation Below-Grade Construction	120
Substation Wiring	90
Telecom	60
Substation Above-Grade Construction	60
Equipment Installation	45
69-kV Riser Pedestal	18
Terminate Underground 69-Kv	18
Controls and Relays	40

Proposed Project Segment	Days (Estimated)
Complete Landscaping	40
Testing	40
Energization (TL 6965)	5
Energization (TL 6910)	5
Cut Over	15
TL 6965	
Roads and Foundation	66
Foundation Installations	30
Pole Installations	60
String Conductor	23
Trench and Conduit	30
Cable Installation	30
TL 6910	
Foundation Installations	45
Pole Installations	10
Trench and Conduit	40
Cable Installation	40
Distribution Getaways	
Underground Trench/Conduit/Substructure	94
Cable Conductor Pulling and Tensioning	38
Existing Substation Modification	
Substation Below-Grade Construction	20
Substation Above-Grade Construction	20
Substation Wiring	20
Relay Testing	20
Existing Substation Side TL 6965 Energization	5
69-kV Substation Cutover	15

Note: Above information represents a best estimate, but is subject to change upon final Proposed Project design and engineering.

Construction equipment would include bulldozers, excavators, loaders, and trucks for compacting, hauling, and final grading. Any soil export or import would be transported on or off the site with street-legal haul trucks. Portable cranes and heavy hauling trucks would be employed for the equipment delivery and installation. Concrete trucks, backhoes, crew trucks, and pick-up trucks would arrive and depart the proposed Salt Creek Substation site during installation of foundations, ground grid, and underground ducts. Crew trucks, boom trucks, and pick-up trucks would arrive and depart from the site daily for construction activities, testing and check-out, final power line tie-ins, and circuit cabling, until the substation is energized. Helicopters could be used for construction of the transmission lines.

It is anticipated that approximately 35 workers would be on-site at the proposed Salt Creek Substation at any one time during construction. A similar number of workers would be employed to install the 69-kV position at the Existing Substation. An additional 15 to 25 workers would be employed to construct the power line (TL 6965) and loop-ins (TL 6965 and TL 6910). Approximately 22 workers would be employed to install distribution line getaways.

Daily transportation of construction workers is not expected to cause a significant effect to air quality, since no more than 35 workers at one time would be in any one location at the peak of construction, and the number of trips generated would be minimal and constitute an insignificant percentage of current daily volumes in the area. (See discussion in Section 4.16, Traffic and Transportation.) Moreover, SDG&E would encourage carpooling.

Construction of the Proposed Project would generate short-term air quality impacts during grading and construction operations. The short-term air quality analysis considers the following temporary impacts from the Proposed Project:

- clearing, grading, excavating, and using heavy equipment or trucks would create large quantities of fugitive dust, and thus PM_{10};
- heavy equipment required for grading and construction would generate and emit diesel exhaust; and
- vehicles transporting commuting construction workers and trucks hauling equipment and materials would generate and emit exhaust.

Construction activities for the Proposed Project were modeled based on the schedule provided in Table 4.3-6. The Proposed Project was modeled using emissions factors from CARB's OFFROAD2007 and EMFAC2011 programs. It was assumed that construction equipment would include a mix of equipment that meets USEPA Tier 2 and USEPA Tier 3 emissions standards.

Variables factored into estimating the total construction emissions include the level of activity, length of construction period, number of pieces and types of equipment in use, site characteristics, weather conditions, number of construction personnel, and the amount of materials transported on-site or off-site. Proposed Project construction emissions findings are presented in Table 4.3-7, Proposed Project Construction Air Emissions. Table 4.3-7 presents an evaluation of the maximum daily emissions associated with the simultaneous construction activities required for the Proposed Project. Maximum daily activities were identified based on a review of the construction schedule to identify simultaneous construction phases. A list of mobile and stationary construction equipment is included in the air quality modeling; refer to Appendix 4.3-A, Air Quality Construction Emissions.

To reduce impacts to the extent possible, SDG&E would implement the following air emissions control measures (set forth in Section 3.8) during construction:

- All unpaved demolition and construction areas shall be wet/watered at least three times daily during construction, and temporary dust covers shall be used to reduce dust emissions and meet SDAPCD Rule 55 requirements.
- SDG&E or its contractor shall keep the construction area sufficiently dampened to control dust caused by construction and hauling, and at all times provide reasonable dust control of areas subject to windblown erosion.
- All loads shall be secured by covering or use of at least 2 feet of freeboard to avoid carry-over.
- All materials transported off-site shall be either sufficiently watered or securely covered.
- All earthmoving or excavation activities shall be discontinued during period of high winds (i.e., greater than 25 mph) to prevent excessive amounts of fugitive dust generation.
- All equipment shall be properly tuned and maintained in accordance with manufacturer specifications.
- SDG&E or its contractor shall maintain and operate construction equipment to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues shall have their engines turned off after 5 minutes when not in use. Construction activities shall be phased and scheduled to avoid emissions peaks, and equipment use shall be curtailed during second-stage smog alerts.
- To the extent possible, power shall be obtained from power poles (the electrical grid) rather than through the use of large generators on-site.
- Low- and non-VOC containing coatings, sealants, adhesives, solvents, asphalt, and architectural coatings shall be used to reduce VOC emissions.
- All areas where construction vehicles are parked, staged, or operating shall be visibly posted with signs stating “No idling in excess of 5 minutes.”
- Catalytic converters shall be installed on all heavy construction equipment, where feasible.
- Deliveries shall be scheduled during off-peak traffic periods to reduce trips during the most congested periods of the day, where feasible.
- Construction sites shall be posted with signs providing a contact number for complaints. All complaints shall be addressed in a timely and effective manner.

Table 4.3-7: Proposed Project Construction Air Emissions

Emissions Source	Pollutant (pounds per day)[1]					
	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$
2014						
Uncontrolled Emissions	25.28	104.28	245.80	0.41	165.35	41.54
Controlled Emissions[2]	25.28	104.28	245.80	0.41	21.65	11.36
SDAPCD Thresholds	75	550	250	250	100	55
Is Threshold Exceeded?	No	No	No	No	No	No
2015						
Uncontrolled Emissions	37.20	173.40	249.32	0.54	14.17	9.67
Controlled Emissions[2]	37.20	173.40	249.32	1.19	11.54	9.12
SDAPCD Thresholds	75	550	250	250	100	55
Is Threshold Exceeded?	No	No	No	No	No	No
2016						
Uncontrolled Emissions	0.76	5.50	5.25	0.01	0.32	0.22
Controlled Emissions[2]	0.76	5.50	5.25	0.01	0.32	0.22
SDCAPCD Thresholds	75	550	250	250	100	55
Is Threshold Exceeded?	No	No	No	No	No	No

ROG = reactive organic gases; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X = sulfur oxides; PM_{10} = particulate matter, up to 10 microns; $PM_{2.5}$ = particulate matter, up to 2.5 microns

Notes:

1. Refer to Appendix 4.3-A, Air Quality Assessment, for assumptions used in this analysis, including quantified emissions reduction by control measures.
2. Controlled emissions calculated assuming standard fugitive dust control measures, including watering the site three times daily, as SDG&E's construction restrictions require.

Fugitive Dust Emissions

Construction activities are a source of fugitive dust (PM10) emissions that may have a substantial, although temporary, impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the Proposed Project area. Fugitive dust emissions are associated with land clearing, excavation, cut and fill, and truck travel on unpaved roadways. Fugitive dust emissions vary substantially from day to day, depending on the level of activity, specific operations, and weather conditions. Fugitive dust from grading and construction is expected to be short-term and would cease when these activities are completed. Additionally, most of this fugitive dust material would be inert silicates, rather than the complex organic particulates released from combustion sources, which are more harmful to sensitive receptors.

Emissions calculations include fugitive dust emissions as part of the site grading and earthmoving activities; refer to Table 4.3-7. However, with implementation of SDG&E's standard construction practices, the Proposed Project would not exceed SDAPCD standards for PM_{10} or $PM_{2.5}$. Measures include adherence to standard construction practices (watering inactive and perimeter areas, track-out requirements, and containing dirt and dust within the Proposed Project area) and compliance with SDAPCD's Fugitive Dust Rule 55.

Construction Equipment and Worker Vehicle Exhaust

Exhaust emissions from construction activities include emissions associated with transporting machinery and supplies to and from the Proposed Project area, emissions produced on-site as the equipment is used, and emissions from trucks transporting fill material to the Salt Creek Substation site. Emitted pollutants would include CO, ROG, NO_X, PM_{10}, and $PM_{2.5}$. As presented in Table 4.3-7, the maximum daily uncontrolled emissions for each year of construction of the Proposed Project would not exceed SDAPCD standards for all pollutants except PM_{10} in 2014. With implementation of standard fugitive dust control measures, including watering the site three times daily, emissions would be below SDAPCD standards for all pollutants. There is no other substantial evidence in the record demonstrating that the Proposed Project would have a significant impact. Therefore, impacts associated with construction would be less than significant.

Toxic Air Contaminants (TACs)

California identifies diesel particulate matter as a TAC. Diesel particulate matter is emitted from on- and off-road vehicles that use diesel as fuel. Following identification of diesel particulate matter as a TAC in 1998, CARB worked on developing strategies and regulations aimed at reducing the emissions and associated risk from diesel particulate matter. The overall strategy for achieving these reductions is found in the Risk Reduction Plan to Reduce Particulate Matter from Diesel-Fueled Engines and Vehicles (CARB 2000).

Construction activities would result in emissions of diesel particulate matter. Sources of diesel particulate matter at the site would include haul trucks, heavy construction equipment, and contractor vehicles. Potential health effects associated with exposure to diesel particulate matter are long-term effects and are evaluated on the basis of a lifetime of exposure (70 years). Because construction activities would move on a daily basis, and because activities would be short-term, emissions would not impact any sensitive receptors for any length of time.

CARB has adopted airborne toxic control measures (ATCMs) applicable to off-road diesel equipment and portable diesel engines rated brake horsepower 50 and greater. The purpose of these ATCMs is to reduce emissions of particulate matter from engines subject to the rule. The ATCMs require diesel engines to comply with particulate matter emissions limitations on a fleet-averaged basis.

CARB has also adopted an ATCM that limits diesel-fueled commercial motor vehicle idling. The rule applies to motor vehicles with gross vehicular weight ratings greater than 10,000 pounds that are licensed for on-road use. The rule restricts vehicles from idling for more than 5 minutes at any location, with exceptions for idling that may be necessary in the operation of the vehicle.

All off-road diesel equipment, on-road heavy-duty diesel trucks, and portable diesel equipment used for the Proposed Project must meet the state's applicable ATCMs for control of diesel particulate matter or NO_X in the exhaust (e.g., ATCMs for portable diesel engines, off-road vehicles, and heavy-duty on-road diesel trucks, and 5-minute diesel engine idling limits) that are in effect during implementation of the Proposed Project. The mobile fleets used in the Proposed Project are expected to be in full compliance with these ATCMs. This will ensure that pollutant emissions in diesel engine exhaust do not exceed applicable state or federal air quality standards.

Operation and Maintenance – No Impact

As shown in Table 4.3-8, Criteria Air Pollutant Emissions from Operation and Maintenance, operation and maintenance of the Proposed Project would not result in criteria air pollutant emissions and, therefore, would not result in any impacts related to existing air quality standards. As a result, there would be no air quality impact associated with operation and maintenance of the Proposed Project.

Table 4.3-8: Criteria Air Pollutant Emissions from Operation and Maintenance

Emissions Source	Pollutant (pounds per day)[1]					
	ROG	**CO**	**NO_X**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Operational (Vehicle)	0.25	3.64	0.48	0.00	0.12	0.06
Air District Threshold	75[2]	550	250	250	100	55[2]
Is Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:

1. Emissions were calculated using emissions factors from the EMFAC2011 Model, which is CARB's latest model for on-road emissions.
2. The APCD does not have thresholds of significance for ROG or $PM_{2.5}$. The analysis uses the ROG and $PM_{2.5}$ thresholds from the South Coast Air Quality Management District.

Question 4.3c – Cumulatively Considerable Criteria Pollutant Increases

Construction – Less-than-Significant Impact

As shown in Table 4.3-7, Proposed Project Construction Air Emissions, construction of the Proposed Project would lead to a small increase in nonattainment criteria air pollutants. SDG&E standard construction practices include minimizing vehicle idling time and controls for dust emissions to reduce construction impacts. There is no other substantial evidence in the record demonstrating that the Proposed Project would have a cumulatively considerable impact. As a result, impacts due to nonattainment criteria pollutant increases would be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Operational emissions were simulated using the URBEMIS model, assuming default traffic estimates of daily commutes for the Proposed Project instead of limiting traffic to periodic site visits for maintenance, as may be the case. Therefore, the emissions estimates presented in Table 4.3-8, Criteria Air Pollutant Emissions from Operation and Maintenance, represent emissions levels that are overly conservative and unlikely to be approached by the Proposed Project. These increases in criteria air pollutants are significantly less than those projected for the construction phase, and are well below the acceptable significance thresholds. As a result, criteria air pollutant increases due to operation and maintenance of the Proposed Project would be considered less than cumulatively considerable and impacts would therefore be considered less than significant.

Question 4.3d – Sensitive-Receptor Exposure

Construction – Less-than-Significant Impact

The Salt Creek Substation site is characterized by a mixture of single-family and multi-family residential, recreation, and open space uses, adjacent to and southeasterly of Hunte Parkway, where SDG&E's Transmission Corridor crosses Hunte Parkway. An approximately 5-mile-long overhead 69-kV transmission line would be constructed from the Existing Substation extending southerly to the proposed Salt Creek Substation. The Transmission Corridor to the Existing Substation crosses through an area that includes primarily residential uses. The Existing Substation site is located in an undeveloped area east of SR-125. Although sensitive receptors were identified within a 1-mile radius of the Proposed Project's components, impacts to these receptors would be less than significant with implementation of SDG&E's standard construction practices. These practices include reducing idling time and implementing dust-control measures. Therefore, impacts to sensitive receptors during Proposed Project construction would be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Emissions resulting from operation and maintenance activities associated with the Proposed Project were calculated using the EMFAC2011 Model; refer to Table 4.3-8*,* Estimated Operation and Maintenance Emissions. As indicated, operations and maintenance activities associated with the Proposed Project would not emit substantial amounts of pollutants that would result in exposure of sensitive receptors to substantial pollutant concentrations; therefore, operations and maintenance activities would have a less-than-significant impact to sensitive receptors.

Question 4.3e – Odor

Construction – Less-than-Significant Impact

Construction activity for the proposed Salt Creek Substation may generate detectable odors from heavy-duty equipment exhaust. Potential odors generated during construction would be temporary and would be limited by the relatively small number of vehicles on-site, small graded area, and distance from any sensitive receptors. As discussed above, the proposed Salt Creek Substation site is located south of Hunte Parkway, TL 6965 and TL 6910 loop-in are located in the vicinity of SR-125, and the Existing Substation site is also located near SR-125. These roads are a source of combustion odors that would be more than the temporary construction activities at the site. Therefore, impacts would be less than significant.

Operation and Maintenance – No Impact

Operations and maintenance activities associated with the Proposed Project would not result in detectable odors. As such, no impact would occur.

4.3.5 Project Design Features and Ordinary Construction/Operations Restrictions

With implementation of the ordinary construction restrictions, as outlined within Section 3.8, Project Design Features and Ordinary Construction/Operations Restrictions, potential impacts related to air quality would be less than significant.

4.3.6 Applicant-Proposed Measures

Because air quality impacts would be less than significant, no APMs are required or proposed.

4.3.7 Detailed Discussion of Significant Impacts

Based on the above analyses, no significant impacts have been identified for the Proposed Project, and no APMs are required or proposed. No operational APMs are required or proposed.

4.3.8 References

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4.4 Biological Resources

Would the project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	❒	☑	❒	❒
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	❒	❒	☑	❒
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	❒	❒	❒	☑

Would the project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
d. 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?	❐	❐	❐	☑
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	❐	❐	❐	☑
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	❐	❐	❐	☑

4.4.1 Introduction

The purpose of this section is to document existing biological resources within the Proposed Project area and to assess impacts to biological resources, including wetlands, that may potentially occur as a result of Proposed Project implementation, including short-term construction activities and long-term operation and maintenance. In addition, this section reviews the Proposed Project for potential biological impacts with regard to consistency with plans or policies pertaining to biological resource protection. The Proposed Project consists of the following main components: construction and operation of the proposed Salt Creek Substation, modifications to the Existing Substation, construction and operation of a 5-mile-long power line along an existing Transmission Corridor (referred to herein as the “Transmission Corridor”) between the Existing Substation south to the proposed Salt Creek Substation, and three staging yards in the City of Chula Vista (Figure 3.3). Five potential alternative staging yards identified within the OTC 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 Proposed Project will incorporate the standard set of operational protocols, avoidance and minimization measures, and mitigation set forth in SDG&E's Subregional NCCP to avoid and minimize potential impacts that may occur to biological resources during construction and upon operation of the Proposed Project (see Appendix 4.4-A, Biological Resources Technical Report). The SDG&E Subregional NCCP is a Habitat Conservation Plan (HCP) permitted under Section 10A of the federal ESA for incidental take and an NCCP permit under a management authorization pursuant to Section 2835 of the California Fish and Game Code (CFGC). SDG&E entered into an Implementation Agreement with USFWS and CDFW for the management and conservation of multiple species and their associated habitats as established according to the federal and state ESAs and the state's NCCP Act. Through the avoidance of resources, application of protective measures and mitigation outlined in the SDG&E Subregional NCCP, and the SDG&E Enhancement and Monitoring Program, the Proposed Project's impacts to biological resources would remain less than significant.

4.4.2 Methodology

Surveys and assessments to inventory and evaluate biological resources were conducted within the Biological Study Area (BSA) during 2011, 2012, and 2013. The BSA is composed of an existing Transmission Corridor (that contains an existing wood and steel 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 (Figures 4.4-1a through 4.4-1c). The BSA encompasses approximately 775 acres. 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.

Prior to conducting field surveys, a search of the California Natural Diversity Database (CNDDB) (CDFW 2012a) 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. 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 ESA (CDFW 2011a).
- CDFW Species of Special Concern (SSC) (CDFW 2011b; Jennings and Hayes 1994).
- CDFW fully protected species (CDFW 2011b).
- Covered as a state protected furbearing mammal (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 Native Plant Protection Act (NPPA), CFGC Section 1901 or the California ESA, or CFGC Sections 2050 through 2098 (California ESA).

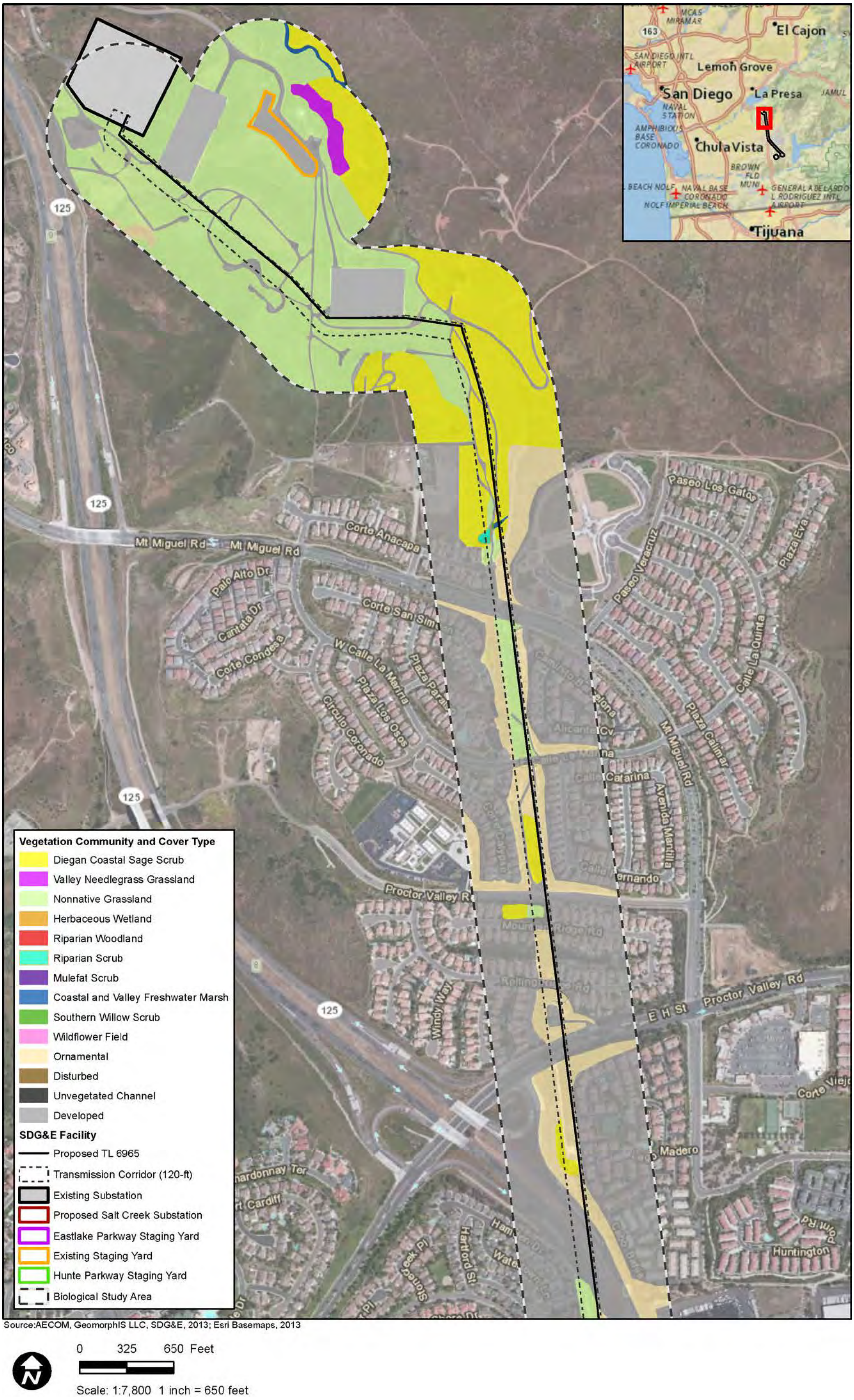
- CRPR List 3: plants for which more information is needed (a review list), or List 4: plants of limited distribution (watch list) (CNPS 2012).
- Covered under the SDG&E Subregional NCCP (SDG&E 1995).

Data regarding biological resources within the existing Transmission Corridor, staging yards, and proposed Salt Creek Substation BSAs were obtained through general habitat reconnaissance surveys, followed by focused surveys for sensitive species. Based on the database analysis and reconnaissance surveys, it was determined that focused surveys would be required for sensitive plant species; 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); and for western burrowing owl (*Athene cunicularia hypugaea*) (WBO), a California Species of Concern. A jurisdictional delineation and assessment for regulated "waters of the U.S." and state was also completed.

Between March and July 2011, AECOM conducted vegetation mapping 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 the proposed Salt Creek Substation, Transmission Corridor, and staging yards. In March 2013, follow-up visits were conducted by David Faulkner within the previous QCB survey areas to assess the suitability of habitat for QCB. General wildlife surveys occurred concurrently with focused protocol surveys during 2011 and 2012. 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. AECOM biologists incidentally recorded wildlife sign, track, and direct observations during focused protocol surveys. 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 current substation footprint, which consists of paved and gravel-covered areas surrounded by a chain-link fence.

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 the following sections have been truncated to the BSA; however, sensitive species results are presented for the BSA and areas surveyed outside of the current BSA, which yields a more comprehensive and thereby conservative analysis. The survey methods for all general and focused surveys, including a list of the survey personnel and dates for each survey, survey results, and potential impacts, are provided in a Biological Technical Report prepared for the Proposed Project and included as Attachment 4.4-A.

Figure 4.4-1a: Vegetation Communities and Cover Types within the Biological Study Area



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

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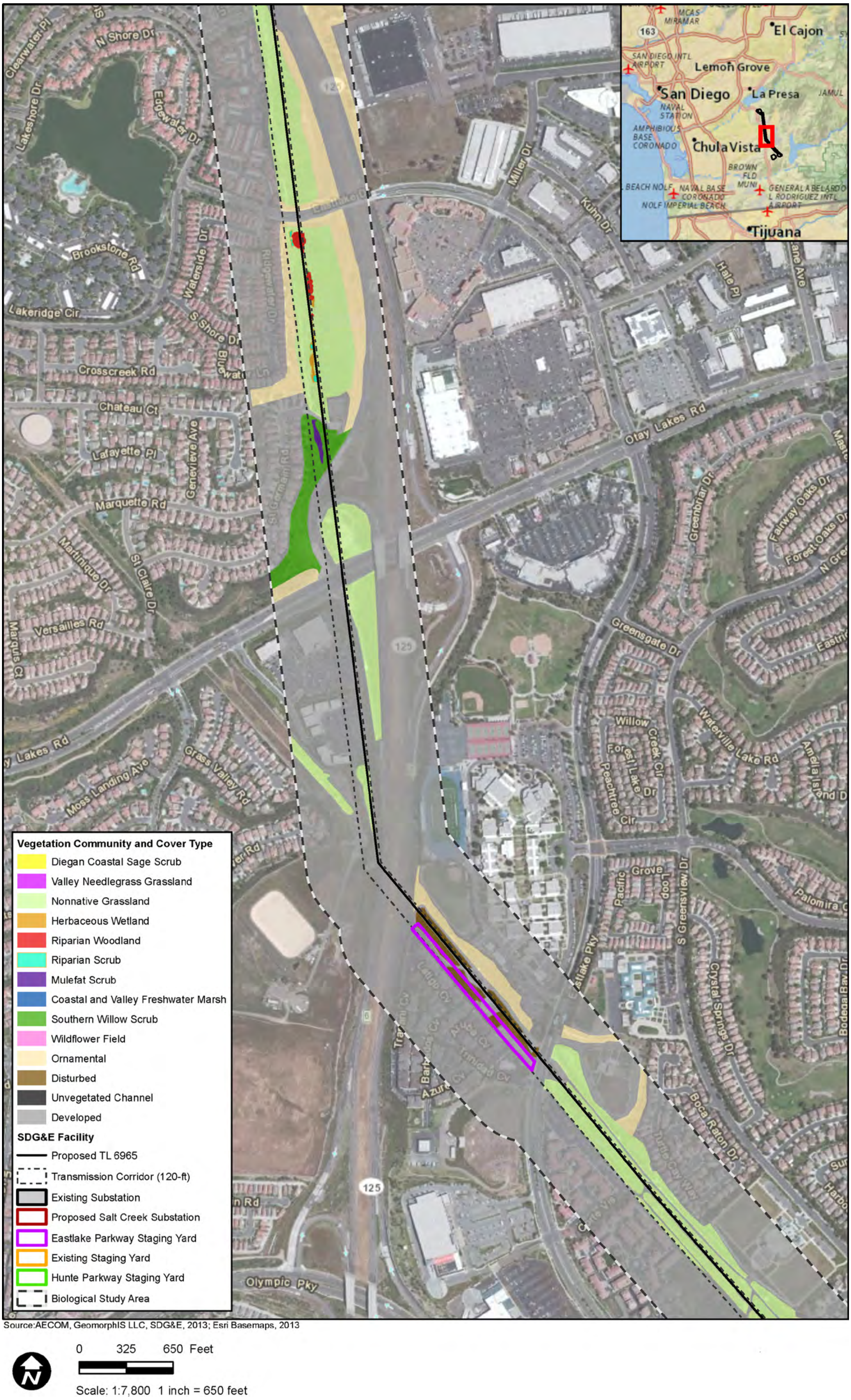
Figure 4.4-1b: Vegetation Communities and Cover Types within the Biological Study Area



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

0 325 650 Feet

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

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

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Figure 4.4-1c: Vegetation Communities and Cover Types within the Biological Study Area

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

0 325 650 Feet

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

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

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4.4.2.1 Vegetation Mapping and Habitat Suitability Surveys

Vegetation mapping was conducted within the proposed Salt Creek Substation site and a 500-foot buffer around the site in March, April, and June 2011. Vegetation mapping was conducted within the Transmission Corridor; Existing Substation, 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 area. Habitats were classified based on the dominant and characteristic plant species in accordance with vegetation community classifications following Holland (1986), as modified by Oberbauer et al. (2008). Vegetation mapping was completed using 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 ArcGIS software.

4.4.2.2 Jurisdictional Delineation

Prior to field surveys, a pre-survey investigation was conducted to obtain contextual information relevant to the site to be surveyed; this may not be evident from the ground during field surveys. 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 (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.

A reconnaissance-level jurisdictional waters assessment was completed within the 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 proposed Salt Creek Substation site. The assessment followed the guidelines set forth by the 1987 U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual and the 2008 Regional Supplement to the USACE Wetland Delineation Manual: Arid West Region, Version 2.0 (Environmental Library 1987, 2008). The assessment was performed by AECOM and RECON on March 21, 2012, and April 27, 2012, respectively. 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 site. 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 Transmission Corridor bounded by Eastlake Drive to the north and Otay Lakes Road to the south by RECON on April 27, 2012. During the field assessment, spatial and tabular data were collected using a handheld submeter-accuracy GPS unit. Field-collected spatial and tabular data were exported to ArcGIS software to map the type, location, and extent of potential jurisdictional waters.

Areas meeting the criteria for jurisdiction under 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. 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. Detailed survey methods and results of this assessment are presented in the jurisdictional delineation report included as an appendix in the Biological Technical Report (Appendix 4.4-A).

4.4.2.3 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 (CDFW 2009)[3]; 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.

The rare plant surveys were conducted by walking meandering transects through the BSA, recording all plant species observed, and mapping rare plants 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 the 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 methods and results of the rare plant survey conducted in the Transmission Corridor and proposed Salt Creek Substation BSA are presented in two reports: Rare Plant Survey Report for the Proposed Salt

[3] This document replaced the CDFW document *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities*.

Creek 69kV Transmission Line Installation Project, Chula Vista, California (AECOM 2012a), and the Vegetation and Rare Plant Summary Report for the Proposed Salt Creek Substation for SDG&E (AECOM 2011a), respectively. These reports are included as appendices in the Biological Technical Report (Attachment 4.4-A).

4.4.2.4 Focused Protocol Surveys for Quino Checkerspot Butterfly

Habitat assessments to identify suitable habitat were conducted prior to initiating protocol-level surveys following the current protocols for the species (USFWS 2002). Approximately 220 acres of nonnative grassland and coastal sage scrub were surveyed within the BSA in 2011 and 2012.

Focused presence/absence surveys for QCB were conducted within the proposed Salt Creek Substation and 500-foot survey buffer between March 14 and April 20, 2011, and within the Transmission Corridor, staging yards, and a 500-foot survey buffer between February 17 and March 30, 2012. Detailed methods and results of the focused QCB surveys, including the names and permit numbers of the permitted biologists who conducted the surveys, are presented in two 45-day summary reports. Results of the Transmission Corridor survey are presented in 45-Day Summary Report of 2012 Focused Surveys for the Quino Checkerspot Butterfly for the Proposed 69kV Transmission Line Installation Project for SDG&E (AECOM 2012b). Results of the proposed Salt Creek Substation survey are in 45-Day Summary Report of Focused Surveys for the Quino Checkerspot Butterfly for the Proposed Salt Creek Substation for SDG&E (AECOM 2011b). These reports are included as appendices in the Biological Technical Report (Attachment 4.4-A).

On March 13 and 16, 2013, follow-up visits were conducted by David Faulkner 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).

4.4.2.5 Focused Protocol Surveys for Coastal California Gnatcatcher

Due to the presence of suitable habitat for CAGN, including coastal sage scrub habitat, focused presence/absence surveys were determined necessary for approximately 54 acres within the BSA. Since the Proposed Project is covered by SDG&E's NCCP (SDG&E 1995), a minimum of three surveys were conducted at least 1 week apart between February 15 and August 30 to determine the presence/absence of CAGN. Protocol-level surveys were conducted between April 20 and June 24, 2011, in all suitable CAGN habitat within the proposed Salt Creek Substation site and 500-foot buffer zone. Protocol-level surveys were conducted 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 components.

Protocol surveys followed the current USFWS survey protocol for the species (USFWS 1997). 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 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.

Detailed methods and results of the focused CAGN surveys, including the names and permit numbers of the permitted biologists who conducted the surveys, are presented in two 45-day summary reports. Results of the 2011 survey within the Transmission Corridor are presented in 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 2012c). Results for the proposed Salt Creek Substation are in 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 2011c). These reports are included as appendices in the Biological Technical Report (Attachment 4.4-A).

4.4.2.6 Focused Protocol Surveys for Least Bell's Vireo

Due to the presence of suitable habitat for LBV, including riparian scrub habitat in the vicinity of the proposed Salt Creek Substation, focused surveys for LBV were determined necessary in riparian scrub habitat totaling approximately 1 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 BSA were surveyed eight times, at least 10 days apart, during the LBV breeding period (April 10 through July 31). No surveys were conducted for this species within the Transmission Corridor, staging yards, or other Proposed Project areas, as suitable habitat is not present.

Detailed methods and results of the focused LBV surveys, including the names and permit numbers of the permitted biologists who conducted the 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). This report is included as an appendix in the Biological Technical Report (Appendix 4.4-A).

4.4.2.7 Focused Protocol Surveys for Western Burrowing Owl

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. A total of 269 acres of suitable WBO habitat occur within the BSA. Surveys in 2011 were performed in May, June, July, and December for the proposed Salt Creek Substation according to the protocol established by the California Burrowing Owl Consortium (CBOC 1993) and accepted by CDFW.

Surveys in 2012 were performed for the Transmission Corridor, staging yards, and a 500-foot survey buffer around these Proposed Project components. 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 was conducted on July 4 and 5, 2012. Protocols for conducting focused WBO surveys released by the California Burrowing Owl Consortium (CBOC)

(1993) were recently updated by CDFW (2012b). The updated survey protocols were generally followed in 2012; however, 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)." Additionally, the CDFW survey guidelines suggest that surveys between morning civil twilight and 10 a.m., and 2 hours before sunset until evening civil twilight provide the highest detection probabilities; however, due to mild daily temperatures, surveys extended beyond 10 a.m.

Detailed methods and results of the 2011 survey within the proposed Salt Creek Substation are presented in the Western Burrowing Owl Presence/Absence Surveys for the Proposed Salt Creek Substation for SDG&E (AECOM 2011e). Detailed methods and results of the 2012 survey within the Transmission Corridor are presented in the Western Burrowing Owl Presence/Absence Surveys for the Transmission Line Installation Project, Chula Vista, California (AECOM 2012d). These reports are included as appendices in the Biological Technical Report (Attachment 4.4-A).

4.4.3 Existing Conditions

4.4.3.1 Regulatory Background

Federal

Federal Endangered Species Act

The federal ESA of 1973 (50 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 federal ESA. As development is proposed, the responsible agency or individual landowner is required to submit to a formal consultation with USWFS 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 an HCP, such as SDG&E's Subregional NCCP.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S. Code [USC] 703 et seq.) is a federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The number of bird species covered by the MBTA is extensive and is listed at 50 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 as 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).

Clean Water Act of 1972

Pursuant to Section 404 of the CWA, 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 USEPA, has the principal authority to issue CWA Section 404 permits.

Pursuant to Section 401 of the CWA, 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.

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.

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.

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."

State

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 SSC based on limited distribution; declining populations; diminishing habitat; or unusual scientific, recreational, or educational value. 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 CFGC) 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, which address habitat conservation and management on an ecosystem basis rather than one species or habitat at a time.

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 Section 4700 of the CFGC, the possession or taking of fully protected species is only allowed as provided in Section 2081.7 and 2835 of the CFGC.

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 the applicant is the Lake or Streambed Alteration Agreement.

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

Within California, fish, wildlife, and native plant resources are protected and managed by CDFW. The California Fish and Wildlife 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, protection of birds of prey is provided for in Sections 3503, 3513, and 3800 of the CFGC.

Native Plant Protection Act

The NPPA was adopted in 1977 (CFGC Sections 1900–1913) to preserve, protect, and enhance rare and endangered plants. CDFW is responsible for administering the NPPA, and the Fish and Wildlife Commission has the authority to designate native plants as "endangered" or "rare" and to provide measures to avoid take.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act provides for statewide coordination of water quality regulations. The SWRCB was established as the statewide authority, and nine separate RWQCBs were developed to oversee water quality on a day-to-day basis.

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 U.S.' will not violate water quality standards," pursuant to Section 401. Water Quality Certification must be based on the finding that the 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

Section 404 does not apply. "Waste" is partially defined as any waste substance associated with human habitation, including fill material discharged into water bodies.

Regional and Local Plans

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 that 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 and 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 federal- and state-listed species and Covered Species. The Proposed Project falls within the area in which SDG&E's utility operations are governed by the SDG&E Subregional NCCP, which would be applied to the Proposed Project. The NCCP is limited to new electric substations that will 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 4.4.4, Potential 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 federal- 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 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."

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 on 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. The BSA is within the City of Chula Vista's Subarea and MSCP Planning Area.

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 CEQA process. The process provides an evaluation of wetlands avoidance and minimization, and ensures compensatory mitigation within the Chula Vista Subarea or Chula Vista Planning Area for unavoidable impacts to wetlands, thereby achieving no overall net loss of wetlands.

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.

4.4.3.2 Physical Setting of Proposed Project

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 site is primarily flat with a gentle slope across the site from north (510 amsl) to south (430 amsl). Manufactured slopes rise up to Hunte Parkway at 535 amsl, which lies along the northern perimeter of the proposed Salt Creek Substation site. The proposed Salt Creek Substation site is composed primarily of nonnative grassland, Diegan 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.

4.4.3.3 Existing Biological Resources within the Biological Study Area

Vegetation Communities and Cover Types

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 the Biological Technical Report prepared for this Proposed Project follow those of Holland (1986), as modified by Oberbauer et al. (2008). Descriptions of these vegetation communities and other cover types are provided in the following discussion.

Fourteen vegetation communities and other cover types were identified within the Transmission Corridor, staging yards, proposed Salt Creek Substation site, 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 4.4-1a through 4.4-1c depict the locations of vegetation communities, and Table 4.4-1 provides a summary of the acreages of vegetation communities and other cover types within the BSA.

Riparian and Wetlands

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 Substation staging yard. Another small area of coastal and valley freshwater marsh is located in the extreme southern portion of the BSA, south of the proposed Salt Creek Substation site. These areas are approximately 0.45 acre and are permanently inundated by fresh water, which flows from small ponds located outside of the BSA. These communities consist of monotypic stands of southern cattail (*Typha domingensis*).

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*).

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 typically associated with coastal and valley freshwater marsh (*Typha*, *Scirpus*, and *Juncus*).

Table 4.4-1: Vegetation Communities/Land Cover Types within the BSA[1]

Vegetation Communities and Other Cover Types	Proposed Salt Creek Substation (Acres)	Transmission Corridor (Acres)	Staging Yards (Acres)	500-Foot Buffer (Acres)	Total (Acres)
Riparian and Wetland					
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
Total Riparian and Wetland	*0.13*	*2.09*	*0.00*	*5.18*	*7.40*
Upland					
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
Total Upland	*7.99*	*43.59*	*23.40*	*177.95*	*252.93*
Other Cover Types					
Disturbed Habitat	2.42	1.23	0.55	1.90	6.10
Landscape/Ornamental	-	5.67	0.05	51.91	57.63
Urban/Developed	1.10	20.88	2.90	426.30	451.18
Total Other Cover Types	*3.52*	*27.78*	*3.50*	*480.11*	*514.91*
Total	**11.64**	**73.46**	**26.90**	**663.24**	**775.24**

[1] Values may not sum due to rounding.

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.

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 mostly of 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 salt cedar (*Tamarix ramosissima*), mulefat, red willow (*Salix laevigata*), and southern cattail.

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*).

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 proposed 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, and southern cattail. Approximately 4.37 acres consisting of southern willow scrub occurs within the BSA.

Unvegetated Channel

Approximately 0.64 acre 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% cover of herbaceous species and less than 10% cover by tree or shrub species).

Uplands

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 BSA include lemonade berry (*Rhus integrifolia*), deerweed (*Acmispon glaber*), and wild cucumber (*Marah macrocarpa*).

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.

Valley Needlegrass Grassland

Valley needlegrass grassland, designated as rare on the CNDDB, 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*).

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*).

Other Cover Types

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 Corridor, and within and adjacent to the Eastlake Parkway staging yard. 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. This land cover type contains about 20% bare ground.

Ornamental/Landscape

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.

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.

Jurisdictional Waters and Wetlands

As presented in Table 4.4-2, a total of 0.81 acre of potential jurisdictional waters were identified during jurisdictional reconnaissance-level field assessments conducted within the proposed Salt Creek Substation, 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 the 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 4.4-2a through 4.4-2c.

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).[4]

The feature identified as coastal and freshwater marsh, north of the Existing Substation staging yard (Figure 4.4-2a), 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.

[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).

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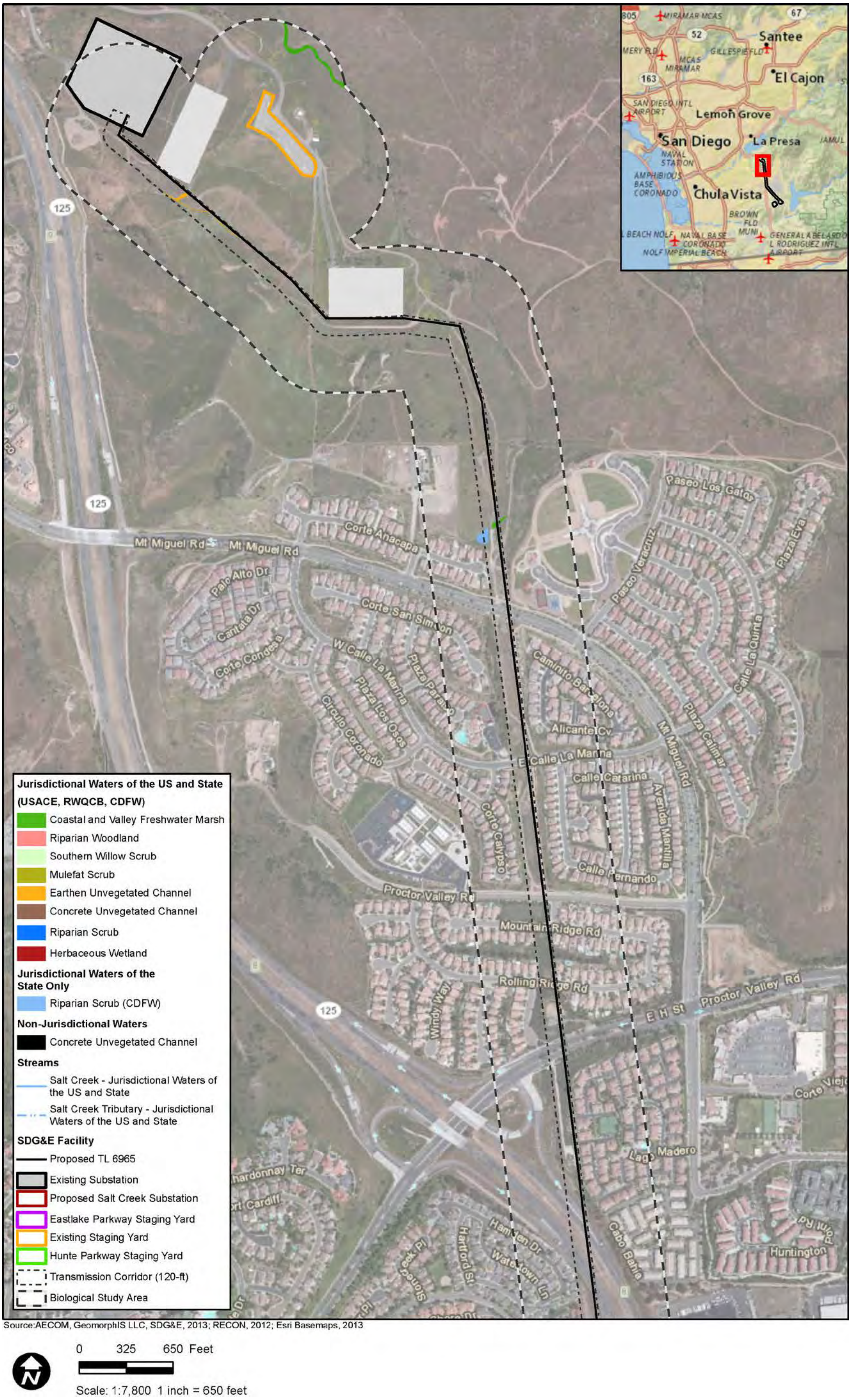
Figure 4.4-2a: Wetlands and Jurisdictional Waters within the Biological Study Area



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

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

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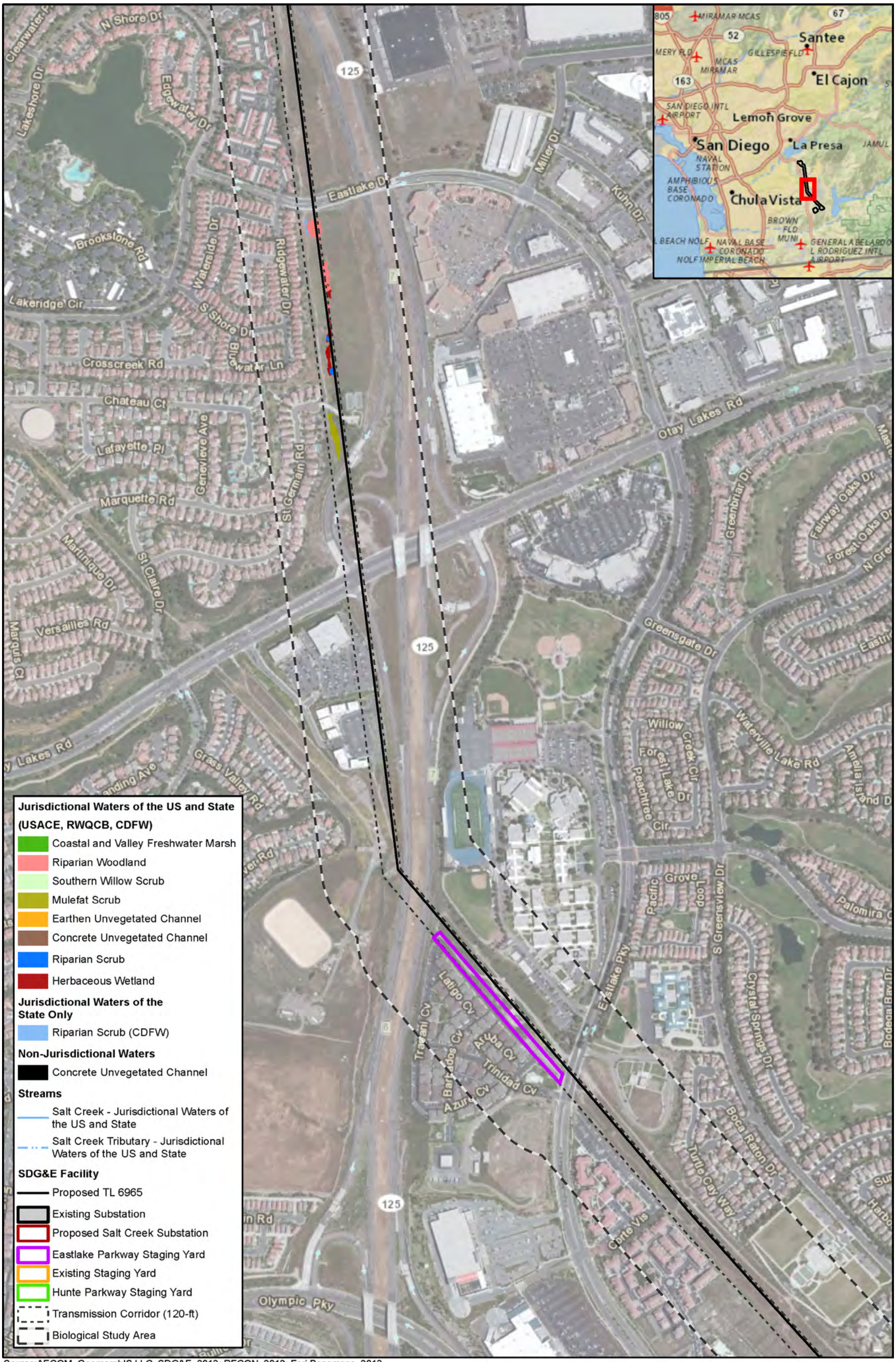
Figure 4.4-2b: Wetlands and Jurisdictional Waters within the Biological Study Area



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

0 325 650 Feet

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

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

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Figure 4.4-2c: Wetlands and Jurisdictional Waters within the Biological Study Area

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

0 325 650 Feet

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

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

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Table 4.4-2: 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 provided for linear aquatic features only.

The drainage feature that was mapped between Eastlake Drive and Otay Lakes Road (Figure 4.4-2b) flows south into Telegraph Creek. 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 south of Eastlake Drive 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 (Figure 4.4-2b).

Features identified as unvegetated concrete channels within the proposed Salt Creek Substation site were constructed wholly in uplands and collect storm water (Figure 4.4-2c). These constructed drainage features, along previously disturbed and contoured areas on-site, appear to have been installed for erosion control and storm water conveyance purposes, and are non-jurisdictional features (both state and federal).

Special-Status Plant Species

This section discusses plant species detected within the BSA or with potential to occur within the BSA. 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 of the Biological Technical Report, Attachment 4.4-A). Thirteen special-status plant species were observed within the BSA (Table 4.4-3 and Figures 4.4-3a through 4.4-3d). 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 4.4-3). A discussion of the 13 special-status plant species detected within the BSA is presented below. A comprehensive list of all plant species, special-status and non-special-status, that were detected during the rare plant and vegetation mapping surveys within the BSA are included in the Biological Technical Report (Attachment 4.4-A).

Federally Listed Plant Species

Otay tarplant

Otay tarplant (*Deinandra [=Hemizonia] conjugens*) 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 up to approximately 20 inches in height and has aromatic deep green or gray-green leaves covered with soft shaggy hairs and seven to 10 yellow ray flowers and 13 to 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.

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. The majority of individuals were concentrated in the northern portion of the Transmission Corridor and buffer, from the Existing Substation area south until the Mountain Ridge Road crossing (just south of Proctor Valley Road) (Figure 4.4-3a). Several additional individuals were mapped in a small area in the buffer of the southern portion of the Transmission Corridor, just south of Hunte Parkway (Figure 4.4-3d).

State-Listed Plant Species

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

Other Special-Status Plant Species

California adolphia

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.

Eleven individuals of California adolphia were observed in the buffer on the northern end of the BSA near the Existing Substation. Ten plants were mapped as a polygon just south of the Existing Substation, and a single plant was mapped just to the east of the Existing Substation, in coastal sage scrub (Figure 4.4-3a).

San Diego sunflower

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.

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 4.4-3a and 4.4-3d). Plants occur within coastal sage scrub and grassland on-site, and are especially numerous in areas of recent disturbance. A comparison of 2012 results (AECOM 2012a) with the survey results for the 2011 special-status plant survey (AECOM 2011a) 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.

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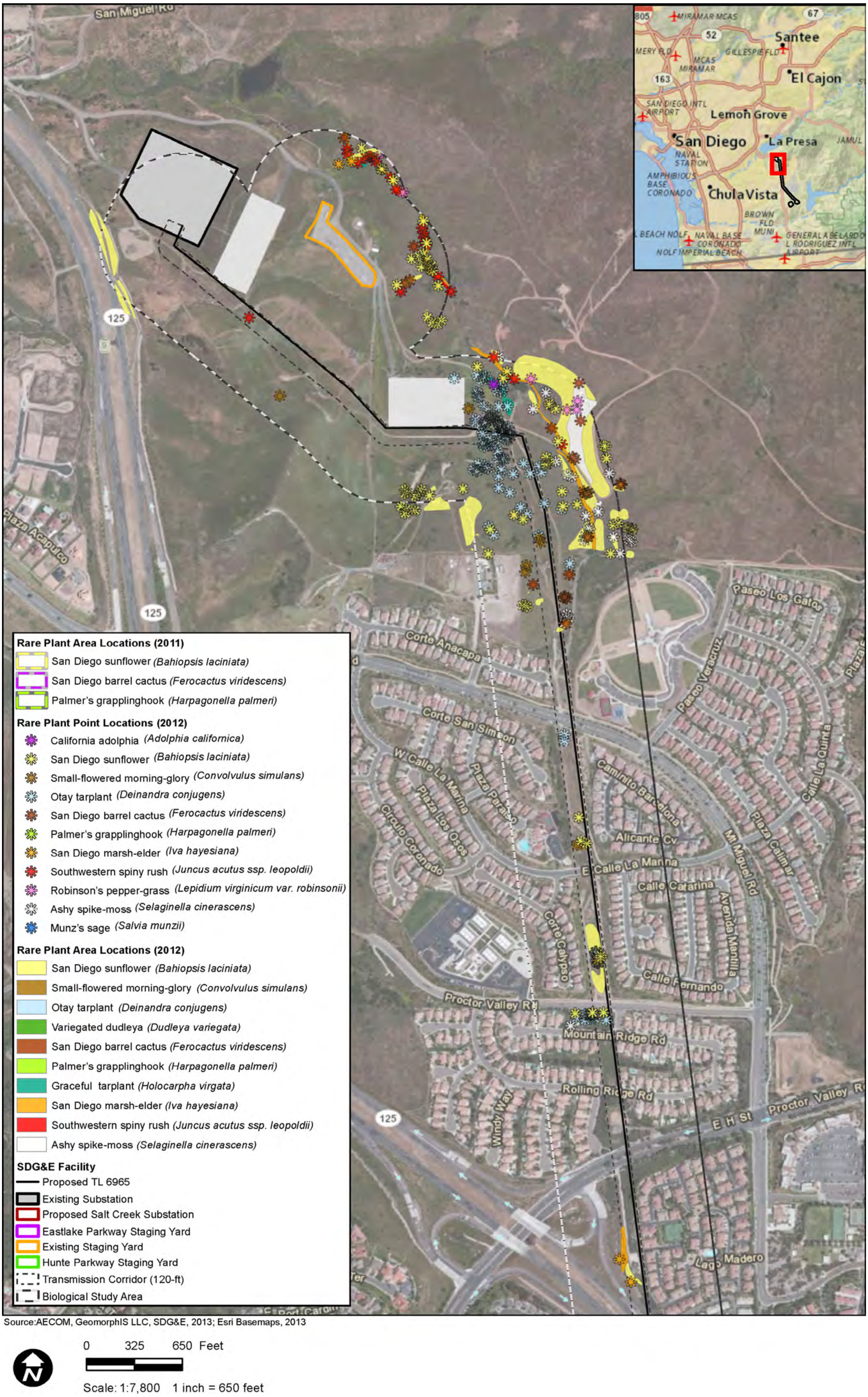
Figure 4.4-3a: Special-Status Plant Species within the Biological Study Area



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

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Figure 4.4-3b: Special-Status Plant Species within the Biological Study Area

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

0 325 650 Feet

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

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

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Figure 4.4-3c: Special-Status Plant Species within the Biological Study Area

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

0 325 650 Feet

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

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

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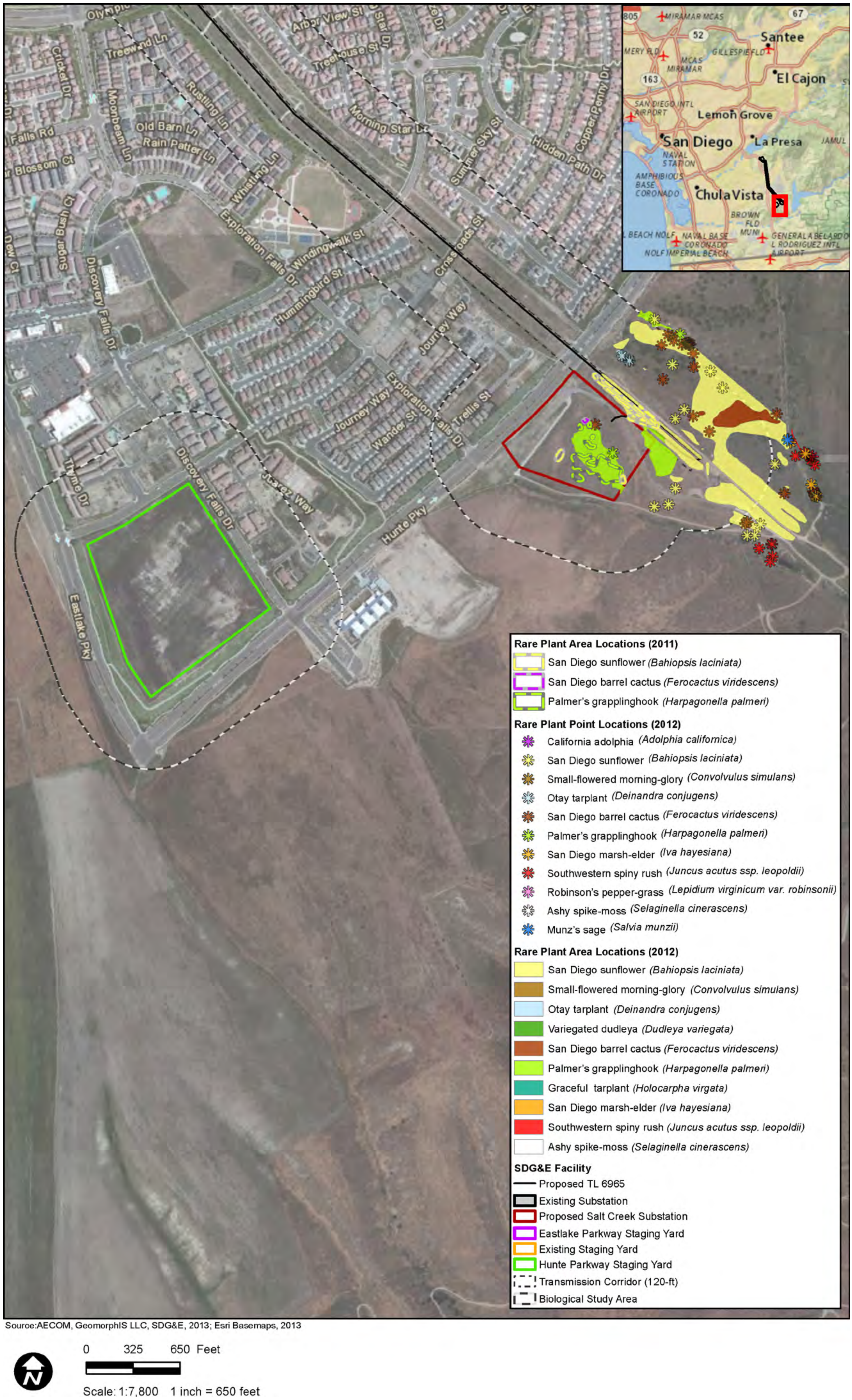
Figure 4.4-3d: Special-Status Plant Species within the Biological Study Area



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

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Table 4.4-3: Special-Status Plant Species Observed or With the Potential to Occur Within 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 *Acanthomintha ilicifolia*	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 *Adolphia californica*	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 bursage *Ambrosia chenopodiifolia*	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 *Ambrosia monogyra*	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 *Ambrosia pumila*	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 *Artemisia palmeri*	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

Species	Status[1]	Primary Habitat Associations/Life Form/Blooming Period	Potential to Occur/Comments	Substation	Transmission Corridor	Buffer
				Findings[2]		
Coulter's saltbush *Atriplex coulteri*	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 *Atriplex pacifica*	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
San Diego County sunflower *Bahiopsis* [=*Viguiera*] *laciniata*	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 *Bloomeria clevelandii*	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 *Brodiaea orcuttii*	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

Species	Status[1]	Primary Habitat Associations/Life Form/Blooming Period	Potential to Occur/Comments	Substation	Transmission Corridor	Buffer
				Findings[2]		
Brewer's calindrinia *Calandrinia breweri*	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 *California macrophylla*	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 *Camissoniopsis lewisii*	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 *Convolvulus simulans*	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
Otay tarplant *Deinandra* [=*Hemizonia*] *conjugens*	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 *Dichondra occidentalis*	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

Species	Status[1]	Primary Habitat Associations/Life Form/Blooming Period	Potential to Occur/Comments	Substation	Transmission Corridor	Buffer
				Findings[2]		
Variegated dudleya *Dudleya variegata*	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 *Ferocactus viridescens*	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 the northern and southern regions of the BSA.	P	P	P
Palmer's grapplinghook *Harpagonella palmeri*	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 *Holocarpha virgata* ssp. *elongate*	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 *Iva hayesiana*	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 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]		
Southwestern spiny rush *Juncus acutus* spp. *leopoldii*	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
Robinson's pepper grass *Lepidium virginicum* var. *robinsonii*	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 BSA.	ND – L	ND – L	P
Munz's sage *Salvia munzii*	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 *Selaginella cinerascens*	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 *Senecio aphanactis*	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 *Stemodia durantifolia*	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

Species	Status[1]	Primary Habitat Associations/Life Form/Blooming Period	Potential to Occur/Comments	Substation	Transmission Corridor	Buffer
				Findings[2]		
San Diego County needlegrass *Stipa diegoensis*	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 *Xanthisma* [=*Macharantha juncea*] *juncea*	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

[1] 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 (more than 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

[2] Findings:
P (present) – Species detected during Proposed Project surveys
ND (not detected) – Species not detected during Proposed 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

Small-flowered morning-glory

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. Several small occurrences of small-flowered morning glory were mapped in the Transmission Corridor and buffer, generally in the northern portion of the BSA (Figure 4.4-3a). A total of 178 individuals were mapped, generally in points of one to a few individuals, on clay soils in grasslands.

Variegated dudleya

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.

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 Transmission Corridor, just south of Hunte Parkway (Figure 4.4-3d).

San Diego barrel cactus

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.

San Diego barrel cactus was mapped in the northern and southern areas of the BSA, generally in coastal sage scrub (Figures 4.4-3a and 4.4-3d). 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 2011a), have rooted into the ground through the decaying pots.

Palmer’s grapplinghook

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, although 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.

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 proposed Salt Creek Substation footprint and buffer area (Figure 4.4-3d). A total of 1,065,044 individuals were estimated to be present via a quadrat sampling method. This number is slightly less than the approximately 1.2 million plants observed during 2011 surveys (AECOM 2011a), despite the approximately 2.17 additional occupied acres mapped in 2012. Population sizes of annual plants such as Palmer's grapplinghook are known to fluctuate widely from year to year with fluctuations in rainfall and temperature, among other factors.

Graceful tarplant

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.

A total of 13,061 graceful tarplant individuals were mapped in the buffer of the Transmission Corridor. 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 4.4-3a).

San Diego marsh elder

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.

Within the BSA, it grows in nearly uninterrupted thickets along the perennial stream traversing the eastern edge of the Proposed Project area in the north, and along Salt Creek in the south (Figure 4.4-3a and 4.4-3d). 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 1,860 plants.

Southwestern spiny rush

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.

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. Two individuals were observed in an ephemeral channel on the north end of the Proposed Project area, just south of the Existing Substation (Figures 4.4-3a and 4.4-3d).

Robinson's pepper-grass

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 Baja California, Mexico. Although Robinson's pepper-grass is now thought by leading authorities to be a synonym of the non-sensitive *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.

A total of 37 individuals were mapped in the buffer of the northern and southern ends of the BSA (Figures 4.4-3a and 4.4-3d).

Munz's sage

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.

Two individuals of Munz's sage were mapped in the buffer of the southeastern region of the BSA, in coastal sage scrub (Figure 4.4-3d).

Ashy spike-moss

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.

Ashy spike-moss was mapped in the buffer of the easternmost portions of the northern end of the BSA, in coastal sage scrub (Figure 4.4-3a). It is difficult to estimate the number of plants at a particular location, since it grows as 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.

Special-Status Wildlife Species

Twenty-five special-status wildlife species were observed or have low, moderate, or high potential to occur in the BSA. A total of 12 special-status wildlife species were observed within the BSA, and one (LBV) 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 SSC; 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. The 25 special-status wildlife species observed or with a potential to occur are listed in Table 4.4-4, and the location of those observed are depicted in Figures 4.4-4a through 4.4-7b. A comprehensive list of all wildlife species, special-status and non-special-status, that were detected during Proposed Project surveys within the BSA are included in Biological Technical Report (Attachment 4.4-A).

Federally Listed Wildlife Species

Quino Checkerspot Butterfly (QCB)

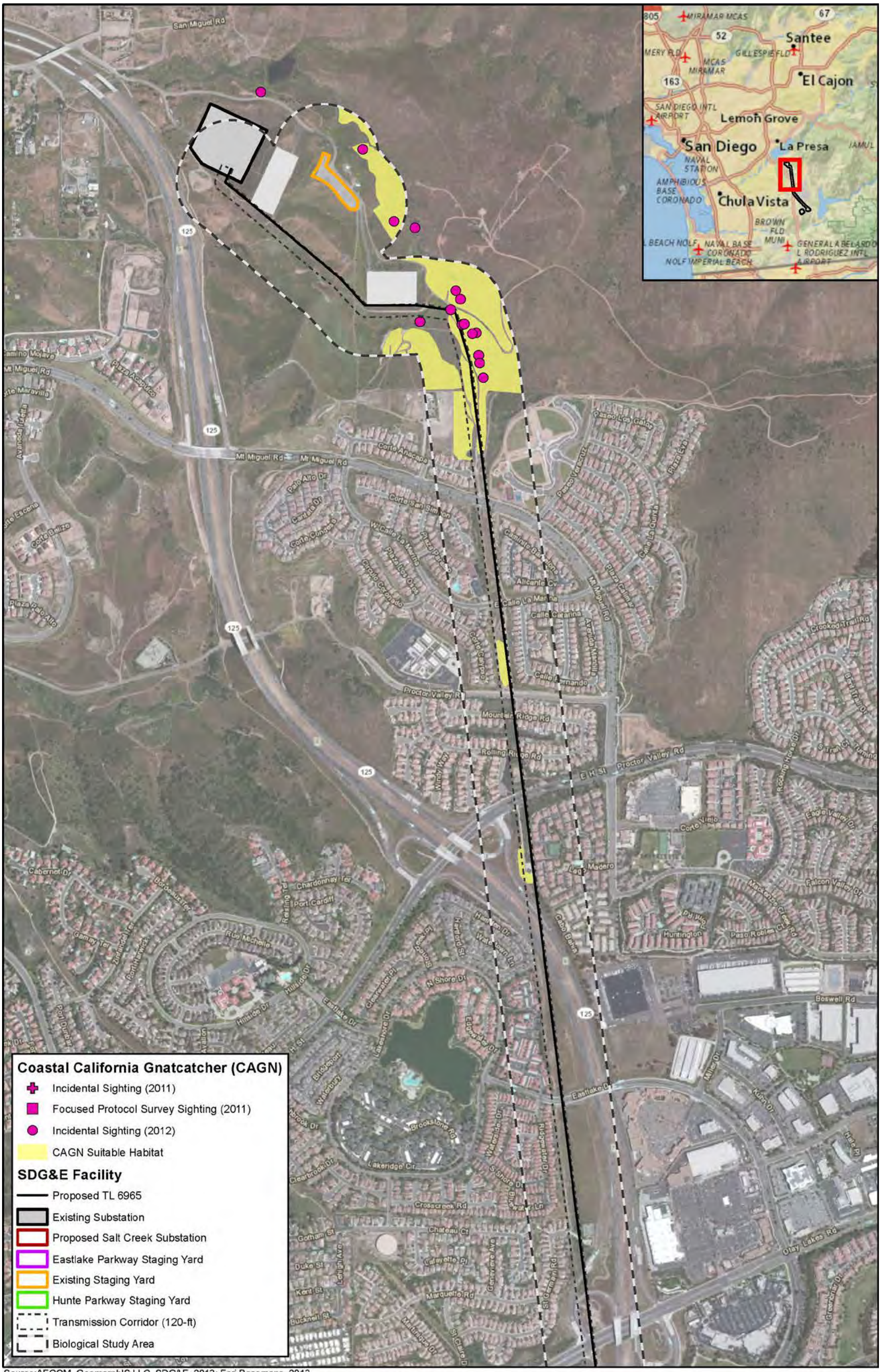
QCB, a subspecies of Edith's checkerspot butterfly (*Euphydryas editha*), is a federally listed endangered species and a Covered Species under SDG&E's NCCP. QCB is generally found in native and nonnative grasslands, coastal sage scrub, open chaparral, and other open plant community types where high densities of host plant species occur (USFWS 1997). The primary larval host plant species for 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 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. 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.

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 nonnative grassland, Diegan coastal sage scrub, and wildflower field habitats (Figure 4.4-1c). During focused QCB surveys, small patches of dot-seed plantain (*P. erecta*), which is a QCB larval host plant, was observed in the southern end of the 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.

Coastal California Gnatcatcher

CAGN is federally listed as threatened and is considered a California SSC. CAGN is a local and uncommon year-round resident of Southern California. CAGN generally inhabits Diegan coastal sage scrub and Riversidian coastal sage scrub dominated by California sagebrush and flat-topped buckwheat (*Eriogonum fasciculatum*), generally below 457 meters (1,500 feet) in elevation along the coastal slope. When nesting, this species typically avoids slopes greater than 25% with dense, tall vegetation.

