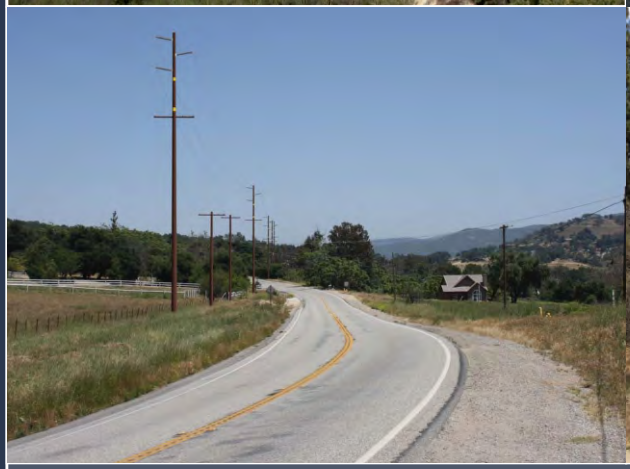
FINAL

Environmental Impact Report/Environmental Impact Statement

Master Special Use Permit and Permit to Construct Power Line Replacement Projects



JUNE 2015

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FINAL EIR/EIS FOR THE MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

Lead Agencies:

California Public Utilities Commission

and

United States Department of Agriculture
Forest Service, Cleveland National Forest

Prepared by:

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JUNE 2015

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FINAL EIR/EIS FOR THE MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

Volume I, Part 1: EIR/EIS Combined Sections

Lead Agencies:

California Public Utilities Commission

and

United States Department of Agriculture
Forest Service, Cleveland National Forest

Prepared by:

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San Diego Gas & Electric
Master Special Use Permit and Permit to Construct Power Line Replacement Projects
Joint Final Environmental Impact Report/ Final Environmental Impact Statement (FEIR/FEIS)
Orange and San Diego Counties, California

Lead Agencies:	**United States Department of Agriculture, Forest Service** **California Public Utilities Commission**
Responsible/Cooperating Agencies:	**California State Department of Parks and Recreation** **Bureau of Land Management, Bureau of Indian Affairs**
Responsible Officials:	**William Metz, Forest Supervisor, Cleveland National Forest** **Lisa Orsaba, California Public Utilities Commission**
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Abstract: San Diego Gas & Electric (SDG&E) is proposing to combine over 70 individual use permits and easements for SDG&E electric facilities within the Cleveland National Forest (CNF) into one Master Special Use Permit (MSUP) to be issued by the Forest Service. In addition, SDG&E is proposing to replace certain electric power lines located within and outside the CNF. Replacement would primarily include fire hardening (for wood-to-steel pole replacement), relocation, and undergrounding. The proposed power line replacement projects will require authorization under the MSUP, as well as approval from the California Public Utilities Commission (CPUC).

The CPUC and Forest Service prepared and distributed a Joint Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for SDG&E's proposed Master Special Use Permit and Power Line Replacement Projects (proposed project) for public review on September 5, 2014. The 60-day public review period ended November 4, 2014. During this time, 35 comment letters were received. The Joint Final EIR/EIS takes into account and includes written responses to all public comments received on the Draft EIR/EIS during the public comment period.

As required by the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA), the CPUC and Forest Service have prepared this Joint Final EIR/EIS for consideration of SDG&E's proposed project. The Joint Final EIR/EIS describes SDG&E's proposed project, evaluates and describes the potential environmental impacts associated with the construction and operation of the MSUP and power line replacement projects, identifies those impacts that could be significant, and presents mitigation measures, which, if adopted, could avoid or minimize these impacts. The Joint Final EIR/EIS also evaluates 11 alternatives to SDG&E's proposed project, including the federal proposed action and the No Action Alternative and No Project Alternative, as required by CEQA and NEPA.

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July 2, 2015

SDG&E Master Special Use Permit and Permit to Construct Power Line Replacement Projects Final Environmental Impact Report / Final Environmental Impact Statement

To All Interested Parties:

The California Public Utilities Commission (CPUC) and United States Forest Service (Forest Service) have prepared this Joint Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for consideration of the San Diego Gas & Electric (SDG&E) proposed Master Special Use Permit and Power Line Replacement Projects (proposed project). The Final EIR/EIS takes into account and includes written responses to public comments received on the Draft EIR/EIS during the 60-day public comment period that ended November 4, 2014.

Contents of the Final EIR/EIS: The Final EIR/EIS for the proposed project is made up of two volumes. Volume 1, which contains the Final EIR/EIS and appendices, is completely reprinted from the Draft EIR/EIS. Changes made since public review are signified as a replacement, addition, or revision to existing text. Revisions to existing text are signified by strikeout (i.e., ~~strikeout~~) where text is removed, and by underlined text (i.e., <u>underline</u>) where text is added for clarification. Volume 2 of the Final EIR/EIS contains all comments received on the Draft EIR/EIS and responses thereto.

Changes Made to the Draft EIR/EIS: Changes have been made in the Final EIR/EIS in response to comments on the Draft EIR/EIS and through ongoing consultation with responsible, trustee, and cooperating government agencies. Revisions were made to update and/or clarify information presented in the Draft EIR/EIS. These modifications to the EIR/EIS do not amount to "significant new information" as the term is used in Section 15088.5(b) of the California Environmental Quality Act (CEQA) Guidelines and under the National Environmental Policy Act (NEPA) do not result in new significant circumstances or information relevant to environmental concerns or require analysis of a new alternative (40 CFR 1502.9(c)(1)(ii)).

In addition to minor typographical corrections or clarifications, the following summarizes the information that has been added to or modified in the Final EIR/EIS.

<u>Executive Summary</u>

The Executive Summary has been updated to reflect the modifications made to the EIR/EIS. In addition Section E.8, Issues to be Resolved, has been added.

Section A, Introduction

Subsection A.1 updates the public participation effort completed as part of the Final EIR/EIS.

Section B, Project Description

As described in Section B, Project Description, the EIR/EIS assumes implementation of Applicant Proposed Measures (APMs) that rely on implementation of SDG&E's Subregional Natural Community Conservation Plan (NCCP). Following publication of the Draft EIR/EIS, the CPUC submitted Data Request (DR) 9 and DR10 to SDG&E (CPUC 2015a, 2015b) in order to ensure that assumptions regarding reliance on SDG&E's NCCP in the EIR/EIS are appropriate for "take" authorization under both the federal and state Endangered Species Acts for NCCP-covered species, and to implement mitigation obligations as described in the EIR/EIS.

In response to DR9 and DR10, and in order to ensure reliance on SDG&E's NCCP as described in the EIR/EIS, SDG&E reduced the temporary work areas required to construct the proposed project as analyzed in the Draft EIR/EIS, which would reduce environmental effects to biological resources (SDG&E 2015a, 2015b). The proposed modifications to the temporary work areas are summarized in Section B.5.2.1, Temporary Work Area Requirements, in the EIR/EIS and are within the scope of the original Draft EIR/EIS analysis. Besides reducing the temporary work area required to construct the project, minor technical corrections and updates to the project description have been made in Table B-2, Summary of Applicant's Proposed Power Line Replacement Projects, and the text has been modified where appropriate.

In addition, Section B.3.2, Federal Proposed Action, has been modified to clarify the temporary and permanent disturbance areas assumed under the federal proposed actions.

Section C, Alternatives

Section C.4.1, Partial Road Removal of Overland Access Roads, has been modified to clarify the description of roads to be removed under this alternative and a new Figure C-1A has been added showing their location.

Section C.4.2, Removal of TL626 from Service, has been modified to include the rationale for eliminating undergrounding from further consideration under this alternative.

Section C.5.7, Underground of All Tie-Lines and Circuits Alternative, and Section C.5.8, Undergrounding of All Tie-Lines and Circuits Located Near Existing Roads, have been modified to clarify the rationale for eliminating these alternatives from further consideration.

Section C.5.13, System Alternative 3: No-Wire Alternative, specifically the discussion on use of microgrids, has been modified to clarify the rationale for eliminating this alternative from further consideration.

Section C.5.14, System Alternative 4: Management and System Maintenance Oversight, has been modified to clarify the rationale for eliminating this alternative from further consideration.

Section D, Environmental Analysis

Various sections have been modified in Section D, Environmental Analysis, in response to comments on the Draft EIR/EIS, revisions made to Section B, Project Description, and through consultation with government agencies. In addition, the analysis has been updated to reflect that the Forest Service adopted an amendment to the 2006 Southern California National Forests Land Management Plan LMP in October 2014. While no revisions have been made to impact conclusions reached in the Draft EIR/EIS (see EIR/EIS, Executive Summary, Section ES.5, Summary of Environmental Analysis), several mitigation measures have been modified for clarity or to ensure their feasibility and enforceability (see various issue areas in Section D of the Final EIR/EIS).

Section E, Comparison of Alternatives

A new Figure E-1 has been added showing the Environmentally Superior Alternative and Federal Preferred Alternative.

Sections I, Public Participation, and J, Distribution of the EIR/EIS

These sections update the public participation effort completed as part of the Final EIR/EIS.

After Joint Final EIR/EIS Completion: The Final EIR/EIS will be used by the CPUC (as the lead state agency), in conjunction with other information developed in the CPUC's formal record, to act on SDG&E's application for a Permit to Construct (PTC) the proposed power line replacement projects. Under CEQA requirements, the CPUC will determine the adequacy of this Final EIR/EIS and, if adequate, will certify the document as complying with CEQA. The CPUC will then make a final decision regarding approval of the PTC the power line replacement projects.

The Forest Service MSUP project will be subject to the pre-decisional administrative review process pursuant to 36 CFR 218, Subparts A and B. This review process, commonly referred to as the Forest Service "Objection Process," will only apply to the Forest Service actions. Under the objection process, individuals and entities who have submitted timely, specific written comments regarding a proposed project or activity that is subject to the 36 CFR 218 regulations during any designated opportunity for public comment (such as the comment period for the Draft EIR/EIS) may file an objection.

The Objection Period will begin when the legal notice announcing the availability of the Final EIR/EIS and the Draft Record of Decision is published in the *San Diego Union Tribune*. The Objection Period is open for 45 days. Issues raised in the objection must be based on previously submitted timely, specific written comments regarding the proposed project unless based on new information arising after designated opportunities. The legal notice and Draft Record of Decision are available for review at the project website on the CPUC website at: http://www.cpuc.ca.gov/environment/info/dudek/CNF/CNF.htm.

Objections must be submitted within 45 days following the publication of the legal notice of the Draft Record of Decision in the *San Diego Union Tribune*. The date of this legal notice is the exclusive means for calculating the time to file an objection. Those wishing to object should not rely on dates or timeframes provided by any other source. It is the objector's responsibility to ensure evidence of timely receipt (36 CFR 218.9).

Objections must be submitted to the reviewing officer: Randy Moore, Regional Forester, United States Department of Agriculture, Forest Service; Attn: SDG&E MSUP; 1323 Club Drive, Vallejo, California 94592; phone no. 707.562.8737. Objections may be submitted via mail or fax (707.562.9229), or delivered during business hours (Monday through Friday, 8:00 a.m. to 4:00 p.m.). Electronic objections, in common formats (.doc, .pdf, .rtf, .txt), may be submitted via email to objections-pacificsouthwest-regional-office@fs.fed.us with the subject SDG&E MSUP. Refer to the Draft Record of Decision for more details.

Responsible and cooperating agencies, including California State Parks; Bureau of Indian Affairs; Bureau of Land Management; and La Jolla, Campo, Pauma-Yuima, and Viejas Indian Reservations may also use the EIR/EIS for their permitting processes.

References

36 CFR 218.9. Evidence of timely filing. In Subpart A: Predecisional Administrative Review Process for Hazardous Fuel Reduction Projects Authorized by the Healthy Forests Restoration Act of 2003.

CPUC (California Public Utilities Commission). 2015a. "Subject: San Diego Gas & Electric Company – Master Special Use Permit (MSUP) and Permit to Construct (PTC) Power Line Replacement Projects, PTC Application No. 12.10.009— Data Request No. 9." Data request from Lisa Orsaba (CPUC) to Rebecca Giles (SDG&E). January 22, 2015.

CPUC. 2015b. "Subject: San Diego Gas & Electric Company – Master Special Use Permit (MSUP) and Permit to Construct (PTC) Power Line Replacement Projects, PTC Application No. 12.10.009 – Data Request No. 10." Data request from Lisa Orsaba (CPUC) to Rebecca Giles (SDG&E). February 25, 2015.

SDG&E (San Diego Gas & Electric). 2015a. "San Diego Gas & Electric Company (SDG&E) Cleveland National Forest Master Special Use Permit and Permit to Construct Power Line Replacement Projects (Proposed Project) Application No. A.12-10-009: SDG&E's Response Dated January 30. 2015 to Data Request No. 9 Dated January 22, 2015, SDG&E Geographic Information System (GIS) Data Transfer dated February 13, 2015, and SDG&E's CNF ED09-SDGE Updated Response Q1-2 dated February 24, 2015." Responses from SDG&E to CPUC. January 30, 2015, February 13, 2015, and February 24, 2015. http://www.cpuc.ca.gov/environment/info/dudek/CNF/SDGE_DataResponse9.pdf

SDG&E. 2015b. Complete Response A. 12-10-009 to Cleveland National Forest Power Line Replacement Projects PTC Energy Division Data Request 10 (Dated February 27, 2015). CNF ED10-SDGE Consolidated Response Q1-5. Response dated May 1, 2015. http://www.cpuc.ca.gov/environment/info/dudek/CNF/SDGE_DataResponse10.pdf

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ES. EXECUTIVE SUMMARY

This executive summary is organized as follows: ES.1, Introduction; ES.2, Project Overview; ES.3, Areas of Controversy/Public Scoping Issues; ES.4, Project Alternatives; ES.5, Summary of the Environmental Analysis; ES.6, Environmentally Superior Alternative Under CEQA; ES.7, Federal Preferred Alternative; and ES.8, Issues to be Resolved.

ES.1 Introduction

San Diego Gas & Electric Company's (SDG&E's or applicant) proposed project would include issuance of a Master Special Use Permit (MSUP) for the SDG&E system in the Cleveland National Forest (CNF), and would replace/fire harden select lines within the SDG&E system both on and off the CNF.

SDG&E is proposing to combine over 70 individual use permits and easements for SDG&E electric facilities within the (CNF into one MSUP to be issued by the United States Forest Service (Forest Service). In addition, SDG&E is proposing to replace certain electric power lines located within and outside the CNF. Replacement would primarily include fire hardening (wood-to-steel pole replacement), relocation, and undergrounding. The proposed power line replacement projects will require authorization from the Forest Service under the MSUP, as well as a Permit to Construct from the California Public Utilities Commission (CPUC).

The CNF MSUP study area is located within multiple locations within the Trabuco, Palomar, and Descanso ranger districts of the CNF, Orange and San Diego Counties, California. The proposed power line replacement projects are located within and outside the Palomar and Descanso ranger districts of the CNF in the vicinity of the unincorporated communities of Alpine, Boulevard, Pine Valley, Descanso, Campo, Pauma Valley, Santa Ysabel, Julian, and Warner Springs within the central portion of San Diego County (see Figures ES-1, Regional Overview Map, and ES-2, Power Line Replacement Projects Overview Map). SDG&E's proposed power line replacement projects not only traverse National Forest System lands, but due to the patchwork of land ownership in the project study area, also traverse lands managed by the Bureau of Land Management (BLM); tribal lands of the La Jolla, Campo, ~~Inaja/Cosmit~~ Pauma-Yuima, and Viejas Indian Reservations managed by the respective tribes and held in trust by the Bureau of Indian Affairs (BIA); Cuyamaca Rancho State Park lands managed by California State Parks (CSP); lands under the jurisdiction of the City of San Diego, and private holdings within unincorporated San Diego County.

Project approval would allow for the continued operation and maintenance of SDG&E electric facilities within the CNF and authorize the replacement of certain existing power lines on and adjacent to CNF lands. The proposed project is needed because the existing authorizations within

the CNF are expired, and the existing power lines are needed to supply power to local communities, residences, and government-owned facilities located within and adjacent to the CNF.

The CPUC and Forest Service have independent jurisdiction and approval authority for the project. The CPUC is the lead agency under the California Environmental Quality Act (CEQA) and will use this EIR/EIS in consideration of SDG&E's application for a Permit to Construct the proposed power line replacement projects. The Forest Service is the lead federal agency under the National Environmental Policy Act (NEPA) and will use this EIR/EIS in consideration of whether to issue a Master Special Use Permit. The CPUC and Forest Service have prepared this joint EIR/EIS for SDG&E's proposed Master Special Use Permit and Permit to Construct (MSUP/PTC) Power Line Replacement Projects (SDG&E's proposed project) in compliance with CEQA and NEPA. The BIA and BLM are joining the Forest Service as federal cooperating agencies under NEPA, and the CSP is participating as a responsible agency under CEQA.

The purpose of the EIR/EIS is to disclose the environmental impacts expected to result from construction and operation of SDG&E's proposed project and provide mitigation measures, which, if adopted, would avoid or minimize those environmental impacts as well as identify alternatives to SDG&E's proposed project (including the No Project/No Action Alternatives) that could avoid or minimize significant environmental impacts. This EIR/EIS does not make recommendation regarding the approval or denial of the project; it is purely information in content and has been prepared to inform the public and to meet the needs of federal, state, and local permitting agencies in considering SDG&E's proposed project.

ES.2 Project Overview

SDG&E's proposed project would include issuance of a MSUP for the SDG&E system, including 102 miles of electric lines and over 34 miles of access roads within the CNF and would replace/fire harden certain power lines within the SDG&E system totaling approximately ~~146~~ 149 miles both on and off the CNF. The following provides an overview of the proposed power line replacement projects.

ES.2.1 SDG&E's Proposed Power Line Replacement Projects

SDG&E proposes to replace the following five 69-kilovolt (kV) transmission lines (TL) and six 12 kV distribution circuits (C):

- TL682 is approximately 20.2 miles in total length and generally runs from Rincon Substation east to Warners Substation. Proposed replacement includes wood-to-steel pole conversion.

- TL626 is approximately 18.8 miles in total length and generally runs from Santa Ysabel Substation south to Descanso Substation. Proposed replacement includes wood-to-steel pole conversion.
- TL625 is approximately 22.5 miles in total length and generally runs from Loveland Substation east to Barrett Tap, from Barrett Tap east to Descanso Substation, and from Barrett Tap south to Barrett Substation. Proposed replacement includes wood-to-steel pole conversion along with single circuit to double circuit conversion.
- TL629 is approximately 29.8 miles in total length and generally runs from Descanso Substation east to Glencliff Substation, from Glencliff Substation southeast to Cameron Tap, from Cameron Tap south to Cameron Substation, and from Cameron Tap east to Crestwood Substation. Proposed replacement includes wood-to-steel pole conversion, undergrounding, and single to double circuit conversion.
- TL6923 is approximately 13.4 miles in total length and generally runs from Barrett Substation east to Cameron Substation. Proposed replacement includes wood-to-steel pole conversion.
- C79 is approximately 2.2 miles in total length and generally runs from Boulder Creek Road east to the Cuyamaca Peak communication site. Proposed replacement includes removal of existing overhead line and replacement with new undergrounding.
- C78 is approximately 1.8 miles in total length and generally runs from east of Viejas Reservation, east along Viejas Grade Road, to Via Arturo Road. Proposed replacement includes wood-to-steel pole conversion and overhead relocation.
- C157 is approximately 3.5 miles in total length and generally runs from Skye Valley Road, near Lyons Valley Road, east to Skye Valley Ranch. Proposed replacement includes wood-to-steel pole conversion. The applicant's proposal includes replacement and motorized use in the congressionally designated Hauser Wilderness. This aspect of the applicant's proposal conflicts with the requirements of the Wilderness Act.
- C442 is approximately 6.2 miles in total length and generally runs south from Pine Valley Road to Los Pinos Peak Forest Station and along Pine Creek Road south toward the community of Pine Valley. Proposed replacement includes wood-to-steel pole conversion.
- C440 is approximately 24.0 miles in total length and generally runs from Glencliff Substation northeast to Mount Laguna along Sunrise Highway. Proposed replacement includes wood-to-steel pole conversion with some line removal, undergrounding, and overhead relocation.
- C449 is approximately 6.7 miles in total length and generally runs from Old Highway 80 south along Buckman Springs Road to Oak Drive and southwest along Morena Stokes Valley Road to Camp Morena. Proposed replacement includes wood-to-steel pole conversion with some line removal and undergrounding.

SDG&E also proposes to install appurtenant facilities on poles and within the right-of-way (ROW) as needed to manage the power line system. These appurtenances may include electrical switches, smart grid control devices, weather stations, and surveillance cameras.

ES.2.2 Federal Proposed Action

The federal proposed action includes the Forest Service, BIA and BLM proposed actions.

The Forest Service reviewed and accepted the application for an MSUP with modifications to certain actions on National Forest System lands. This modified proposal includes the Forest Service proposed action, which, as described in Section B.3.2 of this EIR/EIS, modifies SDG&E's proposed project along TL626, C157, and C440 and the BIA proposed action, which modifies SDG&E's proposed project along TL682. In addition, the Forest Service proposes to authorize electrical control devices and weather stations not otherwise specified in the permit, subject to Forest Service review and approval of final design and location. The Forest Service is not proposing to authorize surveillance cameras on National Forest System lands.

The BLM proposed action does not modify SDG&E's proposed project and includes portions of SDG&E's proposed power line replacement projects for TL629, TL625, and TL6923. The BLM proposed action is to issue new ROW grants for the continued occupancy of the three transmission lines and authorize the fire hardening upgrades.

ES.3 Areas of Controversy/Public Scoping Issues/Public Comment on the Draft EIR/EIS

The content of this EIR/EIS reflects input received from government officials, agencies, non-governmental organizations, and concerned members of the public during the EIR/EIS scoping period and Draft EIR/EIS public comment period. See Section A Introduction/Overview of this EIR/EIS, Table A-1 for a list of issues raised and addressed in the EIR/EIS. The formal scoping period followed the CPUC's publication of the Notice of Preparation (NOP) of an EIR (September 23, 2013) and the Forest Service's publication of the Notice of Intent (NOI) to prepare an EIS in the Federal Register (September 23, 2013). Following the formal scoping period, the CPUC and Forest Service provided a supplemental 45-day scoping period (January 21 – March 7, 2014) to provide the public with an additional opportunity to comment on the topics and alternatives to be addressed in the EIR/EIS. The Draft EIR/EIS was released for public review on September 5, 2014. The 60-day public review period closed on November 4, 2014.

Major issues raised during this process included evaluation of alternatives, including project design alternatives such as undergrounding and relocation of certain power lines such as TL626. Environmental and social issues that were raised during scoping included impacts on a variety of sensitive resources, including impacts to natural scenery; biologically sensitive areas, including

golden eagle (*Aquila chrysaetos)* and riparian habitat; residential and recreational areas; areas susceptible to erosion; increased risk of wildfire hazards; public health and safety; effects on local groundwater resources; as well as growth-~~inducement~~ inducing effects from increasing the conductor size and cumulative effects from other energy projects in the region in addition to all past, present, and reasonably foreseeable projects within the geographic range of the project.

ES.4 Project Alternatives

Alternatives considered in this EIR/EIS include those considered by SDG&E, the CPUC, Forest Service and the BIA, as well as those identified by the general public and other agencies during the public scoping period. Of the 26 alternatives considered to SDG&E's proposed project, 11 project alternatives along with the No Action and No Project alternatives are carried forward for full analysis in this EIR/EIS. Additionally, the EIR/EIS fully considers undergrounding of more than 38 miles of electric lines along existing roadways (13 miles SDG&E proposed plus over 25 additional miles of undergrounding identified in the Federal Proposed Action).

ES.4.1 Required Alternatives

In addition to detailed consideration of SDG&E's proposed project, NEPA mandates the detailed consideration of the federal proposed action and the No Action Alternative, and CEQA requires consideration of a No Project Alternative. These actions and alternatives are discussed in the EIR/EIS as required.

ES.4.1.1 Federal Proposed Action

The Federal proposed action includes actions proposed by the Forest Service, BIA, and BLM. The Forest Service proposed action includes issuance of an MSUP for the SDG&E system in the Cleveland National Forest and modifies SDG&E's proposed project along TL626, C157 and C440. The BIA proposed action also includes upgrades to facilities on La Jolla Reservation lands as proposed by the La Jolla Band of Luiseño Indians. The BLM proposed action includes issuing ROW grants for portions of SDG&E's proposed power line replacement projects for TL629, TL625, and TL6923.

ES.4.1.1.1 Forest Service Proposed Action

TL626 Alternative Routes

The Forest Service proposed action considers the following five options for relocating certain segments of TL626. All other project components would remain the same under these alternatives.

Option 1 SDG&E Proposed Overhead Alignment through Inaja and Cosmit Reservation Lands

Reroutes a portion of TL626 to the east on the Inaja and Cosmit Reservation Lands and would develop over 5.5 miles of new overhead electric utility ROW and extend TL626 to approximately 20.6 miles in length compared to the reconstruction of 18.8 miles of the existing TL626 in place as proposed. Approximately 3.7 miles of the existing alignment and associated access roads would be restored.

Option 2 SDG&E Proposed Overhead Alignment around Inaja and Cosmit Reservation Lands

Reroutes a portion of TL626 to the east and around the Inaja and Cosmit Reservation Lands and would develop over 5.6 miles of new overhead electric utility ROW and extend TL626 to approximately 20.7 miles in length compared to the reconstruction of 18.8 miles of the existing TL626 in place as proposed. Approximately 3.7 miles of the existing alignment and associated access roads would be restored.

Option 3 Partial Underground Relocation in Boulder Creek Road

Options 3a and 3b would consist of placing a segment of TL626 underground in Boulder Creek Road. Depending on the option, TL626 would be extended to 26.3 miles (Option 3a which undergrounds 11.4 miles and includes 1 mile of new overhead ROW) or 22.9 miles (Option 3b which undergrounds 6.3 miles and includes 1 mile of new overhead ROW) in length compared to the reconstruction of 18.8 miles of the existing TL626 in place as proposed. Approximately 4.9 miles and 3.2 miles for Options 3a and 3b, respectively, of the existing alignment and associated access roads would be restored.

Option 4 Overhead Relocation along Boulder Creek Road

Relocates a 7.5-mile segment of TL626 overhead along Boulder Creek Road to Pine Hills Fire Station where it would connect to Options 1 and 2 described above and continue overland for approximately 2.1 miles. The rerouted segment of Option 4 would develop approximately 9.6 miles of new overhead ROW and extend TL626 to 23.5 miles compared to the reconstruction of 18.8 miles of the existing TL626 in place as proposed. Approximately 4.9 miles of the existing alignment and associated access roads would be restored.

Option 5 Reroute and Undergrounding around Inaja Picnic Area

Relocates a portion of TL626 around the Inaja Memorial Picnic Area. Consists of approximately 2,100 feet of relocated overhead alignment along with a 400-foot underground segment located within an existing parking lot. The existing crossing and access road would be restored.

C157 Partial Relocation to Avoid Designated Wilderness

The Forest Service proposed action considers the following two options for relocating a segment of C157 to avoid designated wilderness areas. All other project components would remain the same under these alternatives.

Option 1 SDG&E Proposed Alignment between Two Wilderness Areas

Reroutes an approximately 2-mile segment of C157 to the south of the existing alignment. Extends C157 to 4.1 miles in length compared to the reconstruction of 3.5 miles of the existing C157 as proposed.

Option 2 City of San Diego Modified Alignment

Reroutes a 2-mile segment of C157 similar to option 1 with a slight shift on City-owned property to the north. This option would extend C157 to 4.1 miles in length compared to the reconstruction of 3.5 miles of the existing C157 as proposed.

C440 Mount Laguna Underground Alternative

Besides undergrounding C440 as proposed by the project, the Forest Service proposed action includes undergrounding an additional 14.3 miles of C440 primarily within existing roadways in the Mount Laguna Recreation Area. Additional undergrounding along C440 in the Laguna Mountain Recreation Area has been considered by the Forest Service since the 1970s. Furthermore, the Land Management Plan (LMP) standards and the Forest Service regional policy also influenced the addition of undergrounding along C440 consistent with past utility management within the Laguna Mountain Recreation Area. All other project components would remain the same under this alternative.

ES.4.1.1.2 BIA Proposed Action

The BIA proposed action would modify TL682 on Tribal lands by undergrounding a 1,500-foot segment of TL682 through the economic development zone located on the La Jolla Reservation along with relocation of certain poles.

ES.4.1.1.3 BLM Proposed Action

The BLM action would authorize the power line replacement work included in SDG&E's proposed project on public lands administered by the BLM for portions of SDG&E's proposed power line replacement project for TL629, TL625, and TL6923, and issue ROW grants for the continued occupancy of the transmission lines on public lands under BLM jurisdiction.

ES.4.1.2 No Action Alternative – No MSUP Issued

Under the No Action Alternative, the MSUP would not be issued for the existing electric lines, and the existing permits would terminate according to their terms. Those expired permits require the holder (SDG&E) to remove the existing 102 miles of electric lines and 45 miles of access road, and restore the site to conditions acceptable to the Forest Service. The Forest Service would manage the land under its jurisdiction consistent with the CNF Land Management Plan (LMP). Accordingly, no pole replacement, ground disturbance, or other project effects would occur associated with SDG&E's proposed project as no pole replacement, construction, or long-term operations and maintenance associated with the electric lines would be authorized on National Forest System lands. Under this alternative, SDG&E would need to redesign the existing electric system to avoid National Forest System lands in conformance with California Independent System Operator (ISO) requirements in order to meet the electric demand in their service territory.

ES.4.1.3 No Project Alternative

Under the No Project Alternative, the existing alignments within the CNF would be maintained as they are currently, under their approximately 70 separate permits and easements. In addition, none of SDG&E's proposed power line replacement projects including proposed fire hardening activities would be authorized.

ES.4.2 Additional Alternatives

Numerous alternatives to SDG&E's proposed project and the Federal Proposed Action were suggested during the public scoping and supplemental scoping periods by the general public in response to the NOP and Notice of Intent (NOI) as well as additional information provided through the data request process with SDG&E. In total, 17 additional alternatives to those required under CEQA and NEPA were identified in the following categories during scoping:

- Alternatives to TL626
  - TL626 Alternative 1: Relocate Along State Route 79 (SR-79)
  - TL626 Alternative 2: Demand Side Management Options

  - TL626 Alternative 3: Removal from Service (Upgrade TL6931 or TL625)
  - TL626 Location Alternatives.
- Alternatives to C157
  - C157 Partial Underground Alternative
  - C157 Alternative Route 1: Corte Madera Ranch to Skye Valley Ranch
  - C157 Alternative Route 2: Los Pinos to Skye Valley Ranch.
- Additional undergrounding alternatives
  - Underground all Tie-lines and Circuits Alternative
  - Underground Tie-lines and Circuits within Existing Roadways.
- Design Alternatives
  - Partial Removal of Overland Access Roads
  - Alternative Pole Design 1 – Height
  - Alternative Pole Design 2 – Material.
- System Alternatives
  - System Alternative 1: Consolidate TL6923 and TL625 along Sunrise Powerlink
  - System Alternative 2: Additional Consolidation and Removal of Facilities
  - System Alternative 3: No-Wire Alternative
  - System Alternative 4: Fire harden with similar materials and improve fire hardening by increasing vegetation management and system maintenance oversight
  - System Alternative 5: Distributed Generation.

Of the 17 alternatives considered, the following two were carried forward for full analysis in this EIR/EIS. As described in Section C of this EIR/EIS, alternatives that were not carried forward for full analysis did not meet project objectives, feasibility or environmental effectiveness criteria.

ES.4.2.1 Partial Removal of Overland Access Roads

This alternative would remove up to 10.5 miles of exclusive use access roads that are in general greater than 25% grade and in close proximity to creeks, particularly along TL626 (Boulder Creek) and TL625 (Barber Mountain/Carveacre).

ES.4.2.2 Removal of TL626 from Service

Under this alternative, TL626 would be removed from service. SDG&E would implement the following system upgrades and changes in order to provide service lost due to the removal of TL626:

- Upgrade the existing 6-mile 69 kV TL6931 by fire hardening and adding a circuit from the Boulevard Substation to the Crestwood Substation, or
- Modify existing TL625 by constructing a new 3-mile double circuit loop-in into the Suncrest Substation. The new double circuit 69 kV line would primarily cross National Forest Service lands immediately adjacent to the 500 kV Sunrise Powerlink line. A new transformer and substation rack would be installed within the existing footprint of the Suncrest Substation to establish the new 69 kV source.
- In order to serve existing customers at Boulder Creek substation, this alternative would either convert a 6.5-mile section of TL626 from 69 kV to 12 kV distribution, or serve the load with a local off-grid photovoltaic system. A 6.8-mile section of TL626 that is co-located with C79 would also be converted to a 12 kV fire hardened distribution line.