Figure 4.4-4a: Coastal California Gnatcatcher Observations within the Biological Study Area



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

0 500 1,000 Feet

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

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

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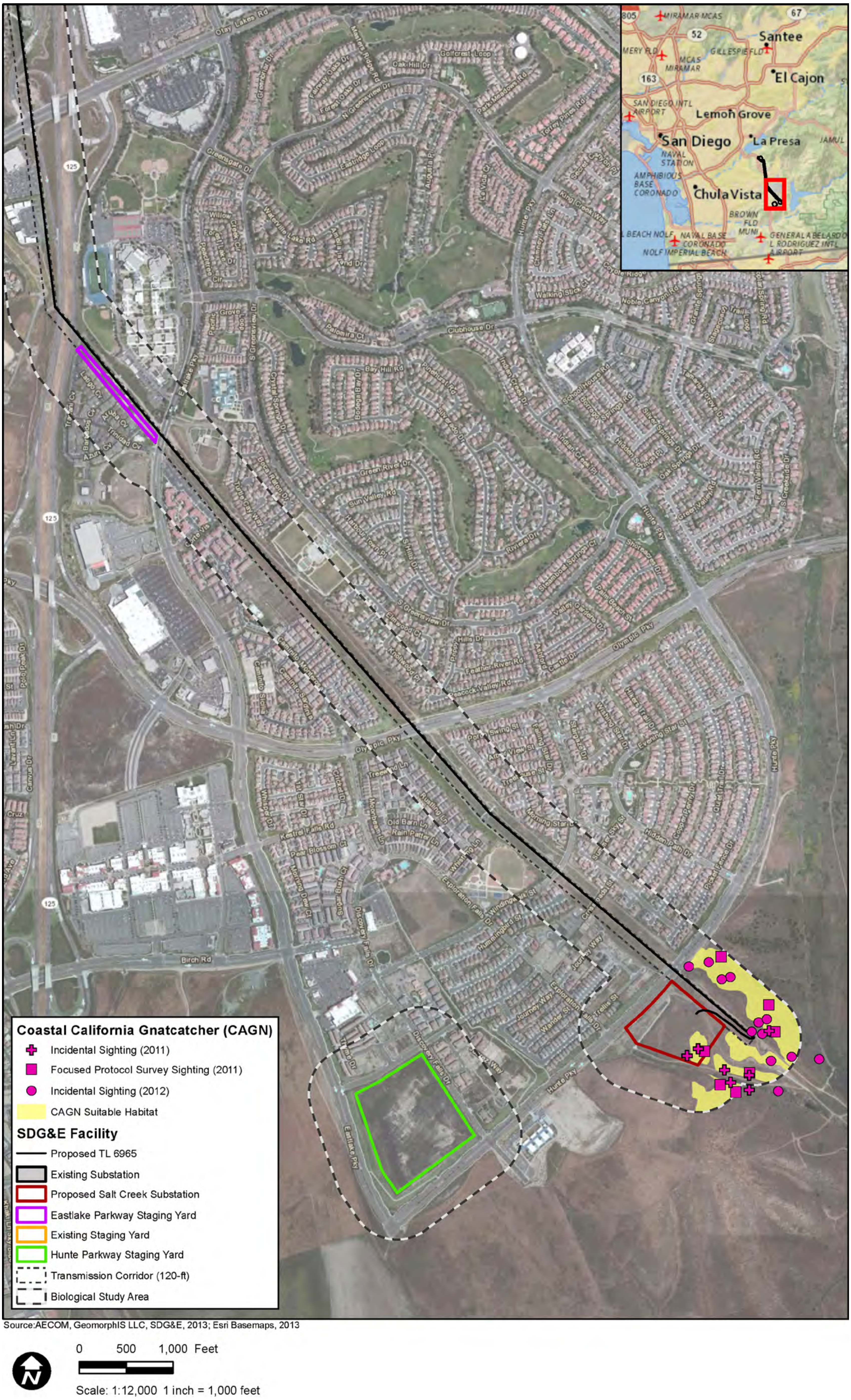
Figure 4.4-4b: Coastal California Gnatcatcher Observations within the Biological Study Area



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

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Figure 4.4-5: Least Bell's Vireo Observations within the Biological Study Area

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

0 200 400 Feet

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

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

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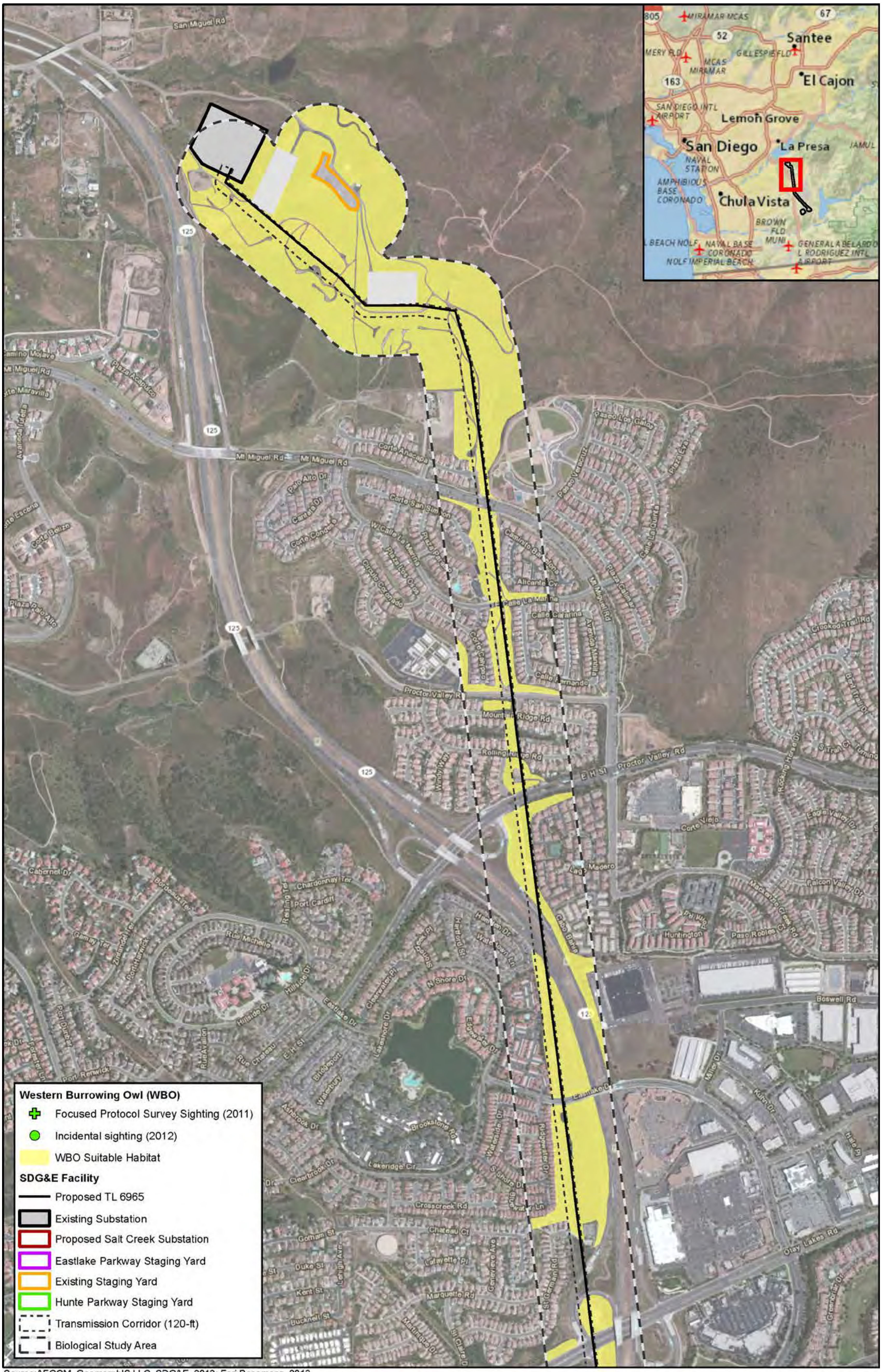
Figure 4.4-6a: Western Burrowing Owl Observations within the Biological Study Area



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

0 500 1,000 Feet

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

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

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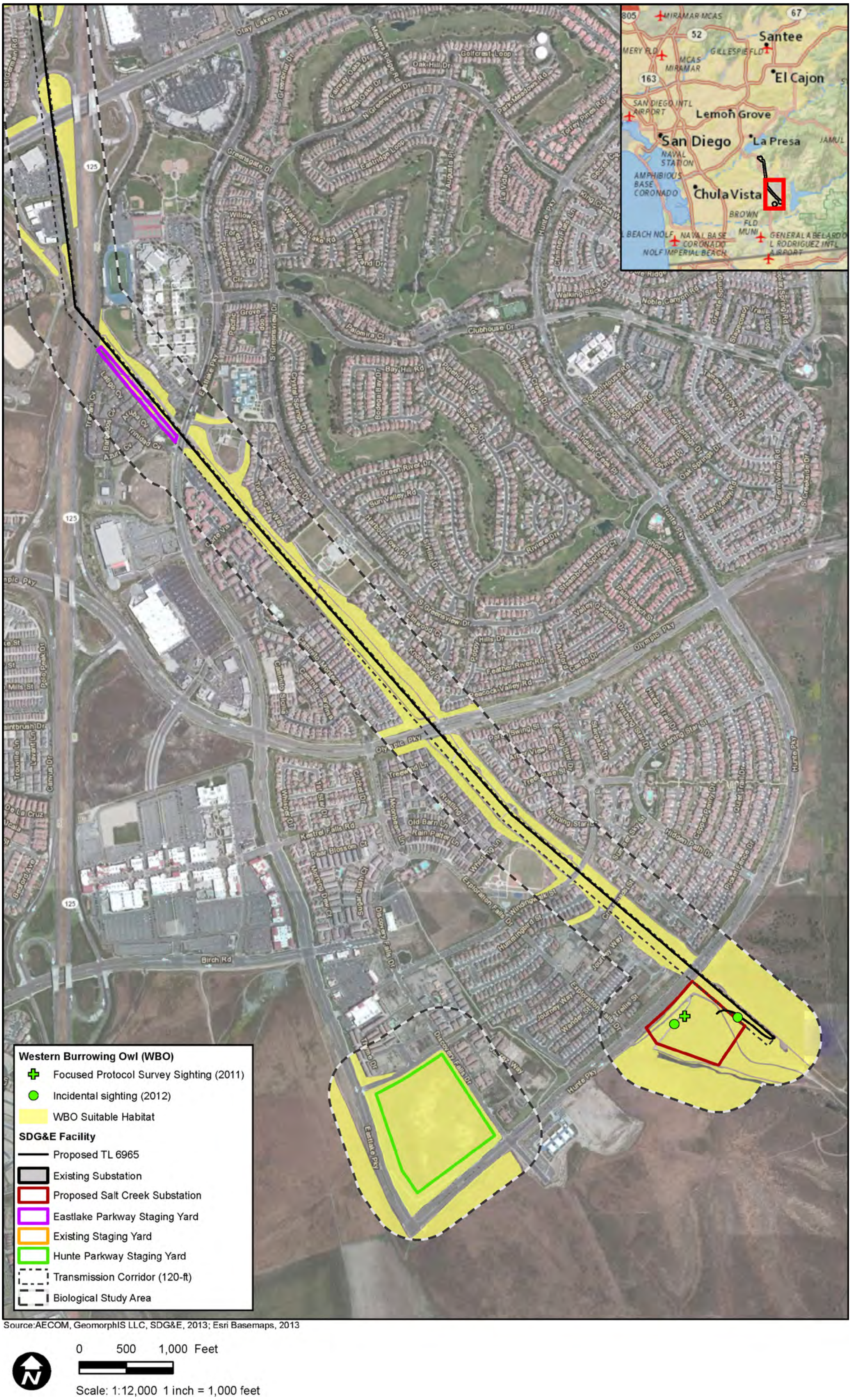
Figure 4.4-6b: Western Burrowing Owl Observations within the Biological Study Area



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

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Figure 4.4-7a: Other Special-Status Wildlife Species within the Biological Study Area

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

0 500 1,000 Feet

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

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

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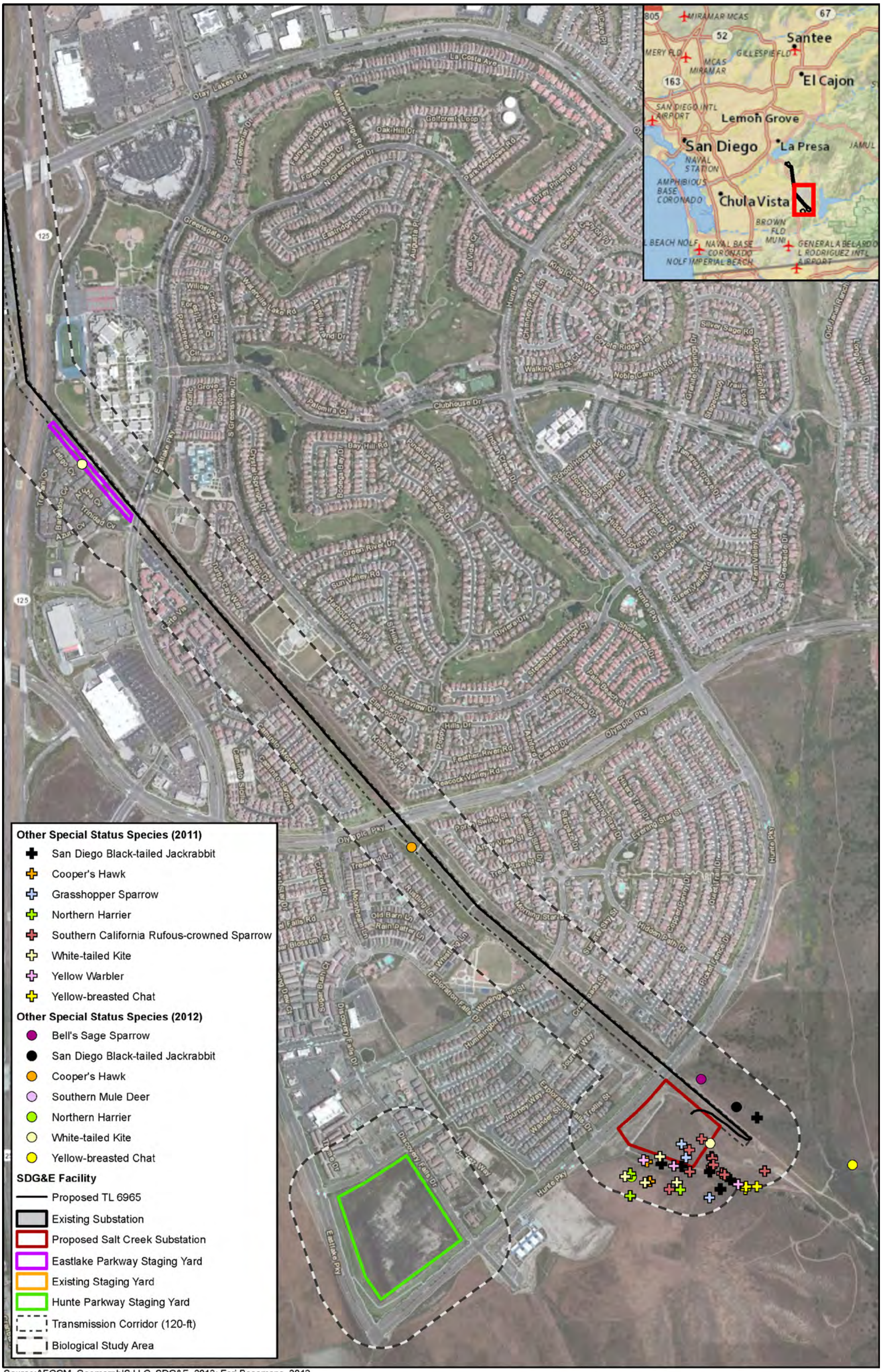
Figure 4.4-7b: Other Special-Status Wildlife Species within the Biological Study Area



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

0 500 1,000 Feet

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

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

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Table 4.4-4: Special-Status Wildlife Species Observed or with the Potential to Occur Within the BSA

Species	Status[1]	Primary Habitat Associations	Potential to Occur / Comments	Substation	Transmission Corridor	Buffer
				Findings[2]		
INVERTEBRATES						
Quino checkerspot butterfly *Euphydryas editha quino*	FE	Sunny openings within coastal sage scrub and chaparral scrublands. Requires plantain (*Plantago* spp.) or owl's clover (*Castilleja exserta*) as a host plant.	This species has a high potential to occur within the southern terminus of the Transmission Corridor and proposed Salt Creek Substation site due to the presence of marginally suitable sage scrub habitat and populations of dot-seed plantain (*P. erecta*) and owl's clover.	ND – H	ND – H	ND – H
AMPHIBIANS						
Western spadefoot toad *Spea hammondii*	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 within the Transmission Corridor or the proposed Salt Creek Substation site due to the presence of grasslands; however, vernal pools are not present.	ND – L	ND – L	ND – L
REPTILES						
Belding's orange-throated whiptail *Aspidoscelis [=Cnemidophorus] hyperythra beldingi*	CSC, NCCP	Chaparral, coastal sage scrub with coarse sandy soils and scattered brush.	This species has a moderate potential to occur within Transmission Corridor and proposed Salt Creek Substation site due to the presence of marginally suitable coastal sage scrub habitat and soils.	ND – M	ND – M	ND – M

Species	Status[1]	Primary Habitat Associations	Potential to Occur / Comments	Substation	Transmission Corridor	Buffer
				Findings[2]		
Northern red-diamond rattlesnake *Crotalus ruber ruber*	CSC, NCCP	Coastal sage scrub, chaparral in inland and desert locales with rocky soils.	This species has a moderate potential to occur within the Transmission Corridor and proposed Salt Creek Substation site due to the presence of marginally suitable, isolated scrub habitat.	ND – M	ND – M	ND – M
Coastal rosy boa *Lichanura trivigata roseofusca*	NCCP	Coastal sage scrub, desert scrub, and chaparral with rocky soils.	This species has a moderate potential to occur within the Transmission Corridor and proposed Salt Creek Substation site due to the presence of marginally suitable, isolated scrub habitat.	ND – M	ND – M	ND – M
San Diego horned lizard *Phrynosoma coronatum* (San Diego/blainvillii population)	CSC, NCCP	Chaparral, coastal sage scrub with fine, loose soil. Partially dependent on harvester ants (*Pogonomyrmex* sp.) for forage.	This species has a low potential to occur within the Transmission Corridor or proposed Salt Creek Substation site due to the presence of marginally suitable scrub habitat and soils. No harvester ants, a main component of this species' diet, were observed within the BSA.	ND – L	ND – L	ND – L
Two-striped garter snake *Thamnophis hammondii*	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 Corridor and proposed Salt Creek Substation site due to the presence of suitable aquatic habitat observed in the survey buffer.	ND – M	ND – M	ND – M

Species	Status[1]	Primary Habitat Associations	Potential to Occur / Comments	Substation	Transmission Corridor	Buffer
				Findings[2]		
BIRDS						
Southern California rufous-crowned sparrow *Aimophila ruficeps canescens*	WL, NCCP	Coastal sage scrub, chaparral, grassland; favors steep and rocky areas. Localized resident.	This species was observed within the footprint of the proposed Salt Creek Substation and in the buffer of the southern terminus of the Transmission Corridor.	P	ND – H	P
Cooper's hawk *Accipiter cooperi*	WL (nesting), NCCP	Mature forest, open woodlands, wood edges, and river groves. Parks and residential areas. Year-round resident.	This species was observed within the Transmission Corridor south of Olympic Parkway and within the strip of riparian vegetation located southwest of the proposed Salt Creek Substation site.	ND – H	P	P
Grasshopper sparrow *Ammodramus savannarum*	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 the proposed Salt Creek Substation and in the buffer near the southern terminus of the Transmission Corridor.	P	ND – H	P
Bell's sage sparrow *Amphispiza belli belli*	WL	Nests in chaparral dominated by chamise, but also found in coastal sage scrub in the 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 Substation staging yard.	ND – M	ND – M	P
Western burrowing owl *Athene cunicularia hypugaea*	CSC, NCCP	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 site during the 2011 Phase III Winter WBO survey. This species was also observed within the footprint of the proposed Salt Creek Substation during the 2012 QCB and CAGN surveys of the Transmission Corridor.	P	P	ND - H

Species	Status[1]	Primary Habitat Associations	Potential to Occur / Comments	Substation	Transmission Corridor	Buffer
				Findings[2]		
Ferruginous hawk *Buteo regalis*	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 Corridor and proposed Salt Creek Substation site due to the presence of suitable grassland habitat, rabbits, and ground squirrels that were observed during surveys of the BSA.	ND – M	ND – M	ND – M
Swainson's hawk *Buteo swainsoni*	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 Corridor and proposed Salt Creek Substation site due to the presence of suitable grassland habitat and rodents that were observed during surveys of the BSA.	ND – M	ND – M	ND – M
Northern harrier *Circus cyaneus hudsonius*	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 site.	P	P	P
White-tailed kite *Elanus leucurus*	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 site.	P	P	P
Yellow-breasted chat *Icteria virens*	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

Species	Status[1]	Primary Habitat Associations	Potential to Occur / Comments	Substation	Transmission Corridor	Buffer
				Findings[2]		
Coastal California gnatcatcher *Polioptila californica californica*	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 site.	P	P	P
Yellow warbler *Setophaga petechia*	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 site.	ND – M	ND – M	P
Western bluebird *Sialia mexicana occidentalis*	NCCP	Open woodlands, farmlands, orchards.	This species has a low potential to nest within the Transmission 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 *Vireo bellii pusillus*	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
MAMMALS						
Northwestern San Diego pocket mouse *Chaetodipus fallax fallax*	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 within the Transmission Corridor or proposed Salt Creek Substation site due to the presence of sparse scrub habitat; however, suitable sandy soils are limited in the BSA.	ND – L	ND – L	ND – L

Species	Status[1]	Primary Habitat Associations	Potential to Occur / Comments	Substation	Transmission Corridor	Buffer
				Findings[2]		
San Diego black-tailed jackrabbit *Lepus californicus bennetti*	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 Substation staging yard at the northern terminus of the Transmission Corridor, and at the southern terminus of the Transmission Corridor, near the proposed Salt Creek Substation site.	P	ND – H	P
Southern mule deer *Odocoileus hemionus fuliginata*	NCCP	Many habitats.	This species was observed near the Existing Substation staging yard at the northern terminus of the Transmission Corridor.	ND – H	ND – H	P
American badger *Taxidea taxus*	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 Corridor and proposed Salt Creek Substation site 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 Wildlife Fully Protected Species
CSC = California Department of Fish and Wildlife Species of Special Concern
WL = California Department of Fish and Wildlife Watch List

2 Findings:

P (present) – Species detected during Proposed Project surveys

ND (not detected) – Species not detected during Proposed 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

Due to the presence of suitable habitat in the BSA for CAGN, focused surveys were conducted on approximately 54 acres of suitable coastal sage scrub habitat within the BSA. During the 2011 surveys, seven CAGNs (five adults and two juveniles) were detected. Seven, 11, and six CAGNs were detected during the three protocol surveys in 2012, respectively, including family groups, adult pairs, individual adults, and nestlings. Observations were clustered at the northern 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 (Figures 4.4-4a and 4.4-4b).

Least Bell's Vireo

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 builds its nests in dense shrubbery 3 to 4 feet above the ground (Salata 1984), it requires young successional riparian habitat or older habitat with a dense understory. Nests are also often placed along internal or external edges of riparian thickets (Unitt 2004).

Due to the presence of approximately 1 acre of suitable riparian scrub habitat in the buffer of the proposed Salt Creek Substation, focused surveys for LBV were conducted at the proposed Salt Creek Substation site 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 4.4-5). Additionally, one LBV was detected outside of the BSA during the 2012 CAGN survey (Figure 4.4-5). This individual was located within the riparian scrub habitat south of the proposed Salt Creek Substation site; therefore, the suitable riparian scrub habitat south and adjacent to the proposed Salt Creek Substation is considered occupied.

State-Listed Species

LBV is the only state-listed species documented during surveys conducted for the Proposed Project. Its background and occurrence are described above.

Other Special-Status Species

Western Burrowing Owl

WBO is a CDFW SSC and is a Covered Species under SDG&E's NCCP. It is primarily restricted to the western United States and Mexico. Habitat for WBO includes dry, open, short-grass areas often associated with burrowing mammals (Haug et al. 1993). A year-round resident in San Diego County, WBO ranges throughout the coastal lowlands in grasslands, agricultural areas, and coastal dunes (Unitt 1984). 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. WBO is an opportunistic feeder, consuming a diet that includes arthropods, small mammals, and birds, and occasionally amphibians and reptiles (Haug et al. 1993).

Results of the 2011 WBO winter surveys document the presence of 38 potential burrows and one WBO individual (Figures 4.4-6a and 4.4-6b). Because no sign of WBO activity was found at any burrow from May through July 2011, it can be assumed that no breeding took place on-site in 2011. A total of 86 potentially suitable 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 observed during these surveys. An incidental sighting of an individual adult WBO was recorded in March 2012 during the QCB survey at the southern terminus of the Transmission Corridor, which overlaps with the footprint of the proposed Salt Creek Substation (Figure 4.4-6b). Additionally, a WBO family group was detected in July 2012 during the CAGN survey within the Transmission Corridor (Figure 4.4-6b).

Southern California Rufous-Crowned Sparrow

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

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 site during general surveys and focused CAGN surveys conducted in 2012 (Figure 4.4-7b).

Cooper's Hawk

Cooper's hawk (*Accipiter cooperii*) is a CDFW SSC and an SDG&E NCCP Covered Species. 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.

Suitable foraging habitat for Cooper's hawk occurs within coastal sage scrub, grassland, and riparian habitats throughout the Transmission Corridor and proposed Salt Creek Substation site. Cooper's hawk nests 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 proposed Salt Creek Substation site perching within trees and on poles, and flying over coastal sage scrub, grassland, and riparian habitats during general surveys conducted in 2011 and focused CAGN surveys in 2012 (Figure 4.4-7b).

Grasshopper Sparrow

Grasshopper sparrow (*Ammodramus savannarum*) is an 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. Habitat can also include open coastal sage scrub with scattered shrubs such as California buckwheat or coastal sagebrush dispersed among native or nonnative grasses.

Suitable foraging and nesting habitat for grasshopper sparrow occurs within grassland and open coastal sage scrub habitats within the Transmission Corridor and proposed Salt Creek Substation site. Individual grasshopper sparrows and a family group that included juveniles were observed in grassland and coastal sage scrub habitats during general surveys conducted at the proposed Salt Creek Substation site in 2011 (Figure 4.4-7b).

Bell's Sage Sparrow

Bell's sage sparrow (*Amphispiza belli belli*) is a CDFW SSC. This species prefers semi-open habitats with shrubs 1 to 2 meters high and is closely associated with sagebrush. It often occurs in chaparral dominated by chamise and coastal sage scrub dominated by California sagebrush.

Suitable foraging and nesting habitat for Bell's sage sparrow occurs within open coastal sage scrub and transitional grassland/sage scrub habitats at the northern terminus of the Transmission Corridor, and at the southern terminus of the Transmission Corridor and the proposed Salt Creek Substation site. This species was observed in the northern terminus of the Transmission Corridor and at the southern terminus of the Transmission Corridor and Salt Creek Substation during focused WBO surveys in 2012 (Figure 4.4-7a).

Northern Harrier

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

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 proposed Salt Creek Substation site. Northern harrier was observed foraging in open coastal sage scrub and grassland habitats at the southern terminus of the Transmission Corridor and proposed Salt Creek Substation site during vegetation mapping and focused WBO surveys in 2012 (Figure 4.4-7b).

White-Tailed Kite

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.

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 site. 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 proposed Salt Creek Substation site during focused CAGN and WBO surveys in 2012 (Figure 4.4-7b).

Yellow-Breasted Chat

Yellow-breasted chat (*Icteria virens*) is a CDFW SSC. Nesting yellow-breasted chat occupies early successional riparian habitats with a well-developed shrub layer and an open canopy.

Suitable foraging and nesting habitat for yellow-breasted chat occurs within riparian, mulefat, and southern willow scrub habitats throughout the Transmission Corridor and proposed Salt Creek Substation site. Yellow-breasted chat was observed in riparian habitat at the southern terminus of the Transmission Corridor during focused CAGN and WBO surveys conducted in 2012 (Figure 4.4-7b).

Yellow Warbler

Yellow warbler (*Setophaga petechia*) is a California species of concern. This species nests in mature riparian woodland from coastal and desert lowlands up to 2,500 meters (8,000 feet) amsl. Yellow warbler prefers to nest in mature cottonwood, willow, alder, and ash trees.

Suitable foraging and nesting habitat for yellow warbler occurs within riparian, mulefat, and southern willow scrub habitats throughout the Transmission Corridor and proposed Salt Creek Substation site. This species was observed in the buffer of the proposed Salt Creek Substation site during focused LBV and WBO surveys in 2011 (Figure 4.4-7b).

San Diego Black-Tailed Jackrabbit

San Diego black-tailed jackrabbit (*Lepus californicus bennetti*) is a CDFW SSC and an SDG&E NCCP Covered Species. 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.

Suitable habitat for San Diego black-tailed jackrabbit occurs within open coastal sage scrub and grassland habitats throughout the Transmission Corridor and proposed Salt Creek Substation site. This species was observed near the southern terminus of the Transmission Corridor and in the surrounding area during vegetation mapping surveys conducted in 2012 (Figure 4.4-7b).

Southern Mule Deer

Southern mule deer (*Odocoileus hemionus fuliginata*) is an SDG&E NCCP Covered Species. Southern mule deer is widespread throughout undeveloped portions of San Diego County, ranging from Marine Corps Base Camp Pendleton to the Laguna Mountains, Sweetwater River, and Otay Lakes at elevations of 400 to 3,600 feet amsl (Bleich and Holl 1982). This species requires relatively large, undisturbed tracts of chaparral, coastal sage scrub, and mixed grassland/shrub habitats.

Suitable habitat for southern mule deer occurs within open coastal sage scrub and grassland habitats throughout the Transmission Corridor and proposed Salt Creek Substation site. Southern mule deer was observed within the BSA near the Existing Substation staging yard at the northern terminus of the Transmission Corridor during focused WBO surveys in 2012 (Figure 4.4-7a).

Critical Habitat

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 2002).

Critical habitat for the endangered Otay tarplant coincides with the BSA at the southern terminus of the Transmission Corridor, near the proposed Salt Creek Substation site (USFWS 2012) (Figure 4.4-8). A total of 13.46 acres of critical habitat occurs within the 500-foot buffer of the Transmission Corridor at its southern terminus. Critical habitat also occurs just outside of the 500-foot buffer at the northern terminus of the Transmission Corridor and the Existing Substation staging yard.

Critical habitat for CAGN occurs just east and north of the northern terminus of the Transmission Corridor, but does not coincide with BSA (Figure 4.4-8).

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 LBV also occurs east of Otay Lake, approximately 2.5 miles east of the southern terminus of the Transmission Corridor.

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 (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 Focused Planning Areas (SANDAG 2003).

A portion of the northern section of the Transmission Corridor, the Existing Substation, and the Existing Substation staging yard are located within an SDG&E-defined “Preserve” area; the remainder of the proposed power line route is located outside of defined Preserve boundaries. The proposed Salt Creek Substation site 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 4.4-9).

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 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 that support wildlife species, the Transmission Corridor is intersected by numerous roadways, with some carrying high volumes of traffic, and it is 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 Proposed Project activities within the Transmission Corridor would not interfere with wildlife migration patterns.

The proposed Salt Creek Substation site 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 proposed Salt Creek Substation site lies adjacent to a roadway (Hunte Parkway) and is flanked to the north by urban development, both of which can introduce stressors. As such, the proposed Salt Creek Substation site does not represent an important regional or local migration corridor for wildlife movement, or coincide with such a corridor. Proposed Project activities within the proposed Salt Creek Substation site would not interfere with wildlife migration patterns.

4.4.4 Potential Impacts

The following discussion describes the Proposed Project's potential to impact sensitive biological resources during construction and operation of the proposed Salt Creek Substation, construction and operation of a 5-mile-long power line along the existing Transmission Corridor; construction of modifications to the Existing Substation, and use of the three staging yards. No impacts are included for the alternative staging yards at the OTC, since it has not been determined if these areas will be needed during construction and these were previously graded areas. Any additional 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.

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 and state ESAs, MBTA, 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 and state ESAs 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 (see Appendix M in the Biological Technical Report [Appendix 4.4-A of this PEA]). Operational protocols 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.

Figure 4.4-8: USFWS Mapped Critical Habitat within the Biological Study Area

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

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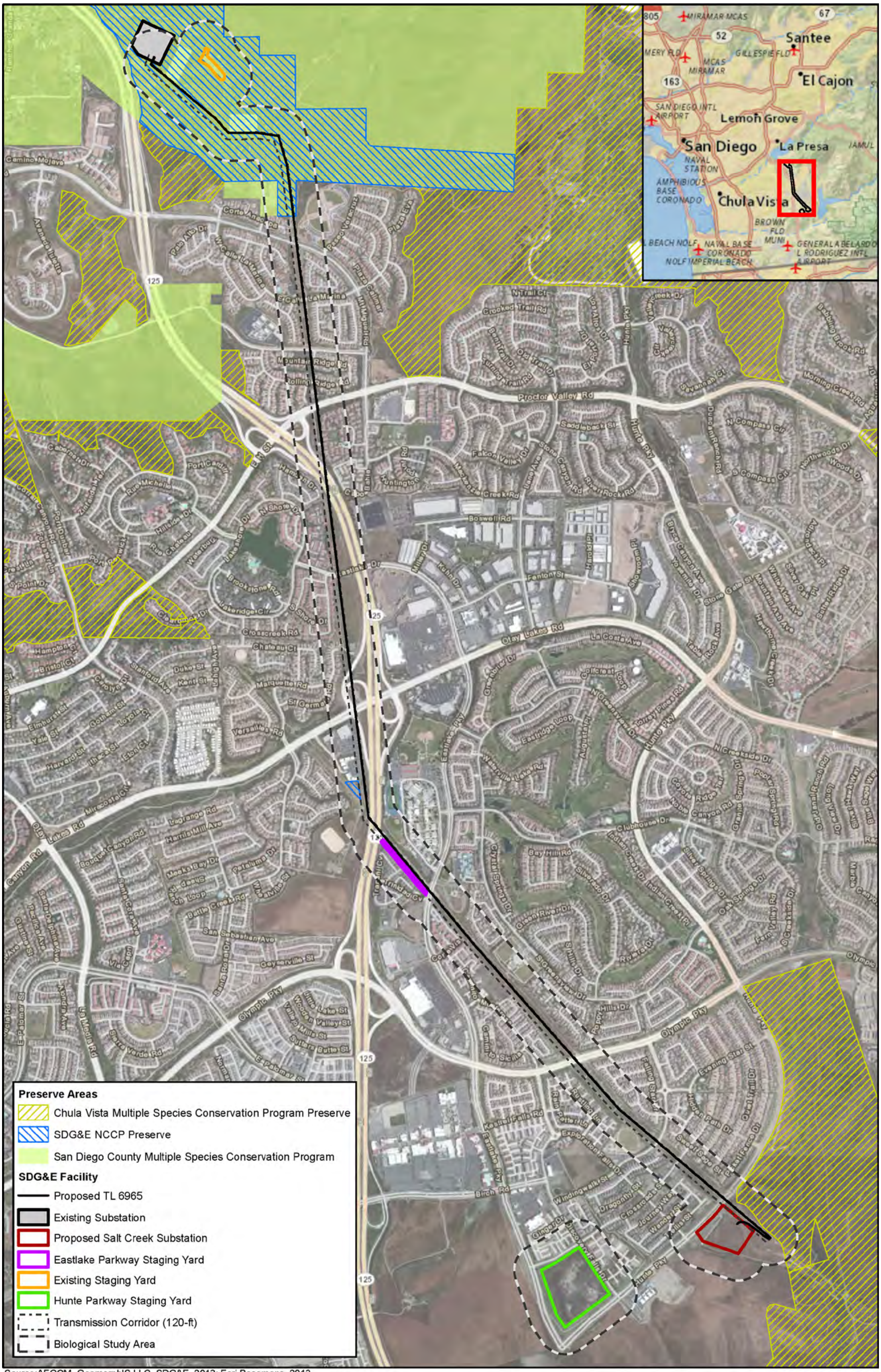
Figure 4.4-9: Biological Study Area in Relation to MSCP Preserve Areas



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

0 900 1,800 Feet

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

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

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Significance Criteria

For the purpose of this analysis, the following applicable thresholds of significance were 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 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 federally protected wetlands as defined by Section 404 of the CWA (including marsh, vernal pool, coastal, or other wetland areas) 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; and/or
- conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP.

Question 4.4a – Sensitive Species

Construction – *Potentially Significant Unless APMs Implemented*

Individual special-status plant species could be damaged or destroyed during construction activities of the Proposed Project. Plants could be graded over, crushed, or trampled, or be impacted by construction-related habitat loss or modification of habitats that support special-status plant species. Special-status wildlife species could also be impacted by construction activities, including construction-related noise disturbance, mortality resulting from vehicle strikes, and loss or modification of suitable habitat for these species. The potential impacts on special-status species, designated critical habitat, Preserve areas, and common wildlife associated with construction of the Proposed Project are presented and evaluated below.

Special-Status Plant Species

Direct Impacts

Salt Creek Substation

The federal- and state-listed Otay tarplant occurs within the 500-foot buffer of the proposed Salt Creek Substation site, but not within the site itself; therefore, no direct impacts to this species are anticipated during construction. However, five other special-status species occur within the grading limits and in the 500-foot buffer of the proposed Salt Creek Substation site.

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 proposed 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 proposed Salt Creek Substation grading limits and would 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

The federal- and state-listed Otay tarplant was observed within the 500-foot buffer of the Transmission Corridor, but does not coincide with areas that would be directly, permanently, or temporarily impacted by construction activities in 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. Twelve other 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 Proposed 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 County sunflower, a CRPR 4.2 species.

Existing Substation Modifications

No federal- or state-listed plant species or other special-status plant species have potential to occur within the Existing Substation. All modification activities would occur within the current substation's footprint, which consists of paved and gravel-covered areas. Therefore, no impacts to special-status plant species are anticipated during modification activities at the Existing Substation.

Staging Yards

No federal- or state-listed plant species or other special-status plant species were observed or have potential to occur within the Existing Substation staging yard, Hunte Parkway staging yard, or Eastlake Parkway staging yard. The Existing Substation staging yard is entirely within bare ground and the Hunte Parkway staging yard (previously graded) was mitigated for previously under a separate project. Therefore, no impacts on special-status plant species are anticipated during use of the staging yards.

Indirect Impacts

Potential temporary, indirect impacts to Otay tarplant and the other special-status plant species could arise from runoff and sedimentation, erosion, fugitive dust, and unauthorized access outside of the disturbance area by construction workers. In addition, the introduction and establishment of exotic species within or adjacent to special-status plant populations could adversely affect these species by reducing growth, dispersal, and recruitment. Exotic species are opportunistic and often occupy disturbed and bare soils such as those created in transmission line corridors during construction. Wildfires caused by construction are rare, but may occur. Exotic species often frequent areas adjacent to and within burn areas following a wildfire.

Significance Determination

SDG&E would implement protocols as described in the SDG&E NCCP and Operational Protocols (see Appendix L in Biological Technical Report [Attachment 4.4-A]). These protocols include restricting vehicles to existing roads when feasible, minimizing impacts by defining disturbance areas, providing biological monitoring to assist crews in avoiding and minimizing impacts at sites with the potential for direct impacts, compensating for permanent impacts to Covered Species and their habitats through drawdown of mitigation credits as described further below, restoring temporary impact areas (including topsoil salvage for preservation of seed bank for sensitive species), and designing 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 special-status plant species would remain at a less-than-significant level.

Special-Status Invertebrate Species

Direct Impacts

Salt Creek Substation

No QCB were detected during protocol surveys conducted within the proposed Salt Creek Substation site in 2011. Proposed Project-related activities are anticipated to have both temporary and permanent impacts in suitable habitat for QCB. These impacts, however, would 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. No other special-status invertebrate species were identified in the proposed Salt Creek Substation footprint or survey buffer.

Transmission Corridor

No special-status invertebrate species were identified within the Transmission Corridor. Focused QCB surveys were conducted in the Transmission Corridor in 2012, but no QCB were detected. Proposed-Project-related activities are anticipated to have temporary and permanent impacts in suitable habitat for QCB near the southern terminus of the Transmission Corridor. These impacts, however, would not occur within SDG&E's 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

No special-status invertebrate species have potential to occur within the Existing Substation. All modification activities would occur on paved and gravel-covered areas of the Existing Substation. As a result, direct impacts to special-status invertebrates and QCB-suitable habitat would not occur during modifications to the Existing Substation.

Staging Yards

No special-status invertebrate species were identified within the Existing Substation staging yard, Hunte Parkway staging yard, or Eastlake Parkway staging yard. The Existing Substation staging yard is entirely within bare ground, the Hunte Parkway staging yard (previously graded) was 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 special-status invertebrate species and QCB-suitable habitat would not occur during use of these staging yards.

Indirect Impacts

Potential indirect impacts to special-status invertebrate species include permanent impacts to habitat suitable for special-status invertebrate species by the introduction and proliferation of invasive nonnative plant species and temporary impacts associated with dust, sedimentation, and erosion during construction.

Significance Determination

SDG&E would implement the NCCP Operational Protocols (see Appendix L in Biological Technical Report [Attachment 4.4-A]) to avoid and minimize impacts to invertebrate species, including suitable QCB habitat. 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. 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 4.4.5). As a result, potential impacts on invertebrate species, including suitable QCB habitat, would be less than significant.

Special-Status Amphibian Species

Direct Impacts

Salt Creek Substation

No special-status amphibian species were identified in the proposed Salt Creek Substation BSA; however, one NCCP Covered Species, western spadefoot toad, has low potential to occur.

Transmission Corridor

No special-status amphibian species were detected in the Transmission Corridor BSA; however, one NCCP Covered Species, western spadefoot toad, has low potential to occur in the Transmission Corridor.

Existing Substation Modifications

No special-status amphibian species have potential to occur within the Existing Substation. All modification activities would occur on paved and gravel-covered areas of the substation. As a result, direct impacts to special-status amphibian species would not occur during modifications to the Existing Substation.

Staging Yards

No special-status amphibian species were identified and none has potential to occur within the Existing Substation staging yard, Hunte Parkway staging yard, or Eastlake Parkway staging yard. The Existing Substation staging yard is entirely within bare ground, the Hunte Parkway staging yard (previously graded) was 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 special-status amphibian species would not occur during use of these staging yards.

Indirect Impacts

Potential indirect impacts to special-status amphibian species include permanent impacts to habitat suitable for special-status amphibian species by the introduction and proliferation of invasive nonnative plant species, and temporary impacts associated with dust, sedimentation, and erosion during construction.

Significance Determination

SDG&E would implement NCCP Operational Protocols (see Appendix L in Biological Technical Report [Attachment 4.4-A]) to avoid and minimize impacts to amphibian species. 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 having a biological monitor on-site to avoid and minimize impacts to biological resources. Wetland habitats would not be impacted. 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 4.4.5). As a result, potential impacts on amphibian species would be less than significant.

Special-Status Reptile Species

Direct Impacts

Salt Creek Substation

No special-status reptile species were identified in the proposed Salt Creek Substation BSA; however, five NCCP Covered Species have potential to occur: Belding's orange-throated whiptail (moderate), northern red-diamond rattlesnake (moderate), coastal rosy boa (moderate), San Diego horned lizard (low), and two-striped garter snake (moderate).

Transmission Corridor

No special-status reptile species were observed in the Transmission Corridor BSA; however, five NCCP Covered Species have potential to occur in the Transmission Corridor: Belding's orange-throated whiptail (moderate), northern red-diamond rattlesnake (moderate), coastal rosy boa (moderate), San Diego horned lizard (low), and two-striped garter snake (moderate).

Existing Substation Modifications

No special-status reptile species have potential to occur within the Existing Substation. All modification activities would occur on paved and gravel-covered areas of the Existing Substation. As a result, direct impacts to special-status amphibian species would not occur during modifications to the Existing Substation.

Staging Yards

No special-status reptile species were identified and none have potential to occur within the Existing Substation staging yard, Hunte Parkway staging yard, or Eastlake Parkway staging yard. The Existing Substation staging yard is entirely within bare ground, the Hunte Parkway staging yard (previously graded) was 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 special-status reptile species would not occur during use of these staging yards.

Indirect Impacts

Potential indirect impacts to special-status reptile species include permanent impacts to habitat suitable for special-status reptile species by the introduction and proliferation of invasive nonnative plant species, and temporary impacts associated with dust, sedimentation, and erosion during construction.

Significance Determination

SDG&E would implement NCCP Operational Protocols (see Appendix L in the Biological Technical Report [Attachment 4.4-A]) to avoid and minimize impacts to reptile species. 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 having a biological monitor on-site to avoid and minimize impacts to biological resources. Consistent with SDG&E's NCCP, SDG&E would 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 4.4.5). As a result, potential impacts on reptile species would be less than significant.

Special-Status Avian and Other Nesting Avian Species

Direct Impacts

Salt Creek Substation

Five NCCP-covered avian species were observed in the proposed Salt Creek Substation BSA: southern California rufous-crowned sparrow, grasshopper sparrow, WBO (including at least one occupied burrow), northern harrier, and CAGN. Three special-status species, not covered by the NCCP, were observed in the proposed Salt Creek Substation BSA: white-tailed kite, yellow-breasted chat, and yellow warbler. Additionally, three special-status species have potential to occur, including two NCCP Covered Species—western bluebird (low) and LBV (moderate) —and one special-status species not covered by the NCCP—Bell’s sage sparrow (moderate).

Transmission Corridor

Six NCCP-covered avian species were observed in the Transmission Corridor BSA: southern California rufous-crowned sparrow, Cooper’s hawk, grasshopper sparrow, WBO, northern harrier, and CAGN. Three special-status species not covered by the NCCP were observed in the Transmission Corridor BSA: Bell’s sage sparrow, white-tailed kite, and yellow-breasted chat. Additionally, two NCCP Covered Species have potential to occur: western bluebird (low) and LBV (moderate).

Existing Substation Modifications

No special-status avian species have potential to occur within the Existing Substation. All modification activities would occur on paved and gravel-covered areas of the Existing Substation. As a result, direct impacts to special-status avian species would not occur during modifications to the Existing Substation.

Staging Yards

No special-status avian species were identified and none have potential to occur within the Existing Substation staging yard, Hunte Parkway staging yard, or Eastlake Parkway staging yard. The Existing Substation staging yard is entirely within bare ground, the Hunte Parkway staging yard (previously graded) was 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 special-status avian species would not occur during use of these staging yards.

Indirect Impacts

Potential indirect impacts to special-status avian species include permanent impacts to habitat suitable for special-status avian species by the introduction and proliferation of invasive nonnative plant species, and temporary impacts associated with noise, nighttime lighting, dust, sedimentation, and erosion during construction.

Significance Determination

SDG&E would implement NCCP Operational Protocols (see Appendix L in the Biological Technical Report [Attachment 4.4-A]) to avoid and minimize impacts to special-status and migratory bird species. 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. Consistent with SDG&E's NCCP, SDG&E would 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 4.4.5). Implementation of SDG&E's NCCP and Operational Protocols, and compliance with the MBTA as described above, would ensure that impacts on special-status and migratory bird species remain less than significant.

In addition, WBO is a narrow endemic species under the NCCP. Implementation of APM-BIO-1 would provide avoidance, minimization, and mitigation to prevent significant impacts to WBO (see Section 4.4.6). As a result, potential impacts on WBO would be less than significant.

Special-Status Mammal Species

Direct Impacts

Salt Creek Substation

One special-status NCCP-covered mammal species, San Diego black-tailed jackrabbit, was detected within the proposed Salt Creek Substation BSA. Three additional NCCP-covered mammal species have some potential to occur: Northwestern San Diego pocket mouse (low), southern mule deer (high), and American badger (moderate).

Transmission Corridor

Two NCCP-covered mammal species were detected within the Transmission Corridor BSA: San Diego black-tailed jackrabbit and southern mule deer. Two additional NCCP-covered mammal species have some potential to occur: Northwestern San Diego pocket mouse (low) and American badger (moderate).

Existing Substation Modifications

No special-status mammal species have potential to occur within the Existing Substation. All modification activities would occur on paved and gravel-covered areas of the Existing Substation. As a result, direct impacts to special-status avian species would not occur during modifications to the Existing Substation.

Staging Yards

No special-status mammal species were identified and none have potential to occur within the Existing Substation staging yard, Hunte Parkway staging yard, or Eastlake Parkway staging yard.

The Existing Substation staging yard is entirely within bare ground, the Hunte Parkway staging yard (previously graded) was 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 special-status avian species would not occur during use of these staging yards.

Indirect Impacts

Potential indirect impacts to special-status mammal species include permanent impacts to habitat suitable for special-status mammal species by the introduction and proliferation of invasive nonnative plant species, and temporary impacts associated with noise, nighttime lighting, dust, sedimentation, and erosion during construction.

Significance Determination

SDG&E would implement NCCP Operational Protocols (see Appendix L in the Biological Technical Report [Attachment 4.4-A]) to avoid and minimize impacts to mammal species. These protocols include restricting vehicles to existing roads when feasible, avoiding wildlife to the extent practicable, conducting pre-construction surveys, and handling of wildlife only by biologists or experts in handling wildlife. These protocols also include having a biological monitor on-site to avoid and minimize impacts to biological resources. Consistent with SDG&E's NCCP, SDG&E would 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 4.4.5). As a result, potential impacts on mammal species would be less than significant.

Critical Habitat

Direct Impacts

Salt Creek Substation

No critical habitat designated by USFWS for endangered or threatened species coincides with the proposed Salt Creek Substation BSA. As a result, no impacts to critical habitat for special-status species would occur during construction of the proposed Salt Creek Substation.

Transmission Corridor

A review of final boundaries (USFWS 2012) indicates that designated critical habitat for the endangered Otay tarplant coincides with the Transmission Corridor buffer (Figure 4.4-8). A total of 13.46 acres occurs within the 500-foot buffer of the Transmission Corridor at the southern terminus. However, no designated critical habitat coincides with the Transmission Corridor footprint. As a result, no impacts to critical habitat for special-status species would occur during construction activities in the Transmission Corridor.

Existing Substation Modification

No critical habitat designated by USFWS for endangered or threatened species coincides with the Existing Substation. As a result, no impacts to critical habitat for special-status species would occur during modification activities in the Existing Substation.

Staging Yards

No critical habitat designated by USFWS for endangered or threatened species coincides with the Existing Substation staging yard, Hunte Parkway staging yard, or Eastlake Parkway staging yard. As a result, no impacts to critical habitat for special-status species would occur during use of these staging yards during construction.

Indirect Impacts

Potential indirect impacts to critical habitat include permanent impacts to habitat suitable for those federally listed species that the habitat supports by the introduction and proliferation of invasive nonnative plant species, and temporary impacts associated with noise, nighttime lighting, dust, sedimentation, and erosion during construction.

Significance Determination

Since no designated critical habitat coincides with Proposed Project construction-related activities, potential direct impacts to critical habitat would not occur. Indirect impacts to critical habitat from noise, nighttime lighting, dust, sedimentation, and erosion would be considered temporary and, upon implementation of NCCP Operational Protocols (see Section 4.4.5), would be reduced to a less-than-significant level.

Preserve Areas

Direct Impacts

Salt Creek Substation

The proposed Salt Creek Substation site 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.

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 an SDG&E-defined Preserve area; the remainder of the Transmission Corridor is located outside of defined Preserve boundaries.

Existing Substation Modifications

The Existing Substation falls within the boundaries of the City of Chula Vista's MSCP Subarea Plan. All modification activities would occur within the current 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 Substation staging yard falls within the boundaries of the City of Chula Vista's MSCP Subarea Plan; however, the staging yard is entirely within bare ground. Thus, no impacts to Preserves would occur.

Indirect Impacts

Potential indirect impacts to Preserve areas include permanent impacts to habitat suitable for special-status species by the introduction and proliferation of invasive nonnative plant species, and temporary impacts associated with noise, nighttime lighting, dust, sedimentation, and erosion during construction.

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 of Chula Vista's MSCP but, instead, are covered by the SDG&E NCCP. Per Table 7.4 of SDG&E's Subregional NCCP, SDG&E proposes to mitigate permanent impacts to covered vegetation communities (i.e., coastal sage scrub and nonnative grassland habitats) located within the Preserve at a 2:1 ratio (see Section 4.4.5). Furthermore, implementation of the NCCP Operational Protocols (see Section 4.4.5) during construction is expected to reduce any potential impacts to less than significant.

Operation and Maintenance – *Less-than-Significant Impact*

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

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 special-status plant species could occur during maintenance of vegetation around power line structures, and driving or walking across special-status plant species. Direct impacts to wildlife species could occur from mortality of individuals by crushing or vehicle collisions during operation and maintenance activities.

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

Staging Yards

Upon completion of the Proposed Project, the Existing Substation staging yard, Hunte Parkway staging yard, and Eastlake Parkway staging yard would no longer be used, and operations and maintenance activities would not occur at them.

Indirect Impacts

Operation and maintenance activities could result in permanent indirect impacts to special-status species. Erosion and storm water contaminant runoff may degrade adjacent habitat for special-status species. Exotic plant species are opportunistic and often occupy disturbed soils such as those within transmission line corridors and areas of exposed bare ground that may occur within areas of disturbance. Exotic plant species compete with natives for resources, resulting in a reduction in growth, future dispersal, and recruitment of native species. 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 disruption of nesting and foraging behavior. As SDG&E currently operates existing facilities in the Transmission Corridor, a significant increase from current rates in vehicle trips and activities generated by SDG&E maintenance is not anticipated. There is a greater likelihood of impacts where special-status plant species occur adjacent to the areas of disturbance.

Significance Determination

SDG&E would implement the NCCP Operational Protocols (see Appendix L in the Biological Technical Report [Attachment 4.4-A]) to avoid and minimize impacts to special-status wildlife species during future operations 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 having a biological monitor on-site to avoid and minimize impacts to biological resources. As such, implementation of NCCP Operational Protocols is expected to reduce potential impacts to special-status plant and wildlife species to less than significant.

Question 4.4b – Sensitive Natural Communities

Construction – *Less-than-Significant Impact*

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 installation of a drainage to an existing off-site dissipater are Diegan coastal sage scrub, nonnative grassland, disturbed habitat, and landscaped/ornamental vegetation (Table 4.4-5). Direct, temporary impacts would occur to these same vegetation communities and other cover types (Table 4.4-5). Diegan coastal sage scrub and nonnative grassland vegetation communities provide habitat for NCCP Covered Species.

Table 4.4-5: Potential Impacts to Vegetation Communities for the Proposed Project[1]

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 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	1.34	177,176	4.07	236,013	5.42
Total Temporary Impacts	**82,267**	**1.89**	**241,754**	**5.55**	**324,021**	**7.44**

[1] Values may not sum due to rounding.

Transmission Corridor

Vegetation communities that would be directly, permanently impacted during power line construction activities in the Transmission Corridor are Diegan coastal sage scrub, nonnative grassland, disturbed habitat, landscaped/ornamental vegetation, and urban/developed land

(Table 4.4-5). Direct, temporary impacts would occur to the same habitat and other cover types (Table 4.4-5). 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 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 were mitigated for previously under a separate project. The Existing Substation 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.

Indirect Impacts

Potential indirect impacts, temporary and permanent, 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.

Significance Determination

The Proposed Project was designed to avoid, when possible, sensitive vegetation communities that may support special-status species and sensitive biological resources, 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 of sensitive 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 (see Appendix L in the Biological Technical Report [Attachment 4.4-A]) and compensatory mitigation as required by SDG&E's NCCP for these vegetation communities (discussed in Section 4.4.5) would ensure that these impacts remain less than significant.

Operation and Maintenance – *Less-than-Significant Impact*

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 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. However, potential impacts to sensitive vegetation communities could occur during the maintenance of vegetation around power line structures, and during 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 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 Substation staging yard, Hunte Parkway staging yard, and Eastlake Parkway staging yard would no longer be used, and operations and maintenance activities would not occur at them.

Indirect Effects

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 storm water contaminant runoff may degrade adjacent vegetation communities. Exotic plant species are opportunistic and often occupy disturbed soils such as those within 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 out-compete natives for resources, resulting in a reduction in growth, future dispersal, and recruitment of native species, and the eventual degradation of the vegetation community.

Significance Determination

SDG&E would implement the NCCP Operational Protocols (see Appendix L in the Biological Technical Report [Attachment 4.4-A]) to avoid and minimize impacts to sensitive vegetation communities during future operations and maintenance of the Transmission Corridor. Such Operational Protocols include driving and remaining on existing access roads to conduct operations and maintenance activities. As such, implementation of NCCP Operational Protocols is expected to reduce potential impacts to sensitive communities to less than significant.

Question 4.4c – Effects on Wetlands

Construction – *No impact*

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-inch-diameter 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 would be 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 would be covered under the SWRCB's Construction General Permit and outlined in more detail in the Proposed Project's Storm Water Pollution Prevention Plan (SWPPP). Avoidance of post-construction drainage and water quality impacts would be addressed in site design and the Proposed Project's Storm Water Management Plan (SWMP) in accordance with the City of Chula Vista's Standard Urban Storm Water Mitigation Plan (SUSMP).

Transmission Corridor

The Transmission Corridor and potential ground-disturbing activities are located away from potential jurisdictional waters and wetlands, and no structures or string sites would be placed within jurisdictional waters or wetlands. Construction activities associated with the proposed power line in the Transmission Corridor are designed to avoid direct impacts to jurisdictional resources. In addition, 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 BSA.

Existing Substation Modifications

No potential jurisdictional waters are present in the Existing Substation. As a result, impacts to jurisdictional waters during modification to the Existing Substation would not occur.

Staging Yards

No potential jurisdictional waters are present in the Existing Substation staging yard, Hunte Parkway staging yard, or Eastlake Parkway staging yard. As a result, impacts to jurisdictional waters during use of these staging yards would not occur.

Significance Determination

In accordance with SDG&E NCCP Operational Protocols (see Section 4.4.5) 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 USACE, 401 Certification or Waste Discharge Requirements (WDRs) from RWQCB, and/or 1600 Agreement from CDFW, which would ensure that potential impacts are avoided and minimized to the greatest extent possible.

Operations and Maintenance – *No Impact*

Since permanent structures in the Transmission Corridor and the proposed Salt Creek Substation site are located away from potential jurisdictional waters and wetlands, future operations and maintenance activities are not expected to impact jurisdictional areas either. Additionally, a sufficient wetland buffer to adequately protect the functions and values of existing waters and wetlands would exist, offering further protection from potential impacts during operation and maintenance of the power line and proposed Salt Creek Substation. As such, no impacts to jurisdictional areas would occur during operations and maintenance activities upon Proposed Project completion.

Question 4.4d – Interfere with Native Wildlife Movement

Construction – *No Impacts*

Significant impacts would occur if a wildlife movement corridor is interrupted by a feature that physically blocks wildlife movement (i.e., roadway) or if habitat suitable to support wildlife in the movement corridor is directly removed during construction or indirectly affected by construction noise or dust.

Salt Creek Substation

The proposed Salt Creek Substation site lies adjacent to urban development and a roadway (Hunte Parkway). As such, the proposed Salt Creek Substation site does not function as a wildlife movement corridor and is not part of a movement corridor. No impacts to a native wildlife movement corridor would occur during construction of the proposed Salt Creek Substation.

Construction vehicles have the potential to result in accidental injury to or mortality of on-site species during construction; however, species would be mobile and would likely temporarily leave an on-site area where construction activity is occurring. Therefore, impacts are considered less than significant. In addition, the likelihood of on-site species leaving the proposed Salt Creek Substation site and colliding with vehicles is low, as heavy vehicle traffic is currently present on roadways within the surrounding area. As such, impacts would be less than significant.

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 a native wildlife movement corridor would occur during construction of the power line in the Transmission Corridor.

Existing Substation Modifications

The Existing Substation is surrounded by chain-link fence. As such, it does not function as a wildlife movement corridor, and no impacts to a native wildlife movement corridor would occur during modification activities within the Existing Substation.

Staging Yards

Urbanized development and roadways surround the Hunte Parkway staging yard and Eastlake Parkway staging yard, and the Existing Substation staging yard is surrounded by chain-link fence. As such, the staging yards do not function as wildlife movement corridors, and no impacts to a native wildlife movement corridor would occur during use of the staging yards during construction of the Proposed Project.

Operation and Maintenance – *No Impact*

Since the Transmission Corridor, staging yards, Existing Substation, and proposed Salt Creek Substation site do not function as native wildlife movement corridors, no impacts to a native wildlife corridor would occur during operation and maintenance of the Proposed Project.

Question 4.4e – Conflict with Local Policies – No Impact

Construction, operation, and maintenance associated with the proposed Transmission Corridor, staging yards, Existing Substation, and proposed Salt Creek Substation would not conflict with any local environmental policies or ordinances promulgated to protect biological resources.

Section 6.3.3.3 of the City of Chula Vista's MSCP (see Section 4.4.5 of this PEA) states that SDG&E substation projects and associated facilities are not covered by the City of Chula Vista's MSCP, but instead are covered by the SDG&E NCCP. Pursuant to the provisions of Section 6.3.3.3 of the MSCP, no impacts to a local policy would occur during construction and operation of the Proposed Project.

Question 4.4f – Conflict with Conservation Plan – No Impact

The Proposed Project is within the SDG&E Subregional NCCP area. The SDG&E NCCP addresses potential impacts to sensitive resources associated with SDG&E's ongoing installation, use, maintenance, and repair of its gas and electric systems and typical expansion to those systems throughout SDG&E's existing service area. The SDG&E NCCP includes mitigation measures and Operational Protocols designed to avoid and/or minimize impacts on biological resources and to provide appropriate mitigation where impacts are unavoidable to ensure the protection and conservation of Covered Species. The NCCP Operational Protocols would be applied to the Proposed Project to avoid and/or minimize potential impacts resulting from Proposed Project implementation. SDG&E would follow the habitat enhancement and reclamation measures described within the NCCP to ensure that Proposed Project impacts on biological resources remain less than significant.

4.4.5 Project Design Features and Ordinary Construction/Operations Restrictions

The Proposed Project was 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 of sensitive 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 ordinary construction restrictions, as outlined within Section 3.9, Project Design Features and Ordinary Construction/Operations Restrictions, including compliance with the SDG&E Subregional NCCP (see Appendix 4.4-A), 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. Compensation specific to the Proposed Project, in accordance with the SDG&E Subregional NCCP, is outlined in 4.4.5.1, below.

4.4.5.1 Compensation in Accordance with SDG&E Subregional NCCP

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 1 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 Salt Creek 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 in June 2011 (Cameron 2011), in conjunction with purchasing the 11.64-acre 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 are covered by the SDG&E NCCP.

Section 6.3.3.3, Facilities Covered by Other Habitat Planning Efforts, of the City of Chula Vista's MSCP, states: 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 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.

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 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 4.4-6). 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.
- 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 4.4-6: 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**

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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 will be mitigated at a ratio of 1:1. No mitigation is required for temporary impacts to bare ground, disturbed habitat, or landscaped/ornamental vegetation. SDG&E proposes to mitigate for 63,594 square feet (1.46 acres) of temporary impacts to coastal sage scrub and nonnative grassland at a ratio of 1:1 (Table 4.4-7). SDG&E is requesting that the resource agencies allow SDG&E to use 1.46 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.

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 landscaped/ornamental.

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 4.4-7). 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 4.4-7: TL 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 within 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**

4.4.6 Applicant-Proposed Measures

With implementation of the following APM, Proposed Project impacts to WBO would remain less than significant:

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 (CDFW 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 (CDFW 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.

4.4.7 Detailed Discussion of Significant Impacts

Based on the analyses presented above, impacts to most biological resources would be avoided, minimized, and compensated for through SDG&E Operational Protocols.

However, potential for significant impacts to WBO were identified for the Proposed Project. As such, AMP-BIO-1 is proposed to address these potential impacts. By implementing APM-BIO-1, outlined in Section 4.4.6, above, potential impacts to biological resources are considered less than significant.

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4.5 Cultural Resources

Would the project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☑
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☑	☐	☐
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☑	☐	☐
d. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☑	☐

4.5.1 Introduction

The analysis in this section is based on the Preliminary Cultural Resources Survey prepared for the Proposed Project. The Proposed Project is in Southwestern San Diego County, California. The Preliminary Cultural Resources Survey Report was prepared by AECOM in June 2012 (Bowden-Renna 2012a) and revised in October 2012 (Bowden-Renna 2012b) and July 2013 (Bowden-Renna 2013); a Paleontological Report was prepared by the San Diego Natural History Museum (SDNHM) (Deméré 2012) on November 2, 2012, and revised on January 15, 2013 (Appendix 4.5-A). Pertinent results from the previous cultural resource survey conducted by HDR for the Tie Line (TL) 6910 transmission line study (Clowery and Blotner 2012), as well as results from a previously conducted HDR survey study of the proposed Salt Creek Substation location (previously called the "Otay Substation" site) (Whitaker 2011), were incorporated into the Preliminary Cultural Resources Survey Report prepared by AECOM to ensure complete coverage of the entire Proposed Project area. The purpose of this section is to document existing cultural and paleontological resources in the Proposed Project area and to assess impacts to these resources that may potentially occur as a result of Proposed Project implementation, particularly with regard to short-term construction activities and long-term operation and maintenance.

The Proposed Project would require ground-disturbing activities associated with constructing the proposed Salt Creek Substation power line (TL 6965), the loop-in of TL 6910, and the

Existing Miguel Substation (Existing Substation) modifications. The Proposed-Project-specific components include access roads, pole locations, work pads (WP), stringing sites (SS), guard structures (GS), and construction staging yards. In addition, areas within the nearby Olympic Training Center (OTC) were identified as potential alternative staging yards for the Proposed Project. These areas were surveyed for cultural resources (Bowden-Renna 2012b).

Twelve cultural resources were previously documented within, or immediately adjacent to, the proposed power line and facilities: CA-SDI-4527, CA-SDI-4529, CA-SDI-4897, CA-SDI-7197, CA-SDI-8651, CA-SDI-8666, CA-SDI-12067, CA-SDI-12909, CA-SDI-14225, P-37-015138, P-37-015375, and P-37-015377. Additionally, two new isolated finds were observed and documented along access roads within the Existing Substation: SC-CBR-I-1 and SC-CBR-I-2. No other cultural resources were observed. Impacts to previously documented and undiscovered cultural resources resulting from the Proposed Project would be less than significant with implementation of SDG&E's APMs; refer to Section 4.4.5*,* Applicant Proposed Measures*,* which outlines minimization measures.

4.5.2 Methodology

4.5.2.1 Cultural Resources Records Search

Prior to conducting the cultural resources survey, SDG&E conducted a records search of information on file at the South Coastal Information Center (SCIC). The records search indicated 12 cultural resources previously documented within, or immediately adjacent to, the Proposed Project power lines and facilities. These resources are discussed in Section 4.4.3, Existing Conditions.

4.5.2.2 Archaeological Survey

A field survey was conducted by AECOM on June 8, September 13, and October 22, 2012. Previously documented cultural sites CA-SDI-4897 and CA-SDI-12909 were located during this current survey effort. Two new isolated finds, SC-CBR-I-1 and SC-CBR-I-2, were also identified during the survey effort.

4.5.2.3 Paleontological Resources Record Search

A paleontological records search was completed by the SDNHM in October 2012 (Deméré 2012). This consisted of reviewing relevant published and unpublished geological reports (Kennedy and Tan 1977; Kleinfelder West 2007; Todd 2004), published and unpublished paleontological reports (Deméré 1988; Deméré and Walsh 1993), geotechnical reports (Geosyntec 2012; Kleinfelder West 2007, 2012), and museum paleontological locality data (SDNHM, Department of Paleontology). This approach was followed in recognition of the direct relationship between paleontological resources and the geologic formations within which they are found. Knowing the geology of a particular area and the fossil productivity of formations that occur in that area, it is possible to predict where fossils will, or will not, be encountered. The record search revealed that more than 20 recorded paleontological localities were identified within the Proposed Project power lines and facilities.

4.5.3 Existing Conditions

4.5.3.1 Cultural Resources

Regulatory Background

State

California Environmental Quality Act (CEQA)

CEQA requires that state and local agencies identify impacts of proposed discretionary activities or projects, and to determine if impacts will be significant. CEQA also requires that alternatives be identified and mitigation measures be developed and implemented to reduce or eliminate impacts to the environment, including historic and archaeological resources. Under CEQA, historical and archaeological resources are assessed for eligibility to the California Register of Historical Resources (CRHR).

CEQA requires that impacts to cultural resources be identified and, if impacts will be significant, that mitigation measures be implemented to reduce those impacts to the extent feasible. In the protection and management of the cultural environment, both the CEQA statute and its Guidelines provide definitions and standards for cultural resources management. The term "historical resource" is defined as follows:

(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission for listing in, the California Register of Historical Resources (CRHR).

(2) A resource included in a local register of historical resources or identified as significant in a historical resource survey shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site area, record, or manuscript, which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a cultural resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources, including the following:

a. is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

b is associated with the lives of persons important in our past;

c. embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

d. has yielded, or may be likely to yield, information important in prehistory or history.

The fact that a resource is not listed in or not determined to be eligible for listing in the California Register of Historical Resources (CRHR), not included in a local register of historical resources, or not identified in a historical resources survey does not preclude a lead agency from determining that the resource may be a historical resource. However, under CEQA, isolated finds are not considered significant.

CEQA also requires that impacts to archeological resources be identified and, if impacts will be significant, that mitigation measures be implemented to reduce those impacts to the extent feasible. Archeological resources fall into three categories: (1) unique archeological resources; (2) archeological resources that are not unique, but fall under the definition of historical resources, above; and (3) archeological resources that are neither unique nor historical resources.

As defined in Section 21083.2(g) of CEQA, a "unique archaeological resource" is as follows:

> An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
>
> (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
>
> (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.
>
> (3) Is directly associated with a scientifically recognized important prehistoric or historical event or person.

Under this definition, there are no unique historic or archeological resources at the Proposed Project site.

California Register of Historical Resources (CRHR)

The State Historic Preservation Office (SHPO) established the CRHR as an authoritative guide for evaluating significant historical resources in the State of California, as follows:

> While the significance criteria for the California Register are similar to those used by the National Register of Historic Places, this new California Register will document the unique history of the Golden State.

"Integrity," which is a concept used by CEQA to determine the significance of impacts to historic resources, is defined in CRHR program as a property's ability to convey its historic significance. Evaluation of integrity may be a somewhat subjective judgment; however, it must be founded on "an understanding of a property's physical features and how they relate to its significance."

Pursuant to the California Public Resources Code (PRC) Section 5024.1 and 14 California Code of Regulations (CCR) Section 4850, properties of local significance that are designated under a local preservation ordinance, or that have been identified in a local historical resources inventory, may also be eligible for listing in the CRHR. Resources that are eligible for listing in the National Register of Historic Places (NRHP) are automatically listed by the state in the CRHR.

No historic resources currently listed in the CRHR or determined eligible for listing in the CRHR by the SHPO are located on lands potentially affected by the Proposed Project.

California Public Resources Code (PRC)

The PRC addresses archaeological finds with regard to human remains and associated objects of cultural or historical value. Sections 5097.9 to 5097.994 of the PRC identify appropriate procedures in the event that Native American remains are discovered. In addition, if human remains are discovered during site disturbance activities, Section 7050.5 of the California Health and Safety Code requires that such activities at the discovery site, and within proximity to where human remains are reasonably suspected to exist, shall cease until the County coroner can be notified. If it is determined that the human remains are of Native American origin, the Native American Heritage Commission (NAHC) must be contacted within 24 hours. All activities must proceed consistent with applicable state laws relative to the disposition of Native American burials, as regulated by the NAHC (PRC Section 5097.9, et seq.).

Native American Graves Protection and Repatriation Act (2001), California Health and Safety Code

The California Health and Safety Code, Sections 8010 through 8030, provides for the protection of Native American cultural resources. This code provides measures requiring that federal agencies and institutions that receive federal funding return Native American cultural items and human remains to their respective peoples. Such cultural items may include funerary objects, sacred objects, or objects of cultural patrimony. The code also authorizes a program of federal grants to assist in the repatriation process to ensure that California Native American human remains and cultural resources are treated with respect and dignity.

Prehistoric Setting

The earliest well-documented sites in the San Diego area belong to the San Dieguito complex, thought to be older than 9,000 years old (Warren 1967). Related materials were found in the Mojave Desert and the Great Basin, sometimes called the Lake Mojave complex (e.g., Campbell et al. 1937; Warren and Ore 1978). Diagnostic artifact types and categories associated with the San Dieguito complex include scraper planes; choppers; scraping tools; crescentics; elongated bifacial knives; and Silver Lake, Lake Mojave, and leaf-shaped projectile points (Rogers 1939; Warren 1967). In areas adjacent to the coast, many Paleoamerican-period sites were probably covered by rising sea levels since the end of the Pleistocene. In more inland regions, alluvial sedimentation in valley areas may cover these materials. Stable mesa landforms in the region, an abundance of appropriate lithic material, and soil column exposures along areas such as the San Diego River make the foothills an important area for Paleoamerican research.

The Archaic period (7,000 to 1,500 years before present [B.P.]) brings an apparent shift toward a more generalized economy and an increased emphasis on seed resources, small game, and shellfish. Local cultural manifestations of the Archaic period are called the La Jollan complex along the coast and the Pauma complex inland. Pauma complex sites lack the shell that dominates many La Jollan complex site assemblages. The La Jollan tool assemblage is dominated by rough, cobble-based choppers and scrapers, as well as slab and basin metates. There has been considerable debate about whether San Dieguito and La Jollan patterns might represent the same people using different environments and subsistence techniques, or whether they are separate cultural patterns (e.g., Bull 1983; Ezell 1987; Gallegos 1987; Warren et al. 1993).

The Late Prehistoric period (1500 B.P. to 200 B.P.) is characterized by higher population densities and elaborations in social, political, and technological systems. Economic systems diversified and intensified during this period with continued elaboration of trade networks, use of shell-bead currency, and appearance of more labor-intensive but effective technological innovations.

Subsistence is thought to have focused on acorns and grass seeds, with small game serving as a primary protein resource and big game as a secondary resource. Fish and shellfish were also secondary resources, except for areas immediately adjacent to the coast where they assumed primary importance (Luomala 1978). The settlement system is characterized by seasonal villages where people used a central-based collecting subsistence strategy. Artifactual material is characterized by the presence of arrow shaft straighteners, pendants, comales (heating stones), Tizon Brownware pottery, ceramic figurines reminiscent of Hohokam styles, ceramic “Yuman bow pipes,” ceramic rattles, miniature pottery, various cobble-based tools (e.g., scrapers, choppers, hammerstones), bone awls, manos and metates, and mortars and pestles. The arrow point assemblage is dominated by the Desert Side-notched series, but the Cottonwood series and the Dos Cabazas Serrated type also occur.

Ethnographic Setting

The Proposed Project area is in the traditional territory of the Kumeyaay. Also known as Kamia, Ipai, Tipai, and Diegueño, the Kumeyaay occupied the southern two-thirds of what is now San Diego County. The Kumeyaay spoke a language belonging to the Hokan language family, which includes the lower Colorado River tribes and Arizona groups to whom they are closely related. The Kumeyaay lived in semi-sedentary, politically autonomous villages or rancherias. Most rancherias were the seat of a clan, although it is thought that, aboriginally, some clans had more than one rancheria and some rancherias contained more than one clan (Luomala 1978).

Historic Setting

Cultural activities within San Diego County between the late 1700s and the present provide a record of Native American, Spanish, Mexican, and American occupation and land use. The Spanish period (1769–1821) represents a time of European exploration and settlement. Dual military and religious contingents established the San Diego Presidio and the San Diego Mission. The mission system used Native American labor to build the infrastructure needed for European settlement. By about 1821, the traditional lifeways were disrupted and Native American populations were tied economically to the missions. In addition to providing new construction methods and architectural styles, the mission system introduced horses, cattle, and other agricultural goods and implements to the area. The cultural systems and institutions established by the Spanish continued to influence the region beyond 1821, when California came under Mexican rule.

The Mexican period (1821–1848) retained many of the Spanish institutions and laws; however, in 1834, the mission system was secularized. This allowed for increased Mexican settlement, but it also meant that many Native Americans were dispossessed. After secularization, large tracts of land were granted to individuals and families, and a rancho system was established. Land was used primarily for grazing cattle (Pourade 1963:73). Cattle ranching dominated the agricultural activities, and development of hide and tallow trade with the United States increased during the early part of this period. The Pueblo of San Diego was established at this time, and Native American influence greatly declined. The Mexican period ended when Mexico ceded California to the United States after the Mexican-American War (1846–1848).

Very early in the American period (1848 to present), gold was discovered in California. Few Mexican ranchos remained intact because of land claim disputes. Railroad development opened much of the country to settlement. The homestead system encouraged American settlement beyond the coastal plain. The growth and decline of communities occurred in response to an increasing and shifting population, fostering a “boom and bust” cycle. As early as 1868, San Diego was promoted as a natural sanitarium, and many people suffering from tuberculosis came to the area seeking a cure in the moderate climate.

After the California Southern Railroad connected San Diego with the eastern U.S. in 1885, land speculators and health-seekers flocked to San Diego. Hundreds of people arrived daily, and property values soared. San Diego’s Great Boom lasted from 1886 to 1888. At the peak of the Great Boom, San Diego had an estimated 30,000 to 40,000 residents, most of these having arrived within a span of just 2 years (Smythe 1908).

A continued increase in population brought continued growth and wealth to Southern California. Entry of the United States into World War I, and later World War II, helped to firmly establish San Diego as a major military port. Tourism, agriculture, education, and the military are some of the major social and economic factors in the region today.

Native American Contact Program

A Sacred Lands File Search with the NAHC was conducted on March 23, 2012, for the Proposed Project. A letter of response from the NAHC, dated April 2, 2012, was received, stating that no sacred sites were known within 0.5 mile of the Proposed Project. On April 4, 2012, letters were mailed to local Native American tribal groups and/or individuals listed by the NAHC, seeking information and concerns they may have about resources in the Proposed Project area or vicinity. To date, only one response was received.

A response was received from Clint Linton of the Ipai Nation of Santa Ysabel. Mr. Linton indicated that there are numerous cultural resources in the Proposed Project area, and requested involvement with the Proposed Project prior to conducting the survey effort. Additionally, Mr. Linton requested that a Native American monitor be included in the survey effort.

On May 14, 2012, an on-site meeting was conducted with Dr. Susan Hector of SDG&E, Mr. Linton of the Ipai Nation of Santa Ysabel, and Cheryl Bowden-Renna of AECOM to discuss Mr. Linton's concerns regarding the Proposed Project. Based on the information presented by Dr. Hector regarding past surveys conducted in the area and on the brief site visit, it was agreed that Ms. Bowden-Renna would provide Mr. Linton with site forms for previously documented cultural resources located within the proposed power line corridor. Mr. Linton could then prepare a more detailed letter, with site-specific concerns, to be addressed to SDG&E. Further, it was determined that no Native American monitor was required during the survey effort. However, Native American monitors may be requested during any ground-disturbing activities during the construction phase of this Proposed Project.

Cultural Resources Record Search Results

The records search indicated that 12 cultural resources, were previously documented within or immediately adjacent to the proposed power lines and facilities (Table 4.5-1): CA-SDI-4527, CA-SDI-4529, CA-SDI-4897, CA-SDI-7197, CA-SDI-8651, CA-SDI-8666, CA-SDI-12067, CA-SDI-12909, CA-SDI-14225, P-37-015138, P-37-015375, and P-37-015377. Previous testing programs and site evaluations have been conducted at sites CA-SDI-4527, CA-SDI-4529, CA-SDI-4897, CA-SDI-8651, CA-SDI-8666, CA-SDI-12067, and CA-SDI-14225, none of which are unique archeological resources. However, all are considered potentially significant, with the exception of CA-SDI-8666, which was reclassified as an isolate. P-37-015138, P-37-015375, and P-37-015377 are also isolates. Under CEQA, isolated finds are considered not significant. CA-SDI-7197 and CA-SDI-12909 have not been previously tested or evaluated. Therefore, these sites are considered potentially significant and are treated as such. This section analyzes each of sites identified as "potentially significant" to determine whether the Proposed Project would cause a substantial adverse change in the site's significance.

CA-SDI-4527

CA-SDI-4527, situated on a knoll overlooking Wild Man's Canyon to the northeast, was originally recorded as a midden deposit and lithic scatter that included cores, flakes, and scrapers (Kaldenberg 1975a). Possible hearth features were also noted. The site area measured 40 meters (m) by 20 m with a depth of approximately 30 centimeters (cm).

Table 4.5-1: Previously Recorded Cultural Resources by Proposed Project Component

Permanent Trinomial	Description	Date(s) Recorded	Previously Tested	Evaluation Status
Salt Creek Substation				
None	n/a	n/a	n/a	n/a
TL 6965 and TL 6910 Loop-In				
CA-SDI-4529	Lithic scatter	1975; 1979; 1981; 2012	Yes	Potentially Significant
CA-SDI-7197	Lithic scatter	1979, 1980, 2002, 2005; 2012	Yes	Potentially Significant
CA-SDI-8651	Lithic scatter	1981; 1989; 1991; 2010	No	Potentially Significant
CA-SDI-8666	Lithic scatter; Isolate	1981; 2012	Yes	Reclassified as an isolate; Not Significant
CA-SDI-12067	Lithic quarry and lithic scatter	1991; 2005; 2012	Yes	Potentially Significant
CA-SDI-12909	Lithic scatter	1990; 2011	No	Potentially Significant
CA-SDI-14225	Temporary camp	1996; 2001; 2010	Yes	Potentially Significant
SC-CBR-I-1	Isolate	2012	No	Not Significant
SC-CBR-I-2	Isolate	2012	No	Not Significant
Existing Substation				
CA-SDI-4527	Habitation	1975; 1977; 1979; 1981; 2012	Portions of site tested	Potentially Significant
CA-SDI-4897	Multi-component site	1976; 1977; 1981; 1982; 2012	Yes	Potentially Significant
Staging Yards				
CA-SDI-4897	Multi-component site	1976; 1977; 1981; 1982; 2012	Yes	Potentially Significant
CA-SDI-8666	Lithic scatter; Isolate	1981; 2012	Yes	Reclassified as an isolate; Not Significant
P-37-015138	Isolate	1991	No	Not Significant
P-37-015375	Isolate	1993	No	Not Significant
P-37-015377	Isolate	1993	No	Not Significant

The site was revisited in 1977 by archaeologists from Wirth and Associates, and additional artifacts were noted, including blades and ceramics, and the site area was extended to 50 m by 40 m (Miller et al. 1977). A surface collection testing program was subsequently conducted in 1979 by RECON (RECON 1979), and additional subsurface testing was conducted by CSRI in 1981 (Clark 1981a). In 1982, R. L. Franklin (Franklin 1982a) relocated the site and noted the possibility of future impacts to it from the proposed expansion of an adjacent substation. According to Franklin, previous studies at CA-SDI-4527 had recorded more than 600 artifacts, including flake stone tools and manufacturing debitage, groundstone milling tools, and ceramic sherds. Based on this information, the site was interpreted as a Late Prehistoric base camp.

HDR examined the site in 2011 and reported that, while surface visibility was poor to moderate depending on vegetation density, 11 artifacts were identified within and slightly outside of the recorded site boundary (Clowery and Blotner 2012). Artifacts observed included a chopper, a retouched chert flake fragment, and nine metavolcanic flakes. Artifacts appeared more concentrated along the seasonal drainage that corresponded with Wild Man's Canyon. Based on the discovery of numerous artifacts outside of the recorded site boundary, the site boundary was extended an additional 25 m to the southwest and 30 m to the southeast (Clowery and Blotner 2012:10).

CA-SDI-4529

This site was originally recorded as a broad lithic scatter measuring approximately 20 m by 30 m on a flat northwest-southeast-trending ridge (Kaldenberg 1975b). Site significance evaluations were conducted by RECON (Hanna 1979) and CSRI (Nagle 1981a). This resulted in expanding the site boundaries to 450 m by 100 m. During these studies, more than 600 artifacts, including cores, flakes, hammerstones, flaked stone tools, manos, and metates, were recovered from the surface, along with minimal quantities of shell and cow bone (Nagle 1981a). Subsurface recovery from three 1-m by 1-m test excavation units, excavated to a depth of 30 cm, included 47 flakes/debitage and one shell fragment (Clark 1981b). Site disturbance observed included erosion, pot hunting, and agricultural disking.

In 2011, HDR examined the western margin of CA-SDI-4529 that extended within the SDG&E TL 6910 project area. This area was described as a relatively narrow strip of level land that contained a growth of grasses and weeds of variable density. Ground surface visibility was described as poor to moderate due to vegetation density. Two metavolcanic flakes were noted within this portion of the site boundary. The remainder of CA-SDI-4529 to the east was impacted by residential housing development (Clowery and Blotner 2012:10).

CA-SDI-4897

CA-SDI-4897 is an extensive prehistoric and historic site located on a series of adjacent knolls west of Wild Man's Canyon (RECON 1976). Ten loci, nine prehistoric and one historic, were defined during a number of archaeological surveys and investigations at the site. Locus A was the first noted and the most southern of the 10 loci (RECON 1976). Wirth and Associates resurveyed the site area in 1977 and described a lithic scatter of metavolcanic flakes measuring 30 m by 30 m, and noted that the site was being impacted by development (Toren and Schiowitz 1977).

In 1982, an additional nine loci were defined, some of which included other sites in the vicinity (Franklin 1982b) that were incorporated into CA-SDI-4897. These other resources included CA-SDI-8659 (Locus C), CA-SDI-9184 (Locus D), and CA-SDI-8665/CA-SDI-9186 (Locus H). The nine prehistoric loci (A, B, C, D, E, F, G, I, and J) consist of mostly low-density lithic scatters and/or bedrock milling features interpreted as temporary camps and/or quarries. Locus H consists of a moderately dense lithic scatter. The single historic locus, Locus E, consists of a surface scatter of historic trash and a brick-covered cistern. According to Franklin (1982b), Locus A was first tested by RECON in 1979 (RECON 1979), and was tested again in 1981 by CSRI, who expanded its dimensions to 120 m by 150 m. Artifact recovery consisted of a surface scatter of 51 artifacts, including lithic tools and flakes. CSRI (Nagle 1981b) estimated that 70% of Locus A had been destroyed. Overall, the CA-SDI-4897 loci encompass an area of approximately 74 acres.

In 2010 and 2011, HDR revisited the site and observed artifactual material between recorded Loci B and D (Blotner 2010; Clowery 2011; Clowery and Blotner 2012). However, vegetation was dense at this time and visibility was poor. No other loci were relocated. A limited testing program was conducted by HDR in 2011 as part of the TL 13826 Wood-to-Steel Replacement Project (Morgan 2011). Fourteen shovel test pits (STPs) were placed within or adjacent to Loci C and H near existing poles to be replaced. All STPs were excavated to a depth of 30 cm and all were sterile.

CA-SDI-7197

This site was originally recorded as a sparse lithic scatter measuring approximately 30 m by 50 m (Franklin 1979). CA-SDI-7197 is located on a small knoll top overlooking Proctor Valley and Telegraph Canyon. In 1980, the site was relocated and expanded westward across several ridge tops and slopes, incorporating an area of approximately 1,300 m by 300 m (Douglas 1980a). The site was interpreted as a lithic workshop and milling stone scatter consisting of five loci, and possibly representing multiple cultural periods. The site was revisited by CSRI in 2002 (Duke 2002) and by URS in 2005 (Carrel and Hoff 2005a). However, no evidence of the site was observed by either LSA or URS. Locus B of this site was relocated by HDR (Clowery and Blotner 2012). Impacts from residential development and paved roads in the area were noted.

CA-SDI-8651

CA-SDI-8651 was originally recorded by CSRI (Clark 1981c) as a lithic and groundstone scatter consisting of 20 flakes, a core, a biface, a chopper, a side scraper, and a mano fragment within a 90-m by 80-m area. While this site was relocated in 1989 by RECON (Ritz 1989), it was not relocated by ERC Environmental in 1991 due to dense vegetation covering the area at that time (Rader 1991).

This previously recorded site was not located during the survey conducted by HDR in 2010 (Clowery and Blotner 2012). It was noted that the site had been destroyed by residential development and landscaping in the area.

CA-SDI-8666

This was originally recorded by CRSI as a sparse lithic scatter located on the south side of Poggi Canyon and consisted of two flakes, four scrapers, and one core in a 300-m by 100-m area (Douglas 1980b). The site was relocated during a testing effort conducted by LSA in 1981 (Clark 1981d; Douglas 1980b). However, only one core was located on the surface. LSA placed one test unit at this site. The unit was excavated to a depth of 60 cm, and no subsurface material was encountered (Douglas 1980b). The site was re-classified as an isolate, although no specific locational data for the isolate was provided on the updated site form.

In 2011, the site area was revisited by HDR; however, the site was not relocated (Clowery and Blotner 2012). It was noted that a portion of the site had been destroyed by residential development.

CA-SDI-12067

CA-SDI-12067 was originally recorded by Brian F. Smith and Associates (BFSA) in 1991 as a small “light duty” quarry with an associated sparsely dispersed lithic scatter (Smith 1991). Artifacts observed included lithic production waste, flaked tools, and manos. While not mentioned by BFSA, the presence of manos appears to indicate that food processing activities were also occurring at the site, in addition to lithic quarrying and production activities. A testing program was conducted by BFSA in 1991, which indicated that the site’s horizontal dimensions were 165 m by 70 m, with no discernible subsurface deposit.

In 2005, URS attempted to relocate the site, but was not successful due to dense ground cover (Carrel and Hoff 2005b). The site was relocated by HDR in 2011, and a sparse lithic scatter was observed at this time (Clowery and Blotner 2012). It was noted that portions of this site were destroyed by residential development.

CA-SDI-12909

This site was recorded as a sparse lithic scatter consisting of one core and four to six pieces of debitage in area measuring approximately 120 m by 60 m (Rosen et al. 1990). The site is located just west of Wild Mans Canyon, east of Horseshoe Bend and southwest of Mother Miguel Mountain. A graded dirt road was described as bisecting the site, and artifacts were observed along the road and on the uphill and downhill slopes on both sides of the road. In addition to the road, other disturbance noted included cattle grazing and trampling from livestock and human foot traffic. This site was relocated during the survey effort by HDR in 2011 (Clowery and Blotner 2012).

CA-SDI-14225

CA-SDI-14225 was recorded as a lithic scatter consisting of 25 flakes, at least five scrapers, and a core in an area measuring 99 m by 122 m (BFSA 1996). Within this area, site materials extended across the slope of a southeast-facing knoll along the west side of the Salt Creek drainage. A dirt road running north/south was noted through the site. A subsequent subsurface testing and evaluation program was conducted by BFSA in 2001, which included a surface collection of artifacts (BFSA 2001). This investigation noted additional disturbance in the site that included additional dirt roads, past aqueduct construction activities, cattle grazing, and agricultural discing. No subsurface component was identified. However, the discovery of additional surface artifacts resulted in an extension of the site boundary by approximately 100 m to the northwest.

In 2010, HDR revisited the site (Blotner and Clowery 2010), and conducted a resurvey of the area as part of a cultural resource assessment for SDG&E’s Wood to Steel Conversion of TL 6910. Three metavolcanic flakes were relocated within 6 m of each other along the dirt access road in the northeastern portion of the site. Based on the BFSA site sketch maps, the eastern boundary of CA-SDI-14225 contracted toward the west after the 2001 testing program. However, during a survey conducted by HDR|e2M, artifacts were identified near the eastern portion of the original site boundary (Blotner 2010). Based on artifact location, the eastern site boundary should remain consistent with the one delineated on the 1996 BFSA site form. A new comprehensive site boundary was suggested that encompasses both prior site boundaries.

P-37-015138

This is an isolate lithic flake recorded in 1991 (Rader and James 1991). This isolate was collected during the survey effort conducted by ERCE in 1991.

P-37-015375

P-37-015375 consists of an isolated metavolcanic flake (Kyle and Tift 1993a).

P-37-015377

This isolate consists of two metavolcanic flakes (Kyle and Tift 1993b).

No known cemeteries exist and no recorded Native American or other human remains have been identified within or adjacent to the study area for the Proposed Project.

Archaeological Field Survey Results

A pedestrian survey of the Proposed Project components was conducted on June 8, September 13, and October 22, 2012 (Bowden-Renna 2012a, 2012b). The majority of the current Proposed Project area was previously surveyed during a recent study conducted for the adjacent, parallel, existing TL 6910 by HDR (Clowery and Blotner 2012). The current survey addressed all Proposed-Project-specific components and included access roads, pole locations, WP's, SS's, GS's and construction staging yards associated with the current Proposed Project. Additionally, potential staging yards were identified within the OTC. Portions of these components are within areas previously surveyed by HDR. Pertinent results from the HDR TL 6910 Transmission Line study (Clowery and Blotner 2012), as well as the results from a previously conducted HDR survey of the proposed Salt Creek Substation location (previously the Otay Substation site) (Whitaker 2011) are incorporated into the results of the current study for the Proposed Project to ensure complete survey coverage of the Proposed Project area.

Salt Creek Substation

The proposed Salt Creek Substation site was surveyed in parallel 10- to 12-m intervals. No previously recorded cultural resources were identified within the proposed Salt Creek Substation area. No cultural resources were identified during the survey effort.

TL 6965 and TL 6910 Loop-In

Proposed-Project-specific components, which included access roads, pole locations, WP's, and SS'S associated with the power lines, were surveyed in parallel 10- to 12-m intervals. The areas surveyed for the SS's included the proposed SS areas and a 50-foot (15-m) buffer around each SS. A 90-foot (30-m) radius around each proposed pole location was inspected. Access roads plus a 10-m buffer were also surveyed. All components of the Proposed Project that are located within previously recorded site boundaries were surveyed to identify any cultural material that may be impacted within these components.

Much of the Proposed Project area is heavily overgrown with thick brush and grass. Portions of the Proposed Project area have been previously disturbed. A new access road to pole 40 may require minor grading. All other existing access roads are either paved or were previously graded. Areas around proposed poles within existing sites boundaries were either cleared or vegetation in the area was moderate to dense. All visible ground was inspected.

Portions of the proposed TL 6965 would be located within the boundaries of previously recorded sites CA-SDI-4529, CA-SDI-8666, CA-SDI-7197, CA-SDI-12067, and CA-SDI 14225. The pedestrian field survey did not find any unique archeological resources. At site CA-SDI-7197, one mano fragment was relocated within the proposed SS6 area. No other cultural material was relocated at these sites during the current survey effort; however, only the areas associated with Proposed Project components that are located within these sites were surveyed. The remainder of the site area outside of these components was not inspected. Additionally, monitoring was conducted within portions of sites CA-SDI-7197 and CA-SDI-14225 during geotechnical potholing and boring. No subsurface cultural material was observed during the monitoring efforts.

Portions of the transmission line located within the SDG&E fee-owned Existing Substation property are located within the boundaries of previously recorded sites CA-SDI-4897 and CA-SDI-12909. All Proposed Project components are located outside of established loci for site CA-SDI-4897. Lithic material associated with sites CA-SDI-4897 and CA-SDI-12909 was observed during the current survey effort along existing access roads. The pedestrian field survey did not find any unique archeological resources. No other cultural material was relocated at sites CA-SDI-4897 and CA-SDI-12909 within the remaining Proposed Project components of the Existing Substation property; however, only the areas associated with Proposed Project components that are located within these sites were surveyed. The remainder of the site area outside of these components was not inspected. No cultural material was relocated at previously recorded site CA-SDI-4527 during the recent survey effort; however, only the areas associated with Proposed Project components that are located within these sites were surveyed. The remainder of the site area outside of these components was not inspected.

Two new isolated finds, SC-CBR-I-1 and SC-CBR-I-2, were identified during the survey effort. SC-CBR-I-1 is located within the Existing Substation property along an access road leading south into a residential development. The isolate consists of one metavolcanic flake. SC-CBR-I-2 was observed between the access road and proposed pole 37, and consists of two green metavolcanic modified flakes. Isolates are not considered significant under CEQA, and, as such, are not considered impacts. No other cultural material was noted.

Existing Substation

Substation modifications are proposed for the Existing Substation. The substation is located within the site boundaries for CA-SDI-4527 and CA-SDI-4897.

Staging Yards

Three staging yards and five potential alternative staging yards have been identified: the Existing Substation staging yard, the Hunte Parkway staging yard, the Eastlake Parkway staging yard, and the alternative OTC staging yards. The Existing Substation staging yard is located in an existing yard area within the Existing Substation. The Hunte Parkway staging yard would be located on previously graded future development pads located northeast of the intersection of Eastlake Parkway and Hunte Parkway. One isolate, P-37-015138, was previously recorded in this area and was previously collected (Rader and James 1991). The Eastlake Parkway staging yard would be located north of Eastlake Parkway and extend northwest to SR-125. Site CA-SDi-8666 was previously recorded in this area as a lithic scatter (Douglas 1980b) and has been re-classified as an isolated find (Clark 1981d). The alternative OTC staging yards would be located at the existing OTC. Two isolated finds, P-37-015375 and P-37-015377, were previously recorded near alternative OTC 3 (Kyle and Tift 1993a; Kyle and Tift 1993b). All visible ground surfaces were inspected and no cultural material was observed within the staging yards.

4.5.3.2 Paleontological Resources

Regulatory Setting

State of California

California Environmental Quality Act (CEQA)

CEQA requires that state and local agencies identify impacts of proposed discretionary activities or projects, and determine if impacts will be significant. CEQA also requires that alternatives be identified, and that mitigation measures be developed and implemented to reduce or eliminate impacts to the environment, including paleontological resources.

California Public Resources Code (PRC)

Section 5097.5 of the California PRC prohibits “knowing and willful” excavation, removal, destruction, injury, and defacement of any paleontologic feature on public lands (lands under state, county, city, district, or public authority jurisdiction, or the jurisdiction of a public corporation), except where the agency with jurisdiction has granted or expressed permission.

Paleontological Setting

Geological Setting

The Proposed Project and associated components are located within the southern Peninsular Ranges Geomorphic Province, which is dominated by plutonic igneous rocks of late Mesozoic age (approximately 125 to 90 million years old [Ma]) and prebatholithic metamorphic rocks of middle Mesozoic age (approximately 200 to 140 Ma). Along the coastal plain of San Diego County, these crystalline basement rocks are overlain by younger sedimentary deposits of Cenozoic age (approximately 45 Ma to 10,000 years old) (Walawender 2000).

Sedimentary rocks of the Oligocene-age (approximately 29 Ma) Otay Formation (Artim and Pickney 1973; Deméré 1988; Walsh and Deméré 1991) underlie the majority of the proposed

Salt Creek Substation site, as well as the TL 6965 alignment. Minor occurrences of the Cretaceous-age (approximately 120 to 130 Ma) Santiago Peak Volcanics are exposed at the northern extent of TL 6965. However, a small portion of the TL 6965 to the south is overlain by Eocene-age (approximately 42 Ma) sedimentary rocks of the Mission Valley Formation.

A site-specific geotechnical report prepared by Kleinfelder West (2007) for the proposed Salt Creek Substation site provides detailed information about subsurface conditions and indicates that fine-grained, stratified deposits of clayey sandstone and silty sandstones underlie major portions of the area. Minor occurrences of coarser-grained pebble and cobble conglomerate layers were also noted in the geotechnical reports. These lithologies are typical of the sandstone-mudstone member of the Otay Formation as defined by Walsh and Deméré (1991). The geotechnical report also indicates that up to 90 feet of artificial fill material underlies the extreme southwestern portion of the substation site, immediately adjacent to Hunte Parkway. This engineered fill material was placed during construction of Hunte Parkway and does not extend into the main area of the proposed substation site. The geotechnical report prepared by Geosyntec (2012) for the TL 6965 alignment notes that similar conditions exist along the majority of the power line, with the exception of the northern area in the vicinity of the Existing Substation. Older, metavolcanic rocks of the Santiago Peak Volcanics capped in places by Eocene sedimentary rocks of the Mission Valley Formation underlie this area.

Geologic Rock Units

The following section provides a general overview of the types of geologic deposits located within the Proposed Project area (in order from oldest to youngest).

Santiago Peak Volcanics (Ksp)

This unit is described as metavolcanic rocks mapped from the late Jurassic to early Cretaceous (Todd 2004). Santiago Peak Volcanics occur in the northernmost portion of the Proposed Project area, underlying the northern terminus of the proposed power lines, the Existing Substation, and the Existing Substation staging yard. This formation is composed primarily of volcanic breccias, with lesser amounts of volcanic tuffs and flows. In some areas, slightly to moderately metamorphosed marine mudstones and sandstones appear interbedded with the volcanic rocks (Fife et al. 1967). Radiometric dates on the volcanic flow-rocks of the Santiago Peak Volcanics yielded earliest Cretaceous ages (approximately 120 to 130 Ma) (Herzig and Kimbrough 1991). Santiago Peak Volcanics were altered during emplacement of the vast volumes of magma generated by early Cretaceous subduction of a large lithospheric plate. These magmas subsequently cooled to form the plutonic (“granitic”) rocks of the Peninsular Ranges Batholith.

Mission Valley (Tmv)

Sedimentary rocks of the Mission Valley Formation directly overlie metavolcanic rocks of the Santiago Peak Volcanics in the northernmost portion of the Proposed Project area, underlying the northern terminus of TL 6965, the Existing Substation, and the Existing Substation staging yard. The Mission Valley Formation consists of fine- to very-fine-grained marine sandstone in its type area along SR-163 on the south side of Mission Valley. Eastern and southern exposures of the formation consist of fine- to medium-grained, fluvial sandstones, as well as green and brown non-marine siltstone and mudstone. Maximum formation thickness near its type location in Mission Valley is 200 feet, although it only reaches a thickness of 60 feet at Scripps Ranch and 45 feet in Tierrasanta (Deméré and Walsh 1993). Radiometric dating (Ar-Ar method) indicates that the Mission Valley Formation is approximately 42.83 million years old, placing it within the Middle Eocene Epoch (Walsh 1996). This formation is the only Eocene rock unit in Southern California that contain fossil mammal localities that are directly associated with a radiometric date (Deméré and Walsh 1993).

Otay Formation (To)

The majority of the Proposed Project, including the proposed Salt Creek Substation, Hunte Parkway staging yard, OTC alternative staging yards, and most of the proposed TL 6965, is underlain by the Oligocene-age Otay Formation. Sedimentary rocks mapped by Todd (2004) as fluvial and alluvial fan strata comprise this formation. The Otay Formation in this area is radiometrically dated at approximately 29 Ma and is correlative with the Arikareean North American Land Mammal Age.

The formation was divided into three members by Walsh and Deméré (1991), who recognize a basal angular conglomerate (fanglomerate) unit, a middle gritstone unit, and an upper sandstone-mudstone unit. The upper member consists of gray-white, medium-grained, tuffaceous sandstone with interbeds of brown and red-brown claystones and white bentonite layers (Walsh and Deméré 1991). The middle member consists of interbedded coarse-grained sandstones and angular gravels (gritstone). The lower member is a poorly sorted, cobble to boulder fanglomerate, largely composed of angular blocks of locally derived metavolcanic and plutonic igneous rock. (Walsh and Deméré 1991; Todd 2004). In general, the formation becomes finer grained from bottom to top, with the basal angular conglomerate unit grading upward and westward into the gritstone member, which in turn grades upward and westward into the sandstone-mudstone member. The Otay Formation may be as thick as 400 feet, but at any one location, the formation is typically less than 120 feet thick.

Paleontological Resources Records Search Results

Numerous fossil-collecting localities are documented in paleontological records housed at SDNHM. More than 20 recorded fossil-collecting localities occur within the Proposed Project area and associated facilities. All of these localities were discovered in the sandstone-mudstone member of the Oligocene-age Otay Formation during mass grading for the Eastlake and Winding Walk developments. Fossils recovered from these localities include aquatic plant impressions; freshwater invertebrate shells; isolated bones and teeth; and whole and partial skeletons of terrestrial vertebrates, including lizards (iguanid), opossums (cf. *Nanodelphys* sp.), insectivore (cf. *Centetodon* sp.), hedgehog (cf. *Ocajila* sp.), early rodents (*Heliscomys* sp., *Leidymys* sp., *Pleurolicus* sp., *Protospermophilus* sp., and *Meniscomys* sp.), rhinoceros (cf. *Subhyracodon* sp.), mouse deer (*Hypertragulus* sp.), and oreodont (*Sespia californica*).

Fossil potential for the geologic deposits located within the Proposed Project area are summarized below.

Santiago Peak Volcanic

In general, the molten origin of the Santiago Peak Volcanics precludes preserving significant fossil remains. However, some volcanic breccias contain petrified wood, as in Mira Mesa and near Rancho Santa Fe (D'Vincent 1967). In addition, certain exposures of meta-sedimentary rocks produced important remains of siliceous microfossils (e.g., radiolarians: Jones and Miller 1982) and marine macroinvertebrates, including belemnites and clams (Jones and Miller 1982). Currently, there are no records of any paleontological collecting sites in these rocks south of San Clemente Canyon in the City of San Diego.

Mission Valley Formation

Well-preserved fossils of microorganisms (e.g., foraminiferans), clams, snails, crabs, sea urchins, sharks, rays, and bony fish were collected from marine Mission Valley units (Givens and Kennedy 1979). In addition, fluvial deposits produced well-preserved fossil remains of wood, as well as a diverse assemblage of terrestrial mammals, including opossums, insectivores, bats, rodents, primates, artiodactyls, and perissodactyls (Gotz and Lillegraven 1977; Walsh 1996).

The combined marine and non-marine fossil assemblages recovered from the formation allow direct correlation of marine and terrestrial faunas of the Eocene of Southern California. In this respect, the Mission Valley Formation is scientifically important, and it serves as one of a few instances within North America from which such correlations are ascertained (Flynn 1986; Gotz and Lillegraven 1977; Walsh 1996).

The Mission Valley Formation is discontinuously exposed between Otay Valley in the south; Scripps Ranch in the north; Old Town in the west; and Spring Valley, Fletcher Hills, and Santee in the east (Deméré and Walsh 1993). Based on paleontology, several distinctive vertebrate fossil-bearing sandstone outcrops in the Rancho Bernardo, Rancho Peñasquitos, and Carmel Mountain Ranch regions, mapped as the Mission Valley Formation, more likely belong to the upper sandstone tongue of the Friars Formation (Walsh 1996; Walsh et al. 1996).

Otay Formation

Numerous fossil localities in the Otay Formation were discovered in the Eastlake, Otay Ranch, and Otay Mesa areas of southwestern San Diego County. These localities produced a diverse assemblage of well-preserved terrestrial vertebrate remains, which includes tortoises, lizards, snakes, birds, shrews, rodents, rabbits, dogs, foxes, cat-like nimravids, rhinoceros, camels, mouse-deer, and oreodonts. Based on these fossil discoveries, the Otay Formation is considered the richest source of late Oligocene terrestrial vertebrates in California (Deméré 1988; Walsh and Deméré 1991).

Paleontological Resources Assessment

A Paleontological Resources Assessment, based on the paleontological records search, was completed by the SDNHM in October 2012 (Deméré 2012). This study found that the Proposed Project area and associated facilities are located within three geologic units with varying paleontological potential: Santiago Peak Volcanics, Mission Valley, and Otay Formation (Table 4.5-2). The record search revealed the presence of more than 20 localities recorded within the

Proposed Project area. All of these localities were located in sedimentary deposits associated with the Otay Formation. Additionally, while no known localities are mapped in the Mission Valley Formation within the Proposed Project area, well-preserved fossils were previously recovered from this formation. Therefore, the Mission Valley and Otay Formations are considered high sensitivity for paleontological resources. The Santiago Peak Volcanics precludes the possibility of fossil remains and, therefore, is considered to have no sensitivity for paleontological resources.

Table 4.5-2: Paleontological Resource Assessment by Proposed Project Area

Proposed Project Location	Geologic Formation	Level of Sensitivity	Recorded Localities	Recommendations
Salt Creek Substation				
Proposed Substation Site	Otay Formation	High	Yes	Monitor
TL 6965 and TL-6910 Loop-In				
Northern Terminus	Santiago Peak Volcanics; Mission Valley Formation**	Low; High	No; Yes*	Monitor
From Existing Substation to Proposed Salt Creek Substation	Otay Formation	High	Yes	Monitor
Existing Substation				
Substation Site	Santiago Peak Volcanics; Mission Valley Formation	Low; High	No; Yes*	Monitor
Staging Yards				
Existing Staging Yard	Santiago Peak Formation; Mission Valley Formation	Low; High	No; Yes*	None***
Eastlake Parkway Staging Yard	Otay Formation	High	Yes*	None***
Hunte Parkway Staging Yard	Otay Formation	High	Yes*	None***
Olympic Training Center 1	Otay Formation	High	Yes*	None ***
Olympic Training Center 2	Otay Formation	High	Yes*	None ***
Olympic Training Center 3	Otay Formation	High	Yes*	None ***
Olympic Training Center 4	Otay Formation	High	Yes*	None ***
Olympic Training Center 5	Otay Formation	High	Yes*	None ***

*Localities found in this formation but not located within Proposed Project area.
**Underlies the Santiago Peak Volcanics in the same location.
*** Ground-disturbing activities would be minimal and would not impact soils associated with paleontological resources.

4.5.4 Impacts

4.5.4.1 Significance Criteria

Appendix G to the CEQA Guidelines sets forth the criteria for determining whether a project will result in a significant impact on cultural and paleontogical resources. These criteria are whether the project:

a. Would cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

b. Would cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

c. Would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Cultural Resources

CEQA Guideline 15064.5(a) defines historical resources as follows:

> (1) A resource listed in, or determined to be eligible by, the State Historical Resources Commission, for listing in the CRHR (PRC Section 5024.1, Title 14 CCR, Section 4850 et seq.).
>
> (2) A resource included in a local register of historical resources, as defined in Section 020.1(k) of the PRC or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the PRC, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
>
> (3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the CRHR (PRC Section 5024.1, Title 14 CCR, Section 4852), including the following:
>
>> (A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
>>
>> (B) Is associated with the lives of persons important in our past;
>>
>> (C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
>>
>> (D) Has yielded, or may be likely to yield, information important in prehistory or history.

For archaeological resources, this involves evaluation of their ability to address important research questions (Criterion D). For sites with built or historic components, this can involve assessment under one or more criteria.

Under CEQA Guideline 15064.5(b), a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. Substantial adverse change in the significance of a historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired.

The significance of a historical resource is materially impaired when a project would:

> (A) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
>
> (B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Code or its identification in a historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
>
> (C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

Paleontological Resources

Appendix G of the CEQA Guidelines, quoted above, also applies to paleontological resources, which asks whether a project would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Although CEQA does not define what is "a unique paleontological resource or site," the definition of "unique archaeological resources" can guide analysis of unique paleontological resources. PRC Section 21083.2 defines "unique archaeological resources" as "any archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

> 1. contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
>
> 2. has a special and particular quality such as being the oldest of its type or the best available example of its type; and/or
>
> 3. is directly associated with a scientifically recognized important prehistoric or historic event.

As there is no standard guidance in CEQA to assess the significance of paleontological resources, paleontologists use existing fossil and geological data to determine areas of potential significance. A resource is deemed unique or important if:

(1) it has fossils that have previously been recovered from a particular geologic unit;

(2) there are recorded fossil localities within the same geologic units as occur within the project area; and

(3) the types of fossil materials that have been recovered from the geologic unit are unique or important.

Impacts to paleontological resources are typically rated from high to zero, depending on the resource sensitivity of impacted geologic formations. The specific criteria applied for each sensitivity category are summarized below:

- **High Sensitivity:** High sensitivity is assigned to geologic formations known to contain paleontological localities with rare, well-preserved, critical fossil materials for stratigraphic or paleoenvironmental interpretation, and fossils providing important information about the paleobiology and evolutionary history (phylogeny) of animal and plant groups. Generally speaking, highly sensitive formations produce vertebrate fossil remains or are considered to have the potential to produce such remains.

- **Moderate Sensitivity:** Moderate sensitivity is assigned to geologic formations known to contain paleontological localities with poorly preserved, common elsewhere, or stratigraphically unimportant fossil material. The moderate sensitivity category is also applied to geologic formations that are judged to have a strong, but unproven, potential for producing important fossil remains.

- **Low Sensitivity:** Low sensitivity is assigned to geologic formations that, based on their relatively youthful age and/or high-energy depositional history, are judged unlikely to produce important fossil remains. Typically, low sensitivity formations have the potential to yield poorly preserved invertebrate fossil remains in low abundance.

- **Zero Sensitivity:** Zero sensitivity is assigned to geologic formations that are entirely igneous in origin and, therefore, have no potential for producing fossil remains. Artificial fill materials are also placed in this category.

4.5.4.2 Impact Analysis

Question 4.4a – Historical Resource Change

Construction – No Impact

Salt Creek Substation

No historical resources were identified within the construction areas for the proposed Salt Creek Substation site. As such, potential impacts on significant historic resources are considered avoided and no further action is required. No impact would occur.

TL 6965 and TL 6910 Loop-In

No historical resources were identified within the construction areas for the proposed TL 6965 and TL 6910 loop-in. As such, potential impacts on significant historic resources are considered avoided and no further action is required. No impact would occur.

Existing Substation Modifications

No historical resources were identified within the construction areas for proposed improvements at the Existing Substation. As such, potential impacts on significant historic resources are considered avoided and no further action is required. No impact would occur.

Staging Yards

No historical resources were identified within the proposed staging yards. As such, potential impacts on significant historic resources are considered avoided and no further action is required. No impact would occur.

Operation and Maintenance – No Impact

Long-term operation of the Proposed Project would not impact any known historical resources on-site, as none were identified.

Question 4.4b – Archaeological Resource Change

Construction – Potentially Significant Unless APMs Implemented

Salt Creek Substation

No archaeological resources were identified within the construction areas of the proposed Salt Creek Substation site. As such, potential impacts on significant archaeological resources are considered avoided and no further action is required. No impact would occur.

TL 6965 and TL 6910 Loop-In

The Proposed Project has been designed to avoid archaeological resources to the extent feasible. The main loci of archaeological sites have been avoided, but it is not feasible to entirely avoid all potential archaeological resources given the high number of discoveries that have been made in recent years.

Previously recorded archaeological resources CA-SDI-4529, CA-SDI-7197, CA-SDI-8666, CA-SDI-12067, and CA-SDI-14225 are located within specific construction areas for the proposed TL 6965 power line, near pole locations 1, 19, 20, 28, 29, 30, and 33. One mano fragment associated with CA-SDI-7197 was observed in the vicinity of SS-6. No other cultural material associated with these sites was observed during the survey effort.

Geotechnical boring and potholing were also conducted at sites CA-SDI-7197, CA-SDI-8666, and CA-SDI-14225. No subsurface cultural material was observed during the monitoring effort. As such, there would be no adverse impacts to these sites during the construction of the proposed TL 6965. However, undiscovered buried archaeological resources may be encountered during ground-disturbing activities for the Proposed Project. Previously recorded archaeological resources CA-SDI-4527, CA-SDI-4897, and CA-SDI-12909 are located within the proposed construction areas for the proposed TL 6965 power transmission line, located within SDG&E fee-owned Existing Substation property near pole locations 36, 38, 39, 41, and 42. No cultural material associated with these sites was observed during the survey effort. Additionally, all proposed locations for new components within the Existing Substation property are located outside of known loci for CA-SDI-4897. As such, there would be no adverse impacts to these sites during the construction of the proposed modifications at the Existing Substation. However, undiscovered buried archaeological resources may be encountered during ground-disturbing activities. The Proposed Project includes implementing APM-CUL-1 through CUL-3, which provide an archaeological construction-monitoring program when ground-disturbing activities are undertaken. With implementation of monitoring during ground-disturbing activities, impacts would be less than significant.

Existing Substation Modifications

The Existing Substation is located within previously recorded archaeological sites CA-SDI-4527 and CA-SDI-4897. It is not feasible to avoid these sites, because the Existing Substation has already been constructed. While the Existing Substation has been previously constructed, buried remnants of these sites may be present and may be encountered during ground-disturbing activities. The Proposed Project includes implementing APM-CUL-1 through CUL-3, which provide an archaeological construction-monitoring program when ground-disturbing activities are undertaken. With implementation of monitoring during ground-disturbing activities, impacts would be less than significant.

Staging Yards

Previously recorded archaeological resource CA-SDI-4897 is located within the Existing Substation staging yard. It is not feasible to avoid this site because the Existing Substation staging yard has already been constructed and is actively being used for various work. Additionally, no subsurface ground-disturbing activities are proposed. Therefore, no impacts would occur. One previously recorded isolated find, P-37-015138, is within the proposed Hunte Parkway staging yard and was previously collected. CA-SDI-8666, a previously recorded site, is within the Eastlake staging yard and has been re-classified as an isolated find. Two previously recorded isolated finds, P-37-015375 and P-37-015377, are located within alternative staging yards at the OTC. Under CEQA, isolated finds are not considered significant. As such, potential impacts on significant archaeological resources are considered avoided, and no further action is required. No impact would occur.

Operation and Maintenance – Less-than-Significant Impact

SDG&E has standard internal programs and practices that are designed to avoid impacts to cultural resources, and those programs and practices would not change as a result of the Proposed Project. There would be no operational impacts on cultural resources within the Proposed Project once the Proposed Project is constructed.

Salt Creek Substation

No archaeological resources were identified within the construction areas of the proposed Salt Creek Substation site. As such, no impact would occur.

TL 6965 and TL 6910 Loop-In, Existing Substation, and Staging Yards

Ongoing operation and maintenance activities associated with TL 6965, TL 6910 loop-in, and the Existing Substation upgrades for the Proposed Project would occur within areas disturbed during the construction phase. As such, it is not anticipated that operation and maintenance activities would result in activities with the potential to encounter archaeological resources. Therefore, no impact would occur.

Question 4.4c – Paleontological Resource Destruction

Construction – Potentially Significant Unless APMs Implemented

Salt Creek Substation

Anticipated grading and earthmoving activities at the proposed Salt Creek Substation site would likely result in the removal of previously undisturbed Otay Formation strata, which has a high sensitivity ranking for potential paleontological resources. As such, the Proposed Project includes implementing APM-CUL-4 through CUL-7, which would provide paleontological monitoring when ground-disturbing activities are undertaken. With implementation of monitoring during ground-disturbing activities, impacts would be less than significant.

TL 6965 and TL 6910 Loop-In

Work associated with the Proposed Project would involve excavations into the Mission Valley and Otay Formations, and may result in removing previously undisturbed Otay Formation strata. The Proposed Project includes implementing APM-CUL-4 through CUL-7, which would provide paleontological monitoring when ground-disturbing activities are undertaken. With implementation of monitoring during ground-disturbing activities, impacts would be less than significant.

Existing Substation Modifications

Proposed modifications at the Existing Substation could involve excavations into the Mission Valley and Otay Formations, and may result in removing previously undisturbed Otay Formation strata. Because Eocene-age bedrock occurs at or near the surface, shallow excavation or grading could adversely impact paleontological resources within the Mission Valley Formation. The Proposed Project includes implementing APM-CUL-4 through CUL-7, which would provide paleontological monitoring when ground-disturbing activities are undertaken. With implementation of monitoring during ground-disturbing activities, impacts would be less than significant.

Staging Yards

With the exception of possible minor grading for driveway access at the Hunte Parkway staging yard and the minor grading at the Eastlake Parkway staging yard, no excavations are anticipated at the proposed staging yards. It is unlikely that site activities would disturb either the Mission Valley or Otay Formations. Therefore, impacts would be less than significant, and no monitoring is required.

Operation and Maintenance – No Impact

Ongoing operation and maintenance activities associated with the Proposed Project would occur within areas disturbed during the construction phase. As such, it is not anticipated that operation and maintenance activities would result in activities with the potential to encounter paleontological resources. Therefore, no impact would occur.

Question 4.4d – Human Remains Disturbance

Construction – Less-than-Significant Impact

Salt Creek Substation

The records search and NAHC sacred lands file check undertaken in 2012 indicated that no human remains were identified within the proposed Salt Creek Substation area. As such, the potential for discovering unknown human remains during subsurface construction activities is low. However, undiscovered buried remains may be encountered during ground-disturbing activities for the Proposed Project. In the event that human remains are discovered during construction, SDG&E would implement its ordinary operations restrictions regarding unanticipated discovery of human remains, as outlined in Section 3.8, Project Design Features and Ordinary Construction/Operations Restrictions. All work would be halted in the vicinity of the find and the county coroner's office would be notified in accordance with the California PRC (Sections 5097.94, 5097.98, and 5097.99) and State Health and Safety Code (Section 7050.5). As a result, impacts would be less than significant.

TL 6965 and TL 6910 Loop-In

No human remains were previously identified within the Proposed Project area. As such, the potential for discovering unknown human remains during subsurface construction activities is low. However, undiscovered buried remains may be encountered during ground-disturbing activities for the Proposed Project. In the event that human remains are discovered during construction, SDG&E would implement its ordinary operations restrictions regarding unanticipated discovery of human remains, as outlined in Section 3.8, Project Design Features and Ordinary Construction/Operations Restrictions. All work would be halted in the vicinity of the find, and the county coroner's office would be notified in accordance with the California PRC (Sections 5097.94, 5097.98, and 5097.99) and State Health and Safety Code (Section 7050.5). As a result, impacts would be less than significant.

Existing Substation Modifications

No human remains were previously identified within the Existing Substation. As such, the potential for discovering unknown human remains during subsurface construction activities is low. However, undiscovered buried remains may be encountered during ground-disturbing activities for the Proposed Project. In the event that human remains are discovered during construction, SDG&E would implement its ordinary operations restrictions regarding unanticipated discovery of human remains, as outlined in Section 3.8, Project Design Features and Ordinary Construction/Operations Restrictions. All work would be halted in the vicinity of the find, and the county coroner's office would be notified in accordance with the California PRC (Sections 5097.94, 5097.98, and 5097.99) and State Health and Safety Code (Section 7050.5). As a result, impacts would be less than significant.

Staging Yards

No human remains were previously identified at the staging yards. With the exception of possible minor grading for driveway improvements at the Hunte Parkway staging yard and minor grading at the Eastlake Parkway staging yard, no earthmoving activities are anticipated at the proposed staging yards. As such, the potential for discovering unknown human remains during subsurface construction activities required for the Proposed Project is low. However, undiscovered buried remains may be encountered during ground-disturbing activities for the Proposed Project. In the event that human remains are discovered during construction, SDG&E would implement its ordinary operations restrictions regarding unanticipated discovery of human remains, as outlined in Section 3.8, Project Design Features and Ordinary Construction/Operations Restrictions. All work would be halted in the vicinity of the find and the county coroner's office would be notified in accordance with the California PRC (Sections 5097.94, 5097.98, and 5097.99) and State Health and Safety Code (Section 7050.5). As a result, impacts would be less than significant.

Operation and Maintenance – No Impact

The presence of human remains within the Proposed Project area is considered unlikely; however, the potential for discovery of human remains in the area does exist. As ongoing Proposed Project operation and maintenance activities would occur in areas already disturbed during the construction phase, they are not anticipated to adversely impact any human remains. Therefore, no impact would occur.

4.5.5 Project Design Features and Ordinary Construction/Operations Restrictions

With implementation of the ordinary construction and operations restrictions, as outlined within Section 3.8, Project Design Features and Ordinary Construction/Operations Restrictions, potential impacts related to human remains would remain less than significant.

4.5.6 Applicant-Proposed Measures

With implementation of the following APMs, Proposed Project impacts on archaeological resources would remain less than significant:

- APM-CUL-1: A qualified archaeologist shall attend pre-construction meetings, as needed, to consult with the excavation contractor concerning excavation schedules, archaeological field techniques, and safety issues. Proposed Project personnel shall receive training regarding the appropriate work practices necessary to effectively implement the APMs, including the potential for exposing subsurface cultural resources and paleontological resources. This training shall include procedures to be followed upon the discovery or suspected discovery of archaeological materials, including Native American remains, as well as paleontological resources. The requirements for archaeological monitoring shall be noted on the construction plans.

- APM-CUL-2: Monitoring shall occur during proposed pole replacement/improvement activities for Poles 1, 28, 29, 30, 33, 36, 38, 39, 46, 47, and 48. These poles are located adjacent to previously recorded resources (CA-SDI-4529, CA-SDI- 4897, CA-SDI-7197, CA-SDI-12067, CA-SDI-12909, and CA-SDI-14225). Monitoring shall also occur during vegetation removal or ground-disturbing activities at Stringing Sites SS-1, -2, -3, -5, -6, and -14. These are located within sites CA-SDI-4527, CA-SDI-4897, and CA-SDI-14225. In the event that cultural resources are encountered during ground-disturbing activities, the archaeologist shall have the authority to divert or temporarily suspend ground disturbance to allow evaluation of potentially significant cultural resources. The archaeologist shall contact SDG&E's Cultural Resources Specialist and Environmental Project Manager at the time of the discovery. The archaeologist, in consultation with SDG&E's Cultural Resource Specialist, shall determine the significance of the discovered resources. SDG&E's Cultural Resources Specialist and Environmental Project Manager must concur with the evaluation procedures to be performed before construction activities are allowed to resume. For significant cultural resources, preservation in place shall be the preferred manner of mitigating impacts. For resources that cannot be preserved in place, a Research Design and Data Recovery Program shall be prepared and carried out to mitigate impacts.

- APM-CUL-3: If ground-disturbing activities, such as grading, are to be conducted along access roads, monitoring shall occur where the access road crosses the site or is located with the boundaries of a site, and equipment blades shall be lifted when traversing sites. Monitoring shall occur for ground-disturbing activities associated with access road improvements within the Existing Substation property. Additionally, all vehicles shall remain on existing dirt roads and new access identified for the Proposed Project. If needed, additional overland travel or access routes shall be reviewed, and appropriate avoidance measures and monitoring shall be implemented.

With implementation of the following APMs, Proposed Project impacts on paleontological resources would remain less than significant:

- APM-CUL-4: A qualified paleontologist shall attend pre-construction meetings, as needed, to consult with the excavation contractor concerning excavation schedules, paleontological field techniques, and safety issues. A qualified paleontologist is defined as an individual with a Master's of Science or Doctor of Philosophy in paleontology or geology who is experienced with paleontological procedures and techniques, who is knowledgeable in the geology and paleontology of Southern California, and who has worked as a paleontological mitigation project supervisor in the region for at least 1 year. The requirements for paleontological monitoring shall be noted on the construction plans.

- APM-CUL-5: A paleontological monitor shall work under the direction of the qualified Proposed Project paleontologist, and shall be on-site to observe excavation operations that involve the original cutting of previously undisturbed deposits with high paleontological resource sensitivity (i.e., Mission Valley and Otay Formations). A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials.
- APM-CUL-6: In the event that fossils are encountered, the Proposed Project paleontologist shall have the authority to divert or temporarily halt construction activities in the area of discovery to allow recovery of fossil remains in a timely manner. The paleontologist shall contact SDG&E's Cultural Resource Specialist and Environmental Project Manager at the time of discovery. The paleontologist, in consultation with SDG&E's Cultural Resource Specialist, shall determine the significance of the discovered resources. SDG&E's Cultural Resource Specialist and Environmental Project Manager must concur with the evaluation procedures to be performed before construction activities are allowed to resume.
- APM-CUL-7: Because of the potential for recovery of small fossil remains, it may be necessary to set up a screen-washing operation on-site. If fossils are discovered, the paleontologist (or paleontological monitor) shall recover them, along with pertinent stratigraphic data. Because of the potential for recovery of small fossil remains, such as isolated mammal teeth, recovery of bulk sedimentary matrix samples for off-site wet screening from specific strata may be necessary, as determined in the field. Fossil remains collected during monitoring and salvage shall be cleaned, repaired, sorted, cataloged, and deposited in a scientific institution with permanent paleontological collections. A final summary report shall be completed. This report shall include discussions of the methods used, stratigraphy exposed, fossils collected, and significance of recovered fossils. The report shall also include an itemized inventory of all collected and catalogued fossil specimens.

4.5.7 Detailed Discussion of Significant Impacts

4.5.7.1 Cultural Resources

Based on the above analyses, no historical resources were identified within the Proposed Project area. As such, there are no impacts, and no APMs are required for historical resources.

Twelve archaeological resources, CA-SDI-4527, CA-SDI-4529, CA-SDI-4897, CA-SDI-7197, CA-SDI-8651, CA-SDI-8666, CA-SDI-12067, CA-SDI-12909, CA-SDI-14225, P-37-015138, P-37-015375, and P-37015377, were identified within the Proposed Project area. Based on the analyses conducted, potential significant impacts to archaeological resources CA-SDI-4527, CA-SDI-4529, CA-SDI-7197, CA-SDI-12067, CA-SDI-12909, and CA-SDI-14225 were identified, as it was not feasible to avoid these resources in the design of the Proposed Project. As such, APMs are proposed to address these potential impacts. By implementing APM-CUL-1 through APM-CUL-3, outlined in Section 4.5.6, above, potential adverse impacts to archaeological resources are considered less than significant.

4.5.7.2 Paleontological Resources

More than 20 fossil localities were identified within the Proposed Project area. Based on the analyses conducted, potential for significant impacts to paleontological resources within the Mission Valley and Otay Formations were identified for the Proposed Project. As such, APMs are proposed to address these potential impacts. By implementing APM-CUL-4 through APM-CUL-7, outlined in Section 4.5.6, above, potential impacts to paleontological resources are considered to be less than significant.

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4.6 Geology and Soils

Would the Project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
a. Expose people or structures to potential adverse effects, including the risk of loss, injury or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☑	☐
ii. Strong seismic ground shaking?	☐	☐	☑	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☑	☐
iv. Landslides?	☐	☐	☑	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☑	☐

Would the Project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	❒	❒	☑	❒
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial risks to life or property?	❒	❒	❒	☑
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	❒	❒	❒	☑

4.6.1 Introduction

The analysis in this section is based on the Geotechnical Investigation: 69-kV Transmission Line TL 6965 Salt Creek Substation to Miguel Substation, prepared by Geosyntec Consultants, dated August 22, 2012 (Appendix 4.6-A); Geotechnical Investigation of the Proposed SDG&E Otay Ranch Substation, prepared by Kleinfelder, dated March 7, 2008 (Appendix 4.6-B); Geotechnical Investigation of TL 6910 Wood to Steel Improvements, prepared by GEOCON, dated July 15, 2011; and the Report of Earthwork Observation and Testing, prepared by URS Corporation, dated May 7, 2007. In addition, publicly available geologic maps and data were reviewed.

This section describes the geologic and soil conditions in the area for the proposed Salt Creek Substation, TL 6965, TL 6910 loop-in, and staging yards. The potential geologic and seismic impacts of the Proposed Project analyzed in this section include the exposure of people and structures to potential substantial adverse effects involving strong seismic ground shaking, fault rupture, liquefaction, unstable soils, landslides, expansive soil, or substantial soil erosion or loss of topsoil. The evaluation concludes that, with implementation of the design features identified in the geotechnical reports, construction of the Proposed Project would result in less-than-significant geologic impacts.

4.6.2 Methodology

This section was prepared based on the geotechnical investigations listed above, and data compiled from the U.S. Geological Survey (USGS), the California Geological Survey (CGS) (2012a, 2012b), and the General Plans of the County of San Diego (2011) and the City of Chula Vista (2005).

The proposed Salt Creek Substation, TL 6965, TL 6910 loop-in, and staging yards were considered in the following analysis, along with the Existing Substation. The proposed TL 6965 extends approximately 5 miles from its northwestern terminus at the Existing Substation to its southeastern terminus at the proposed Salt Creek Substation in the Otay Ranch area. Where existing conditions or potential impacts are identical for multiple components, these components are described together in the subsections that follow.

SDG&E would incorporate the design measures and findings of the Geotechnical Investigation reports prepared by Geosyntec Consultants, Kleinfelder, and the contractor's Geotechnical Engineer in the final design of all Proposed Project components. This approach would ensure that final design and construction techniques compensate for potential landslides, expansive soils, and slope instability. In addition, SDG&E would comply with all applicable codes and seismic standards, as appropriate, to minimize the potential for damage from a seismic event. Final design would be reviewed and approved, prior to commencement of construction, by a professional engineer registered in California.

4.6.3 Existing Conditions

4.6.3.1 Topography and Physiography

The Proposed Project area is located in the Peninsular Ranges Geomorphic Province, which encompasses an area that extends south approximately 900 miles, from the Transverse Ranges and the Los Angeles Basin to the southern tip of Baja California. The Peninsular Ranges vary in width from approximately 30 to 100 miles. The lower Peninsular Range Region in San Diego County is composed of foothills with elevations ranging from 600 feet above mean sea level (amsl) to 2,000 feet amsl (County of San Diego 2011). It is characterized by rolling to hilly uplands that contain frequent, narrow, winding valleys traversed by several rivers and intermittent drainages.

The land underlying proposed TL 6965 is generally characterized by sloping terrain varying from relatively flat to gentle slopes. The natural hillsides along the alignment are covered by moderate growth of scrub brush and low grasses. Elevations along the proposed power lines range from 487 feet amsl to 630 feet amsl. The majority of the land underlying proposed TL 6965 generally drains to the west or southwest toward San Diego Bay; however, the southern portion of the proposed TL 6965 near the proposed Salt Creek Substation site drains to the southeast toward Salt Creek and Lower Otay Lake.

The proposed Salt Creek Substation site is relatively undisturbed and consists of gentle to moderately sloping hillsides that descend to the west, south, and east toward a natural drainage system below the site. The undeveloped portions of the site are covered with grasses and native scrub habitat.

4.6.3.2 Soils

Several soil types are present in the Proposed Project area, as shown in Figure 4.6-1. The majority of the Proposed Project area, including the Hunte Parkway staging yard, Eastlake Parkway staging yard, and the alternative staging yards at the Olympic Training Center, is composed of Diablo Clay, a very dark silty clay, present on uplands with slopes of 2 to 30%. The majority of the proposed Salt Creek Substation site is composed of Diablo-Olivenhain complex, a mix of clay and cobbly loam, which occurs on uplands at elevations of 100 to 600 feet. A portion of the Proposed Project area to the east of the Existing Substation is composed of soils from the San Miguel-Exchequer Rocky silt loams, present on mountainous uplands at elevations of 400 to 3,300 feet. A portion of the soils east of the southern terminus of the proposed power lines are composed of Linne clay loams, which are generally present on uplands, with slopes of 9 to 50%. The Olympic Training Center site is composed of Huerhuero loam, a moderately well-drained loam with clay subsoil that is present on uplands with slopes of 15 to 30%. Surficial materials encountered in the Proposed Project area are described below.

Table 4.6-1 shows the soil characteristics in the Proposed Project area. The erosion rate is characterized by the “T factor,” the soil loss tolerance expressed in tons per acre per year, with values ranging from 1 (low erosion potential) through 5 (high erosion potential).

Table 4.6-1: Soil Characteristics in the Proposed Project Area

Soil Series	Description	Soil Type and Map Unit	Acreages in Project Area	Percent of Project Area	T Factor
Diablo	Well-drained, moderately deep to deep clays derived from soft, calcareous sandstone and shale.	Diablo clay, 9 to 15% (DaD)	73.8	33.2%	3
		Diablo clay, 2 to 9% (DaC)	44.3	20.0%	3
		Diablo clay, 15 to 30% (DaE)	27.2	12.3%	3
		Diablo-Olivenhain complex, 9 to 30% slopes (DoE)	32.8	14.8%	3
		Diablo clay, 15 to 30% (DaE2)	0.8	0.4%	3
Olivenhain	Well-drained, slow-to-medium runoff and very slow permeability soils.	Olivenhain cobbly loam, 9 to 30% slopes (OhE)	12.4	5.6%	3
		Olivenhain cobbly loam, 2 to 9% slopes (OhC)	1.8	0.8%	3

Soil Series	Description	Soil Type and Map Unit	Acreages in Project Area	Percent of Project Area	T Factor
San Miguel-Exchequer	Well-drained, shallow to moderately deep silt loams that have clay subsoil.	San Miguel-Exchequer rocky silt loams, 9 to 70% slopes (SnG)	7.6	3.4%	2
Huerhuero	Moderately well-drained loams that have clay subsoil.	Huerhuero loam, 15 to 30% slopes (HrE2)	9.7	4.4%	2
		Huerhuero loam, 2 to 9% slopes (HrC)	1.0	0.5%	2
Riverwash	Occurs in intermittent stream channels and consists of sandy, gravely, or cobbly material. It is excessively drained and rapidly permeable.	Riverwash (Rm)	6.9	3.1%	n/a
Linne	Well-drained, moderately deep clay loams derived from soft calcareous sandstone and shale.	Linne clay loam, 9 to 30% slopes (LsE)	1.5	0.7%	3
Salinas	Deep, well-drained soils that formed in alluvium weathered from sandstone and shale.	Salinas clay loam, 2 to 9% slopes (SbC)	1.2	0.5%	5
Terrace Escarpments	Steep to very steep escarpments on the nearly even fronts of terraces or alluvial fans.	Terrace escarpments (TeF)	1.0	0.5%	n/a

Source: NRCS 2012

Topsoil/Colluvium

Surficial deposits, including topsoil, alluvium, colluviums, slopewash, and residual soils, were encountered in portions of the proposed power lines within the natural drainages and mantling the sloping areas (Geosyntec 2012). The composition and strength of these materials are variable depending on the age, parent sources, and mode of deposition.

Topsoil/Colluvium was encountered in all borings and test pits on the proposed Salt Creek Substation site, with the exception of Boring B4, which was placed in the existing access road (Kleinfelder 2008). Topsoil/colluvium is related to natural soil development processes and movement downslope by precipitation and gravity. The topsoil/colluvium materials were generally encountered from the ground surface to depths of approximately 2 to 4 feet. However, colluviums depths of 6, 8, and 10 feet were observed in Test Pits 2, 4, and 7, which are located farther downslope than the other explorations and likely represent greater accumulations of colluviums. As encountered, the topsoil/colluvium consisted of light brown to dark brown, dry to moist, soft to firm, sandy silt, sandy clay, and clayey sand with some organics and pinhole porosity.

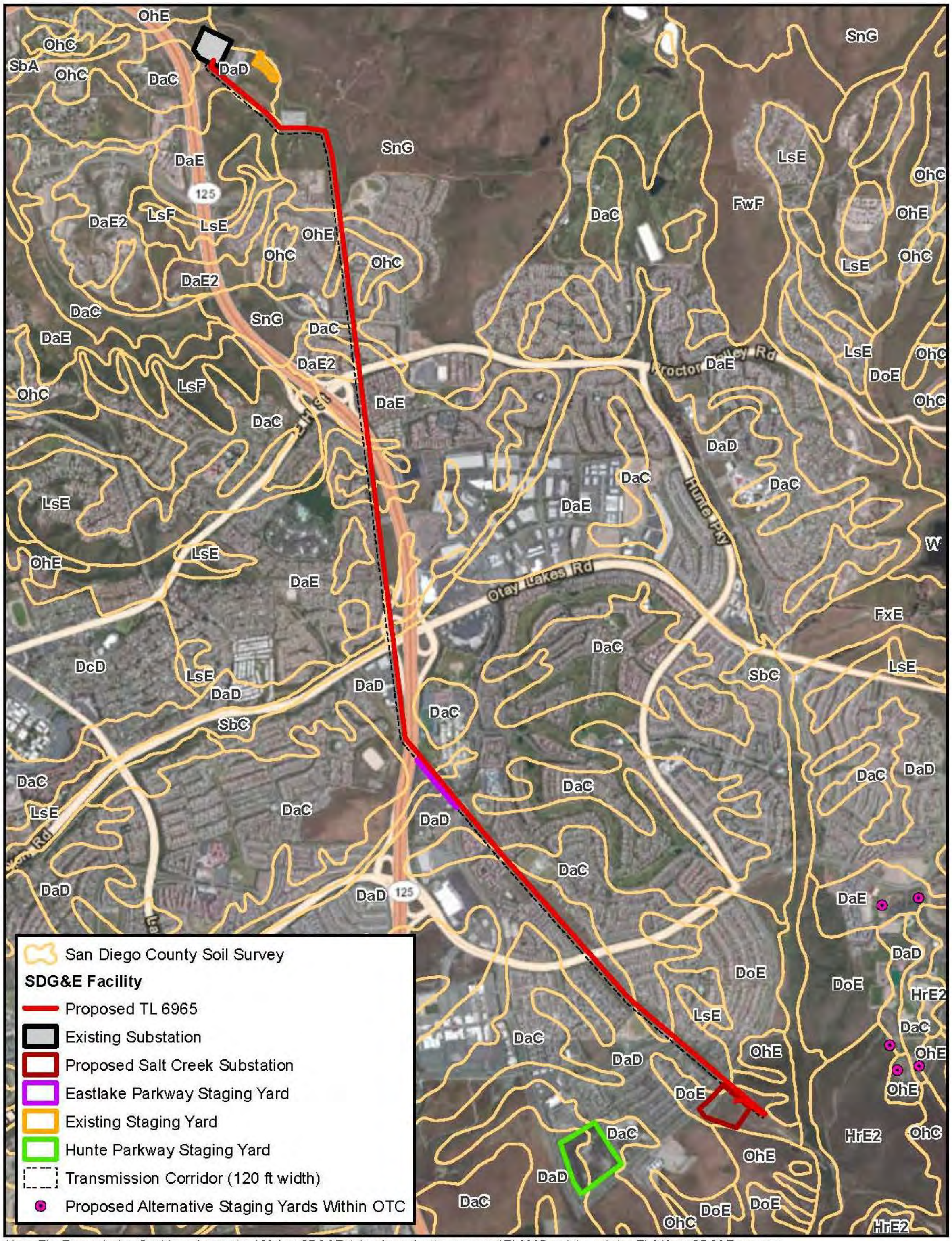
Fill

Undocumented fill was encountered during the geotechnical investigation (Kleinfelder 2008). The undocumented fill is generally loose, moist to wet, and consists of silty sand with cobbles and gravel. Fill materials present along portions of the access roads are primarily associated with construction of Hunte Parkway. This material consists of lean clay with some fat clay, which was not observed on the proposed Salt Creek Substation site.

4.6.3.3 Geologic Units

The Peninsular Ranges Geomorphic province is characterized by mountainous terrain on the east composed mostly of Mesozoic igneous and metamorphic rocks, and relatively low-lying coastal terraces to the west underlain by Quaternary, Tertiary, and late Cretaceous-age sedimentary rocks. Most of the coastal region of San Diego County occurs within this coastal terrace and is underlain by sedimentary rock. Specifically, the Proposed Project area in this portion of the province is underlain by Quaternary-age and Tertiary-age (Eocene) sediments. Figure 4.6-2 displays the local geologic area.

Figure 4.6-1: Soils in the Proposed Project Area



Note: The Transmission Corridor refers to the 120-foot SDG&E right-of-way for the proposed TL6965 and the existing TL643 on SDG&E property.
Source: GeomorphIS LLC, AECOM, SDG&E, 2013; Soils: NRCS, 2012; Esri Basemaps, 2013

0 1,500 3,000 Feet

Scale: 1:36,000 1 inch equals 3,000 feet

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

Quaternary-Age Terrace Deposits

Quaternary-age terrace deposits overlie portions of the Otay Formation in the vicinity of the Otay River basin. Sediments generally associated with this formation consist of cobble-gravel-sand mixtures, along with locally cemented zones and sandy to clayey siltstones. Granular portions of these terrace deposits typically exhibit adequate shear strength and low expansive potential in either an undisturbed or properly compacted condition.

Mission Valley Formation

The mid Tertiary-age Mission Valley Formation was encountered at the northern limits of the proposed power line during the geotechnical investigation (GEOCON 2011). This material consists of interbedding sandstone, claystone, and siltstone, with various degrees of cementation. The Mission Valley Formation in the area exhibits adequate shear strength. The clayey part of this formation may possess high expansion potential.

Otay Formation

The Otay Formation is the predominant geologic unit within the proposed power line (Geosyntec 2012). The Otay Formation consisted of dense to very dense, silty, fine to medium sandstone with occasional siltstone, claystone, and conglomerate interbeds (GEOCON 2011) along the proposed power lines.

The Otay Formation also underlies the proposed Salt Creek Substation site, and was encountered in the geotechnical explorations (Kleinfelder 2008). The Otay Formation typically consists of arkosic sandstone or claystone. For the proposed Salt Creek Substation site, the Otay Formation consisted of light brown and light gray, friable to weakly cemented, coarse-grained sandstone.

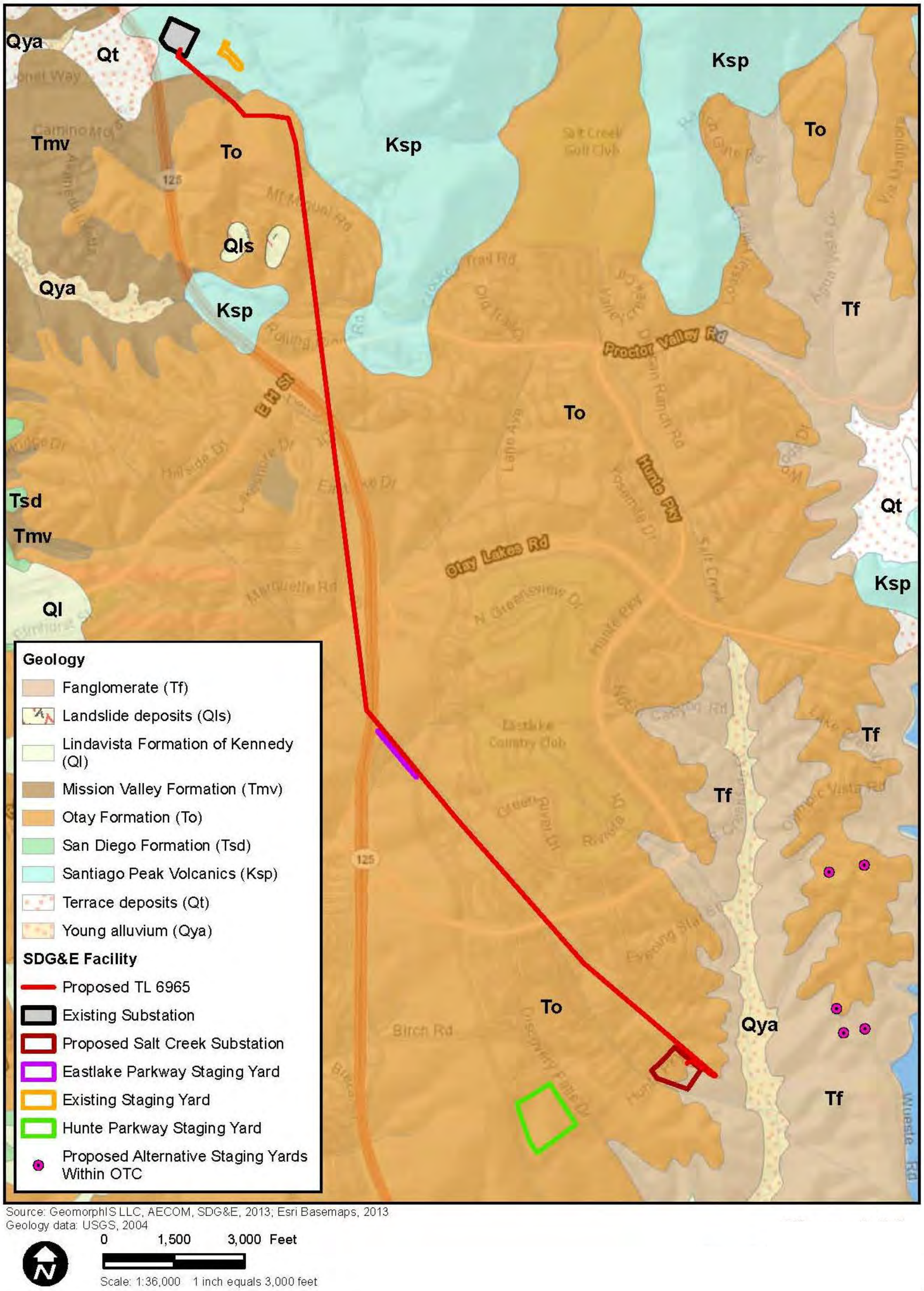
Due to low cementation, this material may also be classified as very dense sand. The proposed Salt Creek Substation site is underlain by the coarse “gritstone” granular facies of the lower Otay Formation. No significant clay beds were observed on the proposed Salt Creek Substation site during the geotechnical explorations (Kleinfelder 2008).

The fanglomerate facies of the Otay Formation was encountered within the southern portion of the proposed power lines during the geotechnical investigation (GEOCON 2011). This material consists of dense, moderately cemented, conglomeratic, clayey sandstones and sandy boulder conglomerates with clasts frequently exceeding 1 to 2 feet. The Otay Formation and fanglomerate facies possess relatively high shear strength parameters.

Santiago Peak Volcanics

Santiago Peak Volcanics were not encountered during any geotechnical explorations. Cretaceous/Jurassic-age Santiago Peak Volcanics consist of mildly metamorphosed volcanic and meta-sedimentary rock. These materials are generally moderately strong to strong, intensely to slightly weathered, and moderately to slightly jointed.

Figure 4.6-2: Local Geologic Area



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

4.6.3.4 Faults and Seismicity

Faults

Faults are fractures or lines of weakness in the Earth's crust. Rocks on one side of a fault are offset relative to the same rocks on the other side. Sudden movement along a fault generates an earthquake. Surface faults exhibiting horizontal movement are called strike-slip faults (e.g., Elsinore Fault).

The Proposed Project area is in a seismically active region. The Peninsular Ranges are traversed by a number of major active faults. The Whittier-Elsinore, San Jacinto, and San Andreas Faults are located northeast or east of the proposed Salt Creek Substation site, and the Rose Canyon, Newport-Inglewood, Coronado Bank, and San Diego Trough Faults are located to the west-southwest of the Proposed Project area.

Seismicity

The Proposed Project area is located in a seismically active region of Southern California that is subject to significant hazards from moderate to large earthquakes. Major tectonic activity associated with these faults is right-lateral strike-slip movement. The Proposed Project area does not lie within an active Alquist-Priolo Special Studies Zone and is not underlain by a known potentially active fault, as shown in Figure 4.6-3 (CGS 2012a).

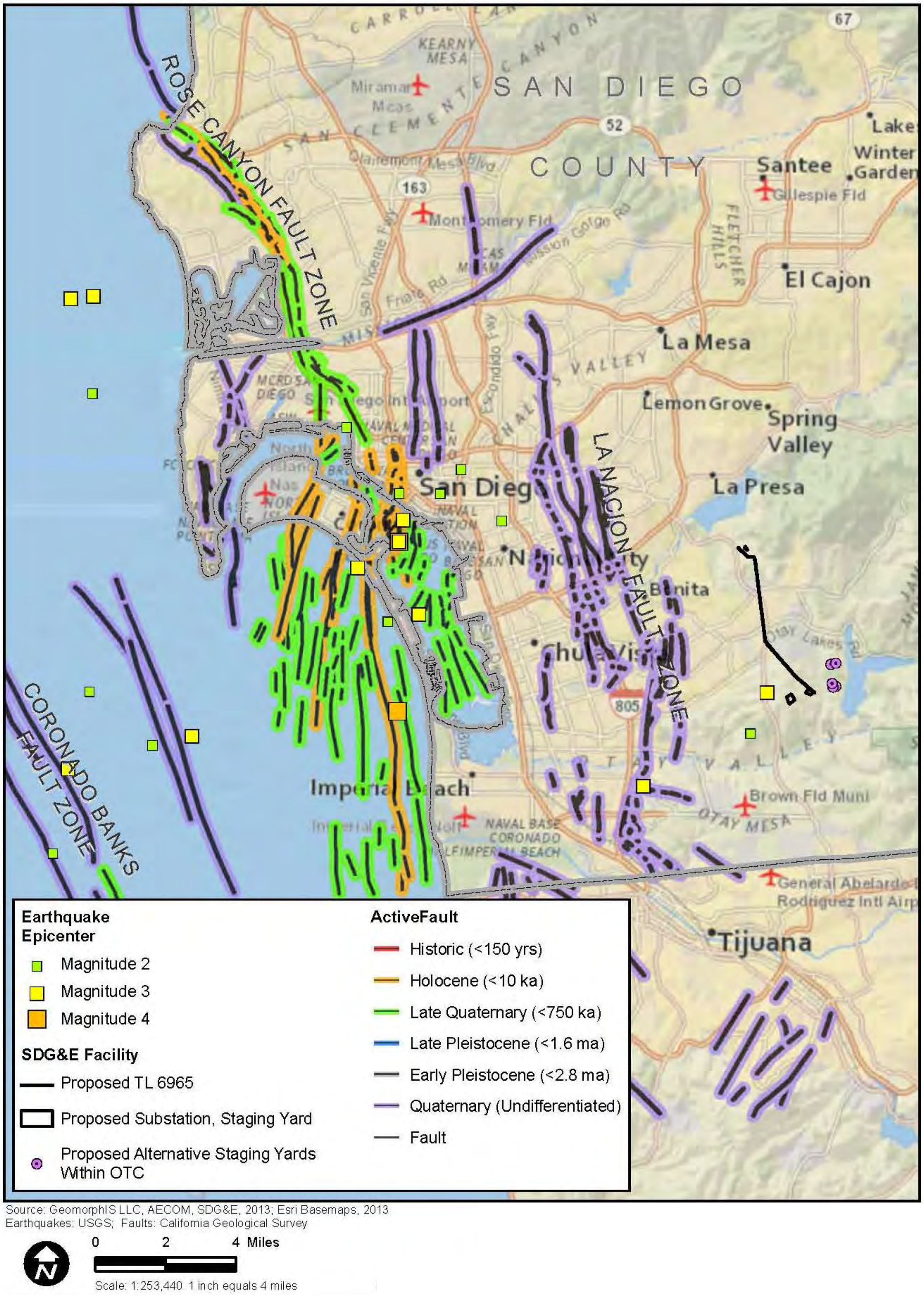
The Rose Canyon Fault zone is the closest mapped active fault zone, located approximately 10 miles west of the Proposed Project area. It is considered the dominant source of potential ground motion at the site.

The most recent major earthquake on the Rose Canyon Fault zone in San Diego occurred sometime between 1523 and 1769, with two additional earthquakes possibly occurring on the offshore segments of the Rose Canyon Fault zone in the 1800s.

The Rose Canyon Fault zone consists of predominantly right-lateral strike-slip faults that extend south-southeast from La Jolla, bisecting the San Diego metropolitan area. The most significant seismic event likely to affect the Proposed Project area would be a maximum magnitude 7.2 earthquake resulting from the Rose Canyon Fault (Kleinfelder 2008).

A major strand of the La Nacion Fault zone is mapped approximately 3.8 miles west of the proposed Salt Creek Substation site and approximately 2.5 miles west of the proposed power lines. The La Nacion Fault zone is composed of several parallel to subparallel west-dipping normal faults that displace Tertiary and Quaternary deposits. CGS categorizes the La Nacion Fault zone as a potentially active fault zone.

Figure 4.6-3: Fault Zones and Earthquake Magnitudes in the Proposed Project Area



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

4.6.3.5 Soil and Geologic Hazards

Erosion

Erosion is the process by which rocks, soil, and other land materials are abraded or worn away from the Earth's surface over time. The erosion rate depends on many factors, including soil type, geologic parent material, slope, soil placement, vegetation, and human activity. As shown in Table 4.6-1, the majority of the Proposed Project area has a T factor that lies between 2 and 3, which is considered low to moderate (NRCS 2012). Less than 1% of the proposed power lines are composed of soils with a T factor of 5, which are highly erosive soils.

Groundwater

Groundwater was observed at one location within the alluvium in Boring B-5, located to the west of the proposed power lines near the Otay Lakes/SR-125 exit ramp, at a depth of approximately 11 feet below ground surface (bgs) (Geosyntec 2012). However, this depth to groundwater represents conditions observed at the time of drilling, and would not necessarily be indicative of stabilized water levels at this location. Perched groundwater in the filled drainage to the west of the proposed Salt Creek Substation site may be on the order of 225 to 230 feet in elevation (Kleinfelder 2008). With the exception of Boring B-5, regional groundwater was not encountered in the current or previous explorations performed within the Proposed Project alignment. Regional groundwater generally occurs at 40 feet bgs or greater (Geosyntec 2012; Kleinfelder 2008).

Expansive and Collapsible Soils

Expansive soils are characterized by their ability to undergo significant volume changes due to variations in moisture content. Changes in soil moisture content can result from precipitation, landscape irrigation, utility leakage, roof drainage, perched groundwater, drought, or other factors. Fluctuating moisture content may result in unacceptable settlement or heave of structures or concrete slabs supported on-grade. The majority of near-surface clayey materials are considered expansive and subject to desiccation cracking during cycles of wetting and drying.

In general, soils in the Proposed Project area are not expansive (NRCS 2012). During the geotechnical investigation of the proposed Salt Creek Substation site, a sample of topsoil was tested for expansion using the index Uniform Building Code (UBC) Standard 18-2 (Kleinfelder 2008). The test results indicated an expansion index (EI) of 46, which may be classified in the medium expansion range (less than 50 EI), with the potential for high expansion in some areas. The granular materials of the Otay Formation are present over the majority of the proposed Salt Creek Substation pad, and are considered to have very low to low expansion potential.

Collapsible soils occur as naturally relatively dry alluvial fans, colluviums, and wind-blow deposits. They are typically silt and sand size, with a small amount of clay (Geosyntec 2012). Collapsible soils are not anticipated to be present in significant quantities along the proposed power lines.

Fault Rupture

Surface fault rupture occurs when movement along a fault trace causes displacement of surface deposits. This may result from a large earthquake or from "creep" along a fault without an associated earthquake. Ground rupture is considered more likely along active faults.

The Proposed Project area is not underlain by known active faults that exhibited evidence of ground displacement during the last 11,000 years (Geosyntec 2012). In addition, due to the distance from documented faults and small earthquake magnitudes in the Proposed Project area, as shown in Figure 4.6-3, the possibility of ground rupture in the Proposed Project area is considered low.

Ground Motion

Ground shaking is the seismic effect that causes most structural damage. Several factors control how ground motion interacts with structures. As a result, impact hazards associated with ground shaking are difficult to predict. Seismic waves propagating through the Earth's crust are responsible for the ground vibrations typically felt during an earthquake. Seismic waves can vibrate in any direction and at different frequencies, depending on the frequency content of the earthquake, its rupture mechanism, the distance from the seismic epicenter, and the path and material through which the waves are propagating.

Active faults are classified as Type A, Type B, or Type C. Type A faults are capable of producing large-magnitude (M) events ($M \geq 7.0$) and have a high rate of seismic activity. Type C faults are not capable of producing large-magnitude events ($M \geq 7.0$) and have a relatively low rate of seismic activity. Type B faults are all other faults (not Type A or C). The San Andreas Fault and segments of the San Jacinto and Elsinore Fault zones are Type A. Type B faults are the majority of the rest of the seismic faults in the San Diego area, including the Rose Canyon Fault zone.

Relative to the Proposed Project area, the Rose Canyon Fault zone is the closest active or potentially active fault. Due to its proximity, it is more dominant for ground motion evaluation than the nearest Type A fault zone.

Approximate ground-motion parameters were estimated for both endpoints of the Proposed Project area. These ground-motion parameters are for environmental review purposes and should not be used for engineering design. The parameters are at the northern terminus of the proposed TL 6965 at the Existing Substation and at the proposed Salt Creek Substation site (Table 4.6-2 and Figure 4.6-4) (CGS 2012b).

The ground-motion values presented in Table 4.6-2 represent a 10% probability of being exceeded during a 50-year period. They are expressed as a fraction of the acceleration due to gravity (g). Three ground-motion values are shown: peak ground acceleration (PGA), short-period (0.2-second) spectral acceleration (S_a), and moderately long period (1.0-second) S_a. Each ground-motion value is shown for three site conditions: firm rock, soft rock, and alluvium. The Proposed Project area is underlain primarily by soft rock and firm rock at different depths, and possibly some alluvium at the surface.

Table 4.6-2: Estimated Ground Motion Parameters in the Proposed Project Area

Ground Motion	Firm Rock (g)	Soft Rock (g)	Alluvium (g)
Northern Terminus of TL 6965 – Existing Substation			
Peak ground acceleration (PGA)	0.216	0.236	0.276
Spectral acceleration (S_a) (0.2-second)	0.509	0.555	0.662
S_a (1.0-second)	0.195	0.247	0.330
Salt Creek Substation Site			
PGA	0.213	0.232	0.274
S_a (0.2-second)	0.501	0.547	0.654
S_a (1.0-second)	0.191	0.242	0.324

g=acceleration of gravity
Source: CGS 2012b

Liquefaction

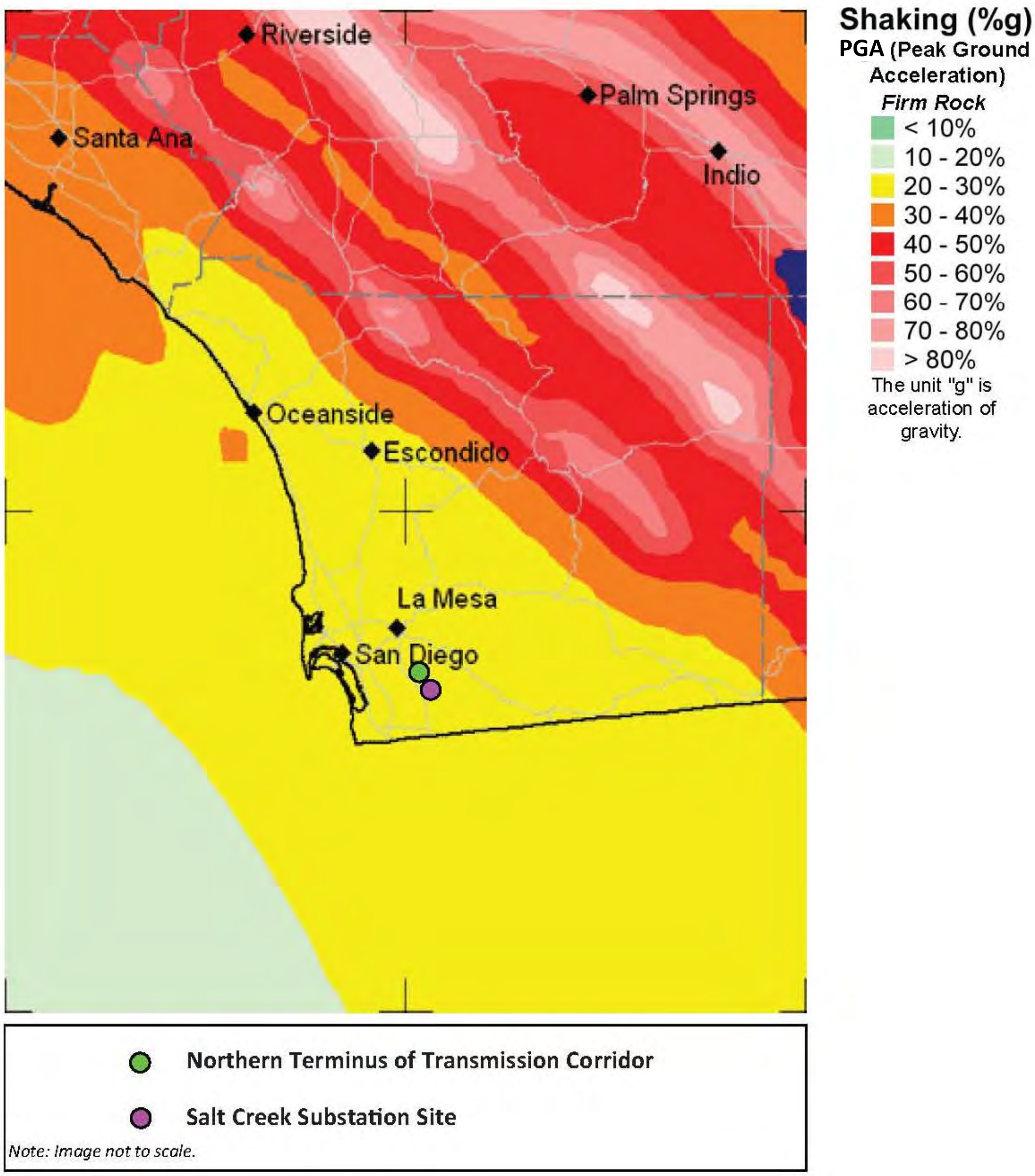
Liquefaction is a phenomenon in which water-saturated cohesionless sediments, such as sand and silt, temporarily lose their strength and liquefy. This occurs when saturated sediments are subjected to dynamic forces, such as intense and prolonged ground shaking during an earthquake. The factors known to influence liquefaction potential include soil type, relative density, and grain size; confining pressure; depth to groundwater; and the intensity and duration of the seismic ground shaking. Cohesionless soils most susceptible to liquefaction are loose, saturated sands and some silts.

Liquefaction typically occurs when groundwater is shallow (i.e., less than 50 feet bgs) and soils are predominantly granular and unconsolidated. Structures located on or above potentially liquefiable soils may experience vertical settlement due to the temporary loss of foundation support or bearing capacity failures. Liquefaction may also cause lateral spreading and damage to structures.

Due to the relatively dense nature of shallow geologic units, weathered bedrock underlying the proposed power line, and the lack of permanent shallow groundwater, the probability of liquefaction for the Proposed Project is considered low. According to the City of Chula Vista's General Plan, the Proposed Project area is not located in an area susceptible to liquefaction (City of Chula Vista 2005).

The proposed Salt Creek Substation site is generally underlain by weakly to moderately cemented sandstones or compacted fill. Based on the dense nature of these deposits and the absence of shallow groundwater, liquefaction potential and seismic-related settlement across the proposed Salt Creek Substation site is considered low.

Figure 4.6-4: Ground Motion Parameters



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

Landslides

A landslide is defined as the slipping down or flowing of a land mass (rock, soil, and debris) from a mountain or hill. Landslide potential is high in steeply sloped areas underlain by alluvial soils, thinly bedded shale, or clay bedrock formations where the bedding planes are oriented in an out-of-slope direction (bedding plane angles that are greater than horizontal, but less than the slope face), and/or in areas with fracture planes. Major landslides are deep-seated ground failures that occur tens to hundreds of feet deep, in which a large section of a slope detaches and slides downhill.

Landslides can cause damage to structures above and below the slide mass. Several formations within the San Diego region, including the Otay Formation, are particularly prone to landslides. These formations generally have high clay content and mobilize when they are saturated with water. Portions of the Existing Substation were previously identified as being underlain by landslide deposits or possible landslides. In addition, other nearby landslides were previously mapped to the west of the proposed power lines. However, based on review of the available geologic maps and aerial photographs, there are no landslides that have been identified beneath the proposed sites (Geosyntec 2012).

The City of Chula Vista's General Plan indicates that the Proposed Project area is not located in an area susceptible to landslides (City of Chula Vista 2005). In addition, the Proposed Project area was absent of deep-seated (several tens to hundreds of feet deep) landslides and other landslide factors. Landslide potential is considered low.

Subsidence

Subsidence is a deep-seated settlement due to the withdrawal of fluid (oil, natural gas, or water). When fluid is withdrawn, pressure in the drained sediments increases. Compressible sediments are then compacted due to overlying pressures no longer being compensated by hydrostatic pressure from below. The underlying geologic formations in San Diego County are mostly granitic, which has a very low potential for subsidence (County of San Diego 2011).

Tsunamis and Seiches

Tsunamis are seismically induced waves generated by sudden movements of the ocean bottom during earthquakes, landslides, or volcanic activity. Seiches are wind- or earthquake-induced "standing waves" within enclosed water bodies, such as bays, lakes, or reservoirs. Based on the inland location of the Proposed Project area and site elevation, potential for tsunami damage is considered very low (Geosyntec 2012). Since the nearest lakes to the Proposed Project area are Lower Otay Lake, approximately 1 mile east of the proposed Salt Creek Substation site, and the Sweetwater Reservoir, approximately 0.85 mile northwest of the Existing Substation, the potential for damage due to a seiche is considered very low (Geosyntec 2012).