ES.5 Summary of Environmental Analysis

The analysis of environmental impacts is based upon the environmental setting (i.e., conditions as they existed at the time the NOP was distributed) applicable to each resource/issue and the manner in which the construction, operation, and maintenance of the Proposed Project or alternatives would affect the environmental setting and related resource conditions. The impact assessment methodology also considers the following three topics: (1) the regulatory setting and evaluation of whether SDG&E's proposed project or alternatives would be consistent with adopted federal, state, and local regulations and guidelines; (2) growth-inducing impacts; and (3) cumulative impacts.

Reference to "significant" or "less-than-significant" environmental effects in this EIR/EIS is considered a CEQA-related finding consistent with Public Resources Code Section 21082.2 and CEQA Guidelines Section 15064. NEPA does not require such a finding for an EIS. Consequently, references to significant impacts in this document are made to fulfill the requirements of CEQA pursuant to the standards of California law.

While the criteria for determining the significance of an impact under CEQA are unique to each area of the environmental analysis, the following classifications were uniformly applied to denote the significance of environmental impacts under CEQA. Classification of impacts under CEQA are as follows:

- **Class I:** Significant – cannot be mitigated to a level that is less than significant
- **Class II:** Significant – can be mitigated to a level that is less than significant

- **Class III:** Less than significant – no mitigation required
- **Class IV:** Beneficial impact
- **No Impact:** No impact identified

The evaluation of effects under NEPA considers the magnitude, duration, and significance of the changes. Changes that will improve the existing condition are noted, and detrimental impacts are characterized as adverse.

Table ES-1 located at the end of this executive summary provides a summary of the environmental effects for SDG&E's proposed project and each of the alternatives evaluated in this EIR/EIS. Following is a summary of the environmental impact conclusions for SDG&E's proposed project and each of the project alternatives.

ES.5.1 SDG&E's Proposed Project

As shown in Table ES-1, SDG&E's proposed project would have adverse impacts under NEPA that cannot be mitigated and, under CEQA, would have significant and unmitigable (Class I) impacts to visual resources (Impact VIS-1: TL626 impact to Inaja scenic overlook); air quality (Impact AIR-1: construction would generate short-term VOC, NOx, CO, and $PM_{2.5}$ ~~10~~ emissions ~~of~~ that exceed criteria pollutant~~s~~ thresholds), water resources (Impact HYD-4: ongoing use of access roads associated with C79, C442, TL625, TL626, and TL 629 in excess of 25% slopes would result in erosion, gullying and sedimentation), and land use (Impact LU-3: conflicts with the Wilderness Act associated with C157). Impacts in the remaining 9 issue areas were either found under NEPA to be not adverse and under CEQA less than significant (Class III) following the implementation of applicant proposed measures (APMs), and/or following the implementation of mitigation measures presented in this EIR/EIS, to be mitigable under NEPA and under CEQA, less than significant with mitigation implemented (Class II).

ES.5.2 Federal Proposed Action

As discussed in Section ES.4.1.1, the federal proposed action modifies the applicant's proposed project along four project alignments, including TL626, C157, C440, and TL682.

Forest Service Proposed Action for TL626 (5 Options considered)

Options 1, 2, 3, and 4 would relocate a portion of TL626 out of the Cedar Creek riparian area, which would reduce adverse and unmitigable impacts under NEPA and significant and unavoidable (Class I) impacts under CEQA due to erosion and water quality impact due to reauthorization of steep access roads in the Cedar Creek riparian area (Impact HYD-4). These impacts would be reduced to mitigable under NEPA and to less than significant with

mitigation under CEQA (Class II). Relocating a segment of TL626 as proposed under Options 3 and 4 would also avoid Class II impacts associated with conflicts with resource management standards identified in the Forest Service's Land Management Plan (LMP) for the Cedar Creek riparian area.

While Options 1 through 4 would reduce identified effects, these options, as summarized in Table ES-1, would create the following additional impacts when compared to replacing TL626 in place as proposed in SDG&E's proposed project due to the increased area of disturbance required along with the establishment of a new overhead ROW where none currently exists:

- **Impact VIS-3 (visual character).** As a result of placing new poles and power lines in an area where none currently exist, Impact VIS-3 would change from not adverse under NEPA and less than significant under CEQA (Class III) to adverse and unmitigable under NEPA and significant and unavoidable (Class I) under CEQA. Mitigation Measure MM VIS-1 has been provided to minimize the visual prominence and contrast. However, due to the height of poles, open visibility of the new overhead ROW under Options 1, 2, and 4 and 1-mile overhead segment proposed under Option 3, and proximity of residences, there are no effective screening methods available to reduce the significant visual contrast of the introduction of a new overhead 69-kilovolt (kV) transmission line ROW where none currently exists.
- **Impact CUL-4 (traditional cultural properties).** As a result of placing new poles and power lines in an area where none currently exist, Impact CUL-4 would change under Options 1 and 2 from not adverse under NEPA and less than significant under CEQA (Class III) to adverse and mitigable under NEPA and less than significant with mitigation (Class II) under CEQA.
- **Impact PH-4 (aviation hazards).** As a result of placing new poles and power lines in an area where none currently exist, Impact PH-4 would require additional mitigation and therefore change from not adverse under NEPA and under CEQA less than significant (Class III) to adverse and mitigable under NEPA and less than significant with mitigation under CEQA (Class II).
- **Impact FF-3 (reduced firefighter effectiveness).** As a result of placing new poles and power lines in an area where none currently exist, Impact FF-3 would require additional mitigation and therefore would change from not adverse under NEPA and under CEQA less than significant to adverse and mitigable under NEPA and less than significant with mitigation under CEQA (Class II). Under Options 3 and 4, there would be a net improvement in firefighter effectiveness due to the overall reduction in overhead transmission lines.

- **Impact LU-2 (divide an established community).** Due to placement of new overhead ROW where none currently exists as proposed under Options 1,2 and 4 on the periphery of the community of Pine Hills, Impact LU-2 would require additional mitigation and therefore change from not adverse under NEPA and under CEQA less than significant (Class III) to adverse and mitigable under NEPA and to less than significant with mitigation under CEQA (Class II).

In terms of comparing the number of significant environmental effects created versus reduced or eliminated, as summarized in Table ES-1, Options 1 through 4 as proposed by the Forest Service for TL626 under CEQA would not be environmentally superior to SDG&E's proposed reconstruction of TL626 in place.

Option 5, which relocates a segment of TL626 around the Inaja Memorial Picnic Area, would reduce Impact VIS-1 (Scenic Vista) from unavoidable under NEPA and significant and unavoidable (Class I) under CEQA to not adverse under NEPA and less than significant (Class III) under CEQA. Option 5 also has the potential to reduce long-term direct collision-related impacts to golden eagles (*Aquila chrysaetos)* as the existing line crosses over the San Diego River gorge at higher elevations and is located within 1 mile of a historical golden eagle nest. As summarized in Table ES-1, Option 5 would result in the following significant effects in addition to those that would be caused by the project as proposed:

- **Impact PH-4 (aviation hazards).** As a result of placing new poles and power lines in an area where none currently exist, Impact PHS-4 would require additional mitigation and change from not adverse under NEPA and less than significant (Class III) under CEQA to adverse and mitigable under NEPA and less than significant with mitigation under CEQA (Class II).
- **Impact FF-3 (reduced firefighter effectiveness).** As a result of placing new poles and power lines in an area where none currently exist, Impact FF-3 would require additional mitigation and change from not adverse under NEPA and less than significant (Class III) under CEQA to adverse and mitigable under NEPA and less than significant with mitigation under CEQA (Class II).

In terms of comparing the number of significant environmental effects created versus reduced or eliminated, as in Table ES-1, Option 5 as proposed by the Forest Service for TL626 would under CEQA be environmentally superior to SDG&E's proposed reconstruction of TL626 in place.

Forest Service Proposed Action for C157 (2 options considered)

Relocation of C157 (Options 1 and 2) would eliminate the adverse and unmitigable impacts under NEPA and significant and unavoidable (Class I) impacts under CEQA to land use

conflicts associated with the provisions of the Wilderness Act (Impact LU-3). While additional significant effects beyond those that would be caused by the project as proposed were identified to arroyo toad critical habitat (Impact BIO-6) and to City of San Diego conservation lands (Impact BIO-7), these impacts can be mitigated by selecting Option 2, City of San Diego Modified Alignment, and by implementation of new mitigation measures as described in Section D.4, Biological Resources.

In terms of comparing the number of adverse environmental effects created versus reduced or eliminated, as summarized in Section in Table ES-1, relocation of C157 Option 2, City of San Diego Modified Alignment, would under CEQA be environmentally superior to the applicant's proposed reconstruction of C157 in place.

Forest Service Proposed Action for C440 Underground

While this alternative would underground additional portions of C440 within the Mount Laguna Recreation Area beyond that proposed in the project and would thereby reduce long-term impacts due to fire hazards and visual impacts, the impact findings as summarized in Table ES-1 would be similar to those described for the propose project. In addition, this alternative would have greater short-term impacts due to the increased disturbance area required for construction when compared to reconstruction of the existing electric lines in place as proposed by the project.

In terms of comparing the number of significant environmental effects created versus reduced or eliminated, as summarized in Table ES-1, further undergrounding as proposed by the Forest Service for C440 under CEQA would not be environmentally superior to SDG&E's proposed project for C440, which includes undergrounding as well as overhead reconstruction in place. Under NEPA, the additional undergrounding proposed by the Forest Service would be environmentally preferred due to the reduced fire hazard, reduced long-term vegetation management impacts, and improved aesthetics.

BIA Proposed Action for TL682

This alternative would relocate a portion of TL682 (within the La Jolla Reservation). While this alternative would reduce visual, recreational, fire, public safety, and land use impacts, the impact findings as summarized in Table ES-1 would be similar when compared to the proposed project and therefore this alternative would rank equally with the applicant's proposed reconstruction of TL682 in place.

BLM Proposed Action for TL629, TL625 and TL6923

The BLM action would not modify portions of SDG&E's proposed power line replacement projects for TL629, TL625, and TL6923 and therefore the environmental effects described for these portions of SDG&E's project would be identical to those considered under the BLM proposed action.

ES.5.3 Additional Alternatives

Partial Removal of Overland Access Roads

This alternative would remove problematic access road segments along TL626, TL625, TL629, and C442. The EIR/EIS concludes there is no way to feasibly avoid substantial long-term effects on erosion and sedimentation (Impact HYD-4) without decommissioning (removing) or realigning these road segments as proposed under this alternative. This alternative would therefore reduce HYD-4 impacts that were determined to be adverse and unavoidable under NEPA and significant and unavoidable (Class I) under CEQA to mitigated under NEPA and less than significant with mitigation under CEQA (Class II), without creating additional impacts.

In terms of comparing the number of adverse environmental effects created versus reduced or eliminated, as summarized in Table ES-1, removing overland access roads in excess of 25% as described in this alternative would be environmentally superior to the applicant's proposed project, which would re-authorize under the MSUP the use of problematic road segments within sensitive watersheds.

Removal of TL626 from service

This alternative would remove TL626 out of areas managed by the Forest Service as having high-value resource protection and would replace TL626 with facilities requiring a similar or reduced disturbance footprint within existing overhead electric utility ROWs and when compared to SDG&E's proposed project would reduce adverse and unmitigable impacts under NEPA and significant and unavoidable (Class I) impacts under CEQA in the following issue areas: Impact VIS-1 (Scenic Vista) associated with the TL626 and the Inaja Scenic Overlook and erosion and water quality impacts in the Cedar Creek riparian area (Impact HYD-4).

Removal of TL626 as proposed under this alternative would also avoid conflicts with the LMP amendment (Impact LU-3) determined to be adverse under NEPA and significant under CEQA while not substantially increasing impacts to other issue areas as summarized in Table ES-1.

In terms of comparing the number of significant adverse environmental effects created versus reduced or eliminated, as summarized in Table ES-1, removing TL626 from service as described

in this alternative would under CEQA be environmentally superior to SDG&E's proposed project for TL626.

ES.5.4 No Action Alternative

Under the No Action Alternative, SDG&E's proposed project including alternatives considered would not be constructed. All environmental impacts associated with the construction and operation of the proposed project would be eliminated. SDG&E's existing permits to operate and maintain its facilities on National Forest lands would not be renewed and therefore per the existing permits, SDG&E would be required to remove its electric facilities from the visual landscape, and areas disturbed by construction and operation and maintenance of these facilities would be restored to their pre-project conditions. Restoring to the pre-project site conditions would entail recontouring, grading, stabilization of disturbed surfaces, seeding, and planting to restore the affected areas, which would generate short-term temporary impacts to the environment that were either found not to be adverse under NEPA and less than significant (Class III) under CEQA, and/or, following implementation of mitigation measures presented in this EIR/EIS, to be mitigable under NEPA and less than significant with mitigation (Class II) under CEQA.

In order that the decision makers can compare the impacts of approving the project with the impacts of not approving the project, the events or actions that would be reasonably expected to occur in the foreseeable future if the MSUP is not approved by the Forest Service must also be considered.

Removal of SDG&E electric facilities from the National Forest would materially reduce and/or eliminate the ability of SDG&E to provide power to the area now served by these facilities. To avoid these consequences, SDG&E would be required to implement additional transmission upgrades. It is reasonably expected that the existing 69 kV and 12 kV electric lines within the National Forest, removed under the No Action Alternative, would be replaced in-kind outside the National Forest on an as-needed basis and therefore are assumed for purposes of the analysis conducted in this EIR/EIS, to be part of the No Action Alterative. As summarized in Section E Comparison of Alternatives in this EIR/EIS Table E-1, impacts resulting from removal and replacement of electric facilities under the No Action alternative would (when compared to reconstruction of the existing electric lines in place as proposed by the project), in most cases, be equal to or greater when compared to the proposed project due to the increased disturbance area required for both the restoration and removal of existing facilities combined with the construction of new in-kind facilities outside the National Forest.

ES.5.5 No Project Alternative

Under the No Project Alternative, the proposed power line replacement projects would not be built and the existing SDG&E electric facilities would remain; therefore, none of the temporary and permanent construction impacts described in Sections D.2 through D.14 would occur. Operation and maintenance of SDG&E electrical facilities would continue and include routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks and would be based on the requirements of the existing permits. While these activities and the continued presence of SDG&E facilities represent a potential and ongoing impact to existing natural resources such as continued erosion and water quality impacts due to existing steep access roads and ongoing conflicts with applicable land use plans such was the Wilderness Act and the Forest Service LMP (as summarized in Section E Comparison of Alternatives in this EIR/EIS Table E-2), these ongoing impacts would not increase in duration, intensity, or frequency over existing conditions; therefore, no impacts over existing baseline conditions would occur.

Under the No Project Alternative, the existing lines would not be replaced with lines incorporating the Avian Power Line Interaction Committee (APLIC) design features, which are associated with the proposed project, such as greater distance between conductors or placed underground. Any avian safety measures would be incorporated during ongoing operation and maintenance at a much slower rate and in a piecemeal fashion. Further, the benefits associated with the reduction in the risk of power-line-related wildfire and avian electrocutions as well as avian protection measures and reliability improvements of power delivery to the unincorporated communities of Descanso, Campo, Pauma Valley, Santa Ysabel, Warner Springs, and other surrounding communities, would not be developed. Also, ~~and the~~ removal of over 11 miles of access roads and undergrounding of 13 miles of electric lines as proposed would not be implemented.

ES.6 Environmentally Superior Alternative Under CEQA

CEQA requires that an EIR identify an "environmentally superior alternative." The evaluation of the environmental superiority of an alternative focuses on its ability to reduce or avoid significant effects of the proposed project. Whether the alternative would improve existing environmental conditions or provide beneficial impacts are not considered in this evaluation. Based on the analysis presented in Sections D.2 through D.14 and comparison of alternatives presented in Section E of this EIR/EIS, the environmentally superior alternative was determined under CEQA to be the No Project Alternative. Under the No Project Alternative, the proposed project would not be constructed. All environmental impacts associated with the construction and operation of the proposed project would be eliminated and no impacts over existing baseline conditions would occur.

CEQA Guidelines, Section 15126, subd. (d)(2) stipulates that "if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives."

Overall, based on the analysis for each alternative presented in Sections D.2 through D.14, and as summarized in Section ES.-5, the environmentally superior alternative other than the No Project Alternative is shown in Figure ES-3 and is defined as follows:

Environmentally Superior Alternative

Alternative	Jurisdiction
Power Line Replacement Projects	
SDG&E's Proposed Power Line Replacement Projects: TL682, TL625, TL629, TL6923, C79, C78, C442, C440, C449.	CPUC, FS, BLM, ~~and~~ BIA, and CSP to consider.
Relocation of C157 out of wilderness (Option 2 City of San Diego Modified Alignment)	CPUC and FS to consider
Removal of TL626 and replacement with electric facilities within existing electric utility ROWs* • Reconstruction of TL6931 • Conversion of 13 miles of TL626 to 12 kV	CPUC, FS, and BIA ~~(Campo Reservation)~~ to consider
MSUP	
Partial Removal of Overland Access Roads	FS to consider reduction of existing exclusive use access roads on National Forest lands.

Notes:

1 Reconstruction of TL6931 compared to developing the TL625 loop-in along the Sunrise Powerlink would rank similarly in terms of number of adverse impacts created vs reduced or eliminated. Reconstruction of TL6931 ranks higher due to the extensive work completed for TL6931, which provides a knowledge base that reduces the risk of impacting environmental resources (Sources: SDG&E 2012, TL6931 PEA)
BIA = Bureau of Indian Affairs, BLM = Bureau of Land Management, CPUC = California Public Utilities Commission, CSP = California State Parks, FS = Forest Service.

The environmentally superior alternative, specifically the relocation of C157, would avoid the significant and unavoidable (Class I) impact to land use conflicts (Impact LU-3) under CEQA associated with the provisions of the Wilderness Act. This impact would be reduced to no impact through avoidance.

Without substantially increasing impacts to other issue areas, the environmentally superior alternative would, also under CEQA, avoid significant and unavoidable (Class I) impacts to the Inaja Scenic Overlook (Impact VIS-1) by removing TL626 from service; reduce impacts due to erosion and water quality impacts (Impact HYD-4 associated with maintenance and use of steep access roads) to less than significant with mitigation (Class II), and avoid significant land use impacts (Class II) LU-3 impacts associated with TL626 conflicts with the Forest Service LMP.

While the environmentally superior alternative would reduce the proposed reconstruction of existing power lines by approximately 5 miles, it would still under CEQA result in Class

I significant and unavoidable short-term construction VOC, NOx, CO, and $PM_{2.5}$ ~~dust~~ emissions (Impact AIR-1).

ES.7 Federal Preferred Alternative

As shown in Figure ES-3, ~~T~~the federal preferred alternative is the alternative that the federal agencies believe would fulfill their statutory mission and responsibilities, giving consideration to economic, environmental, technical, and other factors. There is no requirement for the federal agencies to select the preferred alternative in the Record of Decision, and the identification of the federal preferred alternative may change between a draft EIS and final EIS. Identifying the federal preferred alternative in the draft helps identify the agencies initial thinking and serves to focus public review of the analysis.

Although the Forest Service is the lead federal agency, all three federal agencies (the Forest Service, BLM, and BIA) have independent authority within their areas of jurisdiction. Given that independent authority, and the interrelated nature of the action, the federal preferred alternative was developed jointly between the three federal agencies.

The federal preferred alternative is a composite of three alternatives. The federal proposed action is the basis of the preferred alternative; however, the TL626 relocation option has been replaced by the TL626 removal from service option, Option 1 (upgrade to TL6931), combined with the off-grid system replacing the load served by the Boulder Creek Substation. The federal preferred alternative also incorporates the portions of the partial removal of overland access road alternative applicable to TL626/C79, TL625, C442, and TL629. All other components of the federal proposed actions remain the same.

The federal preferred alternative is also the NEPA environmentally preferable alternative. This alternative would improve scenic quality, reduce impacts to vegetation and associated habitat, reduce fire risk associated with overhead power lines, reduce watershed and water quality impacts, and better meet the resource goals identified in local, federal, and tribal plans by reducing the total miles of overhead power line, placing power lines underground, relocating a power line from wilderness, and removing excessively steep roads from sensitive watersheds.

The preferred alternative also adopts SDG&E's APMs and the additional mitigation measures identified in this EIR/EIS.

ES.8 Issues to be Resolved

This EIR/EIS considers the full range of potential environmental impacts and issues for SDG&E's proposed project and alternatives. The environmental issues addressed in the EIR/EIS have been resolved (i.e., disclosed and effects considered including whether or how

to mitigate significant effects) in accordance with CEQA and NEPA. As previously discussed in this section, an environmentally superior alternative under CEQA and a federal preferred alternative under NEPA have been presented. Final selection of the proposed project and each of the project alternatives evaluated in the EIR/EIS, will be predicated by the final decisions made by each of the jurisdictions with permitting authority over the project: CPUC, Forest Service, BLM, BIA, CSP, and affected tribal lands in their consideration of information presented in this EIR/EIS, as well as other factors, including purpose and need, engineering, economic cost/benefit, and public input.

Other issues will be resolved during the permitting and agency review process described in Section A, Introduction/Overview, of this EIR/EIS, which will need to be resolved prior to project construction.

Table ES-1
Comparison of CEQA Impacts and Mitigation for SDG&E's Proposed Project, Federal Proposed Actions, and Other Alternatives*

SDG&E's Proposed Project Impact	Federal Proposed Actions				Other Alternatives		Mitigation Measures	Residual Impacts
	TL626	*C157*	*BIA*	*C440*	*Partial Removal of Overland Access Roads*	*Remove TL626*		
Visual Resources (see Section D.2 for full analysis)								
VIS-1: Scenic Vista: (Class I TL626 - Inaja Scenic Overlook - all others Class III)	Options 1, 2, 3, and 4: Class I Inaja Scenic Overlook Option 5: reduced to no impact	Class III	Class III	Class III	Class III	Class III	MM VIS-1: Prepare and Implement Scenery Conservation Plan: Coordination with Jurisdictional agencies in final pole design and siting (see Table D.2-11 for further details).	MM VIS-1 mitigates project impact except TL626 as viewed from Inaja Scenic Overlook which remains Class I Selection of Federal Action RE TL626 option 5 or Removal of TL626 avoids this impact
VIS-2: Scenic Highway (Class II C440 all others III)	Class III	Class III	Class III	Class II	Class III	Class II (TL625 loop-in) Class III (TL6931)	No mitigation required	None
VIS-3: Visual Character (Class II limited poles only and all others III)	Options 1 through 4: Class I Option 5 : Class II	Class III	Class III	Class III	Class III	Class II	MM VIS-1	MM VIS-1 mitigates project impact. Federal Action RE TL626 options 1-4 remains adverse and unavoidable

Table ES-1
Comparison of CEQA Impacts and Mitigation for SDG&E's Proposed Project, Federal Proposed Actions, and Other Alternatives*

SDG&E's Proposed Project Impact	Federal Proposed Actions				Other Alternatives		Mitigation Measures	Residual Impacts
	TL626	*C157*	*BIA*	*C440*	*Partial Removal of Overland Access Roads*	*Remove TL626*		
VIS-4: Glare/Light (Class III)	Class III	Class III	Class III	Class III	Class III	Class III	No mitigation required	None
VIS-5:Scenic Integrity (Class II TL626, TL629, TL6923, C449, and C157 all others III) VRM (BLM – Class III TL 625, TL629, 6923)	Class II	Class II	Class II	Class III	Class III	Class II (TL625 loop-in) Class III (TL6931)	MM VIS-1 MM VIS-2: A Project Specific Plan Amendment regarding Scenic Integrity Objective per Forest Land Management Plan to allow for the project (see Table D.2-11 for further details).	MM VIS-1 mitigates project impact. Federal Action RE TL626 options 1-4 remains adverse and unavoidable
Air Quality (see Section D.3 for full analysis) and Greenhouse Gas Emissions (see Section D.6 for full analysis)								
AIR-1:Short-term construction-related VOC, NO_x, CO, and $PM_{2.5}$ air emissions (Class I); other short-term air quality impacts (Class II).	Class I	Class I	Class I	Class I	Class I	Class I	Applicant Proposed Measures (APMs) include dust and emission controls. No additional mitigation measures have been identified.	Impacts remain Class I and cannot be mitigated by further reduction measures or selection of an alternative other than the No Project Alternative.
AIR-2: Long-term impacts (Class III).	Class III	Class III	Class III	Class III	Class III	Class III	No mitigation required	None
AIR-3: General Conformity (federal) - not adverse	—	—	—	—	—	—	—	—

Table ES-1
Comparison of CEQA Impacts and Mitigation for SDG&E's Proposed Project, Federal Proposed Actions, and Other Alternatives*

SDG&E's Proposed Project Impact	Federal Proposed Actions				Other Alternatives		Mitigation Measures	Residual Impacts
	TL626	*C157*	*BIA*	*C440*	*Partial Removal of Overland Access Roads*	*Remove TL626*		
AIR-4: Conflict with Land Use Plans (No Impact)	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact	No mitigation required	None
AIR-5: Expose Sensitive Receptors (Class III)	Class III	Class III	Class III	Class III	Class III	Class III	No mitigation required	None
GHG-1 through 3: Result in GHG Emissions or conflict with applicable plan (Class III)	Class III	Class III	Class III	Class III	Class III	Class III	No mitigation required	None
Biological Resources (see Section D.4 for full analysis)								
BIO-1: Vegetation Loss (Class II)	Class II	Class II	Class II	Class II	Class II	Class II	MM BIO-1: Confine construction areas MM BIO-2 :Contractor Training MM BIO-3: Construction monitoring MM BIO-4: Restore construction areas MM BIO-5: Habitat compensation/ restoration MM BIO-6: Fire prevention BMPs MM BIO-7: Stormwater Pollution Prevention MM BIO-8~~(a)~~: Herbicide application ~~requirements and (b) Assessment of typical O&M activities, including pole~~	MM BIO-1 through BIO-8 mitigates project impact

Table ES-1
Comparison of CEQA Impacts and Mitigation for SDG&E's
Proposed Project, Federal Proposed Actions, and Other Alternatives*

SDG&E's Proposed Project Impact	Federal Proposed Actions				Other Alternatives		Mitigation Measures	Residual Impacts
	TL626	*C157*	*BIA*	*C440*	*Partial Removal of Overland Access Roads*	*Remove TL626*		
							~~replacement~~ (See Table D.14-16 for further details).	
BIO-2: Loss of Preserve Areas (Class II)	Class II	Class II	Class II	Class II	Class II	Class II	MM ~~BIO 8(b) and~~ BIO-9: Coordination with ~~j~~Jurisdictional agencies in final pole design and siting (see Table D.14-16 for further details).	MM BIO-9 mitigates project impact
BIO-3: Native Wildlife (Class III)	Class III	Class III	Class III	Class III	Class III	Class III	No mitigation required	None
BIO-4: Jurisdictional Resources (Class II)	Class II	Class II	Class II	Class II	Class II	Class II	MM ~~BIO 8(b) and~~ BIO-10: Limit impacts to wetlands MM BIO-11: Habitat creation - No net loss of wetlands MM BIO-12: Construction road restrictions (see Table D.14-16 for further details).Also see Hydrology and Water Quality Section D.9 MM HYD-2a, HYD-2b, and MM HYD-4 ~~through~~ and HYD-5 ~~HYD-6~~	MM BIO-10 through BIO 12 and MM HYD-2a, HYD-2b along with MM HYD -4 ~~through~~ and HYD-5~~HYD-6~~ mitigates project impact
BIO-5: Invasive Species (Class II)	Class II	Class II	Class II	Class II	Class II	Class II	MM BIO-1 through BIO-7: (see Table D.14-16 for further details).	MM BIO-1 through BIO 7 mitigates project impact

Table ES-1
Comparison of CEQA Impacts and Mitigation for SDG&E's Proposed Project, Federal Proposed Actions, and Other Alternatives*

SDG&E's Proposed Project Impact	Federal Proposed Actions				Other Alternatives		Mitigation Measures	Residual Impacts
	TL626	*C157*	*BIA*	*C440*	*Partial Removal of Overland Access Roads*	*Remove TL626*		
BIO-6: Candidate, Sensitive, or Special-Status Species in local or regional plans, policies or regulations, or by CDFW or USFWS (Class II)	Class II	Class II Creates additional impact to USFWS designated arroyo toad habitat	Class II	Class II	Class II	Class II	MM ~~BIO 8(b) and~~ BIO-13 through MM BIO-32: Includes Preconstruction Surveys, Exclusionary Fencing, Final Pole Design and Siting Restrictions, Seasonal Restrictions, bird and bat protection measures, Monitoring/Inspection/Enforcement, Blasting Restrictions and Compensation (see Table D.14-16 for further details). MM BIO-33 applies to C157 and Arroyo Toad and contains similar requirements listed in MM BIO-13- MM BIO-30.	MM ~~BIO 8 (b) and~~ BIO-13 through BIO-32 mitigates project impact MM BIO-33 mitigates additional impact to arroyo toad habitat
BIO-7: Conflict with HCP, NCCP or other Conservation Plan (Class III)	Class III	Class II Option1 creates additional impact to City of San Diego conservation lands Option 2 avoids this impact.	Class III	Class III	Class III	Class III	None required	None

Table ES-1
Comparison of CEQA Impacts and Mitigation for SDG&E's Proposed Project, Federal Proposed Actions, and Other Alternatives*

SDG&E's Proposed Project Impact	Federal Proposed Actions				Other Alternatives		Mitigation Measures	Residual Impacts
	TL626	*C157*	*BIA*	*C440*	*Partial Removal of Overland Access Roads*	*Remove TL626*		
BIO-8: Interfere with wildlife movement/corridors (Class III)	Class III	Class III	Class III	Class III	Class III	Class III	None required	None
Cultural and Paleontological Resources (see Section D.5 for full analysis)								
CUL-1: Historical Resources (Class II)	Class II	Class II	Class II	Class II	Class II	Class II	MM CUL-1 New Pole Siting Restrictions MM CUL-2 Protection of Historical Resources (see Table D.5-15 for further details).	MM CUL-1 and CUL-2 mitigates project impact
CUL-2: Archaeological Resources (Class II)	Class II	Class II	Class II	Class II	Class II	Class II	MM CUL-3 Implement Measures as identified in Cultural Resources Report (see Table D.5-15 for further details).	MM CUL-3 mitigates project impact
CUL-3: Human Remains (Class III)	Class III	Class III	Class III	Class III	Class III	Class III	None Required	None
CUL-4: TCP (Class III)	Options 1, 2, 4, and 5 Class II	Class III	Class III	Class III	Class III	Class III	MM CUL-3 applies only to Federal Proposed Action RE TL626 Options 1,2,4 and 5	None
PALEO-1: Unique Paleontological Resource or Geologic Feature (Class III)	Class III	Class III	Class III	Class III	Class III	Class III	None Required	None

Table ES-1
Comparison of CEQA Impacts and Mitigation for SDG&E's Proposed Project, Federal Proposed Actions, and Other Alternatives*

SDG&E's Proposed Project Impact	Federal Proposed Actions				Other Alternatives		Mitigation Measures	Residual Impacts
	TL626	*C157*	*BIA*	*C440*	*Partial Removal of Overland Access Roads*	*Remove TL626*		
Public Health and Safety (see Section D.7 for full analysis)								
PHS-1 through PHS-3: Hazardous Materials Impacts During Construction (Class II)	Class II	Class II	Class II	Class II	Class II	Class II	MM PHS-1 and PHS-4:: Contractor Training MM PHS-2: Implement BMPs MM PHS-3 : Compliance with rock blasting requirements (see Tale D.7-2 for further details	None
PHS-4: Flight Operations/Aviation Hazards (Class II)	Options 1,2,4,5: Creates additional impact Class II Option 3: Underground portion avoids impact. 1-mile OH portion Class II	Class II	Class II	No Impact	Class II	Class II	MM PHS-5: Compliance with FAA requirements MM PHS-6: Helicopter Lift Pan MM PHS-9: Consult with FAA and Fire agencies applies only to alternative overhead alignments (TL 626) (see Tale D.7-2 for further details)	None
PHS-5: Emergency Response (Class III)	Class III	Class III	Class III	Class III	Class III	Class III	Applicant Proposed Measures (APMs) include traffic control. No additional mitigation measures have been identified.	None

Table ES-1
Comparison of CEQA Impacts and Mitigation for SDG&E's Proposed Project, Federal Proposed Actions, and Other Alternatives*