4.6.3.6 Regulatory Setting

Federal

There are no federal regulations applicable to the Proposed Project related to geology, soils, or seismic hazards.

State

Alquist-Priolo Earthquake Fault Zoning Act

The 1972 Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) provided for the delineations of rupture zones along active faults in California. The purpose of the Alquist-Priolo Act is to regulate development on or near active fault traces to reduce the hazard of fault rupture and to prohibit the location of structures for human occupancy across active fault traces. Cities and counties must regulate certain development projects within Alquist-Priolo hazard zones, which may include withholding permits until geologic investigations demonstrate that development sites are not threatened by future surface displacement.

Seismic Hazards Mapping Act

The California Seismic Hazards Mapping Act of 1991 was enacted to protect the public from the effects of strong seismic ground shaking, liquefaction, landslides, or other ground failure, and from other hazards caused by earthquakes. The Seismic Hazards Mapping Act mandates that the state geologist delineate various seismic hazard zones, and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones.

California Building Code

The California Building Code (CBC) is a modified version of the UBC, published in the United States by the International Conference of Building Officials. Standards and text were amended to reflect California earthquake conditions. Oversight of the CBC is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating building standards.

Local

County of San Diego

The County of San Diego General Plan includes the following applicable policies related to soils and seismic hazards:

Policy S-7.1: Locate development in areas where the risk to people or resources is minimized. In accordance with the California Department of Conservation Special Publication 42, require development be located a minimum of 50 feet from active or potentially active faults, unless an alternative setback distance is approved based on geologic analysis and feasible engineering design measures adequate to demonstrate that the fault rupture hazard would be avoided.

Policy S-7.2: Require all development to include engineering measures to reduce risk in accordance with the CBC, UBC, and other seismic and geologic hazard safety standards, including design and construction standards that regulate land use in areas known to have or potentially have significant seismic and/or other geologic hazards.

Policy S-7.3: Prohibit high occupancy uses, essential public facilities, and uses that permit significant amounts of hazardous materials within Alquist-Priolo and county special studies zones.

Policy S-7.4: Require the retrofitting of unreinforced masonry structures to minimize damage in the event of seismic or geologic hazards.

Policy S-7.5: Seismically retrofit essential facilities to minimize damage in the event of seismic or geologic hazards.

Policy S-8.1: Direct development away from areas with high landslide, mudslide, or rock fall potential when engineering solutions have been determined by the county to be infeasible.

Policy S-8.2: Prohibit development from causing or contributing to slope instability.

City of Chula Vista

The City of Chula Vista's General Plan includes the following applicable policies related to seismic hazards:

Policy E-14.1: To the maximum extent practicable, protect against injury, loss of life, and major property damage through engineering analyses of potential seismic hazards, appropriate engineering design, and the stringent enforcement of all applicable regulations and standards.

Policy E-14.2: Prohibit the subdivision, grading, or development of lands subject to potential geologic hazards in the absence of adequate evidence demonstrating that such development would not be adversely affected by such hazards and would not adversely affect surrounding properties.

Policy E-14.3: Require site-specific geotechnical investigations for proposals within areas subject to potential geologic hazards, and ensure implementation of all measures deemed necessary by the City Engineer and/or Building Official to avoid or adequately mitigate such hazards.

Policy E-14.4: Promote programs to identify un-reinforced masonry buildings and other buildings and structures that would be at risk during seismic events, and promote strengthening of these buildings and structures, where appropriate.

Policy E-14.5: Wherever feasible, land uses, buildings, and other structures determined to be unsafe from geologic hazards shall be discontinued, removed, or relocated.

4.6.4 Impacts

4.6.4.1 Significance Criteria

Standards of significance were derived from Appendix G of the CEQA Guidelines.

Impacts to geology and soils would be considered significant if the Proposed Project:

- exposes people or structures to potential substantial adverse effects involving fault rupture, strong seismic ground shaking, liquefaction, or landslides;
- results in substantial soil erosion or the loss of topsoil;
- is located on a geologic unit or soil that is unstable, or that will become unstable as a result of the Proposed Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;
- is located on expansive soil, as defined in Table 18-1-B of the UBC (ICBO 1997), creating substantial risks to life or property; and/or
- is located on soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

4.6.4.2 Impact Analysis

Question 4.6(a)(i) Rupture of a Known Earthquake Fault

Construction – Less-than-Significant Impact

Since potential impacts are identical for the multiple Proposed Project components, these components were analyzed together. The Proposed Project would be located in Southern California, an area considered seismically active. However, no known active faults or mapped Alquist-Priolo Earthquake Fault Zones traverse or are in the immediate vicinity of the Proposed Project area. A major strand of the potentially active La Nacion Fault zone is mapped approximately 3.8 miles west of the proposed Salt Creek Substation site and approximately 2.8 miles west of the proposed power lines. The Rose Canyon Fault zone is the closest mapped active fault zone and is located approximately 10 miles west of the Proposed Project area. Therefore, fault rupture hazard is considered very low and impacts would be less than significant.

Operation and Maintenance – Less-than-Significant Impact

The Proposed Project would be unattended, with operation crews visiting the proposed Salt Creek Substation site for routine maintenance approximately six times per year. Therefore, the potential for personnel to be exposed to fault rupture is minimal and impacts would be less than significant.

Question 4.6(a)(ii) Strong Seismic Ground Shaking

Construction – Less-than-Significant Impact

Since potential impacts are identical for the multiple components of the Proposed Project, these components were analyzed together. The Proposed Project would be located in a seismically active region. Severe ground shaking has the potential to cause harm to structures or human injury; however, due to the short duration of construction (18 to 24 months) and the low probability of a seismic event occurring during this time, the potential for structures and construction personnel to be exposed to strong seismic ground shaking is minimal. Impacts would be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Strong seismic ground shaking could occur during the operational lifetime of the Proposed Project as a result of a moderate or greater earthquake. The Proposed Project, including the proposed Salt Creek Substation structures and foundations, would be designed to withstand strong seismic accelerations in accordance with SDG&E standard design and engineering practices to reduce the potential for damage to occur to the proposed facilities in the event of a major seismic event. The Institute of Electrical and Electronics Engineers' (IEEE) 693 Recommended Practices for Seismic Design of Substations includes specific requirements to reduce or avoid substation equipment damage. SDG&E follows these requirements. When these recommendations are followed, minimal structural damage from horizontal ground accelerations is anticipated. Incorporation of these standard engineering practices and recommendations would address hazards associated with strong seismic ground shaking. As such, impacts would be less than significant.

Routine maintenance crews would be working on the proposed TL 6965 and TL 6910 loop-in or at the proposed Salt Creek Substation site only periodically throughout the year and for limited periods of time, minimizing the potential for exposure to strong seismic ground shaking during a seismic event if one occurred. Therefore, impacts would be less than significant.

Question 4.6(a)(iii) Seismic-Related Ground Failure (Including Liquefaction)

Construction – Less-than-Significant Impact

Salt Creek Substation

The proposed Salt Creek Substation site is underlain by weakly to moderately cemented sandstones or by compacted fill. Based on the dense nature of these on-site deposits, as well as the absence of a shallow groundwater in those areas, liquefaction potential and seismic-related settlement across the proposed Salt Creek Substation site is low. According to the City of Chula Vista's General Plan, the proposed Salt Creek Substation site is not located in an area susceptible to liquefaction (City of Chula Vista 2005). Due to the short duration of construction (18 to 24 months) and the low probability of a seismic event occurring during this time, the potential for construction personnel to be exposed to seismic-related ground failure is minimal. As such, impacts would be less than significant.

TL 6965 and TL 6910 Loop-In

Due to the relatively dense nature of the geologic units, weathered bedrock underlying the proposed TL 6965 and TL 6910 loop-in, and the lack of permanent groundwater, liquefaction probability is considered low (Geosyntec 2012). According to the City of Chula Vista's General Plan, the proposed power line would not be located in an area susceptible to liquefaction (City of Chula Vista 2005). Therefore, impacts would be less than significant.

Existing Substation Modifications

The Existing Substation is underlain by weakly to moderately cemented sandstones or by compacted fill. According to the City of Chula Vista's General Plan, the Existing Substation is not located in an area susceptible to liquefaction (City of Chula Vista 2005). Therefore, impacts would be less than significant.

Staging Yards

According to the City of Chula Vista's General Plan, the staging yards are not located in an area susceptible to liquefaction (City of Chula Vista 2005). Therefore, impacts would be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Although unlikely, seismic-induced ground failure could occur during the operational lifetime of the Proposed Project as a result of a moderate or greater earthquake. However, the proposed Salt Creek Substation site is not located in an area susceptible to liquefaction, and all Proposed Project structures would be designed and constructed in accordance with the latest version of the CBC, the UBC, and all other applicable federal, state, and local codes relative to seismic criteria. With adherence to all applicable building codes and design requirements, impacts would be less than significant.

Routine maintenance crews would be working on the proposed TL 6965 and TL 6910 loop-in or proposed Salt Creek Substation site only periodically throughout the year and for limited periods of time, minimizing the potential for exposure to liquefaction or seismic-related ground failure during a seismic event if one occurred. Therefore, impacts would be less than significant.

Question 4.6(a)(iv) Landslides

Construction – Less-than-Significant Impact

Salt Creek Substation

Several formations within the San Diego region are particularly prone to landslides. These formations generally have high clay content and mobilize when they are saturated with water. According to the City of Chula Vista's General Plan, the Proposed Project area is not located in an area susceptible to landslides (City of Chula Vista 2005). In addition, the proposed Salt Creek Substation site lacks deep-seated (several tens to hundreds of feet deep) landslides and other landslides factors. As such, impacts would be less than significant.

The proposed Salt Creek Substation would include construction of retaining walls to widen the existing sewer access road. To ensure that the proposed Salt Creek Substation is designed to minimize the risk from geological hazards, including landslides, the Proposed Project would implement the design features presented in the geotechnical reports. The engineering geotechnical reports provide geotechnical and structural design specifications that meet existing building code requirements and incorporate design measures that address site-specific geological conditions. As such, impacts would be less than significant.

TL 6965 and TL 6910 Loop-In

Nearby landslides were previously mapped to the west of the proposed power lines. However, based on review of the available geologic maps and aerial photographs, no landslides were identified under the proposed power lines (Geosyntec 2012). In addition, the Proposed Project would adhere to the design features stated in the geotechnical reports; therefore, impacts would be less than significant.

Existing Substation Modifications

Portions of the Existing Substation were previously identified as being underlain by landslide deposits or possible landslides (Geosyntec 2012). However, the Proposed Project would adhere to the design features stated in the geotechnical reports. Therefore, impacts would be less than significant.

Staging Yards

The City of Chula Vista's General Plan indicates that the Proposed Project area is not located in an area susceptible to landslides (City of Chula Vista 2005). In addition, the staging areas lacked deep-seated (several tens to hundreds of feet deep) landslides and other landslide factors. As such, impacts would be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Activities associated with operation and maintenance of the Proposed Project would not expose people or equipment to additional hazards related to landslides. Impacts from landslides would be less than significant.

Question 4.6(b) Substantial Soil Erosion or the Loss of Topsoil

Construction – Less-than-Significant Impact

Salt Creek Substation

The Proposed Project would not result in substantial soil erosion or loss of topsoil. As shown in Table 4.6-1, the proposed Salt Creek Substation site has a T factor of 3, which is considered moderate (NRCS 2012). The Proposed Project would require significant grading, as discussed in Section 3.6. During construction, grading would expose soils for a limited time, allowing for possible erosion, although the temporary nature of the soil exposure would not be expected to cause substantial erosion. Rain and wind may further contribute to the erosion of disturbed soils, which may be transported to off-site locations or off-site water bodies. However, the Proposed Project would implement the design measures included in the SWPPP and SDG&E's Water Quality Construction BMP Manual. Therefore, impacts would be less than significant.

TL 6965 and TL 6910 Loop-In

As shown in Table 4.6-1, the majority of the proposed power lines have a T factor between 2 and 3, which is considered low to moderate (NRCS 2012). Approximately 0.5% of the proposed power lines are composed of soils with a T factor of 5, which have a high potential for erosion. During construction, grading would expose soils for a limited time, allowing for possible erosion, although the temporary nature of the soil exposure would not be expected to cause substantial erosion. Rain and wind may further contribute to the erosion of disturbed soils, which may be transported to off-site locations or off-site water bodies; however, with the implementation of design measures included in the SWPPP and SDG&E's Water Quality Construction BMP Manual, the potential for erosion or loss of topsoil would be less than significant.

Existing Substation Modifications

As shown in Table 4.6-1, the majority of the Existing Substation has a T factor between 2 and 3, which is considered low to moderate (NRCS 2012). With implementation of the design measures included in the SWPPP and SDG&E's Water Quality Construction BMP Manual, the potential for erosion or loss of topsoil would be less than significant.

Staging Yards

The majority of the Hunte Parkway staging yard, Eastlake Parkway staging yard, Existing Substation staging yard, and potential staging sites at the Olympic Training Center have a T factor between 2 and 3, which is considered low to moderate (NRCS 2012). With implementation of the design measures included in the SWPPP and SDG&E's Water Quality Construction BMP Manual, the potential for erosion or loss of topsoil would be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Long-term operation and maintenance of the proposed Salt Creek Substation would generally not involve ground-disturbing activities or grading. If additional grading were required for maintenance, SDG&E would implement the measures provided in SDG&E's BMP Manual, including installation of silt fences, fiber rolls, and gravel bags, in addition to landscaping. To minimize further ground disturbance and potential resultant soil erosion or loss of topsoil, maintenance vehicles would use access roads and would not disturb undeveloped lands. No large areas of exposed soils subject to erosion would be created or affected by operation of the Proposed Project. As such, impacts would be less than significant.

Question 4.6(c) Geologic Unit Instability

Construction – Less-than-Significant Impact

Salt Creek Substation

The majority of the existing and proposed site slopes are considered stable due to their planned inclinations, strength of subsurface materials, and lack of adverse bedding. The proposed Salt Creek Substation site, along with all of Southern California, is subject to seismic shaking due to earthquakes; however, implementation of required engineering design features would ensure that all structures and proposed Salt Creek Substation components are engineered to withstand strong ground movement. The proposed Salt Creek Substation site is not at risk for impacts related to landslides or liquefaction. The proposed Salt Creek Substation site is not located in an area likely to be subject to subsidence because construction and/or operation and maintenance activities would not involve withdrawal of substantial amounts of groundwater that could result in subsidence. The proposed Salt Creek Substation would be located on relatively flat terrain, and Proposed Project design includes construction of a retaining wall for the existing sewer access road improvements to reduce the potential for on-site slope failure, which is considered to be low. As a result, impacts would be less than significant.

TL 6965 and TL 6910 Loop-In

The majority of the existing and proposed site slopes are considered stable due to their planned inclinations, strength of subsurface materials, and lack of adverse bedding. No impacts would occur.

Existing Substation Modifications

The majority of the existing and proposed site slopes are considered stable due to their planned inclinations, strength of subsurface materials, and lack of adverse bedding. The Existing Substation, along with all of Southern California, is subject to seismic shaking due to earthquakes; however, implementation of required engineering design features would ensure that all structures and Proposed Project components are engineered to withstand strong ground movement. Impacts would be less than significant.

Staging Yards

The majority of the existing and proposed site slopes are considered stable due to their planned inclinations, strength of subsurface materials, and lack of adverse bedding. The staging yards, along with all of Southern California, are subject to seismic shaking due to earthquakes; however, no construction would occur within the staging yards, which would be used for the storage of construction materials and equipment during construction of all of the Proposed Project components. Therefore, impacts would be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Site conditions and potential hazards related to landslides, liquefaction, lateral spreading, and subsidence would not change as a result of operation and maintenance activities of the Proposed Project; therefore, impacts would be less than significant.

Question 4.6(d) Expansive Soils

Construction – No Impact

The potential for encountering expansive or collapsible soils within the Proposed Project area is relatively low. However, a sample of topsoil near the proposed Salt Creek Substation site tested for expansion indicated an EI of 46, which may be classified in the medium expansion range (less than 50 EI), with the potential for high expansion in some areas. The geotechnical investigation prepared for the Proposed Project recommends that existing potentially compressible soils within the limits of site grading be removed to native formation prior to the placement of engineered fill materials (Kleinfelder 2008). Expansive soils with an EI greater than 50 may be blended with other granular soils and used as embankment fill. Expansive soils may also be used as deeper compacted fill in non-structural areas, but they may not be placed in the outer portion of fill slopes, which is defined as the outer 15 feet from the slope or the height of the slope, whichever is less. SDG&E would comply with the geotechnical recommendations. Therefore, no impacts from expansive soils would occur during construction.

Operation and Maintenance – No Impact

Improved site conditions and the removal of expansive soils during construction, as noted above, would not change as a result of operation and maintenance activities of the Proposed Project; therefore, no impacts would occur.

Question 4.6(e) Septic Tanks or Alternative Wastewater Disposal Systems

Construction – No Impact

The proposed Salt Creek Substation would not include toilet facilities or result in new or increased demand for the use of septic tanks or alternative wastewater disposal systems. Self-contained portable toilet facilities would be provided during construction. Therefore, no impact would occur.

Operation and Maintenance – No Impact

The Proposed Project would be unattended. No septic tanks or alternative wastewater disposal systems (e.g., leach fields) are part of the Proposed Project. As such, the proposed Salt Creek Substation would not include toilet facilities or result in new or increased demand for the use of septic tanks or alternative wastewater disposal systems; therefore, no impact would occur.

4.6.5 Project Design Features and Ordinary Construction/Operations Restrictions

With implementation of the ordinary construction restrictions as outlined within Section 3.8, Project Design Features and Ordinary Construction/Operations Restrictions; Proposed Project design features; and applicable engineering standard transmission line practices and guideline recommendations as identified in the geotechnical reports (GEOCON 2011; Geosyntec 2012; Kleinfelder 2008; URS 2007), potential impacts to geology and soils would be less than significant.

4.6.6 Applicant-Proposed Measures

The Proposed Project's impacts on geology and soils would be less than significant; therefore, no APMs are required or proposed.

4.6.7 Detailed Discussion of Significant Impacts

Based on the above analyses, no significant impacts have been identified for the Proposed Project, and no APMs are required or proposed.

4.6.8 References

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4.7 Greenhouse Gas Emissions

Would the Project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	❒	❒	☑	❒
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	❒	❒	❒	☑

4.7.1 Introduction

This section of the PEA describes the existing conditions in the Proposed Project area and potential impacts relating to greenhouse gases (GHG) associated with construction and operation of the Proposed Project. Construction may result in temporary, short-term emissions of GHGs due to combustion of fossil fuels in construction equipment and vehicles. However, the Proposed Project would not generate GHG emissions, either directly or indirectly, that would have a significant impact on the environment or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of GHGs.

4.7.2 Methodology

Federal, state, and regional/local regulations and policies were consulted to determine the Proposed Project's level of compliance with and potential impacts to applicable climate action plans and/or GHG standards. Information for this section was obtained from Internet searches of federal, state, and regional/local websites. Refer also to Appendix 4.7-A for additional discussion of the methods used to predict GHG impacts resulting from the Proposed Project.

This analysis of GHG impacts used the emissions factors from the California Air Resources Board's (CARB) OFFROAD Model (CARB 2007a) for heavy construction equipment and CARB's EMFAC2011 Model (CARB 2011) for on-road vehicles for the construction (short-term) and operational (long-term) analyses. Emissions factors from the OFFROAD Model were based on the South Coast Air Quality Management District's (SCAQMD) composite off-road emissions factors (SCAQMD 2012), since these emissions factors are representative of the construction fleet for Southern California. The San Diego Air Pollution Control District (APCD) does not provide San Diego-specific emissions factors from the OFFROAD Model.

The analysis of GHG evaluates the Proposed Project's potential to generate GHG emissions for the construction and operational phases of the Proposed Project. GHG emissions were calculated with the intent of identifying the biggest contributors of GHGs.

4.7.3 Existing Conditions

Global climate change refers to changes in average climatic conditions on Earth as a whole, including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by naturally occurring atmospheric gases, including water vapor, carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), which are known as GHGs. These gases allow solar radiation (sunlight) into Earth's atmosphere, but prevent radiative heat from escaping, thus warming Earth's atmosphere.

Gases that trap heat in the atmosphere are often called greenhouse gases, analogous to a greenhouse. GHGs are emitted by both natural processes and human activities. The accumulation of GHGs in the atmosphere regulates Earth's temperature. Emissions from human activities, such as burning fossil fuels for electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere.

The proposed Salt Creek Substation site is undeveloped and not currently a source of GHG emissions. The Existing Substation is currently operating, but is not a major source of GHG emissions because its emissions of carbon dioxide equivalents (CO_2e) are below California's reporting threshold of 25,000 metric tons (MT) of CO_2e annually. The staging areas that would be used for construction are undeveloped and are not currently a source of GHG emissions. The new 5-mile-long 69-kV transmission line (TL 6965), the 69-kV transmission line loop-in (TL 6910), and the underground 12-kV distribution circuits from the Salt Creek Substation would be constructed in transmission corridors that are not existing sources of GHG emissions.

4.7.3.1 Regulatory Background

Global climate change refers to any significant change in measures of climate, such as average temperature, precipitation, or wind patterns, over a period of time. Global climate change may result from natural factors, natural processes, and/or human activities that change the composition of the atmosphere.

Different GHGs have varying global warming potentials. Global warming potential is the effectiveness of a gas or aerosol to trap heat in the atmosphere. According to USEPA, global warming potential is the "cumulative radiative forcing effect of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas." The reference gas for global warming potential is CO_2; therefore, CO_2 has a global warming potential of 1. The other main GHGs that have been attributed to human activity are CH_4, which has a global warming potential of 21, and N_2O, which has a global warming potential of 310. Table 4.7-1, presents the global warming potential and atmospheric lifetimes of common GHGs.

Table 4.7-1: Global Warming Potentials and Atmospheric Lifetimes of Greenhouse Gases

GHG	Formula	100-Year Global Warming Potential	Atmospheric Lifetime (Years)
Carbon Dioxide	CO_2	1	Variable
Methane	CH_4	21	12 ± 3
Nitrous Oxide	N_2O	310	120
Sulfur Hexafluoride	SF_6	23,900	3,200

Source: California Climate Action Registry 2009

Federal

Endangerment Finding

On April 17, 2009, USEPA issued its proposed endangerment finding for GHG emissions. On December 7, 2009, USEPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

> **Endangerment Finding:** USEPA found that the current and projected concentrations of the six key well-mixed GHGs (CO_2, CH_4, N_2O, hydrofluorocarbons [HFCs], perfluorocarbons [PFCs], and sulfur hexafluoride [SF_6]) in the atmosphere threaten the public health and welfare of current and future generations.
>
> **Cause or Contribute Finding:** USEPA found that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

The endangerment findings do not themselves impose any requirements on industry or other entities. However, this action is a prerequisite to finalizing USEPA's proposed GHG emissions standards for light-duty vehicles, which were jointly proposed by USEPA and the U.S. Department of Transportation (DOT)'s National Highway Safety Administration on September 15, 2009.

Mandatory Reporting of Greenhouse Gases, 40 CFR Part 98

USEPA's rule titled Mandatory Reporting of Greenhouse Gases (40 CFR Part 98) requires mandatory reporting of GHGs for certain facilities. Subpart DD of the rule, titled Electrical Transmission and Distribution Equipment Use, applies to SF_6 reporting from gas-insulated substations. The proposed Salt Creek Substation would be an air-insulated substation, rather than a gas-insulated substation.

Under the final Mandatory Reporting Rule for Additional Sources of Fluorinated GHGs, owners and operators of electric power system facilities with a total nameplate capacity that exceeds 17,820 pounds (7,838 kilograms) of SF_6 and/or PFCs must report emissions of SF_6 and/or PFCs from the use of electrical transmission and distribution equipment. Owners or operators must collect emissions data; calculate GHG emissions; and follow the specified procedures for quality assurance, missing data, recordkeeping, and reporting.

The rule requires each electric power system facility operator to report total SF_6 and PFC emissions (including emissions from equipment leaks, installation, servicing, decommissioning, and disposal, and from storage cylinders) from the following types of equipment:

- Gas-insulated substations
- Circuit breakers
- Switchgears, including closed-pressure and hermetically sealed pressure switchgears
- Gas-insulated lines containing SF_6 or PFCs
- Gas containers such as pressurized cylinders
- Gas carts
- Electric power transformers
- Other containers of SF_6 or PFCs

Since the proposed Salt Creek Substation would be an air-insulated substation, only the Proposed Project's transmission circuit-breakers would contain SF_6.

Facilities subject to Subpart DD began monitoring GHG emissions on January 1, 2011, in accordance with the methods specified in Subpart DD. The deadline for reporting is March 31 of each year, unless that date falls on a weekend, in which case the report is due the next business day.

State

California Health and Safety Code Section 38505(g) defines GHGs as any of the following compounds: CO_2, CH_4, N_2O, HFCs, PFCs, or SF_6. CO_2, followed by CH_4 and N_2O, are the most common GHGs that result from human activity.

In the State of California GHG Inventory, CARB compiled statewide anthropogenic GHG emissions and sinks, which include processes that uptake GHG emissions (Table 4.7-2, State of California Greenhouse Gas Emissions by Sector). The inventory includes estimates for CO_2, CH_4, N_2O, SF_6, HFCs, and PFCs. The current inventory covers 1990 through 2008, and is summarized in Table 4.7-2, below. Data sources used to calculate this GHG inventory include California and federal agencies, international organizations, and industry associations. Calculation methodologies applied are consistent with guidance from the Intergovernmental Panel on Climate Change (IPCC). The 1990 emissions level is the sum total of sources and sinks from all sectors and categories in the inventory. CARB's original inventory was divided into seven broad sectors and categories: agriculture, commercial, electricity generation, forestry, industrial, residential, and transportation. The latest inventory includes GHG emissions from recycling and waste management, high-global-warming potential gas emissions, and reductions in GHG emissions related to forestry (forestry sinks).

Table 4.7-2: State of California Greenhouse Gas Emissions by Sector

Sector	Total 1990 Emissions ($MMTCO_2e$)[1]	Percent of Total 1990 Emissions	Total 2008 Emissions ($MMTCO_2e$)	Percent of Total 2008 Emissions
Agriculture	23.4	5%	28.06	6%
Commercial	14.4	3%	14.68	3%
Electricity Generation	110.6	26%	116.35	25%
Forestry (excluding sinks)	0.2	<1%	0.19	<1%
Industrial	103.0	24%	92.66	20%
Residential	29.7	7%	28.45	6%
Transportation	150.7	35%	174.99	37%
Recycling and Waste			6.71	1%
High Global Warming Potential Gases			15.65	3%
Forestry Sinks	(6.7)		(3.98)	

[1] $MMTCO_2e$ refers to million metric tons of carbon dioxide equivalent emissions.
Source: CARB 2007b

The following subsections describe regulations and standards adopted by California to address global climate change issues.

Assembly Bill 32, the California Global Warming Solutions Act of 2006

In September 2006, then-governor Arnold Schwarzenegger signed California Assembly Bill (AB) 32, the Global Warming Solutions Act, into law. Pursuant to AB 32, CARB adopted a comprehensive AB 32 Scoping Plan in December 2008, which outlined programs designed to achieve the 2020 GHG reduction goal of 174 million metric tons (MMT) of CO_2e emissions through regulations, market mechanisms, and other actions.

For the electricity sector, the scoping plan adopted CPUC's fundamental recommendations for investor-owned and publicly owned utilities to continue and increase implementation of programs designed to reduce emissions, including energy efficiency programs, increasing the use of electricity supplies obtained from renewable generation sources to 33% by 2020, and the adoption of a cap and trade system to ensure an overall reduction of emissions from electric generation.

The AB 32 Scoping Plan Measure H-6 led to CARB's Regulation for Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear (17 CCR, Sections 95350–95359). The proposed Salt Creek Substation would be an air-insulated substation, rather than a gas-insulated substation.

Equipment containing SF_6 would, therefore, only be used for transmission circuit breakers. CARB's SF_6 regulation sets the maximum emissions rate for SF_6-containing equipment at 10% by 2011. The maximum allowable emissions rate decreases by 1% each year. In 2020, the threshold would remain at 1%.

State Standards Addressing Vehicular Emissions

California AB 1493 (Pavley), enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light-duty trucks. CARB adopted the regulations on September 24, 2009, to reduce GHG emissions in new passenger vehicles from 2009 through 2016. CARB has estimated that the regulations will reduce emissions from the light-duty passenger vehicle fleet by an estimated 18% in 2020 and by 27% in 2030.

Senate Bills 1078 and 107 and Executive Order S-14-08

Senate Bill (SB) 1078 requires retail sellers of electricity to provide at least 20% of their supply from renewable sources by 2017. SB 107 changed the target date to 2010. In November 2008, then-governor Schwarzenegger signed Executive Order S-14-08, which expands the Renewables Energy Standard to 33% by 2020. In April 2011, the California legislature enacted SB 2X, which mandates the Renewables Portfolio Standard of 33% by 2020 for investor-owned and publicly owned utilities.

Executive Order S-21-09

Executive Order S-21-09 directs CARB to work with the CPUC and the California Energy Commission (CEC) to implement the Renewables Portfolio Standard of 33% by 2020.

On May 5, 2011, CPUC adopted Order Instituting Rulemaking 11-05-005 to open a new proceeding for the Renewables Portfolio Standard.

CARB is also working with the California Independent System Operator and other load balancing authorities to address reliability, renewable integration requirements, and interactions with wholesale power markets. CARB established a "loading order" in its Energy Action Plan for resources that provide the greatest environmental benefits with the least environmental costs and impacts on public health.

SDG&E Programs

SDG&E has been engaged for many years in activities to reduce GHG emissions. These activities include programs to increase energy efficiency and efforts to meet the Renewables Portfolio Standard of 33% of its supply from renewable sources by 2020. In 2011, 20.8% of SDG&E's retail sales were from renewable energy sources.

SDG&E submits a mandatory Long-Term Procurement Plan (LTPP) to the CPUC that describes its strategy for meeting forecasted load during the next 10 years. The LTPP must be consistent with the "loading order" prescribed in the CEC's Energy Action Plan to meet growth first with conservation, then with renewable sources of electricity, and finally with new fossil fuel sources to the extent necessary. New generation sources must be consistent with the LTPP. The CPUC approved SDG&E's most recent LTPP in September 2008.

The LTPP includes the following programs to reduce GHG emissions:

- Energy efficiency, which will reduce needed capacity by 487 megawatts (MW) by 2016
- Demand response, which will reduce needed capacity by 249 MW by 2016
- Renewables, which will provide 318 MW in 2010 and 727 MW in 2016
- New peaker plants to back up intermittent renewables and support retirement of older plants

Forecasted reductions from these programs are greater than 1.5 MMT CO_2e per year. These efforts will reduce carbon intensity by one-third while accommodating continued population growth, and will ensure consistency with the applicable plans, policies, and regulations adopted by California to reduce GHG emissions.

4.7.4 Potential Impacts

4.7.4.1 Significance Criteria

Standards for determining impact significance were derived from Appendix G of the CEQA Guidelines. Under these guidelines, the Proposed Project could have a potentially significant impact to GHGs if it would:

- generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or

- conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG.

The San Diego APCD has not established GHG thresholds under CEQA. Both the SCAQMD and the County of San Diego have adopted a significance threshold of 10,000 MT of CO_2e emissions annually for industrial sources, below which levels an industrial project would not generate GHG emissions that would have a significant impact on the environment. The SCAQMD and the County of San Diego recommend amortizing construction emissions over a 30-year period to account for their contribution to GHG emissions over the lifetime of the Proposed Project.

Question 4.7a – Generate Greenhouse Gas Emissions, Either Directly or Indirectly

Impacts from GHG emissions are not direct impacts, but would have the potential for cumulative impacts on the environment. The Summary Report from the California Climate Change Center uses a range of emissions scenarios developed by the IPCC to project a series of potential warming ranges (i.e., temperature increases) that may occur in California during the 21^{st} century. Three warming ranges were identified: lower warming range (3.0 to 5.5°F), medium warming range (5.5 to 8.0°F), and higher warming range (8.0 to 10.5°F). The report then presents an analysis of future projected climate changes in California under each warming-range scenario.

According to the summary report, substantial temperature increases would result in a variety of impacts to the people, economy, and environment of California. These impacts would result from a projected increase in extreme conditions, with the severity of impacts depending on actual future emissions of GHGs and associated warming.

Construction – Less-than-Significant Impact

The main source of GHG emissions associated with the Proposed Project would be fossil fuel combustion during construction. GHG emissions for construction were calculated using the same approach as criteria pollutant emissions for overall construction emissions. Estimated GHGs emissions are summarized in Table 4.7-3, Greenhouse Gas Construction Emissions. Emission calculations are provided in Appendix 4.7-A, Emissions Calculations.

Table 4.7-3: Greenhouse Gas Construction Emissions

	GHG Emissions (metric tons)		
	CO_2	CH_4	N_2O
TOTAL EMISSIONS, Duration of Construction	3,359	0.55	1.77
Global Warming Potential	1	21	310
CO_2 Equivalent	3,359	12	549
CO_2 Equivalent Total	3,921		
Amortized Construction Emissions (amortized over 30 years)	131		

Both the SCAQMD and the County of San Diego have adopted significance thresholds for industrial projects of 10,000 MT of CO_2e annual emissions. The City of Chula Vista also uses the SCAQMD's significance criteria for evaluating significant impacts. The total annualized construction CO_2e emissions of 131 MT for the Proposed Project is below the County of San Diego's and the SCAQMD's significance threshold of 10,000 MT of CO_2e annually for industrial projects. This level of GHG emissions would be less than significant.

Operation & Maintenance – Less-than-Significant Impact

Operation and maintenance activities would include regular inspection of the substation and transmission line and periodic maintenance activities. These activities would generate a minor amount of GHG emissions from vehicles and/or equipment used to inspect and maintain the facilities. GHG emissions associated with operation and maintenance would be well below the significance thresholds.

Equipment that contains SF_6 has the potential to contribute to GHG emissions during operation and maintenance of the Proposed Project. The proposed Salt Creek Substation would be air insulated, rather than gas insulated. Only the Proposed Project's transmission circuit breakers would contain SF_6.

The Proposed Project would have six transmission circuit breakers. Each circuit breaker is estimated to hold 33 pounds of SF_6. The Proposed Project would, therefore, use a total of 198 pounds of SF_6.

New SF_6 equipment, including the Proposed Project's transmission circuit breakers, has a low leak rate of approximately 0.1% annually per industry standards. The Proposed Project would include design and operational features that would decrease the SF_6 emissions rate to approximately 0.1%, which is well below the maximum allowable SF_6 emissions rate of 1% that CARB has established for 2020 (Section 3.8, Project Design Features and Ordinary Construction/Operations Restrictions). With a leak rate of 0.1% annually, the Proposed Project would emit 0.198 pound of SF_6. Since SF_6 has a global warming potential of 23,900, the Proposed Project would have 4,732 pounds (2.15 MT) of CO_2e for operations and maintenance. This level falls below the County of San Diego's and the SCAQMD's significance threshold of 10,000 MT of CO_2e annually for industrial projects. Accordingly, impacts would be less than significant.

Question 4.7b – Conflict with an Applicable Plan, Policy, or Regulation

Construction – No Impact

The Proposed Project's GHG emissions from construction are below the County of San Diego's and the SCAQMD's significance threshold when amortized over a 30-year period, as recommended by the County of San Diego and the SCAQMD. Equipment and vehicles supporting construction of the Proposed Project would comply with the requirements implemented by CARB to reduce GHG emissions and would be consistent with AB 32's goals. Accordingly, there would be no impact associated with construction.

Operation & Maintenance – No Impact

The proposed Salt Creek Substation would be air insulated. Equipment containing SF_6 would only be for the transmission circuit breakers. SDG&E has on-going standard internal programs and practices that ensure compliance with the applicable SF_6 regulations and air quality plan, and those programs and practices would not change as a result of the Proposed Project (Section 3.8, Project Design Features and Ordinary Construction/Operations Restrictions). By virtue of its compliance with applicable rules and regulations and its similarity to existing operation and maintenance requirements, the Proposed Project is consistent with AB 32's goals. Emissions would not differ from emissions levels for operations and maintenance under existing rules and regulations. Accordingly, no impact would occur.

By complying with applicable rules and regulations and following SDG&E's design and operational features to decrease GHG emissions, the Proposed Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Accordingly, there would be no impact.

4.7.5 Project Design Features and Ordinary Construction/Operations Restrictions

With implementation of the ordinary construction restrictions, as outlined within Section 3.8, Project Design Features and Ordinary Construction/Operations Restrictions, potential impacts related to GHG, including SF_6, would remain less than significant.

4.7.6 Applicant-Proposed Measures

Because impacts related to GHG emissions are less than significant, no APMs are required or proposed.

4.7.7 Detailed Discussion of Significant Impacts

Based on the above analyses, no significant impacts have been identified for the Proposed Project, and no APMs are required or proposed.

4.7.8 References

California Air Resources Board (CARB). 2007a. OFFROAD2007 Model. Available at http://www.arb.ca.gov/msei/offroad/offroad.htm.

California Air Resources Board (CARB). 2007b. Staff Report – California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit, November 16.

California Air Resources Board (CARB). 2011. EMFAC2011 Model. Available at http://www.arb.ca.gov/msei/onroad/onroad.htm.

California Climate Action Registry. 2009. General Reporting Protocol, Version 3.1. January.

South Coast Air Quality Management District (SCAQMD). 2012. OFFROAD Emissions Factors. Available at http://www.aqmd.gov/ceqa/handbook/offroad/offroad.html.

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4.8 Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	❒	❒	☑	❒
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	❒	❒	☑	❒
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	❒	❒	☑	❒
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	❒	❒	☑	❒

Would the project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☑
f. For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☑
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☑	☐
h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☑	☐

4.8.1 Introduction

The purpose of this section is to document existing hazardous conditions in the area proposed for the location of the SDG&E Proposed Project and to assess potential impacts that may occur as a result of Proposed Project implementation. Potential impacts include exposure to hazardous materials in or around the areas affected by the Proposed Project, or generated by the Proposed Project during the short-term construction phase or long-term operation phase. In addition, this section evaluates the hazards related to emergency plans, wildfire, and proximity to airports and airstrips. Compliance with applicable laws, rules, and regulations, together with Proposed Project design features, would make potential impacts relative to hazards and hazardous materials less than significant.

4.8.2 Methodology

Hazardous materials facilities were located using a Phase I Environmental Site Assessment (ESA) database search of federal and state-maintained databases, dated March 30, 2011, and September 11, 2012 (Eco & Associates 2011; EDR 2012) (refer to Appendix 4.8-A). Select historic aerial photographs were used to assess past usage of the Proposed Project site and surrounding areas, and a field reconnaissance was conducted to assess field conditions. Reports summarizing previous hazardous materials investigations were also reviewed to understand existing site conditions. In addition, emergency evacuation and response plans and emergency measures employed by the City of Chula Vista (City of Chula Vista 2005) and County of San Diego (County of San Diego 2010a, 2010b, 2012a, 2012b) were researched. Relevant General Plans (City of Chula Vista 2005; County of San Diego 2010a) and environmental impact reports were also reviewed for applicable policies, plans, programs, and mitigation pertaining to the presence of hazards and use of hazardous materials in the Proposed Project area (City of Chula Vista 1993, 2001, 2005; County of San Diego 2010b, 2012a).

4.8.2.1 Records Review

Federal, state, local, and proprietary databases were reviewed to identify areas where hazardous materials may be encountered during Proposed Project construction. These databases and their relative search radii included the following:

- National Priorities List (NPL)—1.0 mile
- Resource Conservation and Recovery Act (RCRA) Corrective Action Report (CORRACTS)—1.0 mile
- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS—0.5 mile
- RCRA Permitted Treatment, Storage, Disposal Facilities (RCRA-TSDF)—0.5 mile
- RCRA Registered Small or Large Generators of Hazardous Waste (GNRTR)—0.25 mile
- State CERCLIS (SCL)—0.5 mile
- Leaking Underground Storage Tanks (LUSTs)—0.5 mile
- Solid Waste Landfill List (SWLF)—0.5 mile
- RCRA Violations/Enforcement Actions (RCRA Viol)—0.25 mile
- Registered Underground or Aboveground Storage Tank (UST/AST) Database—0.5 mile

These registries indicate where facilities have obtained permits for the use and disposal of hazardous materials; where a release, spill, or clean-up has been reported; where a waste disposal/management facility operates or formerly operated; or where storage tanks are or were present.

Historical Use

Aerial photographs were reviewed, where available, to determine the historical use of the Proposed Project area and adjacent properties, and to assess the potential for hazardous materials to be encountered.

4.8.3 Existing Conditions

The following discussion addresses potential hazardous materials located within proximity of the areas affected by the Proposed Project, as well as within proximity of schools, airports, and airstrips that have been identified according to CEQA requirements to assess potential impacts.

4.8.3.1 Regulatory Background

Federal

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) provides a basis for regulations to address the potential health and environmental problems associated with hazardous and non-hazardous waste. This law is implemented by USEPA through Subtitle C, 42 United States Code (USC) Section 6921 et seq., and its implementing regulations, 40 CFR Part 260 et seq. The generation, transportation, treatment, storage, and disposal of hazardous waste are regulated through Subtitle C of RCRA, which addresses a “cradle-to-grave” approach to hazardous waste management. All states are subject to Subtitle C with regard to hazardous waste generation. The RCRA also provides the specific quantities of waste that are regulated under RCRA.

Comprehensive Environmental Response, Compensation, and Liability Act and Superfund Amendments and Reauthorization Act

Planning, reporting, and notification with regard to hazardous materials and hazardous material releases into the environment are regulated by USEPA under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA), which is an amendment to CERCLA. Such regulations are given in 40 CFR Parts 302 through 355.

Annual reporting requirements associated with hazardous material released into the environment are provided in 42 USC Section 11023 and 40 CFR Part 372.30. Reporting of routine discharges and spill releases is required. In addition, Title III of SARA (identified as the Emergency Planning and Community Right-To-Know Act of 1986) requires that all states develop and implement local chemical emergency preparedness programs and make available information pertaining to hazardous materials that are used at facilities within local communities. Additionally, SARA provides specific planning, reporting, and public notification requirements with regard to the use of hazardous materials.

Hazardous Materials Transportation Act

The transportation of hazardous materials and hazardous wastes, including shipping documentation, placarding and marking vehicles, loading and unloading, incident reporting, and worker training is regulated through Caltrans from the Hazardous Materials Transportation Act (HMTA), as amended and codified in 49 USC 5101 et seq.

Clean Water Act/Clean Air Act

The Clean Water Act (CWA) provides measures governing the accidental release of hazardous materials to surface waters. Prevention of, preparedness for, and response to oil discharges at specific non-transportation-related facilities are established under Section 311 of the CWA (as amended). The subsequent regulations require facilities to develop and implement Spill Prevention, Control, and Countermeasure (SPCC) Plans and to establish procedures, methods, and equipment requirements to prevent oil from reaching navigable waters. Separately, the discharge of pollutants to navigable waters are regulated under Section 402 of the CWA and discussed in detail in Section 4.9, Hydrology and Water Quality, of this PEA.

The Clean Air Act (CAA) provides measures aimed at preventing the accidental release of hazardous materials into the atmosphere. Under CAA provisions, regulations governing hazardous materials emissions are provided in 40 CFR Part 68.

Uniform Building Code and Uniform Fire Code

The UBC and the Uniform Fire Code (UFC) provide codes for fire protection at the federal level. To minimize potential fire risk and damage to structures, the UBC provides requirements for building construction, materials, and other elements and practices to be adhered to. The UFC provides design measures for installation of fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards and safety measures, hazardous material storage and use, and other general and specialized requirements pertaining to fire safety and prevention.

State

Division of Occupational Safety and Health

The California Occupational Safety and Health Act (Cal/OSHA) of 1970 provides measures to address the safety of construction and industrial workers. Title 8 of the California Code of Regulations (CCRs) identifies the majority of these measures. Cal/OSHA is responsible for enforcing the occupational and public safety laws adopted by the U.S. Department of Labor. OSHA is responsible for regulation of workplace hazards and hazardous materials at the federal level, and Cal/OSHA regulates hazards and hazardous materials at the state level.

Department of Toxic Substances Control

USEPA authorizes the California EPA (CalEPA), Department of Toxic Substances Control (DTSC), to carry out the federal RCRA program in California. The DTSC regulates hazardous waste primarily through permitting, inspection, compliance, and corrective action programs to ensure that people who manage hazardous waste follow state and federal requirements.

Regional Water Quality Control Board

The San Diego RWQCB is responsible for protecting the beneficial uses of surface water and groundwater resources in the San Diego Hydrologic Basin. The RWQCB adopted a Water Quality Control Plan (Basin Plan) in September 1994 (amended in 2011). The Basic Plan sets forth implementation policies, goals, and water management practices in accordance with the Porter-Cologne Water Quality Control Act. The Basin Plan establishes numerical and narrative standards and objectives for water quality aimed at protecting beneficial uses of surface water in the basin. Proposed Project discharges to surface waters in the region are subject to the regulatory standards set forth in the Basin Plan, which regulates the discharge of hazardous and other materials into surface waters. The San Diego RWQCB also enforces provisions of the state statutes that protect groundwater.

California Hazardous Materials and Waste Codes

Within California, the storage, handling, use, and/or disposal of hazardous materials is regulated through various sections of the California Health and Safety Code and CCRs. Individual states are required by RCRA to develop their own programs for the regulation of hazardous waste discharges; however, such plans are required to meet or exceed RCRA requirements.

The California Hazardous Waste Control Law (HWCL) addresses the control of hazardous waste for the state. The HWCL addresses generators of universal waste (e.g., batteries, mercury control devices, dental amalgams, aerosol cans, and lamps/cathode ray tubes) under Section 25100 et seq. of the California Health and Safety Code, as well as hydrocarbon waste (e.g., oils, lubricants, and greases) that are not classified as hazardous waste under federal RCRA regulations. The DTSC is responsible for administration and enforcement of the HWCL.

The Hazardous Materials Release Response Plans and Inventory Act (California Health and Safety Code, Section 25500 et seq.) and regulations provided in 19 CCR Section 2620 et seq. require that local governments be responsible for the regulation of facilities that store, handle, or use hazardous materials above threshold quantities (TQs). The TQs for identified hazardous materials are 55 gallons for liquids, 500 pounds for solids, and 200 cubic feet for compressed gases measured at standard temperature and pressure. Facilities storing such hazardous materials in excess of their TQs are required to prepare a Hazardous Material Business Plan (HMBP) to identify the facility's internal response requirements to accidental spills. The HMBP may identify emergency contacts, hazardous material inventory and quantities, control methods, emergency response measures, and employee training methods. The HMBP is required to be submitted to the local administering agency (typically the local fire department or public health agency). In the event of a spill, the local administrative agency and the Governor's Office of Emergency Services must be notified.

California Health and Safety Code, Section 25249.5 et seq. of the Safe Drinking Water and Toxics Enforcement Act (Proposition 65), is administered through the California Office of Environmental Health Hazard Assessment. Proposition 65 regulates cancer-causing and reproduction-impairing chemicals. Under Proposition 65, users of such regulated chemicals are required to issue a public warning before potential exposure to chemicals above a threshold amount occurs (California Health and Safety Code Section 25249.6). In addition, Proposition 65 is aimed at preventing discharges or releases of specified hazardous materials into a "source of drinking water." Proposition 65 provides a list of chemicals of concern (Id. Section 25249.5), which is periodically updated.

Section 25404 et seq. of the California Health and Safety Code includes the California Unified Hazardous Waste and Hazardous Material Management Regulatory Program Act, which establishes specific requirements for handling hazardous waste locally by establishing the Certified Unified Program Agency (CUPA). CalEPA has certified the San Diego County Department of Environmental Health, Hazardous Materials Division, as the CUPA responsible for implementing hazardous waste laws and regulations at the local level for the Proposed Project area.

California Department of Transportation

An Encroachment Permit must be obtained from Caltrans for all proposed activities related to the placement of encroachments within, under, or over the state highway ROW. An "encroachment" is defined in Section 660 of the California Streets and Highways Code as "any tower, pole, pole line, pipe, [or] pipeline [that] is in, under, or over any portion of the state highway rights-of-way." All encroachments must comply with the requirements of Caltrans' 2010 Standard Plans and Standard Specifications, which includes provisions for traffic control.

California Building Code

The CBC provides design and construction measures for structures and other facilities with regard to fire protection and prevention. The CBC supplements the UBC by providing measures that are specific to potential conditions in California. Measures provided in the CBC are integrated and enforced through county and city review of development projects, the Office of the State Fire Marshal, and by local county or city fire chiefs or marshals.

California Public Resource Code

The California PRC provides regulations to enhance safety with regard to the operation and management of electrical transmission lines. These include the following:

- PRC Section 4292: This section requires the clearing of flammable vegetation around specific structures that support certain connectors or types of electrical apparatus. Clearing of such vegetation must be maintained in a radius of not less than 10 feet around such structures for the entirety of the fire season.
- PRC Section 4293: This section requires specific clearance between conductors and vegetation. As the line voltage increases, the radius of clearance also increases. The removal of trees that may pose the potential to fall on an electrical transmission line and cause damage is also required.

Local

County of San Diego

Within the County of San Diego, including the City of Chula Vista, the San Diego County Department of Environmental Health, Hazardous Materials Division (HMD) is responsible for implementation of state and federal laws and regulations at the local level. Hazardous materials are addressed through various county codes and regulations. The HMD hazardous material requirements include hazardous waste determination, storage and transportation of hazardous waste, treatment and disposal requirements, biennial reporting, emergency preparedness and prevention, emergency procedures, business plans, personnel training, and violation (County of San Diego 2010a, 2010b, 2012a, 2012b).

City of Chula Vista General Plan and Municipal Code

The Public Facilities and Services Element and the Environmental Element of the City of Chula Vista General Plan (City of Chula Vista 2005) address public facilities and services such as fire-rescue, police, and disaster preparedness. Goals and policies intended to allow for the efficient and adequate provision of public services and facilities, and to reduce the potential for hazardous or emergency situations to occur, are identified.

Brush management programs consistent with the Chula Vista Multiple Species Conservation Plan Subarea Plan and the city’s Urban-Wildland Interface Code are implemented to reduce potential wildland fire hazards in the city and surrounding area.

Construction or development of property within the public ROW requires an Encroachment Permit from the City of Chula Vista. Any barricades and traffic-control devices must conform to the Caltrans Manual of Traffic Controls and must be approved by the city engineer.

4.8.3.2 Existing Hazardous Sites

The electronic databases of Environmental Data Resources (EDR) were searched to complete the environmental records review relative to the proposed Salt Creek Substation and Transmission Corridor. A complete Phase I Environmental Site Assessment was conducted in 2011 prior to the purchase of the land for the proposed substation site. A second database search took place in 2012 to evaluate the areas surrounding the Transmission Corridor. These database searches were used to identify properties that may be listed in the referenced agency records within the approximate minimum search distances specified by the American Society for Testing and Materials (ASTM) standard (ASTM E 1527-05 Standard). The EDR reports also contain search results of other state, local, and proprietary environmental databases that are relevant to Proposed Project areas.

To determine those sites that may potentially represent the greatest risk, the following were considered:

- <u>Density of Listed Sites</u>: The greater the number of listed sites in the Proposed Project vicinity, the greater the potential for encountering contamination.

- Type of Release and Medium Affected: The volume of contaminant released, release date, and medium impacted all affect how contaminants may have migrated and, therefore, their potential to result in an impact.

The ASTM E 1527-05 Standard defines a Recognized Environmental Condition (REC) as "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property." A material threat is defined by the ASTM E 1527-05 Standard as "a physically observable or obvious threat [that] is reasonably likely to lead to a release that, in the opinion of the environmental professional, is threatening and might result in impact to public health or the environment."

A review of regulatory records, historical aerial photography, and a site reconnaissance survey did not identify areas with impacted or potentially impacted soil and/or groundwater that would likely be encountered during construction or operation of the Proposed Project (database search available upon request).

Fire Hazards

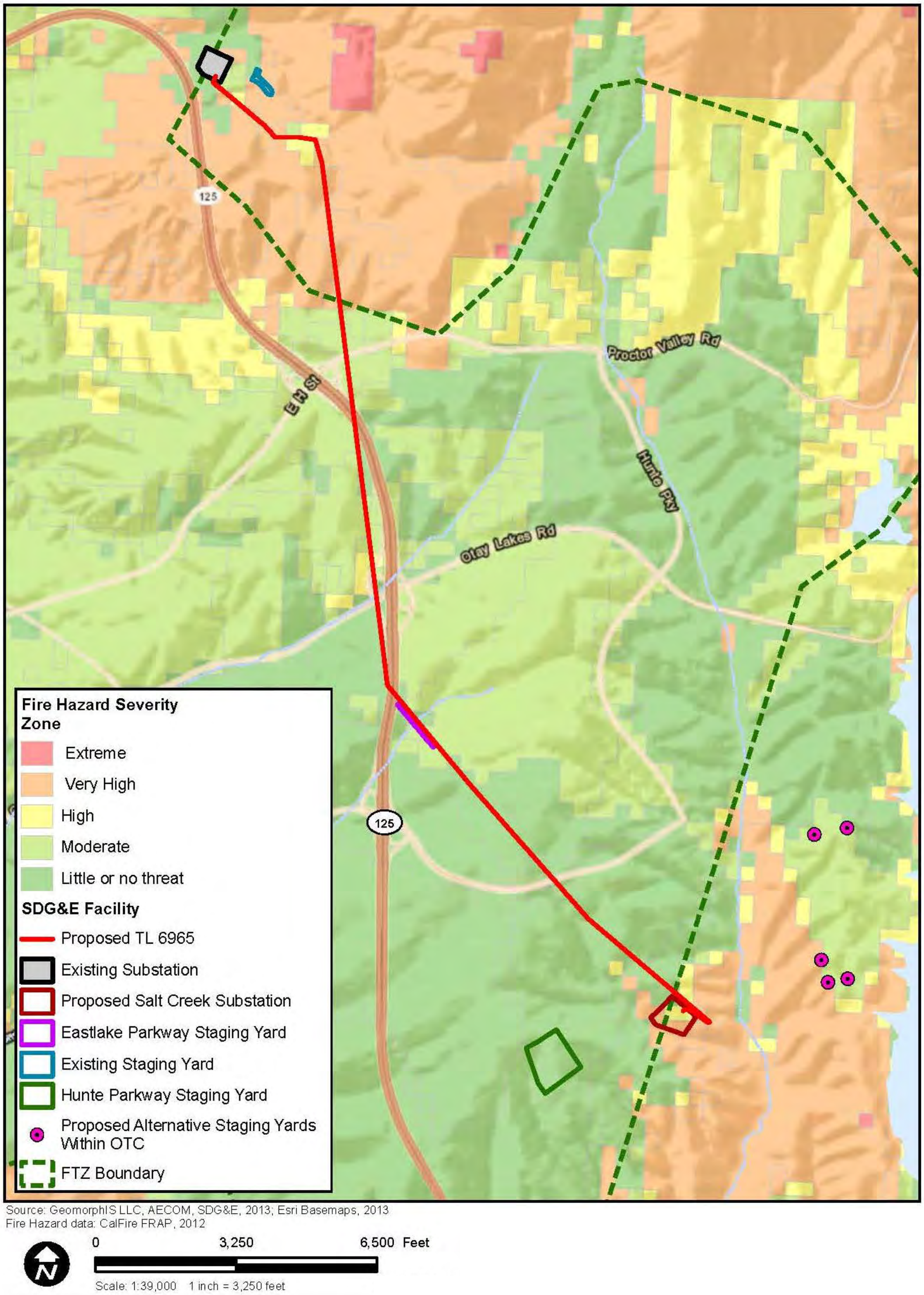
The California Department of Forestry and Fire Protection (CAL FIRE) delineated areas of significant fire threat in the County of San Diego through the Fire Resource Assessment Program (FRAP). These maps place areas of the county into different Fire Threat Zones (FTZs) based on a combination of fire behavior and expected fire frequency. The FTZs are divided into four levels of fire threat: Moderate, High Very High, and Extreme. The Proposed Project's relationship to the FTZ is shown in Figure 4.8.1, Fire Threat Zone Map.

The Proposed Project is located within the City of Chula Vista and the County of San Diego in areas that are primarily developed. However, sites planned for construction of the proposed Salt Creek Substation and power line improvements are undeveloped and support natural vegetation; there is potential for wildland fire to occur in these areas. The Proposed Project has components located in areas designated as Moderate, High, and Very High FTZ.

Schools

Six schools were identified within one-quarter mile of the Proposed Project (San Diego County Office of Education 2012): Eastlake High School (adjacent to the existing Transmission Corridor); Olympic View Elementary School (approximately 0.1 mile to the east); Marshall Elementary School (approximately 0.2 mile to the east); Liberty Elementary School (approximately 0.1 mile to the west); High Tech complex, which consists of an elementary, middle, and high school (approximately 0.1 mile to the west); and the University of Phoenix (adjacent to the existing Transmission Corridor).

Figure 4.8-1: Fire Hazard Map



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

Airports and Airstrips

The Proposed Project is not located within 2 miles of a public or private airport; the nearest airports are each approximately 3 miles from the Proposed Project (Brown Field to the south, John Nichol's Field to the east, and a helipad at Sharp Chula Vista Medical Center to the west) (USA Airport Finder 2012).

Emergency/Evacuation Plans

The County of San Diego Office of Emergency Services serves as staff for the Unified Disaster Council, a governing body of the Unified San Diego County Emergency Services Organization, composed of the Chair of the San Diego County Board of Supervisors and representatives from the 18 incorporated cities (County of San Diego 2010b, 2012b).

The federal Disaster Mitigation Act of 2000 requires that all local governments create a disaster plan in order to qualify for funding. The San Diego County Multi-Jurisdictional Hazard Mitigation Plan (County of San Diego 2010b) is a countywide plan that identifies risks and ways to minimize damage from natural and human-caused disasters. The plan provides a basis for enhancing public awareness, creating a decision tool for management, promoting compliance with state and federal program requirements, enhancing local policies for hazard mitigation capability, and providing inter-jurisdictional coordination.

The San Diego County Office of Emergency Services (County of San Diego 2012b) maintains ReadySanDiego.org in conjunction with Homeland Security's Ready.gov national public service advertising campaign. The Ready Campaign is designed to educate Americans to prepare for and respond to emergencies, including natural disasters and potential terrorist attacks.

The San Diego County Operational Area Evacuation Annex (Annex) is a guidance document to be used as a template for preparation of local jurisdiction evacuation plans and to supplement or support the evacuation plans developed and implemented by local jurisdictions. Strategies, protocols, organizational frameworks, and recommendations that may be used to implement a coordinated evacuation effort within the San Diego County Operational Area are included in the Annex. Estimates on the resident population within each jurisdiction that may be potentially impacted by certain hazards and would require evacuation, the number of residents that may need assistance securing shelter or transportation, and the estimated number of household pets that may need to be accommodated in the event of an evacuation effort are also identified. In addition, the Annex provides hazard-specific considerations, transportation routes and capacities for general evacuation, shelter capacities throughout the county, locally available resources, resources available through mutual aid, and other special considerations.

The Annex also includes hazard-specific evacuation routes for dam failure, earthquakes, tsunamis, floods, and wildfires. Primary evacuation routes consist of the major interstates, highways, and prime arterials within the County of San Diego.

In addition, the City of Chula Vista Fire Department Community Emergency Response Teams (CERT) help local communities build a base of emergency preparedness that can be relied on when needed. The CERT program brings together neighbors, team members, and co-workers within their own community, in coordination with the Chula Vista Fire Department.

4.8.4 Impact Analysis

Significance Criteria

Standards of significance were derived from Appendix G of the CEQA Guidelines. Accordingly, the Proposed Project would result in a significant impact if it would result in any of the following:

- create a hazard to public health or the environment by the routine transport, use, or disposal of hazardous materials;
- create a hazard to the public or the environment by reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a hazard to the public or the environment;
- for a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, the project would result in a safety hazard for people residing or working in the project area;
- for a project within the vicinity of a private airstrip, the project would result in a safety hazard for people residing or working in the project area;
- impair implementation of, or physically interfere with, an adopted emergency response or evacuation plan; and/or
- expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Question 4.8a – Hazardous Material Transport, Use, or Disposal

Construction – Less-than-Significant Impact

Salt Creek Substation

Potential impacts may occur from the transport or use of hazardous materials during the construction phase at the proposed Salt Creek Substation. Such impacts may occur as a result of potential spills or other unauthorized releases during ground clearing, driveway construction, or construction of the proposed Salt Creek Substation. Other potential impacts related to the use of hazardous materials may occur during the refueling or servicing of construction equipment. In addition, material that is excavated, transported, stored, or disposed of during the proposed

Salt Creek Substation construction has the potential to contain hazardous materials and may present a hazard to construction workers, area residents, the public, or the environment if improperly managed. In addition, vehicles and equipment used for construction may contain or require temporary, short-term use of potentially hazardous substances such as fuel, lubricating oils, or hydraulic fluid. Groundwater is not anticipated to be encountered during excavation because the excavation is expected to occur above the water table. Should groundwater be encountered, the procedures described in Section 3.5.1.2, Dewatering, regarding dewatering would be followed.

Table 4.8-1, Hazardous Materials Typically Used for Construction, provides a list of the types of chemicals typically used during construction of SDG&E substations and associated components. The use of hazardous materials during the construction phase generally has the potential to adversely affect the health or safety of construction workers, nearby building occupants or residents, or others within the vicinity of the Proposed Project.

As presented in Section 4.8.3.1, Regulatory Background, several laws, rules, and regulations apply to the routine use of hazardous materials during construction, which include proper handling and disposal of hazardous materials and worker training. SDG&E would abide by all applicable laws and regulations pertaining to the Proposed Project. As a result, impacts would be less than significant.

TL 6965 and TL 6910 Loop-In

Similar to construction of the proposed Salt Creek Substation, construction of TL 6965 and the TL 6910 loop-in for the Proposed Project has the potential for impacts to occur. Impacts may occur during ground clearing and excavation for the installation of the new power line structures, as well as conductor pulling, splicing, and termination of the lines. The material that is excavated, transported, stored, and disposed of during construction of the power lines has the potential to contain hazardous materials and may present a hazard to construction workers, the public, or the environment if improperly managed. In addition, vehicles and equipment used for construction may contain or require temporary, short-term use of potentially hazardous substances such as fuel, lubricating oils, or hydraulic fluid. Groundwater is not anticipated to be encountered during excavation because the excavation is expected to occur above the water table. Should groundwater be encountered, the procedures described in Section 4.9, Hydrology and Water Quality, regarding dewatering would be followed. As presented in Section 4.8.3.1, Regulatory Background, several laws, rules, and regulations apply to the routine use of hazardous materials during construction, which include proper handling and disposal of hazardous materials and worker training. SDG&E would abide by all applicable laws and regulations pertaining to the Proposed Project. As a result, impacts would be less than significant.

Table 4.8-1: Hazardous Materials Typically Used for Construction

Chemicals Typically Used During Construction	Associated Components
ABC fire extinguisher	Ammonium hydroxide
Air tool oil	Battery acid (in vehicles and in substation control shelter)
Automatic transmission fluid	Insect killer
Bottled oxygen	Puncture seal tire inflator
Canned spray paint	Chain lubricant (contains methylene chloride)
Diesel de-icer	Connector grease (penotox)
Diesel fuel	Diesel fuel additive
Eye glass cleaner (contains methylene chloride)	Contact cleaner 2000
Gasoline	Gasoline treatment
Hot stick cleaner (cloth treated with polydimethylsiloxane)	Lubricating grease
Hydraulic fluid	Starter fluid
Insulating oil (inhibited, non-PCB)	Methyl alcohol
Mastic coating	Paint thinner
Propane	WD-40
Sulfur hexafluoride (within the circuit breakers in the Substation)	Brake fluid
Two-cycle oil (contains distillates and hydrotreated heavy paraffin)	Acetylene gas
Wasp and hornet spray (1,1,1-trichloroethene)	Antifreeze (ethylene glycol)
ZEP (safety solvent)	Motor oil

Existing Substation Modifications

The Proposed Project has the potential for impacts to occur as a result of the modifications at the Existing Substation. Vehicles and equipment used at the substation may contain or require temporary, short-term use of potentially hazardous substances, such as fuel, lubricating oils, or hydraulic fluid. As presented in Section 4.8.3.1, Regulatory Background, several laws, rules, and regulations apply to the routine use of hazardous materials during construction, which include proper handling and disposal of hazardous materials and worker training. SDG&E would abide by all applicable laws and regulations pertaining to the Proposed Project. As a result, impacts would be less than significant.

Staging Yards

Potential impacts may occur from the transport or use of hazardous materials during the preparation and use of the staging yards. Such impacts may occur as a result of potential spills or other unauthorized releases during ground clearing, transportation of materials or workers to work sites, or during refueling or servicing equipment. In addition, vehicles and equipment used for construction may contain or require temporary, short-term use of potentially hazardous substances such as fuel, lubricating oils, or hydraulic fluid. As presented in Section 4.8.3.1, Regulatory Background, several laws, rules, and regulations apply to the routine use of hazardous materials during construction, which include proper handling and disposal of hazardous materials and worker training. SDG&E would abide by all applicable laws and regulations pertaining to the Proposed Project. As a result, impacts would be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Similar to activities occurring during the construction phase, routine use of hazardous materials during ongoing operation and maintenance of the Proposed Project would have the potential to pose health and safety hazards to SDG&E maintenance staff, area residents, the public, and the surrounding environment. Potential impacts may occur as a result of possible spills of hazardous substances during routine or emergency maintenance, as well as during daily operation of the facilities. The majority of chemicals used for ongoing operation or maintenance activities would be similar to those used during the construction phase; however, use of such chemicals would generally be considerably less than those used during construction.

The proposed Salt Creek Substation would support low-profile 69/12-kV transformers that contain up to approximately 5,500 gallons of mineral oil per transformer. As the transformers age, the potential for leaks to occur increases. Major natural events (e.g., seismic events) or collisions from maintenance equipment would also have the potential to result in a release into the environment. Mineral oil, which is a hazardous material in California, would be used in on-site transformers and may represent a potential for accidental release of hazardous substances into the environment.

Consistent with 40 CFR Part 112, SPCC Rule, SDG&E would install global and local transformer containment, which is designed to prevent migration of transformer oil during a leak or spill, at the proposed Salt Creek Substation. Localized design features to prevent small leaks from infiltrating into the soil would consist of concrete slabs and curbs around each transformer.

As presented in Section 4.8.3.1, Regulatory Background, several laws, rules, and regulations apply to the routine use of hazardous materials during operation, including proper handling and disposal of hazardous materials and worker training. SDG&E would abide by all applicable laws and regulations pertaining to the Proposed Project. As a result, impacts would be less than significant.

Question 4.8b – Reasonably Foreseeable Upset and Accident Conditions

Construction – Less-than-Significant Impact

Salt Creek Substation

Many of the reasonably foreseeable upset and accident conditions caused by the Proposed Project would be associated with the routine transport and use of hazardous materials discussed above in Question 4.8a – Hazardous Material Transport, Use, or Disposal. That same analysis applies here and yields less-than-significant impacts.

TL 6965 and TL 6910 Loop-In

TL 6965 would be constructed within the existing Transmission Corridor, a portion of which includes a natural gas pipeline and parallels an existing San Diego County Water Authority (SDCWA) easement. Structures for the proposed TL 6965 would be in proximity to existing overhead electric lines, underground gas lines, and underground water lines. Potential hazards for construction in these areas include the following:

- damage associated with equipment and vehicle structural loading on or adjacent to underground facilities;
- work in proximity to overhead energized lines;
- excavation adjacent to existing utilities, structures, and foundations;
- grading above existing utilities; and/or
- long-term structural stability during maintenance or replacement of adjacent utilities.

The design and engineering review being conducted for the Proposed Project will determine if additional support for construction equipment is required, such as installing steel plates and/or bridging over the existing utilities during construction.

To address the risk associated with existing overhead lines, it is planned that equipment access would be limited and vehicles with low overhead booms/cranes would be used as necessary. In addition, SDG&E would provide a qualified electrical worker standing by as necessary during construction activities.

Pole locations, grading, and underground electrical facilities that could potentially affect adjacent utilities would be designed and engineered to avoid potential hazards. Proposed excavation methods adjacent to existing utilities would be submitted to the adjacent utility owners for review and comment, and SDG&E would incorporate this information, at its discretion, into construction plans.

Hazards associated with construction adjacent to existing utilities and joint-use access roads would be addressed by engineering standards, coordination between utility owners, and applicable SDG&E and building codes/standards. As such, impacts would be less than significant.

Existing Substation Modifications

Many of the reasonably foreseeable upset and accident conditions at the Existing Substation would be associated with the routine transport and use of hazardous materials during modifications, which are discussed above in Question 4.8a – Hazardous Material Transport, Use, or Disposal. That same analysis applies here and yields less-than-significant impacts.

Staging Yards

Many of the reasonably foreseeable upset and accident conditions related to preparation and use of staging yards would be associated with the routine transport and use of hazardous materials, which are discussed above in Question 4.8a – Hazardous Material Transport, Use, or Disposal. That same analysis applies here and yields less-than-significant impacts.

Operation and Maintenance – Less-than-Significant Impact

Operation and maintenance adjacent to existing utilities in the Transmission Corridor and substation properties and the joint-use of access roads would be addressed by engineering, coordination between utility owners, and applicable SDG&E and building codes/standards. As such, impacts would be less than significant.

Question 4.8c – Hazardous Substances in Proximity to Schools

Construction – Less-than-Significant Impact

Salt Creek Substation

There are six schools within one-quarter mile of the Proposed Project. Only one location, High Tech Elementary, Middle, and High Schools, is located in proximity (approximately 0.1 mile west) to the proposed Salt Creek Substation site. The other five schools are greater than one-quarter mile from the proposed substation site.

As discussed above in Question 4.8a – Hazardous Material Transport, Use, or Disposal, construction of the Salt Creek Substation site would require the routine use of hazardous materials. The quantities used in construction are unlikely to cause impacts at any of the schools. In addition, as discussed above, the transport, use, and disposal of hazardous materials are subject to regulation, including worker training and the reporting of spills and releases.

As presented in Section 4.8.3.1, Regulatory Background, several laws, rules, and regulations apply to the routine use of hazardous materials, including proper handling and disposal of hazardous materials and worker training. SDG&E would abide by all applicable laws and regulations pertaining to the Proposed Project. As a result, impacts would be less than significant.

TL 6965 and TL 6910 Loop-In

The other five schools presented above in Section 4.8.3.2, Existing Hazardous Sites, are located within one-quarter mile of the existing Transmission Corridor. As discussed above in Question 4.8a – Hazardous Material Transport, Use, or Disposal, construction of the power lines would require the routine use of hazardous materials. The quantities used in construction are unlikely to cause impacts at any of the schools. In addition, the transport, use, and disposal of hazardous materials are subject to regulation, including worker training and the reporting of spills and releases.

As presented in Section 4.8.3.1, Regulatory Background, several laws, rules, and regulations apply to the routine use of hazardous materials, including proper handling and disposal of hazardous materials and worker training. SDG&E would abide by all applicable laws and regulations pertaining to the Proposed Project. As a result, impacts would be less than significant.

Existing Substation Modifications

No existing or proposed schools were identified within one-quarter mile of the Existing Substation.

Staging Yards

The High Tech complex, which includes an Elementary, Middle, and High School, is located in proximity to the Hunte Parkway staging yard. East Lake High School and Olympic View Elementary School are located in proximity to the Eastlake Parkway staging yard. As discussed above in Question 4.8a – Hazardous Material Transport, Use, or Disposal, preparation and use of the staging yards would require the routine use of hazardous materials. The quantities used in construction are unlikely to cause impacts at any of the schools. In addition, as discussed above, the transport, use, and disposal of hazardous materials are subject to regulation, including worker training and the reporting of spills and releases.

As presented in Section 4.8.3.1, Regulatory Background, several laws, rules, and regulations apply to the routine use of hazardous materials, including proper handling and disposal of hazardous materials and worker training. SDG&E would abide by all applicable laws and regulations pertaining to the Proposed Project. As a result, impacts would be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Similar to the discussion above for Question 4.8a – Hazardous Material Transport, Use, or Disposal, during operation and maintenance of the Proposed Project, the use of hazardous materials would have the potential to pose health and safety hazards to nearby receptors and the surrounding environment, including schools. Potential impacts may occur as a result of possible spill of hazardous substances during routine or emergency maintenance, as well as during daily operation of the facilities.

As presented in Section 4.8.3.1, Regulatory Background, several laws, rules, and regulations apply to the routine use of hazardous materials during operation, including proper handling and disposal of hazardous materials and worker training. SDG&E would abide by all applicable laws and regulations pertaining to the Proposed Project. As a result, impacts would be less than significant.

Question 4.8d – Existing Hazardous Materials Sites

Construction – Less-than-Significant Impact

Salt Creek Substation

Construction of the proposed Salt Creek Substation would not result in significant impacts from being located on an existing hazardous materials site, as no known hazardous sites have been identified in the Proposed Project areas or on adjacent lands. In addition, because the substation site is currently undeveloped, it is unlikely that hazardous materials would be encountered during excavation activities. However, if hazardous materials are uncovered during construction, the SWPPP prepared for the Proposed Project provides guidance on identification and reporting requirements and worker training. As such, impacts would be less than significant.

TL 6965 and TL 6910 Loop-In

Power line construction would not result in significant impacts from being located on an existing hazardous materials site, as no known hazardous sites have been identified in or near the alignment. In addition, because SDG&E has not encountered hazardous materials while constructing and maintaining existing facilities in the power line alignment for the Proposed Project, it is unlikely that hazardous materials would be encountered during excavation activities. However, if hazardous materials are uncovered during construction, the SWPPP prepared for the Proposed Project provides guidance on identification and reporting requirements, and worker training. As such, impacts would be less than significant.

Existing Substation Modifications

Modifications at the Existing Substation would not result in significant impacts from being located on an existing hazardous materials site, as no known hazardous sites have been identified in or near the substation. In addition, because SDG&E owns and developed the land for the Existing Substation, it is unlikely that unexpected hazardous materials would be encountered during excavation activities. However, if hazardous materials are uncovered during construction, the SWPPP prepared for the Proposed Project provides guidance on identification and reporting requirements, and worker training. As such, impacts would be less than significant.

Staging Yards

Preparation and use of staging yards would not result in significant impacts from being located on an existing hazardous materials site, as no known hazardous waste sites have been identified in or near the staging yards proposed at Hunte Parkway, Eastlake Parkway, or the Existing Substation. The Olympic Training Center was developed in the 1990s, and a review of publically available databases did not yield reports of spills or clean-up actions at the facility. However, if hazardous materials are uncovered during construction, the SWPPP prepared for the Proposed Project provides guidance on identification and reporting requirements, and worker training. As such, impacts would be less than significant.

Operation and Maintenance – No Impact

Long-term operation and maintenance activities would not result in significant impacts due to the presence of an existing hazardous materials site, as none have been identified. However, if a hazardous materials site is identified during construction, it would be addressed during construction and either remediated or secured in compliance with applicable laws, rules, and regulations and would not result in acute or continued exposure to workers during routine operation.

Future maintenance activities for the Proposed Project would primarily occur on or within existing facilities and structures, thereby minimizing the potential for uncovering existing, unknown hazardous materials sites during such activities. Therefore, no impact would occur.

Question 4.8e – Public Airport Hazards – No Impact

No components of the Proposed Project are located within 2 miles of a public airport and, therefore, would not affect or disrupt existing operations or worker safety at such a facility. As such, the Proposed Project would not impact operations at a public airport. No impact would occur.

Question 4.8f – Private Airstrip Hazards – No Impact

No components of the Proposed Project are located within 2 miles of a private airstrip and, therefore, would not affect or disrupt existing operations or worker safety at such a facility. No impact would occur.

Question 4.8g – Emergency Response and Evacuation Plans

Construction – Less-than-Significant Impact

Salt Creek Substation

No conflicts with public safety or emergency response and evacuation plans were identified for construction of the proposed Salt Creek Substation. The majority of construction equipment, vehicles, personnel, and material staging areas would be accommodated within the property lines of the proposed Salt Creek Substation site, which would not affect emergency access. Emergency access would not be directly impacted during construction, as roadways would remain open to emergency vehicles at all times.

TL 6965 and TL 6910 Loop-In

No conflicts with public safety or emergency response or evacuation plans were identified or would be associated with installation of power line improvements. When construction occurs within the ROW of a public roadway, SDG&E would be required to obtain an Encroachment Permit from the appropriate jurisdiction. Encroachment Permits from the City of Chula Vista and, separately, from Caltrans, would require an approved traffic control plan. Emergency access would not be impacted during construction, as roadways would remain open to emergency vehicles. Construction would not interfere with evacuation efforts should a disaster occur. Impacts would be less than significant.

Existing Substation Modifications

No conflicts with public safety or emergency response and evacuation plans were identified for the modifications of the Existing Substation. The majority of construction equipment, vehicles, and personnel would be accommodated within the property lines of the Existing Substation site or nearby staging yard. Emergency access would not be directly impacted during construction, as roadways would remain open to emergency vehicles at all times. No impact would occur.

Staging Yards

No conflicts with public safety or emergency response and evacuation plans were identified for the preparation and use of the staging yards for the Proposed Project. The majority of construction equipment, vehicles, and personnel would be accommodated within the leased area of each staging yard. Emergency access would not be directly impacted during construction, as roadways would remain open to emergency vehicles at all times. No impact would occur.

Operations and Maintenance – No Impact

Impacts to emergency and evacuation plans during operations and maintenance of the Proposed Project would be similar to those during construction and limited to maintenance of those facilities within the public ROW. Similar to construction activities, Encroachment Permits would require that an approved traffic control plan be implemented during road or lane closures. These permits ensure that emergency access would be maintained, and, as such, activities would not interfere with emergency or evacuation plans. Therefore, no impact would occur.

Question 4.8h – Fire Hazard

Construction – Less-than-Significant Impact

Salt Creek Substation

Although the Proposed Project is primarily located in a developed area, the site planned for construction of the proposed Salt Creek Substation is undeveloped and supports natural vegetation with the potential to support wildfire, particularly when considered with the sloping hillsides where winds may enable the rapid spread of flames. The proposed Salt Creek Substation site is located within an area designated as High to Very High FTZ. Therefore, the potential for wildland fire to occur is high to very high.