SDG&E's Proposed Project Impact	Federal Proposed Actions				Other Alternatives		Mitigation Measures	Residual Impacts
	TL626	*C157*	*BIA*	*C440*	*Partial Removal of Overland Access Roads*	*Remove TL626*		
PHS-6: Structural Failure (Class II)	Options 1,2,4,5 : Class II Option 3: Underground portion avoids impact. (Class II for 1-mile OH portion)	Class II	Class II	Class III	Class II	Class II	MM PHS-7: Geotechnical Investigations MM PHS-8: Inspections (see Tale D.7-2 for further details)	None
PHS-7: Shock Hazards (Class III)	Class III	Class III	Class III	Class III	Class III	Class III	None required	None
Fire and Fuels Management (see Section D.8 for full analysis)								
FF-1: Construction, Operation and Maintenance Could Start a Wildfire (Class II)	Class II	Class II	Class II	Class II	Class II	Class II	MM FF-1 and FF-2: Implement Fire Prevention Plan (see Tale D.8-2 for further details)	None
FF-2: Presence of Transmission Lines Could Start a Fire (Class III)	Options 1,2, 4,5: Class II new overhead lines creates	Class III	Class III	No impact)	Class III	Class II TL625 loop-in Class III TL6931	None required	None

Table ES-1
Comparison of CEQA Impacts and Mitigation for SDG&E's Proposed Project, Federal Proposed Actions, and Other Alternatives*

SDG&E's Proposed Project Impact	Federal Proposed Actions				Other Alternatives		Mitigation Measures	Residual Impacts
	TL626	*C157*	*BIA*	*C440*	*Partial Removal of Overland Access Roads*	*Remove TL626*		
	additional impact Option 3: Underground portion avoids impact .1-mile OH Class II							
FF-3: Reduced Firefighter Effectiveness (Class III)	Options 1,2, 4,5: Class II Creates additional impact Option 3: Underground portion avoids impact 1-mile OH Class II	Class II	Class III	No impact	Class III	Class II TL625 loop-in Class III TL6931	None required for proposed project MM PHS-9 Consult with FAA and Fire agencies applies only to alternative overhead alignments (TL 626) (see Tale D.7-2 for further details)	None
FF-4: Introduction of Non-Native Plants (Class II)	Class II	Class II	Class II	Class II	Class II	Class II	MM FF-2 (Implement Fire Prevention Plan) and MM BIO-4 (Restore all temporary construction areas pursuant to a Habitat Restoration Plan) (see Tables D.8-2 and D.4-16 for further details)	None

Table ES-1
Comparison of CEQA Impacts and Mitigation for SDG&E's Proposed Project, Federal Proposed Actions, and Other Alternatives*

SDG&E's Proposed Project Impact	Federal Proposed Actions				Other Alternatives		Mitigation Measures	Residual Impacts
	TL626	*C157*	*BIA*	*C440*	*Partial Removal of Overland Access Roads*	*Remove TL626*		
Hydrology and Water Quality (see Section D.9 for full analysis)								
HYD-1 and HYD-2: Short-Term Construction Activities Would Degrade Water Resources (Class II)	Class II	Class II	Class II	Class II	Class II	Class II	MM HYD-1; Erosion Control Plan/Stormwater Pollution Control Plan (see Tale D.9-11 for further details)	None
HYD-3: Groundwater Supply (Class II)	Class II	Class II	Class II	Class II	Class II	Class II	MM HYD 2A :Documentation of purchased water sources MM HYD-2b: Groundwater evaluations. (see Table D.9-11 for further details)	None
HYD-4: Access Roads Access road segments associated with C79, C442, TL625, TL626, and TL629 (Class I). All others (Class II).	Options 1 through 4: Class II (Reduces Class I impacts associated with TL626)	Class II	Class II	No Impact	Class II	No impact (TL625 loop-in – no roads proposed) Class III (TL6931 – no new access roads)	MM HYD-3: Implement Access road decommissioning Best Practices MM HYD-4: Access road evaluation and repair design report (see Table D.9-11 for further details)	Remains Class I for access road segments associated with C79, C442, TL625, TL626, and TL629. All others mitigated. Partial access removal alternative reduces impact to Class II. FS Alternatives to TL626 reduces impact associated with TL626

Table ES-1
Comparison of CEQA Impacts and Mitigation for SDG&E's Proposed Project, Federal Proposed Actions, and Other Alternatives*

SDG&E's Proposed Project Impact	Federal Proposed Actions				Other Alternatives		Mitigation Measures	Residual Impacts
	TL626	*C157*	*BIA*	*C440*	*Partial Removal of Overland Access Roads*	*Remove TL626*		
								only to Class II under Options 1-4. Option 5 remains a Class I for TL626.
HYD-5: Maintenance - Vegetation Management, Pesticide, and Herbicide Application (Class II)	Class II	Class II	Class II	No impact	Class II	Class II	MM-HYD-5: Procedural Requirements for Pesticide and Herbicide Applications ~~For C440, C449, and TL 629C: MM-HYD-6: Pesticide Use Prohibition along Cottonwood Creek~~ (see Table D.9-11 for further details)	None
Land Use (see Section D.10 for full analysis)								
LU-1:Temporary Disturbance Due to Construction (Class II)	Class II	Class II	Class II	Class II	Class II	Class II	MM LU-1: Construction Notification Plan (see Table D.10-10 for further details)	None
LU-2:Divide an Established Community (No Impact)	Class II	No Impact	No Impact	No Impact	No Impact	No Impact	MM LU-3 Revise project elements to minimize land use conflicts. Applies only to Forest Service alternatives for TL 626 (see Table D.10-10 for further details)	None
LU- 3: Conflict with Applicable Land Use Plan: C157 (Class I), TL626 and C442	Options 1-5: Class II	Option 1: Class II. Option 2: Class III	Class III	Class III	Class III	Avoids Class II impacts associated	MM LU-2: Project-specific amendment to Forest Service LMP to provide an exception for and allow rebuild/fire	None with the exception of LU-3 impacts associated with C157 determined

Table ES-1
Comparison of CEQA Impacts and Mitigation for SDG&E's Proposed Project, Federal Proposed Actions, and Other Alternatives*

SDG&E's Proposed Project Impact	Federal Proposed Actions				Other Alternatives		Mitigation Measures	Residual Impacts
	TL626	*C157*	*BIA*	*C440*	*Partial Removal of Overland Access Roads*	*Remove TL626*		
(Class II), all others Class III		(both options reduce Class I impacts associated with C157 in wilderness; option 2 removes it from City of San Diego planned conservation area)				with TL626 reduces to Class III	hardening of existing TL626 (see Table D.10-10 for further details) For Federal Action RE TL626 Options 3 and 4; and C440 MM-LU-4: Encroachment Permit from County of San Diego (see Table D.10-10 for further details)	to be Class I. Selection of Federal Proposed Action RE C157 mitigates this impact.
Noise (see Section D.11 for full analysis)								
NOI-1 and NOI-2: Construction Noise (Class II)	Class II	Class II	Class II	Class II	Class II	Class II	MM NOI-1: Implement noise reduction measures during construction MM NOI-2:Notification of helicopter use MM NOI-3: Blasting Plan MM NOI-4: Notification of any work outside allowable construction hours (see Table D.11-9 for further details)	None
NOI-3 and NOI-4: Corona Noise/Long-Term Impacts (Class III).	Class III	Class III	Class III	No Impact	Class III	Class III	None required	None

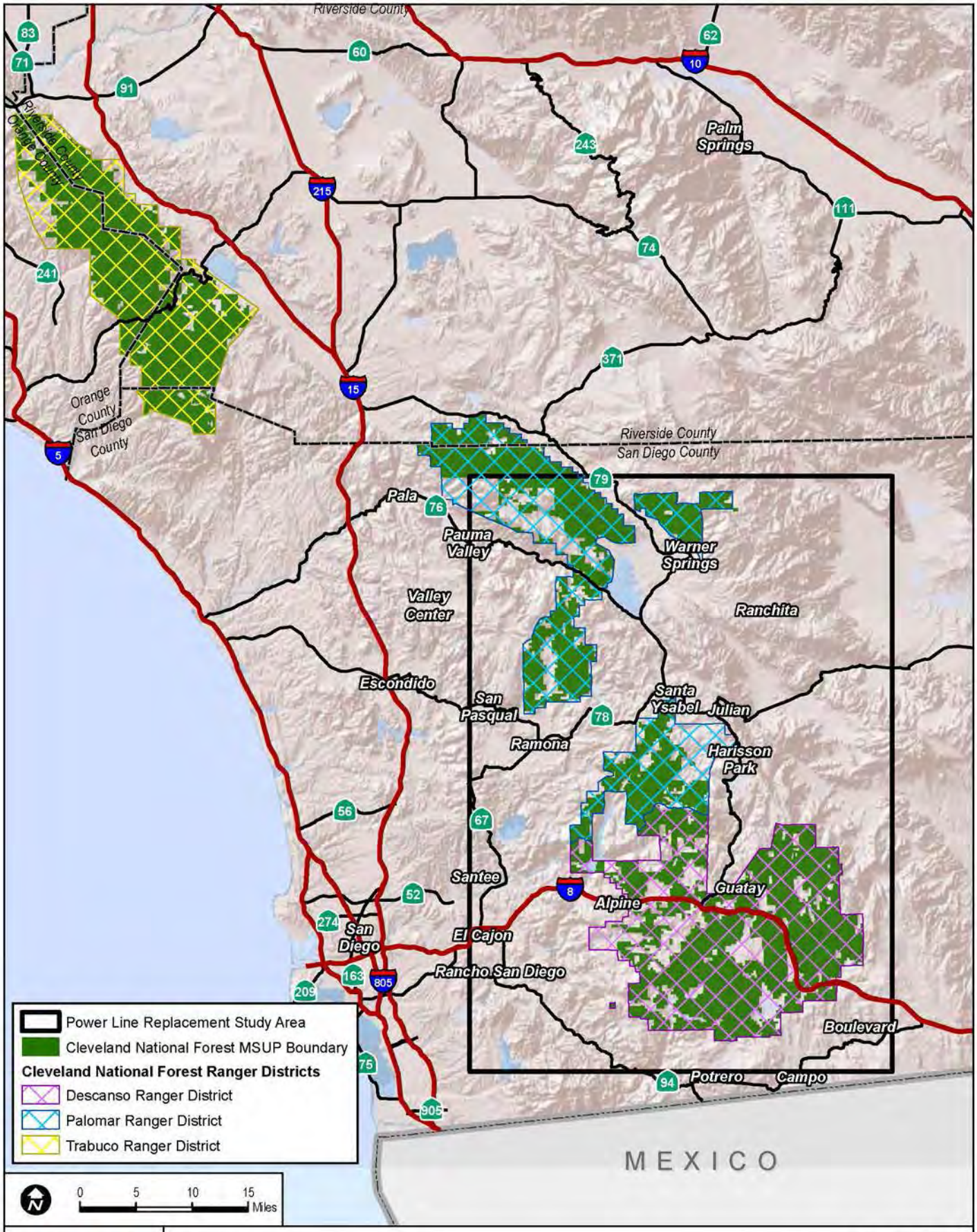
Table ES-1
Comparison of CEQA Impacts and Mitigation for SDG&E's Proposed Project, Federal Proposed Actions, and Other Alternatives*

SDG&E's Proposed Project Impact	Federal Proposed Actions				Other Alternatives		Mitigation Measures	Residual Impacts
	TL626	*C157*	*BIA*	*C440*	*Partial Removal of Overland Access Roads*	*Remove TL626*		
Public Services and Utilities (see Section D.12 for full analysis)								
PSU-1: Effects on Fire, Water Supply, and Telecommunications - (Class II).	Class II	Class II	Class II	Class II	Class II	Class II	MM HYD-2a: Documentation of purchased water sources MM PSU-1 AT&T commitments to co - locate facilities with proposed power line replacement projects. (see Tables D.9-11 and D.12-3 for further details)	None
PSU-2: and PSU-3: Solid Waste Disposal Facilities and Disruption of Electrical Service (Class III).	Class III	Class III	Class III	Class III	Class III	Class III	None required.	None
Recreation (see Section D.13 for full analysis)								
REC-1: Reduce Access During Construction - Temporary construction impacts to access to recreation and wilderness areas would be adverse but mitigable (Class II – TL682, TL626, TL625, TL629, TL6923, C79,	Options I -4: Class III Option 5: Class II	Class III	Class II	Class II	Class III	Class III	MM LU-1: Construction Notification Plan (see Table D.10-10 for further details)	None

Table ES-1
Comparison of CEQA Impacts and Mitigation for SDG&E's Proposed Project, Federal Proposed Actions, and Other Alternatives*

SDG&E's Proposed Project Impact	Federal Proposed Actions				Other Alternatives		Mitigation Measures	Residual Impacts
	TL626	*C157*	*BIA*	*C440*	*Partial Removal of Overland Access Roads*	*Remove TL626*		
and C157; all others are Class III)								
REC-2: Project Components Reduce Access to Recreation Areas (Class III)	Class III	Class III	Class III	Class III	Class III	Class III	None required	None
REC-3: Unauthorized Access (Class II)	Options 1, 2 and 5: Class II Options 3 and 4: No Impact	No Impact	No Impact	No Impact	Class II	No impacts	MM REC-1 : Installation of gates and signage MM REC-2: Enforcement of restricted areas.	None
Transportation and Traffic (see Section D.14 for full analysis)								
TRANS-1 through TRANS-5: Short-term construction activities to transportation facilities, traffic and roadways (Class III).	Options 1, 2, 4, and 5: Class III Option 3: Class II	Class III	Class III	Class II	Class III	Class III	MM-LU-5: Encroachment Permit from County of San Diego applies only to Federal Proposed Action RE TL626 Option 3 and C440 (see Table D.10-10 for further details)	None

Note: Comparison of the No Action and No Project Alternatives within the Executive Summary is discussed in Section ES.5.4 and ES 5.5



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SOURCE: USFS 2013; SDG&E 2013

FIGURE ES-1

Regional Overview Map

MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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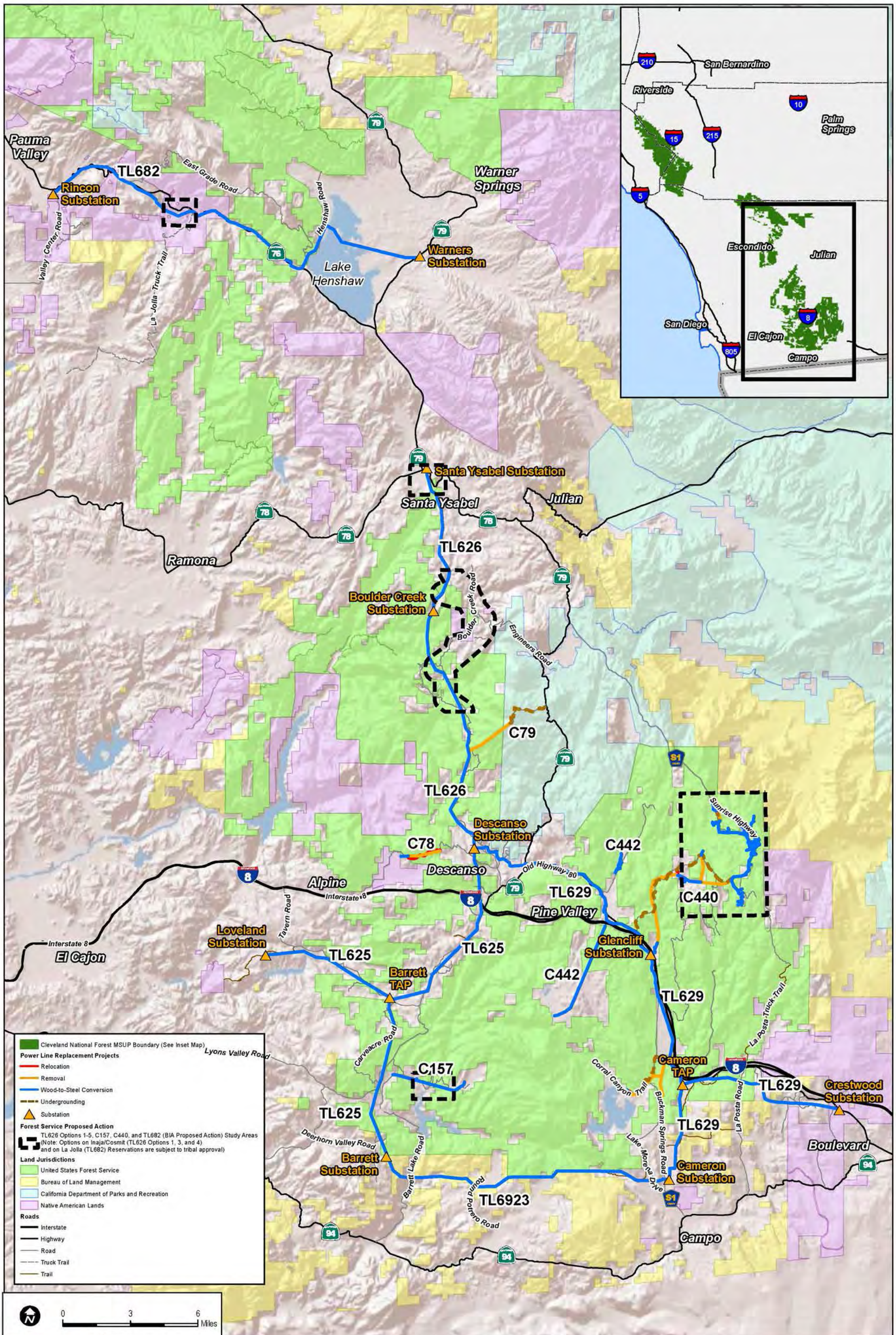

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SOURCE: SDG&E 2011; SanGIS 2012; Bing Maps

3 6 Miles

FIGURE ES-2

Power Line Replacement Projects Overview Map

MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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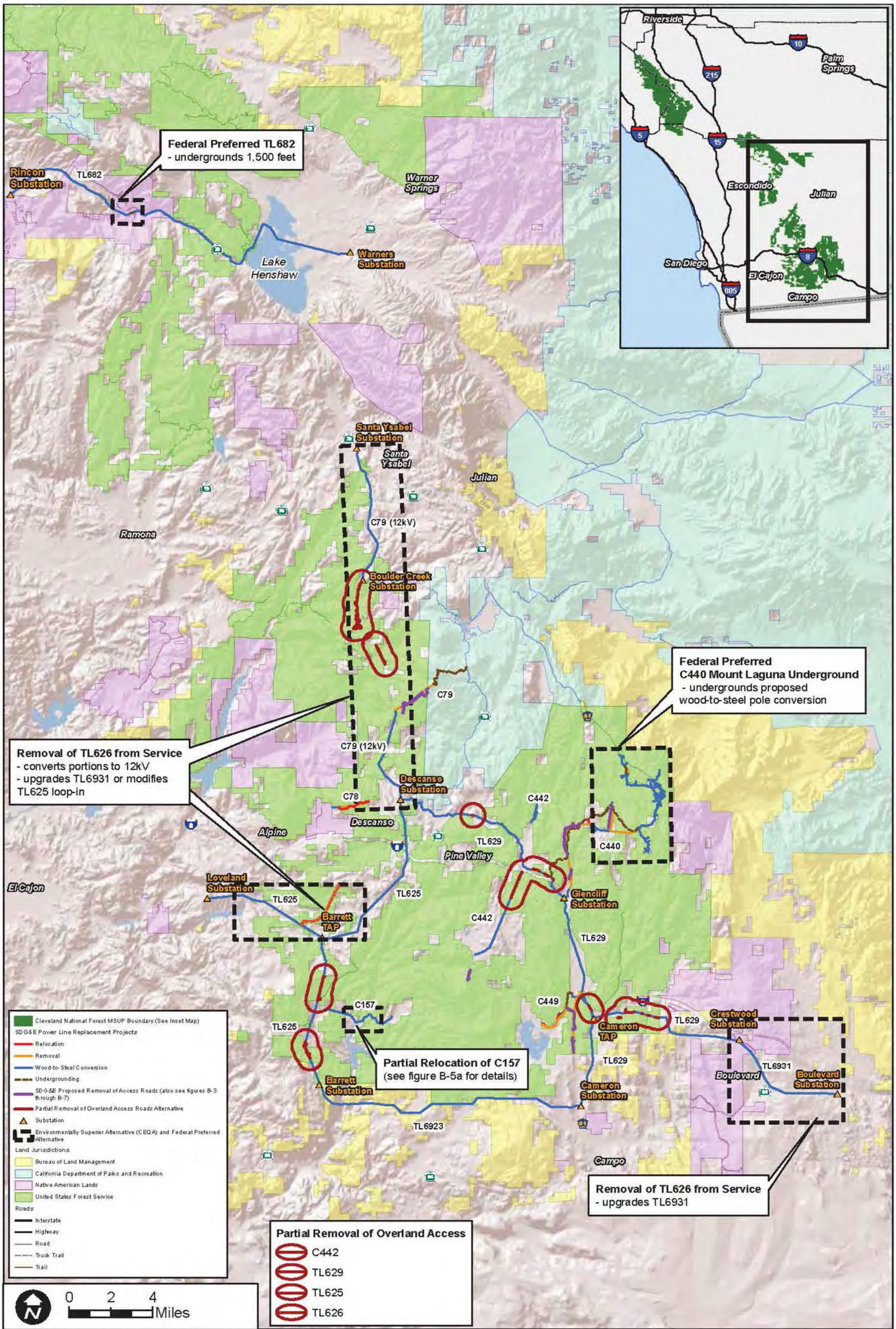

SOURCE: SDG&E 2011; SanGIS 2012; Bing Maps

FIGURE ES-3

Environmentally Superior Alternative (CEQA) and Federal Preferred Alternative (NEPA)

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MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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A. INTRODUCTION/OVERVIEW

This ~~section~~ chapter provides a general introduction (Section A.1), Environmental Impact Report/Environmental Impact Statement (EIR/EIS) purpose and content ~~project background~~ (Section A.2), project overview (Section A.3), purpose and need as it applies to the federal agencies and tribal lands (Section A.4), project objectives (Section A.5), and agency use of this joint ~~Environmental Impact Report/Environmental Impact Statement (~~EIR/EIS~~)~~ (Section A.6). The organization and content of the EIR/EIS is provided in Section A.7, and references cited are listed in Section A.8.

A.1 Introduction

San Diego Gas & Electric Company's (SDG&E or applicant) proposed project would include issuance of a Master Special Use Permit (MSUP) for the SDG&E system in the Cleveland National Forest (CNF), and would replace/fire harden select lines within the SDG&E system both on and off the CNF.

SDG&E is proposing to combine over 70 individual use permits and easements for SDG&E electric facilities within the (CNF into one MSUP to be issued by the United States Forest Service (Forest Service). In addition, SDG&E is proposing to replace certain electric power lines located within and outside the CNF. Replacement would primarily include fire hardening (wood-to-steel pole replacement), relocation, and undergrounding. The proposed power line replacement projects will require authorization under the MSUP, as well as approval from the California Public Utilities Commission (CPUC).

The CNF MSUP study area is located within multiple locations within the Trabuco, Palomar, and Descanso ranger districts of the CNF, Orange and San Diego Counties, California. The proposed power line replacement projects are located within and outside the Palomar and Descanso ranger districts of the CNF in the vicinity of the unincorporated communities of Alpine, Boulevard, Pine Valley, Descanso, Campo, Pauma Valley, Santa Ysabel, Julian, and Warner Springs within the central portion of San Diego County. SDG&E's proposed power line replacement projects not only traverses National Forest System lands, but due to the patchwork of land ownership in the project study area, also traverses lands managed by the Bureau of Land Management (BLM); tribal lands of the La Jolla, Campo, ~~Inaja/Cosmit~~Pauma-Yuima, and Viejas Indian Reservations managed by the respective tribes and held in trust by the Bureau of Indian Affairs (BIA); Cuyamaca Rancho State Park lands managed by California State Parks (CSP); lands under the jurisdiction of the City of San Diego, and private holdings within unincorporated San Diego County.

Approval of the MSUP would allow for the continued operation and maintenance of SDG&E electric facilities within the CNF and authorize the replacement of certain existing power lines on and adjacent to CNF lands. MSUP approval is being requested by SDG&E because the existing authorizations within the CNF are expired, and the existing power lines are needed to supply power to local communities, residences, and government-owned facilities located within and adjacent to the CNF.

SDG&E filed a Standard Form (SF) 299 Application for Transportation and Utility Systems and Facilities on Federal Lands along with a Plan of Development (SDG&E 2013a) with the Forest Service to initiate this action and has filed an application (A.12-10-009) for a Permit to Construct (PTC) the proposed project with the CPUC. The CPUC and Forest Service have independent jurisdiction and approval authority for the project. The CPUC is the lead agency under the California Environmental Quality Act (CEQA), and the Forest Service is the lead federal agency under the National Environmental Policy Act (NEPA).

A.2 EIR/EIS Purpose and Content

The CPUC and Forest Service have prepared this joint EIR/EIS for the proposed Master Special Use Permit and Permit to Construct (MSUP/PTC) Power Line Replacement Projects (SDG&E's proposed project) in compliance with CEQA and NEPA. The BIA and BLM are joining the Forest Service as federal cooperating agencies under NEPA, and the CSP is participating as a responsible agency under CEQA. The purpose of the EIR/EIS is to disclose the environmental impacts expected to result from construction and operation of SDG&E's proposed project and provide mitigation measures, which, if adopted, would avoid or minimize those environmental impacts as well as identify alternatives to SDG&E's proposed project (including the No Project/No Action Alternative) that could avoid or minimize significant environmental impacts. This EIR/EIS does not make recommendation regarding the approval or denial of the project; it is purely information in content and has been prepared to inform the public and to meet the needs of federal, state, and local permitting agencies in considering SDG&E's proposed project as described in Section A.6.

The content of this EIR/EIS reflects input received from government officials, agencies, non-governmental organizations, and concerned members of the public during the EIR/EIS scoping period and Draft EIR/EIS public comment period (see Table A-1 for a list of issues raised during this process and ~~to be~~ addressed in the EIR/EIS).

Scoping Period and Issuance of the Draft EIR/EIS

The scoping period followed the CPUC's publication of the Notice of Preparation (NOP) of an EIR (September 23, 2013) and the Forest Service's publication of the Notice of Intent (NOI) to

prepare an EIS in the Federal Register (September 23, 2013). During this comment period, several public involvement activities were completed: public distribution of the NOP, NOI, and a scoping meeting notice; establishment of an Internet web page; two public scoping meetings; and meetings with a number of the affected local jurisdictions (see details in Section I of this EIR/EIS). Consultation with agencies also continued after the formal scoping period ended. The issues evaluated in this EIR/EIS were derived from comments made during the scoping period as summarized in Table A-1 and in Section I of this EIR/EIS and presented in the Public Scoping Report prepared for SDG&E's proposed project and issued on January 16, 2014. The Scoping Report is posted on the project website at: http://www.cpuc.ca.gov/environment/info/dudek/CNF/CNF.htm.

Following the formal scoping period (September 23 – November 7, 2013), the CPUC and Forest Service provided a supplemental 45-day scoping period (January 21 – March 7, 2014) to provide the public with an additional opportunity to comment on the topics and alternatives to be addressed in the EIR/EIS. In addition, during this supplemental scoping period, public involvement activities completed included publishing legal notices in four local newspapers, posting public notices at local planning group meeting venues and on community boards at local post offices throughout the project study area, and holding a supplemental scoping meeting.

The Draft EIR/EIS was released for public review on September 5, 2014. The 60-day public review period closed November 4, 2014. During this review period, public involvement activities completed included publishing legal notices in four local newspapers, posting public notices at local planning group meeting venues and on community boards at local post offices throughout the project study area, and holding an informational public meeting on the Draft EIR/EIS.

Final EIR/EIS

The Final EIR/EIS takes into account public comments received on the Draft EIR/EIS. Volume 1 of the Final EIR/EIS presents changes that were made to the Draft EIR/EIS as a result of comments received. Revisions were made to clarify information presented in the Draft EIR/EIS and only minor technical changes or additions have been made. These changes and additions to the EIR/EIS do not raise important new issues related to significant effects on the environment. Such changes are insignificant as the term is used in Section 15088.5(b) of the CEQA Guidelines and under NEPA, do not result in new significant circumstances or information relevant to environmental concerns, or require analysis of a new alternative (40 Code of Federal Regulations (CFR) 1502.9(c)(1)(ii)). Volume 1 is completely reprinted from the Draft EIR/EIS and changes made since public review are signified as a replacement, addition, or revision to existing text. Revisions to existing text are signified by strikeout (i.e., ~~strikeout~~) where text is removed, and by

underlined text (i.e., underline) where text is added for clarification. Volume 1, in conjunction with Volume 2, Responses to Comments, constitute the Final EIR/EIS for the proposed project.

Table A-1
EIR/EIS Issues ~~to be~~Addressed

Environmental Issue Area/ EIR/EIS Section	Potential Issues or Impacts
Aesthetics/Visual Resources Section D.2	• Construction-related activities would result in the temporary degradation of existing visual character and quality in the project study area, including scenic vistas and other designated scenic resources. • Nighttime construction lighting may be used during project construction that could affect the nighttime view. • There may be potential conflicts associated with proposed wood to steel pole replacement with federal, state, and local plans; regulations; or standards applicable to the protection of visual resources. • Yellow striping on new steel poles and use of reflective conductors could affect the visual character of the project area. • Lighting on taller steel poles and use of colored balls on conductors, if required, could affect the visual character of the project area.
Air Quality Section D.3	• Project construction will produce short-term air emissions (fugitive dust and vehicle equipment exhaust) and may violate air quality standards during construction.
Biological Resources Section D.4	• Project construction and vegetation management activities could result in temporary and permanent loss of native wildlife and/or their habitat. • Loss of habitat for sensitive species designated by state and federal resource agencies. • Conflict with federal, state, or local policies or ordinances protecting biological resources. • Project construction, including use of helicopters, could impact eagles on federal and non-federal lands. • Project construction and maintenance could result in impacts to jurisdictional wetlands. • Project construction and maintenance could result in the spread of invasive species. • Lighting if used on steel poles could affect wildlife in project area. • Heavy equipment could damage root systems of older trees along alignment. • Project construction could exceed take acreage allotted in the 1995 SDG&E Natural Community Conservation Plan (NCCP).
Cultural and Paleontological Resources Section D.5	• Construction and operation could damage or destroy historic and archaeological sites, traditional cultural properties, or areas containing paleontological resources. • Temporary use of staging areas and conductor pull sites could damage or destroy historic and archaeological sites, traditional cultural properties, or areas containing paleontological resources.
Greenhouse Gas Emissions Section D.6	• Construction activities would result in greenhouse gas emissions.

Table A-1
EIR/EIS Issues ~~to be~~Addressed

Environmental Issue Area/ EIR/EIS Section	Potential Issues or Impacts
Hazards, Hazardous Materials, Section D.7 (Public Health)	• Leaking or spilling of petroleum or hydraulic fluids from construction equipment or other vehicles during project construction, operation, or maintenance could contaminate soils, surface waters, or groundwater. • Wind speeds in the project area may exceed normal design standards. • Wind speeds exceed rating of pole/conductors. • Harmonic rocking of lines during high winds could lead to failure/fire risk. • Steel towers may not perform well to high temperatures during wild fire, and may be more susceptible to lightning.
Fire D.8 (Fire and Fuels Management)	• Fire hazard during construction and operation. • Doubling circuits on certain transmission lines can increase fire risk. • Constructing power lines in areas designated as wilderness could increase fire risk.
Hydrology and Water Quality Section D.9	• Project construction and operation and maintenance, particularly use of steep access roads, could affect surface water flow and erosion rates causing subsequent downstream sedimentation and reduced surface water quality. • Water used for project construction and maintenance could impact local groundwater.
Land Use and Planning Section D.10	• Construction would temporarily disturb ongoing or traditional land uses within the project study area. • Possible conflicts with pending land management plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. • Construction or operation could cause conflicts with the Wilderness Act of 1964.
Noise Section D.11	• Project construction will produce short-term noise (from helicopters, vehicles and construction equipment) and may violate noise standards during construction. • Location of fly yards and associated helicopter use may impact communities away from the project area.
Public Services and Utilities Section D.12	• Construction activities could result in increased generation of waste and disposal needs. • Fire and emergency services may be required to service SDG&E's proposed project and project study area during construction and operation. • Construction may result in temporary loss of electrical service to remote communities. • Telecommunication services in the project area could be disrupted. • Water used for project construction and maintenance could impact local water supplies.
Recreation Section D.13	• Construction or operation could cause conflicts with ongoing or traditional recreation uses in the project study area. • Access roads could increase vehicle trespass into areas where vehicles are not authorized.
Transportation and Traffic Section D.14	• Traffic would be generated by construction worker commute trips and equipment deliveries. Hauling materials, such as poles, concrete, conductor, and excavation spoils, would temporarily increase existing traffic volumes in the project study area.
Electro Magnetic Fields Section D.15	• Public health risks due to EMF.
Growth-Inducing Effects Section G.1	• Increasing conductor size may increase system capacity, inducing growth in local generation. • Doubling circuits on certain transmission lines may increase system capacity and induce growth in local generation.

Table A-1
EIR/EIS Issues ~~to be~~Addressed

Environmental Issue Area/ EIR/EIS Section	Potential Issues or Impacts
Socioeconomics/Environmental Justice Section G.5	• The relocation of certain transmission facilities may result in social and economic effects as well as have disproportionally high or adverse effects on minority or low-income populations.