Construction activities have the potential to start a wildland fire due to the increased presence of vehicles, equipment, and human activity in areas of elevated fire hazard severity. In particular, heat or sparks from construction vehicles or equipment have the potential to ignite dry vegetation. Construction of the Proposed Project, however, would not expose people or structures to significant risk of loss, injury, or death involving wildland fires with implementation of SDG&E's comprehensive construction fire prevention program. Consistent with current SDG&E standard practices, SDG&E would implement fire prevention and protection BMPs, which typically include requirements for carrying emergency fire suppression equipment, conducting "tailgate meetings" that cover fire safety discussions, restricting smoking and idling vehicles, and imposing construction restrictions during red flag warnings. As part of the Proposed Project, SDG&E would also implement the Salt Creek Project Fire Plan (refer to Appendix 4.8-B) to assist in safe practices to prevent fires within the Proposed Project area. The Salt Creek Project Fire Plan includes procedures and tools that are designed to minimize the risk of starting wildland fires during construction and increase the ability to suppress a wildland fire in the unlikely event that one is ignited. The Salt Creek Project Fire Plan includes the following procedures:

- minimum requirements for firefighting equipment (including size and response time requirements),
- work limitations for "high" to "extreme" fire danger days, and
- designation of specific "Fire Patrol" personnel to perform monitoring and first response on-site.

During construction activities within the FTZ, workers would follow the Salt Creek Project Fire Plan to ensure that the risk of a wildland fire event during construction of the Proposed Project is minimized. The relevant portions of the Fire Plan are incorporated into the design of the Proposed Project, and would be used to ensure that potential impacts relating to wildland fires remain less than significant. Therefore, any potential impacts from wildland fires would be less than significant.

TL 6965 and TL 6910 Loop-In

Similar to the construction of the proposed Salt Creek Substation, construction of the power lines would take place in areas designated as Moderate, High, and Very High FTZ. In general, power line construction activities would occur within areas that have been cleared of vegetation pursuant to the procedures in Section 4.4 of this PEA, thereby removing fuel and reducing the potential for a wildland fire. As discussed, construction activities do have the potential to start a fire due to the increased presence of vehicles, equipment, and human activity in areas of elevated wildland fire threat. In particular, heat or sparks from construction vehicles or equipment have the potential to ignite dry vegetation. Construction of the Proposed Project, however, would not expose people or structures to significant risk of loss, injury, or death involving wildland fires due to strict adherence to SDG&E's comprehensive construction fire prevention program. The Salt Creek Project Fire Plan, as outlined above, would be implemented to minimize the risk of starting wildland fires during construction and to increase the ability to suppress a wildland fire in the unlikely event that one is ignited.

The Salt Creek Project Fire Plan includes requirements for carrying emergency fire suppression equipment, conducting "tailgate meetings" that cover fire safety discussions, restricting smoking and idling vehicles, and imposing construction restrictions during red flag warnings. On high fire danger days, the Salt Creek Project Fire Plan may also require the staging of firefighting resources, assigning a dedicated fire patrol, and curtailing work activities. Based on the plans to clear vegetation to create adequate working space and implementation of the Salt Creek Project Fire Plan, the potential impacts from fire hazard would be less than significant.

Existing Substation Modifications

Existing Substation modifications would occur within the substation's fenced-in areas, an area that is clear of vegetation. This area does not support wildland fire. There would be no impact.

Staging Yards

Similar to the construction of the proposed Salt Creek Substation, preparation and use of the staging yards would take place in areas designated as Moderate, High, and Very High FTZ. In general, staging areas would be cleared of vegetation, thereby removing fuel and reducing the potential for a fire to start. The Salt Creek Project Fire Plan, as outlined above, would be implemented during construction activities to minimize the risk of starting fires during construction and to increase the ability to suppress a fire in the unlikely event that one is ignited.

The Salt Creek Fire Plan includes requirements for carrying emergency fire suppression equipment, conducting "tailgate meetings" that cover fire safety discussions, restricting smoking and idling vehicles, and imposing construction restrictions during red flag warnings. On high fire danger days, the Salt Creek Fire Plan may also require the staging of firefighter resources, assigning a dedicated fire patrol, and curtailing work activities. Based on the plans to clear vegetation to create adequate working space and implementation of the Salt Creek Project Fire Plan, the potential impacts from fire hazard would be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Operation and maintenance activities are presently conducted by SDG&E in the Proposed Project area within the existing Transmission Corridor and at the Existing Substation. These activities occur primarily in previously cleared areas, thereby reducing the potential to start a wildland fire. Operation and maintenance for the proposed Salt Creek Substation and power line improvements would generally involve clearing vegetation on an as-needed basis for safety and/or access.

Although maintenance vehicles would use the proposed access driveways and the existing unimproved (dirt) access road during operation and maintenance activities, the potential for heat or sparks generated by a maintenance vehicle to ignite dry vegetation and start a wildland fire does exist. Maintenance vehicles would use the existing easements, driveways, parking areas, and ROW, as applicable, to access Proposed Project facilities during operation and maintenance activities to reduce potential fire hazards.

The Salt Creek Fire Plan includes requirements for carrying emergency fire suppression equipment, conducting "tailgate meetings" that cover fire safety discussions, restricting smoking and idling vehicles, and imposing construction restrictions during red flag warnings. Additional actions taken on high fire danger days may include staging firefighter resources, assigning a dedicated fire patrol, or curtailing work activities.

As such, impacts resulting from long-term operation and maintenance activities with regard to wildfire hazards would be less than significant.

4.8.5 Proposed Project Design Features and Ordinary Construction/Operations Restrictions

With implementation of the ordinary construction restrictions, as outlined within Section 3.8, Project Design Features and Ordinary Construction/Operations Restrictions, potential impacts related to hazards and hazardous materials would remain less than significant.

4.8.6 Applicant-Proposed Measures

Because hazard and hazardous material impacts resulting from the Proposed Project would be less than significant, no APMs are required or proposed.

4.8.7 Detailed Discussion of Significant Impacts

Based on the above analyses, no significant impacts were identified for the Proposed Project, and no APMs are required or proposed.

4.8.8 References

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4.9 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?	❒	❒	☑	❒
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	❒	❒	☑	❒
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	❒	❒	☑	❒
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	❒	❒	☑	❒

Would the project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
e. Create or contribute runoff water, which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☑	☐
f. Otherwise substantially degrade water quality?	☐	☐	☑	☐
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☑
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☑
i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☑
j. Inundation by seiche, tsunami, or mudflow?	☐	☐	☑	☐

4.9.1 Introduction

The purpose of this section is to document existing conditions of surface water and groundwater resources in the Proposed Project area, as well as to assess potential impacts that might occur as a result of Proposed Project implementation. In addition, this section is intended to evaluate the Proposed Project for potential impacts resulting from flood hazards or inundation from seiche, tsunami, or mudflow. Impacts related to hydrology and water quality would be less than significant for the Proposed Project.

4.9.2 Methodology

Hydrology and water quality in the Proposed Project area were evaluated by reviewing the City of Chula Vista's Development Storm Water Manual and map of drainage watersheds (2011). Aerial photographs of the Proposed Project area were also reviewed. The San Diego RWQCB's Water Quality Control Plan for the San Diego Basin was reviewed to ensure compliance with state and local regulations (RWQCB 2007). Federal Emergency Management Agency (FEMA) maps were referenced for flood zones (FEMA 2012).

4.9.3 Existing Conditions

A description of the regulatory requirements and overall existing hydrologic conditions for the Proposed Project is provided below.

4.9.3.1 Regulatory Background

The San Diego Hydrologic Planning Basin (San Diego Basin), in which the Proposed Project is located, encompasses approximately 3,900 square miles of surface area. The San Diego Basin falls under the jurisdiction of the San Diego RWQCB. San Diego County and the other municipal storm water co-permittees located within the San Diego Basin were mandated by the San Diego RWQCB to regulate discharges from permittees' storm drains to surface waters of the state.

The following authorities regulate water quality in the Proposed Project area:

- U.S. Environmental Protection Agency (USEPA)
- California State Water Resources Control Board (SWRCB)
- San Diego RWQCB
- County of San Diego
- City of Chula Vista

The following sections describe applicable federal, state, and local water quality requirements.

Federal and State

Clean Water Act

The Federal Water Pollution Act, enacted in 1948, established the basic structure for regulating discharge of pollutants into waters of the U.S. and regulating water quality standards for surface waters. The Federal Water Pollution Act was significantly reorganized and expanded in 1972, and the "Clean Water Act" (CWA) became its common name. The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. These waters include all navigable waters and tributaries thereto, and adjacent wetlands.

In 1972, the CWA was amended to specify that the discharge of pollutants to waters of the U.S. from any point source is unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. In 1987, amendments to the CWA added Section 402(p), which establishes a framework for regulating municipal and industrial storm water discharges under the NPDES program. USEPA has authorized the RWQCBs to implement this program.

Section 303

Section 303(c)(2)(b) of the CWA requires states to adopt water quality standards for all surface waters of the U.S. based on the water body's designated beneficial use. Where multiple uses exist, water quality standards must protect the most sensitive use. Water quality standards are typically numeric, although narrative criteria based on bio-monitoring methods may be employed where numerical standards cannot be established or where they are needed to supplement numeric standards. Water quality standards applicable to the Proposed Project are listed in the Water Quality Control Plans for the San Diego Basin, Region 9 (Basin Plans) (RWQCB 1994, 2007).

The Basin Plan list includes waters that do not meet water quality standards necessary to support a waterway's beneficial uses, even after the minimum required levels of pollution control technology are installed. Listed water bodies are priority ranked for development of a total maximum daily load (TMDL). A TMDL is a calculation of the "amount" of a pollutant that a water body can receive on a daily basis and still safely meet water quality standards. TMDLs include waste load allocations for urban storm water runoff, as well as municipal and industrial wastewater discharges, with allocations apportioned for individual municipal separate storm sewer systems (MS4s) and wastewater treatment plants. The SWRCB, RWQCBs, and USEPA are responsible for establishing TMDL waste load allocations and incorporating approved TMDLs into water quality control plans, NPDES permits, and waste discharge requirements (WDRs) in accordance with a specified schedule for completion.

Section 401

Under CWA Section 401, any applicant for a federal permit or license to conduct any activity that may result in a discharge into jurisdictional waters of the U.S. must obtain a water quality certification from the state that the proposed activity would comply with the state's water quality standards. Most 401 Certifications are issued in connection with USACE CWA Section 404 permits for dredge and fill discharges. The SWRCB and RWQCB implement the Section 401 Certification program.

Section 402

The NPDES storm water permitting program, under Section 402(d) of the CWA, is administered by the SWRCB and RWQCB on behalf of USEPA. Section 402(d) establishes a framework for regulating nonpoint-source storm water discharges (33 USC 1251). The NPDES program objective is to control and reduce pollutants to water bodies from surface water discharges, which includes municipal and industrial wastewater and storm water runoff. Under the CWA, discharges of pollutants to receiving waters are prohibited unless the discharge is in compliance with an NPDES permit. The NPDES permit specifies discharge prohibitions, effluent limitations, and other provisions such as monitoring deemed necessary to protect water quality based on criteria specified in the National Toxics Rule, the California Toxics Rule, and the Basin Plan.

Section 404

Under Section 404, USACE and USEPA regulate the discharge of dredged or fill material into waters of the U.S. The phrase "waters of the U.S." includes wetland and non-wetland aquatic habitats within the jurisdictional extent of rivers and streams defined by the ordinary high water mark. Such discharges may result from navigational dredging, flood control channelization, levee construction, channel clearing, fill of wetlands for development, or other activities. These projects involve removal or placement of soil, sediment, and other materials in or near water bodies, and require Section 404 permits from USACE. Please refer to Section 4.4, Biological Resources, for a further discussion of waters of the U.S.

National Flood Insurance Program and Flood Disaster Protection Act

The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 were enacted to reduce the need for flood protection structures and to limit disaster relief costs by restricting development in floodplains. The Federal Emergency Management Agency (FEMA), created in 1979, is responsible for predicting hazards related to flooding events and forecasting the level of inundation under various conditions. As part of its duty to develop standards for delineating fluvial and coastal floodplains, FEMA provides information about flood hazard and inundation potential on Flood Insurance Rate Maps (FIRMs) used in the National Flood Insurance Program (NFIP), and, where appropriate, designates regions as special flood hazard areas. Special flood hazard areas are defined as areas that have a 1% chance of flooding in a given year, which are commonly known as a FEMA designated 100-year floodplain.

FEMA also administers the NFIP, a federal program that enables property owners in participating communities to purchase insurance as protection against flood losses in exchange for state and community floodplain management regulations that reduce future flood damages.

Within the floodplain, non-residential development is allowed and construction activities are restricted within flood hazard areas, depending on the potential for flooding identified within a specific area. Title 44, Part 60 of the CFR provides measures requiring that municipalities participating in the NFIP adopt specific standards aimed at reducing flood hazards by regulating construction and development activities within the designated 100-year flood hazard areas.

State

Porter Cologne Water Quality Control Act

The California Porter-Cologne Water Quality Act (Porter-Cologne) provides a comprehensive water quality management system for the protection of California waters. Porter-Cologne designated the SWRCB as the ultimate authority over California water rights and water quality policy, and also established nine RWQCBs to oversee water quality on a day-to-day basis at the local/regional level. Each RWQCB has responsibility to grant NPDES permits for storm water runoff from construction sites or grant a waiver for "low threat" discharges from short-term construction dewatering operations to land.

State Water Resources Control Board Order 2009-009-Division of Water Quality

Projects that disturb 1 acre or more of soil are required to obtain coverage under the SWRCB's General Permit for Storm Water Discharges Associated with Construction Activity Order No. 2009-0009-Division of Water Quality (DWQ) (General Permit). To obtain coverage under the General Permit, Permit Registration Documents, including a Notice of Intent, SWPPP, risk assessment, site map, certification, and annual fee, must be submitted electronically to the SWRCB prior to initiating construction activities. Two SWPPPs would be prepared for the Proposed Project: a traditional SWPPP for the Salt Creek Substation component and a linear SWPPP for the TL 6965 and distribution facilities outside of the Salt Creek Substation property. The SWPPPs would include the following:

- identification of pollutant sources and non-storm-water discharges associated with construction activity;
- specifications for BMPs that would be implemented, inspected, and maintained during Proposed Project construction to minimize erosion and the potential for accidental releases, and to minimize pollutants in the runoff from the construction areas, including pollutants from storage and maintenance areas and building materials laydown areas;
- specifications for spill response and implementation;
- a record of training provided to persons responsible for implementing the SWPPP;
- reporting and record keeping requirements; and
- if required, a plan for water sampling and analyzing pollutants to ensure that the Numeric Action Levels are met and that Numeric Effluent Limitations are not exceeded.

In addition, as the weather dictates, a specific Rain Event Action Plan would be prepared as required for all phases of construction.

State Water Resources Control Board Order 2001-11-DWQ

The SWRCB adopted a statewide permit for dewatering utility vaults and underground structures (Statewide General NPDES Permit for Discharges from Utility Vaults & Underground Structures to Surface Waters [General Permit CAG990002]) in 2001. This permit is used by permittees for the discharge of uncontaminated water from vaults and substructures (i.e., water not related to construction groundwater dewatering) to surface waters.

California Department of Fish and Wildlife Lake and Streambed Alteration Agreement Program

CDFW is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the Fish and Game Code (Section 1602) requires an entity to notify CDFW (Ecosystem Conservation Division) of any proposed activity that may substantially modify a river, lake, or stream. Refer to Section 4.4*,* Biological Resources*,* for a further discussion.

Regional Water Quality Control Board, San Diego Region

The San Diego RWQCB has the authority to waive the requirements that a person file a report of waste discharge (RoWD) and/or be issued WDRs prior to initiating a discharge to surface waters not subject to federal NPDES regulations. Specifically, Section 13269 of the Porter-Cologne Water Quality Control Act (Water Code) gives the San Diego RWQCB the authority to waive the requirements of Water Code Sections 13260(a) and (c), 13263(a), and 13264(a) for specific discharges or specific types of discharge, provided the waiver is consistent with the Basin Plan and is in the public interest. A waiver is available for a discharge if it can comply with the conditions of the waiver. Discharges that comply with the conditions of a waiver are expected to pose a low threat to the quality of waters of the state. Dischargers that cannot comply with the waiver conditions must file a RoWD with the San Diego RWQCB.

Resolution No. R9-2007-0104 was adopted by the San Diego RWQCB on October 10, 2007, which amends the Basin Plan to renew and issue the revised conditional waivers. Except for the waiver conditions pertaining to composting operations, the SWRCB approved Resolution No. R9-2007-0104 on November 4, 2008. The Office of Administrative Law (OAL) approved Resolution No. R9-2007-0104 on February 3, 2009. There are 11 conditional waivers that may be available for 34 specific types of discharge within the San Diego Region. Dischargers must comply with the waiver conditions to be eligible for a waiver of the requirement to file a RoWD and/or issuance of WDRs.

Conditional Waiver No. 2 is for “low threat” discharges to land, which can percolate to groundwater. Low threat discharges include liquid wastes containing pollutant concentrations that are not expected to adversely impact the quality of waters of the state under ambient conditions. Low threat discharges may include potable water or uncontaminated groundwater. Potable water and uncontaminated groundwater are not considered waste when initially discharged. However, when it comes into contact with pollutants and transports those pollutants in surface runoff or leaches those pollutants into the soil and groundwater, it becomes a waste. Low threat discharges to land are not expected to contain significant concentrations of pollutants that can adversely affect the quality of underlying groundwater. Discharges from short-term construction dewatering operations to land may be eligible for Conditional Waiver No. 2.

Local

County of San Diego

The northernmost portion (approximately 4,700 feet) of the Proposed Project, the power line and the Existing Substation, are located within an unincorporated portion of San Diego County. The San Diego RWQCB issued a Municipal Permit (NPDES No. CA0108758) to the co-permittees (includes San Diego County, the San Diego Unified Port District, the San Diego County Regional Airport Authority, and 18 cities in the region) with the primary goal of preventing polluted discharges from entering the storm water conveyance system and local receiving and coastal waters. Pursuant to this permit, co-permittees are required to develop and implement measures that would address and prevent pollution from development projects.

City of Chula Vista

The proposed Salt Creek Substation and a majority of the associated power line would be located within the City of Chula Vista. The co-permittees for the Municipal Permit include Chula Vista. Consistent with the Municipal Permit, Chula Vista Municipal Code Chapters 14.20 and 15.04 prohibit discharge into storm water conveyance systems that results in or contributes to a violation of the Municipal Permit. Discharges that are regulated under an individual NPDES permit issued directly to the discharger are exempt from the requirements and prohibitions of the co-permittees' Municipal Codes. Chula Vista prepared its Development Storm Water Manual (2011) to provide general information on how to comply with Chula Vista's construction and permanent storm water BMP requirements, including the Chula Vista Standard Urban Storm Water Mitigation Plan (SUSMP). All development projects that obtain their grading, construction, or building permit after March 24, 2010, are required to comply with requirements of the Municipal Permit.

Chula Vista's SUSMP requires preparation of a Water Quality Technical Report to address all site, source, and treatment control BMPs for the Proposed Project, as well as any long-term maintenance activities that are required. The Water Quality Technical Report would be submitted to Chula Vista with the final grading plans when ministerial permits from Chula Vista are required.

As of early 2013, the San Diego RWQCB is in the process of finalizing the Regional MS4 Storm Water NPDES Permit (Regional MS4 Permit) to update the Municipal Permit. The San Diego RWQCB will likely issue the Regional MS4 Permit in mid-2013 (RWQCB 2013). Once this permit is issued, Chula Vista will revise its SUSMP accordingly.

4.9.3.2 Surface Water and Groundwater Resources

General Setting

Watersheds within the San Diego RWQCB Basin all ultimately drain to the Pacific Ocean and include the San Dieguito, Los Peñasquitos, San Diego, Pueblo, Sweetwater, Otay, and Tijuana watersheds. The Proposed Project area lies within the Otay and Sweetwater Basins (RWQCB Region 9 designated numbers of 910 and 909).

Natural drainage patterns were modified largely to protect against the risk of flooding in Chula Vista, which is highly urbanized. Storm water within Chula Vista is largely conveyed into natural drainages, portions of which were modified or are built drainages, together comprising Chula Vista's MS4.

Water from rain events within Chula Vista flows into the MS4 and ultimately drains into receiving water bodies such as rivers, reservoirs, or bays. The MS4 also directs water into the Pacific Ocean. Generally, the drainage system for majority of the Proposed Project, including the proposed Salt Creek Substation, flows south or southwest into the Otay River and San Diego Bay.

The northern portion of the power line route and the Existing Substation are located in an unincorporated portion of the County of San Diego. The northern portion of the Proposed Project drains west to the Sweetwater River and then to San Diego Bay.

Winter storms usually occur during mid-October to May, with the greatest frequency and intensity typically occurring from December to March. These storms usually originate over the Pacific Ocean as a result of the interaction between Polar Pacific and Tropical Pacific air masses, and move eastward over the San Diego area. This type of storm occasionally lasts for several days. Generally, more precipitation falls in the mountains than over the coast due to increased condensation from the presence of cooler air at higher elevations.

Summer storms, including tropical cyclones, occur on a few occasions in the summer and early fall. These storms usually occur near the end of the dry season in August and September. They rarely result in any major flooding.

Local storms can occur at any time of the year, either during general storms or as isolated phenomena. Local summer storms occur more frequently in the higher mountains than on the coast. These storms, which normally result from a flow of moist air into the region from the south and east, cover comparatively small areas, but are characterized by high-intensity precipitation for 3 hours or less.

Local winter storms can occur on occasion in conjunction with a strong cold front or deep upper-level low-pressure center, and are sometimes imbedded within a general winter storm. Like their summer counterparts, local winter storms result in high-intensity precipitation for a short duration over small areas. Mean seasonal precipitation in the San Diego area from all storm types ranges from a low of 3 inches in the eastern desert regions of the county to highs of 35 to 40 inches in the Cuyamaca and Laguna Mountains.

Average annual rainfall in the area is approximately 10 inches per year, with the majority of precipitation falling between November and April. Rainfall between June and October averages less than 0.5 inch per month (Western Regional Climate Center 2012).

Surface Water

<u>Channels, Creeks, and Rivers</u>

Many rivers and creeks in San Diego County are intermittent due to the seasonal nature of rainfall and the relatively low yearly rainfall totals. Some drainages have perennial and intermittent segments due to effects from dams or other artificial blockages. Imported water adds to each watershed in the form of runoff from urban, agricultural, and water storage activities, sometimes producing flow in drainages when they would otherwise be dry.

The San Diego RWQCB identifies surface water watersheds within its boundaries. Chula Vista also identifies storm water drainage basins within Chula Vista boundaries that are part of its municipal storm drain system.

The Salt Creek Substation site and a majority of the power line route are located within the watersheds of the Salt Creek and Poggi Canyon Creek tributaries of the Otay River (Otay Valley hydrologic unit).

The Salt Creek Substation site currently drains in two directions via existing concrete brow ditches. Half of the site drains in the southwesterly direction and the other half drains southeast. An existing 96-inch-diameter reinforced concrete pipe storm drain is located within the existing canyon fill, below the western end of the access road to the southeast of the Salt Creek Substation site; it discharges at the base of the slope (Kleinfelder 2008). The entire site ultimately drains south to a tributary to Salt Creek.

A portion of TL 6965 located in the area along SR-125 and Otay Lakes Road is located in the Telegraph Canyon Creek watershed, which is part of the Sweetwater River Watershed. Another portion of TL 6965 located in the area along SR-125 and Otay Lakes Road crosses over the Telegraph Canyon Creek drainage, and a portion of TL 6965 located in the area of Eastlake Parkway crosses over the Poggi Canyon Creek drainage.

The northernmost portion of TL 6965 and the Existing Substation are located in the Middle Sweetwater Hydrologic Area (identified as the Sunnyside drainage basin by Chula Vista). This hydrologic area is within the Sweetwater River Watershed, just below the Sweetwater Reservoir. The northernmost portion of the proposed power line route would cross a drainage that is named as a tributary of the Sweetwater River.

Wetlands

Wetland vegetation communities identified during biological field surveys are located within the study area for the proposed Salt Creek Substation, Transmission Corridor, and associated buffer zone for the power line. Refer to Section 4.4, Biological Resources, for additional detail regarding USACE, CDFW, and San Diego RWQCB jurisdictional resources, and the biological value of the wetland areas associated with the Proposed Project.

Reservoirs, Ponds, Lakes

No reservoirs, ponds, or lakes are located on the Salt Creek Substation site. No such water bodies would be crossed or impacted by the Proposed Project. The Upper and Lower Otay Reservoirs are located 1.5 miles and 0.6 mile, respectively, to the northeast and east of the proposed Salt Creek Substation. The Sweetwater Reservoir is located approximately 1 mile north and to the east of the northern-most portion of the power line and the Existing Substation. A portion of the power line route is approximately 500 feet to the east of East Lake. East Lake is surrounded by residential development and is not fed by a drainage way. The Otay and Sweetwater Reservoirs and East Lake are located in watersheds that are adjacent to the watersheds where the Proposed Project would be located. Therefore, the Proposed Project would not be upstream or downstream of these nearby water bodies.

Surface Water Quality

Surface water quality is affected by storm water runoff and runoff from industrial, commercial, and agricultural activities. The proposed TL 6965 route would cross two impaired water bodies:

the upper portion of Poggi Canyon Creek, which is listed on the California Section 303(d) list for toxicity and is a tributary of the Otay River that discharges into San Diego Bay; and Telegraph Canyon Creek, which is listed on the California Section 303(d) list for selenium and discharges into San Diego Bay. San Diego Bay is listed on the California Section 303(d) list for poly-chlorinated biphenyls (PCBs) (SWRCB 2010).

Groundwater

Groundwater basins are present along major drainages in San Diego County. Groundwater recharge occurs from dam releases and underflow past existing dams. Other sources of recharge may include precipitation, stream flow, and discharges from municipal wastewater treatment plants. The Proposed Project would be located in the Otay Valley and Lower Sweetwater hydrologic areas (groundwater basins) of the Southern San Diego Unit.

Groundwater was not encountered by exploratory borings on the proposed Salt Creek Substation site when the geotechnical investigation was conducted (Kleinfelder 2008). The 2008 geotechnical report estimated that perched groundwater in the filled drainage to the west of the proposed Salt Creek Substation site was approximately 225 to 230 feet in elevation. Using an estimated ground surface elevation of approximately 450 feet amsl at the proposed Salt Creek Substation site, groundwater would be approximately 200 feet below the ground surface (bgs) (Kleinfelder 2008). Groundwater levels may fluctuate due to seasonal variations, irrigation, and other factors. Groundwater or seepage is not expected to be a constraint to construction of the Proposed Project.

The geotechnical investigation conducted for the proposed TL 6965 power line encountered groundwater only in one of the nine borings drilled along the proposed TL 6965 route (Geosyntec 2012). Groundwater was observed within alluvium at Boring B-5, at a depth of approximately 11 feet bgs. This depth to groundwater represents conditions observed at the time of drilling and may not be indicative of stabilized water levels at this location. With the exception of Boring B-5, regional groundwater was not encountered in the current or previous explorations performed within the Proposed Project alignment. The 2012 geotechnical report stated that regional groundwater is expected to be greater than 40 feet bgs. Perched groundwater or localized zones of wet materials were observed in the borings. Based on Geosyntec's experience from other field investigations and similar sedimentary bedrock terrain, zones of perched groundwater are anticipated during foundation excavation (Geosyntec 2012).

Water Supply

Domestic water supply for the area encompassing the Proposed Project as well as the eastern portions of Chula Vista is supplied by the Otay Water District. The Otay Water District purchases water from the San Diego County Water Authority (SDCWA), a public agency that operates as a wholesale water supplier in San Diego County. Much of this water is purchased from the Los Angeles-based Metropolitan Water District of Southern California, another public agency that imports water from Northern California (through the State Water Project) and the Colorado River. In addition to purchasing drinking water from the SDCWA, the Otay Water District purchases drinking water from the Helix Water District and the City of San Diego. The Otay

Water District reports that 6% of its water supply portfolio in the future will be from groundwater sources (Otay Water District 2013).

The Otay Water District operates a water recycling facility that produces approximately 1.3 million gallons per day of recycled water from wastewater and also operates a recycled water distribution system to reduce the demand for potable water. The current distribution system targets landscaping uses such as golf courses and other commercial interests, and covers the northeastern portion of Chula Vista. Plans to extend the recycled water distribution system include a line placed in Hunte Parkway, adjacent to the proposed Salt Creek Substation site (Otay Water District 2013).

Floodplains

Based on FEMA FIRMs (FEMA 2012), the proposed Salt Creek Substation site and the entire power line route are in FEMA Zone X. Therefore, the Proposed Project would be outside of designated 100-year and 500-year flood hazard zones and would be subject to minimal flooding.

The closest that the power line route comes to 100-year or 500-year flood hazard zones is at the intersection of SR-125 and Otay Lakes Road. At this location, the power line route is approximately 100 feet from the limits of the flood hazard zone, but does not cross over the flood hazard zone. At the specific location that the power line route crosses the drainage for Telegraph Canyon Creek, the FIRM states that the 500-year flood discharge is contained in a culvert, so the designated flood hazard zone was deleted from the FIRM at this location (FEMA 2012).

Dam Failure Inundation Areas

The State Emergency Management Agency and the California Department of Water Resources maintain a list of areas that are subject to potential inundation in the event of dam failures. This list is intended to guide local jurisdictions in developing evacuation plans for areas located below such dams. Estimated times when floodwaters would arrive at certain locations downstream are also provided to guide such planning efforts. No dams are located upstream of the Proposed Project area.

4.9.4 Impacts

4.9.4.1 Significance Criteria

According to Appendix G of the CEQA Guidelines, the Proposed Project would have a significant impact on hydrology and water quality if it would do any of the following:

- violate any water quality standards or waste discharge requirements;
- substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level;

- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site;
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site;
- create or contribute to runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff;
- otherwise substantially degrade water quality;
- place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary, FIRM, or other flood hazard delineation map;
- place within a 100-year flood hazard area structures that would impede or redirect flood flows;
- expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam; and/or
- cause inundation by seiche, tsunami, or mudflow.

4.9.4.2 Impact Analysis

Grading and construction activities required for the proposed Salt Creek Substation would substantially alter existing on-site drainage patterns, but would not significantly alter drainage discharge to Salt Creek or create substantial sources of polluted runoff. The proposed Salt Creek Substation design includes a water quality and hydromodification basin that would alter drainage patterns on-site, but would also control runoff from the proposed Salt Creek Substation. Grading and construction activities required for the proposed associated power lines and distribution circuits would not substantially alter existing on-site drainage patterns, nor create substantial sources of polluted runoff. In addition, impacts resulting from flood hazards or exposure of people or structures to a significant risk of loss, injury, or death involving flooding or inundation by seiche, tsunami, or mudflow are considered less than significant. Adherence to SDG&E's SWPPPs under the State General Construction Permit; environmental standards relative to SDG&E's Water Quality Construction BMP Manual; and applicable federal, state, and local regulations would bring impacts to less-than-significant levels.

Question 4.9a – Water Quality Standards and Waste Discharge Violations

Potential impacts on hydrology and water quality of greatest concern involve negative effects due to ground disturbance (erosion and sedimentation), potential storm water runoff related to construction activities, and use of hazardous materials. However, these potential impacts are considered less than significant by incorporating SDG&E's SWPPPs under the State General Construction Permit and implementing BMPs from the SDG&E BMP Manual. In addition, as part of the SWPPPs, all crew and on-site personnel would receive SWPPP training. Therefore, the Proposed Project would not result in a prohibitive discharge as defined in the Water Quality Control Plan for the San Diego Basin, increase pollutant loads that exceed water quality standards for the Poggi Canyon or Telegraph Canyon Creeks, or conflict with any water quality objectives. As a result, impacts would be less than significant.

Construction – Less-than-Significant Impact

Salt Creek Substation

Potential temporary, short-term impacts on surface water and groundwater quality that could occur during construction of the proposed Salt Creek Substation on access roads, at structure locations, and at temporary work areas are as follows:

- an accidental release of diesel fuel, gasoline, lubrication oil, hydraulic fluid, antifreeze, transmission fluid, or lubricating grease from a vehicle or construction equipment, and/or
- a release of materials during concrete preparation or placement of foundations, concrete washout stations, and concrete splice vaults.

Such spills could wash into nearby drainages or infiltrate into the soil, resulting in surface water or groundwater quality degradation. These potential temporary, short-term impacts would be minimized by compliance with applicable federal, state, and local laws, and through the proper implementation of the SWPPP and SDG&E's BMP Manual.

Hazardous materials would be delivered, stored, managed, and disposed of according to BMPs outlined in SDG&E's BMP Manual. SDG&E's BMP Manual outlines several BMPs to store, use, and control spills, if one should inadvertently occur. Section 4.8, Hazards and Hazardous Materials, includes additional detail regarding hazardous materials for the Proposed Project. As such, potential discharges would be controlled, water quality standards would be adhered to, and no impacts to wastewater quality would occur with Proposed Project construction. As a result, impacts would be less than significant.

In accordance with the SWPPP prepared under the State General Construction Permit, approved erosion-control measures such as gravel bags, silt fences, straw wattles, or temporary catch basins would be used during grading operations.

Grading would direct storm water from the access road and substation pad southwesterly toward a water quality and hydromodification basin located in the southwestern portion of the substation pad. A storm drain from the water quality basin would convey runoff discharge to the existing 96-inch-diameter storm drain dissipater southwest of the site. Substation runoff would then enter Salt Creek. Storm water from the graded slopes of the pad would be directed toward the existing southwestern dissipater or toward the existing off-site surface drainage swale southeast of the site. This natural drainage swale discharges to Salt Creek southeasterly of the existing dissipater. As a result, impacts would be less than significant.

TL 6965 and TL 6910 Loop-In, Existing Substation Modifications, and Staging Yards

Groundwater impacts for construction of the TL 6965, including the loop-in, modifications at the Existing Substation, and staging yards, would be similar to those identified for the proposed Salt Creek Substation. Potential temporary impacts on surface water and groundwater quality that could occur during construction are as follows:

- an accidental release of diesel fuel, gasoline, lubrication oil, hydraulic fluid, antifreeze, transmission fluid, or lubricating grease from a vehicle or construction equipment; and/or
- an accidental release of materials during concrete preparation or placement of foundations, concrete washout stations, and concrete splice vault.

BMPs specific to staging yard ingress and egress and perimeter protection would be outlined in the linear SWPPP. In addition, avoidance/protection of any storm water facilities within or in proximity to TL 6965, the Existing Substation, and staging yards would be outlined in the linear SWPPP.

These potential temporary impacts would be minimized by complying with applicable federal, state, and local laws, and by implementing the linear SWPPP under the State General Construction Permit and the BMPs from the SDG&E BMP Manual. As a result, impacts would be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Areas affected by the Proposed Project would be stabilized using BMPs, including installation of landscaping and road-base or gravel at the proposed Salt Creek Substation site to permanently stabilize ground surfaces. These measures, in addition to using a water quality and hydromodification basin, would minimize potential sediment discharge into on-site or off-site waters.

SDG&E operations and maintenance personnel may use oils, paint, or solvents in the course of routine maintenance at the proposed Salt Creek Substation. These materials would not be stored or disposed of at the substation, and their use would conform to applicable laws, regulations, and operating procedures governing the use, management, and disposal of hazardous materials.

Some equipment used at the proposed Salt Creek Substation, such as the transformers or capacitor banks, would contain mineral oil. As such, a mineral-oil release from electrical equipment associated with operation of the substation could occur. Such releases, either from leaks or equipment failure, could wash into nearby waterways or infiltrate soil to groundwater. To prevent this, the proposed Salt Creek Substation design includes a concrete containment basin proposed along the southern portion of the substation. This basin would be configured to contain the volume of oil in the largest transformer. Although the mineral oil is non-toxic, the CWA and Porter-Cologne Water Quality Act prohibit the release of any oil to state waters. Implementation of SDG&E's Spill Prevention Plan would ensure that any potential release or spill of hazardous materials during operation of the proposed facilities is properly handled and reduces potential impacts to less than significant.

A Water Quality Technical Report would be prepared for the Proposed Project in accordance with Chula Vista's SUSMP and would address all site, source, and treatment control BMPs for the Proposed Project and any long-term maintenance activities that are required. As a result, impacts would be less than significant.

Question 4.9b – Groundwater Depletion or Recharge

Construction – Less-than-Significant Impact

Salt Creek Substation

During construction, water from the Otay Water District's reclaimed or potable water system would be used for dust control and grading activities. All unpaved construction areas would be sprayed with water or other acceptable dust-control agents during dust-generating activities to reduce potential emissions. The Otay Water District produces 1.3 million gallons per day of recycled water, and distributes recycled water for landscaping and commercial uses within the Proposed Project area. A daily maximum of approximately 30,000 gallons of water would be used for dust control during construction of the Salt Creek Substation. Since the quantity of unpaved construction area is relatively small, the volume of water required for dust control would not be significant relative to the available water system's supply, and would not impact existing water supply. In addition, groundwater contributes only 6% to the total water supply for the Otay Water District. As a result, impacts on groundwater supply would be less than significant.

No dewatering is anticipated during construction, since groundwater was not encountered during the proposed Salt Creek Substation geotechnical investigation. However, where localized shallow groundwater is encountered, dewatering systems, as outlined in SDG&E's BMP Manual, may be installed in trenches and excavations, as appropriate, to allow construction under dry conditions. Dewatering activities may have localized effects on groundwater levels. However, the effects would be temporary and are not expected to affect any area wells. Therefore, impacts on groundwater recharge during construction would be less than significant. Any short-term construction dewatering operations would comply with San Diego RWQCB permit requirements.

TL 6965 and TL 6910 Loop-In, Existing Substation Modifications, and Staging Yards

Impacts relative to groundwater supplies and recharge for the TL 6965 and TL 6910 loop-in and associated trenching and duct installation, modifications at the Existing Substation, and staging yards would be similar to that identified for construction of the proposed Salt Creek Substation. As construction of the TL 6965 and TL 6910 loop-in would occur within the existing ROW, significant generation of dust is not anticipated. There would be some water use for dust suppression for pull sites and active access roads, a daily maximum of approximately 30,000 gallons of water, but not significant water use for dust suppression. During construction of the Existing Substation modifications, water from Chula Vista's public water system or the Otay

Water District's reclaimed water system would be used to supply water for dust control, if necessary. As a result, impacts to groundwater supply during construction would be less than significant.

No dewatering is anticipated during construction. If groundwater were encountered, it would likely occur during construction of the TL 6965 drilled pier foundations or the underground duct bank segment. Where localized shallow groundwater is encountered, dewatering systems, as outlined in SDG&E's BMP Manual, may be installed in trenches and excavations to allow for construction under dry conditions. Dewatering activities may have localized effects on groundwater levels. However, the effects would be temporary and are not expected to affect area groundwater within Chula Vista or other nearby areas. Therefore, impacts on groundwater recharge during construction would be less than significant. Any short-term construction dewatering operations would comply with San Diego RWQCB permit requirements.

Operation and Maintenance – Less-than-Significant Impact

The majority of post-construction water used for the Proposed Project would be for landscape irrigation. Water for irrigation would be provided by the existing reclaimed water supply system, Otay Water District, if available. Otherwise, domestic water supply would be used, which, for the most part, is not reliant on groundwater resources.

A limited amount of water would be required for long-term operation and maintenance of the Salt Creek Substation. As applicable, recycled or domestic water would primarily be used for fire protection and other general operational uses. Water would be obtained from the Otay Water District, which currently has adequate water to supply the site. In addition, the Proposed Project would continue to direct all runoff to the surrounding large areas of permeable ground and the water quality basin, allowing water to continue to infiltrate the ground surface and/or be transported to the storm drain system. As such, operation and maintenance activities would not affect existing groundwater supplies. As a result, impacts on groundwater reserves or recharge capabilities from operation would be less than significant.

Question 4.9c – Drainage Patterns – Erosion/Siltation

Construction – Less-than-Significant Impact

Salt Creek Substation

The Proposed Project would include substantial grading and earthmoving, as discussed in Section 3.6. Existing on-site vegetation would be removed during grading activities and soils would be disturbed, making the site more susceptible to erosion caused by wind or water. Storm water run-on and runoff have the potential to detach and transport soil particles and deleterious material from bare soils and deposit them in nearby waterways. Sediment can result in increased turbidity in waterways, impair riparian habitat, restrict recreational uses, and cause the transport of other pollutants. Construction vehicles and equipment may also disturb underlying soils through the transport of soils from construction areas to adjacent area roadways, thereby further eroding the ground surface. Water trucks used during construction to assist with soil compaction and abate fugitive dust would also have the potential to cause erosion.

SDG&E's grading and improvement plans would incorporate grading, drainage, and structural water quality elements to minimize surface runoff and erosion impacts. In general, the proposed Salt Creek Substation pad is divided from north to south. A small northwest to southeast divide characterizes existing site terrain and controls local storm water runoff. Generally, surface runoff from the existing site is to the west and to the east from this small divide, before going to the natural water course that runs from west to east along the south side of the substation site. The western portion of the pad would be graded to drain southwest. The eastern portion of the pad would be graded to drain toward the south. A water quality and hydromodification basin would be constructed in the southwestern portion of the proposed Salt Creek Substation. A storm drain from the water quality basin would convey runoff discharge to the existing 96-inch-diameter storm drain dissipater southwesterly of the site. The basin would store and slowly release water into the storm drain. Installation of the water quality basin, as well as discharging to the existing 96-inch-diameter storm drain dissipater, would reduce potential impacts on existing drainage patterns in the area downstream of the proposed Salt Creek Substation pad by ensuring that runoff does not alter any swales or other drainage features beyond the proposed Salt Creek Substation limits. As such, runoff from the proposed Salt Creek Substation site would not result in significant erosion as compared to existing conditions. Impacts would be less than significant.

With implementation of SDG&E's SWPPP and measures from SDG&E's BMP Manual, including installation of silt fences, fiber rolls, and gravel bags, the potential for the Proposed Project to impact water quality as a result of erosion and sedimentation would be less than significant. Sediment would be prevented from entering the storm drain system through use of gravel bag berms, and tracking controls would be used to minimize construction traffic tracking dirt onto adjacent roadways. Incorporation of these and other BMPs as outlined in the BMP Manual would ensure that potential impacts would be less than significant.

TL 6965 and TL 6910 Loop-In, Existing Substation Modifications, and Staging Yards

Existing drainage patterns would not be significantly changed with the proposed modifications. As such, the potential for erosion or siltation to occur as a result of TL 6965 construction is considered less than significant because existing drainage patterns would not be substantially changed. Impacts on water resources and water quality would be less than significant with implementation of SDG&E's linear SWPPP and BMP Manual. Therefore, the potential for impacts on water quality as a result of erosion and sedimentation would be less than significant.

Operation and Maintenance – Less-than-Significant Impact

A water quality and hydromodification basin is planned in the southwest corner of the proposed Salt Creek Substation. The water quality basin would be designed to meet volume, area, depth, and detention time objectives of the San Diego RWQCB and City of Chula Vista. The preliminary proposed Salt Creek 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 planned for the proposed Salt Creek Substation. The preliminary calculation of required hydromodification area is approximately 10,000 square feet.

A storm drain from the water quality basin would convey runoff discharge to the existing 96-inch-diameter storm drain dissipater southwesterly of the site. Runoff from the substation would then enter Salt Creek.

A Water Quality Technical Report would be prepared for the Proposed Project in accordance with Chula Vista's SUSMP and would address all site, source, and treatment control BMPs for the Proposed Project, as well as any long-term maintenance activities that are required.

The proposed grading and drainage modifications are not anticipated to result in impacts in the form of increased on- or off-site erosion or siltation. As such, impacts would be less than significant.

Question 4.9d – Drainage Patterns – Runoff/Flooding

Construction – Less-than-Significant Impact

Salt Creek Substation

As discussed in the response to Question 4.7c – Drainage Patterns – Erosion/Siltation, above, construction-related activities would result in alterations to the existing drainage patterns on the proposed Salt Creek Substation site. Existing on-site vegetation would be removed during grading activities and soils would be disturbed, making the site more susceptible to erosion caused by wind or water. Storm water run-on and runoff have the potential to change on-site drainage patterns.

With implementation of SDG&E's SWPPP and BMP Manual, including installation of silt fences, fiber rolls, and gravel bags, the potential for the Proposed Project to change drainage patterns as a result of erosion would be less than significant. Incorporation of these and other BMPs outlined in the BMP Manual would ensure that impacts would be less than significant.

TL 6965 and TL 6910 Loop-In, Existing Substation Modifications, and Staging Yards

As discussed in the response to Question 4.7c – Drainage Patterns – Erosion/Siltation, above, construction-related activities would not result in alterations to the existing drainage patterns for TL 6965 and the TL 6910 loop-in, the Existing Substation, or staging yards. Existing drainage patterns would not be substantially changed with the proposed modifications. As such, the potential for increased runoff and flooding to occur during construction as the result of these components of the Proposed Project is considered minimal. Impacts on runoff and flooding would be less than significant with implementation of SDG&E's linear SWPPP and BMP Manual. Therefore, impacts would be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Once construction of the proposed Salt Creek Substation is complete, no additional changes to on-site or off-site drainage patterns are anticipated. A water quality and hydromodification basin is planned in the southwest corner of the proposed Salt Creek Substation. The water quality basin would be designed to meet volume, area, depth, and detention time objectives of the San Diego RWQCB and Chula Vista. A storm drain from the water quality basin would convey runoff discharge to the existing 96-inch-diameter storm drain dissipater southwesterly of the site. Runoff from the substation would then enter Salt Creek. As such, the Proposed Project would not result in the potential for increased runoff volumes, and storm water facilities in the surrounding area would not be further affected. Therefore, impacts would be less than significant.

Question 4.9e – Storm Water Runoff

Construction – Less-than-Significant Impact

Salt Creek Substation

Grading activities for the Proposed Project would be required at the proposed Salt Creek Substation site to accommodate the proposed layout. The total disturbed area needed for construction of the proposed Salt Creek Substation is approximately 11.6 acres.

Existing on-site vegetation would be removed during grading activities and soils would be disturbed, making the site more susceptible to erosion caused by wind or water and increased storm water runoff. Storm water run-on and runoff have the potential to transport soil particles and deleterious material from bare soils and deposit them in nearby waterways. Sediment can result in increased turbidity in waterways, impair riparian habitat, restrict recreational uses, and cause the transport of other pollutants.

With implementation of SDG&E's SWPPP and BMP Manual, including installation of silt fences, fiber rolls, and gravel bags, the potential for the Proposed Project to increase storm water runoff or to impact water quality as a result of erosion and sedimentation would be less than significant. Peak storm water runoff would be reduced through use of fiber rolls or gravel bag berms. Sediment would be prevented from entering the storm drain system through use of gravel bag berms, and tracking controls would be used to minimize construction traffic tracking dirt onto adjacent roadways. With these BMPs and others in the BMP Manual, impacts would be less than significant.

New sources of pollutants generated during the construction phase may potentially be released into off-site water bodies by storm water. Potential sources of pollutants may include hazardous materials such as diesel fuel, hydraulic fluid, oil, and grease, as well as construction materials, sediment, and trash. Standard BMPs would be implemented to ensure that such pollutants or sediment are not carried to on-site or off-site water bodies via storm water. The Proposed Project would not violate any water quality standards or waste discharge requirements, and the proposed modifications would not significantly impede or redirect storm water runoff flows. Construction of new structures and the access roads, construction of the proposed Salt Creek Substation, and associated clearing and grading would not significantly alter existing drainage patterns or result in substantial runoff from the site. By implementing SDG&E's SWPPP and BMP Manual, the potential for hydrologic or water quality impacts as a result of storm water runoff would be less than significant.

TL 6965 and TL 6910 Loop-In, Existing Substation Modifications, and Staging Yards

Ground disturbance for the proposed underground duct bank, above-ground power lines, Existing Substation modifications, and staging yards would occur from operation of construction vehicles, trenching, and other construction activities. All drilling/construction work for foundations, trenching work, pole holes, work pads, pole access, or other soil disturbance associated with TL 6965 and the TL 6910 loop-in would occur on land that is either already owned by SDG&E or within existing SDG&E easements, except for work in Hunte Parkway (for distribution work and curb cut improvement). Proposed modifications would not create conditions that would cause an increase in storm water runoff that enters the local storm water system over that of pre-construction rates. Implementation of SDG&E's BMP Manual would reduce potential erosion and sedimentation through such measures as street sweeping, soil stabilization measures, and installing silt fences. Implementing SDG&E's linear SWPPP and BMP Manual would ensure that potential impacts for polluted runoff would be less than significant.

Operation and Maintenance – Less-than-Significant Impact

The proposed Salt Creek Substation site consists of 11.6 acres of undeveloped land. Approximately 75,000 square feet of impervious area is planned for the proposed Salt Creek Substation. The increase compared to existing conditions of impervious surface area on the site would increase storm water runoff volume.

The discharge of storm water from the new water quality basin to the existing storm drain dissipater would result in no significant change to the downstream watercourse as a result of runoff from the proposed Salt Creek Substation site. The water quality and hydromodification basin would be designed to allow the storm water to be released at a similar rate as water currently flowing off the site.

The water quality basin would be designed to connect to the existing storm water dissipater that currently services the site. No significant impacts to existing storm water conveyance systems are anticipated with operation and maintenance of the proposed Salt Creek Substation, and no significant alteration of existing off-site drainage facilities such as culverts, catch basins, or drainage basins would be required to support long-term operation and maintenance of the proposed Salt Creek Substation.

A Water Quality Technical Report would be prepared for the Proposed Project in accordance with Chula Vista's SUSMP. It would address all site, source, and treatment control BMPs for the Proposed Project, as well as any long-term maintenance activities that would be required.

In addition, maintenance activities would have the potential to increase the presence of pollutants on-site. Fertilizers or other soil additives may potentially be applied to the ground surface to enhance and maintain landscaping materials. Such substances would be applied on-site consistent with manufacturer's recommendations or specifications, and are not anticipated to be transported into any off-site waterways by means of storm water runoff. Materials and/or equipment used for maintenance would be used at the site on an as-needed basis and stored at off-site SDG&E maintenance facilities, as appropriate, to reduce the potential for introduction of new or increased pollutants on the property. In addition, standard measures to control and dispose of any potential pollutants that may be used during maintenance activities would be implemented in accordance with federal and state regulations. SDG&E would implement standard practices to reduce the potential for pollutants to leave the site and enter any off-site waterways. By constructing the water quality basin, implementing manufacturer's recommendations or specifications for use of fertilizers or soil additives, and implementing standard BMPs to reduce the potential for pollutants to leave the site and enter any off-site waterways, the potential for hydrologic and water quality impacts as a result of storm water runoff from the proposed Salt Creek Substation site would be less than significant.

Question 4.9f – Water Quality Degradation – Less-than-Significant Impact

The potential for the Proposed Project to result in water quality degradation as the result of Proposed Project construction or operation is also discussed in the responses to Question 4.7a – Water Quality Standards and Waste Discharge Violations, and Question 4.7e – Storm Water Runoff. Other potential pollutants are not anticipated to result in a degradation of surface water or groundwater quality as a result of Proposed Project implementation. Therefore, impacts would be less than significant.

No existing water quality conditions would be adversely affected. The majority of water used at the site would be for landscape irrigation provided by Otay Water District's reclaimed or potable water system, as available. A limited amount of water would be used for fire protection and other general operational uses.

Shallow groundwater is not expected to be encountered during excavation or installation of underground facilities. (See discussion in Question 4.9b.) However, where localized shallow groundwater is encountered, dewatering systems, as outlined in SDG&E's BMP Manual, may be installed in trenches and excavations, as appropriate, to allow construction under dry conditions. Dewatering activities may have localized effects on groundwater levels. However, the effects would be temporary and are not expected to affect any area wells. Therefore, impacts on groundwater recharge during construction would be less than significant. Any short-term construction dewatering operations would comply with San Diego RWQCB permit requirements.

Question 4.9g – Housing in Flood Hazard Areas – No Impact

No housing would be constructed as part of the Proposed Project, and no housing would be placed within a 100-year flood hazard area. Therefore, no impact would occur.

Question 4.9h – Structures in Flood Hazard Areas

Construction – No Impact

Because no impacts are anticipated, the discussion of structures in flood hazard areas is not part of Proposed Project effects. According to a FEMA FIRM (FEMA 2012), the proposed Salt Creek Substation site, power line route, Existing Substation improvements, and staging yards are in FEMA Zone X and considered to be outside of FEMA designated 100-year and 500-year flood hazard zones.

No new structures would be constructed that would impede or redirect flood flow within a 100-year flood hazard area at the proposed Salt Creek Substation site or along the power line route. As a result, the Proposed Project would not impact flood flows. Therefore, no impact would occur.

Operation and Maintenance – No Impact

Impacts during the operation and maintenance phase would be identical to the construction phase with regard to placing structures within flood hazard areas. None of the operation and maintenance activities required for the Proposed Project would cause flooding, impede flood flows, or be adversely affected by flooding. Therefore, no impact would occur.

Question 4.9i – Flood Exposure – No Impact

Because no impacts are anticipated, the discussion of structures in flood hazard areas is not part of Proposed Project effects.

Based on the review of watershed maps, the proposed Salt Creek Substation site, power line route, Existing Substation, and staging yards would not be located downstream of a dam or within a dam inundation area. The potential for risk, loss, injury, or death from installation of new structures and modifications to existing structures within dam inundation areas is minimal with the Proposed Project.

Based on the document review and Proposed Project reconnaissance, the potential for flooding to occur is considered low. The Proposed Project is in FEMA Zone X and would not involve construction of structures in a FEMA designated 100-year or 500-year flood hazard zone.

After construction is complete, the Proposed Project would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or a dam. Not only is the Proposed Project not in a flood hazard area, but the Proposed Project would not be routinely staffed. As a result, no impact would occur.

Question 4.9j – Seiche, Tsunami, and Mudflow – Less-than-Significant Impact

Because no impacts are anticipated with seiche or tsunami, the discussion of seiche and tsunami is not part of Proposed Project effects. The discussion of potential impacts from mudflow is separated below into Proposed Project components.

A seiche is an oscillation (wave) in an enclosed or semi-enclosed body of water that varies in duration, depending on the physical dimensions of the basin, from a few minutes to several hours. Wave height also varies from several inches to several feet. A seiche is caused primarily by local changes in atmospheric pressure aided by winds, tidal currents, and occasionally earthquakes. Lower Otay Lake is approximately 1 mile southeast of the Proposed Project, and the Sweetwater Reservoir is approximately 2.2 miles northwest of the Proposed Project. Based on the Proposed Project's location and direction of the downstream topography below Lower Otay Lake and the Sweetwater Reservoir, the potential for damage due to a seiche is very low. No impacts would occur.

Tsunamis are seismic sea waves with a long wavelength compared to the ocean depth that are generated by sudden movements of the ocean bottom during submarine earthquakes, landslides, or volcanic activity. Based on the Proposed Project's inland location and site elevation, the potential for damage due to a tsunami is very low. No impacts would occur.

Because there are potential impacts anticipated with mudflows, the discussion of mudflows is separated into Proposed Project components. Debris avalanches and debris flows, which are both popularly called "mudslides," are shallow landslides, saturated with water, that travel rapidly downslope as muddy slurries. The flowing mud carries rocks, bushes, and other debris as it pours down the slopes. The most common cause of debris avalanches and debris flows is the combination of heavy rainfall, steep slopes, and loose soil. The ashy slopes left by wildfires in California are especially susceptible to mudslides during and immediately after major rainstorms (California Geological Survey 2012).

Salt Creek Substation

Several formations within the San Diego region are particularly prone to landsliding. These formations generally have high clay content and mobilize when they become saturated with water. Other factors, such as steeply dipping bedding that projects out of the face of the slope and/or the presence of fracture planes, will also increase the potential for landsliding. When disturbed due to natural activities (e.g., wildfires) or human activities (e.g., grading) and exposed to heavy precipitation, these slopes could generate mudflows (Kleinfelder 2008). No indication of deep-seated landsliding was noted at the proposed Salt Creek Substation site during field exploration or review of available geological literature, topographic maps, and stereoscopic aerial photographs (Kleinfelder 2008). The Kleinfelder geotechnical report concluded that the potential for landsliding is low (Kleinfelder 2008).

Slopes disturbed for the proposed Salt Creek Substation would be revegetated with landscaping and undisturbed slopes would remain vegetated. Wildfire potential would be reduced by existing development or measures to stabilize/revegetate slopes if a wildfire occurs (see Section 4.8.3.2). Therefore, the potential for a mudflow event is considered low. Impacts would be less than significant.

TL 6965 and TL 6910 Loop-In, Existing Substation Modifications, and Staging Yards

Sedimentary deposits associated with the Otay Formation that are mapped within the Proposed Project area are considered prone to landslides (Geosyntec 2012). In addition, portions of the Existing Substation were previously identified as underlain by landslide deposits or possible past landslide occurrences (URS 2011). Other nearby landslides are mapped west of the proposed alignment. When disturbed due to natural (e.g., wildfires) or human (e.g., grading) activities and exposed to heavy precipitation, these unstable slopes could generate mudflows. Geosyntec's review of the available geologic maps and aerial photographs did not identify evidence of past landslides beneath the Proposed Project area. Given this review, the risk of slope movement associated with landslides at the proposed pole locations is considered to be low (Geosyntec 2012).

Minimal to no soil disturbance of existing slopes would occur for construction of TL 6965 and the TL 6910 loop-in, Existing Substation modifications, and staging yards. As a result, mudflow impacts from TL 6965 and the TL 6910 loop-in, Existing Substation modifications, and staging yards would be less than significant.

4.9.5 Project Design Features and Ordinary Construction/Operations Restrictions

With implementation of the ordinary construction restrictions as outlined within Section 3.8, Project Design Features and Ordinary Construction/Operations Restrictions, potential impacts related to hydrology and water quality would be less than significant.

4.9.6 Applicant-Proposed Measures

The Proposed Project's impacts on hydrology and water quality would be less than significant. Therefore, no APMs are required or proposed.

4.9.7 Detailed Discussion of Significant Impacts

Based on the above analyses, no significant impacts have been identified for the Proposed Project. No APMs are required or proposed.

4.9.8 References

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4.10 Land Use and Planning

Would the project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
a. Physically divide an established community?	☐	☐	☐	☑
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☑
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☑

4.10.1 Introduction

This section describes the existing land uses in the vicinity of the Proposed Project and analyzes potential land use impacts that may result from construction and operation of the Proposed Project. Construction of the Proposed Project would not result in significant impacts to existing or proposed land uses or physically divide an established community. The Proposed Project would be compatible with all applicable land use plans and policies adopted by local governments.

4.10.2 Methodology

The land use analysis involved a review of various land use plans, policies, and regulations for the City of Chula Vista and the County of San Diego. These include the City of Chula Vista General Plan (2005a), City of Chula Vista Municipal Code (2013), and the County of San Diego General Plan – A Plan for Growth, Conservation, and Sustainability (2011). The land use analysis also involved a review of Google Earth aerial imagery of the Proposed Project area. Personal communications with local agency representatives and a site visit to the Proposed Project area confirmed jurisdictions and existing land uses, respectively. In addition, the City of Chula Vista's MSCP (2003) and SDG&E's NCCP (1995) were reviewed.

4.10.3 Existing Conditions

4.10.3.1 Regulatory Background

Pursuant to Article XII, Section 8, of the California Constitution and the California Public Utilities Code, the California Public Utilities Commission (CPUC) maintains jurisdiction to regulate the design, siting, installation, operation, maintenance, and repair of electric transmission facilities. Other state agencies maintain jurisdiction over specific resource areas and coordinate with the CPUC during the application review and approval process.

The CPUC encourages, and SDG&E participates in, cooperative discussions with affected local governments to address their concerns, where feasible. However, local governments do not have the power to regulate activities related to electric transmission facilities. As applicable, SDG&E is obligated to obtain ministerial permits from local agencies. SDG&E nonetheless considered relevant land use plans, policies, and issues, and prepared the following evaluation of potential impacts resulting from the Proposed Project with regard to land use and planning.

4.10.3.2 Existing Land Uses – Proposed Project Components

Salt Creek Substation

The proposed Salt Creek Substation would occupy an 11.6-acre parcel of land owned by SDG&E. The proposed Salt Creek Substation site is undeveloped and consists of gently to moderately sloping hillsides. Located at the southern edge of development in the southeastern portion of the City of Chula Vista, the proposed Salt Creek Substation site is characterized by a mixture of single-family and multi-family residential, recreation, and open space uses, as shown in Figures 4.10-1A through 4.10-1C. Land to the south and west of the proposed Salt Creek Substation site is undeveloped, but part of the City of Chula Vista's University Campus Sectional Planning Area (SPA). The proposed Salt Creek Substation site is adjacent to the boundary of the Preserve Area delineated in the Chula Vista MSCP Subarea Plan (City of Chula Vista 2003). SR-125 runs north/south approximately 1.25 miles west of the proposed Salt Creek Substation site. The existing High Tech Elementary, Middle, and High School are located southwest of the site.

The proposed Salt Creek Substation site is located in hills above Otay River Valley, with Otay River itself approximately 1.4 miles to the south. A drainage conveying water from an underground storm drain system serving residential development north and west of the proposed Salt Creek Substation site is located down slope toward the southwest. Generally, it runs in a northwest-to-southeast direction toward Salt Creek, which empties into Otay River.

Figure 4.10-1A: Land Use

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Figure 4.10-1B: Land Use

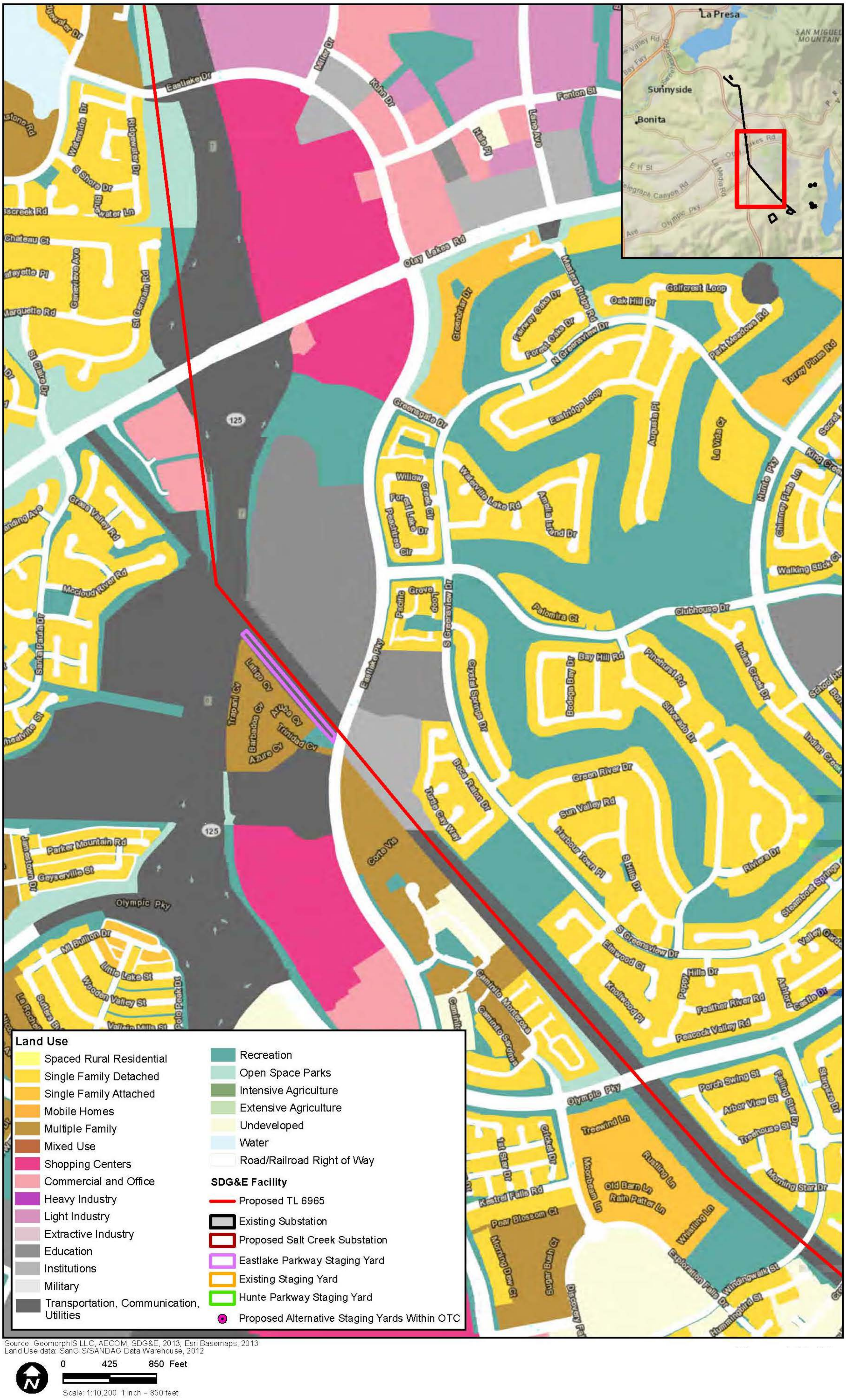

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Figure 4.10-1C: Land Use

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TL 6965 and TL 6910 Loop-In

A new overhead circuit 69-kV power line (TL 6965), approximately 5 miles long, is proposed along the east side of the existing Transmission Corridor from the Existing Substation to the proposed Salt Creek Substation. Figures 4.10-1A through 4.10-1C show the proposed 69-kV power line location. The existing Transmission Corridor is 120 feet wide and includes an existing 69-kV power line and two 230-kV transmission lines mutually located on double-circuit steel lattice towers along the centerline of the Transmission Corridor. The new 69-kV power line route would be located approximately 15 feet in from the eastern edge of the 120-foot-wide easement. Existing land uses within the Transmission Corridor are generally transportation, communications, and utilities. Within the area adjacent to the Transmission Corridor, land uses include single-family and multi-family residential, recreation, open space, commercial and office, education, institutions, light industrial, and undeveloped uses (Figures 4.10-1A, 4.10-1B, and 4.10-1C).

The TL 6910 loop-in would occur entirely within the Salt Creek substation parcel owned by SDG&E and/or within the existing 120-foot-wide Transmission Corridor adjacent to the substation property.

Existing Substation Modifications

At the Existing Substation, a new 69-kV circuit position would be installed for the proposed TL 6965 going to the proposed Salt Creek Substation. The Existing Substation is located on land owned and operated by SDG&E.

Staging Yards

During grading and construction of the proposed Salt Creek Substation and the proposed TL 6965, construction equipment and vehicles would be stored at the Hunte Parkway staging yard located approximately 0.5 mile to the northwest of the proposed Salt Creek Substation site. Approximately 8 acres of a 22-acre previously graded pad would be used for staging purposes during construction. The staging area itself is undeveloped. Land uses adjacent to the staging area include multi-family residential, recreation, and undeveloped.

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 proposed modifications at the Existing Substation and the northern portion of TL 6965. These activities include storing transmission material and related construction equipment. The staging area itself is located on land owned and operated by SDG&E.

Another staging area would be located on the northwest side of Eastlake Parkway. The Eastlake Parkway staging yard is approximately 1.7 acres and is located between Eastlake Parkway and SR-125. The Eastlake Parkway staging area was previously used as staging yard. Land uses adjacent to the staging area include education, recreation, and multi-family residential.

The alternative staging areas at the Olympic Training Center (OTC) are approximately 0.6 mile to the east of the proposed Salt Creek Substation site. The OTC is developed and used as a training facility. Land uses adjacent to the staging areas include multi-family residential, recreation, and undeveloped.

4.10.3.3 Designated Land Uses

The proposed Salt Creek Substation and a majority of the Proposed Project components would be located within the City of Chula Vista. The area north of Mount Miguel Road, adjacent to the Existing Substation, is within the County of San Diego. All Proposed Project components, except for the temporary Hunte Parkway, Eastlake Parkway, and OTC staging yards, would be located entirely on land owned by SDG&E or within SDG&E's existing ROW.

This section summarizes the designated uses of land that is traversed by and/or adjacent to the Proposed Project area and planned development within the Proposed Project vicinity.

City of Chula Vista General Plan

The City of Chula Vista General Plan provides a framework of policies, objectives, and land use designations to guide long-term development within the city. The City of Chula Vista's Municipal Code supports the General Plan and provides specific details for land development within individual zoning districts.

The southern portion of the Proposed Project area is within the Otay Ranch Planning Area. Table 4.10-1, Existing and Designated Land Uses, summarizes the existing and designated land uses and zoning designations for lands affected by the Proposed Project. Lands surrounding the Proposed Project area are primarily designated for residential, mixed use, commercial, open space, parks, and public/quasi-public. Additionally, the area identified for the proposed Salt Creek Substation is within the University SPA of Chula Vista's Otay Ranch area. Land use designations are further described below.

The General Plan has seven residential designations that provide for a full range of housing types. Residential designations are based on density. Densities of less than eight units per 1 acre usually consist of detached, single-family homes, and higher densities usually consist of attached units such as duplexes, townhouses, row homes, apartments, and condominiums. A variety of these residential land uses occur adjacent to the Proposed Project area.

There are three designations in the mixed-use category: one for commercial mixed use and two for residential mixed use. Areas designated as mixed use are intended to function differently from typical patterns of single-zone land uses, such as an area of only office buildings. In mixed-use areas, a variety of compatible land uses and activities are integrated to create a dynamic urban environment that serves as the activity center for the surrounding area.

Three commercial designations allow for a variety of retail and professional uses. The intensity of development is measured using floor area ratio (FAR).

Land uses designated as parks and recreation consist of parks, sports fields, playgrounds, golf courses, and other passive and active recreation uses. This designation may also include community centers and urban parks. These areas are located adjacent to the proposed Salt Creek Substation site and the proposed TL 6965.

Table 4.10-1: Existing and Designated Land Uses

Proposed Project Components	General Plan Land Use Designation	Zoning	Existing Land Use
City of Chula Vista			
Salt Creek Substation	Public and Quasi-Public	PC (Planned Community)	Undeveloped
TL 6965 and TL 6910 Loop-In Construction (South of San Miguel Ranch Road)	The ROW is not called out in the General Plan	PC (Planned Community)	Transportation, communications, and utilities
Hunte Parkway Staging Area	Public and Quasi-Public	PC (Planned Community)	Undeveloped
Eastlake Parkway Staging Area	Public and Quasi-Public	PC (Planned Community)	Undeveloped
Olympic Training Center (OTC) Staging Yards	Public and Quasi-Public	PC (Planned Community)	Recreational, undeveloped, and multi-family residential (OTC)
County of San Diego			
TL 6965 Construction (North of San Miguel Ranch Road)	Public/Semi-Public Facilities	S90 (Holding Area)	Transportation, communications, utilities
Existing Substation Improvements	Public/Semi-Public Facilities	S90 (Holding Area)	Transportation, communications, utilities
Existing Staging Area	Public/Semi-Public Facilities	S90 (Holding Area)	Transportation, communications, utilities

Sources: City of Chula Vista 2009; County of San Diego 2012

The University SPA is applied to four focus areas located on the future university site and surrounding properties in the East Area Plan, and includes the University Campus, University Village, Regional Technology Park, and Eastern Urban Center. The purpose of the University SPA is to develop a coordinated strategy to address important relationships between the focus areas, and the need for coordinated development to enhance the economic and community success and vitality of the Eastern University District. The proposed Salt Creek Substation site is located within the University Campus focus area.

County of San Diego General Plan

The County of San Diego General Plan was updated and adopted in 2011. The General Plan provides a framework of goals, policies, and objectives, and identifies land use designations to guide future development. As shown in Table 4.10-1, Existing and Designated Land Uses, the portion of the Proposed Project located north of San Miguel Ranch Road and within the County of San Diego has a General Plan designation of public/semi-public facilities.

City of Chula Vista Municipal Code

The proposed Salt Creek Substation site is zoned as a Planned Community (PC). Utility substations are a conditionally permitted use in the Planned Community (PC) Zone. SDG&E would not be required to obtain a conditional use permit or any other discretionary approvals from the City of Chula Vista pursuant to Section XIV.B of CPUC's General Order 131-D, which states that local jurisdictions are preempted from regulating electrical power line projects, distribution lines, substations, or electrical facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, public utilities must consult with local agencies regarding land use matters.

County of San Diego Municipal Code

Portions of the proposed TL 6965 route and the Existing Substation are within the County of San Diego. These areas are zoned as a Holding Area (S90). Minor-impact utilities are a minor permitted use in the Holding Area (S90) Zone. SDG&E would not be required to obtain a minor use permit or any other discretionary approvals from the County of San Diego, pursuant to Section XIV.B of CPUC's General Order 131-D.

Natural Community Conservation Plans/Habitat Conservation Plans

County of San Diego Multiple Species Conservation Program

The County of San Diego MSCP is a comprehensive, long-term habitat conservation plan that addresses the needs of multiple species and preservation of natural vegetation communities in the County of San Diego. The MSCP addresses the potential impacts of urban growth, loss of natural habitat, and species endangerment. It 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 on public and private lands within the MSCP area.

The MSCP is a subregional plan under the California NCCP Act of 1991. The MSCP was prepared for the subregion, an area encompassing 12 jurisdictions and 582,243 acres. The MSCP Subregional Plan is implemented through local Subarea Plans.

Chula Vista Subarea Plan

The City of Chula Vista Subarea Plan is consistent with the MSCP Subregional Plan and is the mechanism by which the city implements the MSCP Subregional Plan Preserve within the City of Chula Vista. The Chula Vista Subarea is composed of territory located within the incorporated limits of the City of Chula Vista, and for which "take authorization" would be granted. The area and configuration of the Chula Vista Subarea is anticipated to change over time as territory is annexed or detached. Take authorization for future annexation areas will be processed pursuant to Section 5.3.1 of this Subarea Plan. Habitat conservation land within the City of Chula Vista is mapped in Figure 1-2 of the City of Chula Vista MSCP Subarea Plan as either 100% or 75 to 100% Conservation Area (Preserve) (City of Chula Vista 2003).

The proposed Salt Creek Substation is within the Chula Vista Subarea, and is mapped as a Development Area within a Covered Project (the project being Otay Ranch) in the Subarea Plan. The site is adjacent to the Subarea's Preserve Area. The staging areas for the proposed Salt Creek Substation, including the Hunte Parkway staging yard and the alternative OTC staging yards, are also within the Chula Vista Subarea, and are mapped as a Development Area within a Covered Project (the project being East Lake Greens) in the Subarea Plan.

The proposed TL 6965 and TL 6910 loop-in within the City of Chula Vista are also within the Chula Vista Subarea and are mapped as a Development Area within several Covered Project areas (the projects being Eastlake Greens, Village Center, Salt Creek I, and San Miguel Ranch) in the Subarea Plan.

Chula Vista MSCP Planning Area

The Chula Vista MSCP Planning Area is defined by the city's General Plan boundary and includes 57,849 acres, both within the city and within the unincorporated County of San Diego. Although take authorization pursuant to the Chula Vista Subarea Plan will be issued only for the Chula Vista Subarea, the Chula Vista Subarea Plan includes information on the larger Chula Vista MSCP Planning Area because of the important inter-relationship between the Chula Vista Subarea Plan and the adopted County of San Diego MSCP Subarea Plan/South County Segment, which overlaps the Chula Vista MSCP Planning Area. Therefore, implementation of the Chula Vista Subarea Plan will contribute to the achievement of the County Subarea Plan/South County Segment conservation goals, as well as achieve the conservation goals set forth for the Chula Vista MSCP Planning Area and the Chula Vista Subarea.

Portions of the TL 6965 and Existing Substation staging yard are within the County of San Diego and the Chula Vista MSCP Planning Area. These portions of the Proposed Project are located on SDG&E property. This property is identified in the plan as Facilities Covered by Other Habitat Planning Efforts, and fall under the SDG&E's Subregional NCCP, as identified below.

SDG&E's Subregional Natural Community Conservation Plan

The Proposed Project falls within the area in which SDG&E's utility operations are governed by SDG&E's Subregional NCCP. As a part of the SDG&E Subregional NCCP, SDG&E has been issued incidental take permits (Permit PRT-809637) by USFWS and CDFW for 110 Covered Species. The SDG&E Subregional NCCP includes measures and operational protocols designed to minimize and avoid potential impacts to sensitive species. Refer to Section 4.4, Biological Resources, for more information about the SDG&E Subregional NCCP.

SDG&E's Subregional NCCP expressly supersedes any other MCSPs or Habitat Conservation Plans (HCPs). The purpose of this provision is to harmonize areas of overlap such that there is no conflict with other plans.

4.10.4 Impacts

4.10.4.1 Significance Criteria

Standards of significance were derived from Appendix G of the CEQA Guidelines. Impacts to land use and planning are considered significant if the Proposed Project would do any of the following:

- physically divide an established community;
- conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Proposed Project (including a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; and/or
- conflict with any applicable HCP or NCCP.

4.10.4.2 Impact Analysis

Question 4.10a – Physical Division of an Established Community

Construction – No Impact

Salt Creek Substation

The proposed Salt Creek Substation would occupy an 11.6-acre parcel of land owned by SDG&E. The proposed Salt Creek Substation site is undeveloped and consists of gently to moderately sloping hillsides. Located at the southern edge of development in the southeastern portion of the City of Chula Vista, the surrounding area is characterized by a mixture of single-family and multi-family residential, recreation, open space, and educational uses. The proposed Salt Creek Substation site is located on the south side of Hunte Parkway.

Access to all residential and other uses within the area surrounding the proposed Salt Creek Substation would generally be maintained during the construction phase. Although it is not anticipated that construction of the proposed Salt Creek Substation would require any road closures, traffic may be restricted to one-way traffic on a periodic basis to allow for the transport of materials to and from the proposed Salt Creek Substation site and for installation of the underground power line. SDG&E would prepare and implement a traffic control plan to minimize potential traffic delays. However, such traffic control measures would be temporary and short-term, and are not anticipated to create a division between area land uses or within the larger community.

Due to the site location and existing surrounding land uses, there are no existing established communities that would be physically divided by construction of the proposed Salt Creek Substation. Construction activities associated with the proposed Salt Creek Substation would not divide an established community; therefore, no impact would occur.

TL 6965 and TL 6910 Loop-In

TL 6965 and the TL 6910 loop-in would be installed on land within SDG&E's existing ROW or fee-owned property. Existing land uses within the Transmission Corridor are generally transportation, communications, and utilities. Some commercial development currently exists adjacent to the ROW west of SR-125 and south of Otay Lakes Road. However, an existing single steel lattice tower line already exists within the ROW, and no additional structures are proposed for this area. Therefore, no impact would occur.

Land uses adjacent to the ROW include single-family and multi-family residential, recreation, open space, commercial and office, education, institutions, light industrial, and undeveloped uses, and no new development associated with the Proposed Project is proposed outside of the ROW. Therefore, power line construction would not affect other privately owned lands or established uses. There are no existing established communities that would be physically divided as a result of power line construction; therefore, no impact would occur. Refer also to Sections 4.1, Aesthetics, and 4.12, Noise, for additional discussion on impacts to adjacent established land uses.

Existing Substation Modifications

Construction associated with the Existing Substation would occur within the current footprint of the substation, and no expansion of the substation footprint would occur. There are no existing established communities that would be physically divided as a result of Existing Substation improvements; therefore, no impact would occur.

Staging Yards

The Hunte Parkway staging yard is currently undeveloped and has a land use designation of public and quasi-public. Land uses adjacent to the staging area include multi-family residential, recreation, and undeveloped. Staging for construction would also occur at an existing SDG&E-owned staging yard located at the Existing Substation. The staging yard itself is located on land owned and operated by SDG&E and has a land use designation of public/semi-public facilities. Land adjacent to the Existing Substation has the same designation. The Eastlake Parkway staging yard was previously used as a staging yard, and has a land use designation of public and quasi-public. Land uses adjacent to the staging area include education, recreation, and multi-family residential. The alternative OTC staging yard is developed and used as a training facility, and has a land use designation of public and quasi-public. Land uses adjacent to the OTC staging yard include multi-family residential, recreation, and undeveloped.