In addition to the issues listed in Table A-1, commenters expressed the need for the environmental analysis to include a full and comprehensive range of alternatives that reduce identified impacts. Suggestions from commenters regarding specific alternatives included distributed generation (DG); undergrounding electric lines; alternative transmission routes; alternative sites and configurations; alternative pole designs regarding materials and height; increased vegetation management and equipment inspections versus replacement; removal of various lines; and alternative technologies, including solar, that achieve a majority of project objectives. Section C of the EIR/EIS describes the alternatives evaluation process and provides a description of alternatives considered but eliminated from further analysis and the rationale thereof, and a description of the alternatives carried forward for further analysis in this EIR/EIS.

A.3~~2~~ Project Overview ~~Background~~

In 2005, in consultation with the Forest Service, SDG&E submitted an initial application to obtain an MSUP. The purpose of the MSUP was to consolidate SDG&E's rights and responsibilities in connection with the continued operation of its electric lines and other existing facilities located within the CNF. As part of the NEPA review process, the Forest Service circulated an Environmental Assessment (EA) for public comment in 2009. In response to public comments received on that EA, the Forest Service determined that additional fire risk reduction measures within the CNF (including fire hardening) and additional undergrounding should be evaluated as part of the MSUP review process. SDG&E has expanded the scope of the proposed MSUP to include fire hardening, undergrounding, and relocation as proposed in the power line replacement projects.

The proposed MSUP/PTC Power Line Replacement Projects are detailed in Section B, Project Description, of this EIR/EIS. As discussed previously in Section A.1, approval of the MSUP/PTC Power Line Replacement Projects would authorize the continued operation and maintenance of SDG&E electric facilities within the CNF through issuance of the MSUP and authorize the replacement of certain existing power lines on and outside of CNF lands through issuance of the MSUP and PTC. The following provides an overview of the proposed power line replacement projects.

A.3.1 Applicant's Proposed Power Line Replacement Projects

SDG&E proposes to replace the following five 69-kilovolt (kV) transmission lines (TL) and six 12 kV distribution circuits (C):

- TL682 is approximately 20.2 miles in total length and generally runs from Rincon Substation east to Warners Substation. Proposed replacement includes wood-to-steel pole conversion.
- TL626 is approximately 18.8 miles in total length and generally runs from Santa Ysabel Substation south to Descanso Substation. Proposed replacement includes wood-to-steel pole conversion.
- TL625 is approximately 22.5 miles in total length and generally runs from Loveland Substation east to Barrett Tap, from Barrett Tap east to Descanso Substation, and from Barrett Tap south to Barrett Substation. Proposed replacement includes wood-to-steel pole conversion along with single circuit to double circuit conversion.
- TL629 is approximately 29.8 miles in total length and generally runs from Descanso Substation east to Glencliff Substation, from Glencliff Substation southeast to Cameron Tap, from Cameron Tap south to Cameron Substation, and from Cameron Tap east to Crestwood Substation. Proposed replacement includes wood-to-steel pole conversion, undergrounding, and single to double circuit conversion.
- TL6923 is approximately 13.4 miles in total length and generally runs from Barrett Substation east to Cameron Substation. Proposed replacement includes wood-to-steel pole conversion.
- C79 is approximately 2.2 miles in total length and generally runs from Boulder Creek Road east to the Cuyamaca Peak communication site. Proposed replacement includes removal of existing overhead line and replacement with new undergrounding.
- C78 is approximately 1.8 miles in total length and generally runs from east of Viejas Reservation, east along Viejas Grade Road, to Via Arturo Road. Proposed replacement includes wood-to-steel pole conversion and overhead relocation.
- C157 is approximately 3.5 miles in total length and generally runs from Skye Valley Road, near Lyons Valley Road, east to Skye Valley Ranch. Proposed replacement includes wood-to-steel pole conversion. The applicant's proposal includes replacement and motorized use in the congressionally designated Hauser Wilderness. This aspect of the applicant's proposal conflicts with the requirements of the Wilderness Act.

- C442 is approximately 6.2 miles in total length and generally runs south from Pine Valley Road to Los Pinos Peak Forest Station and along Pine Creek Road south toward the community of Pine Valley. Proposed replacement includes wood-to-steel pole conversion.
- C440 is approximately 24.0 miles in total length and generally runs from Glencliff Substation northeast to Mount Laguna along Sunrise Highway. Proposed replacement includes wood-to-steel pole conversion with some line removal, undergrounding, and overhead relocation.
- C449 is approximately 6.7 miles in total length and generally runs from Old Highway 80 south along Buckman Springs Road to Oak Drive and southwest along Morena Stokes Valley Road to Camp Morena. Proposed replacement includes wood-to-steel pole conversion with some line removal and undergrounding.

The applicant also proposes to install appurtenant facilities on poles and within the right-of-way (ROW) as needed to manage the power line system. These appurtenances may include electrical switches, smart grid control devices, weather stations, and surveillance cameras.

A.3.2 Federal Proposed Action

The federal proposed action includes the Forest Service, BIA and BLM proposed actions.

The Forest Service reviewed and accepted the application for an MSUP with modifications to certain actions on National Forest System lands. This modified proposal includes the Forest Service proposed action, which, as described in Section B.3.2 of this EIR/EIS, modifies the applicant's proposed project along TL626, C157, and C440 and the BIA proposed action, which modifies the applicant's proposed project along TL682. In addition, the Forest Service proposes to authorize electrical control/communication devices and weather stations not otherwise specified in the permit, subject to Forest Service review and approval of final design and location. The Forest Service is not proposing to authorize surveillance cameras on National Forest System lands.

The BLM action does not modify SDG&E's proposed project and includes portions of SDG&E's proposed power line replacement projects for TL629, TL625, and TL6923.

A.4 Purpose and Need

A.4.1 Forest Service Purpose and Need

The Forest Service purpose is to authorize the power lines and associated facilities needed to continue electric service to a variety of users within and adjacent to the CNF through an MSUP in a manner that is consistent with the CNF Land Management Plan (LMP). This action is

needed because the 70 individual permits or easements for the existing facilities have expired, and a permit is required for the continued occupancy and use of National Forest System lands. Further, the purpose of this action is to reduce fire risk associated with the existing facilities in a high fire hazard area through fire hardening of facilities in the CNF. This action is needed for resource protection as well as public safety.

Permits issued by the Forest Service are required by law to be consistent with the LMP. The LMP identifies suitable uses within various land use zones, describes desired conditions based on the LMP goals and objectives, and sets resource management standards. The Forest Service proposed action is designed to be consistent with the LMP requirements. The Forest Service purpose and need will guide the development of alternatives considered on National Forest System lands.

A.4.2 BLM Purpose and Need

The BLM purpose is to authorize the power lines and associated facilities needed to continue electric service to a variety of users within and adjacent to the National System of Public Lands in a manner that is consistent with the South Coast Resource Area Plan. This action is needed because ROW grants for the existing facilities have expired or were never issued, and a ROW grant is required for the continued occupancy and use of Public Lands.

A.4.3 BIA Purpose and Need

The BIA purpose is to authorize the power lines and associated upgrades needed to continue electric service to a variety of users within and adjacent to the Indian trust lands in a manner that is consistent with tribal land use goals and policies. The action is needed to amend the existing easements to include the proposed fire hardening measures and locations, and to extend their term.

A.5 Project Objectives

A.5.1 Applicant's Objectives

According to SDG&E, the objectives of the MSUP and PTC are to (1) secure Forest Service authorization to continue to operate and maintain existing SDG&E facilities within the National Forest System lands and (2) increase fire safety and service reliability of these facilities by replacing five existing 69 kV power line facilities and six existing 12 kV distribution facilities. SDG&E's objectives also include undertaking these activities consistent with CPUC General Orders, North American Electric Reliability Corporation/Federal Energy Regulatory

Commission requirements, and SDG&E standards; and minimizing potential environmental impacts by locating facilities within previously disturbed areas where feasible.

A.5.2 CPUC Project Objectives

CEQA Guidelines (Section 15124[b]) requires that an EIR provide a statement of objectives sought by the proposed project that will assist the lead agency in developing a reasonable range of alternatives. In addition, CEQA Guidelines (Section 15126.6) requires that project objectives be set forth in an EIR to help define alternatives to the proposed project that meet most of the basic project objectives. Having taken into consideration the project objectives set forth by SDG&E for the MSUP/PTC Power Line Replacement Projects, the CPUC has identified the following basic project objectives that will be used to guide development of alternatives considered for SDG&E's proposed project:

- Reduce fire risk by fire hardening electric facilities in and around the CNF.
- Improve the reliability of power delivery to surrounding communities.

A.6 Agency Use of this Document and Permits Required

A.6.1 Forest Service Decision Framework

The Forest Service is the federal lead agency for the preparation of this EIR/EIS in accordance with the Council on Environmental Quality regulations for implementing the National Environmental Policy Act at 40 ~~Code of Federal Regulations (~~CFR~~)~~ 1501.5. Using the analysis in the EIS and supporting documentation, the forest supervisor will make the following decision regarding National Forest System lands:

- Whether or not to issue a Master Special Use Permit authorizing the continued occupancy and use of National Forest System lands for the purposes of transmission and distribution of electric energy and fire hardening facilities, and if so, under what conditions.

Following issuance of the Draft EIR/EIS, comments have been ~~will be~~ accepted and ~~that will be~~considered in preparing this ~~a~~Final EIR/EIS. Following or concurrent with issuance of the Final EIR/EIS, the forest supervisor will issue a Draft Record of Decision (Draft ROD). The Draft ROD may contain changes or additions to the MSUP to reduce or eliminate adverse environmental impacts from the proposed projects on National Forest System lands.

This project will follow the predecisional administrative review process pursuant to 36 CFR 218, Subparts A and B. Only those who submit timely project-specific written comments during a

public comment period are eligible to file an objection. Individuals or representatives of an entity submitting comments must sign the comments or verify identity upon request.

A.6.2 CPUC

Pursuant to Article XII of the Constitution of the State of California, the CPUC is charged with the regulation of investor-owned public utilities, including SDG&E. The CPUC is the lead state agency for CEQA compliance in evaluation of SDG&E's proposed power line replacement projects and, along with Forest Service, has directed the preparation of this EIR/EIS. In this role, the CPUC is responsible for compliance with CEQA and for coordinating with other state and local agencies that will use this EIR/EIS in their permitting processes.

This EIR/EIS will be used by the CPUC, in conjunction with other information developed in the CPUC's formal record, to act only on SDG&E's application for a PTC to construct and operate the proposed power line replacement projects. Under CEQA requirements, the CPUC will determine the adequacy of the Final EIR/EIS and, if adequate, will certify the document as complying with CEQA and make a final decision approving or disapproving the PTC for the power line replacement projects.

A.6.3 Responsible/Cooperating Agencies

Because portions of SDG&E's proposed project would occur on lands under the jurisdiction of CSP (which, in accordance with CEQA, will act as a responsible agency) and the BLM and BIA (which, in accordance with NEPA, are federal cooperating agencies), these agencies, as well as the La Jolla, Pauma-Yuima~~Inaja/Cosmit~~, Viejas, and Campo Indian Reservations, may also use the EIR/EIS for their permitting processes. Table A-2 lists agency jurisdiction by each proposed project.

Table A-2
Proposed Power Line Replacement Projects Agency Jurisdiction

Proposed Project Component	Jurisdiction	Number of Miles under Jurisdiction*
TL682	CPUC	15.6
	CNF	1.32
	Tribal (La Jolla and Pauma-Yuima Indian Reservations)	3.24
TL626	CPUC	10.79
	CNF	7.99
TL625	CPUC	16.16
	CNF	6.26
	BLM	0.05

Table A-2
Proposed Power Line Replacement Projects Agency Jurisdiction

Proposed Project Component	Jurisdiction	Number of Miles under Jurisdiction*
TL629	CPUC	29.75
	CNF	8.95
	Tribal (Campo Indian Reservation)	0.56
	BLM	0.71
TL6923	CPUC	7.01
	CNF	3.17
	BLM	3.22
C79	CNF	1.85 (removal)
	CSP	0.38 (removal) 2.84 (underground)
C78	CPUC	0.02 (removal) 0.21 (reconductor)
	CNF	1.41 (removal) 1.81 (reconductor)
	Tribal (Viejas Indian Reservation)	0.06 (reconductor)
C157	CPUC	1.80 (reconductor)
	CNF	1.71 (reconductor)
C442	CPUC	2.52 (reconductor)
	CNF	3.67 (reconductor)
C440	CPUC	1.38 (removal) 4.09 (underground) 5.08 (reconductor)
	CNF	5.76 (removal) 4.26 (underground) 11.88 (reconductor))
	State	0.09 (reconductor)
C449	CPUC	0.7 (removal) 0.23 (underground) 0.58 (reconductor)
	CNF	4.93 (removal) 0.39 (underground) 1.72 (reconductor)

Source: SDG&E 2013b
***Note:** Mileage under CPUC can include areas within the City/County of San Diego, school/water districts, and/or private lands.

A.6.4 Consultation with other Agencies

The Forest Service, BIA, and BLM have statutory consultation requirements for endangered species and historic properties that must be completed before taking action on the SDG&E

application. The Forest Service, as lead agency, must also file the Draft and Final EIR/EIS with the Environmental Protection Agency. Table A-3 lists the required consultation.

Table A-3
Federal Agency Statutory Consultation Requirements

Agency	Jurisdiction	Permit Regulatory Requirement
Advisory Council on Historic Preservation	National Historic Preservation Act	National Historic Preservation Act, Section 106 Consultation
State Historic Preservation Officer	National Historic Preservation Act	•National Historic Preservation Act, Section 106 Consultation
U.S. Fish and Wildlife Service	Endangered Species Act, 16 U.S.C. 1531–1544; Migratory Bird Treaty Act; Bald and Golden Eagle Protection Act; Fish and Wildlife Coordination Act	Section 7 Consultation Consultation (Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act).
U.S. Environmental Protection Agency	NEPA	Filing EIS with EPA for review

A.6.5 SDG&E Permit Requirements

As listed in Table A-3, several other state and federal agencies may rely on information in this EIR/EIS to inform them in their decisions regarding issuance of specific permits related to project construction or operation. In addition to the CPUC and CSP, state agencies such as the Department of Transportation, California Department of Fish and Wildlife, Regional Water Quality Control Board, and the Office of Historic Preservation would be involved in reviewing and/or approving SDG&E's activities associated with the proposed project. In addition to the Forest Service, BLM, and the BIA, the U.S. Fish and Wildlife Service (USFWS) and U.S. Army Corps of Engineers (ACOE) are also federal agencies with potential reviewing and/or permitting authority.

SDG&E is responsible for obtaining any permits necessary for their activities. Table A-4 lists the federal, state, and local permits and authorizations that may be required by SDG&E for the proposed project prior to construction. Section G.6 lists all applicable federal environmental regulations and policies.

Table A-4
Permits or Other Actions Required by SDG&E Prior to Construction

Agency	Jurisdiction	Permit Regulatory Requirement
Federal		
U.S. Forest Service	Federal Land Policy and Management Act (FLPMA), 43 U.S.C. 1701 et seq.	• FS 2700-4 Special Use Permit

Table A-4
Permits or Other Actions Required by SDG&E Prior to Construction

Agency	Jurisdiction	Permit Regulatory Requirement
U.S. Fish and Wildlife Service[1]	Endangered Species Act, 16 U.S.C. 1531–1544; Migratory Bird Treaty Act; Bald and Golden Eagle Protection Act; Fish and Wildlife Coordination Act	• Section 10 Incidental Take Permits • Bald and Golden Eagle Protection Act Take Permits.
Bureau of Land Management	FLPMA, 43 U.S.C. 1701 et seq.	• ROW Grant
Bureau of Indian Affairs	25 USC 323 (the Act of February 5, 1948 (PL 407))	• ROW Grant
Army Corps of Engineers	Clean *Water* Act	• Clean Water Act Section 404 Nationwide Permit or Individual permit
Federal Aviation Administration	Helicopter Flights	• Helicopter Lift Plan • Form 7460-1.
State		
California Public Utilities Commission	Transmission, substation, generation projects 50 kV to 200kV	• Permit to Construct.
California Department of Fish and Wildlife	Manage fish, wildlife, plant resources, and habitats; California Endangered Species Act, California Native Plant Protection Act, California Fish and Game Code Section 1600~~1~~	• 1602 Streambed Alteration Agreement~~1601 Permit~~
California Department of Transportation	California streets and highways Code 660-711.21 CCR 1411.1-1411.6	• Encroachment Permits • Traffic Control Plans.
California Department of Toxic Substances Control	Hazardous Waste Control Act of 1972	• Environmental Protection Agency (EPA) Hazardous Waste Generator ID • 90 days Treatment, Storage, and Disposal Permit • Hazardous Material Business Plan
California Office of Historic Preservation	Potential to affect cultural ~~or paleontological~~ resources	• National Historic Preservation Act, Section 106 Consultation
Regional Water Quality Control Board, Region 7 (Colorado River) and Region 9 (San Diego)	Clean Water Act, Sections 401 and 402; Porter-Cologne Water Quality Control Act; California Water Code Division 7. Water Quality	• 401 Certification • Stormwater Construction General Permit 2009-0009-DWQ (National Pollutant Discharge Elimination System Permit)
California Department of Forestry and Fire Protection	Public Resource Code 4125-4128, and CCR Title 14 Division 1.5 Chapter 7, Subchapter 2, Articles 1–5	• Concurrence with Fire District approval of project Fire Protection Plan

[1] Species covered under SDG&E's 1995 Natural Community Conservation Plan (NCCP) and Quino checkerspot butterfly (*Euphydryas editha quino*) (per SDG&E's low-effect Habitat Conservation Plan (HCP)) will not require additional take permits when treated per the letter of the low--effect HCP.

Table A-4
Permits or Other Actions Required by SDG&E Prior to Construction

Agency	Jurisdiction	Permit Regulatory Requirement
Local		
City of San Diego	Alignment easements	• Amend existing easement documents or issue new easements, as needed
San Diego County	County roads and highways	• Road/Highway Encroachment Permit
~~San Diego County Air Pollution Control District (SDCAPCD)~~	~~SDAPCD Regulation II, Rule 10.~~	~~• Authority to Construct and Permit to Operate~~
San Diego County Environmental Health Services	Health and Safety Code Chapter 6.95	• Hazardous Materials Business Plan • Hazardous Materials Inventory.
San Diego Rural Fire Districts	Fire Protection	• Fire District Approval • Fire Service Agreement.

A.7 Reader's Guide to EIR/EIS

A.7.1 Incorporation by Reference

The following document has been used in preparing this EIR/EIS and is hereby incorporated by reference.

- San Diego Gas & Electric Company Master Special Use Permit Cleveland National Forest, Orange and San Diego Counties, California – Revised Plan of Development, April 2013.

SDG&E's Revised Plan of Development (POD; SDG&E 2013a) submitted to the Forest Service in support of SF 299 Application for Transportation and Utility Systems and Facilities on Federal Lands and submitted to the CPUC in support of SDG&E's amended Permit to Construct (PTC) application A.12-10-009 contains certain information that is incorporated by reference in some sections of this EIR/EIS. This document is available for public review via the Internet at the CPUC website: http://www.cpuc.ca.gov/environment/info/dudek/CNF/POD.htm.

A.7.2 EIR/EIS Organization

This EIR/EIS is organized as follows. Note that all figures referenced in this EIR/EIS are located at the end of each section.

Executive Summary. A summary description of SDG&E's proposed project, the alternatives, their respective environmental impacts, and the Environmentally Superior (CEQA) and Agency Preferred (NEPA) Alternative.

Section A (Introduction/Overview). A discussion of the background, an overview of SDG&E's proposed project, purpose and need, project objectives, and a discussion of the public agency use of the EIR/EIS.

Section B (Project Description). Detailed description of SDG&E's proposed project and federal proposed action, which modifies certain components of SDG&E's proposed project.

Section C (Alternatives). Description of the alternatives evaluation process. Provides description of alternatives considered but eliminated from further analysis and the rationale thereof, and description of the alternatives fully analyzed in this EIR/EIS.

Section D (Environmental Analysis: Proposed Power Line Replacement Projects including Alternatives). A comprehensive analysis and assessment of impacts and mitigation measures for SDG&E's proposed project and alternatives, including the No Project and No Action Alternatives. This section is divided into 13 environmental issue areas (e.g., aesthetics, air quality, biological resources) that contain the environmental settings/affected environments and effects of SDG&E's proposed project and each alternative. In addition, each section provides applicable regulations, plans, and standards. A mitigation monitoring, compliance, and reporting summary table is provided at the end of each issue area analysis.

Section E (Comparison of Alternatives). An analysis of the relative advantages and disadvantages of SDG&E's proposed project in comparison with the alternatives evaluated and identification of both the CEQA "Environmentally Superior Alternative" and the NEPA "Agency Preferred Alternative." Consistent with Section 15126.6 of the CEQA Guidelines, the alternatives analysis includes "a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project" (14 CCR 15000 et seq.). Similarly, consistent with CEQ's NEPA Regulations (40 CFR 1502.14), the environmental impacts of SDG&E's proposed project and alternatives are provided in comparative form, defining the issues and providing a clear basis for choice by decision makers. Ultimately, the analysis includes identification of the CEQA "Environmentally Superior Alternative," consistent with CEQA Guidelines, Section 15126.6(e)(2), and the NEPA "Environmentally Preferred Alternative" consistent with the Forest Service NEPA Handbook, Section 23.3 (Forest Service 2011).

Section F (Cumulative Scenario and Impacts). A discussion of the cumulative scenario and impacts of past, present, and reasonably foreseeable projects in the project vicinity.

Section G (Required CEQA/NEPA Topics). A discussion of topics required by CEQA and NEPA, including growth-inducing effects, irreversible and irretrievable commitment of

resources and environmental changes, adverse unavoidable impacts (Class I) identified in Sections D.2 through D.14, relationship between short-term uses of the environment and the maintenance and enhancement of long-term productivity, effects not found to be significant, and compliance with applicable federal environmental regulations and policies.

Section H (Mitigation Monitoring and Reporting). A discussion of the mitigation monitoring and reporting program requirements for SDG&E's proposed project as identified in this EIR/EIS.

Section I (Public Participation). A brief description of the public participation program for this EIR/EIS as well as issues to be resolved.

Section J (Distribution of the EIR/EIS~~Report Preparation~~). Describes the distribution of both the Draft and Final EIR/EIS.~~A listing of individuals who contributed to the preparation of this EIR/EIS.~~

Section K (Report Preparation). Lists individuals who contributed to the preparation of this EIR/EIS.

Section L (Index). Lists key terms and provides page numbers for reference.

A.8 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

40 CFR 1500–1508. Protection of Environment; Chapter V: Council on Environmental Quality.

Forest Service (U.S. Forest Service). 2011. *National Environmental Policy Act Handbook*. FSH 1909-15.

SDG&E (San Diego Gas & Electric Company). 2013a. *Master Special Use Permit, Cleveland National Forest, Orange and San Diego Counties, California, Revised Plan of Development.* Prepared by Insignia Environmental. Encinitas, California: Insignia Environmental. April 2013. http://www.cpuc.ca.gov/environment/info/dudek/CNF/DR3Response.htm

SDG&E. 2013b. SDG&E 04/19/13 Response A. 12-10-009 Cleveland National Forest Power Line Replacement Projects PTC Energy Division Data Request 03 Dated February 27, 2013. http://www.cpuc.ca.gov/environment/info/dudek/CNF/DR3_ResponseCombi

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B. PROJECT DESCRIPTION

Section B describes the Master Special Use Permit/Permit to Construct (MSUP/PTC) Power Line Replacement Projects (SDG&E's proposed project) as proposed by the San Diego Gas & Electric Company (SDG&E or applicant) and as modified in the federal proposed action, which includes the U.S. Forest Service (Forest Service), Bureau of Land Management (BLM), and Bureau of Indian Affairs' (BIA) proposed actions. Section B.1 provides a general introduction and overview of SDG&E's proposed project. Section B.2 provides project location information. Section B.3 describes SDG&E's proposed project and its components (Section B.3.1 describes the applicant's proposed project and Section B.3.2 describes the federal proposed action). Section B.4 describes the permanent land requirements associated with SDG&E's proposed project. Section B.5 describes project construction including schedule, temporary impact areas, methods, personnel, and equipment. Section B.6 describes the operations and maintenance (O&M) procedures. Section B.7 describes the measures proposed by SDG&E, which are designed to reduce or avoid potential environmental impacts associated with project construction, operations, and maintenance. Section B.8 lists the references cited in this section. Figures referenced in the text are located at the end of this section.

B.1 Introduction and Overview

SDG&E's proposed MSUP/PTC power line replacement projects would consolidate over 70 existing special use permits and easements for SDG&E facilities within the Cleveland National Forest (CNF) into one MSUP to be issued by the Forest Service. Project approval would allow the continued operation and maintenance of approximately 100 miles of SDG&E's existing 69-kilovolt (kV) power lines, 12 kV distribution circuits (C), and ancillary facilities, as well as approximately 34 miles of existing access roads required to maintain and operate SDG&E electric facilities within the CNF.

In addition to combining the permits and easements for existing SDG&E facilities within the CNF into one MSUP, SDG&E's proposed project includes the replacement of five existing 69 kV power lines and six 12 kV distribution circuits located within and outside of the CNF, referred to herein as the proposed power line replacement projects. Power line replacement would primarily include fire hardening along with relocation, removal, undergrounding, and single-circuit to double-circuit conversion along certain facilities and segments. The proposed power line replacement projects will require authorization under the MSUP as well as approval from the California Public Utilities Commission (CPUC).

B.2 Project Location

As shown in Figure B-1, Regional Overview Map, and Figure B-2, Power Line Replacement Projects Overview Map, the MSUP study area is located within the Trabuco, Palomar, and Descanso Ranger Districts of the CNF, Orange and San Diego Counties, California.

As shown in Figures B-1 and B-2, the existing power lines and distribution facilities proposed to be replaced are located within the central portion of San Diego County approximately 4.5 miles north of the U.S.–Mexico Border, 14 miles east of the City of El Cajon, in the vicinity of the unincorporated communities of Alpine, Boulevard, Pauma Valley, Warner Springs, Santa Ysabel, Julian, Descanso, Pine Valley, and Campo. As shown in Figure B-2, the proposed power line replacement projects not only traverse the Palomar and Descanso Ranger Districts of the CNF, but due to the patchwork of land ownership in the project study area, also traverse public lands managed by the Bureau of Land Management (BLM); tribal lands on the La Jolla and Campo Indian reservations; Cuyamaca Rancho State Park lands; and private holdings within unincorporated San Diego County.

Project components and route descriptions are described in greater detail in Section B.3.

B.3 Project Components

Approval of the MSUP/PTC power line replacement projects would authorize the continued operation and maintenance of SDG&E electric facilities currently permitted within the administrative boundary of the CNF through issuance of the MSUP and would authorize the replacement of certain existing power lines on and outside CNF lands through issuance of the MSUP and PTC.

As shown in Table B-1, the MSUP would authorize approximately 100 miles of transmission and distribution lines, and approximately 34 miles of access roads on the CNF. See Figure B-2a, Facilities Included Under the MSUP, for an overview of the locations of these facilities.

Table B-1
SDG&E Electric Facilities to be included in the MSUP as part of the Proposed Project

Circuit Number	Miles of Overhead Line	Miles of Underground Line	Total Miles of Circuit	Miles of Exclusive Use Access Roads
C67	0.0[1]	—	0.0	—
C73	6.0	0.0	6.1	—
C78*	1.7	—	1.7	0.0
C79*	6.2	—	6.2	—
C157*	2.5	—	2.5	0.3
C212	4.0	0.0	4.1	—

Table B-1
SDG&E Electric Facilities to be included in the MSUP as part of the Proposed Project

Circuit Number	Miles of Overhead Line	Miles of Underground Line	Total Miles of Circuit	Miles of Exclusive Use Access Roads
C214	1.3	—	1.3	—
C220	0.1	—	0.1	—
C236	—	0.0	0.0	—
C237	1.9	—	1.9	—
C240	0.5	—	0.5	—
C358	2.5	0.1	2.6	—
C440*	12.0	9.8	21.8	0.6
C441	4.9	0.3	5.2	—
C442*	10.6	—	10.6	3.0
C449*	2.7	1.5	4.2	0.4
C524	0.1	—	0.1	—
C970	—	0.1	0.1	—
C973	0.0	0.0	0.0	—
C1166	1.5	—	1.5	—
C1243	0.5	—	0.5	—
C1458	0.2	—	0.2	—
TL625*	6.5	—	6.5	11.0
TL626*	8.2	—	8.2	9.9
TL629*	9.6	—	9.6	6.9
TL637	0.4	—	0.4	—
TL682*	2.5	—	2.5	1.1
TL6923*	1.7	—	1.7	1.1
Glencliff Substation	—	—	—	—
Grand Totals	**88.2**	**11.9**	**100.1**	**34.4**

Source: SDG&E 2013c.
Notes:
* Proposed power line replacement projects
[1] Values of 0.0 reflect very short segments (less than 250') of line that when rounded to a tenth of a mile round to zero.

The electric facilities within the CNF would be authorized by Forest Service standard permit 2700-4, and operations for these facilities would be managed according to an Operations and Maintenance (O&M) Plan developed by SDG&E and approved by the Forest Service. A Draft O&M Plan was submitted with the Plan of Development. The final O&M Plan would incorporate the appropriate mitigation measures from the Forest Service Record of Decision for the project.

B.3.1 Applicant's Proposed Power Line Replacement Projects

As summarized in Table B-2 and discussed below, the power line replacement projects proposed by the applicant would replace five existing 69 kV power lines totaling approximately 114.8 miles and six existing 12 kV distribution lines (C) totaling approximately 31.1 miles both on and off CNF lands. Replacement would primarily include fire hardening (wood-to-steel pole replacement), relocation and undergrounding. Wood-to-steel pole replacement would replace existing wood poles along approximately ~~145~~148.~~9~~ 8 miles of 69 kV and 12 kV electric lines by installing approximately 2,102~~4~~ weathered steel poles (1,384 to support the 5 existing 69 kV lines and ~~720~~718 to support the 6 existing 12 kV lines). Relocation and undergrounding would remove approximately 15.2 miles of existing 12 kV overhead and replace/relocate some portions (approximately 13 miles) with new underground lines. The proposed power line replacement projects would also convert approximately 5.7 miles from single-circuit 69 kV to double-circuit configuration and remove approximately 11.2 miles of existing access roads used to operate and maintain the existing power lines and distribution lines.

B.3.1.1 69 kV Power Line TL682

Route Description

As shown in Figures B-2 and B-3, the existing 69 kV power line TL682, is located near the communities of Pauma Valley and Warner Springs in central San Diego County. TL682 is approximately 20.2 miles long and generally runs along State Route 76 (SR-76) from the Rincon Substation east to the Warner Substation. From Rincon Substation, located southwest of Valley Center Road and south of SR-76, the line travels generally southeast along SR-76 for approximately 11 miles through private land and tribal land before entering the CNF west of Lake Henshaw. The line continues southeast along SR-76 through the CNF for approximately 0.9 mile, leaves the CNF for approximately 0.1 mile, reenters the CNF for approximately 0.3 mile, then exits the CNF for approximately 0.4 mile. The line then crosses SR-76 and reenters the CNF for approximately 0.1 mile, then exits the CNF for approximately 0.7 mile. The line reenters the CNF near the intersection of East Grade Road and County Highway S7 and continues northeast for approximately 0.1 mile, before crossing Henshaw Truck Trail. From Henshaw Truck Trail, the line continues northeast for approximately 0.7 mile and then leaves the CNF. The line then follows the northern coast of Lake Henshaw and continues east for approximately 5.4 miles through private land before entering Warners Substation.

Table B-2
Summary of Applicant's Proposed Power Line Replacement Projects

Project Components	CNF	Land Owner Type – Occupied Area (Miles)					Description
		State	*BIA/Tribal*	*BLM*	*Other Public*	*Private*	
TL682: Existing 20.2-mile 69 kV power line from Rincon Substation to Warner Substation. Reconstructed TL682 would remain 20.2 miles.	1.3 miles	~~2.2~~0.2	La Jolla Indian Reservation 3.1 Yuima Indian Reservation 0.2	—	~~School~~County of San Diego ~~0.3~~2.4 Water District 6.6~~6.7~~	6.4	• Replace existing wood poles (40–90 feet in height) with 253~~259~~ weathered steel poles (max height 110 feet) • 1.1 miles of existing access road would be maintained.
TL626: Existing 18.8-mile 69 kV power line from Santa Ysabel Substation to Descanso Substation. Reconstructed TL626 would remain 18.8 miles.	~~78.0~~7.9 miles	~~0.2~~--	—	—	County of San Diego ~~0.3~~0.6	10.3	• Replace existing wood poles (40–90 feet in height)with 279 weathered steel poles (max height 110 feet) • 10.1 miles of existing access roads would be maintained • Boulder Creek crossing eliminated and turnarounds installed.
TL625: Existing 22.5-mile 69 kV power line from Loveland Substation to Barrett Tap and from Barrett Tap north to Descanso Substation and south to Barrett Substation. Reconstructed TL625 would remain 22.5 miles.	~~6.7~~6.3 miles	0.1~~0.3~~	—	0.1	City of San Diego 1.8 County of San Diego ~~0.7~~0.8 Water District 2.9	~~10.6~~10.5	• Replace existing wood poles (40–90 feet in height) with 273~~267~~ weathered steel poles (max height 120 feet with one pole 125 feet in height) • Convert Loveland Substation to Barrett Tap segment from single-circuit to double-circuit • 11.3 miles of existing access roads would be maintained.

Table B-2
Summary of Applicant's Proposed Power Line Replacement Projects

Project Components	CNF	Land Owner Type – Occupied Area (Miles)					Description
		State	*BIA/Tribal*	*BLM*	*Other Public*	*Private*	
TL629: Existing 29.8-mile 69 kV power line from Descanso Substation to Cameron Tap and from Cameron Tap South to Cameron Substation and east to Crestwood Substation. Reconstructed TL629 ~~would remain 29.8~~will be 30.1 miles.	~~9.0~~9.1 miles	~~0.5~~<0.1	Campo Indian Reservation ~~0.6~~0.5 (includes ~~792 feet~~0.1 mile of undergrounding into Crestwood Substation)	0.7	County of San Diego 4.8~~4.1~~ School District 0.1	15.0~~15.1~~	• Replace existing wood poles (40–90 feet in height) with ~~442~~ 440 weathered steel poles (max height 110 feet with one pole 130 feet in height near Crestwood Substation) • Convert Cameron Tap to Cameron Substation from single-circuit to double-circuit • Underground ~~792 foot~~0.1 mile segment into Crestwood Substation • 7.0 miles of existing access roads would be maintained.
TL6923: Existing 13.4-mile 69 kV power line from Barrett Substation to Cameron Substation. Reconstructed TL6923 would remain 13.4 miles.	~~3.2~~2.4 miles	—	—	3.4~~3.2~~	City of San Diego 0.3 County of San Diego <0.1	~~6.7~~7.4	• Replace existing wood poles (40–90 feet in height) with ~~137~~ 128 weathered steel poles (max height 110 feet) • 1.4 miles of existing access roads would be maintained.
Subtotal: ~~114.78~~105.0 miles of 69 kV power line replacement	*~~27.7~~26.9 miles*	*~~13.1~~10.4*	*3.8*	*~~—~~4.2*	*~~21.1~~20.0*	*~~49.1~~49.5*	• *Replace existing wood poles with ~~1,384~~1,392 weathered steel poles* • *Convert (2) segments (5.7) miles from single-circuit to double-circuit* • *Underground ~~792 foot~~0.1 mile of TL629 into Crestwood Substation* • *Maintain 30.9 miles of existing access roads.*

Table B-2
Summary of Applicant's Proposed Power Line Replacement Projects

Project Components	CNF	Land Owner Type – Occupied Area (Miles)					Description
		State	*BIA/Tribal*	*BLM*	*Other Public*	*Private*	
C79: Existing 2.2 miles overhead 12 kV circuit from TL626 to Cuyamaca Peak. Replace with new 2.8~~4~~-mile underground circuit.	Remove 1.8~~6~~ miles	Remove 0.4 Underground 2.8	—	—	—	—	• Remove existing 2.2 miles overhead circuit (64 existing wood poles) and replace with new 2.8-mile underground circuit • Remove 4.2 miles of existing access roads. No new access proposed.
C78: Existing 12 kV circuit runs 1.8 miles east from Viejas Indian Reservation. Reconstruction of C78 ~~would remain 1.8~~will be 2.1 miles.	Remove 1.4 miles Reconductor 1.8 miles	—	Reconductor 0.1 (Viejas Indian Reservation)	—	County of San Diego Reconductor 0.1	Remove <0.1 Reconductor 0.1	• Replace existing wood poles (33–47 feet in height) with 44 weathered steel poles (max height 52 feet) • Overhead relocation along Viejas Grade Road • 0.1 mile of existing access roads would be maintained.
C157: Existing 3.5-mile 12 kV circuit from Sky Valley Road to Sky Valley Ranch	Reconductor 1.7 miles	—	—	—	City of San Diego Reconductor 1.2	Reconductor 0.6	• Replace wood poles (30–43 feet in height) with 57 weathered steel poles (max height 47.5 feet) • 0.4 mile of existing access roads would be maintained.
C442: Existing 6.2-mile 12 kV circuit near the community of Pine Valley. Reconstruction of C442 would remain 6.2 miles.	Reconductor 3.7 miles	—	—	—	—	Reconductor 2.5	• Replace wood poles (24–49 feet in height) with 129 weathered steel poles (max height 61 feet) • 4.0 miles of existing access roads would be maintained, ~~of which~~ 0.6 mile ~~to~~ will be removed.

Table B-2
Summary of Applicant's Proposed Power Line Replacement Projects

Project Components	CNF	Land Owner Type – Occupied Area (Miles)					Description
		State	*BIA/Tribal*	*BLM*	*Other Public*	*Private*	
C440: Existing 24-mile circuit from Glencliff Substation to Mt. Laguna. Reconstruction of C440 would be 25.4 miles.	Remove 5.8 miles Underground ~~4.3~~7.5 miles Reconductor 11.9 miles	~~Reconductor <0.1~~ -	—	—	County of San Diego remove <0.-1 ~~Underground 4.1~~ Reconductor 0.5~~4~~	Remove 1.4 Reconductor ~~4.7~~4.6 Underground 0.9	• Remove 7.2~~1~~ miles of existing overhead 12 kV circuit from Glencliff Substation north to Sunrise Highway • Replace with new 8.4-mile underground segment along Sunrise Highway • Replace remaining wood poles (19–52 feet in height) with 440~~1~~ weathered steel poles (max height 62 feet) • Remove 4.0 miles of existing access roads • 4.7 miles of existing access roads would be maintained.
C449: Existing 6.7-mile circuit runs from Old Highway 80 south and southwest. Reconstruction of C449 would be 1.5 miles.	Remove 5.3 miles Underground 0.4 miles Reconductor ~~1.7~~1.3 miles	—	—	—	City of San Diego remove 0.5 Reconductor 0.4 School District Underground 0.1	Remove 0.2 Underground 0.2 Reconductor 0.2	• Remove 6.1 miles of existing overhead 12 kV circuit and replace with ~~0.6~~1.8-mile underground segment and 2.3 miles underbuilt along TL629 • Replace remaining wood poles (24–48 feet in height) with ~~48~~ 41 weathered steel poles (max height 62 feet) • Remove 2.4 miles of existing access roads • 2.8 miles of existing access roads would be maintained.

Table B-2
Summary of Applicant's Proposed Power Line Replacement Projects

Project Components	CNF	Land Owner Type – Occupied Area (Miles)					Description
		State	*BIA/Tribal*	*BLM*	*Other Public*	*Private*	
Subtotal: ~~31.13~~43.8 miles of 12 kV distribution circuit replacement	*Underground ~~4.7~~4.6 miles Reconductor ~~20.8~~20.4 miles*	*New 2.8-mile underground ~~and reconductor 0.1 miles~~*	*Reconductor 0.1 mile*	*—*	*Underground ~~4.2~~5.4 Reconductor ~~2.2~~2.3*	*Underground 0.2 Reconductor 8.0*	• *Remove total of 16.4 miles of 12 kV overhead circuit* • *Replace with total of ~~11.8~~13.0 miles of underground circuit* • *Replace existing wood poles with a total of 711 weathered steel poles* • *Remove 11.2 miles of access roads* • *Maintain 12 miles of access roads.*
Total: ~~145.91~~148.8 Miles of Power Line and Distribution Circuit Replacement	**Underground ~~4.7~~4.6 miles Reconductor ~~48.5~~47.3 miles**	**0.9 Existing 2.8 New (underground)**	**3.9**	**—**	**Underground ~~4.2~~5.5 Reconductor ~~23.2~~22.4**	**Underground 0.2 Reconductor ~~57.2~~57.5**	• **Replace existing wood poles with 2,1024 weathered steel poles** • **Remove 16.4 miles of 12 kV overhead circuit** • **Replace with ~~11.8~~13 miles of underground** • **Remove 11.2 miles of access roads** • **Maintain 42.9 miles of access roads**

Source: SDG&E 2013a, ~~and~~ 2013b, 2015a, 2015b.
Note: All mileages are approximately based on SDG&E engineering data, ~~and~~ Forest Service-provided GIS layer depicting administrative boundary of the CNF, and October 2014 SanGIS parcel data. Information may vary depending on which GIS layer is used for these calculations. For purposes of the analysis conducted in this EIR/EIS information presented in SDG&E's revised Plan of Development (POD) (SDG&E 2013a) and updated in responses to CPUC Data Request Nos. ~~3~~ 10 and 11 (SDG&E ~~2013b~~2015a, 2015b) are used.

Project Components

As illustrated in Figure B-3, reconstruction of TL682 would include wood–to-steel pole replacement.

- **Wood–to-Steel Conversion:** Replace existing wood poles at an approximate one-to-one ratio with 259 weathered steel poles (175 tangent and 84 angle weathered steel poles). Steel poles would be located within the existing right-of-way (ROW), typically within 8 feet of existing wood poles in-line with the existing conductors. Tangent poles would be used when the alignment continues generally in a straight line, and angle poles would be used when the alignment changes direction.

  Maximum height of replacement poles would be 110 feet with a typical diameter of approximately 30 inches (see Figures B-8 and B-9, Proposed Single-Circuit Tangent Transmission Pole and Proposed Single-Circuit Angle Transmission Pole). Existing wood poles to be removed range in height from approximately 40–90 feet with an approximate 20-inch diameter.
- **Conductor Installation:** Each pole would be configured to carry three 69 kV conductors along with one communication circuit and have an average conductor span length of 400 feet. The lowest 69 kV conductor would be installed with a minimum ground clearance of approximately 30 feet, and 25 feet where there is pedestrian access only.
- **Installation of Other Facilities:** In addition to the replacement steel poles and conductors, SDG&E may install all necessary and proper guys, anchorage, crossarms and braces, and other fixtures for use in connection therewith, including but not limited to, ancillary facilities such as pole- or pad-mounted transformers and other equipment needed to effectively support and enable electric transmission and distribution across the system. In addition to this equipment, SDG&E may also install appurtenant facilities (i.e., weather stations, fire safety and early fire detection equipment, smart-grid system data collection equipment, or other technologies or facilities which may include surveillance cameras) on the replacement steel poles within existing ROWs, as needed, to collect additional information needed to further increase fire safety and service reliability as new technologies become available. Any appurtenant facilities located on Forest Service lands require Forest Service review and approval.
- **Access Roads:** SDG&E maintains 1.1 miles of existing access roads to provide access to TL682 (see Table B-8). Replacement poles would be located in close proximity to existing poles, and therefore existing access roads would be used to support construction and O&M. No new access roads are proposed.

B.3.1.2 69 kV Power Line TL626

Route Description

As shown in Figures B-2 and B-4, the existing TL626 is approximately 18.8 miles in length and runs from the Santa Ysabel Substation near the unincorporated community of Santa Ysabel, south to the Descanso Substation near the unincorporated community of Descanso.

From Santa Ysabel Substation—Located less than approximately 0.1 mile north of SR-78 and approximately 0.2 mile east of SR-79, TL626 travels south for approximately 0.9 mile before entering the CNF west of Inaja Memorial Park. The line then travels for approximately 0.4 mile southeast through the CNF, leaves the CNF for approximately 4.1 miles, and reenters the CNF approximately 0.5 mile near Eagle Peak Road. The line continues south from Eagle Peak Road for approximately 1.0 mile before tapping into the Boulder Creek Substation.

From the Boulder Creek Substation—TL626 heads south for approximately 0.1 mile before entering the CNF. TL626 then continues south through the CNF for approximately 2.6 miles and crosses Cedar Creek, Kelly Creek, and Boulder Creek Road. The line then leaves the CNF for approximately 0.3 mile near McCoy Ranch Road, reenters the CNF for approximately 0.2 mile, crosses McCoy Ranch Road, leaves the CNF for approximately 0.3 mile, and reenters the CNF near King Creek. The line then continues approximately 1.1 miles southeast through the CNF, exits the CNF for approximately 0.6 mile near the intersection of Tule Springs Road and Boulder Creek Road, and reenters the CNF west of Boulder Creek Road. From Boulder Creek Road, the line then travels for approximately 0.5 mile, leaves the CNF for approximately 0.6 mile, reenters and travels through the CNF for approximately 1.2 miles. The line then leaves the CNF near Forest Route 14S09, travels for approximately 0.6 mile, and reenters the CNF near the intersection of Boulder Creek Road and Sherilton Valley Road for approximately 0.5 mile. The line then leaves the CNF and travels for approximately 0.5 mile before reentering near the intersection of Boulder Creek Road and Echo Hills Road. From Echo Hills Road, the line travels through the CNF for approximately 1.2 miles before exiting the CNF and traveling for approximately 1.6 miles south to Descanso Substation located on Oak Grove Drive.

Project Components

As illustrated in Figure B-4, reconstruction of TL626 would include wood-to-steel pole replacement.

- **Wood-to-Steel Conversion:** Replace existing wood poles at an approximate one-to-one ratio with 279 weathered steel poles (221 tangent and 58 angle weathered steel poles). Steel poles would be located within the existing ROW as described for TL682 (see Section B.3.1.1).

Maximum height of replacement poles would be 100 feet with a typical diameter of approximately 36 inches to 60 inches (see Figures B-8 and B-9, Proposed Single-Circuit Tangent Transmission Pole and Proposed Single-Circuit Angle Transmission Pole). Existing wood poles to be removed range in height from approximately 40–90 feet with an approximate 20-inch diameter.

- **Conductor Installation:** Each pole would be configured to carry three 69 kV conductors along with one communication circuit and have an average conductor span length of 400 feet. The lowest 69 kV conductor would be installed with a minimum ground clearance of approximately 30 feet, and 25 feet where there is pedestrian access only.
- **Installation of other Facilities:** Installation of other facilities associated with TL626 may include those as described for TL682 (see Section B.3.1.1).
- **Access Roads:** SDG&E maintains 10.1 miles of existing access roads to provide access to TL626 (see Table B-8). Replacement poles would be located in close proximity to existing poles, and therefore existing access roads would be used to support construction and O&M. No new access roads are proposed.

  The existing access road crossing at Boulder Creek between poles Z372130 and Z372131 (see Figure B-4) would be eliminated, and turnarounds would be installed at either side to permit safe vehicle maneuvering.

B.3.1.3 69 kV Power Line TL625

Route Description

TL625 is located near the unincorporated communities of Alpine and Descanso in central San Diego County. As shown in Figures B-2 and B-5, the existing TL625 is approximately 22.5 miles long and runs from the Loveland Substation east to the Barrett Tap where the line runs both north to the Descanso Substation and south to the Barrett Substation. As shown in Figure B-5, TL625, C78, C157 Overview Map, TL625 consists of the following three segments.

The Loveland Substation to Barrett Tap segment travels east out of Loveland Substation, located on the Sycuan Road (also known as) Sequan Truck Trail south of the Alpine and north of the Loveland Reservoir, for approximately 4.5 miles along Loveland Reservoir and Japatul Road before entering the CNF southeast of the intersection of Japatul Road and Abrams Ridge Road. The line then continues approximately 0.3 mile southeast before crossing Japatul Road, after which it continues 0.3 mile southeast before exiting the CNF. The line then travels approximately 0.1 mile through private land, reenters the CNF near Japatul Road for approximately 0.4 mile, then exits the CNF and travels approximately 0.5 mile southeast through private land before reaching Barrett Tap on Japatul Road.

The Barrett Tap to Descanso Substation segment travels northeast from the Barrett Tap for approximately 1.3 miles through private land, enters the CNF for approximately 0.1 mile, then heads northeast along Japatul Valley Road for approximately 5.1 miles through private land, and reenters the CNF near Interstate 8 (I-8). From I-8, the line continues for approximately 0.5 mile through the CNF, exits the CNF for approximately 0.3 mile, and reenters the CNF near Wildwood Glen Lane. From Wildwood Glen Lane, the line traverses the CNF for approximately 1 mile, exits for approximately 0.1 mile, and reenters the CNF for approximately 0.1 mile near Viejas Grade Road, then travels approximately 0.5 mile north through private land before reaching the Descanso Substation located south of Oak Grove Drive at Boulder Creek Road.

The Barrett Tap to Barrett Substation segment travels south from Barrett Tap for approximately 0.1 mile and enters the CNF. The line then travels for approximately 0.2 mile south through the CNF, crosses Carveacre Road, and continues south for approximately 0.1 mile before exiting the CNF. The line leaves the CNF for approximately 0.3 mile and then reenters the CNF between Carveacre Road and Spirit Trail. After reentering the CNF, the line travels for approximately 0.3 mile, exits the CNF for approximately 0.1 mile, then reenters the CNF northeast of the intersection of Carveacre Road and Fog Ridge and continues southeast through the CNF for approximately 0.2 mile. The line then exits the CNF and travels approximately 0.7 mile southwest through private land before reentering the CNF near Forest Route 16S03. The line then continues approximately 1.3 miles southwest from Forest Route 16S03, exits the CNF near Lyons Valley Road, continues for approximately 1.1 miles through private land, and reenters the CNF near Lyons Valley Road for approximately 0.3 mile. The line then leaves the CNF for approximately 0.8 mile, reenters the CNF west of the intersection of Skye Valley Road and Barrett Lake Road, and travels through the CNF for approximately 0.9 mile west of Barrett Lake. After crossing Forest Route 17S10 east of Barber Mountain, the line continues south for approximately 0.2 mile. The line then exits the CNF for approximately 0.5 mile, reenters the CNF for approximately 0.5 mile near Turmeric Way, then leaves the CNF and travels approximately 0.1 mile to reach Barrett Substation, located north of Manzanita Way and east of Deerhorn Valley Road.

Project Components

As illustrated in Figure B-5, reconstruction of TL625 would include wood-to-steel pole replacement along with single-circuit to double-circuit conversion along one segment.

- **Wood-to-Steel Conversion:** Replace existing wood poles at an approximate one-to-one ratio with 267 weathered steel poles (158 tangent and 109 angle weathered steel poles). Steel poles would be located within the existing ROW as described for TL682 (see Section B.3.1.1).

  Maximum height of replacement poles would be 120 feet with a typical diameter of approximately 36–60 inches (see Figures B-8 and B-9, Proposed Single-Circuit Tangent

Transmission Pole and Proposed Single-Circuit Angle Transmission Pole, and also Figures B-10 and B-11 for Proposed Double-Circuit Tangent Transmission Pole and Proposed Double-Circuit Transmission Angle Pole). Existing wood poles to be removed range in height from approximately 40 feet to 90 feet with an approximate 20-inch diameter.

- **Single-Circuit to Double-Circuit Conversion:** The project proposes to convert the existing Loveland Substation to Barrett Tap segment from a single to a double-circuit segment.
- **Conductor Installation:** Each pole would be configured to carry three 69 kV conductors along with one communication circuit and have an average conductor span length of 400 feet. For the double-circuit segment, up to six 69 kV conductors would be installed. The lowest 69 kV conductor would be installed with a minimum ground clearance of approximately 30 feet, and 25 feet where there is pedestrian access only.
- **Installation of Other Facilities:** Installation of other facilities associated with TL625 may include those as described for TL682 (see Section B.3.1.1).
- **Access Roads:** SDG&E maintains 11.3 miles of existing access roads to provide access to TL625 (see Table B-8). Replacement poles would be located in close proximity to existing poles, and therefore existing access roads would be used to support construction and O&M. No new access roads are proposed.

B.3.1.4 69 kV Power Line TL629

Route Description

As shown in Figures B-2 and B-6, the existing TL629 is located near the communities of Descanso, Guatay, Pine Valley, and Campo in central San Diego County. TL629 is approximately 29.8 miles in length and runs from the Descanso Substation east to the Glencliff Substation, and then south to the Cameron Tap where the line runs both south to the Cameron Substation and ~~west~~ east to the Crestwood Substation.

The Descanso Substation to Glencliff Substation segment travels east for approximately 5.6 miles through private land and Cuyamaca Rancho State Park land before it enters the CNF east of the unincorporated community of Guatay. The line travels 1.2 miles southeast through the CNF along Old Highway 80, exits the CNF for approximately 1.9 miles, then reenters the CNF south of the unincorporated community of Pine Valley. From Pine Valley, the line travels east between Old Highway 80 and I-8 for approximately 3.4 miles before crossing I-8. From I-8, the line travels southeast for approximately 1.2 miles before reaching Glencliff Substation, located in the CNF between Old Highway 80 and I-8.

The Glencliff Substation to Cameron Tap segment travels southeast through the CNF from Glencliff Substation along Old Highway 80 for approximately 1.5 miles and exits the CNF for approximately 3.1 miles. The line reenters the CNF west of I-8 and travels an additional 1.6 miles through the Cameron Tap, located south of the intersection of Old Highway 80 and I-8 at Kitchen Road.

The Cameron Tap to Cameron Substation segment travels south for approximately 0.4 mile before exiting the CNF. The line leaves the CNF for approximately 0.5 mile and reenters the CNF near Cameron Truck Trail. The line then continues approximately 0.8 mile south, crosses Cameron Truck Trail, and exits the CNF near the intersection of Cameron Truck Trail and Hyde Park Lane. From Hyde Park Lane, the line continues south for approximately 3.0 miles through private land and BLM-administered land before entering the Cameron Substation, located on Buckman Springs Road.

The Cameron Tap to Crestwood Substation segment travels east from Cameron Tap for approximately 1.5 miles before entering the CNF near the intersection of Cameron Truck Trail and Old Highway 80. The line travels east through the CNF along I-8 for approximately 1.7 miles, crossing La Posta Road. From La Posta Road, the line exits the CNF for approximately 4.4 miles and travels through private land, BLM-administered land, and the Campo Indian Reservation before entering Crestwood Substation, located southwest of the Golden Acorn Casino and I-8.

Project Components

As illustrated in Figure B-6, reconstruction of TL629 would include wood-to-steel pole replacement along with undergrounding and single-circuit to double-circuit conversion for certain segments.

- **Wood-to-Steel Conversion:** Replace existing wood poles at an approximate one-to-one ratio with 442 weathered steel poles (334 tangent and 108 angle weathered steel poles). Steel poles would be located within the existing ROW as described for TL682 (see Section B.3.1.1).

  Maximum height of replacement poles would be 110 feet with a typical diameter of approximately 36 inches to 60 inches (see Figures B-8 and B-9, Proposed Single-Circuit Tangent Transmission Pole and Proposed Single-Circuit Angle Transmission Pole, and also Figures B-10 and B-11 for Proposed Double-Circuit Tangent Transmission Pole and Proposed Double-Circuit Transmission Angle Pole). Existing wood poles to be removed range in height from approximately 40–90 feet with an approximate 20-inch diameter.
- **Single-Circuit to Double-Circuit Conversion:** The project proposes to convert the existing Cameron Tap to Crestwood Substation segment from a single- to a double-circuit segment.

- **Conductor Installation:** Each pole would be configured to carry three 69 kV conductors along with one communication circuit and have an average conductor span length of 400 feet. For the double-circuit segment, up to six 69 kV conductors would be installed. TL629 would also be configured to carry one optical ground wire. The lowest 69 kV conductor would be installed with a minimum ground clearance of approximately 30 feet, and 25 feet where there is pedestrian access only.
- **Undergrounding:** As part of the single-circuit to double-circuit conversion from the Cameron Tap to the Crestwood Substation, an approximate 792-foot segment of TL629 entering into the Crestwood Substation would be undergrounded.

  This underground connection would begin at the replacement steel pole west of Crestwood Substation, proceed east to the western shoulder of Old Highway 80, continue north along the western shoulder of Old Highway 80, cross under Old Highway 80 to the west via jack-and-bore construction (as described further in the following paragraphs), continue east along SDG&E's access road to Crestwood Substation, and finally turn south into the substation where it would connect to the existing rack.
- **Installation of other facilities:** Installation of other facilities associated with TL629 may include those as described for TL682 (see Section B.3.1.1).
- **Access Roads:** SDG&E maintains 7.0 miles of existing access roads to provide access to TL629 (see Table B-8). Replacement poles would be located in close proximity to existing poles, and therefore existing access roads would be used to support construction and O&M. No new access roads are proposed.

B.3.1.5 69 kV Power Line TL6923

Route Description

As shown in Figures B-2 and B-7, the existing TL6923 is located near the communities of Potrero and Campo in central San Diego County. TL6923 is approximately 13.4 miles in length and runs from the Barrett Substation east to the Cameron Substation.

From Barrett Substation, the line travels east for approximately 6.3 miles south of Barrett Lake, through private land and BLM-administered land. The line then travels approximately 1.5 miles along the boundary between the CNF and BLM-administered land, through private land for approximately 0.2 mile, then along the CNF boundary for another 0.2 mile, crossing into Potrero Creek. The line then travels northeast for approximately 0.4 mile through private land, then traverses the CNF boundary for approximately 2.8 miles and crosses Hauser Creek before traveling approximately 2.1 miles to Cameron Substation.

Project Components

As illustrated in Figure B-7, reconstruction of TL6923 would include wood-to-steel pole replacement.

- **Wood-to-Steel Conversion:** Replace existing wood poles at an approximate one-to-one ratio with 137 weathered steel poles (88 tangent and 49 angle weathered steel poles). Steel poles would be located within the existing ROW as described for TL682 (see Section B.3.1.1).

  Maximum height of replacement poles would be 100 feet with a typical diameter of approximately 36–60 inches (see Figures B-8 and B-9, Proposed Single-Circuit Tangent Transmission Pole and Proposed Single-Circuit Angle Transmission Pole). Existing wood poles to be removed range in height from approximately 40–90 feet with an approximate 20-inch diameter.
- **Conductor Installation:** Each pole would be configured to carry three 69 kV conductors along with one communication circuit and have an average conductor span length of 400 feet. The lowest 69 kV conductor would be installed with a minimum ground clearance of approximately 30 feet, and 25 feet where there is pedestrian access only.
- **Installation of Other Facilities:** Installation of other facilities associated with TL6923 may include those as described for TL682 (see Section B.3.1.1).
- **Access Roads:** SDG&E maintains 1.4 miles of existing access roads to provide access to TL6923 (see Table B-8). Replacement poles would be located in close proximity to existing poles, and therefore existing access roads would be used to support construction and O&M. No new access roads are proposed.

B.3.1.6 12 kV Distribution Circuit C79

Route Description

As shown in Figures B-2 and B-4, the existing 12 kV distribution circuit (C)79 is located approximately 5 miles north of the community of Descanso in central San Diego County. C79 is approximately 2.2 miles in length and runs from its intersection with TL626 east to the Cuyamaca Peak communication site within Cuyamaca Rancho State Park.

Project Components

As illustrated in Figure B-4, reconstruction of C79 would include removal of existing overhead line and replacement with new relocated underground segment.

- **Removal:** As shown in Figure B-4, the existing 2.2-mile overhead C79 from its intersection with TL626 to the Cuyamaca Peak communication site would be removed.

Sixty-four existing wood poles (from pole P377371 to pole P377405 and from pole P676926 to pole P377414) would be removed and replaced with a new underground segment as described below.

- **Undergrounding:** The existing overhead C79 proposed for removal would be replaced with a new approximately 2.8-mile underground 12 kV circuit through Cuyamaca Rancho State Park from the Cuyamaca Peak communication site ~~west in~~east along Lookout Road where it would connect to an existing overhead 12 kV distribution circuit via a new 45-foot-tall riser pole on the eastern side of SR-79 (see Figure B-13, Proposed Distribution Riser Pole).

  Underground cables would be installed in a 1.5-foot-wide by 1.5-foot-deep ducts bank. Approximately 19 splice vaults would also be installed along the new underground segment. Splice vaults would be approximately 5.5 feet wide by 8 feet long by 7 feet deep.

- **Access Roads:** Removes 4.2 miles of existing access roads maintained by SDG&E to provide access to C79 (see Table B-8). Undergrounding would be located in Lookout Road, and therefore existing access roads would be used to support construction and O&M. No new access roads are proposed.

B.3.1.7 12 kV Distribution Circuit C78

Route Description

As shown in Figures B-2 and B-5, the existing C78 is located east of the Viejas Indian Reservation, approximately 3 miles west of the community of Descanso in central San Diego County. C78 is approximately 1.8 miles in length and runs from approximately 400 feet east of the eastern boundary of the Viejas Indian reservation east to its termination point near the intersection of Viejas Grade Road and Via Arturo Road.

Project Components

As illustrated in Figure B-5, reconstruction of C78 would include wood-to-steel pole replacement and relocation.

- **Wood–to-Steel Conversion/Overhead Relocation:** Replace existing wood poles with 44 weathered steel poles (9 tangent and 35 angle weathered steel poles). Steel poles would be located within the existing ROW (as described in Section B.3.1.1) from poles P172686 to P176290 (approximate distance of 1,600 feet). The remaining C78 and associated steel poles would be relocated along Viejas Grade Road.

Maximum height of replacement poles would be 52 feet with a typical diameter of approximately 14 inches (see Figures B-12a and B-12b, Proposed Steel Distribution Pole). Existing wood poles to be removed range in height from approximately 33 feet to 47 feet.

- **Conductor Installation:** Each pole would be configured to carry two to four 12 kV conductors and have an average span length of 230 feet. The lowest 12 kV conductor would be installed with a minimum ground clearance of 25 feet, and 17 feet where there is pedestrian access only.
- **Installation of Other Facilities:** Installation of other facilities associated with C78 may include those as described in Section B.3.1.1.
- **Access Roads:** SDG&E maintains 0.1 mile of existing access roads to provide access to C78 (see Table B-8). Replacement poles would be located in close proximity to existing poles and Viejas Grade Road, and therefore existing access roads would be used to support construction and O&M. No new access roads are proposed.

B.3.1.8 12 kV Distribution Circuit C157

Route Description

As shown in Figures B-2 and B-5, the existing C157 is located east of TL625 and north of Barrett Lake in central San Diego County. C157 is approximately 3.5 miles in length and runs from Sky Valley Road just east of Lyons Valley Road east through portions of the congressionally designated Pine Creek and Hauser Wilderness Areas to Sky Valley Ranch.

Project Components

As illustrated in Figure B-5, reconstruction of C157 would include wood-to-steel pole replacement.

- **Wood-to-Steel Conversion:** Replace existing wood poles at an approximate one-to-one ratio with 57 weathered steel poles (51 tangent and 6 angle weathered steel poles). Steel poles would be located within the existing ROW as described in Section B.3.1.1.

  Maximum height of replacement poles would be 47.5 feet with a typical diameter of approximately 14 inches (see Figures B-12a and B-12b, Proposed Steel Distribution Pole). Existing wood poles to be removed range in height from approximately 30 feet to 43 feet.
- **Conductor Installation:** Each pole would be configured to carry two to four 12 kV conductors and have an average span length of 230 feet. The lowest 12 kV conductor would be installed with a minimum ground clearance of 25 feet, and 17 feet where there is pedestrian access only.

- **Installation of Other Facilities:** Installation of other facilities associated with C157 may include those as described in Section B.3.1.1.
- **Access Roads:** SDG&E maintains 0.4 miles of existing access roads to provide access to C157 (see Table B-8). Replacement poles would be located in close proximity to existing poles, and therefore existing access roads would be used to support construction and O&M. No new access roads are proposed.

B.3.1.9 12 kV Distribution Circuit C442

Route Description

As shown in Figures B-2 and B-6, the existing C442 is located near the community of Pine Valley in central San Diego County. C442 is approximately 6.2 miles in length consisting of both a northern and southern segment.

The northern segment is located entirely within the CNF and travels south along Pine Creek Road for approximately 1.0 mile, traveling to the west of Noble Canyon National Recreation Trail and associated trailhead, with approximately 0.5 mile along three branches to the east.

The southern segment travels southwest from Pine Valley Road, just south of I-8 and the unincorporated community of Pine Valley, for approximately 2.2 miles through the CNF, passing to the west of Long Valley Peak. The line then exits the CNF and travels southwest for approximately 2.5 miles before terminating near Los Pinos Mountain.

Project Components

As illustrated in Figure B-6, reconstruction of C442 would include wood-to-steel pole replacement.

- **Wood-to-Steel Conversion:** Replace existing wood poles at an approximate one-to-one ratio with 129 weathered steel poles (109 tangent and 20 angle weathered steel poles). Steel poles would be located within the existing ROW as described in Section B.3.1.1.

  Maximum height of replacement poles would be 61 feet with a typical diameter of approximately 14 inches (see Figures B-12a and B-12b, Proposed Steel Distribution Pole). Existing wood poles to be removed range in height from approximately 24 feet to 49 feet.
- **Conductor Installation:** Each pole would be configured to carry two to four 12 kV conductors and have an average span length of 230 feet. The lowest 12 kV conductor would be installed with a minimum ground clearance of 25 feet, and 17 feet where there is pedestrian access only.