Use of the staging yards would be temporary and would not affect other privately owned lands or established uses. No established communities would be physically divided by temporary use of the staging yards during construction; therefore, no impact would occur. Refer also to Sections 4.1, Aesthetics, and 4.12, Noise, for additional discussion on impacts to adjacent established land uses.

Operation and Maintenance – No Impact

Operation and maintenance activities for the Proposed Project would be similar to those currently performed by SDG&E to maintain its existing facilities. No existing established communities would be physically divided by operations and maintenance of the Proposed Project due to the nature of typical inspections and repair activities. Operations and maintenance of the Proposed Project would not divide an established community; therefore, no impact would occur.

Question 4.10b – Plans and Policy Conflicts – No Impact

SDG&E is not specifically subject to the City of Chula Vista's planning documents or zoning ordinance, pursuant to Section XIV.B of CPUC's General Order 131-D. However, the city's planning information should be considered in siting and design for the Proposed Project. The Salt Creek Substation site is zoned PC, with a General Plan land use designation of public and quasi-public, and is within the University SPA of Chula Vista's Otay Ranch area. A SPA plan has not been prepared for the University SPA, but the site is subject to the City of Chula Vista's General Plan and the Otay Ranch General Development Plan (GDP). Utility substations are a conditionally permitted use in the PC Zone. SDG&E would not be required to obtain a conditional use permit or any other discretionary approvals from the City of Chula Vista, pursuant to Section XIV.B of CPUC's General Order 131-D.

A review of the County of San Diego's General Plan, City of Chula Vista General Plan and Otay Ranch GDP does not indicate any plans, policies, or regulations that specifically preclude, discourage, or otherwise present considerable constraints to substation development in this area. One noteworthy component of the City of Chula Vista General Plan relative to the Proposed Project is Land Use Element LUT 10.7, which requires the city to "[w]ork with utility providers to coordinate the design of utility facilities (e.g., substations, pump stations, switching buildings, etc.) to ensure that the facilities fit within the context of their surroundings and do not cause negative visual impacts." Other than this statement, the City of Chula Vista General Plan provides little guidance on utilities siting.

Prior to planning the Proposed Project, SDG&E conducted an approximately 10-year-long comprehensive site selection effort. Close coordination with the City of Chula Vista and landowners in the area ensured that the proposed Salt Creek Substation site met key goals. These included selecting a preferred site located outside of the City of Chula Vista MSCP Subarea Preserve Area, obtaining major property owner and jurisdictional support, acquiring land without condemnation, and providing a site that avoids and minimizes environmental impacts.

Recent revisions to the generalized land use program for the area divides the greater University SPA into a "University Village" and a "University" site, with the future extension of Eastlake Parkway serving as the general boundary between the two. SDG&E's proposed Salt Creek Substation site falls within the University area, east of the proposed extension of Eastlake Parkway. SDG&E has coordinated with the City of Chula Vista and university officials regarding the development of the proposed Salt Creek Substation to ensure minimal conflicts with development of the new university.

The proposed Salt Creek Substation site is also located within the city's Greenbelt Master Plan, a joint plan by Chula Vista, the County of San Diego, and the City of San Diego. The City of Chula Vista's Greenbelt Master Plan is intended to incorporate developed and undeveloped open space and potential new open space linkages into a continuous 28-mile open space and park system around the perimeter of Chula Vista. The proposed Salt Creek Substation site is within the Otay Valley Regional Park East/Otay Ranch Village Greenway Segments of the Greenbelt Master Plan. The Greenbelt Master Plan identifies a multi-use trail planned to extend through each segment of the plan area and connect the park system. An existing segment of this multi-use trail runs along Hunte Parkway on the northwestern side of the Salt Creek Substation site. An additional planned segment of the trail runs along the Salt Creek Substation site's northeastern and eastern boundaries. The City of Chula Vista's Greenbelt Master Plan does not identify any goals, policies, or standards that would have an effect on Proposed Project development, but SDG&E would consider the Proposed Project within the context of this planning effort and the existing/planned trail system in the vicinity of the site, as it has done in Section 4.1, Aesthetics. The footprint of the proposed Salt Creek Substation would not interfere with existing or planned trails.

For the reasons presented above, the Proposed Project would not conflict with the County of San Diego and the City of Chula Vista's planning documents or zoning ordinance; therefore, no impact would occur.

Question 4.10c – Habitat Conservation Plan or Natural Community Conservation Plan Conflicts – No Impact

None of the improvements associated with the Proposed Project would result in a significant impact due to an inconsistency with adopted plans or policies intended for the protection of biological resources; refer also to the response to Question 4.10b, above. As described in Section 4.4, Biological Resources, the Proposed Project is required to comply with biological and habitat-related provisions and policies in the SDG&E Subregional NCCP and the City of Chula Vista Subarea Plan and County of San Diego MSCP, as appropriate. Construction, operation, and maintenance of the Proposed Project would not conflict with SDG&E's Subregional NCCP or the City of Chula Vista's Subarea Plan and County of San Diego's MSCP. In addition, implementation of SDG&E's NCCP (particularly avoidance of resources) and implementation of SDG&E's APM-Bio-1 would reduce potential impacts on biological resources. Refer to Appendix 4.4-A, Biological Resources Technical Report, and Section 4.4, Biological Resources, for additional discussion.

4.10.5 Proposed Project Design Features and Ordinary Construction/Operations Restrictions

There are no specific policies, standards, regulations, or design features that are necessary to minimize impacts from the Proposed Project. No impacts related to land use and planning are anticipated with Proposed Project implementation.

4.10.6 Applicant-Proposed Measures

No conflicts with applicable land use plans or policies would occur with implementation of the Proposed Project, and the Proposed Project would not divide an established community. Therefore, no APMs are required or proposed.

4.10.7 Detailed Discussion of Significant Impacts

Based on the above analyses, no significant impacts were identified for the Proposed Project, and no APMs are required or proposed.

4.10.8 References

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4.11 Mineral Resources

Would the project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	❒	❒	❒	☑
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	❒	❒	❒	☑

4.11.1 Introduction

This section identifies existing mineral resources in the vicinity of the Proposed Project. The proposed Salt Creek Substation site and the majority of the proposed power lines are located within the City of Chula Vista in southwestern San Diego County. For this analysis, the Proposed Project components (Salt Creek Substation, TL 6965, TL 6910 loop-in, Existing Substation modifications, and staging yards) are evaluated together, since economically viable mineral resources were not identified in the immediate Proposed Project area. As such, there would be no impact with regard to mineral resources.

4.11.2 Methodology

A review of existing mineral resources data was conducted, which included the California Department of Conservation (CDC 2007), the City of Chula Vista General Plan (2005), and the County of San Diego General Plan (2011).

4.11.3 Existing Conditions

4.11.3.1 Regulatory Setting

State

The State of California Surface Mining and Reclamation Act (SMARA) of 1975 (PRC 2710 et seq.) addresses the protection and subsequent beneficial use of mineral resources while providing for the reclamation of mined lands to prevent or minimize adverse effects on the environment and to protect public health and safety (CDC 2007). Under the SMARA, the City of Chula Vista is required to provide justification of a conflicting land use to show why the approved use is more important to the region than the loss of the designated mineral resource.

4.11.3.2 Mineral Resources Setting

California identifies areas as Mineral Resource Zones (MRZs) relative to known or expected mineral resources. Portions of Otay River Valley, within the southern boundary of the Chula Vista General Plan Area, are identified as MRZ-2 areas. MRZ-2 is defined as an area where significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists (City of Chula Vista 2005). The MRZ-2 areas are approximately 1.3 miles south of the proposed Salt Creek Substation site.

The Otay River Valley area encompasses approximately 3,200 acres and is a major source of construction aggregate for the County of San Diego. It contains a number of mineral resources, with the most economically valuable being sand, gravel, and crushed rock resources, known as construction aggregate. The only active mining operation within the City of Chula Vista, the Otay Mesa Pit at Rock Mountain, is located within the Otay River Valley area, approximately 2.7 miles southwest of the proposed Salt Creek Substation site. The Otay Mesa Pit produces crushed rock resources.

Two other MRZ-2 areas are located just outside of the Chula Vista General Plan Area and are known to contain construction-quality sand reserves: a portion of the Sweetwater River Valley east of the Sweetwater Reservoir, approximately 2.9 miles northeast of the Existing Substation, and a portion near the Jamul/Dulzura Creek east of Lower Otay Lake, approximately 4.4 miles northeast of the proposed Salt Creek Substation site.

No known economically viable mineral resources were identified on the Proposed Project site or in the immediate vicinity.

4.11.4 Impacts

4.11.4.1 Significance Criteria

Standards of significance were derived from Appendix G of the CEQA Guidelines. These standards are summarized below.

Impacts to mineral resources would be considered significant if the Proposed Project would do either of the following:

- result in the loss of availability of a known mineral resource that may be of value to the region and the residents of the state or
- result in the loss of availability of a locally important mineral resource recovery site that is delineated on a local general plan, specific plan, or other land use plan.

4.11.4.2 Impact Analysis

Question 4.11a – Loss of Regional- or State-Valued Mineral Resources

Construction – No Impact

The Proposed Project site within the City of Chula Vista has no identified valuable mineral resources. The nearest MRZ-2 area is approximately 1.3 miles south of the proposed Salt Creek Substation site. The only active mining operation within the City of Chula Vista, Otay Mesa Pit at Rock Mountain, is located approximately 2.7 miles southwest of the proposed Salt Creek Substation site and would continue to function regardless of Proposed Project activities. Proposed Project construction activities would not result in the loss of a known mineral resource. Therefore, no impact would occur.

Operation and Maintenance – No Impact

As discussed above, the Proposed Project is located in an area with no identified valuable mineral resources. Operation of the Proposed Project, including the proposed Salt Creek Substation, would not result in the loss of valuable regional or state mineral resources. Therefore, no impact would occur.

Question 4.11b – Loss of Locally Important Mineral Resources

Construction – No Impact

There are no known locally important mineral sources or MRZs on the proposed Salt Creek Substation site or within the other sites affected by the Proposed Project. The MRZ-2 area is approximately 1.3 miles south of the proposed Salt Creek Substation site. No active mining operations or known areas designated or delineated for mineral resource recovery are within the Proposed Project site. The only active mining operation within the City of Chula Vista, Otay Mesa Pit at Rock Mountain, is located approximately 2.7 miles southwest of the proposed Salt Creek Substation site, and would continue to function regardless of the Proposed Project. Proposed Project construction activities would not result in the loss of a known mineral resource with noted value to the region or to the residents of the state. Therefore, no impact would occur.

Operation and Maintenance – No Impact

As discussed above, the Proposed Project would be located at a site with no known locally important mineral sources or MRZs. Operation of the Proposed Project, including the proposed Salt Creek Substation, would not result in the loss of availability of a locally important mineral resource recovery site. Therefore, no impact would occur.

4.11.5 Project Design Features and Ordinary Construction/Operations Restrictions

There are no specific policies, standards, regulations, or design features that are necessary to minimize impacts from the Proposed Project. No impacts to mineral resources are anticipated with Proposed Project implementation.

4.11.6 Applicant-Proposed Measures

The Proposed Project would have no impact on mineral resources; therefore, no APMs are required or proposed.

4.11.7 Detailed Discussion of Significant Impacts

Based on the above analyses, no significant impacts were identified for the Proposed Project, and no APMs are required or proposed.

4.11.8 References

California Department of Conservation (CDC). 2007. Surface Mining and Reclamation Act of 1975. Available at http://www.conservation.ca.gov/omr/smara/Pages/index.aspx. Revised January 2007.

City of Chula Vista. 2005. General Plan. *Environmental Element*. Adopted December 13, 2005. Available at http://www.chulavistaca.gov/City_Services/Development_Services/Planning_Building/General_Plan/documents.asp.

County of San Diego. 2011. General Plan. *Safety Element*. Adopted August 3, 2011. Available at http://www.sdcounty.ca.gov/pds/gpupdate/docs/BOS_Aug2011/C.1-6_Safety.pdf.

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4.12 Noise

Would the project result in:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☑	☐
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☑	☐
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☑	☐
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☑	☐
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☑

Would the project result in:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
f. For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	❒	❒	❒	☑

4.12.1 Introduction

The purpose of this section is to describe the ambient noise conditions in the vicinity of the Proposed Project and to assess noise impacts that may potentially occur as a result of Proposed Project implementation, particularly with regard to short-term construction activities and long-term operation. Construction of the Proposed Project would not result in a significant increase in temporary, periodic, or permanent ambient noise levels in the Proposed Project area. Additionally, the Proposed Project would not expose sensitive receptors to significant vibration levels.

4.12.2 Methodology

By definition, "noise" is human-caused sound that is considered unpleasant and unwanted. Whether a sound is considered unpleasant depends on the individual who hears the sound, as well as the setting and circumstance under which the sound is heard. While performing certain tasks, people expect and accept certain sounds that are considered unpleasant under other circumstances. Because an individual's tolerance for noise varies by setting, some land uses are more sensitive to changes in the ambient noise environment than others. Noise-sensitive receptors include schools, hospitals, convalescent homes, long-term care facilities, mental care facilities, residential uses, places of worship, libraries, and passive recreation areas.

Decibel (dB) is the unit of measure used to describe the loudness of sound. Because the range of sound that humans can hear is quite wide, the decibel scale is logarithmic, making calculations more manageable. Several factors affect people's perception of sound. These factors include the actual noise level, frequencies involved, exposure period to the sound, and changes or fluctuations in sound level during exposure. To measure sound in a manner that accurately reflects human perception, several measuring systems, or scales, have been developed. The A-weighted scale reflects that the human ear does not perceive all pitches or frequencies equally; therefore, decibel measurements are adjusted (or weighted) to compensate for the human lack of sensitivity to low-pitched and high-pitched sounds. The adjusted unit is known as the A-weighted decibel (dBA).

The subjective human perception of noise "loudness" is usually different than what is measured. Generally, a 3-dBA increase in ambient noise levels is considered the minimum threshold at which most people can detect a change in the noise environment; an increase of 10 dBA is perceived as a doubling of the ambient noise level. As a point of reference, a conversation between two people would typically measure approximately 60 to 65 dBA, and prolonged noise levels at higher than 85 dBA can cause hearing loss.

To reflect the fact that ambient noise levels from various sources vary over time, they are generally expressed as an equivalent noise level (L_{eq}), which is a computed steady noise level over a specified period of time. L_{eq} values are commonly expressed for 1-hour periods, but different averaging times may be specified.

For the evaluation of community noise effects, Community Noise Equivalent Level (CNEL) is often used. It represents the average A-weighted noise level during a 24-hour day with a 5-dB addition for the period from 7 p.m. to 10 p.m., and a 10-dB addition for the period from 10 p.m. to 7 a.m.

4.12.3 Environmental Setting

The proposed Salt Creek Substation site and the majority of the proposed TL 6965 route is located in the eastern portion of the City of Chula Vista. Approximately 4,700 linear feet of the northernmost portion of TL 6965, north of Mount Miguel Road, is located in an unincorporated portion of San Diego County on SDG&E fee-owned land surrounding the Existing Substation. Noise levels in these areas are those typical of suburban and rural residential communities. The primary noise source in the area is vehicular traffic on major roads and streets.

4.12.3.1 Regulatory Setting

Federal

There are no federal noise standards that directly regulate noise from the operation of electrical power lines and substation facilities. The federal government has, however, passed general laws to regulate and limit noise levels.

The USEPA Office of Noise Abatement and Control was originally established to coordinate federal noise-control activities. After inception, the Office of Noise Abatement and Control established the federal Noise Control Act of 1972, which established programs and guidelines to identify and address the effects of noise on public health and welfare and the environment. Administrators at USEPA determined in 1981 that subjective issues, such as noise, would be better addressed at the lower levels of government. Consequently, responsibilities for regulating noise-control policies were transferred to state and local governments. Noise-control guidelines contained in the rulings by USEPA in prior years are not standards, criteria, regulations, or goals, but are defined to protect public health and welfare with an adequate margin of safety, and to provide guidelines for implementing noise standards locally. However, the Noise Control Act of 1972 and the Quiet Communities Act of 1978 were not rescinded by Congress and remain in effect today.

Noise Control Act of 1972

The Noise Control Act of 1972 was the first comprehensive statement of national noise policy. It declares, "It is the policy of the U.S. to promote an environment for all Americans free from noise that jeopardizes their health or welfare."

Quiet Communities Act of 1978

The Noise Control Act was amended by the Quiet Communities Act of 1978 to promote the development of effective state and local noise-control programs, to provide funds for noise research, and to produce and disseminate educational materials to the public on the harmful effects of noise and ways to effectively control it.

By 2002, agencies, including the Department of Transportation, Department of Labor, Federal Railroad Administration, and FAA, developed their own noise-control programs, with each agency setting its own criteria.

State

California adopted noise standards in specific areas of regulation not previously covered by the federal government. State standards regulate noise levels of motor vehicles, sound transmission through buildings, occupational noise, and noise insulation.

CEQA states that the potential for excessive groundborne noise and vibration levels must be analyzed; however, CEQA does not define the term "excessive" vibration. Numerous public and private organizations and governing bodies provide guidelines to assist in the analysis of groundborne noise and vibration; however, federal, state, and local governments have yet to establish specific groundborne noise and vibration requirements. Additionally, there are no federal, state, or local vibration regulations or guidelines directly applicable to the Proposed Project.

Federal Transit Administration and California Department of Transportation

Publications by the Federal Transit Administration (FTA) and Caltrans are two of the seminal works for the analysis of groundborne noise and vibration relating to transportation and construction. The Proposed Project is not subject to FTA or Caltrans regulations; however, these guidelines serve as a useful tool to evaluate vibration impacts. Therefore, FTA and Caltrans guidance are used to establish significance criteria for assessing the impacts of the Proposed Project, as presented in Section 4.12.4.1, Significance Criteria. Caltrans guidelines recommend that a standard of 0.2 inches per second (in/sec) peak particle velocity (PPV) not be exceeded for the protection of normal residential buildings, and that 0.08 in/sec PPV not be exceeded for the protection of old or historically significant structures (Caltrans 2004). With respect to human response within residential uses (i.e., annoyance, sleep disruption), FTA recommends a maximum acceptable vibration standard of 80 vibration decibels (VdB) (FTA 2006).

Local

Local governments outline requirements for noise abatement and control in the noise element of their general plans and municipal codes. These noise elements typically set noise goals and objectives, and the municipal codes set sound-level limits and time of day restrictions for activities. The municipalities applicable to the Proposed Project are the City of Chula Vista and the County of San Diego.

City of Chula Vista General Plan

The Environmental Element (EE) of the City of Chula Vista's General Plan contains applicable noise/land use compatibility guidelines (City of Chula Vista 2005), which are shown in Table 4.12-1. Policies from the City of Chula Vista's General Plan relevant to this noise analysis are as follows:

EE 21.1 Apply the exterior land use noise compatibility guidelines contained in Table 9-1 of this Environmental Element to new development where applicable and in light of project-specific considerations. (Note: Table 9-1 of the Environmental Element is Table 4.12-1 of this PEA.)

EE 21.3 Promote the use of available technologies in building construction to improve noise attenuation capacities.

EE 22.5 Where necessary, require appropriate mitigation measures in order to attenuate existing and projected traffic noise levels in accordance with applicable standards, including the exterior land use noise compatibility guidelines contained in Table 9-1 of this Environmental Element.

As shown in Table 4.12-1, all land uses are considered incompatible with noise levels in excess of 75 dBA CNEL. Offices, businesses, churches, athletic fields, and community parks are considered incompatible in excess of 70 dBA CNEL. Residences, schools, neighborhood parks, and libraries, are considered incompatible in excess of 65 dBA CNEL.

City of Chula Vista Noise Ordinance

Chapter 19.68 of the City of Chula Vista's Zoning Code, the Noise Control Ordinance, requires that "[n]o person shall operate or cause to be operated, any source of sound … or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level to exceed … the applicable limits given in Table III." Construction noise and the noise from motor vehicles operating on public ROWs are exempt from these standards. Table 4.12-2 includes the applicable portion of Table III of the Noise Control Ordinance.

The ordinance states that if the measured ambient level exceeds that permissible, as shown in Table 4.12-2, the allowed noise exposure shall be the ambient noise level, measured from the noise source. Construction activity is exempt from these standards.

Table 4.12-1: Exterior Land Use Noise Compatibility Guidelines

Land Use	Annual CNEL in Decibels					
	50	**55**	**60**	**65**	**70**	**75**
Residential						
Schools, Libraries, Daycare Facilities, Convalescent Homes, Outdoor Use Areas, and Other Similar Uses Considered Noise Sensitive						
Neighborhood Parks, Playgrounds						
Community Parks, Athletic Fields						
Offices and Professional						
Places of Worship (excluding outdoor use areas)						
Golf Courses						
Retail and Wholesale Commercial, Restaurants, Movie Theaters						
Industrial, Manufacturing						

Source: City of Chula Vista 2005

Table 4.12-2: Exterior Noise Standards

Environmental Noise – L_{eq} in any Hour[1]		
Receiving Land Use Category	**Noise Level (dBA)**	
	10 p.m. to 7 a.m. (Weekdays) 10 p.m. to 8 a.m. (Weekends)	**7 a.m. to 10 p.m. (Weekdays) 8 a.m. to 10 p.m. (Weekends)**
All residential, except multiple dwelling	45	55
Multiple dwelling residential	50	60
Commercial	60	65

Source: City of Chula Vista Municipal Code, Section 19.68.030

[1] Environmental noise is the L_{eq} in any hour. The limits also apply to a category of noise defined as nuisance noise, and the limits are not to be exceeded at any time.

Section 17.24.0040B of the City of Chula Vista's Municipal Code restricts the hours of construction activity as follows: "The use of any tools, power machinery or equipment, or the conduct of construction and building work in residential zones so as to cause noises disturbing to the comfort and repose of any person residing or working in the vicinity, between the hours of 10:00 p.m. and 7:00 a.m., Monday through Friday, and between the hours of 10:00 p.m. and 8:00 a.m., Saturday and Sunday, except when the same is necessary for emergency repairs required for the health and safety of any member of the community." Any construction activities that occur within the City of Chula Vista would need to occur during these times.

County of San Diego

San Diego County General Plan

Goal N-2 of the San Diego County General Plan Noise Element is relevant to the Proposed Project:

> GOAL N-2: Protection of Noise Sensitive Uses. A noise environment that minimizes exposure of noise sensitive land uses to excessive, unsafe, or otherwise disruptive noise levels.

County of San Diego Noise Ordinance

The County of San Diego Noise Ordinance, County Code Section 36.404, sets limits on operational noise levels generated from one property to another, such as from mechanical equipment. Sections 36.408 and 36.409 of the Noise Ordinance also regulate when construction can occur, and noise levels generated by construction activities.

Section 36.404. Sound Level Limits

Under the County of San Diego Noise Ordinance, a person generally cannot cause or allow noise generated on a particular property to exceed the 1-hour average sound level set forth in Section 36.404 of the Noise Ordinance and shown herein as Table 4.12-3. The noise-level limits vary with the zoning of the properties concerned. The Existing Substation site and the power line north of San Miguel Ranch Road is currently zoned Holding Area (S90), which allows for "Minor Impact Utilities" such as the Proposed Project; adjacent properties are zoned Residential and Open Space, as discussed in further detail in Section 4.10, Land Use.

Table 4.12-3: County of San Diego Noise Ordinance Sound Level Limits

Zone	Applicable Hours	Sound Level Limit dB $L_{eq\ (1\ hour)}$
RS, RD, RR, RMH, A70, A72, S80, S81, S87, S90, S92, RV, and RU. Use regulations with a density of less than 11 dwelling units per 1 acre.	7 a.m. to 10 p.m. 10 p.m. to 7 a.m.	50 45

Zone	Applicable Hours	Sound Level Limit dB $L_{eq\ (1\ hour)}$
RRO, RC, RM, C30, S86, RV, RU, and V5. Use regulations with a density of 11 or more dwelling units per 1 acre.	7 a.m. to 10 p.m. 10 p.m. to 7 a.m.	55 50
S94, V4, and all other commercial zones	7 a.m. to 10 p.m. 10 p.m. to 7 a.m.	60 55
V1, V2	7 a.m. to 7 p.m. 7 p.m. to 10 p.m.	60 55
V1	10 p.m. to 7 a.m.	55
V2	10 p.m. to 7 a.m.	50
V3	7 a.m. to 10 p.m. 10 p.m. to 7 a.m.	70 65
M50, M52, and M54	Any time	70
S82, M56, and M58	Any time	75
S88 (see Note "c" below)		

Source: County of San Diego Noise Ordinance, Section 36.404

(a) Except as provided in Section 36.409 of the County of San Diego Noise Ordinance, it shall be unlawful for any person to cause or allow the creation of any noise that exceeds the 1-hour average sound-level limits shown in the above table, when the 1-hour average sound level is measured at the property line of the property on which the noise is produced or at any location on a property that is receiving the noise.

(b) Where a noise study has been conducted and the noise mitigation measures recommended by that study have been made conditions of approval of a Major Use Permit that authorizes the noise-generating use or activity, and the decision-making body approving the Major Use Permit determined that those mitigation measures reduce potential noise impacts to a level below significance, implementation and compliance with those noise mitigation measures shall constitute compliance with note (a), above.

(c) S88 zones are Specific Planning Areas, which allow for different uses. The sound-level limits in the table above that apply in an S88 zone depend on the use being made of the property.

(d) If the measured ambient noise level exceeds the applicable limit shown in the table above, the allowable 1-hour average sound level shall be the 1-hour average ambient noise level, plus 3 dB. The ambient noise level shall be measured when the alleged noise violation source is not operating.

(e) The sound-level limit at a location on a boundary between two zones is the arithmetic mean of the respective limits for the two zones. The 1-hour average sound-level limit applicable to extractive industries, however, including borrow pits and mines, shall be 75 dB at the property line, regardless of the zone in which the extractive industry is located.

(f) Fixed-location public utility distribution or transmission facilities located on or adjacent to a property line are subject to the noise-level limits in this table, as measured at or beyond 6 feet from the boundary of the easement upon which the equipment is located.

Section 36.408. Hours of Operation of Construction Equipment

Except for emergency work, it shall be unlawful for any person to operate or cause to be operated, construction equipment as follows:

(a) Between 7 p.m. and 7 a.m.

(b) On a Sunday or a holiday. For purposes of this section, a holiday means January 1, the last Monday in May, July 4, the first Monday in September, December 25, and any day appointed by the President as a special national holiday or the governor of the state as a special state holiday. A person may, however, operate construction equipment on a Sunday or holiday between the hours of 10 a.m. and 5 p.m. at the person's residence or for the purpose of constructing a residence for himself or herself, provided that the operation of construction equipment is not carried out for financial consideration or other consideration of any kind, and does not violate the limitations in Sections 36.409 and 36.410 [of the County of San Diego Noise Ordinance].

Section 36.409. Sound Level Limitations on Construction Equipment

Except for emergency work, it is unlawful for any person to operate construction equipment or cause construction equipment to be operated that exceeds an average sound level of 75 dBA L_{eq} for an 8-hour period between 7 a.m. and 7 p.m., when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received.

In addition to the general limitations on sound levels in Section 36.404, Section 36.410 of the County of San Diego Noise Ordinance applies the sound-level limitations shown in Table 4.12-4 to control impulse noise sources. As with Section 36.404 County of San Diego Noise Ordinance, these limits are applied when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is received. A violation is determined to occur when the limit identified in Table 4.12-4 of this PEA is exceeded for 15 minutes or more in a given hour. Additionally, if the maximum noise level limit is exceeded for only a portion of the minute, the entire minute is included in the determination.

The County of San Diego also evaluates noise impacts in light of a project's potential to result in a significant impact if it would result in a substantial permanent increase in ambient noise levels in the vicinity. This increase is defined as an increase of 10 dBA CNEL above existing conditions in the County of San Diego Noise Report Guidelines, Section 4.1-A (ii).

Table 4.12-4: County of San Diego Code Section 36.410
Maximum Sound Level (Impulsive) Measured at Occupied Property

Occupied Property Use	Decibels (dBA)
Residential, Village Zoning, or Civic Use	82
Agricultural, Commercial, or Industrial Use	85

4.12.3.2 Community Noise Survey

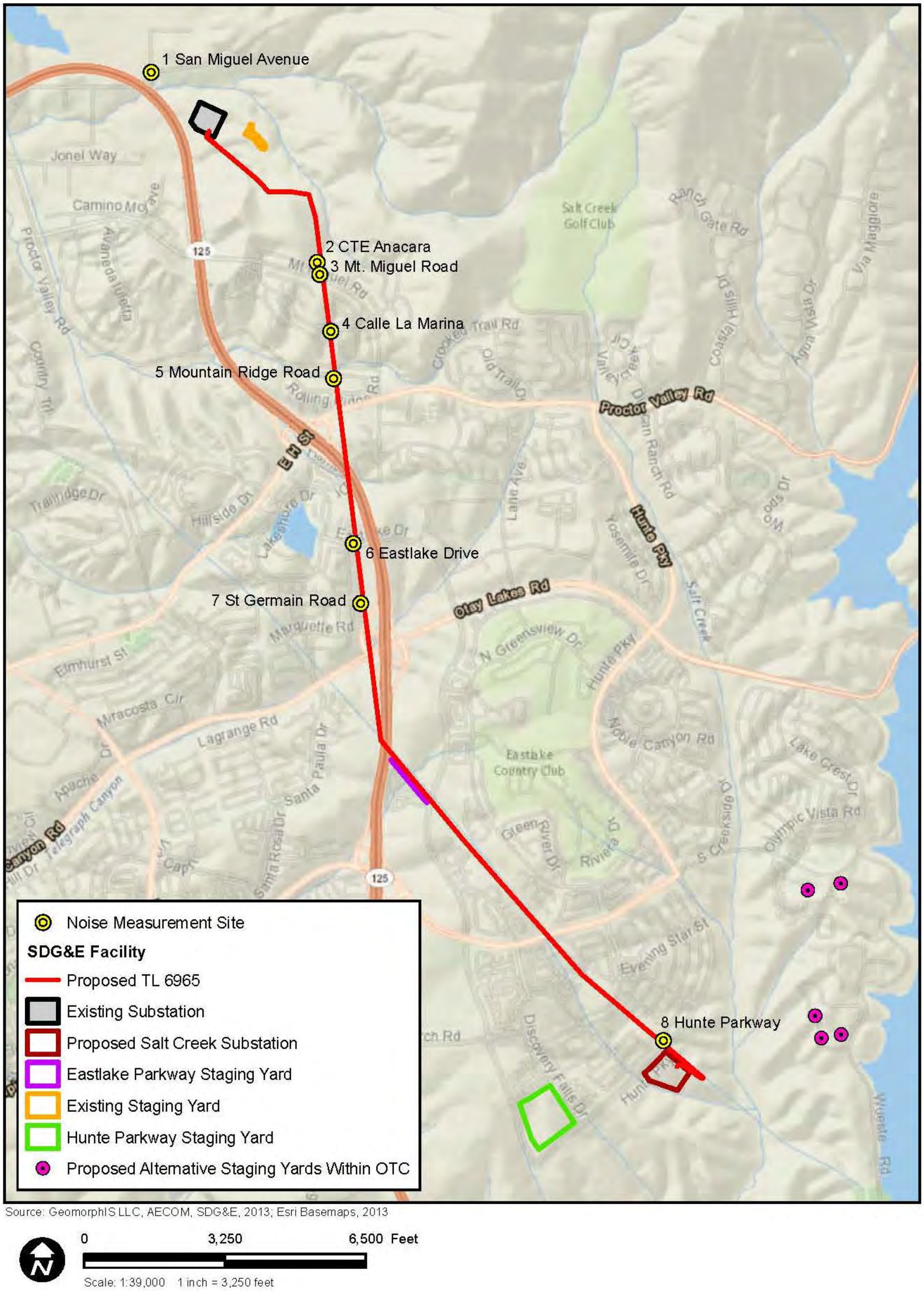
Ambient noise levels in the Proposed Project area are influenced primarily by vehicle traffic on major roads and highways, such as SR-125, and aircraft flyovers in the area. A community noise survey was conducted to document existing ambient noise within noise-sensitive communities located near the proposed Salt Creek Substation site and along proposed TL 6965 up to the Existing Substation. Noise-sensitive receptors are generally defined as residences, places of worship, and schools, but may also include convalescent homes, long-term care facilities, mental care facilities, hospitals, libraries, and passive recreation areas.

A community noise survey was conducted on June 5 and 6, 2012, to document the existing noise environment at noise-sensitive receptors and existing noise sources within the Proposed Project area. As part of site reconnaissance, noise-sensitive receptors located closest to the Proposed Project area were determined to include residences north of Hunte Parkway. These residences are approximately 190 feet northwest of the proposed Salt Creek Substation site. The Hunte Parkway Trail runs adjacent to the proposed Salt Creek Substation site along Hunte Parkway. All other noise-sensitive receptors are located at greater distances from the Salt Creek Substation site. Noise-sensitive land uses along the proposed TL 6965 route include schools (e.g., Liberty Elementary, Thurgood Marshall Elementary, Olympic View Elementary, High Tech High, High Tech Middle, High Tech Elementary, and Eastlake High Schools), a church (Parkway Hills Church Nazarene), parks (e.g., Sunset View Park, Chula Vista Community Park, Windingwalk Park, and Mount San Miguel Community Park), and residences. These are located as close as approximately 100 feet from the proposed power line, as shown in Figure 4.14-1, Public Services, and Figure 4.15-1, Recreational Facilities.

Noise-level measurements were conducted at eight locations, in accordance with the American National Standards Institute (ANSI) standards using a Larson Davis Laboratories (LDL) Model 820 sound-level meter. The sound-level meter was calibrated before and after use with an LDL Model CAL200 acoustical calibrator to verify that the meters were measuring accurately. The equipment used meets all pertinent specifications of the ANSI for Type 1 sound-level meters.

Community noise survey measurement sites are shown in Figure 4.12-1. The L_{eq}, maximum noise level (L_{max}), minimum noise level (L_{min}), and noise level exceeded 90% of a specific time period (L_{90}) were recorded at each short-term ambient noise measurement location and are presented in Table 4.12-5. Detailed noise field measurement data is provided in Appendix 4.12-A.

Figure 4.12-1: Noise Measurement Sites



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

Table 4.12-5: Summary of Monitored Short-Term Daytime Ambient Noise Levels

Site	Location	Date/ Time	Primary Noise Source	A-Weighted Sound Level (dBA)			
				L_{eq}	L_{min}	L_{max}	L_{90}
1	San Miguel Avenue	5 Jun/4:36 p.m.	Vehicles	60.3	49.3	71.7	53.7
2	CTE Anacara	6 Jun/12:46 p.m.	Aircraft	48.1	35.9	61.4	37.8
3	Mt. Miguel Road	6 Jun/1:08 p.m.	Vehicles	54.5	38.3	67.6	42.8
4	Calle La Marina	6 Jun/1:36 p.m.	Vehicles	47.4	39.9	61.0	41.2
5	Mountain Ridge Road	6 Jun/2:10 p.m.	Vehicles	50.5	37.9	66.0	40.2
6	Eastlake Road	6 Jun/2:40 p.m.	Vehicles	57.0	42.6	71.6	46.8
7	St. Germain Road	6 Jun/3:30 p.m.	Vehicles	47.0	39.5	57.2	42.4
8	Hunte Road	6 Jun/4:15 p.m.	vehicles	50.1	36.1	68.2	38.3

Notes: dBA = A-weighted decibels; L_{eq} = equivalent noise level; L_{min} = minimum noise level; L_{max} = maximum noise level; L_{90} = noise level exceeded 90% of a specific period of time

As shown in Table 4.12-5, average daytime ambient noise levels ranged from approximately 47 to 60 dBA L_{eq}, with maximum noise levels from approximately 57 to 71 dBA L_{max}. Based on the L_{90} measurements, background noise levels in the Proposed Project area are generally less than 50 dBA.

4.12.4 Impacts

4.12.4.1 Significance Criteria

The significance criteria for assessing the impacts from noise levels and groundborne vibration were derived from the CEQA Guidelines, Appendix G, Environmental Checklist. According to the CEQA Checklist, a project results in a potentially significant noise impact if it would result in any of the following:

- exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;

- for a project located within an airport land use plan, or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels; and/or
- for a project within the vicinity of a private airstrip, where the project would expose people residing or working in the project area to excessive noise levels.

4.12.4.2 Impact Analysis

Question 4.12(a) – Noise Levels in Excess of Established Standards

Construction – Less-than-Significant Impact

Construction of the Proposed Project would require a variety of construction equipment. Typical maximum noise levels for construction equipment at 50 feet from the source are shown in Table 4.12-6.

In addition, a light-medium lift construction helicopter would be used during the transport, placement, and installation of the power line. Helicopter operation would occur during specific daytime construction activities (for approximately 5 days) at groundlevel to low altitude (groundlevel to 300 feet high). The helicopter flight path would be at low elevation and limited to the Transmission Corridor, with helicopter storage and refueling occurring at the Existing Substation. Helicopter noise typically is approximately 100 dB at 100 feet (Federal Interagency Committee on Noise 1992).

As shown in Table 4.12-6, the maximum intermittent noise levels are expected to range between 74 and 90 dBA at approximately 50 feet, and 100 dBA at 100 feet during helicopter activity. Based on FTA construction noise modeling, the highest combined predicted hourly noise level for construction equipment associated with the Proposed Project at 50 feet would be 84 dBA L_{eq} during construction of the proposed Salt Creek Substation and 78 dBA L_{eq} during the installation of power poles and grading of the access road. Higher levels are expected when intermittent helicopter activity is included, which would average hourly at approximately 90 dBA L_{eq} at 100 feet when working in a given area (FTA 2006).

Noise levels would be attenuated due to intervening structures and/or vegetation located in the vicinity of the Proposed Project. As an example, blocking the line-of-sight between a source and receiver can provide a 5-dBA attenuation, and vegetation can yield up to a 7.5-dBA attenuation per doubling of distance as opposed to a 6-dBA reduction per doubling of distance over hard surfaces such as roadways and parking lots.

During Proposed Project construction, there would be three primary access routes to and from the Proposed Project area. These three primary routes are as follows:

- SR-54 to Briarwood Drive, then extending easterly to the Existing Substation and Existing Substation staging yard
- SR-125 Toll Road

- Olympic Parkway, heading east from Interstate 805 to the proposed Salt Creek Substation, the Hunte Parkway staging yard, and the southern end of TL 6965.

Table 4.12-6: Typical Maximum Noise Levels Generated by Construction Equipment

Equipment	Noise Level (dBA) at 50 feet
Backhoe	80
Concrete mixer	85
Concrete saw	90
Pump truck	82
Crane, mobile	83
Dozer	85
Excavator	85
Generator	81
Grader	85
Man lift	85
Loader	85
Paver	89
Roller	85
Scraper	89
Trucks	74–88
Helicopter[1]	100

[1] Noise level (dBA) at 100 feet

Source: FTA 2006

Generally, these access routes and roadways are either lined with sound walls or vertically separated (i.e., depressed or elevated) from the residences that are located along these roadways, which would provide noise attenuation. However, limited construction traffic might also use other secondary roads in the Proposed Project area. As shown in Table 4.12-6, maximum noise levels associated with truck traffic would range from 74 dBA to 88 dBA at a distance of 50 feet, with a lower hourly average range of approximately 65 to 79 dBA L_{eq}. Construction truck trips are anticipated to be temporary, minimal, and intermittent, and, when combined with the greater regular traffic volumes of these roadways, are anticipated to result overall in a negligible increase in traffic noise.

Salt Creek Substation

The proposed Salt Creek Substation site is located in the eastern portion of the City of Chula Vista, southeast of Hunte Parkway, approximately 0.4 mile from High Tech Middle School and approximately 190 feet from the residences northeast of Hunte Parkway. Construction activities for the proposed Salt Creek Substation are anticipated to occur for approximately 18 to 24 months, and would generally occur during daytime work hours Monday through Friday, 7 a.m. to 7 p.m., and between 8 a.m. and 7 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).

Noise from construction of the proposed Salt Creek Substation is permissible under the City of Chula Vista's Municipal Code if the construction activities occur between 7 a.m. and 10 p.m., Monday through Friday, and between 8 a.m. and 10 p.m. on Saturdays and Sundays. The City of Chula Vista does not have specific noise-level limits for construction activities, but prohibits construction in residential zones that cause noises that disturb the comfort and repose of any person residing or working in the vicinity during these allowable hours.

Construction activities associated with the proposed Salt Creek Substation would occur in accordance with restrictions and standards established by the City of Chula Vista's Municipal Code; however, some concrete pours and transformer oil filling may necessitate work outside of the allowed hours. If work is required outside of the allowed hours, SDG&E would meet and confer with the City of Chula Vista, as needed. Therefore, impacts would be less than significant.

TL 6965 and TL 6910 Loop-In

Construction activities for the power lines are anticipated to occur for approximately 8 to 12 months and would generally occur during daytime work hours Monday through Friday, 7 a.m. to 7 p.m., and between 8 a.m. and 7 p.m. on Saturday. The majority of the proposed TL 6965 would be located in the eastern portion of the City of Chula Vista. Approximately 4,700 linear feet of the northernmost portion of the power line would be located in an unincorporated portion of San Diego County.

Construction activities associated with the proposed TL 6965 and TL 6910 loop-in within the City of Chula Vista would occur in accordance with restrictions and standards established by the City of Chula Vista's Municipal Code. If work is required outside of the allowed hours, SDG&E would meet and confer with the City of Chula Vista, as needed. Therefore, impacts would be less than significant.

Noise from construction of the power lines within the County of San Diego is permissible under the County Municipal Code if the construction activities occur between 7 a.m. and 7 p.m., Monday through Saturday, and do not exceed an average sound level of 75 dBA L_{eq} for an 8-hour period between 7 a.m. and 7 p.m., when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received.

Installing power poles is anticipated to generate an hourly average of 78 dBA L_{eq} at 50 feet. However, construction noise averaged over an 8-hour period is not anticipated to exceed San Diego County's average sound level limit of 75 dBA L_{eq} for an 8-hour period between 7 a.m. and 7 p.m. when measured at the boundary line of SDG&E's fee-owned property at the Existing Substation (where the noise source is located) or on any occupied property where the noise is being received.

Construction activities associated with the proposed power line within the County of San Diego would occur in accordance with restrictions and standards established by the County of San Diego's Municipal Code. If work is required outside of the allowed hours, SDG&E would meet and confer with the County of San Diego, as needed. Therefore, impacts would be less than significant.

Existing Substation Modifications

Proposed modifications at the Existing Substation, located within the County of San Diego, are anticipated to require approximately 3 months. Construction activities would generally occur during normal work hours, Monday through Saturday, 7 a.m. to 7 p.m. Given that refueling and storage of a helicopter would occur at the Existing Substation, there would be temporary noise during start-up, take-offs, and landings at the Existing Substation site. Helicopter noise is typically approximately 100 dB at 100 feet (Federal Interagency Committee on Noise 1992).

Construction activities associated with the proposed modifications to the Existing Substation would occur in accordance with restrictions and standards established by the County of San Diego's Municipal Code. If work is required outside of the allowed hours, SDG&E would meet and confer with the County of San Diego, as needed. Therefore, impacts would be less than significant.

Staging Yards

Staging yards would be used to store construction materials and equipment for the Proposed Project components. Construction activities are anticipated to occur for approximately 18 to 24 months, and would generally occur during normal work hours, Monday through Friday, 7 a.m. to 7 p.m., and between 8 a.m. and 7 p.m. on Saturday. Construction activities associated with the Proposed Project would occur in accordance with restrictions and standards established by the County of San Diego Noise Ordinance and Chula Vista Municipal Code. If work is required outside of the allowed hours, SDG&E would meet and confer with the County of San Diego and/or the City of Chula Vista, as needed. Therefore, impacts would be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Operation of the Proposed Project would consist of inspection, routine maintenance activities, and occasional emergency repairs. Inspections would occur in the form of aerial patrol through the use of helicopters, or through ground patrols visiting the facilities. Prior to using helicopters for operation and maintenance of the Proposed Project facilities, SDG&E or its contractor would notify the FAA and any local agencies, as required, prior to conducting maintenance activities requiring a helicopter. Helicopter operators would comply with all applicable federal, state, and local regulations. These activities would not occur on a continuous basis, and would likely not involve the creation of substantial noise. If extraordinary emergency repairs are required, SDG&E would meet and confer with the County of San Diego and/or the City of Chula Vista, as needed. Additionally, operation and maintenance activities of some components (e.g., Existing Substation and TL 6965) would not be substantially different from ongoing existing operation and maintenance activities.

Due to the distance to the nearest sensitive receptors (approximately 190 feet), noise associated with operation of the proposed Salt Creek Substation would be negligible. All activities associated with operation of the proposed Salt Creek Substation would comply with applicable noise standards and regulations established by the City of Chula Vista, and would not result in exposure of persons to excessive noise levels. Impacts would be less than significant.

Question 4.12(b) – Generation of Excessive Groundborne Vibration or Groundborne Noise Levels

Construction – Less-than-Significant Impact

Salt Creek Substation

Construction activities for the proposed Salt Creek Substation site, such as drilling and driving heavy trucks on uneven surfaces, may produce minor groundborne vibration and noise in the immediate vicinity of the construction activity. Impacts from construction-related groundborne vibration and noise would be intermittent and confined to the immediate area surrounding the activity. According to the FTA, large bulldozers can create vibration levels of 0.089 in/sec PPV and 87 VdB referenced to 1 microinch per second (µin/sec) and based on the root mean square (RMS) velocity amplitude at 25 feet, as shown in Table 4.12-7.

Table 4.12-7: Typical Construction-Equipment Vibration Levels

Equipment	PPV at 25 feet (in/sec)	Approximate L_V at 25 feet
Haul Trucks	0.076	86
Large Bulldozer	0.089	87

Source: FTA 2006

Notes: in/sec = inches per second; L_V = velocity level in decibels (VdB) referenced to 1 microinch/second and based on the root mean square velocity amplitude; PPV = peak particle velocity

Installation of underground (below grade) facilities is anticipated to generate the highest vibration levels. Below-grade activities would require the use of an excavator/backhoe to excavate and backfill trenches for installing the ground grid, cables, foundations and footings, and duct banks; a cement mixer for preparing concrete for cable trenches, foundations and footings, and equipment vaults; and trucks for hauling equipment and construction materials.

Other activities, such as grading and facility construction, would also generate vibrations; however, these vibrations levels would be less intense and would occur for a shorter duration.

The nearest sensitive receptors to the construction activities at the proposed Salt Creek Substation site would be residences located approximately 190 feet to the north of Hunte Parkway. FTA's recommended procedure for applying propagation adjustments to the reference levels shown in Table 4.12-7 accounts for the decrease in vibration levels with an increase in distance from the source to receptor. Using FTA's recommended procedure predicted that a worst-case vibration level of approximately 0.010 in/sec PPV and 68 VdB at the nearest sensitive receptor could occur from excavation and related below-grade activities. These vibration levels would not exceed Caltrans' recommended standards with respect to preventing structural building damage (0.2 in/sec PPV for normal buildings) or exceed FTA's maximum-acceptable-vibration standard with respect to human response (80 VdB for residences and buildings where people normally sleep) at nearby existing vibration-sensitive land uses (Caltrans 2004; FTA 2006).

TL 6965 and TL 6910 Loop-In

The nearest sensitive receptor that may be subjected to groundborne vibration or groundborne noise levels from installing poles, stringing line, and installing telecommunication equipment are residences located along the proposed power line alignment. Residences along the proposed alignment are located as close as 60 feet from potential pole locations. Use of equipment such as an auger/drill or backhoe has the potential to generate groundborne vibrations. Using FTA's recommended procedure for applying propagation adjustments to the reference levels shown in Table 4.12-7, predicted worst-case vibration levels of approximately 0.024 in/sec PPV and 76 VdB at the nearest sensitive receptor could occur from drilling. These vibration levels would not exceed Caltrans' recommended standards or FTA's maximum-acceptable-vibration standard with respect to human response (Caltrans 2004; FTA 2006). Therefore, impacts would be less than significant.

Existing Substation Modifications

Construction activities associated with proposed Existing Substation modifications, such as the passing of heavy trucks on uneven surfaces, installing poles, line stringing, and installing telecommunication equipment, may produce minor groundborne vibration and noise in the immediate vicinity of the construction activity. Impacts from construction-related groundborne vibration and noise would be intermittent and confined to the immediate area, where there are no residences or buildings where people normally sleep. According to the FTA, large bulldozers can create vibration levels of 0.089 in/sec PPV and 87 VdB referenced to 1 µin/sec and based on the RMS velocity amplitude at 25 feet, as shown in Table 4.12-7. Other activities, such as grading and facility construction, would also generate vibrations; however, these vibrations levels would be less intense and would occur for a shorter duration. Therefore, impacts would be less than significant.

Staging Yards

The staging yards would be used for storing construction materials and equipment for the Proposed Project components. The main source of groundborne vibration and noise in the immediate vicinity of the staging yards would be heavy trucks passing on uneven surfaces and concrete cutting and removal. Impacts from construction-related groundborne vibration and noise would be intermittent and confined to the immediate area surrounding the activity. According to the FTA, large bulldozers can create vibration levels of 0.089 in/sec PPV and 87 VdB referenced to 1 µin/sec and based on the RMS velocity amplitude at 25 feet, as shown in Table 4.12-7. Therefore, impacts would be less than significant.

Operation – Less-than-Significant Impact

Operation of the Proposed Project would consist of routine maintenance activities and emergency repairs. These activities would be unlikely to produce significant groundborne vibration. Operation of transformers at the proposed Salt Creek Substation could produce groundborne vibration; however, groundborne vibrations would be perceptible only in the immediate transformer pad vicinity (i.e., less than 25 feet), if at all. No other component of the Proposed Project would generate vibrations during operation. Therefore, impacts would be less than significant.

Questions 4.12(c) and (d) – Substantial Permanent or Temporary Increase in Ambient Noise Levels

Construction – Less-than-Significant Impact

Salt Creek Substation

Noise impacts associated with construction of the Salt Creek Substation would primarily affect those persons located closest to the proposed substation site and along the truck/haul routes. Existing residences near the proposed Salt Creek Substation site, including the primary access routes and roadways, would experience a temporary increase in daytime ambient noise levels above those existing without the Proposed Project. However, the distance from the nearest residences to the proposed Salt Creek Substation site would attenuate substation construction noise by approximately 12 dBA to an average hourly noise level of 64 dBA L_{eq} and maximum noise levels of 69 dBA L_{max} at the nearest residences.

As shown in Table 4.12-5, average daytime ambient noise levels ranged from approximately 47 to 60 dBA L_{eq}, and maximum noise levels from approximately 57 to 71 dBA L_{max}, with the higher end of the range based on proximity to major roadways. A substantial increase is typically defined as a 10-dBA increase. Based on the noise principle that doubling of noise sources increase noise levels by only 3 dBA, the temporary increase in daytime ambient noise levels during construction would not be a substantial increase. As construction would be temporary, there would be no permanent increase in ambient noise levels during construction. Therefore, impacts would be less than significant.

TL 6965 and TL 6910 Loop-In

As shown in Table 4.12-6, the maximum intermittent noise levels of typical construction equipment are expected to range between 74 and 89 dBA at approximately 50 feet. Based on FTA construction noise modeling procedures, the combined predicted hourly noise level for construction equipment associated with the proposed power line at 50 feet would be approximately 78 dBA L_{eq} during power pole installation and access roadway grading (FTA 2006). It is estimated that installing a new power line would generate noise levels of approximately 69 dBA L_{eq} at 50 feet. Some new poles may be installed as close as 60 feet from residences. At 60 feet, noise levels would attenuate slightly to approximately 75 dBA L_{eq} or less, with maximum noise levels of up to 82 L_{max}. Noise levels associated with installing new poles would be short in duration, as it would typically take 1 to 3 days to erect poles, depending on the type. Other pole installation activities would be less intense and would generate lower noise levels than the identified activities.

Noise levels would be further attenuated due to intervening structures and/or vegetation located in the vicinity of the construction. As an example, blocking the line-of-sight between a source and receiver can provide a 5-dBA attenuation, and vegetation can yield up to a 7.5-dBA attenuation per doubling of distance, as opposed to a 6-dBA reduction per doubling of distance over hard surfaces such as roadways and parking lots.

During construction, there would be three primary access routes to and from the Proposed Project area. In addition, it is anticipated that three primary roads would be used during construction to provide access to SDG&E access roads within the Transmission Corridor for TL 6965. The three primary roads are as follows:

- Eastlake Parkway
- Mt. Miguel Road
- San Miguel Ranch Road and Proctor Valley Road (west of SR-125)

Generally, these access routes and roadways are either lined with sound walls or vertically separated (i.e., depressed or elevated) from the residences that are located along these roadways to provide noise attenuation. However, limited construction traffic may also use other secondary roads in the Proposed Project area to access the power line during construction, as needed.

As shown in Table 4.12-6, typical maximum noise levels generated by construction truck traffic ranges from 74 to 88 dBA L_{max} at 50 feet, depending on truck size and horsepower, and a lower hourly average range of approximately 65 to 79 dBA L_{eq}. Construction truck trips are anticipated to be temporary, minimal, and intermittent, and, when combined with the greater regular traffic volumes of these roadways, are anticipated to result overall in a negligible increase in existing traffic noise.

Noise impacts associated with construction of the power lines would primarily affect those persons located closest to the proposed power line and along the truck/haul routes. Existing residences near the Proposed Project elements, including the primary access routes and roadways, would experience a temporary increase in noise levels above those existing without the Proposed Project.

For new poles installed as close as 60 feet from residences, noise levels would attenuate at the residences to approximately 75 dBA L_{eq} or less, and maximum noise levels would reach up to 82 L_{max}. Noise levels associated with installing new poles would be short in duration, as it would typically take 1 to 3 days to erect poles, depending on the type.

Helicopter activity over approximately 5 days total would generate noise levels of approximately 100 dBA at 100 feet; however, helicopter activity would be limited to the transmission line corridor ROW (from ground level up to 300 feet) and the Existing Substation (no overflight of residences), and would occur during the allowable daytime construction hours of the County of San Diego Noise Ordinance and City of Chula Vista Noise Ordinance. Helicopter use would generate a temporary increase in ambient noise levels within the transmission line corridor from ground-level up to 300 feet over the approximately 5-day period; however, the helicopter would not be at a stationary location for extended periods of time, and, therefore, the noise would not be considered substantial.

As shown in Table 4.12-5, average daytime ambient noise levels ranged from approximately 47 to 60 dBA L_{eq}, and maximum noise levels from approximately 57 to 71 dBA L_{max}, with the higher end of the range based on proximity to major roadways. A substantial increase is typically defined as a 10-dBA increase. Based on the noise principle that doubling of noise sources increases noise levels by only 3 dBA, the temporary increase in daytime ambient noise levels would not be a substantial increase. As construction would be temporary, there would be no permanent increase in ambient noise levels during construction. Therefore, impacts would be less than significant.

Existing Substation Modifications

The construction helicopter used for power line installation would be stored and refueled at the Existing Substation, which would generate a temporary increase in ambient noise during start-up, take-offs, and landings. However, there are no noise-sensitive receptors located in proximity to the Existing Substation; the nearest residence is approximately 0.25 mile away. Due to sufficient distance from residences, these noise levels would be less than substantial at the residences. In addition, the Existing Substation is adjacent to the freeway, and the closest residence is across the freeway.

As shown in Table 4.12-5, average daytime ambient noise levels ranged from approximately 47 to 60 dBA L_{eq}, and maximum noise levels from approximately 57 to 71 dBA L_{max}, with the higher end of the range based on proximity to major roadways. A substantial increase is typically defined as a 10-dBA increase. Based on the noise principle that doubling of noise sources increases noise levels by only 3 dBA, the temporary increase in daytime ambient noise levels would not be a substantial increase. As construction would be temporary, there would be no permanent increase in ambient noise levels during construction. Therefore, impacts would be less than significant.

Staging Yards

Staging yards would be used for storing construction materials and equipment for the Proposed Project components. There are residences in proximity to the proposed staging yards; however, the main source of construction noise in the immediate vicinity of the staging yards would be construction traffic. Generally, access routes and roadways are either lined with sound walls or vertically separated (i.e., depressed or elevated) from residences that are located along these roadways to provide noise attenuation. As shown in Table 4.12-6, noise associated with truck traffic would range from 74 dBA to 88 dBA at a distance of 50 feet.

As shown in Table 4.12-5, average daytime ambient noise levels ranged from approximately 47 to 60 dBA L_{eq}, and maximum noise levels from approximately 57 to 71 dBA L_{max}, with the higher end of the range based on proximity to major roadways. A substantial increase is typically defined as a 10-dBA increase. Based on the noise principle that doubling of noise sources increases noise levels by only 3 dBA, the temporary increase in daytime ambient noise levels would not be a substantial increase. As construction would be temporary, there would be no permanent increase in ambient noise levels during construction. Therefore, impacts would be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Operation of the Proposed Project would consist of routine, short-term inspection and maintenance of the facilities. Although the proposed Salt Creek Substation would be unattended and remotely monitored, routine maintenance activities would occur and would consist of testing, monitoring, and repairing equipment. Maintenance of power lines would occur on an as-needed basis, and activities would include inspecting power lines, repairing conductors, replacing insulators, replacing poles, and maintaining access roads. Because operations would involve temporary and limited amounts of activities, the Proposed Project would not contribute to a substantial permanent increase in ambient noise in the area. Impacts would be less than significant.

Permanent noise sources associated with the Proposed Project would be limited to transformer operation at the proposed Salt Creek Substation and the power lines.

Based on the proposed Salt Creek Substation layout, the transformer banks would be located near the center of the substation footprint, with the nearest transformer bank 100 feet from the northern boundary of the proposed Salt Creek Substation. The substation would be located at a depressed elevation, on a substation pad below ground level. A 10-foot-high masonry wall would enclose the substation area. Substations typically generate steady noise from transformers, along with cooling fans and oil pumps needed to cool the transformer during periods of high electrical demand. With all auxiliary cooling fans operating simultaneously, the worst-case noise level from the transformers at full load is predicted to be no more than 66 dBA at 3 feet from the center of the equipment (CPUC 2009).

Based on the design of the proposed Salt Creek Substation, the transformers would be approximately 240 feet from the nearest property line; at this distance, noise levels generated by the transformers would be 32 dBA L_{eq} or less. A noise level of this magnitude would generally be indistinguishable from ambient noise levels. As a result, the Proposed Project would not cause a substantial permanent increase in ambient noise levels in the vicinity of the Proposed Project above levels existing without the Proposed Project. Impacts would be less than significant.

When a power line is in operation, an electric field is generated in the air surrounding the conductors, forming a "corona." The corona results from the partial breakdown of the electrical insulating properties of air surrounding the conductors. When the intensity of an electric field at the surface of the conductor exceeds the insulating strength of the surrounding air, a corona discharge occurs at the conductor surface, representing a small dissipation of heat and energy. Some of the energy may dissipate in the form of small local pressure changes that create audible noise. Audible noise generated by corona discharge is characterized as a hissing or crackling sound that may be accompanied by a 120-hertz hum.

Slight irregularities or water droplets on the conductor and/or insulator surface accentuate the electric field strength near the conductor surface, thereby making corona discharge and the associated audible noise more likely. Therefore, audible noise from power lines is generally a foul weather (wet conductor) phenomenon. However, during fair weather, insects and dust on the conductors can also serve as sources of corona discharge.

The Electric Power Research Institute (EPRI) conducted several studies of corona effects (EPRI 1978, 1987). The typical noise levels for power lines with wet conductors are shown in Table 4.12-8.

Table 4.12-8: Power Line Voltage and Audible Noise Level

Line Voltage (kV)	Audible Noise Level Directly Below the Conductor (dBA)
138	33.5
240	40.4
356	51.0

Source: CPUC 2009

Based on the line voltage of the proposed power line, operation of the proposed power lines can be predicted to generate noise less than 33.5 dBA based on studies conducted by EPRI (see Table 4.12-8) (CPUC 2009). A noise level of this magnitude would generally be indistinguishable from background noise. Therefore, operation of the proposed transmission facilities would have a negligible effect to existing ambient noise levels in the area. Impacts would be less than significant.

Questions 4.12(e) and (f) – Located within an Airport Land Use Plan or Vicinity of a Private Airstrip

Construction – No Impact

The nearest public airport is Brown Field, located approximately 3.7 miles southwest of the proposed Salt Creek Substation site, TL 6965, TL 6910 loop-in, Existing Substation, and staging yards. None of the Proposed Project components are within 2 miles of Brown Field. Thus, the proposed construction activities would not affect noise generated by airport operations or generate substantial noise. Therefore, the Proposed Project would not expose people working in the Proposed Project area during construction to excessive noise levels attributable to a public airport. No impact would occur.

The nearest private air strip is John Nichol's Field, approximately 3.5 miles to the northeast of the Proposed Project. Similar to Brown Field, none of the Proposed Project components are within 2 miles of John Nichol's Field. Therefore, the Proposed Project would not expose people working in the Proposed Project area during construction to excessive noise levels attributable to a private airstrip. No impact would occur.

Operation and Maintenance – No Impact

None of the Proposed Project components are within 2 miles of Brown Field. Thus, operation and maintenance of the Proposed Project would not affect noise generated by airport operations or generate substantial noise. Therefore, the Proposed Project would not expose people working in the Proposed Project area during operation and maintenance to excessive noise levels attributable to a public airport. No impact would occur.

Similar to Brown Field, none of the Proposed Project components are within 2 miles of John Nichol's Field. Therefore, the Proposed Project would not expose people working in the Proposed Project area during operation and maintenance to excessive noise levels attributable to a private airstrip. No impact would occur.

4.12.5 Project Design Features and Ordinary Construction/Operations Restrictions

With implementation of the ordinary construction restrictions as outlined within Section 3.8, Project Design Features and Ordinary Construction/Operations Restrictions, potential impacts related to noise would remain less than significant.

4.12.6 Applicant-Proposed Measures

Because noise impacts would be less than significant, no APMs are required or proposed beyond adherence to applicable noise standards.

4.12.7 Detailed Discussion of Significant Impacts

Based on the above analyses, no significant impacts have been identified for the Proposed Project, and no APMs are required or proposed.

4.12.8 References

California Department of Transportation (Caltrans). 2004. Transportation- and Construction-Induced Vibration Guidance Manual. p. 24. Sacramento, California. June.

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4.13 Population and Housing

Would the project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☑
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑

4.13.1 Introduction

This section identifies existing population and housing trends in the vicinity of the Proposed Project. The proposed Salt Creek Substation site and the majority of the proposed power line are located within the City of Chula Vista in southwestern San Diego County. For this analysis, the Proposed Project components (Salt Creek Substation, TL 6965 and TL 6910 loop-in, Existing Substation modifications, and staging yards) will be analyzed as a single project since data was compiled on the city-level and the Proposed Project would not displace any people or housing.

The Proposed Project is intended to accommodate existing and planned growth in its vicinity, meet the area's projected electric capacity needs, provide improved substation and circuit reliability with added tie capacity, and reduce area substation loading to optimum operating conditions, among other objectives. The Proposed Project would not extend service into new areas and, therefore, would not have a significant impact on the local or regional population by inducing growth. In addition, the Proposed Project would not displace housing or people. As such, impacts would be less than significant.

4.13.2 Methodology

Data used to conduct demographic and economic analyses were obtained primarily from statistical reports published by the United States Census Bureau (U.S. Census) and the California Department of Finance (CA DOF). A literature search was also conducted, which included City of San Diego publications, supplemented by Internet searches of government websites, including the site for the San Diego Association of Governments (SANDAG).

4.13.3 Existing Conditions

4.13.3.1 Population

Table 4.13-1, Proposed Project Area Population Totals and Trends, identifies population totals and trends within the City of Chula Vista, County of San Diego, and California as a whole. In 2010, the City of Chula Vista had an estimated population of 243,916 residents, a 40.5% increase over the year 2000 population of 173,556. In 2010, the County of San Diego had an estimated population of 3,095,313 and grew approximately 10% from its year 2000 population of 2,813,833. California experienced a similar growth trajectory, with an approximately 10% increase in population from 2000 to 2010 (CA DOF 2012a; SANDAG 2012; U.S. Census 2000, 2010a).

The City of Chula Vista is projected to continue growing through the year 2030, with an 18.5% increase in population to 288,978. This growth rate is lower than the County of San Diego's projected percent increase in population (20.4%) and California as a whole (19.7%).

Table 4.13-1: Proposed Project Area Population Totals and Trends

Jurisdiction	2000 Total Population	2010 Total Population	Percent Increase 2000 to 2010	2020 Projected Population	2030 Projected Population	Projected Percent Increase 2010 to 2030
City of Chula Vista	173,556	243,916	40.5	267,418	288,978	18.5
County of San Diego	2,813,833	3,095,313	10.0	3,405,068	3,725,900	20.4
State of California	33,871,648	37,253,956	10.0	40,817,839	44,574,756	19.7

Sources: CA DOF 2012a; SANDAG 2012; U.S. Census 2000, 2010a

4.13.3.2 Housing

Table 4.13-2, Proposed Project Area Total Housing Units and Vacancy Rates, identifies data for the City of Chula Vista and the County of San Diego with regard to the number of housing units and associated vacancy rates. The City of Chula Vista experienced a 33.4% increase in housing units between 2000 and 2010, from 59,529 units to 79,416 units, resulting from a large increase of single-family homes in its eastern master-planned communities. In 2010, the City of Chula Vista had 79,416 housing units, with an approximately 4.9% vacancy rate. This vacancy rate is lower than the rate for the County of San Diego (6.7%). The City of Chula Vista is predicted to experience a 19.1% growth in housing units by 2030, which is slightly higher than the County of San Diego's predicted growth rate (17.6%) (SANDAG 2012; U.S. Census Bureau 2010a).

Table 4.13-2: Proposed Project Area Total Housing Units and Vacancy Rates

Jurisdiction	Total Housing Units, 2010	Percent Vacant, 2010	Total Housing Units, 2020	Total Housing Units, 2030	Projected Percent Increase 2010 to 2030
City of Chula Vista	79,416	4.9	88,186	94,608	19.1
County of San Diego	1,164,786	6.7	1,262,488	1,369,807	17.6

Sources: SANDAG 2012; U.S. Census Bureau 2010a

Temporary Housing

A number of hotels and motels are available in the City of Chula Vista and the surrounding unincorporated areas of the County of San Diego near the Proposed Project. These include the Best Western Plus Otay Valley, California Suites, Comfort Suites Otay Mesa, and Holiday Inn Express Hotel and Suites.

4.13.3.3 Employment and Income

Table 4.13-3, Proposed Project Area Employment Figures and Unemployment Range, 2010, identifies the total employment and unemployment rates for the City of Chula Vista and the County of San Diego. In 2010, the City of Chula Vista had a labor force of 185,097 people, of which 55.2% were employed. The unemployment rate for the County of San Diego was 11.3% in 2010, which is lower than the unemployment rate for the City of Chula Vista (14.7%) (U.S. Census Bureau 2010b).

Table 4.13-3: Proposed Project Area Employment Figures and Unemployment Range, 2010

County/City	Population 16 years and Older[1]	Total Civilian Labor Force[2]	Total Employed	Total Unemployed	Percent Employed	Unemployment Rate
City of Chula Vista	185,097	129,382	102,173	27,209	55.2	14.7%
County of San Diego	2,465,928	1,627,513	1,348,863	278,650	54.7	11.3%

Source: U.S. Census Bureau 2010b
[1] The total population of people age 16 and older who are neither in an institution nor on active duty in the Armed Forces, which includes the total civilian labor force.
[2] The sum of the employed and the unemployed constitutes the civilian labor force.

4.13.3.4 Regulatory Setting

Federal

The U.S. Census is a decennial census mandated by the United States Constitution. The population is enumerated every 10 years, and the results are used to allocate Congressional seats (congressional apportionment), electoral votes, and government program funding. The United States Census Bureau (officially the Bureau of the Census, as defined in Title 13 U.S. Code [USC] Section 11) is the government agency that is responsible for the U.S. Census.

State

The California Complete Count effort was developed to ensure that Californians received their fair share of federal resources and Congressional representation by encouraging the full participation of all Californians in the 2010 U.S. Census. This effort established the infrastructure for statewide outreach to ensure all Californians were counted. The state's role was to convene, coordinate, and partner with the U.S. Census Bureau, local and tribal governments, foundations, community-based organizations, faith-based groups, schools, businesses, the media, and others.

Local

San Diego Association of Governments

SANDAG creates and maintains historic and current demographic and economic information for the San Diego region. In addition, it produces growth forecasts of population, housing, and income for the region to assist local jurisdictions in planning facilities, services, and development practices over the long-term.

County of San Diego General Plan

The County of San Diego General Plan Housing Element (County of San Diego 2011) was updated on April 24, 2013, with recent demographic data and information pertaining to the county's ability to meet the state's Regional Housing Needs Assessment goals. There are no specific policies or regulations of the county's Housing Element that are applicable to the Proposed Project.

City of Chula Vista General Plan

The City of Chula Vista Housing Element (City of Chula Vista 2005) includes a discussion of programs for providing housing, but no specific policies or regulations of the Housing Element are applicable to the Proposed Project.

4.13.4 Impacts

4.13.4.1 Significance Criteria

Determination of impacts was derived from Appendix G of the CEQA Guidelines. Impacts to population and/or housing would be considered potentially significant if they:

- induce substantial population growth in an area, either directly or indirectly;
- displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere; and/or
- displace a substantial number of people, necessitating the construction of replacement housing elsewhere.

4.13.4.2 Impact Analysis

Question 4.13(a) Induce substantial population growth

Construction – No Impact

Construction activities for the Proposed Project and its components are anticipated to occur for approximately 18 to 24 months from initial site development through energization and testing. The estimated number of workers involved in various construction phases would be dependent on local jurisdiction permitting, material availability, and construction scheduling. It is anticipated that approximately 15 to 35 workers would be employed during the different construction phases of the Proposed Project. During peak times, SDG&E may require up to approximately 35 workers per day. The increased demand for construction workers for the Proposed Project would be temporary and, therefore, would not induce substantial population growth in the area. It is anticipated that most of the construction workers for the Proposed Project would reside within the County of San Diego, outside the immediate vicinity of the Proposed Project. Due to the scope of the proposed improvements, construction of the Proposed Project is not expected to increase the desirability or affordability of the area, or cause a significant increase in permanent population within the local community or otherwise. Construction of the Proposed Project would not result in any other increases in population, as the Proposed Project would not provide access to previously inaccessible areas, extend public services to previously unserved areas, or cause new development elsewhere. Therefore, no impacts would occur.

The Proposed Project may require temporary accommodations for construction workers during construction. However, this need is anticipated to be met by hotels and motels available in the City of Chula Vista and surrounding areas. Therefore, no new housing would need to be built for temporary construction workers. No impacts would occur.

Operation and Maintenance – No Impact

Following construction of the Proposed Project, no permanent jobs are expected to be created in the vicinity of the Proposed Project. When in operation, the proposed Salt Creek Substation would be unattended and remotely operated. It would not require dedicated, full-time personnel. Routine operations would require one or two workers to visit the proposed Salt Creek Substation on a daily or weekly basis. Routine maintenance visits to the proposed Salt Creek Substation site would require two to four workers and would be up to six trips per year.

In general, existing access roads within the existing Transmission Corridor would be used for construction and future maintenance of the proposed TL 6965. An existing sewer access road, from Hunte Parkway to the proposed Salt Creek Substation site, would be widened to ensure adequate substation access and to accommodate the proposed 12-kV underground conduit packages in the access road without disturbing the existing sewer line in the road. After construction, the access roads would only be used for occasional maintenance operations and would not provide new roadside development or access opportunities for local industry or commerce in the area. Therefore, the existing and improved access roads would not directly or indirectly induce population growth.

The Proposed Project is being built to meet the current and anticipated future electrical needs of the area and, therefore, would not induce substantial population growth in the area either directly or indirectly. SANDAG and other planning agencies do not perceive the availability of electricity as a driver of growth. Nor is the lack of electricity treated as a barrier to growth. Rather, electrical supply responds to planned growth, and that planned growth inherently requires its own, separate environmental review. Additionally, long-term operation and maintenance activities for the Proposed Project would not result in the demand for new residential units or significantly increase the desirability or affordability of the surrounding area. Similarly, it would not create new opportunities for local industry or commerce, or impact population growth in the area. As a result, the Proposed Project is not expected to cause a direct or indirect increase in population growth. As such, no impact would occur.

Question 4.13(b) Displace a substantial number of existing housing

Construction – No Impact

The Proposed Project would include construction of the proposed Salt Creek Substation, TL 6965 from the Existing Substation, the TL 6910 loop-in, 12-kV distribution circuits from the proposed Salt Creek Substation, and a new 69-kV power line position at the Existing Substation. In general, the Proposed Project would be developed on land that is either owned by SDG&E or within existing SDG&E easements, with the exception of the Hunte Parkway staging yard and alternative staging yards at the OTC, which would be used only temporarily. Housing is not present within the Proposed Project area, including the proposed Salt Creek Substation site, within the proposed power line route, within the loop-in, or at staging yards. Although residences are located near portions of the Proposed Project components, existing housing would not be displaced or relocated as a result of construction of the Proposed Project. Accordingly, the Proposed Project would not necessitate the construction of replacement housing elsewhere; therefore, no impact would occur.

Temporary work areas would generally be located on SDG&E-owned property (proposed Salt Creek Substation site and Existing Substation) or within the existing transmission ROW. Staging construction material, equipment, and vehicles would occur at off-site staging yards. No housing is present in the temporary work areas or staging areas. As such, no existing housing units would be displaced by the required temporary work areas or staging areas; therefore, no impact would occur.

Operation and Maintenance – No Impact

Operation and maintenance of the Proposed Project facilities would include regular inspection, repair work, and vegetation removal activities, as needed. These activities currently occur for the existing SDG&E facilities in the area, and would generally remain the same for the proposed Salt Creek Substation and associated components. As there are no housing units located on the proposed Salt Creek Substation site or the within the existing Transmission Corridor, regular operation and maintenance practices required for the Proposed Project facilities would not displace any existing housing. Therefore, no impact would occur.

Question 4.13(c) Displace a substantial number of people

Construction – No Impact

There is no existing housing within the Proposed Project area. The Proposed Project would be constructed on lands owned by SDG&E or within an existing utility ROW. No people would be displaced with construction of the Proposed Project. Therefore, no impact would occur.

Operation and Maintenance – No Impact

There is no existing housing on the Proposed Project area. The Proposed Project would be constructed on lands owned by SDG&E or within an existing utility ROW. Operation and maintenance of project components would not displace people or necessitate the construction of replacement housing elsewhere. Therefore, no impact would occur.

4.13.5 Project Design Features and Ordinary Construction/Operations Restrictions

There are no specific policies, standards, regulations, or design features that are necessary to minimize impacts from the Proposed Project. No impacts to population and housing are anticipated with Proposed Project implementation.

4.13.6 Applicant-Proposed Measures

No impacts on population and housing are anticipated with implementation of the Proposed Project; therefore, no APMs are required or proposed.

4.13.7 Detailed Discussion of Significant Impacts

Based on the above analyses, no impacts have been identified for the Proposed Project, and no APMs are required or proposed.

4.13.8 References

California Department of Finance (CA DOF). 2012a. Interim Population Projections for California and Its Counties 2010–2050. Available at http://www.dof.ca.gov/research/demographic/reports/projections/interim/view.php. Accessed August 22, 2012.

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4.14 Public Services

Would the project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities (the construction of which could cause significant environmental impacts), in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
a. Fire protection?	☐	☐	☐	☑
b. Police protection?	☐	☐	☐	☑
c. Schools?	☐	☐	☐	☑
d. Parks?	☐	☐	☐	☑
e. Other public facilities?	☐	☐	☐	☑

4.14.1 Introduction

The purpose of this section is to describe local public services in the area proposed for location of the Proposed Project and to evaluate potential effects on such existing (and future) services. Fire and emergency services, police and protective services, hospitals, schools, and parks are addressed, and the potential effects resulting from Proposed Project construction, operation, and maintenance are evaluated. For this analysis, the Proposed Project (Salt Creek Substation, TL 6965, TL 6910 loop-in, Existing Substation modifications, and staging yards) is not broken down into its components and is analyzed as a whole, since the Proposed Project would result in no impacts to public services.

4.14.2 Methodology

Information regarding local public services was obtained through Internet research of local planning agencies. Data regarding fire, police, and emergency services were obtained from the City of Chula Vista website, County of San Diego website, and individual web pages for the fire and police departments. Data pertaining to local area schools were obtained through various Internet searches (Google 2012), as well as the Chula Vista Elementary School District and the Sweetwater Union High School District websites. Statistics pertaining to local hospitals, area recreational amenities, and public libraries were also obtained through Internet research.

4.14.3 Existing Conditions

A regulatory setting section is not applicable to this section due to the nature of public utilities being locally controlled and regulated. Therefore, this Existing Conditions section provides the existing setting for each public utility.