- **Installation of Other Facilities:** Installation of other facilities associated with C442 may include those as described in Section B.3.1.1.
- **Access Roads:** SDG&E maintains 4.0 miles of existing access roads to provide access to C442, of which approximately 0.6 mile would be removed (see Table B-8). Replacement poles would be located in close proximity to existing poles, and therefore existing access roads would be used to support construction and O&M. No new access roads are proposed.

B.3.1.10 12 kV Distribution Circuit C440

Route Description

As shown in Figures B-2 and B-6, the existing C440 is located east of the community of Pine Valley in central San Diego County. C440 is approximately 24 miles in length and runs from the Glencliff Substation north and northeast within the vicinity of the Sunrise Highway, with short branches heading both east and west past Mount Laguna where it terminates near Monument Peak Road.

Project Components

As illustrated in Figure B-6, reconstruction of C440 would include some overhead line removal replaced with undergrounding, along with wood–to-steel pole replacement.

- **Removal:** As shown in Figure B-6, approximately 7.2 miles of the existing overhead C440 would be removed starting from the Glencliff Substation north to the Sunrise Highway. As described below, approximately 99 existing wood poles would be removed and replaced with a new underground segment along Sunrise Highway.
- **Undergrounding:** As shown in Figure B-6, the existing overhead C440 proposed for removal would be replaced with a new approximately 8.4-mile underground 12 kV circuit. The new underground circuit would run approximately 6.9 miles from near I-8 along the Sunrise Highway to Pole P40152 west of Morris Ranch Road. In addition, a new approximately 0.6-mile-long underground portion of C440 would run from P45860 to P40229 in the Laguna Campground area, and a new approximately 0.9-mile long underground portion of C440 would be placed in the vicinity of Sheep Head Mountain Road.

  Underground cables would be installed in a 1.5-foot-wide by 1.5-foot-deep ducts bank. Approximately 55 splice vaults would also be installed along the new underground segment. Splice vaults would be approximately 5.5 feet wide by 8 feet long by 7 feet deep.
- **Wood-to-Steel Conversion:** Replace remaining existing wood poles at an approximate one-to-one ratio with 441 weathered steel poles (292 tangent, 145 angle, and 4 riser weathered steel poles). Steel poles would be located within the existing ROW as described in Section B.3.1.1.

Maximum height of replacement poles would be 62 feet with a typical diameter of approximately 14 inches (see Figures B-12a and B-12b, Proposed Steel Distribution Pole). Existing wood poles to be removed range in height from approximately 19 feet to 52 feet.

- **Conductor Installation:** Each pole would be configured to carry two to four 12 kV conductors and have an average span length of 230 feet. The lowest 12 kV conductor would be installed with a minimum ground clearance of 25 feet, and 17 feet where there is pedestrian access only.
- **Installation of Other Facilities:** Installation of other facilities associated with C-440 may include those as described in Section B.3.1.1.
- **Access Roads:** Approximately 4.0 miles of existing access roads maintained by SDG&E to provide access to C440 would be removed. Undergrounding would be located along Sunrise Highway, and therefore existing access roads would be used to support the new underground portion of C440.

  SDG&E would continue to maintain 4.7 miles of existing access roads to provide access to the remaining overhead portions of C440 (see Table B-8). Replacement poles would be located in close proximity to existing poles, and therefore existing access roads would be used to support construction and O&M. No new access roads are proposed. Where existing access roads are damaged, repair consisting of smoothing, stabilizing and improving the surface would occur.

B.3.1.11 12 kV Distribution Circuit C449

Route Description

As shown in Figures B-2 and B-6, the existing C449 is located near the community of Cameron Corners in central San Diego County. C449 is approximately 6.7 miles in length and runs from Old Highway 80 south along Buckman Springs Road to Oak Drive and southwest along Morena Stokes Road to Camp Morena.

Project Components

As illustrated in Figure B-6, reconstruction of C449 would include some overhead line removal replaced primarily with undergrounding, along with wood-to-steel pole replacement.

- **Removal:** As shown in Figure B-6, approximately 5.7 miles of the existing overhead 12 kV distribution circuit would be removed. Approximately 102 existing wood poles would be removed and replaced with new underground segment as described below, along with 12 kV underbuilt along TL629 and tie into existing C441.

- **Undergrounding:** As shown in Figure B-6, the existing overhead C449 proposed for removal would be replaced with a new approximately 1.8-mile underground 12 kV circuit. The new underground circuit would run along Buckman Springs Road and Moreno Stokes Valley Road.

  Underground cables would be installed in a 1.5-foot -wide by 1.5-foot-deep ducts bank. Approximately 12 splice vaults would also be installed along the new underground segment. Splice vaults would be approximately 5.5 feet wide by 8 feet long by 7 feet deep.

- **12 kV distribution underbuilt along TL629:** The 12 kV underbuilt would occur along TL629 from the Cameron Substation to pole P192945 and become part of C441 underbuilt on TL629 from pole P192945 to Glencliff Substation.

- **Wood-to-Steel Conversion:** Remove remaining existing wood poles and replace with 48 weathered steel poles (28 tangent, 18 angle, and 2 riser weathered steel poles). Steel poles would be located within the existing ROW as described in Section B.3.1.1.

  Maximum height of replacement poles would be 62 feet with a typical diameter of approximately 14 inches (see Figures B-12a and B-12b, Proposed Steel Distribution Pole). Existing wood poles to be removed range in height from approximately 24 feet to 48 feet.

- **Conductor Installation:** Each pole would be configured to carry two to four 12 kV conductors and have an average span length of 230 feet. The lowest 12 kV conductor would be installed with a minimum ground clearance of 25 feet, and 17 feet where there is pedestrian access only.

- **Installation of other facilities:** Installation of other facilities associated with C440 may include those as described in Section B.3.1.1.

- **Access Roads:** Removes approximately 2.4 miles of existing access roads SDG&E maintains to provide access to C449. Undergrounding would be located adjacent to Buckman Springs Road and Morena Stokes Valley Road, and therefore existing access roads would be used to support the new underground portion of C449.

  SDG&E would continue to maintain 2.8 miles of existing access roads to provide access to the remaining overhead portions of C449 (see Table B-8). Replacement poles would be located in close proximity to existing poles, and therefore existing access roads would be used to support construction and O&M. No new access roads are proposed.

B.3.2 Federal Proposed Action

As described in Section A, Introduction, to this EIR/EIS, the Forest Service reviewed and accepted the application for an MSUP with modifications to certain actions on National Forest System lands. In addition, the Bureau of Indian Affairs, as cooperating agency to the Forest

Service and in consultation with the La Jolla Indian Tribe, proposes modifications to TL682 located on tribal lands. This modified proposal is the federal proposed action, which modifies the applicant's proposed project along four project alignments, including TL626, C157, C440, and TL682 (the BIA proposed action). With regards to appurtenant facilities, the Forest Service proposes to authorize electrical control devices and weather stations not otherwise specified in the permit, subject to Forest Service review and approval of final design and location. The Forest Service is not proposing to authorize surveillance cameras on National Forest System lands. The Forest Service proposed action for TL626, C157, C440, and the BIA proposed action (TL682) is described in detail below. The BLM proposed action does not modify SDG&E's proposed project and includes portions of SDG&E's proposed power line replacement projects for TL629, TL625, and TL6923.

The federal proposed action described in this chapter has been modified from the action described in the Notice of Intent. These modifications were made in response to suggestions from the public and agencies during scoping, and by the cooperating federal agencies. These modifications consider five options for rerouting segments of TL626, two options for relocating C157 from designated wilderness areas, additional undergrounding for C440, and undergrounding a segment of TL682 (proposed by BIA). Modifications of the proposed action are consistent with the Forest Service NEPA regulations found at 36 CFR 220.5(e)(1). The federal proposed actions will be considered as alternatives in accordance with California Environmental Quality Act (CEQA) Guidelines (Section 15126.6; 14 CCR 15000 et seq.).

B.3.2.1 TL626 Alternative Routes

The existing TL626 access roads are impacting the Cedar Creek riparian area and are in conflict with the Land Management Plan (LMP) standards for Riparian Conservation Areas. The steep road gradients prevent effective implementation of erosion control treatments. This area is also being evaluated for recommended wilderness zoning in the LMP. Relocation of TL626 will avoid riparian impacts and restore the undeveloped character of the landscape. This federal proposed action is to relocate a section of TL626 out of the Cedar Creek undeveloped area. In order to accomplish this, the Forest Service is evaluating options 1 through 4 as outlined below and shown in Figures B-4a and B-4b. The section of line that is replaced would be removed and the affected area restored. The relocated section of line would be constructed to the same standard described by the applicant for each of the following routes described. Options 1 through 3 were proposed by SDG&E in response to a request by the Forest Service to identify alternate routes through a study corridor developed jointly by the Forest Service and SDG&E (SDG&E 2014a, 2014b).

Option 1 SDG&E Proposed Overhead Alignments through Inaja and Cosmit Reservation Lands

Option 1 would reroute TL626 between poles Z213680 and Z372134 to approximately 2 miles directly east of the existing alignment at its farthest point (SDG&E 2014a). The rerouted segment of Option 1 would measure approximately 5.5 miles in length from pole Z213680 to pole Z372134, as depicted in Figure B-4a. In order to continue serving Boulder Creek Substation and the associated customers in the vicinity of the substation, the existing TL626 alignment in the northern section ending at Boulder Creek Substation would remain as is described in Section B.3.1 under the applicant's proposed project. The portion of TL626 from Boulder Creek Substation south to pole Z372134 would be removed, a length of approximately 3.7 miles. Approximately 1.1 miles of the rerouted portion of the line would be located within the CNF. In addition, the rerouted portion of Option 1 would cross approximately 0.2 mile of the Inaja and Cosmit Reservation and approximately 4.2 miles of private land. Specifically, the route would travel southeast from pole Z213680 for approximately 0.4 mile through private land, enter the CNF for approximately 0.2 mile, leave the CNF for approximately 0.3 mile, then reenter the CNF for less than approximately 0.1 mile. The line would then continue southeast for approximately 1.1 miles across private land, travel south through the CNF for approximately 0.4 mile, then leave the CNF and travel southwest for approximately 1.8 miles, of which approximately 0.2 mile is located on the Inaja and Cosmit Reservation. The line would then continue southwest, entering the CNF for approximately 0.2 mile, leave the CNF for approximately 0.8 mile, then reenter the CNF and travel south for approximately 0.3 mile before terminating at pole Z372134. The total length of Option 1 would be approximately 20.6 miles long, 1.8 miles longer than SDG&E's proposed project, which is approximately18.8 miles long.

Option 1 would include the following components:

- **Wood-to-Steel Replacement:** Replacement of 24 existing poles along the approximately 1.7-mile portion of the existing power line from pole Z213680 to Boulder Creek Substation, as described in Section B.3.1 (same as the applicant's proposed project).
- **New Steel Poles:** Installation of approximately 45 new steel poles.
- **Removal:** Removal of 58 poles along an approximately 3.7-mile portion of the existing power line from Boulder Creek Substation to pole Z372134.
- **Access Roads:** Approximately 3.9 miles of new access roads would be required to access the new pole locations. In addition, approximately 5.8 miles of existing access roads and approximately 3.7 miles of existing ROW would be restored for Option 1. New access roads would be approximately 20 feet in width to accommodate construction as well as operation and maintenance vehicles. Approximately 3 of the 45 poles would be installed by

helicopter. For construction, operations, and maintenance access purposes, landing areas in the vicinity of the three poles locations would be required.

Construction of the 5.5-mile alignment would result in additional ground disturbance over the proposed project of approximately 20.0~~3.3~~ acres of temporary ground disturbance and ~~less than 0.1~~ 9.6 -acres of permanent impacts (see Table B-3).

This option would require CPUC and Forest Service approval.

Option 2 SDG&E Proposed Overhead Alignments around Inaja and Cosmit Reservation Lands

Option 2 would also reroute TL626 between poles Z213680 and Z372134 to approximately 2 miles directly east of the existing alignment at its farthest point, following a path generally similar to Option 1 (SDG&E 2014a). However, the Option 2 alignment would avoid the Inaja and Cosmit Reservation by taking a more easterly path, as shown in Figure B-4a. The rerouted segment of Option 2 would be approximately 5.6 miles in length from pole Z213680 to pole Z372134. Specifically, Option 2 would travel southeast from pole Z213680 for approximately 0.4 mile through private land, enter the CNF for approximately 0.3 mile, leave the CNF for approximately 0.3 mile, then reenter the CNF for less than 0.1 mile. The line would then continue southeast for approximately 1.1 miles on private land, travel south through the CNF for approximately 0.4 mile, then leave the CNF and travel southwest for approximately 2.1 miles. The line would then continue southwest, enter the CNF for less than 0.1 mile, leave the CNF for approximately 0.8 mile, then reenter the CNF and travel south for approximately 0.3 mile before terminating at pole Z372134. The total length of Option 2 would be approximately 20.7 miles long, 1.9 miles longer than SDG&E's proposed project, which is approximately18.8 miles long.

Option 2 would include the following components:

- **Wood-to-Steel Replacement:** Replacement of 24 existing poles along the approximately 1.7-mile portion of the existing power line from pole Z213680 to Boulder Creek Substation, as described in Section B.3.1 (same as the applicant's proposed project).
- **New Steel Poles:** Installation of approximately 53 new steel poles.
- **Removal:** Removal of 58 poles along the approximately 3.7-mile portion of the existing power line from Boulder Creek Substation to pole Z372134.
- **Access Roads:** Construction of access roads would be as described under Option 1. Approximately 4 of the 53 poles would be installed by helicopter. For construction, operations, and maintenance access purposes, landing areas in the vicinity of the four poles locations would be required.

Construction of the 5.6-mile alignment would result in additional ground disturbance over the proposed project of approximately 25.1 ~~29.3~~ acres of temporary ground disturbance and 9.8 ~~less than 0.1~~ acres of permanent impacts – due primarily to the need to construct new access (see Table B-3).

Table B-3
TL626 Options 1 and 2: Temporary and Permanent Footprints

Construction Activity	Temporary Footprint (Acres)		Permanent Footprint (Acres)	
	Option 1	*Option 2*	*Option 1*	*Option 2*
New Steel Poles	1.29 (45 new poles)	1.52 (53 new poles)	<0.1 (45 new poles)	<0.1 (53 new poles)
Landing Zone	0.45	0.45	0	0
Staging Areas	6.17	6.17	0	0
Stringing Sites	0.40	0.60	0	0
Access Roads	11.7	16.4	9.5	9.7
Total	**20.0**	**25.14**	**9.6**	**9.8**

Source: SDG&E 2014a (GIS data).

This option would require CPUC and Forest Service approval. In addition, the portion of the rerouted TL626 that crosses the Inaja and Cosmit Reservation lands would require approval from the Tribe and BIA.

Option 3 Partial Underground Relocation in Boulder Creek Road

Under this alternative, a portion of TL626 would be partially undergrounded within the vicinity of the Forest Service TL626 study corridor and within Boulder Creek Road (SDG&E 2014b). All other aspects of SDG&E's proposed project would remain unchanged. As shown in Figure B-4b, two options have been identified for undergrounding in the roadway. Option 3a (full distance along Boulder Creek Road (11.4 miles)) starts at the southernmost pole location (Z372116) and ties back into the overhead portion of TL626 near pole Z213680. Option 3b (partial distance along Boulder Creek Road (6.3 miles)) starts at pole Z372142 north of C79 and would tie back into the overhead portion of TL626 near pole Z213680.

- ***Option 3a – Full distance along Boulder Creek Road – Pole Z372116 to Pole Z213680*** (removal of a 4.88-mile segment of TL626 from pole Z372116 to Boulder Creek Substation): Under this option, approximately 11.4 miles of TL626 along Boulder Creek Road would be undergrounded beginning at pole Z372116. An additional approximately 1 mile of overhead alignment would be required across private lands to reconnect the underground alignment with the existing overhead alignment at pole Z213680. Along the approximately 11.4-mile-long segment of Boulder Creek Road, approximately 12 turns have an insufficient radius within the existing roadbed to permit construction of underground duct packages or stringing of conductors due to minimum design

requirements of the materials proposed to be used. Approximately 25 locations along this segment of Boulder Creek Road exceed 12% slope, which is the maximum slope feasible for underground conductor installation. Additionally, this segment of Boulder Creek Road crosses approximately 10 hydrological features through which open trenching would not be feasible. For the purposes of this analysis, these 47 locations would require jack-and-bore or horizontal directional drill (HDD) construction techniques to be used, resulting in approximately 75,200 square feet (approximately 1.7 acres) of temporary impacts during construction. The remaining approximately 10.5 miles of Boulder Creek Road would be open trenched, resulting in approximately 138,600 square feet (approximately 3.2 acres) of temporary impacts during construction. This option would result in approximately 90,000 cubic yards of temporary excavation for the jack-and-bore pits (estimated at 20 feet in depth) and approximately 60 splice vaults (assuming 1 splice vault every 1,000 feet of the duct package). The total length of Option 3a would be approximately 26.3 miles long, 7.5 miles longer than SDG&E's proposed project, which is approximately18.8 miles long.

- ***Option 3b – Partial distance along Boulder Creek Road – Pole Z372142 to Pole Z213680*** (removal of a 3.18-mile segment of TL626 from pole Z372142 to Boulder Creek Substation): This option would include undergrounding TL626 from pole Z372142, approximately 0.45 mile along McCoy Ranch Road until it intersects with Boulder Creek Road, then continuing underground along Boulder Creek Road for approximately 5.8 miles, at which point the line would return to an aboveground configuration. An additional approximately 1 mile of overhead alignment would be required to be constructed across private lands to reconnect the underground alignment with the existing overhead alignment at pole Z213680. Along the approximately 5.8-mile-long segment of Boulder Creek Road, approximately 9 turns have an insufficient radius within the existing roadbed to permit construction of underground duct packages or stringing of conductors due to minimum design requirements of the materials proposed to be used. Approximately 12 locations along this segment of Boulder Creek Road exceed 12% slope, which is the maximum slope feasible for underground conductor installation. Additionally, this segment of Boulder Creek Road crosses approximately five hydrological features through which open trenching would not be feasible. For the purposes of this analysis, these 26 locations would require jack-and-bore construction techniques to be used, resulting in approximately 41,600 square feet (approximately 1 acre) of temporary impacts during construction. The remaining approximately 5.3 miles of Boulder Creek Road would be open trenched, resulting in approximately 69,960 square feet (approximately 1.6 acres) of temporary impacts during construction. Option 2 would result in approximately 48,286 cubic yards of temporary excavation for the jack-and-bore pits (estimated at 20 feet in depth) and approximately 33 splice vaults (assuming 1 splice vault every 1,000 feet of the duct package). The total

length of Option 3b would be approximately 22.9 miles long, 4.1 miles longer than SDG&E's proposed project, which is approximately 18.8 miles long.

Under both underground options stringing sites would generally be placed along the road in disturbed areas, and would be required every approximately 1 mile to conduct stringing activities. The stringing sites would be approximately 20 feet wide and 100 feet long to accommodate stringing equipment and materials. Staging of materials and equipment would also be required along Boulder Creek Road or in the vicinity of work areas; assuming three staging areas along Boulder Creek Road are used, and each is approximately 2 acres in size, an additional approximately 6 acres of temporary impacts would occur during construction.

Further, for both options the approximately 1-mile overhead alignment to reconnect at pole Z213680 would require an additional approximately 15 steel poles and associated conductors. This would result in approximately 0.4 acre of additional temporary impacts and approximately 0.01 acre of permanent impacts. See Table B-4 for the temporary and permanent impacts resulting from the various construction activities required to underground TL626 in Boulder Creek Road.

Table B-4
TL626 Option 3: Underground in Boulder Creek Road Temporary and Permanent Footprints

Construction Activity	Temporary Footprint (Acres)		Permanent Footprint (Acres)	
	Option 3a	*Option 3b*	*Option 3a*	*Option 3b*
Jack-and-Bore	1.7	1	<0.1	<0.1
Open Trenching	3.2	1.6	<0.1	<0.1
Staging Areas	6	6	0	0
Stringing Sites	0.5	0.3	0	0
Overhead Alignment (including two riser poles*)	0.4	0.4	<0.1	<0.1
Total	**11.8**	**9.3**	**0.1**	**0.1**

* Based on average of 15 poles per mile.

Note: Temporary and permanent footprints are based on preliminary evaluations conducted by SDG&E, as well as a desktop-level assessment of local conditions along Boulder Creek Road, to estimate approximate locations where jack-and bore or HDD construction techniques may be required. In order to provide a worst-case estimate for the temporary and permanent footprints, SDG&E assumed that jack-and-bore would be used (SDG&E 2014b).

Construction Methods

Underground duct bank installation methods would be similar to that described in Section B.5.2.2 of this EIR/EIS. Where local topography and surface conditions warrant, open trenching would be used to install underground duct packages. Unique constraints along Boulder Creek Road include hydrological features, hairpin turns, and road slopes in excess of 12%. Jack-and-bore or HDD would be used in areas where surface features, such as creek crossings or other

hydrological features, are present. A minimum turning radius of approximately 25 feet is required when installing underground duct packages and cables at road turns.

The depth of the trench would be determined by localized topography and potential conflicts, but is anticipated to be approximately 6 to 10 feet deep, with a width of approximately 2.5 feet. Once installed, the depth from grade to the top of the concrete duct package would be at least 3 feet. As described in Section B, the trench alignment would proceed to a riser pole at either end of the undergrounded segment and support the transition from the underground to overhead conductors.

Underground power lines would be installed in a duct bank containing between four and nine 4-inch to 6-inch-diameter polyvinyl chloride (PVC) conduits encased in concrete with a cover of slurry or engineered or native backfill. The underground concrete splice vaults would be approximately 21 feet long by 9 feet wide by 10 to 12 feet deep (or deeper, depending on local site conditions) to facilitate the pulling and splicing of the cables, and would be installed in-line with the underground duct banks approximately every 1,000 to 1,500 feet depending on terrain, or at shorter intervals where horizontal road bends or slopes in excess of 12% grade are encountered. These vaults would also provide access to the 69 kV underground conduits for maintenance, inspection, and repair during operation. Each vault would include an approximately 5.5-foot by 6.5-foot access cover to allow for personnel and equipment entry during maintenance activities, resulting in an approximately 35-square-foot permanent impact.

Jack-and-Bore

Due to the unique constraints along Boulder Creek Road, SDG&E would use jack-and-bore construction where open trenching is not feasible due to the presence of surface waters, such as where TL626 crosses Boulder or Cedar creeks, or where other surface features exist that prohibit the use of open trenching. The jack-and-bore technique consists of a boring operation that simultaneously pushes a casing under an obstacle and removes the spoil inside the casing with a rotating auger. Boring operations would begin with excavating bore pits at the sending and receiving ends of the bore. Boring and receiving pits would typically measure approximately 20 feet by 40 feet. The depth of the proposed bore pits would be between 10 and 20 feet, depending on local site conditions. After establishing the bore pits, boring equipment would be delivered to the site and then installed into the bore pit at the sending end. The casing would be installed at least 3 feet below the surface feature, as practicable. Once the casing is in place, Schedule 80 PVC cable ducts would be installed within the casing using spacers to hold them in place. The casing would then be injected with a high-strength grout or cement to remove all voids and provide additional rigidity. The casing would be left in place to protect the conduit once it has been installed. Following the completion of all boring, installation of the casing and conduits, and completion of the concrete duct bank, the bore pits would be backfilled using native or

engineered material. Soil not used for backfill would be hauled off site and disposed of at an approved facility, such as the Allied Otay Landfill.

Horizontal Directional Drill

Where open trenching or jack-and-bore techniques are infeasible due to local topography or environmental or engineering constraints, the use of HDD methods may be required. When HDD is required, SDG&E would identify and excavate an entry point on the ground surface, behind which the HDD equipment would be staged. A drilling rig and working space would be established behind the entry point to conduct drilling operations and accommodate handling and disposal of drilling mud and spoils that result from the activity. The HDD then drills into the subsurface along an angled path until reaching a depth sufficient so that the final pipeline will not contact or destabilize the surface feature under which the conductors are being placed; drilling is multi-directional and is controlled in an assembled control house staged within the work area. Drilling mud is injected through the drill augers to serve as a cooling agent and lubricant during drilling operations. Once the drill has cleared the surface feature to be avoided, the HDD would then drill back to the surface along the designed drill path. Once the pilot hole has been established, a second, larger auger bit would be pulled back through the pilot hole to enlarge the hole. This process is repeated using successively larger auger bits until the hole has reached a diameter sufficient to accommodate the bundled underground high-density polyethylene (HDPE) conduits in which the power line cables would be placed. Once the proper diameter has been achieved, the contractor stages the HDPE conduits in-line behind the HDD and chemically fuses the entire assembly length; the HDPE conduits would then be bundled together and pulled through the length of the bore hole in a single pull. Once the HDPE conduits are in place, they would be cleaned, swabbed, and mandreled prior to being connected to the duct packages at either end of the bore hole. Once this is completed, the ground surface would be restored to near preconstruction conditions.

This option would require CPUC and Forest Service approval. In addition, the portion of the undergrounded segment of TL626 that crosses the Inaja and Cosmit Reservation lands would require approval from the Tribe and BIA.

Option 4 Overhead Relocation along Boulder Creek Road

Under this alternative, a portion of TL626 would be relocated within the vicinity of the Forest Service TL626 study corridor along Boulder Creek Road. Beginning at pole Z372116, a segment of TL626 would be relocated along a 7.5-mile segment of the Boulder Creek Road before merging with the alignment proposed in Options 1 and 2, near the Pine Hills Fires Station (see Figure B-4a). From this point the alignment would go overland approximately 2.1 miles to interconnect with the existing TL626 at pole Z213680. The relocated alignment between poles

Z372116 and Z213680 would be approximately 9.6 miles long. New steel poles would be installed adjacent to the roadway, with no new access roads needed. The total length of Option 4 would be approximately 23.5 miles long, 4.7 miles longer than SDG&E's proposed project, which is approximately 18.8 miles long.

A portion of the relocation (to pole Z372153) would be a dual circuit line for the 69 kV TL626 and the 12 kV C79. The existing line from poles Z372116 through Z372120, and poles Z372138 to Z372153 would be converted to 12 kV only to continue service to the private land inholdings.

This option would require CPUC and Forest Service approval. In addition, the portion of the undergrounded segment of TL626 that crosses the Inaja and Cosmit Reservation lands would require approval from the Tribe and BIA.

Option 5 Reroute and Undergrounding around Inaja Picnic Area

TL626 in its current location crosses due south of the Inaja National Recreation Trail and Inaja Memorial Picnic Area. (This site honors the 11 firefighters who lost their lives battling the 1956 Inaja Forest Fire.) The TL626 poles, conductors, marker balls, and support cables impair the view of the fire area from the National Recreation Trail.

Under this alternative, a portion of TL626 would be relocated around the Inaja Picnic Area to restore the scenic view (Figure B-4c). Beginning at pole Z213738, TL626 would be extended approximately 1,060 feet northeast along the ridge, before turning northwest to a point adjacent to SR-78. The line would transition to an underground line traversing approximately 400 feet of parking lot to the west. The line would transition again to an overhead alignment for approximately 1,000 feet, joining the current alignment at pole Z213744. The riser poles required under this option would be approximately 83 feet tall. Due to a lack of existing access and steep terrain, the new poles constructed as part of the relocation around the Inaja Picnic Area would be constructed and maintained using helicopters. In addition, aerial marker balls would remain at the San Diego River crossing.

This option would require CPUC and Forest Service approval.

B.3.2.2 C157 Partial Relocation to Avoid Designated Wilderness

The Forest Service proposed action would relocate the section of C157 out of the Pine Creek and Hauser Wilderness areas and into the area between the Hauser and Pine Creek Wilderness areas. Two options for the alignment have been identified as shown in Figure B-5a and described below. The section of line that is replaced would be removed and the affected area restored consistent with wilderness objectives. The relocated section of line would be

constructed to the same standard described by the applicant. Under these two options, no new access roads will be required.

Option 1 SDG&E Proposed Alignment Between Two Wilderness Areas

Under this option, in order to avoid the Pine Creek and Hauser Wilderness areas, approximately 1.1 miles of the existing line would be realigned from poles P278722 to P278741 (see Figure B-5; SDG&E 2014c). This realignment would be located approximately 0.25 mile south from the existing alignment at its farthest point. The alignment would measure approximately 4.1 miles in total length with approximately 1.8 miles crossing Forest Service-administered land, and would be approximately 0.6 mile longer than SDG&E's proposed project, which is 3.5 miles long.

Specifically, the C157 line would travel northeast from Skye Valley Road for approximately 0.2 mile before entering the CNF. The line would then travel for approximately 0.6 mile southeast through the CNF along Skye Valley Road. The line would then exit the CNF and continue southeast for approximately 1.1 miles through private land before crossing the northern inlet of Barrett Lake. The line would continue east for approximately 0.2 mile before entering the CNF, and then would travel through the CNF along Forest Route 17504 for approximately 1 mile. The line would exit the CNF for less than 0.1 mile, and then continue through the CNF for approximately 0.4 mile. The line would travel northeast through private land for approximately 0.5 mile to terminate at Skye Valley Ranch. No new access roads are anticipated to be required. Construction of this option would result in additional ground disturbance over the proposed project ~~a temporary impact area~~ of approximately 1.07 acres of temporary impact area and a permanent impact area of approximately 0.01 acre.

Option 2 City of San Diego Modified Alignment

As described under Option 1, the Forest Service proposed action would relocate the section of C157 out of the Pine Creek and Hauser Wilderness areas. However, under Option 2 the segment of the line on City-owned property would be shifted to the north as shown in Figure B-5a. From pole P4, the alignment would move in straight line to P278724. In addition, poles P4, P5, and P6 would be moved closer to the edge of the existing private road north of Barrett Lake. Also, under this alternative pole P7 would be moved to the west side of the road to avoid crossing the road in two places. In addition, under this Option, pole P13 would be eliminated or set and maintained by helicopter. The remaining section of the line outside the City boundary would be constructed as outlined under Option 1. This alignment would be approximately 0.02 mile longer than Option 1. Overall the alignment is approximately 4.1 miles in total length, which is approximately 0.6 miles longer than SDG&E's proposed project, which is approximately 3.5 miles. The section of line that is replaced would be removed and the affected area restored consistent with wilderness objectives. The relocated section of line would be constructed to the same standard described by

the applicant. No new access roads are anticipated to be required. Construction of this option would result in similar temporary impacts described above under Option 1.

Options 1 and 2 would require CPUC and Forest Service approval. In addition, the portion of the rerouted C157 that crosses the City of San Diego jurisdictional lands under these options would require consideration of City of San Diego requirements.

B.3.2.3 C440 Mount Laguna Underground Alternative

The Forest Service has proposed and evaluated undergrounding in the Laguna Mountain Recreation Area since the 1970s and therefore determined that the federal proposed action evaluated should include consideration of additional undergrounding along C440 in the Laguna Mountain Recreation Area. Public comments during scoping, the LMP standards, and the Forest Service regional policy further influenced the addition of undergrounding along C440 consistent with past utility management within the Laguna Mountain Recreation Area. In addition to the underground segments proposed by SDG&E (see Section B.3.1.10, SDG&E's proposed rebuild on C440), the segments of C440 located within the Mount Laguna Recreation Area would also be placed underground. This would include approximately 14.3 miles of existing 12 kV line, with 1.5 miles of line on private inholdings, and 12.8 miles of line on National Forest System lands. These lines would be relocated underground along existing roads. The existing 348 poles would be removed and any existing access roads not used for underground locations would be restored.

Assuming estimates for underground construction impacts associated with C440 presented in Table B-7, undergrounding of an additional 14.3 miles would result in additional ground disturbance over the proposed project of approximately 16 acres of temporary impacts (22 acres to underground an additional 14.3 miles and remove existing wood poles—6 acres not required to fire harden as proposed by SDG&E) and 4.4 acres of permanent impacts to reconstruct C440.

This option would require CPUC and Forest Service approval.

B.3.2.4 BIA Proposed Action

The BIA, as cooperating agency and in consultation with the La Jolla Indian Tribe, proposes modifications to TL682 located on tribal lands as part of the federal proposed action. Under this action, approximately 1,500 feet of TL682 would be placed underground between poles Z118079 to Z118082, through an economic development zone located on the La Jolla Reservation. The transition pole for Z118082 would be moved northeast from its current location. In addition, pole Z118085 would be moved to the south from its current location.

Further, several poles to the west of pole Z118079 would be realigned onto tribal lands to avoid allotted properties on the reservation.

Assuming estimates for underground construction impacts presented in Table B-7, construction of this alternative would result in additional ground disturbance over the proposed project of approximately 0.45 acre of temporary impacts.