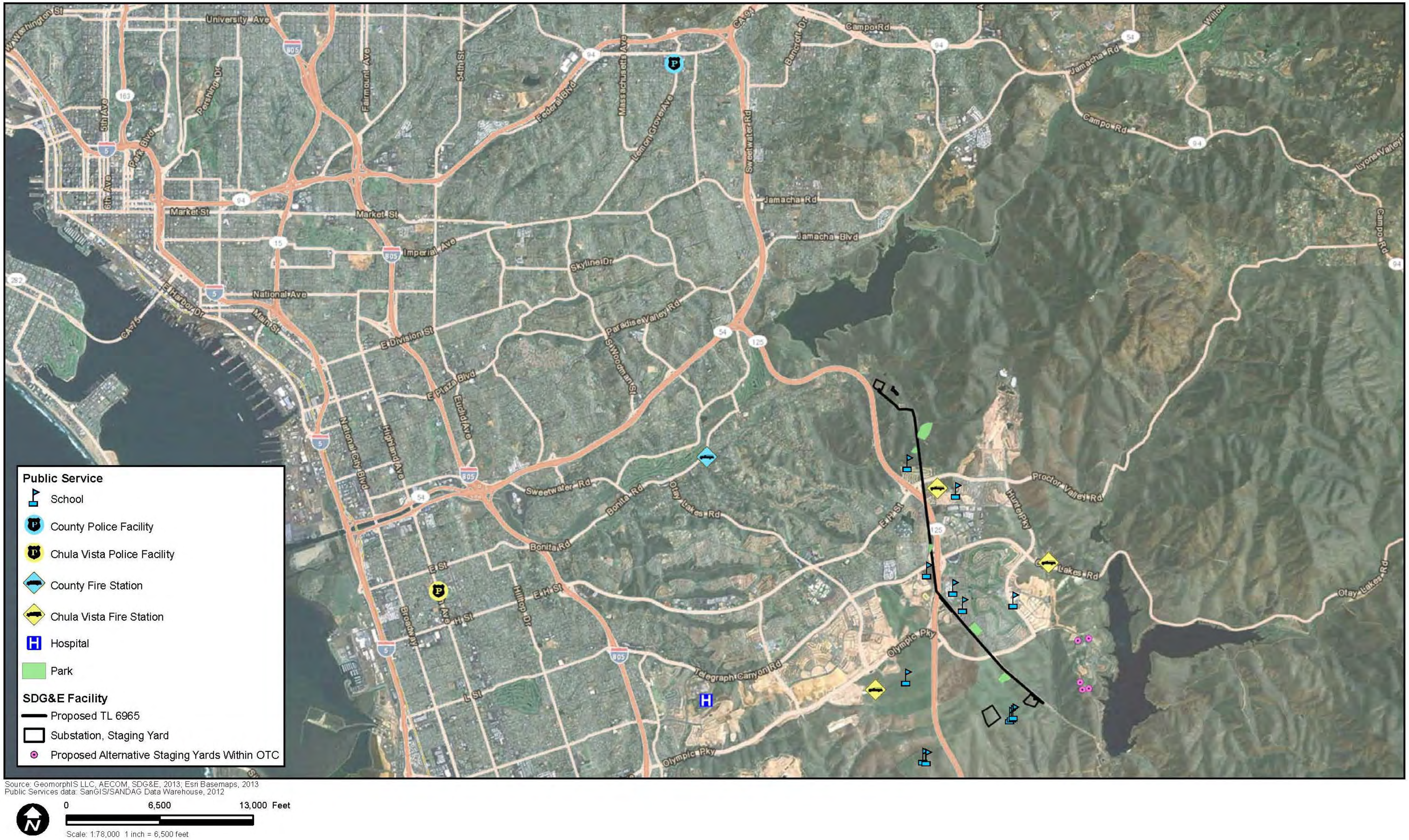
4.14.3.1 Fire and Emergency Services

The Chula Vista Fire Department (CVFD) provides residents with fire and life-saving services, including fire protection, rescue services, emergency medical services, fire inspections, plan checking, disaster preparedness, public education, and hazardous materials response. It serves the 52-square-mile City of Chula Vista. During a typical 24-hour shift, 36 line firefighters and two Battalion Chiefs are on constant duty, spread among the city's nine fire stations. Each station has at least a captain, engineer, and one firefighter. Fire Station #3 has one additional firefighter to staff a heavy rescue truck. Fire Stations #1 and #7 have one additional captain, engineer, and two firefighters to staff a ladder truck. The CVFD's medical transport is provided through a contract with American Medical Response (City of Chula Vista 2012a).

Three fire stations are in the Proposed Project vicinity. Both Fire Station #7, located at 391 Oxford Street, and Fire Station #8, located at 1180 Woods Drive, are approximately 2 miles from the proposed Salt Creek Substation and any point along TL 6965. Fire Station #6, located at 605 Mt. Miguel Road, is approximately 0.5 mile from the Existing Substation, where TL 6965 terminates (Figure 4.14-1). All three fire stations provide both fire protection and medical/rescue services.

Although the majority of the Proposed Project is within the City of Chula Vista, the Existing Substation improvements are within the County of San Diego. Within the unincorporated region's emergency services system, fire and emergency medical services are provided by Fire Protection Districts (FPD), County Service Areas (CSA), and CAL FIRE. Collectively, there are more than 2,800 firefighters responsible for protecting the San Diego region from fire. Generally, each agency is responsible for structural fire protection and wildland fire protection within their area of responsibility. However, mutual and automatic aid agreements enable non-lead fire agencies to respond to fire emergencies outside of their district boundaries (County of San Diego 2011). The nearest fire station within the jurisdiction of the County of San Diego that would serve the Existing Substation is the Bonita–Sunnyside Fire Protection District located at 4900 Bonita Road, approximately 2.5 miles east of the Existing Substation. The Bonita–Sunnyside Fire Protection District employs a three-person fire board, 12 firefighters, one fire chief, a district secretary/office manager, and a full-time office assistant. Fire crews are divided into three different divisions, with four firefighters per division. Each division contains a captain, engineer, and two firefighter paramedics working 24-hour shifts. Fire equipment includes a first line 1999 Pierce Quantum Rescue Pumper, 1988 Beck Pumper, and a 1954 Mack Parade Engine (Bonita–Sunnyside Fire Protection District 2012).

Figure 4.14-1: Public Services



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4.14.3.2 Police and Protection Services

The City of Chula Vista Police Department serves the majority of the Proposed Project area. The main headquarters is located at 315 Fourth Avenue in Chula Vista, approximately 8 miles northwest of the Proposed Project area (Figure 4.14-1). In addition to police protection services, the Police Department operates a number of specialized divisions that include the Administrative Services, Patrol Operations, and Investigation Divisions (City of Chula Vista 2012b).

The Proposed Project within the City of Chula Vista is served by the Patrol Division, which provides law enforcement to residents and visitors 24 hours per day, 7 days per week. Patrol Division officers work 10-hour days, 4 days per week.

The Existing Substation is within the County of San Diego and is within the jurisdiction of the San Diego County Sheriff's Department (SDSD). SDSD is the chief law enforcement agency in San Diego County. SDSD is the fourth largest Sheriff's Department in the U.S. It has a service area of approximately 4,200 square miles and serves a population of more than 870,000 people. SDSD has approximately 4,000 employees, 800 vehicles, and a fleet of helicopters. SDSD operates eight major detention facilities, and provides security for 171 courtrooms and 10 courthouses throughout the county (County of San Diego 2011). Approximately 448,700 of these county residents are located in the unincorporated areas of the County of San Diego; the remainder are located in the following nine cities that contract with SDSD: Del Mar, Encinitas, Imperial Beach, Lemon Grove, Poway, San Marcos, Santee, and Solana Beach, and Vista.

The nine cities that contract with SDSD typically provide more comprehensive law enforcement services than the unincorporated county. The nearest county Sheriff's station is the Lemon Grove station, located at 3240 Main Street in Lemon Grove, approximately 5 miles north of the Existing Substation (Figure 4.14-1).

4.14.3.3 Hospitals

The closest major medical facility to the Proposed Project is the Sharp Chula Vista medical Center, located at 751 Medical Center Court. It is approximately 6 miles west of the Proposed Project area (Figure 4.14-1).

4.14.3.4 Schools

The Proposed Project area lies within the Chula Vista Elementary School District and the Sweetwater Union High School District. The nearest school to the proposed Salt Creek Substation is the High Tech complex, which consists of an elementary, middle, and high school, located at 1945 Discovery Falls Drive. This is a charter school and serves kindergarten through 12th grades. Several other elementary and high schools are near TL 6965, including Olympic View Elementary, East Lake High School, Marshall Elementary, Arroyo Vista Elementary, Veteran's Elementary, East Hills Academy, Olympian High, and Liberty Elementary (Chula Vista Elementary School District 2012; Sweetwater Union High School District 2012) (Figure 4.14-1).

4.14.3.5 Parks

Several city parks are near the Proposed Project: Mount San Miguel Community Park, St. Germaine Tennis Courts, Sunset View Park, and Windingwalk Park (City of Chula Vista 2012c) (Figure 4.14-1).

4.14.4 Impacts

4.14.4.1 Significance Criteria

Determination of impacts was derived from Appendix G of the CEQA Guidelines. Impacts to public services would be considered potentially significant if the Proposed Project would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other similar performance objectives for the following public services:

- Fire protection
- Police protection
- Schools
- Parks
- Other public facilities

4.14.4.2 Impact Analysis

Construction – No Impact

Proposed Project components would be constructed within the City of Chula Vista and the County of San Diego. Due to the nature of the Proposed Project, construction of Proposed Project facilities is not likely to adversely affect the use or operation of any public services or facilities within the immediate area, including fire or police protection services, emergency services, schools, parks, hospitals, or other services. The Proposed Project would not generate the need for new or additional public services, as it would not result in construction of residential or other land uses that would directly or indirectly induce area population growth; refer also to Chapter 6.0, Other CEQA Considerations, for additional discussion of growth-inducing impacts. No impacts would occur.

Fire and Police Protection

Several emergency providers are located in the vicinity of the Proposed Project. Emergency providers include both City of Chula Vista and County of San Diego facilities, and both jurisdictions have mutual and automatic aid agreements enabling the non-lead agencies to respond to emergencies outside of their district boundaries. The City of Chula Vista Police Department serves the majority of the Proposed Project area and is approximately 8 miles northwest of the Proposed Project area. The closest fire stations to the Proposed Project area are Chula Vista Fire Station #7 and Fire Station #8, both approximately 2 miles from the proposed Salt Creek Substation and any point along TL 6965. Fire Station #6 is approximately 0.5 mile from the northern terminus of TL 6965. The Bonita–Sunnyside Fire Protection District is approximately 2.5 miles east of the Existing Substation.

Construction activities are not anticipated to interfere with operations at the City of Chula Vista Police Department; Fire Stations #6, #7, and #8; or the Bonita–Sunnyside station due to their distances from the Proposed Project. Therefore, construction of Proposed Project facilities would not directly interfere with operations of fire protection, police, or other emergency service providers in the immediate area.

The Proposed Project would not result in an increase in the temporary demand for or the alteration of the level of, local public services required, as it would not perceptibly increase area population or demands for housing. Although the need for emergency services may occur during the construction phase of the Proposed Project, such a need would not significantly affect existing emergency services or require service beyond existing capacities. Construction is not anticipated to affect response times, as any lane or road closures, if necessary, would be temporary and all streets would remain open to emergency vehicles at all times throughout construction. In addition, SDG&E would implement appropriate traffic control measures that would be outlined in the Traffic Control Plan. Therefore, no impacts would occur.

Schools

Construction activities would not perceivably increase local population. Construction activities associated with the Proposed Project would not result in the direct or indirect increase in school enrollment or the demand for educational services. It is anticipated that the majority of construction crew members would be hired from the local labor force; therefore, Proposed Project construction would not create a significant new workforce that would result in a new or increased demand for school services. Operation and maintenance of the Proposed Project would not require additional employees; therefore, a significant new workforce that may require educational services is not anticipated. Accordingly, construction of the Proposed Project would not significantly impact local school enrollment or generate the need for new or expanded educational facilities. As a result, no impacts would occur.

Parks

Several parks are located adjacent to the Proposed Project, including Mount San Miguel Community Park, St. Germaine Tennis Courts, Sunset View Park, and Windingwalk Park. Due to the nature of the proposed use, construction of the Proposed Project would not significantly increase local population or reduce the availability of area recreational resources, including park facilities. As such, construction would not result in the need for new parks or the expansion of existing parks. Therefore, no impacts to parks or other recreational facilities would result with construction of the Proposed Project.

Hospitals

The closest major medical facility to the Proposed Project is the Sharp Chula Vista Medical Center, approximately 6 miles west of the Proposed Project area. Construction of the Proposed Project facilities would not directly interfere with operations of the medical center. Therefore, no impacts to hospitals or medical facilities would result with construction of the Proposed Project.

Operation and Maintenance – No Impact

The proposed Salt Creek Substation would operate as an unattended facility. Long-term operation and maintenance activities for the facilities would not interfere with existing public services or create a new demand for such services, as they would be limited to intermittent visits to the site for maintenance purposes. It is anticipated that an operator would visit the proposed Salt Creek Substation several times a week for monitoring purposes. Maintenance of the proposed Salt Creek Substation facilities would be limited to a few times per year and for no more than a few days at a time, as needed. As such, there would be no impacts to public services resulting from long-term operation and maintenance of the Proposed Project.

4.14.5 Project Design Features and Ordinary Construction/Operations Restrictions

There are no specific policies, standards, regulations, or design features that are necessary to minimize impacts from the Proposed Project. SDG&E would, nonetheless, comply with the Salt Creek Fire Plan and Traffic Control Plan pertaining to the Proposed Project. Impacts to public service systems with Proposed Project implementation would be less than significant.

4.14.6 Applicant-Proposed Measures

No potentially significant impacts relative to public service systems would result from the Proposed Project. As such, no APMs are required or proposed.

4.14.7 Detailed Discussion of Significant Impacts

Based on the above analyses, no significant impacts have been identified for the Proposed Project, and no APMs are required or proposed.

4.14.8 References

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Chula Vista Elementary School District. 2012. Schools – Location Map. Available at http://www.cvesd.org/schools/allschools/Documents/map_cvesd-schools.pdf. Accessed June 2012.

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4.15 Recreation

Would the project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	❒	❒	☑	❒
b. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse effect on the environment?	❒	❒	❒	☑

4.15.1 Introduction

This section describes the existing recreational facilities in the vicinity of the Proposed Project, and evaluates potential impacts to recreational resources that may result from construction or operation and maintenance of the Proposed Project. The proposed Salt Creek Substation site and the majority of the proposed power lines would be located within the City of Chula Vista. The Proposed Project does not include a recreational component and would not increase the use of recreational facilities in the area. As such, impacts would be less than significant. Any additional impacts related to recreational facilities (e.g., noise, aesthetics) are discussed in their corresponding sections.

4.15.2 Methodology

This recreation analysis involved a review of various documents, including aerial photographs of the Proposed Project area, the City of Chula Vista General Plan (2005), the City of Chula Vista Draft Parks and Recreation Master Plan Update (2010), and the Chula Vista Greenbelt Master Plan (2003). A literature search was conducted, which included County of San Diego publications, supplemented by Internet searches of government websites.

4.15.3 Existing Conditions

4.15.3.1 Regulatory Setting

County of San Diego General Plan

The Conservation and Open Space Element of the County's General Plan (County of San Diego 2011) discusses parks and recreational opportunities within the county. There are no relevant goals or policies applicable to the Proposed Project.

City of Chula Vista

General Plan

The Public Facilities and Services Element of the City of Chula Vista's General Plan (City of Chula Vista 2005) provides an inventory of existing recreational facilities and describes the different types of parks and recreational facilities within the City of Chula Vista. The General Plan includes the following applicable policies related to recreational facilities:

> **Policy PFS 15.4:** Promote the inclusion of park and recreation facilities in or near development areas to both serve the new development and to contribute to meeting existing park and recreation needs.

> **Policy PFS 15.7:** Work with proponents of new development projects and redevelopment projects at the earliest stages to ensure that parks, recreation, trails, and open space facilities are designed to meet City standards and are built in a timely manner to meet the needs of residents they will serve.

Parks and Recreation Master Plan

The Parks and Recreation Master Plan was updated in 2010 and contains an inventory of existing recreational facilities, a needs assessment, and policies to implement the General Plan (City of Chula Vista 2010). It defines community needs and establishes goals and policies for parks and recreational facilities. The following policy is applicable to the Proposed Project:

> **Policy 1.4:** The City will pursue the recreational opportunities associated with public agency-owned lands and utility rights-of-way.

Greenbelt Master Plan

The Greenbelt Master Plan provides an open space and trails plan based on the City of Chula Vista's General Plan (City of Chula Vista 2003). The Greenbelt consists of 28 linear miles of connected open space and trails encircling the City of Chula Vista. The Greenbelt connects the Sweetwater Valley Regional Park to the north, Otay Valley Regional Park (OVRP) to the south, Otay Lakes to the east, and San Diego Bay to the west. The Greenbelt Master Plan is designed for implementation over several years, with close coordination between resource agencies and local jurisdictions, including the County of San Diego and City of San Diego.

4.15.3.2 Parks and Recreational Facilities

The City of Chula Vista currently includes the following hierarchy of parks: regional, community, neighborhood, mini-parks, urban parks, and special purpose parks, as described below and shown in Figure 4.15-1.

Regional Parks

Regional parks are large open space and recreational facilities, such as public golf courses, beaches, lakes, trails, and wildlife refuges. In 2004, the City of Chula Vista had more than 9,400 acres of regional parks, including portions of the Sweetwater and Otay River Valleys and the Otay Reservoirs (City of Chula Vista 2005).

OVRP is an 8,700-acre regional open space that is an ongoing project between three jurisdictions: City of Chula Vista, City of San Diego, and County of San Diego. OVRP contains a preserve, as well as active and passive recreation, including equestrian, hiking, and biking trails. It is located in the southwestern portion of the City of Chula Vista, approximately 5 miles southwest of the proposed Salt Creek Substation site. According to the City of Chula Vista's General Plan, there are plans to extend this park east along the southern boundary of the City of Chula Vista to the land surrounding both Lower and Upper Otay Lakes (City of Chula Vista 2005).

The Sweetwater Regional Park extends throughout the Sweetwater River Valley and consists of 570 acres, of which 178 acres is located within the City of Chula Vista. The park is located approximately 1 mile northwest of the proposed power lines and contains camping sites, equestrian trails, picnic areas, an aquatic park, fishing, and an amphitheater.

Community Parks

Community parks are designed to serve more than one neighborhood and are ideally 30 acres or more. Community parks provide a wide variety of facilities, including swimming pools, playing fields, recreation centers, cultural centers, and picnic areas. The City of Chula Vista currently contains nine community parks, and is planning to double the number of community parks to 18 by 2030 (City of Chula Vista 2010).

Mount San Miguel Community Park is an approximately 19-acre park located adjacent to the northern portion of the proposed power lines and approximately 0.75 mile southeast of the Existing Substation. This park includes ball fields, a dog park, walking trails, tennis courts, and picnic areas.

Neighborhood Parks

Neighborhood parks mainly serve local residents and range in size from 5 to 15 acres. They include open space, playing fields, play equipment, and picnic areas. The City of Chula Vista currently contains 34 neighborhood parks, and is planning to increase the number of neighborhood parks to 46 by 2030 (City of Chula Vista 2010).

Two neighborhood parks are located adjacent to the Proposed Project. Sunset View Park is an approximately 12-acre neighborhood park with soccer fields, basketball courts, playgrounds, and picnic areas. The proposed power lines run adjacent to the southwestern boundary of Sunset View Park.

Windingwalk Park is an approximately 7-acre neighborhood park with ball fields, a playground, tennis courts, and picnic areas. The northeastern boundary of Windingwalk Park would abut the proposed power lines, and the park is approximately 0.35 mile northwest of the proposed Salt Creek Substation.

Mini-Parks and Urban Parks

Mini-parks and urban parks are both public and private facilities that are typically smaller than 4 acres. Mini-parks serve a smaller number of residents and contain limited facilities. Urban parks are generally located in urban downtown areas amid infill and redevelopment activity. Urban parks may contain public plazas, play structures, public art features, sports courts, trails, picnic areas, dog walk areas, some grass play areas, and trees. The City of Chula Vista currently contains 10 mini-parks and one urban park, and is planning to increase the number of mini-parks/urban parks to 29 by 2030 (City of Chula Vista 2010).

St. Germaine Tennis Courts is a 1.1-acre mini-park that would be located adjacent to the proposed power lines along SR-125 between Otay Lakes Road and Eastlake Parkway. This mini-park contains two tennis courts.

Special-Purpose Parks

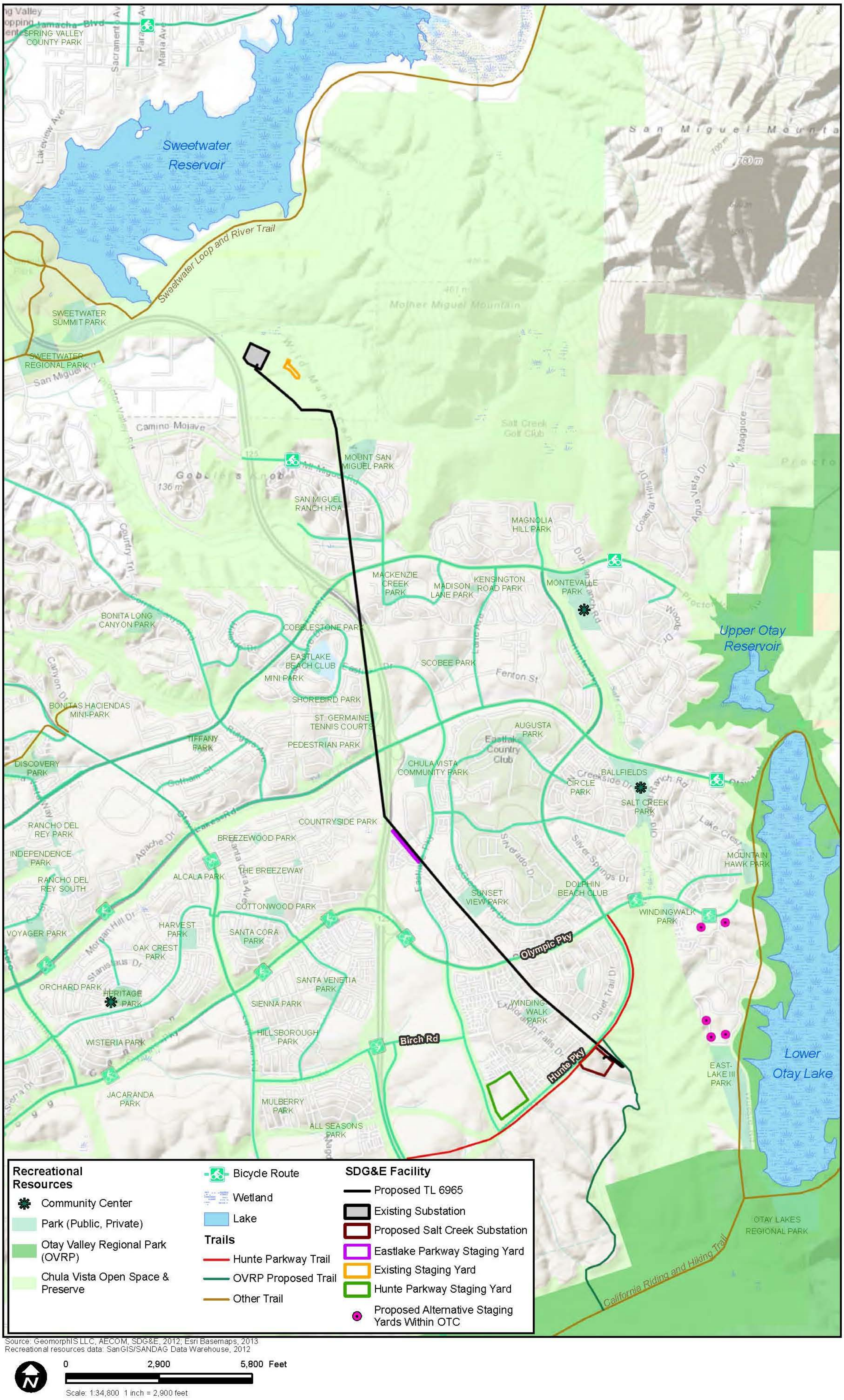
Special-purpose parks can vary in size and be up to 30 acres or more, and contain specialized facilities that serve the entire City of Chula Vista. The Living Coast Discovery Center (formerly known as the Nature Center) is the only special purpose park in the City of Chula Vista. It is a 3.4-acre zoo and aquarium located in the northwestern corner of the City, approximately 7.5 miles west of the proposed power lines.

4.15.3.3 Community Centers

The City of Chula Vista currently contains 12 community centers and is planning to add one more by 2030 (City of Chula Vista 2010). The Montevalle Community Center is located approximately 1.2 miles east of the proposed power lines, near the corner of Hunte Parkway and Proctor Valley Road. The Salt Creek Community Center is located approximately 1.5 miles east of the proposed power lines on Otay Lakes Road.

A private 2-acre recreational facility is located adjacent to the western boundary of the proposed power lines on Calle Marina. Part of the San Miguel Ranch Homeowner’s Association (HOA), the recreational facility includes a pool, tennis court, playground, and community rooms.

Figure 4.15-1: Recreational Facilities



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4.15.3.4 Trails and Bicycle Facilities

The Greenbelt Master Plan anticipates a 28-mile open space trail system that encircles the City of Chula Vista and links to the city's current park system (City of Chula Vista 2003). Currently, the Sweetwater Loop and River Trail is an approximately 8-mile trail that navigates around the Sweetwater Reservoir and is located approximately 0.75 mile north of the Existing Substation (County of San Diego 2005). The approximately 100-mile portion of the California Riding and Hiking Trail, an ongoing project to create a 3,000-mile statewide trail system, was restored in San Diego County between Otay Lakes to Cuyamaca Rancho State Park. The California Riding and Hiking Trail is located approximately 1 mile southeast of the proposed Salt Creek Substation site and travels along the Otay River. The existing Hunte Parkway Trail runs adjacent to the proposed Salt Creek Substation site and extends along Hunte Parkway from Olympic Parkway to SR-125. In addition, the OVRP proposed trail would extend from Hunte Parkway, in the vicinity of the existing transmission access road, down into the OVRP.

The City of Chula Vista maintains a bicycle system; refer to Section 4.16, Transportation and Traffic, for more information.

4.15.4 Impacts

4.15.4.1 Significance Criteria

Determination of impacts was derived from Appendix G of the CEQA Guidelines. Impacts to recreation would be considered potentially significant if the Proposed Project would:

- increase the use of existing neighborhood and regional parks or other recreational facilities to the extent that substantial physical deterioration of the facility will occur or be accelerated, or
- require the construction or expansion of recreational facilities to meet population demand, potentially resulting in an adverse physical effect on the environment.

4.15.4.2 Impact Analysis

Question 4.15(a) Increase the use of existing recreational facilities

Construction – Less-than-Significant Impact

The Proposed Project would not require construction of new recreational facilities, and it would not increase the use of existing neighborhood, community, or regional parks or other recreational facilities, as it would not result in an increase in population. Trails are located along Hunte Parkway adjacent to the proposed Salt Creek Substation and also along portions of the Transmission Corridor. During construction it may be necessary to temporarily close off sections of trails to keep the public at a safe distance from construction areas, as described below.

Salt Creek Substation

The proposed Salt Creek Substation would be located approximately 0.35 mile southeast of Windingwalk Park. Construction activities for the proposed Salt Creek Substation are anticipated to occur for approximately 18 to 24 months, and may require up to 35 workers per day during peak times. These workers may periodically use nearby parks during breaks or after work; however, their use of these facilities would be temporary and would not contribute to a significant use of the parks or other recreational facilities in the area. Therefore, impacts would be less than significant.

Patrons using the access roads in the adjacent Transmission Corridor or paths/trails along Hunte Parkway may experience a slight temporary increase in noise, dust, and odors from construction equipment during construction of the Proposed Project. These increases would occur periodically and intermittently over a period of no longer than 24 months. Construction notices and temporary closures would be posted to alert the public of any construction in the area. SDG&E would coordinate with the City of Chula Vista on trail closure needs during construction. Since construction would be temporary and would not disrupt large portions of existing access roads or paths/trails, impacts would be less than significant.

TL 6965 and TL 6910 Loop-In

The proposed TL 6965 within the existing Transmission Corridor would be located adjacent to five recreational facilities. The northern portion of the Transmission Corridor is adjacent to the western boundary of Mount San Miguel Community Park and the western boundary of the Transmission Corridor is adjacent to the San Miguel Ranch HOA recreational facility. In addition, St. Germaine Tennis Courts is located adjacent to the Transmission Corridor along SR-125 between Otay Lakes Road and Eastlake Parkway.

Two parks would be near the southern portion of the proposed power lines: Sunset View Park and Windingwalk Park. The proposed power lines run adjacent to the southwestern boundary of Sunset View Park and adjacent to the northeastern boundary of Windingwalk Park.

Construction activities for the power lines are anticipated to occur for approximately 8 to 12 months and may require up to 35 workers per day during peak times. These workers may periodically use nearby parks during breaks or after work; however, their use of these facilities would be temporary and would not contribute to a significant use of the parks or other recreational facilities in the area. Therefore, impacts would be less than significant.

Patrons of the access roads or paths/trails along the existing Transmission Corridor may experience a slight temporary increase in noise, dust, and odors from construction equipment during construction of the Proposed Project. These increases would occur periodically and intermittently over a period of no longer than 12 months. Construction notices and temporary closures would be posted to alert the public of any construction in the area. SDG&E would coordinate with the City of Chula Vista on trail closures, as needed, during construction. Since construction would be temporary and would not disrupt large portions of the existing access roads or paths/trails, impacts would be less than significant.

Existing Substation Modifications

The Existing Substation is approximately 0.75 mile northwest of Mount San Miguel Community Park. Modifications would occur at the Existing Substation on SDG&E's existing fee-owned property as part of the Proposed Project. Modifications proposed would occur within the

Existing Substation. No public use of access roads or trails exists in the vicinity of the Existing Substation. Therefore, no impacts to trail users would occur.

Proposed modifications at the Existing Substation are anticipated to take approximately 3 months and may require up to 35 workers. This minor increase in workers in the area would be temporary and would not result in an increase in the utilization of Mount San Miguel Community Park or other recreational facilities in the area. Impacts would be less than significant.

Staging Yards

Three temporary staging areas would be used for the Proposed Project: one would be at the Existing Substation on SDG&E fee-owned property; one would be on the west side of Eastlake Parkway within the Transmission Corridor between SR-125 and Eastlake Parkway; and another one would be on the north side of Hunte Parkway between Discovery Falls, Eastlake Parkway, and Crossroads Street. Alternative staging yard locations have been identified within the OTC, which would include five potential alternative staging yards.

The Existing Substation staging yard is approximately 0.75 mile northwest of Mount San Miguel Community Park. The Eastlake Parkway staging yard is approximately 0.2 mile south of Chula Vista Community Park. The Hunte Parkway staging yard is approximately 0.35 mile southwest of Windingwalk Park. The OTC staging yard is located on private land, approximately 0.70 mile northwest of the proposed Salt Creek Substation. Staging yards would be used to temporarily store construction materials and equipment for Proposed Project components, and, therefore, would not result in an increase in population in the area or an increase in the use of parks. No impact would occur.

Operation and Maintenance – No Impact

The Proposed Project is designed to meet the electrical needs of the area and, therefore, would not induce substantial population growth in the area, either directly or indirectly. Additionally, long-term operation and maintenance activities for the Proposed Project would not result in the demand for new residential units or significantly increase the desirability or affordability of the surrounding area. Therefore, the Proposed Project would not result in a permanent increase in park use. Following construction, the proposed Salt Creek Substation would be unattended, and no permanent jobs would be created in the vicinity of the Proposed Project that would result in an increase in park use or cause substantial physical deterioration of facilities. Therefore, no impact would occur.

Question 4.15(b) Require construction or expansion of recreational facilities – No Impact

Construction and Operation and Maintenance – No Impact

The Proposed Project does not include recreational facilities or require the construction or expansion of any existing recreational facilities that might have an adverse physical effect on the environment; therefore, no impact would occur.

4.15.5 Project Design Features and Ordinary Construction/Operations Restrictions

With implementation of the ordinary construction restrictions, as outlined within Section 3.8, Project Design Features and Ordinary Construction/Operations Restrictions, potential impacts relating to recreation would remain less than significant.

4.15.6 Applicant-Proposed Measures

The Proposed Project's impacts on recreation would be less than significant; therefore, no APMs are required or proposed.

4.15.7 Detailed Discussion of Significant Impacts

Based on the above analyses, no significant impacts have been identified for the Proposed Project, and no APMs are required or proposed.

4.15.8 References

City of Chula Vista. 2003. Greenbelt Master Plan. Adopted September 16, 2003. Available at http://www.chulavistaca.gov/city_services/development_services/planning_building/Planning/greenbelt.asp.

City of Chula Vista. 2005. General Plan. Public Facilities and Services Element. Adopted December 13, 2005. Available at http://www.chulavistaca.gov/City_Services/Development_Services/Planning_Building/General_Plan/documents.asp.

City of Chula Vista. 2010. Parks and Recreation Master Plan Update. Draft available December 2010. Available at http://www.chulavistaca.gov/City_Services/Development_Services/Planning_Building/PDF/DraftParkandRecreationMasterPlanUpdate_001.pdf.

County of San Diego. 2005. Community Trails Master Plan. Adopted January 12, 2005. Available at http://www.co.san-diego.ca.us/parks/trails.html.

County of San Diego. 2011. General Plan. Conservation and Open Space Element. Adopted August 3, 2011.

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4.16 Transportation and Traffic

Would the project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	❐	❐	☑	❐
b. Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	❐	❐	☑	❐
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	❐	❐	❐	☑

Would the project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	❒	❒	❒	☑
e. Result in inadequate emergency access?	❒	❒	☑	❒
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	❒	❒	☑	❒

4.16.1 Introduction

The purpose of this section is to describe the existing transportation and traffic conditions within the Proposed Project area and to evaluate potential Proposed Project-related transportation and traffic impacts. A summary of existing area roadways, transit and rail service, airports, and bicycle facilities, as well as a description of the regulatory setting for transportation and traffic, are presented. An analysis of transportation and traffic impacts that would result from implementation of the Proposed Project is also provided.

The proposed Salt Creek Substation site is located adjacent to and southeasterly of Hunte Parkway, where SDG&E's Transmission Corridor crosses Hunte Parkway. An approximately 5-mile long overhead 69-kV power line would be constructed from the Existing Substation, extending southerly to the proposed Salt Creek Substation. This power line would cross above public streets. The Proposed Project would be developed on land that is either already owned by SDG&E or is within existing SDG&E easements. The Proposed Project would not result in significant impacts on area transportation or traffic, or conflict with any adopted alternative transportation plans or policies.

4.16.2 Methodology

Data pertaining to transportation and traffic for the Proposed Project area were obtained primarily through the County of San Diego General Plan (2011), City of Chula Vista General Plan (2005) and Municipal Code (2013), and the SANDAG 2050 Regional Transportation Plan (SANDAG 2011). A site visit was conducted to obtain a visual understanding of the traffic patterns along the public roadways that may be directly or indirectly affected by the Proposed Project.

4.16.3 Existing Conditions

4.16.3.1 Regulatory Background

Construction projects that cross public transportation corridors are subject to federal, state, and local encroachment permits. Permits are also required for activities that result in the obstruction of navigable air space. Regulations pertaining to transportation and traffic that may be applicable to the construction of electric facilities, such as the Proposed Project, are summarized below.

Federal

The FAA has jurisdiction over all airports and navigable airspace not administered by the U.S. Department of Defense. Standards and required notification for objects affecting navigable airspace are established by 14 CFR Part 77. Pursuant to FAA regulations, construction that exceeds 200 feet in height above ground level or construction that exceeds any of the imaginary surfaces described in 14 CFR Part 77.9 require notifying the FAA.

The FAA also regulates helicopter use. Helicopter operators are responsible for complying with all applicable federal regulations for planned operation of a helicopter within 1,500 feet of residential uses.

State

An Encroachment Permit or written authorization from Caltrans is required for using California State highways for activities other than normal transportation purposes. Caltrans retains jurisdiction over the state's highway system, and is responsible for protecting the public and infrastructure. Encroachment Permits may include specific conditions or restrictions that limit when construction activities can occur within or above roadways that are under the jurisdiction of Caltrans. All requests from utility companies that plan to conduct activities within a Caltrans' ROW are reviewed by Caltrans.

Regional

SANDAG's 2050 San Diego Regional Transportation Plan: Our Region, Our Future

SANDAG's 2050 San Diego Regional Transportation Plan: Our Region, Our Future was approved in 2011 and provides guidance for establishing a coordinated transportation system for the greater San Diego area (SANDAG 2011). The Regional Transportation Plan is intended to connect and improve the regional transportation network of freeways, public transit, and roadways for present and future residents.

County of San Diego General Plan

With the exception of state roads and highways, the County of San Diego is responsible for the operation and maintenance of the public roadway system in unincorporated areas of the county. San Diego County's General Plan includes a Mobility Element that focuses on incorporating road types that are compatible with surrounding land uses and reinforce the positive aspects of a community's character, contributing to the economic and social development of the community. No relevant policies or regulations pertaining to the Proposed Project are provided in San Diego County's General Plan.

Local

Chapter 12.28: Encroachments, of the City of Chula Vista Municipal Code (City of Chula Vista 2013) addresses the use of or encroachment into the public ROW for private uses. The City of Chula Vista requires approval of a Public Right-of-Way Permit for the construction of privately owned structures or facilities within the public ROW. In addition, the Land Use and Transportation Element of the City of Chula Vista General Plan (2005) provides measures for improving the efficiency of the city's transportation system. It facilitates the long-term planning required to improve mobility through the development of a balanced, multi-modal transportation network, while minimizing potential environmental and neighborhood impacts. The Transportation Element is aimed at creating a system wherein each mode of transportation contributes to an overall goal of providing transit services that meet varied user needs, while implementing a strategy to reduce traffic congestion and provide increased transportation choices with consideration for varying land use types.

4.16.3.2 Existing Roadway Network

The Proposed Project is located within an urban area in the City of Chula Vista, and also within unincorporated County of San Diego. Figure 3-3, Project Overview, shows the Proposed Project area and existing roadway network. Primary access to the proposed Salt Creek Substation site during construction would be along the sewer access road from Hunte Parkway. From Hunte Parkway, large vehicles that exceed the width of the driveway would travel over a portion of the existing curb and gutter that are immediately west of the street light/signal intersection with Exploration Falls Drive. A list of roadways adjacent to the Proposed Project that may be used for transporting construction equipment is included in Table 4.16-1, Public Roadways Adjacent to the Proposed Project Area. The table identifies the roadway classification, number of lanes, and level of service (LOS), where available. Multiple roadway segments presented in Table 4.16-1 are applicable to several Proposed Project components.

Within the Proposed Project area, Hunte Parkway and SR-125 are public roadways that run mainly north/south; portions of Hunte Parkway also run east/west. Olympic Parkway and Evening Star are local public streets that run east/west. Access to the proposed Salt Creek Substation would be provided from an existing driveway just west of the signal off Hunte Parkway, which provides access to the existing sewer access roadway. Figure 4.16-1 illustrates the primary existing local roadways that would be used to provide access to Proposed Project components. Construction traffic may also use other local roadways when travelling between segments along TL 6965. Existing SDG&E utility easements would provide access to TL 6965, the TL 6910 loop-in, and the Existing Substation staging yard for construction and ongoing maintenance. Additionally, the TL 6965 alignment crosses SR-125, Olympic Parkway, Otay Lakes Road, and Proctor Valley Road.

Table 4.16-1: Public Roadways Adjacent to the Proposed Project Area

Roadway	Roadway Segment	Classification	Number of Lanes in the Proposed Project Area	Average Weekday Traffic Volume (number)	A.M. Peak*	P.M. Peak*	Acceptable LOS C (number)**
Salt Creek Substation, Hunte Parkway Staging Yard, and Eastlake Parkway Staging Yard							
SR-125***	South of SR-54 to SR-905	Freeway (Tollroad)	2 to 3 Lanes Each Direction	32,141	N/A	N/A	70,000
Hunte Parkway	Discovery Falls Drive to Exploration Falls Drive	4-Lane Major	1 Lane NB 3 Lanes SB	1,293	128	126	30,000
Olympic Parkway	SR-125 to Eastlake Parkway	6-Lane Major Street	2 Lanes EB 4 Lanes WB	37,182	1,458	1,774	40,000
Birch Road	West of SR-125	6-Lane Major	2 Lanes EB 4 Lanes WB	10,432	547	648	40,000
Eastlake Parkway	Fenton Street–Otay Lakes Road	4-Lane Major	1 Lane NB 3 Lanes SB	26,229	736	903	30,000
TL 6965 and TL 6910 Loop-In							
Mt. Miguel Road	SR-125–Calle La Marina	4-Lane Major	1 Lane NB 3 Lanes SB	9,582	648	669	30,000
Eastlake Parkway	Fenton Street–Otay Lakes Road	4-Lane Major	1 Lane NB 3 Lanes SB	26,229	736	903	30,000
Existing Substation Modifications							
SR-125***	South of SR-54 to SR-905	Freeway (Tollroad)	2 to 3 Lanes Each Direction	32,141	N/A	N/A	70,000
San Miguel Ranch Road	Avenida Loretta to SR-125	Class I Collector	1 Lane NB 3 Lanes SB	7,647	402	547	22,000

* Source: City of Chula Vista 2012

** Source: City of Chula Vista General Plan, Land Use and Transportation Element, Chapter 5 Transportation, Table 5-9, Street Segment Performance Standards and Average Traffic Volumes (2005).

*** Source: SANDAG 2012a

NB = northbound; SB = southbound; WB = westbound; EB = eastbound

N/A = Data not available

4.16.3.3 Airports

Chula Vista's commercial air transportation needs are served by Lindbergh Field (located approximately 16 miles northwest of the proposed Salt Creek Substation), San Diego's international airport (passenger and freight traffic), and by Brown Field Municipal Airport, a general aviation facility with one runway located south of Chula Vista on Otay Mesa within the City of San Diego. No private airports or airstrips are located within 2 miles of the Proposed Project.

Brown Field Municipal Airport is the closest public airport to the Proposed Project, located approximately 3.7 miles southwest from the proposed Salt Creek Substation. John Nichol's Field is the closest private airport to the Proposed Project, located approximately 3.4 miles northeast from the proposed Salt Creek Substation.

The proposed Salt Creek Substation site is approximately 20 miles southeast of Marine Corps Air Station (MCAS) Miramar, which has an Air Installations Compatibility Use Zone (AICUZ). Air operations at MCAS Miramar include Seawolf and Julian departures, "touch-and-go's," field carrier landing practice, and ground control approach box patterns for fixed- and rotary-wing aircraft.

4.16.3.4 Bus

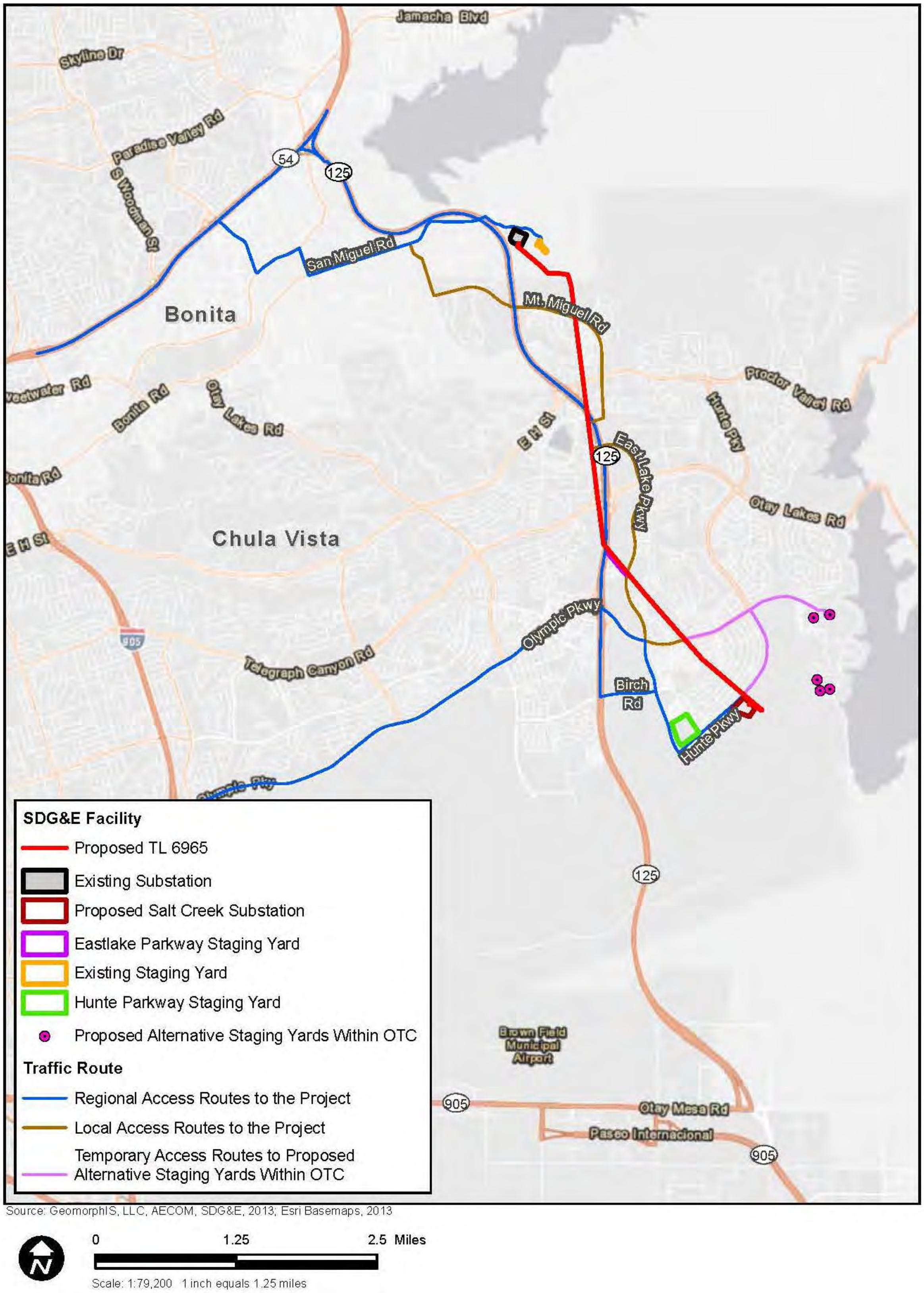
Bus service to the Proposed Project area is provided by the San Diego Metropolitan Transit System (MTS). This system includes a network of local bus routes oriented to each of the community's activity centers, as well as the Urban Core Subarea and eastern activity centers in Chula Vista. Community activity centers serviced by the local bus network are Bayfront, Terra Nova, Bonita, Southwestern College, Eastlake, Otay Ranch Villages, the proposed university, Sharp Hospital, and the Montgomery area. San Diego MTS provides bus line Routes 703, 707, and 709A/B/C in the area (San Diego Metropolitan Transit System 2012).

4.16.3.5 Bicycle Facilities

The City of Chula Vista designates and maintains three types of bicycle facilities: Class I (bike lane separated from traffic), Class II (on-street bike lanes marked at the curb or in the parking lane), and Class III (signage, no paint in ROW). Within the vicinity of the Proposed Project, Birch Road, Hunte Parkway (south of Olympic Parkway), and Eastlake Parkway are designated as proposed Class II bike lanes. Olympic Parkway and Hunte Parkway (north of Olympic Parkway) are designated as existing Class II bike lanes.

Additionally, according to the San Diego Regional Bike Map, Eastlake Parkway, Hunte Parkway, Birch Road, and Olympic Parkway are designated as "bike lane," which refers to a striped lane providing one-way bike travel on a street or highway. South of Birch Road, SR-125 is designated as "freeway shoulder bike access," which opens freeway shoulders to bicyclists (SANDAG 2012b).

Figure 4.16-1: Traffic Routes



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

4.16.4 Impacts

4.16.4.1 Significance Criteria

Activities associated with construction of the Proposed Project would have the potential to affect existing traffic patterns or cause traffic delays associated with transporting equipment and materials to and from the Proposed Project area. Due to the nature of the Proposed Project, traffic resulting from operation and maintenance of the proposed Salt Creek Substation and associated components would have minimal effects on the circulation system, as typically a limited amount of vehicular activity (less than one vehicle trip per day) would be required over the long term. As a result, the following analysis of Proposed Project-related traffic impacts is generally focused on the construction phase. Operational impacts are addressed and analyzed, where appropriate, with regard to the significance criteria.

Minimal helicopter use is anticipated for the Proposed Project. Helicopter use is only anticipated for stringing the “sock line” for TL 6965. Impacts caused by encroachment into navigable airspace, such as by a crane, wire, or tall structure, would be negligible. Potential impacts to air traffic are described for construction and operation and maintenance in response to Question 4.16c.

According to Appendix G of the CEQA Guidelines, the Proposed Project would have a significant impact if it would:

- result in a substantial increase in traffic that conflicts with a plan, ordinance, or policy establishing measures for the effectiveness of circulation system performance;
- result in the exceedance of an established LOS standard;
- cause a change in air traffic patterns;
- result in a substantial increase in hazards due to a design feature or incompatible uses;
- result in inadequate emergency access; and/or
- conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or decrease the safety of such facilities.

Question 4.16a – Circulation System Performance/Traffic Increases

Construction – Less-than-Significant Impact

Salt Creek Substation

Primary access to the proposed Salt Creek Substation site during construction would be provided by the sewer access road from Hunte Parkway. From Hunte Parkway, large vehicles would drive over the existing curb and gutter that are immediately west of the street light/signal. Approximately 120 feet of the existing unreinforced concrete curb and gutter would be removed and replaced with a reinforced concrete curb and gutter. Improvements to the existing driveway, curb, and gutter would require public improvement and traffic control plans.

Prior to trenching, SDG&E would notify other utility companies to locate and mark existing underground utilities along the proposed trench alignment. SDG&E would also conduct exploratory excavations (potholing) to verify locations of existing facilities in the ROW. SDG&E would coordinate with the City of Chula Vista to secure Encroachment Permits for trenching and potholing in the city ROW, as required. Figure 4.16-1 depicts the primary proposed construction travel routes for the Proposed Project.

Vehicle trips generated by construction personnel would generally occur with workers arriving at the site in the morning and leaving the site at the end of the day, with limited worker-related trips to or from the worksite during the course of the day. The estimated construction duration for the Proposed Project is approximately 18 to 24 months. It is anticipated that up to approximately 35 workers would be on-site at the Salt Creek Substation at any one time during construction.

Daily transportation of construction workers is not expected to cause a significant effect since there would not be more than approximately 35 workers at one time in any one location at the peak of construction. It is estimated that construction personnel would generate approximately 50 to 60 personal vehicle trips per day during peak construction times. Approximately eight to 12 trips would be generated each from arrivals and departures during peak hours.

In general, no more than approximately 27 truck trips per day, over an estimated 3- to 6-month duration, are anticipated to complete grading at the proposed Salt Creek Substation site. In addition, approximately six additional trips per day are anticipated for delivering materials and equipment during the duration of construction. Delivery, material, and equipment trucks would travel to and from staging areas approximately one to two times per week during peak construction activities. As stated above, the number of construction workers per weekday would not exceed approximately 35 (or 50 to 60 personal vehicle trips per day) during peak construction of the Proposed Project. With the 27 truck trips and six delivery trips, an additional 83 to 93 trips per weekday would be generated by the Proposed Project during peak construction days. The total weekday trips, including the additional Proposed Project construction trips, would be well below the acceptable LOS C (Table 4.16-1).

All construction vehicles and equipment would enter the proposed Salt Creek Substation site from Hunte Parkway via an existing sewer access road that would be improved as part of the Proposed Project. Although some disruption to traffic flow may occur when trucks ingress or egress the proposed Salt Creek Substation site, such events would be periodic and temporary. As needed, signage or flag personnel may be used to reduce potential traffic flow disruptions and to maintain public safety during construction. In addition, SDG&E would prepare and implement a traffic control plan to further reduce potential impacts.

Average daily traffic volumes on area roadways in the vicinity of the proposed Salt Creek Substation site are generally low, with Hunte and Olympic Parkways operating below capacity. As such, the slight increase in vehicle trips potentially generated by the Proposed Project during construction would not adversely affect traffic. As construction vehicles entering or leaving the site would be periodic and short term, and with consideration of the existing traffic volumes on Hunte Parkway and adjacent roadways, impacts would be less than significant. Based on the above, the proposed Salt Creek Substation would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation.

TL 6965 and TL 6910 Loop-In

Construction of TL 6965 is anticipated to last 8 to 12 months. An approximately 5-mile-long overhead 69-kV power line would be constructed from the Existing Substation, extending south to the proposed Salt Creek Substation, as shown in Figure 3-3, Project Overview. The northernmost 4,700 linear feet would be located in the unincorporated portion of the County of San Diego on SDG&E fee-owned land surrounding the Existing Substation. Figure 4.16-1 depicts the proposed construction travel routes for TL 6965. Construction vehicles would travel on public streets to reach the TL 6965 access roads located on SDG&E property. Construction-related traffic would result in a small increase (additional 80 trips per weekday); therefore, impacts would be less than significant.

Constructing the TL 6910 loop-in would require approximately 2 to 6 months. Construction traffic would use the temporary access that originates within the SDG&E ROW or the primary access from Hunte Parkway. It is estimated that trench work would require 4 to 6 weeks, and cable installation would require an additional 4 to 6 weeks. An additional approximately 15 to 25 workers would be employed during TL 6910 loop-in construction. Up to approximately 22 workers would be employed to install distribution lines. Final testing and checkout would require approximately six to eight electricians and/or engineers.

Trenching operations for the TL 6910 loop-in would not occur within public streets. Trenching operations for distribution lines would be staged in intervals so that only a maximum of 300 to 500 feet of trench would be left open on the public street at any one time, or as allowed by permit requirements. Trenching would generate approximately 400 cy per day of excavated material, which would be exported to an SDG&E-approved disposal site. At any one time, open trench lengths would not exceed that required to facilitate duct bank installation. Steel plating would be placed over open trenches to maintain vehicular and pedestrian traffic across areas that are not under active construction. Traffic controls, as part of a traffic control plan, would be implemented to direct local traffic safely around work areas. As construction activities would generate minimal vehicle trips, such activities would not contribute to a substantial increase in existing traffic volumes (see Table 4.16-1) along roadways affected by the Proposed Project. Therefore, construction activities would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.

Existing Substation Modifications

At the Existing Substation, a new 69-kV circuit position would be installed for the new TL 6965 going to the proposed Salt Creek Substation. Up to approximately 33 workers would be employed during installation of the 69-kV position at the Existing Substation. As depicted in

Figure 4.16-1, construction vehicles would travel on public streets to reach the SDG&E property. As construction activities would generate minimal vehicle trips, such activities would not contribute to a substantial increase in existing traffic volumes (see Table 4.16-1) along roadways affected by the Proposed Project. Therefore, construction activities would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. Impacts would be less than significant.

Staging Yards

Construction of the Proposed Project would use three staging yards, along with an alternative staging yard at the OTC. As shown in Figure 3-3, the staging yards would be in proximity to Proposed Project construction areas; therefore, construction vehicles would travel minimal distances to these staging yards. Additionally, due to the size and nature of the Proposed Project, there would not be substantial numbers of heavy construction equipment traveling to and/or from the staging yards. For these reasons, traffic impacts associated with construction would be low. These activities would be short term and would cease upon completion of construction; therefore, impacts would be less than significant.

Operation and Maintenance – No Impact

The proposed Salt Creek Substation would be unattended, and monitored and controlled by SDG&E's Remote Control Center. Routine maintenance is expected to generate approximately six trips per year by a crew consisting of two to four workers. Routine operations would involve one or two workers in a light utility truck visiting the substation on a weekly or daily basis. It is anticipated that one annual major maintenance inspection would occur, requiring an estimated 10 personnel. It is anticipated that this inspection would require approximately 1 week to complete. Nighttime maintenance activities are not expected to occur more than once per year.

Vegetation clearing would occur on an as-needed basis to maintain safety and/or access. Such activities would generally require one to two maintenance vehicles and one or more employees to clear and/or trim vegetation, thus ensuring that an adequate working space is maintained around the substation and power lines.

It is anticipated that the transmission circuits that would loop into the proposed Salt Creek Substation would be inspected once per year. Maintenance crews may consist of as many as four people and may require a tool truck, an assist truck, and a large bucket lift truck or other similar equipment.

Operations and maintenance activities for TL 6965 and the TL 6910 loop-in would include routine inspection, maintenance, and repair activities. Inspections would continue to occur in the form of aerial patrol through the use of helicopters or through ground patrols visiting the facilities. No increase in frequency over existing inspections for facilities within the Transmission Corridor would occur. Therefore, operation and maintenance activities would not generate new vehicle trips. At a minimum, such routine inspections would occur annually to identify potential corrosion, equipment misalignment, loose fittings, and/or other mechanical problems; such activities would not contribute to a substantial increase in traffic volumes along roadways affected by the Proposed Project. As no increase in vehicle trips would occur with operation and maintenance activities, no traffic impacts would occur, including no conflicts with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.

Question 4.16b – Level of Service Changes

Construction – Less-than-Significant Impact

Salt Creek Substation

Construction traffic generated by the Proposed Project would result in a less-than-significant increase in the existing daily traffic volumes along area roadways; therefore, it would not cause any changes to existing LOS, travel demand measures, or other standards established by the County Congestion Management Agency. Temporary lane closures may be required during Proposed Project construction to facilitate transporting materials and equipment, or to maintain public safety during trenching or other construction activities. SDG&E would prepare a traffic control plan, as required by the City of Chula Vista, when construction activities are located within City of Chula Vista streets. Temporary traffic delays may also occur when construction vehicles enter and exit the site along Hunte Parkway; however, the existing roadway system in the area of the Proposed Project has adequate capacity (see Table 4.16-1) to accommodate any increase in traffic resulting from the vehicular trips associated with construction of the Proposed Project.

The Proposed Project would not cause a change to the existing LOS of any roadways in the vicinity of the Proposed Project. No impact or conflict with an applicable congestion management program would occur.

TL 6965 and TL 6910 Loop-In

Similar to the Salt Creek Substation, constructing TL 6965 and the TL 6910 loop-in would not have a measurable increase in existing traffic volumes on the adjacent roadways. Figure 4.16-1 shows public streets that construction vehicles would travel on to reach the power line access roads located on SDG&E property. Construction-related traffic would generate a small increase in vehicle traffic (additional 80 trips per weekday); therefore, construction-related traffic would not have an impact on existing LOS in the Proposed Project vicinity. No impact or conflict with an applicable congestion management program would occur.

Existing Substation Modifications

Similar to the proposed Salt Creek Substation, modifications at the Existing Substation, which includes installing a 69-kV circuit position for the new TL 6965, would not result in any LOS impacts to existing adjacent roadways. No impact or conflict with an applicable congestion management program would occur.

Staging Yards

Staging yards would be located in proximity to Proposed Project construction areas; therefore, construction vehicles would travel minimal distances to these staging areas. Using staging yards would help to reduce construction traffic impacts on roadways; therefore, no impact or conflict with an applicable congestion management program would occur.

Operation and Maintenance – No Impact

Traffic generated by Proposed Project operation and maintenance activities would be negligible. As such, the Proposed Project would not significantly impact traffic in the surrounding area or alter existing traffic patterns. Operation and maintenance of the Proposed Project would, therefore, not impact the existing LOS of area roadways or conflict with an applicable congestion management program. No impact would occur.

Question 4.16c – Air Traffic Changes

Construction – No Impact

At this time, helicopter use is only anticipated for stringing the sock line for TL 6965. Prior to initiating any construction using a helicopter, SDG&E would implement standard BMPs to ensure that no adverse effects with regard to air quality, noise, or other issues would occur. Prior to construction, SDG&E or its contractor would coordinate flight patterns with local air traffic control and the FAA, as required, to prevent any adverse impacts due to air traffic. In addition, the helicopter operator would be responsible for complying with all applicable federal regulations for planned operation of a helicopter within 1,500 feet of residential uses.

Cranes would likely be used to set some Proposed Project equipment. The tallest structure that would be installed as part of the Proposed Project would be the approximately 113-foot-high cable pole erected adjacent to the proposed Salt Creek Substation. Pursuant to FAA requirements, construction that exceeds 200 feet in height above ground level or construction that exceeds any of the imaginary surfaces described in 14 CFR Part 77.9 is considered to be a potential obstruction to air traffic, and Notice of Construction or Alteration form 7460-1 must be filed with the FAA. Because all construction would be shorter than 200 feet in height, would not exceed the FAA imaginary surfaces described above, and would be outside of the flight path for MCAS Miramar, no impact would occur, and noticing the FAA would not be required.

Operation and Maintenance – No Impact

SDG&E currently uses helicopters for maintaining and inspecting its existing facilities in the Proposed Project area. Operations and maintenance activities for the proposed Salt Creek Substation and power lines would include routine inspection, maintenance, and repair activities, similar to existing operations and maintenance activities. Routine preventive maintenance and emergency procedures would occur to ensure that the integrity of the system is maintained over the long term. Inspections may occur in the form of an aerial patrol using helicopters or through ground patrols visiting facilities. At a minimum, such routine inspections would occur annually to identify potential corrosion, equipment misalignment, loose fittings, and/or other mechanical problems. Prior to using helicopters for operation and maintenance of the Proposed Project facilities, SDG&E or its contractors would notify the FAA and any additional local agencies, as required, prior to conducting maintenance activities requiring a helicopter. Helicopter operators would comply with all applicable federal, state, and local regulations. Therefore, no impact would occur.

Question 4.16d – Increase in Hazards

Construction – No Impact

Aside from installation of vaults and duct banks (See Figure 3-5), a new driveway, and the reinforced curb and gutter on Hunte Parkway, construction of the Proposed Project would not require modification of any existing public roadways. Temporary road or lane closures may be required to ensure public and worker safety during certain activities, particularly during construction of the proposed Salt Creek Substation. Temporary road closure or encroachment into public roadways could potentially increase hazards if appropriate safety measures are not implemented (e.g., proper signage, orange cones, and flaggers). SDG&E would obtain the required Encroachment Permits from the City of Chula Vista and the County of San Diego, as applicable, and would implement appropriate traffic control measures that would be outlined in the traffic control plan. With implementation of such measures, no impact would occur.

The tallest Proposed Project component would be the approximately 113-foot-high cable pole. The Proposed Project would not incorporate elements that would be considered a hazard with regard to FAA height regulations. As a result, no impact would occur.

Operation and Maintenance – No Impact

Once construction is complete, the proposed Salt Creek Substation would be unattended. The substation 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. Occasional operation and maintenance activities associated with the Proposed Project (approximately six trips per year) would occur on-site at the proposed Salt Creek Substation or within SDG&E property or roadway ROW. Access for operation and maintenance activities would be provided from existing public roads and the existing sewer access road from Hunte Parkway. Such activities would not introduce hazardous conditions due to a design feature or incompatible use. No impact would occur.

Question 4.16e – Emergency Access Effects

Construction – Less-than-Significant Impact

Salt Creek Substation

Emergency access would not be directly impacted during construction of the proposed Salt Creek Substation because all streets would remain open to emergency vehicles at all times throughout construction. Temporary lane closures may be required during Proposed Project construction to facilitate transporting materials and equipment, or to maintain public safety during trenching or other construction activities.

Although transporting construction materials and workers to and from the Proposed Project may result in temporary delays along Hunte Parkway, San Miguel Road, and other roadways in the Proposed Project vicinity (as shown in Figure 4.16-1) due to reduced vehicle speeds or maneuvering construction vehicles, emergency access would not be affected, and the affected roadways would continue to provide adequate access for emergency vehicles. Impacts would be less than significant.

TL 6965 and TL 6910 Loop-In

Constructing TL 6965 and the TL 6910 loop-in may require temporary lane closures and/or delays on adjacent roadways, depending on the construction activities being accomplished at the time; however, no significant impacts are anticipated. For power line construction, guard structures would prevent conductors from potentially impacting traffic on roads and highways. The Proposed Project would require Caltrans' approval of a traffic control plan, an Encroachment Permit, and a traffic control permit for work within the SR-125 ROW. In addition, SDG&E would coordinate with the City of Chula Vista to secure Encroachment Permits and traffic control permits for trenching in City ROW, as required. Impacts would be less than significant.

Existing Substation Modifications

Modifications at the Existing Substation would occur within the current substation footprint. Although modifications would not result in any road closures, some roads may be temporarily limited to one-way traffic at times. In such cases, one-way traffic controls would be implemented as required by the traffic control plans. Although this may indirectly impact emergency access, the increase in traffic would be less than significant, and emergency vehicles would be provided access even in the event of temporary lane closures. Therefore, impacts would be less than significant.

Staging Yards

Staging yards would be located in proximity to the Proposed Project construction areas; therefore, construction vehicles would travel minimal distances to these staging areas. The provision of staging yards would help to reduce construction traffic impacts on roadways; therefore, no impact would occur.

Operation and Maintenance – No Impact

Operation and maintenance activities associated with the Proposed Project would generate a minimal amount of additional traffic on area roadways, as compared to existing conditions. No temporary planned road closures would occur for maintenance of the proposed Salt Creek Substation or other Proposed Project components. As such, no impact would occur.

Question 4.16f – Adopted Policies, Plans, or Programs (public transit, bicycle, or pedestrian facility) Conflicts

Construction – Less-than-Significant Impact

The Proposed Project be would located in an urban area. Construction would occur within SDG&E's utility easement ROW and on SDG&E-owned land. The Proposed Project would not involve any activities that would conflict with policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. SDG&E would obtain Encroachment Permits to conduct work within other utility ROWs, and would ensure that access for motorists (including public transit), pedestrians, and bicyclists remains open during construction. During construction work within the Transmission Corridor, access for bicyclists and pedestrians may be temporarily affected for safety reasons. Bicyclists and pedestrians would be considered in the traffic control plan. In addition, any access closure would be temporary. Therefore, impacts would be less than significant.

Operation and Maintenance – No Impact

Operation and maintenance of the Proposed Project would generate less than one vehicle trip per day, on average. No alternative modes of transportation such as rail, bus, or bicycle traffic, or pedestrian circulation patterns would be altered or adversely affected by long-term operation and maintenance activities. Therefore, no conflict or impact would occur.

4.16.5 Project Design Features and Ordinary Construction/Operations Restrictions

With implementation of the ordinary construction restrictions, as outlined within Section 3.8, Project Design Features and Ordinary Construction/Operations Restrictions, potential impacts related to transportation and traffic would be less than significant.

4.16.6 Applicant-Proposed Measures

The Proposed Project would not result in significant impacts with regard to construction and operation/maintenance traffic or transportation resources. Therefore, no APMs are required or proposed.

4.16.7 Detailed Discussion of Significant Impacts

Based on the above analyses, no significant impacts have been identified for the Proposed Project, and no APMs are required or proposed.

4.16.8 References

City of Chula Vista. 2005. *General Plan Final Environmental Impact Report*. Certified December 2005.

City of Chula Vista. 2012. MetroCount Traffic Executive Event Counts for 2010 and 2011. Data received August 24, 2012, and January 15, 2013.

City of Chula Vista. 2013. Municipal Code. Passed March 19, 2013.

County of San Diego. 2011. General Plan. Mobility Element. Adopted August 3, 2011.

San Diego Association of Governments (SANDAG). 2011. 2050 San Diego Regional Transportation Plan: Our Region. Our Future. Prepared by SANDAG. Approved October 2011.

San Diego Association of Governments (SANDAG). 2012a. Telephone conversation with Samuel Johnson, ITS Chief Technology Officer, on August 27, 2012.

San Diego Association of Governments (SANDAG). 2012b. San Diego Regional Bike Map. Available at http://www.icommutesd.com/Bike/BikeMap.aspx. Accessed August 24, 2012.

San Diego Metropolitan Transit System. 2012. Available at http://www.sdmts.com/. Accessed August 24, 2012.

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4.17 Utilities and Service Systems

Would the project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	❐	❐	❐	☑
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	❐	❐	❐	☑
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	❐	❐	❐	☑
d. Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?	❐	❐	☑	❐
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	❐	❐	❐	☑

Would the project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☑	☐
g. Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☑

4.17.1 Introduction

This section describes local utility services and infrastructure in the vicinity of the Proposed Project, including cable television, telephone, water treatment, sanitary sewer, and electricity services. Within this section, potential impacts to these utilities and service systems are assessed. During construction, the Proposed Project would require temporary water use on-site, and the water would come from public utilities. During operations and maintenance of the proposed Salt Creek Substation, landscaping would require initial maintenance, including some water use. SDG&E would install a new water meter for irrigation, and require water service for a fire hydrant at the facility. Based on the temporary and minimal need for utilities and service systems, all impacts would be less than significant.

4.17.2 Methodology

Information regarding local utilities was obtained from the City of Chula Vista General Plan (2005). Additionally, SDG&E reviewed as-built plans for utilities within Hunte Parkway, and, in some instances, performed potholing to confirm locations. Internet searches were also conducted to gather information regarding the telephone and cable providers in the vicinity of the Proposed Project.

4.17.3 Existing Conditions

4.17.3.1 Regulatory Setting

California Integrated Waste Management Board Solid Waste Policies, Plans, and Regulations

The Integrated Waste Management Act of 1989 (PRC Section 40050 et seq. or Assembly Bill [AB] 939, codified in PRC section 40000), administered by the California Department of Resources Recycling and Recovery (CalRecycle), requires all local and county governments to adopt a Source Reduction and Recycling Element to identify means of reducing the amount of solid waste sent to landfills. This law set reduction targets at 25% by the year 1995 and 50% by 2000. Senate Bill 1016 (2007) built on AB 939 by implementing simplified measures of performance toward meeting solid waste reduction goals.

4.17.3.2 Potable Water

As an urbanized area, water service within the City of Chula Vista is provided by municipal suppliers. The Proposed Project area would be located within Otay Water District service boundaries. The Otay Water District is a "revenue neutral" public agency, where each end user pays only its fair share of Otay Water District's costs of acquiring, treating, transporting, operating, and maintaining public water, recycled water, and sanitary sewer facilities. Otay Water District provides water service to approximately 208,000 customers within a 125.5-square-mile area of southeastern San Diego County. Its facilities serve the potable water, recycled water, and sanitary sewer needs of customers residing in Spring Valley, La Presa, Rancho San Diego, Jamul, eastern Chula Vista, and eastern Otay Mesa along the international border with Mexico.

Potable water delivered by the Otay Water District is purchased from the San Diego County Water Authority (County Water Authority). The County Water Authority generally imports 75 to 95% of its water from the Metropolitan Water District (MWD) of Southern California. Water imported to the region comes from two primary sources: the Colorado River, through the 240-mile Colorado River Aqueduct, and the State Water Project from Northern California, through the Sacramento-San Joaquin River Delta and the 444-mile California Aqueduct. These sources deliver water to MWD, which then distributes water to districts throughout the Southern California region, including the County Water Authority.

4.17.3.3 Recycled Water

In addition to potable water, Otay Water District currently has one of the largest recycled water distribution systems in San Diego County. Otay Water District operates the Ralph W. Chapman Water Recycling Facility in Rancho San Diego, which produces approximately 1.1 million gallons per day (mgd) of recycled water. In fall 2003, Otay Water District signed an agreement with the City of San Diego for the right to receive up to 6 mgd of recycled water from San Diego's South Bay Water Reclamation Plant (SBWRP), located in San Ysidro. Otay Water District also acquired the right to purchase supply from the SBWRP that exceeds 6 mgd if surplus supply is available.

4.17.3.4 Electricity and Natural Gas

SDG&E provides gas and electric utilities to the City of Chula Vista and the unincorporated areas of the County of San Diego. SDG&E provides energy service to 3.4 million people through 1.4 million electric meters and 850,000 natural gas meters in San Diego and southern Orange Counties, with a service territory spanning approximately 4,100 square miles.

4.17.3.5 Cable and Telephone

Several companies provide telephone, wireless phone, video/cable, digital subscriber line (DSL), broadband, and satellite services to Chula Vista residents. The two main providers for the Proposed Project area are AT&T and Cox Communications.

4.17.3.6 Sanitary Sewer

The City of Chula Vista currently provides sanitary sewer services to Chula Vista residents using more than 430 miles of sanitary sewer pipes and 12 sanitary sewer pump stations. Collection facilities convey wastewater generated within eight distinct drainage basins and then convey these flows to regional facilities located along San Diego Bay to the west and Sweetwater River to the north. These regional facilities then transport Chula Vista's wastewater to the Point Loma Wastewater Treatment Plant in San Diego, located approximately 30 miles northwest of the Proposed Project area. The Point Loma Wastewater Treatment Plant is owned and operated by the City of San Diego Metropolitan Wastewater Department.

4.17.3.7 Solid Waste

The City of Chula Vista has an exclusive franchise agreement with Pacific Waste Services to remove, convey, and dispose of any non-recyclable waste. The City of Chula Vista has additional yearly options on this agreement, addressing disposal needs through 2031. The agreement includes a number of programs and incentives for the franchisee and public to maximize recycling and other forms of landfill diversion.

Pacific Waste's parent company, Allied, owns and operates the Otay Landfill and Sycamore Canyon Landfill. Most of the solid waste generated in the City of Chula Vista is transported to the Otay Landfill, approximately 8 miles to the southwest of the Proposed Project area. As of March 2012, Otay Landfill had approximately 24,514,904 cy of remaining capacity, or approximately 40% of its total capacity remaining. Otay Landfill is expected to reach capacity by 2028.

4.17.4 Impacts

4.17.4.1 Significance Criteria

Potential impacts to public utilities and service systems were determined in accordance with Appendix G of the CEQA Guidelines. Significant adverse impacts to public utilities and service systems would occur if the Proposed Project would:

- exceed wastewater treatment requirements of the RWQCB;
- require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities;
- require or result in the construction of new storm water drainage facilities or expansion of existing facilities;
- result in the need for a new or expanded water supply;
- result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the Proposed Project's projected demand;
- result in inadequate access to a landfill with sufficient permitted capacity to accommodate the Proposed Project's solid waste disposal needs; and/or

- cause a breach of published national, state, or local standards relating to solid waste.

In addition to the guidelines specified in Appendix G, the Proposed Project would have significant adverse impacts to public utilities and service systems if it would result in the disruption of existing utility systems.

4.17.4.2 Impact Analysis

Question 4.17a – Wastewater Treatment Requirement Exceedances

Construction – No Impact

Salt Creek Substation

Construction of the proposed Salt Creek Substation would not generate wastewater. Portable toilets would be provided for on-site use by construction workers and would be maintained by a licensed sanitation contractor. Portable toilets would be used in accordance with applicable sanitation regulations established by OSHA, which generally requires one portable toilet for every 10 workers. The licensed contractor would dispose of waste at an off-site location, in compliance with standards established by the RWQCB.

During excavation activities, dewatering may be necessary. Water would be discharged to the existing 96-inch-diameter storm drain dissipater located southwest of the site, in accordance with City of Chula Vista and San Diego RWQCB requirements, as discussed further in Section 4.9, Hydrology and Water Quality. As a result, it would not require treatment at a wastewater facility. No impact would occur.

TL 6965 and TL 6910 Loop-In

Construction activities associated with the proposed TL 6965 and TL 6910 loop-in would be similar to those described for the proposed Salt Creek Substation and would not generate wastewater. All construction work related to the power lines would be within the existing 120-foot-wide Transmission Corridor or on SDG&E's fee-owned property for the Existing Substation and the proposed Salt Creek Substation. If dewatering activities are necessary, discharge of any water would follow City of Chula Vista and San Diego RWQCB requirements, as discussed in Section 4.9, Hydrology and Water Quality. No impact would occur.

Existing Substation Modifications

Construction associated with the Existing Substation would occur within the current substation footprint, and no site development would occur. No wastewater would be generated; therefore, no impact would occur.

Staging Yards

Staging yards would be located at Hunte Parkway, Eastlake Parkway, and the Existing Substation. The Hunte Parkway staging yard site is approximately 0.5 mile northwest of the proposed Salt Creek Substation site. Approximately 8 acres of a 22-acre previously graded pad would be used for staging purposes during construction of the Proposed Project. The Eastlake Parkway staging yard site is located along the Transmission Corridor northwest of Eastlake

Parkway. Approximately 1.7 acres would be used for staging in this location. No wastewater would be generated; therefore, no impact would occur.

The Existing Substation staging yard would be used primarily to support construction activities associated with the proposed modifications at the Existing Substation and storing power line material and related construction equipment. No wastewater would be generated; therefore, no impact would occur.

In addition, five alternative staging yards were identified within the OTC as potential sites, should staging yard availability change prior to construction of the Proposed Project. These five locations consist of previously disturbed areas. No wastewater would be generated; therefore, no impact would occur.

Operation and Maintenance – No Impact

Long-term operation and maintenance of the proposed Salt Creek Substation would not generate wastewater. The substation would be unattended, and no permanent sanitary facilities that require waste treatment would be constructed on-site. However, portable toilets would be provided at the proposed Salt Creek Substation for employees doing periodic maintenance. This would generate minimal waste and require off-site waste treatment. The waste generated would be minimal. Thus, no impact would occur.

Question 4.17b – Water and Wastewater Treatment Facility Expansion

Construction – No Impact

Water would be used on a regular basis during construction of all Proposed Project components to control dust on access roads and in work areas. Because this water would be dispersed on-site and would either evaporate or be absorbed into the ground, no wastewater is anticipated. In addition, during excavation activities, dewatering may, but is not expected to, be necessary. Water would be discharged to the existing 96-inch-diameter storm drain dissipater located southwesterly of the site in accordance with City of Chula Vista and San Diego RWQCB requirements, as discussed further in Section 4.9, Hydrology and Water Quality. Therefore, no impact would occur.

Operation and Maintenance – No Impact

Wastewater would not be generated by long-term operation and maintenance of the Proposed Project. Water use would be limited to irrigation of any on-site landscaping (i.e., revegetative groundcover or landscape screening) and fire protection. No sanitation facilities would be located on-site. Therefore, no impact would occur.

Question 4.17c – Water Drainage Facility Expansion

Construction – No Impact

Salt Creek Substation

SDG&E would prepare and implement a drainage plan to minimize surface runoff and erosion impacts on existing drainage facilities and water courses. In general, the proposed Salt Creek

Substation pad is on a small divide that runs from north to south. The westerly portion of the pad would be graded at an approximately 2% grade and drain southwesterly. The easterly portion of the pad would be graded at an approximately 1% grade and drain to the south. Water would be directed to the southwest corner via a drainage channel along the southerly edge of the proposed Salt Creek Substation. A water quality and hydromodification basin would be constructed in the southwestern portion of the proposed Salt Creek Substation. A storm drain from the water quality basin would convey runoff discharge to the existing 96-inch-diameter storm drain dissipater southwesterly of the site.

An existing sewer access road from Hunte Parkway to the proposed Salt Creek Substation site would be widened to ensure adequate substation access and to accommodate the proposed 12-kV underground conduit packages in the access road without disturbing the existing sewer line in the road. Retaining walls would be required to widen the existing sewer access road. The retaining walls would be constructed in accordance with the Proposed Project's Geotechnical Report and Recommendations, and in accordance with standard construction practices and pursuant to structural requirements from the City of Chula Vista. Widening of the existing sewer access road would not require changes to existing drainage facilities. Therefore, no impacts would occur.

TL 6965 and TL 6910 Loop-In

Permanent work pads would be required at approximately 24 pole locations to provide safe work areas during construction of TL 6965 and the TL 6910 loop-in, and also for post-construction operations 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. A total of approximately 1.7 acres of land would be required for the new permanent work pads, including access road adjustments. For work pads requiring manufactured slopes to create the work pad, the manufactured slopes would be revegetated with a native seed mix. In addition, construction of the proposed TL 6965 would require the temporary use of overland travel. Work pads would not require changes to existing drainage facilities or result in a change to storm water flows. No impact would occur.

Existing Substation Modifications

Construction associated with the Existing Substation would occur within the current substation footprint, and no new site development would occur. Construction at the Existing Substation would not create additional impervious surfaces and would not require changes to existing drainage facilities or result in a change to storm water flows. No impact would occur.

Staging Yards

Three staging yards were identified to support construction activities for the Proposed Project, along with alternative staging yards at the OTC. Staging activities at these locations would not create additional impervious surfaces, and would not require changes to existing drainage facilities or result in a change to storm water flows. Therefore, no impact would occur.

Operation and Maintenance – No Impact

Activities associated with operation and maintenance of the Proposed Project would be conducted on existing roads and via overland travel. As discussed in Section 4.9, Hydrology and Water Quality, on-site drainage patterns established during construction would generally remain unchanged with long-term operation and maintenance of the proposed Salt Creek Substation. No impact would occur.

Question 4.17d – Water Supply Availability

Construction – Less-than-Significant Impact

It is anticipated that water would be the primary means for dust control during construction. Water would be transported to the site in trucks equipped for dispersing water onto disturbed areas where grading or routine movement of construction vehicles occurs. Water would be used to wet disturbed soils and reduce the potential for dust particles to enter the air. A maximum of approximately 30,000 gallons of water per day would be required for these activities. Water for the trucks would be obtained from municipal water sources. The amount of water needed for dust control measures would be minimal, and Otay Water District is sufficiently meeting the supply demand of the City of Chula Vista. Therefore, a sufficient water supply would be available to meet water demands for construction needs. The demand for water would be temporary and short term, and would be only required during the construction phase. Therefore, impacts would be less than significant.

Operation and Maintenance – No Impact

Water use would be limited to irrigation of any on-site landscaping (i.e., revegetative groundcover or landscape screening). Water would be obtained from municipal sources and would likely be from a recycled water source. The small volume of water required for maintenance would not change the existing water supply. As a result, no impact would occur.

Question 4.17e – Wastewater Treatment Capacity – No Impact

As previously addressed under the responses to Questions 4.17a and 4.17b, construction of the Proposed Project would not generate wastewater. Therefore, no impact would occur.

Question 4.17f – Landfill Capacity

Construction – Less-than-Significant Impact

Salt Creek Substation

Approximately 138,000 cy of remedial cut and fill of alluvium and colluvium would be required to develop the proposed Salt Creek Substation and improvements to the access road (Kleinfelder 2008). Up to 44,000 cy of structural fill and class-2 aggregate base is estimated to be imported for construction. No excess fill is anticipated to be exported off-site. Construction of the Proposed Project is anticipated to generate waste materials such as packaging (e.g., wooden skids, cardboard boxes, plastic wrapping, trash from consumables), empty conductor spools, and excess conductor. It is anticipated that all recyclable construction materials that are nonhazardous and qualify as non-impacted would be transported to a nonhazardous recycling facility or retained by SDG&E for use on other projects.

All solid waste generated would be collected at a designated location within the proposed Salt Creek Substation site, and temporarily stored on-site in receptacles or otherwise covered until disposal occurs. All waste would ultimately be transported to the Otay Landfill for proper disposal. The Otay Landfill has sufficient capacity to accommodate the amount of waste anticipated to be generated during construction. Therefore, impacts would be less than significant.

TL 6965 and TL 6910 Loop-In

Construction of TL 6965 and the TL 6910 loop-in is anticipated to generate waste materials such as packaging (e.g., wooden skids, cardboard boxes, plastic wrapping, trash from consumables), empty conductor spools, and excess conductor. It is anticipated that all recyclable construction materials that are nonhazardous and qualify as non-impacted would be transported to a nonhazardous recycling facility or retained by SDG&E for use on other projects.

All solid waste generated would be collected at a designated location along the power line route and temporarily stored on-site in receptacles or otherwise covered until disposal occurs. All waste would ultimately be transported to the Otay Landfill for proper disposal. The Otay Landfill has sufficient capacity to accommodate the amount of waste anticipated to be generated during construction. Therefore, impacts would be less than significant.

Existing Substation Modifications

Construction associated with the Existing Substation would occur within the current substation footprint, and no new site development would occur. All solid waste generated would be collected at a designated location within the Existing Substation and temporarily stored in receptacles or otherwise covered until disposal occurs. All waste would ultimately be transported to the Otay Landfill for proper disposal. The Otay Landfill has sufficient capacity to accommodate the amount of waste anticipated to be generated during construction. Therefore, impacts would be less than significant.

Staging Yards

Several staging yards were identified to support construction for the Proposed Project. Solid waste generated at staging yards would be disposed of in the same manner as identified under the proposed Salt Creek Substation section. Impacts would be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Operation and maintenance of the Proposed Project would generate a limited amount of solid waste. The only waste generated would be associated with operational equipment maintenance, crew lunches, and packaging material associated with replacement parts. Excess material or waste from repairing or replacing structures or equipment (e.g., replacement of an insulator) would be transported to an existing SDG&E maintenance yard for reuse, recycling, or disposal in accordance with federal, state, and local statutes and regulations. Any remaining waste would be minimal and would be properly disposed of at an approved landfill. Therefore, impacts would be less than significant.

Question 4.17g – Solid Waste Statutes and Regulations

Construction – No Impact

Construction of the Proposed Project is not anticipated to generate a substantial amount of solid waste. As previously discussed under the response to Question 4.17f, solid waste produced during construction would be disposed of at a nearby licensed landfill. Management and disposal of solid waste would comply with all applicable federal, state, and local statutes and regulations. Thus, the Proposed Project would not violate any solid waste statutes or regulations. No impact would occur.

Operation and Maintenance – No Impact

Handling and disposal of all waste products associated with operation and maintenance activities would comply with all applicable statutes and regulations. Therefore, no impact would occur.

Disruption of Existing Utility Systems

Construction – Less-than-Significant Impact

Salt Creek Substation

Earth-moving 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. While these activities have the potential to unintentionally impact existing underground utilities, SDG&E would notify other utility companies prior to trenching to locate and mark existing underground utilities along the proposed trench alignment. SDG&E would also conduct exploratory excavations (potholing) to verify the locations of existing facilities within the ROW. SDG&E would coordinate with the City of Chula Vista to secure Encroachment Permits for trenching in the city's ROW, as required. Therefore, impacts would be less than significant.

TL 6965 and TL 6910 Loop-In

Construction of TL 6965 and TL 6910 loop-in has the potential to unintentionally impact existing underground utilities, particularly in SDG&E's ROW, which may result in the disruption of service. To minimize the risk of impacting these lines, SDG&E or its contractor would notify other utility companies prior to trenching to locate and mark existing underground utilities along the proposed trench alignment. SDG&E would also conduct exploratory excavations (potholing) to verify the locations of existing facilities in the ROW. SDG&E would coordinate with the City of Chula Vista to secure Encroachment Permits for trenching in the city's ROW, as required. Therefore, impacts would be less than significant.

SDG&E would also work in coordination with the California Independent Systems Operator to obtain clearances to take the existing transmission lines associated with the Proposed Project out of service for a period of time during the cutover work. The length of these outages would be minimized in accordance with California Independent System Operator requirements, and SDG&E would provide power to the areas served by these lines through other substations. As a result, no customers would be without service. Therefore, impacts would be less than significant.

Staging Yards

Several staging yards were identified to support construction for the Proposed Project, as identified in Question 4.17a. No earthwork is associated with staging at the Hunte Parkway, Existing Substation, and OTC staging yards; therefore, no impact would occur at these locations.

Minimal grading may be required on the northwest portion of the Eastlake Parkway staging yard. At this location, SDG&E or its contractor would notify other utility companies prior to grading to locate and mark existing underground utilities within areas proposed for grading. SDG&E would also conduct exploratory excavations (potholing) to verify the locations of existing facilities in the ROW. Therefore, impacts would be less than significant.

Operation and Maintenance – No Impact

Operation and maintenance activities for the Proposed Project may occasionally involve excavation or other ground-disturbing activities. These activities would be conducted in pre-disturbed areas, and standard precautionary measures such as notifying Underground Service Alert, would be implemented to ensure that ground-disturbing activities do not impact existing underground utility lines. The Proposed Project would be located on SDG&E property or in the existing SDG&E ROW. Maintenance and operation activities would occur in the same manner as they did prior to the Proposed Project. Additionally, implementation of the Proposed Project would benefit the electrical service system by increasing system reliability to the area. As a result, no impact would occur.

4.17.5 Project Design Features and Ordinary Construction/Operations Restrictions

With implementation of the ordinary construction restrictions, as outlined within Section 3.8, Project Design Features and Ordinary Construction/Operations Restrictions, potential impacts related to utilities and service systems would remain less than significant.

4.17.6 Applicant-Proposed Measures

Because no potentially significant impacts relative to utilities and service systems would result from the Proposed Project, no APMs are required or proposed.

4.17.7 Detailed Discussion of Significant Impacts

Based on the above analyses, no significant impacts have been identified for the Proposed Project, and no APMs are required or proposed.

4.17.8 References

City of Chula Vista. 2005. Chula Vista General Plan Update. Available at http://www.chulavistaca.gov/city_services/development_services/planning_building/General_Plan/default.asp. Accessed September 10, 2012.

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CHAPTER 5 – ALTERNATIVES

5.0 Introduction

Consistent with the guidance document, Proponent's Environmental Assessment (PEA) Checklist, issued by the CPUC on November 24, 2008, this section evaluates electrical system alternatives, substation site alternatives, power line route alternatives, and a No Project Alternative. This evaluation explains why the Proposed Project and location were selected as the preferred alternative, which was proposed and analyzed in this PEA.

5.1 Alternatives Overview

The CPUC's Information and Criteria List requires a description of all reasonable alternatives to the Proposed Project or Proposed Project location that could feasibly attain the basic objectives, and an explanation of why the alternatives were rejected for the ultimate choice of the Proposed Project.

The following sections describe SDG&E's methodology for screening electrical system, substation site, and power line route alternatives. This chapter analyzes the alternatives SDG&E considered before determining to pursue the Proposed Project. This analysis explains why the Proposed Project was ultimately chosen, including that it achieves the project objectives at a reasonable cost, whereas the alternatives would not. In addition, the Proposed Project would not result in any significant environmental impacts.

CEQA and the CEQA Guidelines also require an analysis of alternatives when a project will have significant environmental impacts. When a project will not have significant environmental impacts, as with the Proposed Project, no analysis of alternatives is required by CEQA.

5.2 Electrical System Project Alternatives

5.2.1 Alternative Evaluation Methodology

Development of an electrical system project proposal includes identification of project objectives. These objectives for the Proposed Project are defined and explained in Chapter 1, PEA Summary, and listed below:

Proposed Project Objectives

1. Meet the area's projected long-term electric distribution capacity needs by constructing the proposed Salt Creek Substation near planned load growth to maximize system efficiency.
2. Provide three 69-kV circuits into the Salt Creek Substation to serve load growth in the region and meet the regulatory requirements of the North American Electric Reliability Corporation (NERC), Western Electric Coordinating Council (WECC), and California Independent System Operator (CAISO).

3. Provide substation and circuit tie capacity that would provide additional reliability for existing and future system needs.
4. Reduce loading on area substations to optimum operating conditions, providing greater operational flexibility to transfer load between substations within the proposed Salt Creek Substation service territory.
5. Comply with and respect the outcome of the extensive community-based public process to select a site for a new substation in the Otay Ranch area, as evidenced by City of Chula Vista City Council Resolution 2011-073.
6. Meet Proposed Project needs while minimizing environmental impacts by siting the substation on property designated for future development that is located outside of the City of Chula Vista's Multiple Species Conservation Program (MSCP) Preserve.
7. Locate proposed new power facilities, as appropriate and as needed, within existing utility rights-of-ways (ROWs), access roads, and utility-owned property.

After identifying Proposed Project objectives, SDG&E conducted a three-step process, summarized below:

1. Develop alternatives that may meet the Proposed Project's need and objectives.
2. Evaluate each alternative in consideration of the extent to which an alternative could feasibly accomplish the Proposed Project's objectives.
3. Eliminate an alternative from further consideration if it is not feasible. If feasible, an alternative is the subject of full analysis in the PEA.

This chapter details this three-step process for an electrical system project alternative to meet projected electrical demand, substation site alternatives, and power line route alternatives.

5.3 Electrical System Evaluation

SDG&E plans ahead to ensure that necessary system facilities are developed in time to meet projected electrical demand. During this planning process, SDG&E evaluates existing facilities within the area and determines whether the existing electrical infrastructure can be modified to meet project objectives. If not, then SDG&E evaluates what new infrastructure is required and where it could be located to meet Project objectives. SDG&E considers the operating limits of a single substation, and evaluates the ability to transfer the load from that single substation to adjacent substations in the system. For the Proposed Project, this process identified the need for a new 69-kV substation and associated power lines, as described in Chapter 2, Purpose and Need.

The following sections describe the methodology for evaluating the existing electrical system, screen various alternatives for their ability to meet Proposed Project objectives, and explain why these alternatives were rejected in favor of the Proposed Project.

5.3.1 System Evaluation Methodology

Evaluating the system's ability to address identified needs consists of a four-step process. These steps are summarized below. The potential ability of various options to address the identified electrical need is presented in Section 1.4:

1. Perform technical engineering analyses to determine whether the forecasted peak electrical demand can be accommodated by modifying the existing electrical infrastructure.
2. If the forecasted electrical demand cannot be accommodated by modifying the existing electrical infrastructure (e.g., transferring load to an adjacent substation in the system is not feasible), then SDG&E identifies system options by considering feasible upgrades or additions to the existing electrical infrastructure.
3. SDG&E then evaluates each system modification option in consideration of the following criteria:
    - the extent to which a system modification would substantially meet project objectives, and
    - the feasibility of a system modification considering capacity limits, ability to upgrade the system on existing utility sites, and economic viability.
4. If a system modification is not feasible, then that alternative is eliminated from consideration. If it is feasible, then the alternative is retained for full analysis in the PEA, as required by CPUC General Order 131-D. If it is determined that a new electrical infrastructure project is required, then site location alternatives, including substation and power line route alternatives, are considered, as described in Section 5.4.

5.3.2 System Alternative Evaluation Discussion

SDG&E identified and evaluated three potential alternative modifications to the existing electrical system that could possibly address forecasted peak electrical demand in the Proposed Project region. SDG&E also evaluated the No Project Alternative. The following sections describe these alternatives and evaluate their ability to meet Proposed Project objectives, as outlined in Section 1.4 and listed above. The sections conclude with a brief description of the alternative that would meet demand in the Proposed Project service area, as described in Chapter 1, PEA Summary.

System Alternative 1: Expand Existing Area Substations to Increase Capacity

This alternative would expand existing area substations to increase local capacity, and possibly transfer load between different substations. Major components of this alternative are as follows:

- install new transformers and associated equipment;
- acquire land to increase size of existing substations and provide the necessary space for new equipment;

- potentially rebuild existing 69-kV circuits, converting them to double-circuit lines; and
- possibly install new underground duct and structure system throughout the area to carry new distribution circuits.

This alternative would provide a temporary solution to capacity limits, but it would not satisfy the need for an additional substation in the foreseeable future. This alternative does not meet the objective of meeting the area's projected long-term electric distribution capacity needs, nor does it optimize operating conditions. Therefore, this engineering option and alternative does not meet all of the Proposed Project objectives, and it was eliminated from further consideration.

System Alternative 2: A New 230/12-kV Substation Project

This alternative would construct a new 230/12-kV substation and associated equipment along the existing Transmission Corridor. This option would "loop-in" the existing 230-kV transmission line and avoid the need for a new power line component. Major components of this alternative are as follows:

- construct a new 230/12-kV substation along the existing ROW, and
- construct new underground 12-kV distribution circuits and connect to the existing network.

This option would relieve the anticipated overload through the planning horizon. This option would meet the existing capacity need, but not provide the system reliability desired. It would also require a larger substation pad, which would disturb a greater area of land. In addition, the City of Chula Vista and surrounding property owners were opposed to an overhead loop-in of the 230-kV line.

A new 230/12-kV substation would not meet the reliability objective for the Proposed Project because this higher-voltage non-standard substation would pose technical issues for transferring load between area 69/12-kV substations. In addition, there would be relay coordination issues associated with higher fault current. Since this engineering option would not improve system reliability, and because it would potentially create new technical system management challenges, it was eliminated from further consideration.

System Alternative 3: A New 69/12-kV Substation Project (Proposed Project)

This alternative would develop a new 69/12-kV substation within the needs area identified by SDG&E. Major components of this alternative are as follows:

- construct a new 69/12-kV substation within a 1.5-mile radius of the Existing Substation's overload area to maintain substation reliability criteria;
- loop-in the existing 69-kV power line (TL 6910) into the proposed substation; and
- construct approximately 5 miles of new 69-kV power line from the Existing Substation to a new substation site to meet NERC, WECC, and CAISO criteria and to provide reliability.

A new 69/12-kV substation would increase reliability of the existing distribution through various potential interconnections. The new 69/12-kV system could connect to the Existing Substation through open 69-kV transmission tie-lines and through the open 12-kV distribution circuit ties, thereby providing the capability to transfer load between substations under both normal and abnormal conditions. Such a system would require a smaller site than System Alternative 2.

System Alternative 4: No Project Alternative

Under the No Project Alternative, no action would be taken. This alternative would require SDG&E to serve the electrical needs of the area from existing substations, with no upgrades or modifications. As discussed in Chapter 2, Purpose and Need, SDG&E's current forecast shows that electric demand in the Salt Creek area would exceed existing capacity in 2016. The southeastern Chula Vista area is fed primarily from existing Telegraph Canyon and Proctor Valley Substations. The ultimate load for the area is 286-MW, a load that requires the Telegraph Canyon, Proctor Valley, and new Salt Creek Substations to each operate at optimal capacity. The Telegraph Canyon Substation is already at its maximum four-bank transformer configuration, with an 86% substation loading forecasted by 2016. Proctor Valley Substation is at a two-bank transformer configuration, with a loading of 92%.

The No Project Alternative would result in a reduced level of reliability, potentially leading to blackouts. This alternative would not meet the following Proposed Project objectives:

- meet the area's projected long-term electric distribution capacity needs by constructing a new substation near planned load growth to maximize system efficiency;
- provide three 69-kV circuits into the proposed Salt Creek Substation to serve load growth in the region and meet NERC/WECC/CAISO regulatory requirements;
- provide substation and circuit tie capacity that would provide additional reliability for existing and future system needs; and
- reduce loading on area substations to optimum operating conditions, providing greater operational flexibility to transfer load between substations within the proposed Salt Creek Substation service territory.

Nor does the No Project Alternative meet the remaining objectives regarding project location. It was, therefore, eliminated from further consideration.

5.3.3 System Alternative Recommendation

SDG&E recommends System Alternative 3, constructing a new 69/12-kV substation. It meets all of the Proposed Project objectives, as shown in Table 5-1. As discussed above, this engineering approach provides superior reliability and operational flexibility. It improves system reliability by providing additional transformer capacity in the Proposed Project area, and operational flexibility by enhancing the ability to transfer load between area substations. It provides the necessary infrastructure to meet anticipated future demands in the area.

5.3.4 System Evaluation Summary and Alternatives Eliminated from Further Consideration

Following the evaluation methodology discussed in Section 5.3.1, SDG&E eliminated system modifications that are infeasible or do not meet Proposed Project objectives as defined in Section 1.4, Project Needs and Alternatives. Those system alternatives eliminated from further consideration are listed below and shown in Table 5-1.

- System Alternative 1: Expand Existing Area Substations to Increase Capacity
- System Alternative 2: A New 230/12 kV Substation Project
- System Alternative 4: No Project Alternative

Table 5-1: System Alternative Evaluation Summary

Project Objective	**Alternative 1 Expand Area Substations**	**Alternative 2 New 230/12-kV Substation**	**Alternative 3 New 69/12-kV Substation and Associated Power Line**	**Alternative 4 No Action (No Project) Alternative**
Meet the area's projected long-term electric distribution capacity needs by constructing the proposed Salt Creek Substation near planned load growth to maximize system efficiency.	No	Yes	Yes	No
Provide three 69-kV circuits into the Salt Creek Substation to serve load growth in the region and meet the regulatory requirements of the North American Electric Reliability Corporation (NERC), Western Electric Coordinating Council (WECC), and California Independent System Operator (CAISO).	No	No	Yes	No
Provide substation and circuit tie capacity that would provide additional reliability for existing and future system needs.	No	No	Yes	No
Reduce loading on area substations to optimum operating conditions, providing greater operational flexibility to transfer load between substations within the proposed Salt Creek Substation service territory.	No	Yes	Yes	No
Comply with and respect the outcome of the extensive community-based public process to select a site for a new substation in the Otay Ranch area, as evidenced by City of Chula Vista City Council	No	Yes	Yes	NA

Project Objective	Alternative 1 Expand Area Substations	Alternative 2 New 230/12-kV Substation	Alternative 3 New 69/12-kV Substation and Associated Power Line	Alternative 4 No Action (No Project) Alternative
Resolution 2011-073.				
Meet Proposed Project needs while minimizing environmental impacts by siting the substation on property designated for future development that is located outside of the City of Chula Vista's Multiple Species Conservation Program (MSCP) Preserve.	No	Yes	Yes	NA
Locate proposed new power facilities, as appropriate and as needed, within existing utility rights-of-ways (ROWs), access roads, and utility-owned property.	No	Yes	Yes	NA

NA = not applicable

As shown in Table 5-1, constructing a new 69/12-kV substation (System Alternative 3) would meet all defined Proposed Project objectives. In comparison, System Alternative 1 would not meet the area's projected long-term electric distribution capacity needs nor would it optimize operating conditions. System Alternative 2 would not provide system reliability, and the No Project Alternative would not address area needs or meet Proposed Project objectives.

System Alternative 3 is the only approach that adequately addresses long-term forecasted demand in the Proposed Project area and improves system reliability. Constructing a new 69/12-kV substation would meet all defined Proposed Project objectives. It would also provide space for future expansion, when needed. Therefore, System Alternatives 1, 2, and 4 were eliminated from further consideration, and System Alternative 3, constructing a new 69/12-kV system, was carried forward for analysis in this PEA.

5.4 Salt Creek Substation Site Alternatives

5.4.1 Substation Site Selection

SDG&E identified the substation site as the area that would meet the Proposed Project's objectives and optimize load balancing and power line lengths. Within the Proposed Project area and prior to purchasing the Salt Creek Substation site, SDG&E identified potential substation sites encompassing at least 8 acres and evaluated each potential site, applying a series of criteria. These criteria include the items listed below:

- Engineering Factors
  - Parcel size (minimum 8 acres) and shape – large enough to accommodate substation design

  - Proximity to existing 69-kV power lines
  - Proximity to load center
  - Adjacency to a fully developed non-utility congested street system
- Land Rights
  - Feasible land acquisition (without condemnation)
  - Cost
- Environmental Constraints
  - Located outside of MSCP Open Space Preserve
  - Minimize impacts to biological and cultural resources (on-site and off-site)
  - Land use/visual compatibility

Based on the criteria listed above, SDG&E identified eight possible substation sites. These eight substation site alternatives are shown in Figure 5-1, Alternative Substation Sites.

5.4.2 Salt Creek Area Site Alternatives

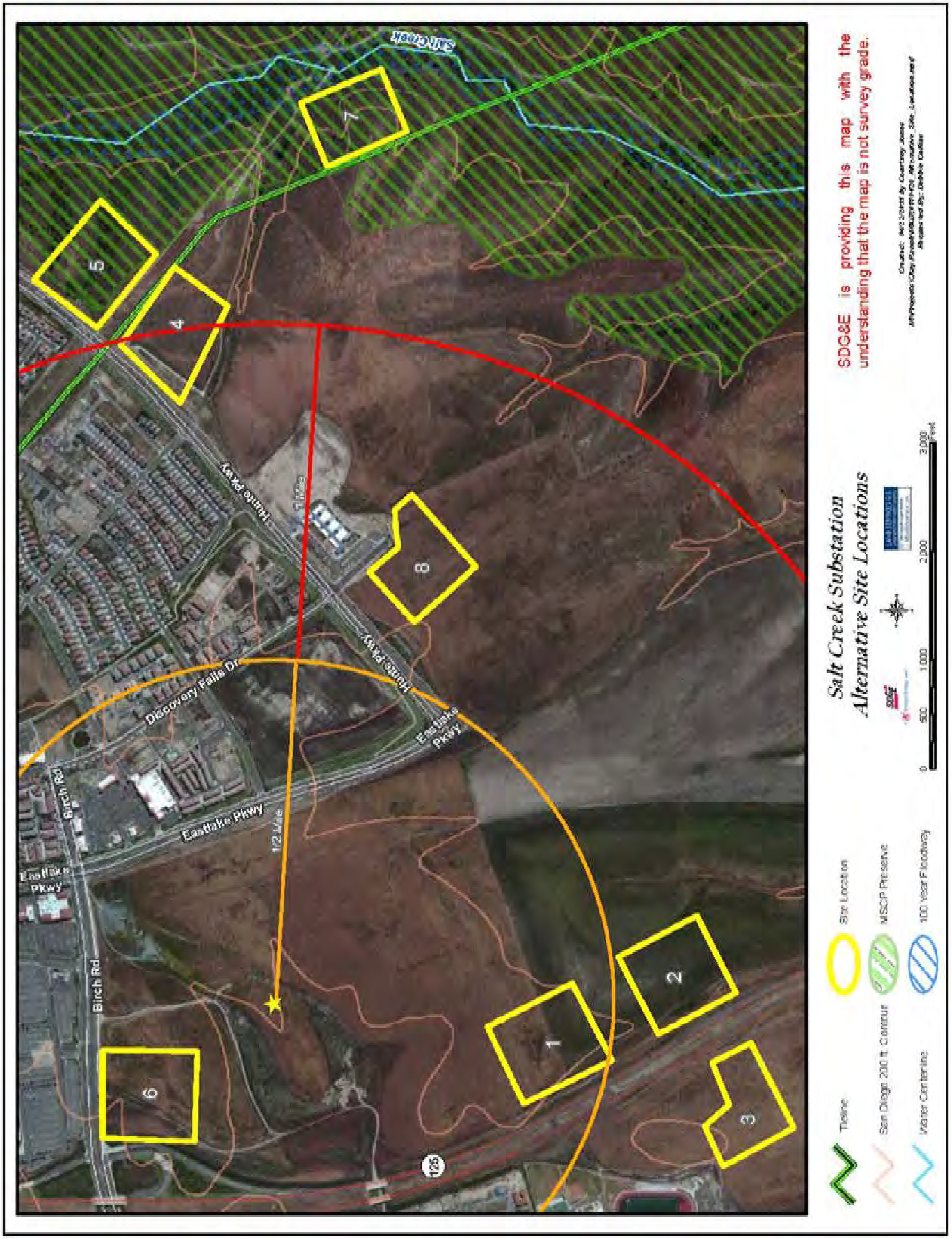
SDG&E considered eight potential alternative sites for the new 69/12-kV Salt Creek Substation. SDG&E evaluated each site for its ability to accommodate anticipated equipment and designs. These alternatives are shown in Figure 5-1 and discussed in the following sections.

The new substation site selection process consisted of two separate evaluations of alternative site locations. The first evaluation occurred from 2002 through mid-2008. SDG&E participated in the City of Chula Vista's University Framework Committee that was responsible for developing a University Framework Plan that included an acceptable location for a new substation. Five sites (Alternatives 1 through 5) were identified and evaluated by the University Framework Committee.

In early 2007, after extensive discussion and consideration of substation site alternatives, a proposed substation site (Hunte West) was identified as the then-preferred location for the new substation. SDG&E then worked with the City of Chula Vista for 2 years to develop a site/grading plan for the preferred site. The site acquisition process was suspended in 2008 when the City of Chula Vista entered into a Land Offer Agreement with the adjacent property owner, and the property appeared to be no longer available for development of a substation. This resulted in the need to re-analyze alternative site locations.

Between mid-2008 and early 2011, five other alternative sites were evaluated, including two that were considered in the initial site selection process. Based on changes in circumstances in early 2011, the site location that was initially determined to be preferred substation site (Hunte West) became available again as a viable location for the Salt Creek Substation. It was still the preferred substation site.

Figure 5-1: Alternative Substation Sites



5.4.2.1 Sites Eliminated from Further Consideration

Based on the site selection criteria listed above, Sites 1, 2, 3, 5, 6, and 7 were eliminated from further consideration in this PEA, as summarized in Table 5-2, Alternative Substation Sites Evaluation Summary. Each site presented potential "fatal flaws" related to environmental conditions or ownership support, as explained further below. Therefore, these six sites were eliminated from further consideration, and the effort focused on identifying a site location with ownership support and that avoided and minimized environmental impacts.

Table 5-2: Alternative Substation Sites Evaluation Summary

Substation Site (Alternative Number)	Alternative Name	Evaluated or Eliminated	Reason for Elimination
1	Future Eastern Urban Center	Eliminated	No property owner or City of Chula Vista support
2	Village 9	Eliminated	No property owner or City of Chula Vista support
3	Regional Technology Park	Eliminated	No property owner or City of Chula Vista support
4	Hunte West	Evaluated	NA
5	Hunte East	Eliminated	Inside MSCP Preserve
6	McMillan Eastern Urban Center	Eliminated	No property owner support
7	Baldwin Offer	Eliminated	Inside MSCP Preserve
8	Discovery Falls	Evaluated but eliminated	No City of Chula Vista support

NA = not applicable

Alternatives 1, 2, and 3 were rejected from further consideration due to being located in an undeveloped area with no access to a public ROW, and due to property rights impacts to adjacent private lands being extensive and costly. For the remaining five alternative sites, there were two primary factors influencing the ultimate acceptability and approvability of the preferred site location. In December 2010, SDG&E met with staff from the City of Chula Vista, USFWS, and CDFW to discuss siting considerations and specific alternative sites. The agencies agreed that the substation should be located outside of the City of Chula Vista's Multiple MSCP Preserve to avoid impacts to biological resources within the Preserve, since feasible locations were identified outside of the Preserve. Thus, from an environmental and regulatory perspective, the preferred location must be located outside of the Preserve. This environmental constraint eliminated two of the five sites as being infeasible alternatives (Alternatives 5 and 7).

The three other candidate sites (4, 6, and 8) evaluated were located outside of the MSCP Preserve boundary and within areas designated for development. However, Alternative 6 did not have support from the property owner and was eliminated from consideration. Based on the regulatory agency guidance and lack of property owner support, only two sites, Hunte West and Discovery Falls, were carried forward for consideration.

Alternative 4, Hunte West (Proposed Project Location)

Alternative 4, Hunte West, was the Preferred Substation Site in the original site selection process from 2002 to 2008, until it became unavailable. Due to a change in circumstances, the Hunte West site became available again in February 2011. A second review of this location reconfirmed its identification as the preferred site for the proposed substation. Two key factors supported this conclusion: it is located outside of the Preserve and it is the only candidate that had the support of both the City of Chula Vista and the property owner. Additional positive attributes are as follows:

- adjacency to the Transmission Corridor provides the opportunity to develop a 69/12-kV or 230/12-kV substation, and eliminates the need to construct a new connecting transmission corridor;
- no known cultural resource issues;
- no hazardous materials issues based on the results of the Phase I study;
- adjacency to a fully developed non-utility-congested street system (Hunte Parkway);
- location below Hunte Parkway and the residences to the north, providing both a horizontal and vertical visual and land use buffer from Hunte Parkway and residents to the north; and
- good distribution circuit access.

Alternative 8, Discovery Falls

Alternative 8 would be located west of Discovery Falls Road and the High Tech Schools, approximately 0.35 mile west of the proposed substation site, south of Hunte Parkway outside of the MSCP Preserve boundary, and within areas designated for development. Alternative 8 was studied as a potential location for the substation since it was located near the load center, existing Transmission Corridor, and existing access roads, and is also located outside of the MSCP Preserve. However, the City of Chula Vista was not supportive of this location, since it was not compatible with the City of Chula Vista's planning objectives for the University SPA. Subsequent to determining that the City of Chula Vista was not supportive of this location, the Hunte West site location (Alternative 4) became available again for development of the proposed substation. The City of Chula Vista expressed its support for Alternative 4 by adopting City of Chula City Council Resolution 2011-073. Therefore, Alternative 8 was rejected from further consideration as a viable alternative, and Alternative 4, Hunte West, is carried forward in this PEA as the proposed Salt Creek Substation site. SDG&E purchased the 11.6-acre Hunte West site (Alternative 4) in June 2011.

5.5 Power Line Alternatives

SDG&E identified and evaluated five power line alternatives for connecting the proposed Salt Creek Substation to the Existing Substation. These included three overhead alternatives and two underground alternatives.

5.5.1 Evaluation Methodology

To identify potential power line route alternatives within the Proposed Project area, SDG&E considered the factors listed below:

- Existing transmission facilities
- Existing transmission and distribution ROWs
- Ground topography and slope steepness
- Line route distance between substations
- Proximity to existing and planned roads
- Aesthetics of individual line segments

Alternative 69-kV Power Line Route Descriptions

SDG&E considered several overhead and underground alternatives for the 69-kV power line between the Existing Substation and the proposed Salt Creek Substation. Each overhead alternative and one underground alternative would be located within the existing Transmission Corridor between the Existing Substation and the proposed Salt Creek Substation. The second underground alternative would pass through residential neighborhoods, following a series of existing residential and commercial streets. The power line alternatives are as follows:

- Alternative 1. Loop-In TL 6910 and Reconductor Five Additional Transmission Lines
- Alternative 2. Rebuild TL 6910 from the Existing Substation to Salt Creek to Twin Circuit and Loop-In to Salt Creek Substation
- Alternative 3. Loop-In TL 6910 and Build New 69-kV Overhead Single Circuit from the Existing Substation to Salt Creek Substation (in existing ROW)
- Alternative 4. Loop-In TL 6910 and Build New 69-kV Underground Double Circuit from the Existing Substation to Salt Creek Substation (in Public ROW)
- Alternative 5. Loop-In TL 6910 and Build New 69-kV Underground Double Circuit from the Existing Substation to Salt Creek Substation (in existing ROW)

As discussed below, Alternatives 1, 2, 4, and 5 are either infeasible or undesirable, with extensive environmental impacts.

5.5.2 Overhead Power Line Alternatives

Three overhead power line alternatives were considered. Each of these three alternatives is summarized below.

Alternative 1. Loop-In TL 6910 and Reconductor Five Additional Power Lines

This alternative would require line upgrades, including rebuilding and reconductoring five different power lines (approximately 25 miles), to meet system operating criteria. This alternative is considered undesirable, as the estimated cost of the reconductors would be $84 million. In addition, this alternative would result in greater effects to residents throughout the region by necessitating approximately 25 miles of transmission line improvements, as compared to the 5 miles proposed under the Proposed Project. This alternative does not meet the Proposed Project objective to provide a third transmission source into the proposed substation to serve load growth in the region to sufficiently meet NERC, WECC, and CAISO regulatory requirements. Therefore, this power line alternative was eliminated from further consideration.

Alternative 2. Rebuild TL 6910 from the Existing Substation to Salt Creek to Twin Circuit and Loop-In to Salt Creek Substation

Rebuilding existing power line TL 6910 and converting it to a double-circuit line would eliminate the need for a new power line component. However, this alternative would require the acquisition of additional ROW across private property on land located adjacent to and west of the existing Transmission Corridor. Acquiring additional ROW would likely impact existing land uses on private property adjacent to the Transmission Corridor, including displacing some residents at considerable cost. With the construction cost at $32 million, and displacement of residences, it was concluded that this alternative is undesirable and was eliminated from further consideration.

Alternative 3. Loop-In TL 6910 and Build New 69-kV Overhead Single Circuit from the Existing Substation to Salt Creek Substation (in Existing ROW)

Building a new overhead 69-kV line to the proposed Salt Creek Substation within the existing Transmission Corridor is feasible with minimal impacts because it would use previously disturbed land where power lines already exist. This option would not require upgrading other transmission lines, nor would it require additional land acquisition. In addition, at $18.9 million, the cost is the lowest in comparison to the other alternatives.

5.5.3 Underground Alternatives Evaluated

Two underground alternatives were considered for the 69-kV power line between the Existing Substation and the proposed Salt Creek Substation. A summary of the evaluation for these two underground alternatives is presented below.

Alternative 4. Loop-In TL 6910 and Build New 69-kV Underground Double Circuit from the Existing Substation to Salt Creek Substation (in Public ROW)

Building a new underground 69-kV power line to the proposed Salt Creek Substation would eliminate the potential for new visual impacts associated with an overhead power line. Therefore, it was considered and evaluated further.

This underground alternative would be constructed in public ROWs, including in residential and busy commercial streets. As such, this alternative would have substantially greater traffic impacts than the Proposed Project. In addition to traffic, air quality and noise impacts to residents would be greater. Also, the cost of undergrounding power lines would be considerably higher, at $62.5 million. While this alternative would meet most Proposed Project objectives, the proposed overhead alternative is superior to this underground alternative because it is more cost effective and would have fewer traffic, air quality, and noise impacts.

Alternative 5. Loop-In TL 6910 and Build New 69-kV Underground Double Circuit from the Existing Substation to Salt Creek Substation (in existing ROW)

Building a new underground 69-kV power line to the proposed Salt Creek Substation would eliminate the potential for new visual impacts associated with an overhead power line. Therefore, it was considered and evaluated further.

This underground alternative would be constructed within the existing Transmission Corridor. Some underground portions of this alignment would be infeasible due to severe elevation and grade changes that exceed current undergrounding standards. In addition, underground construction immediately adjacent to two high-pressure natural gas pipelines along the southern portion of the power line would substantially increase potential safety hazards compared to the proposed overhead power line. As such, these segments would require overhead construction, thus creating similar visual impacts as the proposed overhead alternative, while air quality and noise impacts would be greater due to the underground component. Freeway crossings would entail extensive boring operations. Potential impacts to biological and cultural resources would also be greater by undergrounding the entire corridor. Lastly, the cost of undergrounding the power lines would be significantly higher than other alternatives, at $184 million. Therefore, while this alternative would meet some Proposed Project objectives, the proposed overhead alternative is superior to this underground alternative because it is more cost effective, safer, and would create fewer air quality, biological, cultural, and noise impacts.

5.5.4 Power Line Alternative Evaluation Summary and Recommendation

SDG&E recommends constructing the new 69-kV power lines within the existing Transmission Corridor, extending south from the Existing Substation to the proposed Salt Creek Substation. This Transmission Corridor would includes both the existing 230-kV transmission line (TL 23042) and an existing 69-kV power line (TL 6910).

SDG&E examined five alternative 69-kV power line alternatives (Table 5-3, Power Line Alternative Evaluation Summary). Four of the five were either infeasible or undesirable due to cost and potential impacts. Following this evaluation, it was determined that building a new overhead 69-kV power line to the proposed Salt Creek Substation within the existing Transmission Corridor would be feasible and cost-effective, with no significant environmental impacts. Therefore, it was concluded that this is the superior power line alternative, and it is carried forward as part of the Proposed Project.

Table 5-3: Power Line Alternative Evaluation Summary

Project Objective	Loop-In TL 6910 and Reconductor Five Additional TLs	Rebuild TL 6910 from the Existing to Salt Creek as Twin Circuit	New 69-kV Overhead Single Circuit in Existing ROW	New 69-kV Underground Double Circuit in Public ROW	New 69-kV Underground Double Circuit in Existing ROW
Meet the area's projected long-term electric distribution capacity needs by constructing the proposed Salt Creek Substation near planned load growth to maximize system efficiency.	No	Yes	Yes	Yes	Yes
Provide three 69-kV circuits into the Salt Creek Substation to serve load growth in the region and meet the regulatory requirements of the North American Electric Reliability Corporation (NERC), Western Electric Coordinating Council (WECC), and California Independent System Operator (CAISO).	No	Yes	Yes	Yes	Yes
Provide substation and circuit tie capacity that would provide additional reliability for existing and future system needs.	Yes	Yes	Yes	Yes	Yes
Reduce loading on area substations to optimum operating conditions, providing greater operational flexibility to transfer load between substations within the proposed Salt Creek Substation service territory.	Yes	Yes	Yes	Yes	Yes
Comply with and respect the outcome of the extensive community-based public process to select a site for a new substation in the Otay Ranch area, as evidenced by City of Chula Vista City Council Resolution 2011-073.	Yes	Yes	Yes	Yes	Yes
Meet Proposed Project needs while minimizing environmental impacts by siting the substation on property designated for future development that is located outside of the City of Chula Vista's Multiple Species Conservation Program (MSCP) Preserve.	Yes	Yes	Yes	Yes	Yes
Locate proposed new power facilities, as appropriate and as needed, within existing utility rights-of-ways (ROWs), access roads, and utility-owned property.	Yes	No	Yes	No	Yes

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CHAPTER 6 – OTHER CEQA CONSIDERATIONS

6.0 Introduction

In accordance with the CPUC's Information and Criteria List and PEA Checklist (CPUC 2008), this chapter discusses the Proposed Project's potential to induce growth in the area or remove any obstacles to population growth in the area. In addition, this chapter identifies and evaluates cumulative impacts potentially resulting from construction and operation of the Proposed Project in light of current and planned projects in the area. The Proposed Project is intended to provide new facilities to maintain reliable service to SDG&E customers and accommodate customer-driven distribution load growth in the area, as discussed in Chapter 2.0, Project Purpose and Need. Implementing the Proposed Project would not induce growth and would not result in a significant cumulative environmental impact in any resource area considered under CEQA.

6.1 Growth-Inducing Impacts

Section 15126.2(d) of the CEQA Guidelines states that environmental documents should "discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment."

A project could be considered to have growth-inducing effects if it would do any of the following:

- either directly or indirectly foster economic or population growth or the construction of additional housing in the surrounding area;
- remove obstacles to population growth;
- require the construction of new community facilities that could cause significant environmental effects; and/or
- encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.

Direct forms of growth include new employees hired for proposed commercial and industrial development projects and population growth resulting from residential development projects. Other examples of projects that may induce growth are expanding urban services into previously undeveloped areas or removing major obstacles to growth, such as transportation corridors and potable water supply.

In contrast, projects that respond to future development that has been analyzed in existing local plans or that will undergo their own CEQA review are typically not considered to induce growth.

6.1.1 Growth Caused by Direct and Indirect Employment

The Proposed Project would be considered growth-inducing if it stimulated population growth or population concentration above projected population growth that is already captured in local and regional plans for the City of Chula Vista, unincorporated San Diego County, or surrounding areas. In addition, the Proposed Project would be considered growth-inducing if growth resulted from direct or indirect employment required to construct, operate, or maintain the Proposed Project, and/or if growth resulted from the additional electrical power that would be transmitted by the Proposed Project.

Construction and operation of the Proposed Project would not affect employment in the area. SDG&E would employ approximately 15 to 35 workers to support construction of the various Proposed Project components, with up to approximately 35 workers on-site at any one time during peak construction times. Construction workers would be drawn from the local labor pool and would not require additional housing. Contractors from outside of San Diego County may be mobilized for all or part of the construction phase and may require lodging; however, they would not cause growth in the area due to the short-term and temporary nature of their employment. In addition, a number of lodging facilities and hotels are proximate to the Proposed Project area.

As the proposed Salt Creek Substation would be unattended, no on-site employees/workers would be present during operation. Current SDG&E employees would maintain the Proposed Project components and, therefore, the Proposed Project would not create new jobs or increase the demand for housing. The Proposed Project was developed to meet forecasted electrical demands in the City of Chula Vista and surrounding areas in unincorporated San Diego County. The Proposed Project is not designed to facilitate growth in the community, either directly or indirectly. It would accommodate growth in the area that is already planned or approved by local land use authorities, and would not, by itself, induce growth.

6.1.2 Growth Related to the Provision of Additional Electric Power

6.1.2.1 Regional Background

The population of San Diego County has increased every year since 1944 (SANDAG 2011). As a result, growth is part of the past, present, and expected future of the region. SANDAG is the regional planning entity for the San Diego region, and is composed of representatives from 18 cities and the county government. SANDAG serves as the forum for regional decision-making. SANDAG makes strategic plans, obtains and allocates resources, and provides information on a broad range of topics pertinent to the region's quality of life.

Cities and the county designated SANDAG as the regional planning board, pursuant to a voter-approved proposition. The cities and county provide SANDAG with information regarding their general plans, local growth patterns, and land use regulations. In return, SANDAG generates regional management plans and population forecasts. As members of SANDAG, cities and the county review and approve all plans and forecasts prepared by SANDAG. Cities and the county use SANDAG's findings to develop and shape their respective general plans and land use regulations. The county and each city are required to adopt a general plan, which must be updated on a regular basis. All general plans and subsequent amendments are subject to CEQA review.

The SANDAG Regional Comprehensive Plan (RCP), last approved in 2004, was prepared to provide policy guidance on accommodating the growth projected by SANDAG. A key element of the RCP is the Integrated Regional Infrastructure Strategy (IRIS), which outlines guidance for planning the region's infrastructure. The goal of IRIS is to ensure internal consistency with respect to long-term regional infrastructure planning to meet the needs based on growth projected by SANDAG. IRIS addresses the energy supply and delivery system as key infrastructure elements. As the primary utility that provides electric service to approximately 3.4 million customers in its service area, which includes all of San Diego County and the southern part of Orange County, SDG&E participates in and supports this aspect of the planning process.

SANDAG has been preparing long-range forecasts of population, housing, and employment since the 1970s. SANDAG's forecasts represent the changes anticipated for the region based on the best available information. The forecast is produced by using established computer models that evaluate land use, demographics, regional and local economics, and transportation patterns. SANDAG forecasts use a complex set of assumptions, input data, computations, and model interactions (SANDAG 2011).

The latest Regional Growth Forecast (RGF), published in 2010, was developed for 2050 and provides an update of expected growth from the previous model that was developed for 2030. The 2050 RGF is based on data from local land use jurisdictions plus updated information for all model inputs. Like the 2030 RGF, the 2050 RGF predicts that local population will grow at a steady rate to more than 4 million residents per year between 2010 and 2050. In addition, according to the 2010 RGF, San Diego County employment and income will grow throughout the next 40 years and beyond (SANDAG 2011).

SANDAG and other planning agencies do not perceive the availability of electricity as a driver of growth. Nor is the lack of electricity treated as barrier to growth. Rather, electrical supply responds to planned growth, and that planned growth inherently requires its own, separate environmental review. It is anticipated growth that drives electrical system upgrades, not vice versa. Increasing electrical capacity eases the burdens of meeting existing energy demands and supports already-projected growth. The factors affecting growth are so multifaceted that any potential connection between additional electrical capacity and growth would necessarily be too speculative and tenuous to merit extensive analysis.

SANDAG and its regional growth model recognize investment in energy infrastructure as necessary to support implementation of the RCP. SDG&E coordinates with SANDAG to respond to regional and local planning processes. How and where development occurs within SDG&E's service area is dictated by the land use agencies with land use approval authority. SDG&E responds to these approvals.

6.1.2.2 Proposed Project and Growth

The objectives of the Proposed Project are to meet the area's electric capacity needs while providing improved substation and circuit reliability. The Proposed Project would help to serve existing load in the region, and would increase flexibility and reliability to the distribution system by constructing the proposed Salt Creek Substation. The Proposed Project would not extend infrastructure into previously un-served areas and, therefore, would not create a new service or electrical supply that would indirectly allow for an increase in population and housing.

The Proposed Project would accommodate existing and planned power demands in SDG&E's service area, as well as projected power demands based on state-adopted and locally adopted plans and projections. The demand for electricity is a result of, not a precursor to, development in the region that has been planned for and analyzed by local agencies with land use jurisdiction. The Proposed Project would increase the reliability with which electricity is made available, but the objective of the Proposed Project is not to provide a new source of electricity.

6.1.3 Obstacles to Population Growth

Obstacles to population growth in the region served by the Proposed Project are primarily due to feasibility of development, economic constraints, permitting, and other development restrictions and regulations administered by local agencies. Electrical capacity is not an obstacle to growth. The Proposed Project would not affect the feasibility of developing in the area, remove an obstacle to growth, or affect development regulations administered by local agencies because it serves already-planned-for growth. SDG&E responds to projected development and forecasts, rather than inducing growth by extending infrastructure for future unplanned development; therefore, the Proposed Project would not induce population growth in the area.

6.2 Cumulative Impacts

The CEQA Guidelines, Section 15355, identify cumulative effects as "two or more individual effects, which when considered together, are considerable, or which compound or increase other environmental impacts." The CEQA Guidelines further state that a project may have cumulatively considerable environmental impacts when "the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects" (CEQA Guidelines Section 15065[a][3]). In addition, Section 15064(h)(1) requires that the lead agency consider "whether a cumulative impact is significant and whether the effects of the project are cumulatively considerable." The CEQA Guidelines states that "the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable" (CEQA Guidelines Section 15064[h][4]).

This analysis of potential cumulative impacts generally extends approximately 1 mile from the Proposed Project's components, as this distance was estimated to be the farthest that Proposed Project impacts would extend. Some cumulative projects are located greater than 1 mile away, but are included here in an abundance of caution for a complete and thorough analysis. An approximate 1-mile radius is appropriate based on the Proposed Project's location and the minimal impacts associated with the Proposed Project.

The Proposed Project would be developed on land that is either already owned by SDG&E or is within existing SDG&E easements, and no change to land use patterns would occur except for the proposed substation site. Both the proposed Salt Creek Substation site and the power line route are primarily surrounded by residential development. The Proposed Project is not part of a critical habitat linkage or wildlife corridor. As an unattended substation, the Salt Creek Substation would not generate a substantial amount of traffic that would be distributed into nearby intersections or roadways. For these reasons, the 1-mile radius is an appropriate distance to determine the potential for other reasonably foreseeable projects to be cumulatively considerable.

Data on cumulative projects used for this evaluation was obtained through discussion with City of Chula Vista staff; review of relevant documents and websites of affected agencies, and correspondence with agency staff. Those agencies or organizations listed below were included with regard to current or anticipated development projects in the Proposed Project area:

- County of San Diego
- City of Chula Vista
- California Department of Transportation (Caltrans)
- California Public Utilities Commission (CPUC)
- California Energy Commission

"Reasonably foreseeable" projects considered in the cumulative analysis herein are projects that SDG&E, federal, state, or local agency representatives were aware of when the PEA was prepared. These projects are listed in Table 6-1 and shown in Figure 6-1. A total of 13 projects were identified.

Table 6-1: Planned and Proposed Projects in the Proposed Project Vicinity

#	Project	Project Type	Project Description/Size	Project Location	Permitting Status/ Schedule
1	Caltrans Concrete Median Barrier at SR-54/SR-125*	Roadway improvement	Install concrete median barriers on existing SR-54 and SR-125; approximately 2 miles northwest of Proposed Project site	On SR-54, east of Briarwood Road to west of the SR-54/-125 interchange; on SR-125 from SR-54/-125 intersection to the Elkelton Boulevard overcrossing	Completion scheduled winter 2012

#	Project	Project Type	Project Description/Size	Project Location	Permitting Status/ Schedule
2	San Miguel Ranch	Residential/ mixed-use master plan community	Ongoing development of master planned community with residential and mixed-use development	East and west of SR-125, bisected by San Miguel Ranch Road and Mountain Miguel Road; north of Proctor Valley Road	Construction ongoing
3	Village 11, Winding Walk	Residential with a mixed-use core	2,300 residential units and commercial development	Adjacent to the south of Olympic Parkway and northeast of Hunte Parkway	Ongoing construction, approximately 90% complete
4	Freeway Commercial	Residential with hotel uses	550 multi-family residential units, two hotels	South of Olympic Parkway, east of SR-125, north of Birch Road, west of Eastlake Parkway	Permitting process ongoing
5	Millenia (Eastern Urban Center)	Mixed-use development	3,000 residential units, 3.8 million square feet of commercial	South of Birch Road, East of Eastlake Parkway, North of Hunte Parkway alignment, east of SR-125	Permitted, grading likely to begin in 2013
6	Village 10	Residential development	Single- and multi-family development	Southeast of Eastlake Parkway and Otay Valley Road intersection alignment	Permitting process ongoing
7	Village 9	Residential development with mixed-use town core	4,000 residential units, 1.7 million square feet of commercial	Immediately east of SR-125, south of Hunte Parkway	Permitting process ongoing
8	Village 8 East	Mixed use	Single- and multi-family and commercial development	Immediately west of SR-125, south of Hunte Parkway	Permitting process ongoing
9	Village 8 West	Mixed use	2,050 residential units, 300,000 square feet of commercial	South of Hunte Parkway, west of SR-125 and Village 8 east, generally north of Otay Valley Road alignment	Permitting process ongoing
10	TL 643 (near Existing Substation)	Power line improvements	Wood to steel	Existing Substation (within SDG&E property)	Construction in 2013
11	TL 628 (near Existing Substation)	Power line improvements	Wood to steel	Existing Substation (within SDG&E property)	Construction in 2013

#	Project	Project Type	Project Description/Size	Project Location	Permitting Status/ Schedule
12	TL 6910	Power line improvements	Wood to steel	Existing Substation (within SDG&E property) and east and south of the proposed Salt Creek Substation	Construction Completed in 2013
13	Floit Property, south of Eastlake Drive	Land swap	Land swap with SDG&E to construct a residential development	South of Eastlake Drive and west of SR-125	Application not yet submitted
14	RV and Boat Storage	Commercial development	Storage project within SDG&E easement	West of SR-125 and south of Eastlake High School	Application not yet submitted

* Source: Caltrans 2012

The cumulative impacts analysis considers the Proposed Project's construction duration, as well as post-construction operation and maintenance periods. Construction of the Proposed Project is anticipated to require approximately 18 to 24 months from initial site development through energization and testing, with completion expected in 2016.

6.2.1 No Cumulative Impacts

This section provides discussion and analysis of all technical resource areas, none of which would result in cumulative impacts.

Aesthetics

Overall, the Proposed Project would not substantially alter the visual character of the area. The proposed Salt Creek Substation site would undergo the most visual change because the natural topography of this undeveloped site would be altered into a graded area and would be developed with new substation structures and elements. The proposed TL 6965 and TL 6910 loop-in would be located in an existing Transmission Corridor with existing overhead power lines and towers, and the addition of a new power line within the existing Transmission Corridor would have a relatively minor change in the visual character of the corridor.

Surrounding lands are being developed with large-scale mixed-used development. Other future projects within the Proposed Project area would be evaluated for their potential to contribute to a significant change to the existing visual environment, and subject to mitigation or design measures, as appropriate, to reduce potential visual impacts. Cumulative effects on aesthetics would be minimized by implementing SDG&E's project design features. For these reasons, the Proposed Project would not result in a cumulatively considerable impact on aesthetics, and a less-than-significant impact would result.

Agriculture and Forestry Resources

Prime Farmland, Unique Farmland, or Farmland of Statewide Importance does not occur in the Proposed Project area; however, the proposed Salt Creek Substation site is located on Grazing

Land and the proposed power line route traverses Farmland of Local Importance. The Existing Substation is not located on any designated farmland. The proposed Salt Creek Substation site currently consists of vacant, undeveloped land previously used for grazing, but is not currently used for agricultural purposes. The Existing Substation is not used for agricultural purposes.

Developing many large mixed-use cumulative projects (Table 6-1) would potentially result in the loss of agricultural lands. However, the Proposed Project would not convert agricultural land to another use or preclude surrounding farm land from continued agricultural activities. For this reason, the Proposed Project would not contribute to a cumulatively considerable loss of agricultural lands, and a less-than-significant impact would result.

No forest land, timberland, or timberland zoned Timberland Production exists on-site or in the surrounding area of the Proposed Project; thus, implementation would not result in a cumulatively considerable loss of forestry resources.

Air Quality

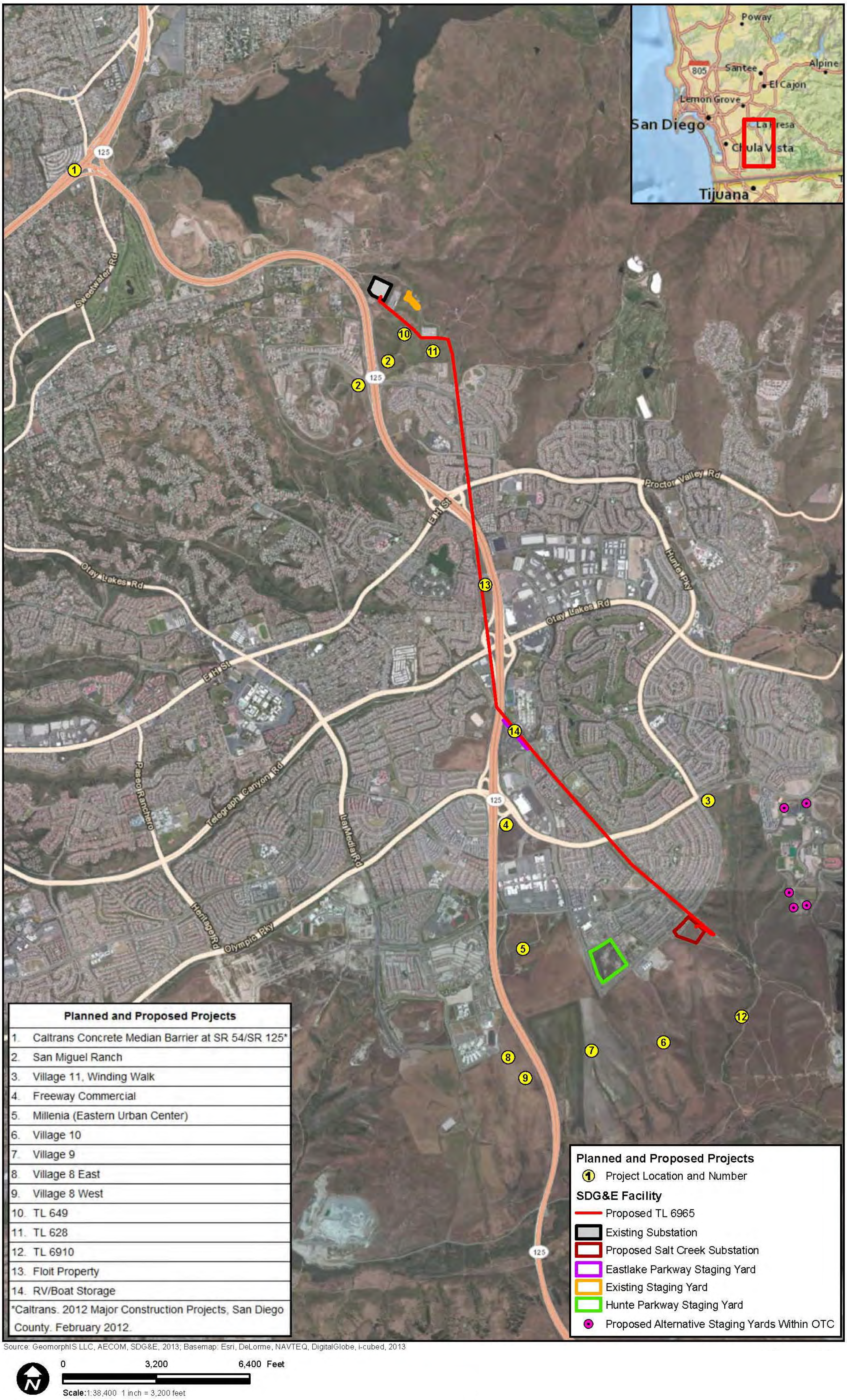
Air quality is a regional resource and is neither defined nor limited by jurisdictional boundaries, political boundaries, or project boundaries. The cumulative study area for air quality primarily focuses on the regional air basin, which includes the Proposed Project area and most of San Diego County, as detailed in Section 4.3. Some specific pollutants can result in localized impacts, such as CO hotspots or fugitive dust conditions.

Construction of the Proposed Project, along with construction of other cumulative projects, would result in a temporary addition of pollutants to the local air basin caused by soil disturbance, fugitive dust emissions, and combustion pollutants from construction equipment and vehicles. Pollutants generated during the construction phase of such projects would have the potential to impact ambient air quality if construction activities occur within proximity and during the same time as the Proposed Project. Emissions associated with the Proposed Project are less than significant and their incremental effect on air quality would not result in a cumulatively considerable net increase of criteria pollutants. As discussed in Section 4.3, the Proposed Project's construction activities would not generate substantial pollutants levels that would exceed applicable thresholds for any pollutant type.

Proposed Project design features and construction restrictions were identified to minimize potential impacts on air quality (see Section 4.3). Similarly, other cumulative projects within the study area would be required to comply with local ordinances and regulations regulating air quality, including dust control during construction activities. Because the Proposed Project and each of the cumulative projects would implement procedures for fugitive dust control, effects would be limited to immediate areas only. Thus, potential cumulative impacts on air quality would not be cumulatively considerable and would be less than significant.

In addition, a significant impact may occur if a project were inconsistent with the rules and regulations of the San Diego APCD or if it would induce growth in excess of that anticipated by the San Diego APCD Regional Air Quality Strategy, neither of which is reasonably foreseeable.

Figure 6-1: Cumulative Projects



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

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Long-term operation of the Proposed Project would not include any permanent, stationary sources of pollution, and would not induce population growth or area employment. Therefore, the Proposed Project would not contribute to a cumulatively considerable air quality impact associated with operation, power generation, or population growth.

Biological Resources

As described in Section 4.4, Biological Resources, there are a variety of sensitive biological resources that occur within the Proposed Project BSA that have the potential to be directly or indirectly impacted, such as Otay tarplant, Quino checkerspot butterfly, avian species, and sensitive habitats and vegetation communities. As shown in Table 6-1, there are a number of large development projects that are planned within the Proposed Project vicinity. Some of these large master-planned developments within the City of Chula Vista would be located on expansive areas of previously undisturbed land that likely host a variety of sensitive biological resources. Although the full extent of those biological impacts is not known at this time (but would be studied for future projects), it is possible that a cumulative impact could result from a combination of all the cumulative projects. Like the Proposed Project, other projects in the area would be subject to federal, state, and local requirements protecting biological resources that would minimize the potential for adverse impacts and require mitigation if impacts were anticipated.

The Proposed Project was designed to best avoid sensitive biological resources, and, as outlined in Section 4.4.5 and the SDG&E NCCP, would implement the APMs and Operational Protocols designed to avoid and/or minimize impacts on biological resources. The Proposed Project would also provide appropriate mitigation where impacts are unavoidable to ensure the protection and conservation of Covered Species. The NCCP Operational Protocols would be applied to the Proposed Project to avoid and/or minimize potential impacts resulting from Proposed Project implementation. In addition, implementation of APM-BIO-1 would ensure that Proposed Project impacts to western burrowing owl would remain less than significant. For these reasons, potential impacts from the Proposed Project would be avoided, minimized, or compensated for, reducing them to a less-than-significant level. As a result, the Proposed Project would not present an incrementally considerable contribution to potential cumulative biological impacts that may result from implementation of all cumulative projects.

No impacts to wetlands or other waters under federal or state jurisdiction are anticipated from the Proposed Project; thus, there would be no contribution to a cumulative wetland impact. None of the Proposed Project component locations function as a wildlife movement corridor and, thus, construction and operation of the Proposed Project would not contribute to a cumulative impact to wildlife movement and corridors.

Cultural Resources

Cultural resources, including archaeological and historical, are generally affected by ground-disturbing activities associated with development. As discussed in Section 4.5, the Proposed Project was designed to avoid cultural resources to the extent feasible. However, it is not feasible to entirely avoid all cultural resources, given the high number of discoveries that have been made in recent years. Although previously recorded archaeological resources are located within specific construction areas for the Proposed Project, and several isolated finds were found during the survey, the Proposed Project is not anticipated to result in impacts to these cultural resources. Nonetheless, the Proposed Project includes implementing APM-CUL-1 through -CUL-3 to reduce impacts to less than significant, including providing an archaeological construction monitoring program when ground-disturbing activities are undertaken. In addition, SDG&E has standard internal programs and practices that are designed to avoid impacts to cultural resources; those programs and practices would not change as a result of the Proposed Project.

Projects included in the cumulative project list, and any other development within the Proposed Project vicinity, would likely involve some form of ground disturbance. If located in previously undisturbed areas, ground disturbance would have the potential to damage or destroy important cultural resources. Like the Proposed Project, other projects in the area would be subject to federal, state, and local requirements protecting cultural resources; these requirements would minimize the potential for adverse impacts and require mitigation if impacts were anticipated. Additionally, SDG&E would implement APMs (i.e., monitoring of ground-disturbing activities) to minimize the potential for impacts to occur with regard to unknown resources. For these reasons, the Proposed Project would not destroy cultural resources. Thus, the Proposed Project would not add incrementally to a cumulatively considerable impact to cultural resources that may result from development of other projects.

The Proposed Project would be located in areas of moderate to high sensitivity for paleontological resources. The record search revealed the presence of 20 localities recorded within the vicinity of the Proposed Project. Anticipated grading and earthmoving activities at the proposed Salt Creek Substation would likely result in the removal of previously undisturbed Otay Formation strata. As such, the Proposed Project includes implementing APM-CUL-4 through -CUL-7 to provide paleontological monitoring when ground-disturbing activities are undertaken. With implementation of monitoring during ground-disturbing activities, impacts would be less than significant.

Cumulative projects may also be proposed in areas of additional known localities and/or within geologic formations with a moderate to high sensitivity for paleontological resources. Similar to the discussion for cultural resources, above, cumulative projects have the potential to impact significant paleontological resources through ground-disturbing activities associated with development if located in previously undisturbed areas. Like the Proposed Project, other projects in the area would be subject to federal, state, and local requirements protecting paleontological resources that would minimize the potential for adverse impacts and require mitigation if impacts were anticipated. Additionally, SDG&E would implement APMs-CUL-4 through -CUL-7 (i.e., monitoring of ground-disturbing activities) to minimize the potential for impacts to occur with regard to unknown paleontological resources. For these reasons, implementation of the Proposed Project would not destroy paleontological resources. Thus, the Proposed Project would not add incrementally to a cumulatively considerable impact to paleontological resources that may result from development of other projects.

Geology and Soils

Proposed Project design and construction would conform to the specific, mandated structural design and performance requirements to protect against the effects of strong seismic shaking. As such, potential impacts as a result of damage caused by strong seismic shaking or fault rupture would be reduced to less than significant. Additionally, SDG&E would implement design features as outlined in the Proposed Project geotechnical reports to minimize the potential for impacts to occur with regard to ground failure, landslides, slope instability, or liquefaction.

Other planned or future projects within the study area would also have the potential for impacts related to geologic resources due to site improvement activities such as grading or landform modification, and due to site-specific soil conditions. Mitigation and/or design measures would be required for these projects to minimize construction-related impacts to or resulting from such resources, and to conform with state and local regulations pertaining to seismic design requirements. For these reasons, potential cumulative effects of construction-related impacts remain at a level that would be less than significant and not cumulatively considerable.

Greenhouse Gas Emissions

GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. GHGs have long atmospheric lifetimes of 1 year to several thousand years, which allow GHG dispersal across the Earth. Similarly, GHG impacts are global, as opposed to the localized air quality effects of criteria air pollutants and TACs. The quantity of GHGs required to ultimately result in climate change is not precisely known. However, the quantity is enormous, and a single project is very unlikely to measurably contribute to a noticeable incremental change in the global average temperature or to the global, local, or micro climate.

GHG emissions would result from construction of the Proposed Project and other foreseeable projects in the surrounding area. Heavy-duty construction vehicles and other equipment would generate GHG emissions. Emissions generated during Proposed Project construction would be negligible when compared to existing baseline GHG emissions in the area, although such emissions have the potential to contribute to an overall cumulative increase in GHG; refer to Section 4.7. SDG&E adheres to the standards and requirements established by the San Diego Air Pollution Control District, thus minimizing the potential for Proposed-Project-related construction activities to contribute to potential cumulative GHG impacts. Similarly, implementing SDG&E's standard procedures and design features, as stated in Section 3.8, would minimize the Proposed Project's incremental effect such that cumulative effects would remain less than significant and not cumulatively considerable.

In addition, during operation, various projects may potentially contribute to GHG accumulation by emitting CO_2, N_2O, CH_4, HFCs, PFCs, and SF_6. While these emissions have the potential to contribute to a cumulative increase in GHG, Proposed-Project-related GHG emissions would not result in a significant impact on global climate because such impacts are incremental. Moreover, the Proposed Project would be consistent with the goals of AB 32. With implementation of SDG&E's standard procedures and design features, as discussed in Section 3.8, Proposed-Project-related cumulative air quality effects, including GHG emissions, would be minimized to a level that would be less than significant and not cumulatively considerable.

Hazards and Hazardous Materials

The cumulative impact analysis for hazards and hazardous materials focused on the immediate vicinity of the Proposed Project. This limited geographic scope is appropriate because risks related to public health and safety are typically localized, and they are generally related to on-site existing hazardous conditions and/or hazards caused by the construction or operation of a project.

A review of regulatory records and historical aerial photography, and a site reconnaissance survey did not identify areas with affected or potentially affected soil and/or groundwater that would likely be encountered during construction and operation of the Proposed Project; therefore, the Proposed Project would not contribute to potential cumulative impacts related to hazardous materials. However, planned or future projects in the area surrounding the Proposed Project may be developed on properties that contain hazardous materials or represent a potential hazard. There are multiple regulations and requirements regarding the use, transport, and storage of hazardous materials. Like the Proposed Project, all cumulative projects would be required to comply with all applicable safety requirements related to hazardous materials. These requirements would reduce potential for accidental release of hazardous materials that might result in an individual or cumulative impact.

The Proposed Project would not contribute to a significant effect when considered with the cumulative projects identified in Table 6-1 relating to fire, public safety, or emergency response. The proposed Salt Creek Substation would be unattended, and improvements to the Transmission Corridor would not increase public safety hazards. In addition, the Proposed Project would not alter fire-suppression policy, alter emergency response or evacuation plans, or create a public safety hazard at a local or regional level. Therefore, the Proposed Project's contribution to public safety hazards would not be cumulatively considerable.

Hydrology and Water Quality

Water resources are based on the hydrologic conditions of the land topography and nature of the subsurface geology that dictate how surface or groundwater flows through an area. Cumulative consideration for water resources would include the Otay Valley and Lower Sweetwater hydrologic areas (i.e., groundwater basins) because the Proposed Project is located within these basins. As described in Section 4.9, grading required for the proposed Salt Creek Substation would substantially alter existing on-site drainage patterns, but would not create substantial sources of polluted runoff because the substation design includes a water quality detention basin to control runoff from the substation. In addition, with implementation of SDG&E's SWPPP, BMP Manual, Chula Vista's SUSMP, and the Water Quality Technical Report, and with adherence to applicable federal, state, and local regulations, impacts on hydrology and water quality resulting from the Proposed Project were found to be less than significant.

Large areas of open space are currently planned for development, as shown in the list of cumulative projects in Table 6-1. The grading and earthwork required for construction of these large-scale mixed-used developments would likely result in significant alteration of the hydraulic conditions of each individual project area and the overall conditions of the watershed. The magnitude of these changes would be many times the size of the Proposed Project.

These large, cumulative construction projects located within close proximity to the proposed Salt Creek Substation site may potentially result in cumulative impacts relative to hydrology within the study area. Improvements required for these projects, such as grading or roadway or utility improvements, may occur at the same time or within close proximity to those required for construction of the proposed substation, thereby combining to create potential cumulative impacts on hydrology or water quality. However, other planned or future projects within the cumulative study area would be required to conform to Chula Vista's regulations and policies, and be required to adopt and implement BMPs. This would minimize the potential for cumulative impacts by reducing potential construction and operational impacts on hydrology and water quality to less than significant for each project. Furthermore, the Proposed Project's impacts, resulting primarily from construction of the proposed Salt Creek Substation, would be less than significant; would have a minor, if any, incremental effect; and would be further reduced through adherence to applicable requirements and implementation of SDG&E's design features and ordinary construction and operations restrictions. Thus, the Proposed Project would not constitute a considerable contribution to an overall cumulative impact.

Land Use and Planning

As discussed in Section 4.10, less-than-significant land use and planning impacts are anticipated with construction and operation of the Proposed Project. The Proposed Project would not substantially modify currently established or planned-for land uses. SDG&E worked with the City of Chula Vista for approximately 10 years to reach consensus on the preferred site location for the proposed substation to serve the needs of other planned and analyzed projects. No Proposed Project component would divide a community or conflict with land use policies or regulations.

Figure 6-1 shows various proposed cumulative projects that would significantly alter land uses in the vicinity from open space to developed urban mixed-use areas. Although there would be substantial changes in the land use of these areas, the projects are proposed as part of the planned development and expansion of the City of Chula Vista. Cumulative projects would be required to adhere to applicable planning designations and land use requirements. While significant cumulative changes to existing land uses would result from proposed cumulative projects, the Proposed Project would not considerably contribute to a land use conflict or create increased inconsistencies with land use or planning policies or regulations. Rather, it responds to such changes. Therefore, the Proposed Project's contribution to land use and planning would not be cumulatively considerable.

Mineral Resources

Although mineral resources are known in the Proposed Project vicinity (e.g., the Otay River Valley is a major source of construction aggregate), there are no known economically viable mineral resources within the Proposed Project site or in the immediate area. The Proposed Project would not alter or affect any mining or extraction operations. Additionally, implementing the Proposed Project, along with the other cumulative projects, would not preclude the development of mineral extraction operations or interfere with those operations currently in place. None of the listed projects would occur at mining or extraction sites. Therefore, the Proposed Project's effect on mineral resources would not be cumulatively considerable.

Noise

Construction noise from different sources within approximately 0.25 mile of each other could combine to cumulatively create elevated construction noise that may be a significant impact to receptors at any point between the projects. While construction noise associated with the Proposed Project components, including the proposed Salt Creek Substation, Existing Substation modifications, and power line, would be noticeable, the noise levels identified in this analysis are typically considered acceptable for these construction activities during daytime hours. Based on the analysis performed, it was determined that construction of the Proposed Project would not result in a substantial increase in temporary or periodic and permanent ambient noise levels in the Proposed Project area, and the impact would be less than significant.

Figure 6-1 illustrates that the majority of cumulative projects are located at the southern end of the Proposed Project location. Thus, the potential for noise impacts from construction at the Existing Substation or along the power line route at the northern end to combine with other concurrent projects in the vicinity of the Existing Substation is minimized due to the noise attenuation achieved by distance. Additionally, construction of the power line would progressively move along the linear route and would not be concentrated in one location for an extended period of time.

The majority of the cumulative projects are large development projects planned for locations near the proposed Salt Creek Substation. Construction activities associated with these development projects could potentially combine with noise during construction of the proposed Salt Creek Substation. However, to cumulatively combine, construction activities would have to occur simultaneously and in proximity to each other. As many of the cumulative projects are still in the planning phases, it is unknown whether these project construction periods would overlap with the Proposed Project, or whether noise-generating activities would be in proximity to the proposed Salt Creek Substation. Given where the other projects are in the planning pipeline, overlapping of construction is unlikely.

In addition, other projects in the area would be subject to the same noise regulations as the Proposed Project to limit their potential noise generation. Construction activities for the proposed Salt Creek Substation are anticipated to occur for approximately 18 to 24 months, and noise levels would vary during this time dependent on activity and location. The noise analysis found that construction would not result in a significant impact to ambient noise levels in the Proposed Project area. Because construction of the Proposed Project would be temporary and is not anticipated to result in a significant noise impact, the Proposed Project's construction noise in combination with other cumulative projects in proximity are not expected to exceed significance criteria. Therefore, the Proposed Project's contribution to noise would not be cumulatively considerable.

Population and Housing

The Proposed Project is intended to accommodate existing and planned growth in the vicinity, meet the area's projected electric capacity needs, and provide improved substation and circuit reliability. The provision of this improved electrical service would not extend service into new or previously underserved areas, and would not generate population growth or housing development. As shown in the list of cumulative projects, there are multiple residential and mixed-use developments within the vicinity of the Proposed Project. These large developments are consistent with the planned expansion and development of the City of Chula Vista, would occur independent and regardless of the Proposed Project, and would add to the planned cumulative population and housing growth occurring in the area. Cumulative projects may benefit from future increased reliability of electrical service that would result from the Proposed Project. Therefore, while the Proposed Project may serve planned development in the local area, the Proposed Project itself does not create or add to the cumulative population and housing expansion in the area. Therefore, the Proposed Project's contribution to population and housing would not be cumulatively considerable.

Public Services

As discussed in Section 4.14, implementing the Proposed Project is not likely to affect the use or operation of any public services or facilities within the immediate area, including schools, fire or police protection services, emergency services, hospitals, or other services. The Proposed Project would have no incremental effect on public services and so would not generate the need for new or additional public services. Table 6-1 lists multiple large mixed-use developments planned for the areas surrounding the Proposed Project within the City of Chula Vista. These projects would increase the cumulative demand for public services, and likely be required to mitigate and provide service facilities or funding for expanded services, but the Proposed Project would not. Therefore, the Proposed Project's contribution to public service impacts would not be cumulatively considerable.

Recreation

There are various recreational opportunities in the Proposed Project vicinity, including Otay Valley Regional Park, Sweetwater Regional Park, Mount San Miguel Community Park, Sunset View Park, Windingwalk Park, and various trails and community centers. The Proposed Project does not include a recreational component and would not increase the use of recreational facilities in the area. If trail closure is necessary, it would be temporary and limited to areas of active construction along the Transmission Corridor. As such, impacts with regard to recreation specific to implementation of the Proposed Project would not be cumulatively considerable.

Table 6-1 lists multiple large mixed-use developments planned for the areas surrounding the Proposed Project within the City of Chula Vista. These projects would increase the cumulative demand on recreation facilities and opportunities, and likely be required to mitigate and provide recreation facilities or funding for expanded recreation facilities. However, the Proposed Project would not cause an increase in the cumulative demand for recreation facilities use. Therefore, the Proposed Project's contribution to recreation would not be cumulatively considerable.

Transportation and Traffic

Potential impacts from Proposed Project construction and operation-related traffic would be less than significant. The existing roadway system in the area of the Proposed Project has adequate capacity to accommodate any increase in traffic resulting from the relatively small number of vehicular trips associated with construction of the Proposed Project, and there would be no significant change to the existing LOS of any roadways in the vicinity of the Proposed Project. In addition, SDG&E would prepare a traffic control plan as required by the City of Chula Vista when construction activities are located within city streets. Once operational, the Proposed Project would generate minimal traffic associated only with ongoing maintenance.

Table 6-1 lists multiple large mixed-use developments planned for the areas surrounding the Proposed Project within the City of Chula Vista. These projects would increase the cumulative traffic in the area, and would likely be required to provide roadway or intersection improvement mitigation or fair share funding for expanded or new transportation facilities. The Proposed Project would not cause a measurable increase in traffic volumes in the area, or incrementally impact the operating conditions of the transportation system. In addition, since the nearby developments are still in their planning phases, construction of the Proposed Project would likely be finished prior to the beginning of these developments. Thus, the impacts are unlikely to overlap. Therefore, the Proposed Project's contribution to transportation and traffic impacts would not be cumulatively considerable.

Utilities and Service Systems

The Proposed Project would require minimal utility service, including nominal water use, no wastewater generation or demand on treatment facilities, and minimal solid waste generation during construction activities. Once constructed, the Proposed Project would create little utility demand, as the unattended facilities would not use or generate high volumes of water, wastewater, or solid waste.

Table 6-1 lists multiple large mixed-use developments planned for the areas surrounding the Proposed Project within the City of Chula Vista. These projects would increase the cumulative demand on utilities and service systems, and likely would be required to mitigate and provide new utilities and service systems or contribute funding for expanded utility and service systems.

Therefore, the Proposed Project's contribution to utilities and services systems would not be cumulatively considerable.

6.2.2 Cumulatively Considerable Impact

As discussed in the individual technical resource area analyses provided above, the Proposed Project would not result in any cumulatively considerable impacts; therefore, no APMs are required.

6.3 References

California Department of Transportation (Caltrans). 2012. 2012 Major Construction Projects, San Diego County. February.

California Public Utilities Commission (CPUC). 2008. Working Draft PEA Checklist. October 7.

San Diego Association of Governments (SANDAG). 2011. 2050 San Diego Regional Transportation Plan: Our Region. Our Future. Prepared by SANDAG. Approved October 2011.

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