This option would require CPUC and Forest Service approval. In addition, the relocated and undergrounded segments of TL682 that cross La Jolla Reservation lands would require approval from the Tribe and BIA.

B.3.2.5 BLM Proposed Action

In addition to the power line replacement work included in SDG&E's proposed project, the BLM would be issuing new or renewed ROW grants for the transmission lines on public lands administered by the BLM. This includes portions of SDG&E's proposed power line replacement project for TL629, TL625, and TL6923 as described in Table B-2. The ROW grants would be issued under the authority of Title V of the Federal Land Policy and Management Act of 1976. The ROW grants would authorize the ongoing operation and maintenance of the transmission lines.

B.4 Permanent Land Requirements

B.4.1 MSUP

The area occupied within the CNF study area by existing SDG&E electric facilities, including power lines, distribution circuits, and associated facilities, is approximately 225 acres. The area occupied by maintenance roads within the CNF is approximately 64 acres.

B.4.2 Right-of-Ways

SDG&E currently has existing ROWs, or franchise rights, for those portions of the 12 kV distribution lines to be undergrounded along public roadways and along the entire lengths of the 69 kV power lines and 12 kV distribution lines. Within the CNF, existing ROWs for overhead 69 kV power lines are 30 feet wide, and existing ROWs for overhead distribution lines are 20 feet wide. Outside the CNF, existing ROWs have varying widths based on individual property owner agreements. Where feasible, SDG&E will construct and operate proposed project facilities within these existing ROWs, although revised easement rights or additional easements may be required based on the final proposed project design and construction. If, based on engineering requirements, existing ROWs are insufficient or unsupportable, then additional ROWs may be required. If so, SDG&E would initiate negotiations for additional easement rights from the

affected landowners, based upon a fair-market value appraisal. If an agreement cannot be reached, compensation would be determined in eminent domain proceedings.

B.4.3 Access Roads

As discussed in Section B.3 the project proposes to remove approximately 11.2 miles of existing access roads within and outside the CNF. No new access roads are proposed. Repair of existing access roads is anticipated to occur within the existing footprint of the road.

B.4.4 New Power Line Structures

As described in Section B.3, SDG&E's proposed project would involve the replacement of existing wood poles with weathered steel poles. The permanent footprint for each direct-bury steel pole would range from 1.1–2.8 feet in diameter, with an average of approximately 2 feet in diameter. Installation of 1,645 direct bury steel poles would result in a total permanent footprint of less than 0.2 acre and installation of 457 micro-piled steel poles would result in a total permanent footprint of less than 0.5 acre.

Sample steel pole with reflective tape and climbing pegs.

In accordance with GO 95 each new power line will require reflective tape that is no more than 40 inches below the lowest conductor whose voltage is above 750 (see inset). In addition, poles will include climbing pegs for workers to access power lines during operations and maintenance activities.

B.4.5 Undergrounding

Table B-5, Underground Trenching Summary, provides the approximate dimensions, footprint, and number of vaults to be used for each underground segment. As shown in Table B-5, the total approximate permanent footprint for undergrounding is 3.9 acres.

Table B-5
Underground Trenching Summary

Distribution Line	Approximate Length (Miles)			Approximate Width (Feet)	Approximate Footprint (Acres)			Approximate Number of Vaults		
	Within CNF	*Outside CNF*	*Total*		*Within CNF*	*Outside CNF*	*Total*	*Within CNF*	*Outside CNF*	*Total*
C79	0.0	2.8	2.8	2.5	0.0	0.9	0.9	0	~~19~~20	~~19~~20
C440	7.5	0.~~8~~9	8.4	2.5	2.3	0.3	2.5	51	4	55

Table B-5
Underground Trenching Summary

Distribution Line	Approximate Length (Miles)			Approximate Width (Feet)	Approximate Footprint (Acres)			Approximate Number of Vaults		
	Within CNF	*Outside CNF*	*Total*		*Within CNF*	*Outside CNF*	*Total*	*Within CNF*	*Outside CNF*	*Total*
C449	1.5	0.3	1.8	2.5	0.4	0.1	0.5	10	2	12
Total	**9.0**	**4.0**	**13.0**	**—**	**2.7**	**1.2**	**3.9**	**61**	**~~25~~26**	**~~86~~87**

Source: SDG&E 2013a, 2015a.

B.5 Project Construction

This section presents an overview of the construction schedule, activities, and methods typically used for removal and construction of replacement poles and power and distribution lines as well as undergrounding activities.

B.5.1 Construction Schedule

Construction of SDG&E's proposed project is anticipated to require 5 years to complete from site development through final energization. Table B-6, Construction Schedule, provides SDG&E's proposed schedule for the proposed project, as defined in its PTC application. While the schedule would be modified to begin after CPUC approval, this table illustrates the approximate length of each construction phase.

Construction activities would generally be limited to no more than 12 hours per 24-hour period, 6 days per week, as needed. On occasion, construction activities may be required at night or on weekends to minimize impacts to schedules and to facilitate cutover work, and as required by other property owners or agencies, such as the California Independent System Operator (CAISO), which may require outages of certain portions of the electric system.

Table B-6
Construction Schedule

Power Lines	Approximate Duration (Months)
TL682	9
TL626	15
TL625	21
TL629	29
TL6923	8
C79 overhead and underground	10
C78	4
C157	4
C442	6

Table B-6
Construction Schedule

Power Lines	Approximate Duration (Months)
C440 overhead and underground	18
C449	6

Source: SDG&E 2013a.

B.5.2 Construction Activities and Methods

For all access, fly yard, and staging areas discussed below, SDG&E anticipates using disturbed areas and does not plan extensive vegetation clearing or any tree removal. However, during the 5-year construction period, trees may require trimming, and some mature bushes and other scrub vegetation may be cleared to reduce or eliminate potential safety hazards. Where clearing is needed, including in pole, stringing, trench, and guard structure work areas, mowing and clearing of vegetation to ground level would be done with gas-powered weed abatement tools, sickles, rakes, or other hand tools as required for safe use of the areas. During construction, SDG&E would access all proposed work areas by motor vehicle if access roads are available, or by helicopter if surface access is unavailable or infeasible due to site conditions. Following construction, all areas temporarily disturbed by construction would be restored to preconstruction conditions (to the extent practicable).

B.5.2.1 Temporary Work Area Requirements

Anticipated workspace requirements are described in detail in the following subsections and are summarized in Table B-7, Temporary Work Area Summary.

Table B-7
Temporary Work Area Summary

Work Area Type		Approximate Quantity			Required Improvements	Approximate Dimensions (Feet)	Total Approximate Area (Acres)		
		Within CNF	*Outside CNF*	*Total*			*Within CNF*	*Outside CNF*	*Total*
69 kV Power Line									
TL682	Direct-Bury Steel Pole Work Area	~~23~~20	~~169~~166	~~192~~186	Vegetation removal and minor grading may be required.	40-foot diameter	~~0.7~~0.6	~~4.9~~4.8	~~5.6~~5.4
	Self-Supported Steel Pole Work Area	7	60	67	Vegetation removal and minor grading may be required.	40-foot diameter	0.2	1.7	1.9
	Staging Area	0	3	3	Vegetation removal, minor grading, and gravel laydown may be required.	Varies	0.0	4.1	4.1
	Stringing Site	~~4~~2	31	~~35~~33	Vegetation clearing may be required.	Varies	~~2.1~~0.2	~~12.2~~5.2	~~14.3~~5.4
	Fly Yard	0	2	2	Vegetation clearing may be required.	Varies	0.0	~~5.2~~4.9	~~5.2~~4.9
	Guard Structure	~~2~~4	~~27~~56	~~29~~60	Vegetation clearing may be required.	3-foot diameter	<0.1	<0.1	<0.1
TL626	Direct-Bury Steel Pole Work Area	93	114	207	Vegetation removal and minor grading may be required.	40-foot diameter	2.7	3.3	6.0
	Self-Supported Steel Pole Work Area	27	45	72	Vegetation removal and minor grading may be required.	40-foot diameter	0.8	1.3	2.1
	Wood Pole Removal Area	0	1	1	Vegetation removal and minor grading may be required.	40-foot diameter	0.0	<0.1	<0.1
	Staging Area	0	~~2~~4	~~2~~4	Vegetation removal, minor grading, and gravel laydown may be required.	Varies	0.0	~~0.9~~5.6	~~0.9~~5.6
	Stringing Site	~~8~~7	~~20~~18	~~28~~25	Vegetation clearing may be required.	Varies	0.6	2.2	2.8
	Fly Yard	0	1	1	Vegetation clearing may be required.	Varies	0	0.5	0.5

Table B-7
Temporary Work Area Summary

Work Area Type		Approximate Quantity			Required Improvements	Approximate Dimensions (Feet)	Total Approximate Area (Acres)		
		Within CNF	*Outside CNF*	*Total*			*Within CNF*	*Outside CNF*	*Total*
TL625	Direct-Bury Steel Pole Work Area	~~48~~54	124	~~172~~178	Vegetation removal and minor grading may be required.	40-foot diameter	~~1.4~~1.6	~~3.5~~3.6	~~4.9~~5.2
	Self-Supported Steel Pole Work Area	~~24~~27	~~71~~72	~~95~~99	Vegetation removal and minor grading may be required.	40-foot diameter	~~0.7~~0.8	~~1.9~~2.1	~~2.6~~2.9
	Wood Pole Removal Area	~~6~~7	~~7~~10	~~13~~17	Vegetation removal and minor grading may be required.	40-foot diameter	0.2	~~0.2~~0.3	~~0.4~~0.5
	Staging Area	0	~~14~~11	~~14~~11	Vegetation removal, minor grading, and gravel laydown may be required.	Varies	0.0	~~14.9~~10.0	~~14.9~~10.0
	Stringing Site	~~1~~27	~~34~~30	~~46~~37	Vegetation clearing may be required.	Varies	~~6.1~~0.5	~~14.7~~5.4	~~20.8~~5.9
	Fly Yard	~~2~~1	~~4~~5	6	Vegetation clearing may be required.	Varies	~~0.4~~0.3	~~6.5~~8.5	~~6.9~~8.8
	Guard Structure	~~8~~14	~~30~~62	~~38~~76	Vegetation clearing may be required.	3-foot diameter	<0.1	<0.1	<0.1
TL629	Direct-Bury Pole Work Area	~~88~~91	~~187~~192	~~275~~283	Vegetation removal and minor grading may be required.	40-foot diameter	~~2.5~~2.6	~~5.4~~5.5	~~7.9~~8.1
	Self-Supported Pole Work Area	~~49~~53	~~118~~119	~~167~~172	Vegetation removal and minor grading may be required.	40-foot diameter	~~1.4~~1.5	~~3.3~~3.4	~~4.7~~4.9
	Wood Pole Removal Area	~~0~~6	~~2~~15	~~2~~21	Vegetation removal and minor grading may be required.	40-foot diameter	~~0.0~~0.2	~~0.1~~0.4	~~0.1~~0.6
	Staging Area	0	5	5	Vegetation removal, minor grading, and gravel laydown may be required.	Varies	0.0	~~9.7~~9.5	~~9.7~~9.5
	Stringing Site	~~6~~13	~~48~~69	~~54~~82	Vegetation clearing may be required.	Varies	~~3.1~~2.1	~~23.8~~13.1	~~26.9~~15.2
	Fly Yard	0	3	3	Vegetation clearing may be required.	Varies	0.0	~~1.3~~1.2	~~1.3~~1.2
	Guard Structure	~~4~~16	~~4~~13	~~8~~29	Vegetation clearing may be required.	3-foot diameter	<0.1	<0.1	<0.1

Table B-7
Temporary Work Area Summary

Work Area Type		Approximate Quantity			Required Improvements	Approximate Dimensions (Feet)	Total Approximate Area (Acres)		
		Within CNF	*Outside CNF*	*Total*			*Within CNF*	*Outside CNF*	*Total*
TL6923	Direct-Bury Steel Pole Work Area	~~18~~22	~~63~~54	~~81~~76	Vegetation removal and minor grading may be required.	40-foot diameter	~~0.4~~0.6	~~1.7~~1.5	~~2.1~~2.1
	Self-Supported Steel Pole Work Area	~~1~~14	~~55~~40	~~56~~54	Vegetation removal and minor grading may be required.	40-foot diameter	~~<0.1~~0.4	~~1.4~~1.2	~~1.5~~1.6
	Wood Pole Removal Area	0	4	4	Vegetation removal may be required.	40-foot diameter	0	0.1	0.1
	Staging Area	0	3	3	Vegetation removal, minor grading, and gravel laydown may be required.	Varies	0	22.5	22.5
	Stringing Site	~~4~~5	~~29~~21	~~33~~26	Vegetation clearing may be required.	Varies	0.5	~~5.2~~2.1	~~5.7~~2.6
	Guard Structure	0	~~1~~4	~~1~~4	Vegetation clearing may be required.	3-foot diameter	0.0	<0.1	<0.1
12 kV Distribution Line									
C79	Wood Pole Removal Area	~~46~~47	~~18~~17	64	Vegetation removal and minor grading may be required.	20-foot diameter	0.3	0.1	0.4
	Staging Area	1	~~4~~6	~~5~~7	Vegetation removal, minor grading, and gravel laydown may be required.	Varies	0.3	0.2	0.5
	Fly Yard	1	0	1	Vegetation clearing may be required.	Varies	<0.1	0.0	<0.1
	Stringing Site	2	23	25	Vegetation clearing may be required.	Varies	<0.1	0.2	0.3
	Underground Duct Bank	0	1	1	Vegetation removal and minor grading may be required.	<12-foot width	0	4.1	4.1
C78	Direct-Bury Steel Pole Work Area	~~30~~33	~~14~~11	44	Vegetation removal and minor grading may be required.	20-foot diameter	0.2	0.1	0.3
	Wood Pole Removal Area	21	0	21	Vegetation removal and minor grading may be required.	20-foot diameter	0.2	0.0	0.2
	Stringing Site	~~0~~1	~~4~~3	4	Vegetation clearing may be required.	Varies	0.0	0.1	0.1

Table B-7
Temporary Work Area Summary

Work Area Type		Approximate Quantity			Required Improvements	Approximate Dimensions (Feet)	Total Approximate Area (Acres)		
		Within CNF	*Outside CNF*	*Total*			*Within CNF*	*Outside CNF*	*Total*
C157	Direct-Bury Steel Pole Work Area	28	29	57	Vegetation removal and minor grading may be required.	20-foot diameter	0.2	0.2	0.4
	Staging Area	1	1	2	Vegetation removal, minor grading, and gravel laydown may be required.	Varies	0.1	0.2	0.3
	Stringing Site	1	2	3	Vegetation clearing may be required.	Varies	<0.1	0.1	0.2
C442	Direct-Bury Steel Pole Work Area	82	47	129	Vegetation removal and minor grading may be required.	20-foot diameter	0.6	0.3	0.9
	Staging Area	1	1	2	Vegetation removal, minor grading, and gravel laydown may be required.	Varies	<0.1	0.3	0.4
	Fly Yard	3	0	3	Vegetation removal, minor grading, and gravel laydown may be required.	Varies	0.1	0	0.1
	Stringing Site	6	4	10	Vegetation clearing may be required.	Varies	0.1	0.1	0.2
C440	Direct-Bury Steel Pole Work Area	~~323~~324	~~117~~116	440	Vegetation removal and minor grading may be required.	20-foot diameter	2.3	0.8	3.1
	Wood Pole Removal Area	~~81~~82	~~18~~17	99	Vegetation removal and minor grading may be required.	20-foot diameter	0.6	0.1	0.7
	Staging Area	10	0	10	Vegetation removal, minor grading, and gravel laydown may be required.	Varies	0.8	0.0	0.8
	Stringing Site	107	13	120	Vegetation clearing may be required.	Varies	1.7	0.3	2.0
	Underground Duct Bank	3	1	4	Vegetation removal and minor grading may be required.	<12-foot width	10.9	1.3	12.2

Table B-7
Temporary Work Area Summary

Work Area Type		Approximate Quantity			Required Improvements	Approximate Dimensions (Feet)	Total Approximate Area (Acres)		
		Within CNF	*Outside CNF*	*Total*			*Within CNF*	*Outside CNF*	*Total*
C449	Direct-Bury Steel Pole Work Area	~~35~~29	~~13~~12	~~48~~41	Vegetation removal and minor grading may be required.	20-foot diameter	0.2	0.1	0.3
	Wood Pole Removal Area	~~87~~83	~~15~~14	~~102~~9 7	Vegetation removal and minor grading may be required.	20-foot diameter	0.6	0.1	0.7
	Staging Area	0	1	1	Vegetation removal, minor grading, and gravel laydown may be required.	Varies	0.0	0.2	0.2
	Stringing Site	~~22~~23	~~8~~7	30	Vegetation clearing may be required.	Varies	~~0.3~~0.6	~~0.1~~0	~~0.4~~0.6
	Underground Duct Bank	1	1	2	Vegetation removal and minor grading may be required.	<12-foot width	2.2	0.4	2.6

Source: SDG&E 2013a, 2015a.

Access

As discussed in Section B.3.1, SDG&E currently maintains a network of access roads, spur roads, and turnarounds to support and provide access to each of the power lines proposed for replacement (see Figures B-3 through B-7). Access roads are approximately 12–15 feet wide and 20 feet wide at curves.

Table B-8, Access Road Summary, provides a summary of the number of miles and acreage of access roads associated with each power and distribution line. In areas where the power or distribution lines would be removed or relocated, access roads would be removed and the areas returned to pre-construction vegetative conditions (to the extent practicable). Where existing access roads are damaged, repair consisting of smoothing, stabilizing, and improving the surface would occur. SDG&E's proposed project would remove approximately 11 miles of existing access roads.

Table B-8
Access Road Summary

Power Lines	Approximate Length (Miles)			Approximate Width (Feet)	Approximate Area (Acres)		
	Within CNF	*Outside CNF*	*Total*		*Within CNF*	*Outside CNF*	*Total*
69 kV Power Lines							
TL682 (see Figure B-3)	1.1	—	1.1	12–20	2.7	—	2.7
TL626 (see Figure B-4)	9.9	0.2	10.1		24.0	0.5	24.5
TL625 (see Figure B-5)	11.0	0.3	11.3		26.7	0.7	27.4
TL629 (see Figure B-6)	6.9	0.1	7.0		16.8	0.4	17.1
TL6923 (see Figure B-7)	1.1	0.3	1.4		2.6	0.9	3.5
Total	**30.0**	**0.9**	**30.9 miles**		**72.8**	**2.5**	**75.2 acres**
12 kV Distribution Lines							
C79 (see Figure B-4)	4.1	0.1	4.2	12–20	9.4	0.2	9.6
C78 (see Figure B-5)	<0.1	<0.1	0.1		0.1	0.1	0.2
C157 (see Figure B-5)	0.3	0.1	0.4		0.9	0.2	1.1
C442 (see Figure B-6)	3.6	0.4	4.0		8.8	1.1	9.8
C440 (see Figure B-6)	4.7	<0.1	4.7		11.3	0.0	11.4

Table B-8
Access Road Summary

Power Lines	Approximate Length (Miles)			Approximate Width (Feet)	Approximate Area (Acres)		
	Within CNF	*Outside CNF*	*Total*		*Within CNF*	*Outside CNF*	*Total*
C449 (see Figure B-6)	2.8	—	2.8		6.7	—	6.7
Total	**15.6**	**0.8**	**16.4 miles**		**37.1**	**1.5**	**38.6 acres**

Source: SDG&E 2013a.
Note: A 20-foot-wide buffer was used for spatial analysis to capture the maximum width of access road area.

Where existing road access is not feasible, SDG&E would access sites by helicopter. The helicopters would be used to deliver and remove construction material and personnel from areas with rugged terrain and where ground access would not safely accommodate the required construction equipment and vehicles. Helicopter models typically used for pole replacements include the Erickson Air Crane, Hughes 500D, Kaman KMAX, or Bell 206L Long Ranger.

SDG&E proposes the use of helicopters at approximately 514 pole locations. Helicopters would typically be used between 6:30 a.m. and 4:00 p.m.~~, and their flight path would~~ During daily construction activities, helicopter flights would generally follow the ROW area to the extent practicable.

Staging Areas

SDG&E would utilize approximately 37 staging areas for 69 kV power line activities and 7 staging areas for 12 kV distribution line activities. As provided in Table B-7, total area required for staging areas is anticipated to be approximately 31.8 acres. Staging areas would be used for storage and preparation of construction materials, including replacement poles and conductors, as well as construction equipment before delivery to the individual pole work areas. The poles would be assembled at the staging areas, fly yards, and/or in pole work areas. Equipment, materials, and vehicle parking would be accommodated at these locations for the duration of construction associated with each staging area. Staging areas would be accessed using public roadways and existing access roads.

Pole Work Areas

In order to accommodate construction equipment and activities during pole replacement and reconductoring of the 69 kV power lines, temporary construction areas may be cleared at each pole location. Each pole work area would require less than 0.1-acre work area, measuring approximately 20–40 feet in diameter. A total of approximately ~~44.7~~45.2 acres of temporary disturbance would be required to facilitate pole installation.

Stringing Sites

Approximately ~~388~~ 395 stringing sites would be required for installing new conductors. Each stringing site would vary in size depending on site conditions, but would result in an average temporary disturbance of approximately 0.2 acre per site. SDG&E does not anticipate grading would be required for most stringing sites. Stringing sites would be spaced approximately 7,000 feet apart for 69 kV power lines, and approximately 1,500 feet apart for 12 kV distribution lines.

Fly Yards

A total of ~~three~~ four fly yards within the CNF and ~~nine~~ ten fly yards outside the CNF would be utilized for helicopter take-off and landing, pole and equipment temporary storage, and pole assembly. Fueling would typically be conducted at airports or at off-site fueling locations, but may occur at fly yards. Helicopters would also utilize existing access roads and staging areas for landings. Fly yards would vary in size depending on site conditions, but would result in an average temporary disturbance of approximately 1.1 acres per fly yard—approximately 0.5 acre of total temporary disturbance within Forest Service-administered lands and ~~13~~14.0 acres of total temporary disturbance outside of Forest Service-administered lands. Fly yards would be accessed using public roadways and existing access roads.

Trench Work Areas

To accommodate the installation of the underground duct banks and vaults, temporary workspaces centered on the duct bank alignments would be established. These areas would be cleared and graded as needed to provide a safe working space for the operation of construction equipment. The duct banks would require an approximately 10- to 12-foot-wide workspace. A total of approximately 1.3 miles of workspace, requiring approximately 19 acres, would be established prior to construction. Trench work areas would be accessed using public roadways and existing access roads.

Guard Structures

Approximately ~~76~~ 179 guard structures would be required for safe road crossings during conductor stringing. Where possible, SDG&E would utilize bucket trucks as temporary guard structures to minimize temporary impacts. Where guard structures must be installed, they would typically consist of two approximately 1.5-foot-wide wood poles supporting a cross arm or wood pole section secured horizontally in between the wood poles. Assuming a scenario where no bucket trucks are used as guard structures, these guard structures would result in a total temporary disturbance of less than 0.1 acre.

Existing Pole Removal

Removal of existing wood poles would require a less than 0.1-acre work area, measuring 20 feet to 40 feet in diameter. A total of approximately ~~45.7~~3.3 acres of temporary disturbance would be required to facilitate pole removal.

B.5.2.2 Construction Methods

The following provides a description of the proposed methods of each construction activity.

Access Road

Where existing access roads need repair, a grader would be used to blade and smooth the road in accordance with the engineered specifications. Importing and compacting more stable materials on existing facilities in unstable areas may also be required.

Existing Pole Removal

Once the replacement poles have been constructed, the new conductor has been installed, and any third-party lines have been relocated to the replacement poles, SDG&E would remove the existing wood poles. Pole-removal activities would utilize bucket trucks to remove crossarms and the conductor, or in locations where there is no truck access, helicopters would be utilized to remove poles. Poles would be completely removed where possible. The holes would be backfilled with native soil or materials similar to the surrounding area, and the site would be restored. If complete removal is not practical (e.g., if the pole cannot be pulled from the ground), the pole would be sectioned and cut at the base, or 6–12 inches below the surface, and covered with native material. In addition, all anchors and stub poles for 69 kV power lines would also be removed. Old poles, associated hardware, and any other debris generated from construction activities would be removed from the site and placed on flatbed trucks for recycling or disposal at an approved facility.

Steel Pole Installation

SDG&E would notify the Underground Service Alert a minimum of 48 hours in advance of excavating or conducting other ground-disturbing activities in order to identify buried utilities. Exploratory excavations (potholing) would also be conducted to verify the locations of existing facilities in the field, if necessary.

Direct-Bury Steel Poles: Installation of direct-bury steel poles would begin with the excavation of holes approximately 20–48 inches in diameter and approximately 7–12 feet deep, depending on the height of the pole. Pole holes would be excavated using a small, truck-mounted or track-mounted drill rig if the site is land-accessible, or by platform-mounted drilling equipment if accessible only

by helicopter. Rock splitting/blasting may be required if crews encounter rock while digging. Pole-hole drilling would excavate between approximately 0.7 cubic yard (CY) and 2.2 CY of soil per pole. New poles would be delivered to the site by a flatbed truck or by helicopter and placed in holes dug using a machine digger and/or hand digger. The annular space between 69 kV power line poles and hole walls would then be backfilled with concrete, with an additional foot of crushed rock placed beneath the bearing plate if needed due to drainage and soil conditions. Should access or site conditions prohibit the use of a concrete backfill, 69 kV power line pole holes may be backfilled and compacted with the previously excavated soil. Any remaining excavated material would be placed around the holes or spread onto access roads and adjacent areas.

Self-Supported Steel Poles: Poles required to resist terminal loads would be installed on micro-pile foundations where local subsurface conditions warrant the use of this foundation type.[1] Micro-pile foundation installation would begin with the excavation of holes approximately 8 inches in diameter by approximately 10–40 feet deep (requiring the removal of approximately 0.1–0.5 CY of soil), depending on the properties of the soil or rock underlying the surface. A steel rod would be inserted into the hole, centered, and the remaining space filled with a mixture of water, cement, and sand. The steel rod would protrude above grade and would connect to the structure or a small concrete cap supporting the structure above grade. Holes for micro-pile foundations would be drilled using a small drill rig operated from the top of an elevated platform, measuring approximately 8 feet by 8 feet on 4–6 legs, and approximately 6 feet above grade. Depending on requirements for foundation strength, 4–12 micro-piles would be arranged in a circular pattern to take the place of a poured concrete foundation. New poles would be delivered to the site by a flatbed truck and assembled on site using a truck-mounted crane, or sections would be flown in by helicopter. If there is no truck access to the job site, poles would be partially assembled at a staging area and flown to the work area in sections by helicopter. Any remaining excavated material would be placed around the holes or spread onto access roads and adjacent areas.

Conductor Installation

SDG&E would coordinate with the CAISO to obtain all the necessary line clearances prior to beginning new conductor installation. This would ensure that SDG&E can take the electric lines out of service and redistribute power to service centers and customers. Prior to stringing the new conductor, temporary guard structures—typically consisting of vertical wood poles with

[1] As an alternative to micro-pile foundation poles, poured foundation poles may be installed where local subsurface conditions warrant the use of this foundation type. The maximum permanent footprint and total footprint associated with poured foundation poles would be the same as for micro-pile foundation poles.

crossarms—would be installed at road crossings and crossings of energized electric and communication lines, preventing the conductors from sagging onto roadways or other lines during conductor installation. In some cases, bucket trucks may also be used as guard structures. As an alternative to using temporary guard structures, SDG&E may use flaggers to halt traffic for brief periods while overhead conductors are installed at road crossings. Conductor stringing would take place within the designated stringing sites. A rope would be pulled through the rollers from structure to structure. The rope may be pulled through the rollers using a helicopter in instances where terrain is difficult; during this operation, the rope may drag between structures in some spans. Once the rope is in place, it would be attached to a steel or synthetic cable and pulled back through the sheaves, and into place using conventional tractor-trailer pulling. The conductor would be pulled through each structure under a controlled tension to keep the conductor elevated and away from obstacles, thereby minimizing damage to the line and protecting the public.

The lowest 69 kV conductor would be installed with a minimum ground clearance of approximately 30 feet and 25 feet where there is pedestrian access only. The lowest 12 kV conductor would be installed with a minimum ground clearance of 25 feet and 17 feet where there is pedestrian access only.

Removal of Existing Conductors

SDG&E would accomplish the removal of existing conductors in a method similar to the reverse of the conductor installation process. The old conductors would be wound onto wooden spools, placed on flatbed trucks, and recycled at an approved facility.

Underground Duct Package and Installation

Prior to trenching for underground distribution lines, SDG&E would notify other utility companies (via Underground Service Alert) to locate and mark existing underground utilities along the proposed underground alignments. Exploratory excavations (potholing) would also be conducted to verify the locations of existing facilities in the field, if necessary.

Trenches would be excavated using a backhoe, saw cutter, and other trenching equipment as warranted by site conditions. The depth of the trench would be determined by localized topography and potential conflicts, but is anticipated to be approximately 5 feet deep, with a width of approximately 2.5 feet. Dewatering of the trenches is not anticipated, but may be required based on weather conditions during construction. If trench water is encountered, trenches would be dewatered using a portable pump and disposed of in accordance with applicable regulations and permits. Once installed, the depth from grade to the top of the concrete duct package would be approximately 2.5 feet, and the depth from grade to the top of the conduit in the duct package would be approximately 3 feet. The trench alignment would

proceed to the riser pole and support the transition from the underground to overhead conductors. Eight new riser poles would be installed with the same equipment previously described for installation of the steel poles.

The underground distribution ~~lines~~ cables would be installed in a duct bank containing two to three 4- to 5-inch-diameter polyvinyl chloride (PVC) conduits encased in concrete or placed in sand or native fill. In order to facilitate the pulling and splicing of the cables, underground concrete splice vaults measuring approximately 8 feet long, 5.5 feet wide, and 7 feet deep would be installed in line with the underground duct banks every approximately 500–800 feet. These vaults would also provide access to the underground cables for maintenance, inspection, and repair during operation.

During trenching activities, the trench would be widened at the underground vault locations to allow for approximately 2 feet of additional clearance. The pre-formed, steel-reinforced, precast concrete splice vaults would be transported to the associated work areas on flatbed trucks and lowered into place using small, truck-mounted cranes. The splice vaults would then be connected to the underground duct banks before they are surrounded with compacted or other fill, likely at the same time the rest of the trench is backfilled. ~~being covered with at least 3 feet of compacted fill.~~ The trench alignment would proceed to the riser pole and support the transition between the underground and the overhead conductors. After installation of the concrete duct bank, approximately 26,058 CY of excavated trench material would be used to backfill the trench. SDG&E does not anticipate that engineered backfill would be required. The remainder of the excavated material would be spread across the ROW or access roads, if possible, or disposed of at an approved facility.~~, such as the Mountain Empire Construction and Operations (MECO) yard in Pine Valley.~~

After trenching activities for the underground duct banks have been completed, the PVC cable conduits would be installed (and separated by spacers), and concrete would be poured around the conduits to form the duct banks. Conduits for participating joint-trench utilities, if any, are installed at the same time using separate splicing structures. Upon completion of the duct bank, the trenches would be backfilled with these materials and the cables would be installed in the duct banks. ~~Each c~~Cable segments would be pulled into the duct bank, spliced with neighbor segments, and eventually terminated at the riser pole where the line converts to an overhead configuration. To pull the cable through the ducts, a cable reel would be placed at one end of the section and a pulling rig at the other end. A larger rope would then be pulled into the duct using a fish line and attached to the cable puller, which pulls the cable through the duct. Lubricant would be applied to the cable as it enters the duct to decrease friction during pulling. After installation of the conductor, the ground surface would be restored to near pre-construction conditions and repaved or reseeded as appropriate.

Cleanup and Post-Construction Restoration

All areas that are temporarily disturbed around each structure, areas used for conductor pulling, and all staging areas would be restored to pre-construction conditions, to the extent practicable, following installation of the replacement poles and reconductoring of the lines. This would include the removal of all construction materials and debris, returning areas to their original contours, and reseeding, as needed.

B.5.3 Construction Personnel and Equipment

According to the preliminary construction schedule proposed by SDG&E, peak construction personnel anticipated to be on site for construction would range from 33 individuals on TL682 and TL6923 to a maximum of 132 individuals on TL629 during peak construction activity. For TL626, 66 individuals, and TL625, 99 individuals, would be anticipated to be on site during peak construction activity. The peak construction personnel anticipated for overhead and underground activities range from 6–12 individuals to be on site for construction of the distribution lines. The overall peak number of individuals working on SDG&E's proposed projects in the study area are approximately 100 crewmembers. Table B-9, Peak Construction Personnel, presents the peak construction personnel anticipated for each of SDG&E's proposed projects.

Table B-10, Typical Construction Equipment by Activity, presents the equipment requirements of the power and distribution lines for the various activities associated with the construction phases of the projects, including the anticipated duration of equipment use. Project construction would involve the use of a wide variety of heavy construction equipment on site. In addition to this equipment, pickup trucks and worker vehicles would travel to and from SDG&E's proposed projects work sites daily. It is anticipated that delivery trucks would travel to and from the staging areas 12 times per week, or up to 24 times per week during peak activities. During active construction activities, approximately one water truck, completing an average of two trips per day, may be required to deliver water to each active construction site for dust control.

During peak construction, a maximum of 38 crews working could be required at one time, resulting in between approximately 304 and 532 trips per day for construction crews and equipment/material deliveries during peak conditions across the 563,200-acre project area. However, the average number of crews working at one time would be 10, resulting in between 80 and 140 trips per day across the entire project area. Further, the maximum number of helicopter flights would not exceed 64 flights per day across the project area.

Table B-9
Peak Construction Personnel

Project Components	Position	Number of Personnel Required
TL682	Foremen	3
	Operators	10
	Linemen	20
TL626	Foremen	6
	Operators	20
	Linemen	40
TL625	Foremen	9
	Operators	30
	Linemen	60
TL629	Foremen	12
	Operators	40
	Linemen	80
	Underground Crew	8
TL6923	Foremen	3
	Operators	10
	Linemen	20
C79	Foremen	1
	Operators	2
	Linemen	2
	Underground Crew	5
C78	Foremen	1
	Operators	6
	Linemen	2
	Underground Crew	0
C442	Foremen	1
	Operators	5
	Linemen	2
	Underground Crew	0
C440	Foremen	1
	Operators	2
	Linemen	2
	Underground Crew	6
C157	Foremen	1
	Operators	3
	Linemen	2
	Underground Crew	0

Table B-9
Peak Construction Personnel

Project Components	Position	Number of Personnel Required
C449	Foremen	1
	Operators	2
	Linemen	2
	Underground Crew	7
	Total	**419**

Source: SDG&E 2013a and 2013b.

Table B-10
Typical Construction Equipment by Activity

Project Components	Activity	Equipment	Use	Approximate Quantity	Approximate Duration of Activity (Days)	Average Duration of Use (Hours per day)
Power Lines	Improve Access Roads (per mile)	Bulldozer	Grade access roads	1	4	10
		Road Grader	Grade access roads	1	4	10
		Loader	Load haul trucks, transport materials	1	4	2
		1-ton Pickup Truck	Transport personnel	1	4	3
		Water Truck	Suppress dust	2	4	8
		Mower	Mow vegetation	1	4	3
	Construct Micro-pile Foundations (per foundation)	*Helicopter Set*				
		Portable Water Tank	Dust control	1	2	4
		Drilling Rig	Drill foundation holes	1	2	8
		Compressor	Operate tools	1	4	8
		1-ton Pickup Truck	Transport personnel	1	4	3
		Helicopter	Deliver materials, set plate	1	4	2
		Truck Set				
		Water truck	Dust/fire control	1	2	2
		Fork Lift	Moving equipment in the ROW	1	1	6
		Drilling Rig	Drill foundation holes	1	2	8

Table B-10
Typical Construction Equipment by Activity

Project Components	Activity	Equipment	Use	Approximate Quantity	Approximate Duration of Activity (Days)	Average Duration of Use (Hours per day)
		Compressor	Operate tools	1	4	8
		Boom Truck	Set plate	1	1	4
		Flatbed Truck	Deliver materials	1	4	3
		1-ton Pickup Truck	Transport personnel	1	4	3
Power Lines	Install Micro-pile Poles	*Helicopter Set*				
		Helicopter	Deliver equipment, set pole base and top sections	1	1	1
		Compressor	Operate tools	1	1	1
		1-ton Pickup	Transport crews	1	1	1
		Flatbed Truck	Transport equipment to helicopter landing zone	1	1	1
		Truck Set				
		Boom Truck	Set base and top section	1	1	3
		Bucket Truck	Frame structures/spread existing phases	1	1	3
		Water Truck	Dust control	1	1	2
		1-ton Pickup Truck	Transport personnel	1	1	2
		Flatbed Truck	Transport equipment	1	1	2
	Construct Direct-Bury Poles (per pole)	*Helicopter Set*				
		Compressor	Dig hole by hand	1	4	8
		Concrete	Concrete backfill	1	1	2
		Helicopter	Deliver equipment, bottom section, and top section of pole	1	2	0.5
		1-ton Pickup Truck	Transport personnel	1	5	3
		Truck Set				
		Drilling Rig	Drill anchor holes	1	3	8

Table B-10
Typical Construction Equipment by Activity

Project Components	Activity	Equipment	Use	Approximate Quantity	Approximate Duration of Activity (Days)	Average Duration of Use (Hours per day)
		Loader	Load spoil and waste	1	1	4
Power Lines	Construct Direct-Bury Poles (per pole)	Water Truck	Dust/fire control	1	3	1
		Air Compressor	Operate tools	1	3	8
		Concrete Truck	Deliver slurry	1	1	2
		Bucket Truck	Set the top section of the pole	1	1	2
		Flatbed Truck	Deliver pole sections	1	1	3
		1-ton Pickup Truck	Transport personnel	1	3	3
		Boom Truck	Set base and top section	1	1	2
	String Conductor (per phase)	Puller and Tensioner	Pull new conductor into place and secure at correct tension	1	1	3
		Reel Trailer	Feed new conductor to the pulling rig	1	1	3
		Bucket Truck	Install conductor and act as guard structure	1	1	3
		1-ton Pickup Truck	Transport personnel	2	1	3
		Water Truck	Dust/fire control	2	1	3
	Undergrounding (TL629E, per 300 feet)	Saw Cut	Cut pavement and road materials	1	1	8
		Backhoe	Excavate	2	1	8
		Bobcat	Moving dirt and steel plates	1	1	2
		Dump Truck	Hauling dirt and asphalt	3	1	8
		Water Truck	Dust control, fire patrol	1	1	8
		Concrete Truck	Slurry hauling	5	1	2

Table B-10
Typical Construction Equipment by Activity

Project Components	Activity	Equipment	Use	Approximate Quantity	Approximate Duration of Activity (Days)	Average Duration of Use (Hours per day)
		Foreman Truck	Transport personnel	3	1	8
Power Lines	Undergrounding (TL629E, per 300 feet)	Crew Truck	Transport personnel	2	1	8
		Air Compressor	Jackhammering, blowing rope in conduits	1	1	8
		Pavement Roller	Asphalt	1	1	8
		Vibrating Plate	Asphalt	1	1	2
		Bitumen (emulsion) Sprayer, Trailer-Mounted	Final street repair	1	1	1
		4-inch Grinder	Final street repair	1	1	3
		Spreader Box (large)	Final street repair	1	1	2
		Arrowboard	Traffic control	2	1	8
	Restore ROW	Grader	Recontour work area	1	2	10
		Haul Truck	Remove waste	1	7	10
		Mini-Excavator	For water bars	1	2	10
		Bobcat	For water bars	1	2	10
		Water Truck	Dust control	1	7	10
		Hydroseed Truck	Replant vegetation	1	1	10
		1-ton Pickup Truck	Transport personnel	1	7	3
	Pole Removal – Ground Access	Boom Truck with Hydraulic Pole Puller	Remove existing pole	1	1	1
	Pole Removal – No Ground Access	Hydraulic Pole Puller	Remove existing pole	1	1	2
		Helicopter	Remove existing pole	1	1	0.5
Distribution Lines	Improve Access Roads (per mile)	Bulldozer	Grade access roads	1	4	8

Table B-10
Typical Construction Equipment by Activity

Project Components	Activity	Equipment	Use	Approximate Quantity	Approximate Duration of Activity (Days)	Average Duration of Use (Hours per day)
		Road Grader	Grade access roads	1	4	8
		Loader	Load haul trucks, transport materials	1	4	1.6
Distribution Lines	Improve Access Roads (per mile)	1-ton Pickup Truck	Transport personnel	1	4	2.4
		Water Truck	Suppress dust	2	4	6.4
		Mower	Mow vegetation	1	4	2.4
	Construct Direct-Bury Poles (per pole)	*Helicopter Set*				
		Compressor	Dig hole by hand	1	4	6.4
		Concrete	Concrete backfill	1	1	16
		Helicopter	Deliver equipment, bottom section, and top section of pole	1	2	0.4
		1-ton Pickup Truck	Transport personnel	1	5	2.4
		Truck Set				
		Drilling Rig	Drill anchor holes	1	3	6.4
		Loader	Load spoil and waste	1	1	3.2
		Water Truck	Dust/fire control	1	3	0.8
		Air Compressor	Operate tools	1	3	6.4
		Concrete Truck	Deliver slurry	1	1	1.6
		Bucket Truck	Set the top section of the pole	1	1	1.6
		Flatbed Truck	Deliver pole sections	1	1	2.4
		1-ton Pickup Truck	Transport personnel	1	3	2.4
		Boom Truck	Set base and top section	1	1	1.6
	String Conductor (per phase)	Puller and Tensioner	Pull new conductor into place and secure at correct tension	1	1	3

Table B-10
Typical Construction Equipment by Activity

Project Components	Activity	Equipment	Use	Approximate Quantity	Approximate Duration of Activity (Days)	Average Duration of Use (Hours per day)
		Reel Trailer	Feed new conductor to the pulling rig	1	1	3
Distribution Lines	String Conductor (per phase)	Bucket Truck	Install conductor and act as guard structure	1	1	3
		1-ton Pickup Truck	Transport personnel	2	1	3
		Water Truck	Dust/fire control	2	1	3
	Undergrounding (C79, C440, and C449, per 300 feet)	Saw Cut	Cut pavement and road materials	1	1	8
		Backhoe	Excavate	2	1	8
		Bobcat	Moving dirt and steel plates	1	1	2
		Dump Truck	Hauling dirt and asphalt	3	1	8
		Water Truck	Dust control, fire patrol	1	1	8
		Concrete Truck	Slurry hauling	5	1	2
		Foreman Truck	Transport personnel	3	1	8
		Crew Truck	Transport personnel	2	1	8
		Air Compressor	Jackhammering, blowing rope in conduits	1	1	8
		Pavement Roller	Asphalt	1	1	8
		Vibrating Plate	Asphalt	1	1	2
		Bitumen (emulsion) Sprayer, Trailer-Mounted	Final street repair	1	1	1
		4-inch Grinder	Final street repair	1	1	3
		Spreader Box (large)	Final street repair	1	1	2
		Arrowboard	Traffic control	2	1	8

Table B-10
Typical Construction Equipment by Activity

Project Components	Activity	Equipment	Use	Approximate Quantity	Approximate Duration of Activity (Days)	Average Duration of Use (Hours per day)
Distribution Lines	Restore ROW (per mile)	Grader	Recontour work area	1	2	8
		Haul Truck	Remove waste	1	7	8
		Mini-Excavator	For water bars	1	2	8
		Bobcat	For water bars	1	2	8
		Water Truck	Dust control	1	7	8
		Hydroseed Truck	Replant vegetation	1	1	8
		1-ton Pickup Truck	Transport personnel	1	7	2.4
	Pole Removal – No Ground Access (per pole)	Boom Truck with Hydraulic Pole Puller	Remove existing pole	1	1	1
		Hydraulic Pole Puller	Remove existing pole	1	1	2
		Helicopter	Remove existing pole	1	1	0.5

Source: SDG&E 2013a.

B.5.4 Water Usage

Construction-related water usage is needed primarily to provide for dust control, fire suppression, and minimal earthwork activities. Approximately 5–10 million gallons of water would be required on site during the construction of SDG&E's proposed project over the 5-year construction period. Water would be obtained through a number of sources, including purchasing and transporting water from local water districts, such as the cities of San Diego, La Mesa, and/or El Cajon, and private groundwater extraction operations (SDG&E 2014d).

B.6 Operations and Maintenance

To ensure continued safe and reliable electric service of the existing facilities in the project study area, SDG&E would conduct standard O&M activities and procedures for their facilities within and outside the CNF. Table B-11, Typical Maintenance Activities, lists and describes the types of maintenance activities that would occur, lists the equipment that would be used for these activities, and provides the estimated frequency. The activities range from routine preventive maintenance to emergency repairs and replacements required to maintain service continuity and

reliability. In addition, aerial and ground inspections of electric line facilities and patrols aboveground components would be conducted on a regular basis. Inspection for corrosion, equipment misalignment, loose fittings, and other common mechanical problems is performed every 3 years (per CPUC General Order 165) for overhead 69 kV power lines. Underground electric lines would be inspected every 3 years from inside the concrete splice vaults. The following list provides the different types of inspections and patrols that SDG&E would conduct to maintain system reliability and to ensure the safety of the general public and personnel engaged in O&M activities.

- Visual aerial inspections—aerial survey conducted by helicopter of overhead structures, conductor spans, and ROW encroachment
- Infrared helicopter inspections—aerial survey of power lines using a specialized camera equipment to identify potential equipment failures
- Ground inspections—detailed ground inspections of underground components, 69 kV overhead structures, and associated facilities are performed to identify possible safety hazards and system defects. In addition, an assessment of access routes, vegetation, ROW encroachment, and vandalism are also conducted
- Vegetation Inspections—inspection conducted to ensure proper vegetation clearances are maintained in accordance with PRC Section 4292 and CPUC General Order 95 requirements
- Special inspections and patrols—occur on a non-routine, as-needed basis. Special inspections may occur when preparing for planned outages associated with construction and/or maintenance projects elsewhere in the larger SDG&E electric transmission and distribution systems. Special inspections and patrols may also be conducted before a line is initially energized after construction or reenergized after an extended outage.

Table B-11
Typical Maintenance Activities

Activity	Description	Equipment Used	Estimated Frequency
Equipment Repair and Replacement	Replacement, repair, and installation of hardware as needed	Four-wheel-drive (FWD) vehicle, helicopter, boom truck, line truck	As needed
Insulator Washing	Removal of dirt from insulators by spraying water	Water Truck	As needed
Routine Vegetation Management	Controlling vegetation to facilitate the use of access roads, allow inspection and maintenance of facilities, expose potential hazards, prevent potential fire hazards, and provide safe working areas	FWD vehicle, large truck, helicopter, chain saw, chipper, weed whip	Biannually, or as required by line inspections

Table B-11
Typical Maintenance Activities

Activity	Description	Equipment Used	Estimated Frequency
Tree Trimming	Maintaining adequate line clearances between conductors and vegetation	FWD vehicle, helicopter, large truck, chain saw, chipper	Annually
Access Road Maintenance	Vegetation removal, water bar or culvert cleaning/repair, road grading	FWD vehicle, grader, excavator, dozer, water truck, roller	Every 2 years or as needed
Pesticide and Herbicide Application	Controlling undesirable woody and herbaceous vegetation (including aquatic plants), insects, rodents, and other pests and weeds	FWD vehicle, helicopter, large truck, applicator	Annual approval by Authorized Officer required
Gate and Barrier Maintenance	Replacement and repair of hardware	FWD vehicle, forklift, large truck	As needed

Source: SDG&E 2013a.

The following discussion provides an overview of the types of activities that currently take place for existing poles and would continue to occur after construction of SDG&E's proposed project. Unless otherwise noted, all vehicles would have rubber tires.

Water requirements for the operation and maintenance of these power lines typically include access road maintenance and dust control during helicopter operations. Annual estimated water usage is 130,000 gallons and the water is purchased from local sources (SDG&E 2014d).

B.6.1 Right-of-Way Repair

Repair methods would include grading previously built (e.g., road reestablishment) and existing access roads and spot-repair of erosion sites where access roads may be subject to scouring. ROW repairs would be performed as necessary (such as following seasonal rains) and may require the use of a four-wheel-drive pickup truck, a motor grader, a backhoe, and/or a skid steer loader. The skid steer loader has steel tracks while the remaining equipment has rubber tires.

B.6.2 Pole Brushing

Certain poles or structures would require the removal of vegetation to reduce the potential for fire danger and other safety hazards. In accordance with fire break clearance requirements stipulated in PRC 4292 and California Code of Regulations, Title 14, Section 1254, SDG&E would trim or remove vegetation in the area surrounding 69 kV power line and 12 kV distribution line poles to reduce potential fire and other safety hazards. Dead, diseased, or dying limbs and foliage from living, sound trees are removed from approximately 8 feet above ground to the horizontal plane of the highest point of conductor attachment; dead, diseased, or dying trees are also removed. From ground level to approximately 8 feet above ground level, SDG&E

removes flammable trash, debris, or other materials; grass; herbaceous and brush vegetation; and limbs and foliage of living trees to a distance of 10 horizontal feet from the outer circumference of the pole. For all steel poles, SDG&E clears to bare ground an approximately 5-foot-radius around the poles that have exposed, external ground wires, and trims all encroaching trees or other vegetation within approximately 10 feet of the pole. Vegetation would be removed using mechanical equipment, such as chainsaws, weed trimmers, rakes, shovels, and brush hooks. A crew of three workers would typically conduct this work. Poles are typically inspected on an annual basis to determine if pole brushing is required.

B.6.3 Application of Pesticides and Herbicides

Consistent with SDG&E Safety Standard G8367 Pesticide Management and as described in the draft MSUP Operating Plan (see POD Attachment C), SDG&E may use one or more of the following insecticides:

- Hit Squad Industrial Insecticide
- Blast ‘Em (Wasp & Hornet Killer).

Similarly, SDG&E may use one or more of the following herbicides during pole brushing, cutstump treatments associated with tree removals, or other operation and maintenance activities where vegetation removal is necessary for fire safety reasons:

- Rodeo
- Roundup
- Roundup Pro
- Accord Concentrate
- Gallery 75DF
- Garlon 4 Ultra
- Landmark XP
- Milestone
- Pathfinder
- Payload
- Stalker
- Spra-Kil SK-26
- Dimension Ultra 40.

The use of pesticides or herbicides are not proposed for facilities on the CNF. If the use of herbicides is determined to be necessary within the CNF in the future, SDG&E would work with the Forest Service to obtain authorization for the specific uses for which herbicides are required. Prior to any herbicide use within the CNF, SDG&E would submit an anticipated schedule to the Forest Service for any proposed herbicide use on an annual basis, or more frequently as needed, and would work with the Forest Service to determine the appropriate herbicide per location. Herbicide application would occur under the direction of a professional pesticide applicator with either a Qualified Applicator License or an Agricultural Pest Control Adviser License in the State of California. This analysis does not evaluate the use of any pesticides or herbicides on the CNF.

B.6.4 Equipment Repair and Replacement

Poles or structures support a variety of equipment, such as conductors, insulators, switches, transformers, lightning arrest devices, line junctions, and other electrical equipment. In order to maintain uniform, adequate, safe, and reliable service, electrical equipment may need to be added, repaired, or replaced during operations. An existing transmission or distribution structure may be removed and replaced with a larger/stronger structure, typically steel if the existing structure is wood, at the same location or a nearby location, due to damage or changes in conductor size. Equipment repair or replacement generally requires a crew to gain access to the location of the equipment to be repaired or replaced. The crew normally consists of four men with two to three trucks, a boom or line truck, an aerial-lift truck, and an assist truck. If no vehicle access exists, the crew and material are flown in by helicopter.

B.6.5 Insulator Washing

In some areas prone to atmospheric moisture, condensation combined with dust on porcelain insulators can create an electrical discharge. This discharge, known as “arcing,” may cause outages. These outages caused by this condition can be prevented by routinely washing the insulators. The process of washing insulators involves driving a washer truck to within 6 feet of the facility and using a high-pressure hose to spray deionized water at the insulators. A crew of two workers driving a washer truck would be required for this operation. The space needed at each location is approximately 30 feet by 40 feet. Typically, approximately 30 minutes is required to wash and set up each insulator pole set. Insulators are typically inspected on an annual basis to determine if washing is required.

B.6.6 Vegetation Management

Tree limb contact with electric lines may cause power outages and cause arcing that serves as an ignition point for wildfires. Fast-growing or diseased, dying, or dead trees within and adjacent to the ROW may require removal during O&M of the electric lines to prevent circuit

interruptions or reduce potential fire hazards. Regular inspection, regardless of habitat type, is necessary to maintain proper tree-to-conductor clearances consistent with PRC Section 4293 and CPUC General Order 95. SDG&E typically conducts tree-trimming activities with a two- to three-person crew, a one-person aerial-lift truck, and a chipper trailer. Although the time required to complete tree trimming varies according to location, SDG&E can complete typical tree-trimming activities in one day. SDG&E annually inspects trees in the SDG&E service area for trimming needs.

B.6.7 Use of Helicopters

Each electric transmission line is inspected several times a year via helicopter. Helicopters may also be used to deliver equipment, position poles and structures, string lines, and position aerial markers, as required by Federal Aviation Administration (FAA) regulations. SDG&E's Transmission and Distribution Departments use helicopters for patrolling transmission and distribution lines during trouble jobs that are in areas of rough terrain or where vehicle access is limited. During trouble job patrolling, the helicopter either picks up the patrolman at the district yard or in the field. If the pickup occurs in the field, a pad or flat field to land on would be required. The area required for small helicopter staging is generally 100 feet by 100 feet, and the size of the crew varies from 4 to 10 crewmembers, 2 helicopter staff, and a water truck driver to apply water for dust control at the staging area. Most helicopter operations typically take 1 day.

B.6.8 Fire Protection

SDG&E would continue to comply with all applicable state and federal regulations, requirements, and procedures when conducting O&M activities. All O&M activities performed would be subject to the fire plan prepared for SDG&E's proposed project. This plan would be consistent with existing SDG&E fire plans and for projects on NFS lands would follow any applicable Project Activity Level (PAL) designations. PALs are forecasted risk levels calculated by the Forest Service to identify potential risks of fire occurring on National Forest System land. PALs are based on fire conditions, including local weather and vegetation conditions, and the designated level is made available by 4:00 p.m. daily for the following day.

B.6.9 Categories of Operation and Maintenance Work

Notifications to the Forest Service for O&M activities under the MSUP are grouped into five categories. Category 1 includes routine inspections with no ground-disturbing activities, and no notification or approval is required. Category 2 includes routine O&M activities within the permit area and may be conducted with notification but without additional review and approval from the Forest Service. Category 3 includes routine work outside of the permit area and requires Forest Service review and approval prior to implementation. Categories 4 and 5 are reserved for

Emergency Work and Catastrophic Events, and SDG&E would provide notifications to the Forest Service at the earliest opportunity.

B.7 SDG&E Applicant Proposed Measures and Protocols

B.7.1 Applicant Proposed Measures

SDG&E proposes applicant proposed measures (APMs) that would be followed during all project-related construction activities. APMs are specific to environmental issue areas, such as aesthetics, air quality, biological resources, cultural resources, fire hazards, hydrology, noise, and transportation. Table B-12, Applicant Proposed Measures for Each Issue Area, lists APMs that are applicable to each environmental issue area, while Table B-13, SDG&E Proposed Applicant Proposed Measures, lists the APMs as proposed by SDG&E (SDG&E 2013a).

All project-related construction activity is subject to the APMs. In addition, all project personnel are subject to training prior to beginning work on the project to ensure that the APMs, environmental laws and regulations, and all other agency requirements are understood and followed.

The impact analysis in this EIR/EIS assumes implementation of all APMs as part of SDG&E's proposed project and alternatives. However, where other impacts are identified that are not addressed by these APMs or where the APMs are not considered adequate under CEQA and NEPA to reduce impacts, additional mitigation measures are provided in Section D, Environmental Analysis, of this EIR/EIS.

Table B-12
Applicant Proposed Measures for Each Issue Area

Issue Area	Applicable APMs
General	APM GEN-01 through APM GEN-08
Visual Resources	APM VIS-01 through APM VIS-05
Air Quality	APM AIR-01 through APM AIR-05
Biological Resources	APM BIO-01 through APM BIO-10
Cultural and Paleontological Resources	APM CUL-01 through APM CUL-09
Fire Hazards	APM HAZ-01 through APM HAZ-06
Hydrology and Water Quality	APM HYD-01 through APM HYD-11
Noise	APM NOI-01 through APM NOI-10
Transportation and Traffic	APM TRANS-01 through APM TRANS-07

Table B-13
SDG&E Proposed Applicant Proposed Measures

APM No.	Description
General	
APM GEN-01	Native soil not used for backfill will be spread on site, if clean, or hauled off site and disposed of at an approved facility. Construction activities that involve placement of native, clean soil will be managed by employing BMPs that minimize soil erosion and impacts on surrounding vegetation per the SDG&E Water Quality BMP Manual. BMPs such as silt fencing or fiber rolls will be installed where necessary (e.g., in high-velocity flow areas and in areas of steep slope), and soil will be placed and compacted in a manner that sufficiently controls erosion and sediment discharge from the site.
APM GEN-02	Where distribution and power lines are removed, the old conductor will be wound onto wooden spools, placed on flatbed trucks, and recycled at an approved facility.
APM GEN-03	Old poles, associated hardware, and any other debris generated from construction activities will be removed from the site and placed on flatbed trucks for recycling or disposal at an approved facility.
APM GEN-04	The entire existing wooden pole will be removed unless protection of an environmental resource requires the pole to be cut off at the surface and the base left in place.
APM GEN-05	Imported material may be used to backfill the holes as needed; however, as much native material as possible will be used on site. Construction activities that involve placement of native, clean soil will be managed by employing BMPs that minimize soil erosion and impacts on surrounding vegetation per the SDG&E Water Quality BMP Manual. BMPs such as silt fencing or fiber rolls will be installed where necessary (e.g., in high-velocity flow areas and in areas of steep slope), and soil will be placed and compacted in a manner that sufficiently controls erosion and sediment discharge from the site.
APM GEN-06	Prior to initiating construction, SDG&E will make all the appropriate and necessary notifications, including landowner notifications.
APM GEN-07	SDG&E will notify the Underground Service Alert a minimum of 48 hours in advance of excavating or conducting other ground-disturbing activities in order to identify buried utilities. Exploratory excavations (potholing) will also be conducted to verify the locations of existing facilities in the field, if necessary.
APM GEN-08	SDG&E will coordinate with CAISO to obtain all the necessary line clearances prior to beginning new conductor installation.
Visual Resources	
APM VIS-01	When construction has been completed, all temporary work areas will be restored to near pre-construction conditions in accordance with landowner agreements, in order to reduce potential visual contrast with the surrounding landscape setting.
APM VIS-02	Construction activities will be kept as clean and inconspicuous as practical. Where practical, construction storage and staging will be screened from close-range residential views with opaque fencing.
APM VIS-03	Non-specular conductors will be installed for new and replacement conductors along the electric line alignments in order to minimize the reflectivity and general visibility of new electric line facilities.
APM VIS-04	New and replacement poles to be installed along the electric line alignments will be reddish-brown, weathered-steel that will appear similar in color to existing wood poles seen in the Proposed Action area and will blend in with the surrounding landscape backdrop.
APM VIS-05	Any required lighting will be limited to individual pole work areas and will not exceed more than two hours per evening.

Table B-13
SDG&E Proposed Applicant Proposed Measures

APM No.	Description
Air Quality	
APM AIR-01	To the extent feasible, unnecessary construction vehicle and idling time would be minimized. The ability to limit construction vehicle idling time is dependent upon the sequence of construction activities and when and where vehicles are needed or staged. Certain vehicles, such as large diesel-powered vehicles, have extended warm-up times following start-up that limit their availability for use following start-up. Where such diesel-powered vehicles are required for repetitive construction tasks, these vehicles may require more idling time. The project would apply a "common sense" approach to vehicle use; if a vehicle is not required for use immediately or continuously for construction activities, its engine would be shut off.
APM AIR-02	To control fugitive dust, SDG&E would apply water or non-toxic soil stabilizers on all unpaved access roads, staging areas, and other work areas if construction activity causes persistent visible emissions of fugitive dust beyond the work area; cover loads in haul trucks or maintain at least six inches of free-board when traveling on public roads; and apply non-toxic soil stabilizers or water to form and maintain a crust on inactive construction areas (disturbed work areas that are unused for four consecutive days).
APM AIR-03	Traffic speeds on unpaved roads would be limited to 15 miles per hour.
APM AIR-04	SDG&E would maintain construction equipment per manufacturing specifications and use low-emission equipment as follows: all off-road and portable construction diesel engines not registered under the CARB Statewide Portable Equipment Registration Program, which have a rating of 50 horsepower (hp) or more, shall meet, at a minimum, the Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, Section 2423(b)(1), unless such an engine is not available for a particular item of equipment. In the event that a Tier 2 engine is not available for any off-road engine larger than 100 hp, that engine shall be equipped with a catalyzed diesel particulate filter (soot filter), unless the engine manufacturer indicates that the use of such devices is not practical for that particular engine type.
APM AIR-05	SDG&E would continue to utilize best management practices (BMPs) to minimize dust and erosion.
Biological Resources	
APM BIO-01	SDG&E will consult with the appropriate resource agencies regarding potential impacts to federally and state-listed species, as appropriate.
APM BIO-02	All work areas will be surveyed for special-status plant and wildlife species by a qualified biologist prior to the commencement of construction in accordance with SDG&E's pre-activity survey report requirements.
APM BIO-03	SDG&E will implement the protocols identified in the POD Appendix A: SDG&E NCCP Protocols (SDG&E 2013a).
APM BIO-04	SDG&E will implement the protocols identified in SDG&E Quino Checkerspot Butterfly (*Euphydryas editha quino*) Low-Effect Habitat Conservation Plan Sections 3.2 Actions to Minimize Impacts and 3.3 Actions to Mitigate Impacts.
APM BIO-05	Stringing site locations are designed with a preference toward placement within roadways, where possible, to minimize additional potential impacts from grading and vegetation removal that may otherwise be required if these stringing sites were required to be located in vegetated, off-road areas.
APM BIO-06	Although Laguna Mountains Skipper is not covered under SDG&E's Natural Community Conservation Plan (NCCP), SDG&E will utilize NCCP protocols 1, 2, 3, 5, 7, 8, 10, 11, 13, 14, 17, 24, 25, 29, 34, 35, 41, 44, 48, 54, 55, and 57 in United States (U.S.) Forest Service- (Forest Service-) modeled critical habitat and occupied habitat to minimize any potential impacts to this species. In addition, SDG&E will have a qualified biologist survey any Laguna Mountains Skipper habitat prior to work.
APM BIO-07	If California spotted owls are identified in the vicinity of proposed work areas during the pre-activity survey process, SDG&E will consult with the appropriate resource agencies to avoid impacts to nesting California spotted owl.

Table B-13
SDG&E Proposed Applicant Proposed Measures

APM No.	Description
APM BIO-08	SDG&E will design and install all new poles to conform to the guidelines in the Suggested Practices for Avian Protection on Power Lines Manual developed by the Avian Power Line Interaction Committee.
APM BIO-09	If active bat roosts are identified during pre-activity surveys, SDG&E will coordinate with the U.S. Fish and Wildlife Service/California Department of Fish and Wildlife as appropriate.
APM BIO-10	SDG&E will eliminate existing access roads that will no longer be used due to removal or relocation of facilities, and will return the land to near pre-construction conditions.
Cultural and Paleontological Resources	
APM CUL-01	Prior to construction, all SDG&E, contractor, and subcontractor personnel will receive training regarding the appropriate work practices necessary to effectively implement the APMs and to comply with the applicable environmental laws and regulations, including the potential for exposing subsurface cultural, archaeological, and paleontological resources and how to recognize possible buried resources. This training will include a presentation of the procedures to be followed upon discovery or suspected discovery of cultural and archaeological materials, including Native American remains and their treatment, as well as of paleontological resources.
APM CUL-02	Intensive pedestrian surveys will be conducted prior to construction in those areas within the ROWs for which initial survey access was not granted to determine the potential for impacts to cultural resources in these areas. Where possible, engineering design will be re-evaluated to determine whether facilities can be relocated to avoid any cultural resources identified from these additional surveys. If relocation is not feasible, APM CUL-03 will be implemented to minimize impacts to sensitive cultural resources.
APM CUL-03	All potentially National Register-eligible or archaeologically sensitive sites, as defined in the Cultural Resources Technical Report, that will not be directly affected by construction but are within 50 feet of replacement pole locations will be designated as Environmentally Sensitive Areas (ESAs). Potentially eligible resources include those that are recommended eligible, as well as unevaluated sites. Protective fencing or other markers will be erected and maintained to protect these ESAs from inadvertent trespass for the duration of construction in the vicinity. ESAs will not be signed or marked as cultural, historical, or archaeological resources.
APM CUL-04	An archaeological or cultural monitor will be present during construction activities that occur within or adjacent to identified archaeological or cultural resource site boundaries, respectively, as identified in the Cultural Resources Technical Report to ensure conformance with prescribed avoidance measures. The monitor will identify potential archaeological or cultural resources that may be unexpectedly encountered during construction and will have the authority to divert or temporarily halt construction activities in the area of discovery. In the event that archaeological or cultural resources are discovered, the monitor will stop work and notify the Principal Investigator (PI), who will inform SDG&E and the Forest Service Heritage Program Manager (HPM) of the stoppage. The archaeologist, in consultation with the Forest Service HPM and SDG&E's Cultural Resource Specialist, will determine the significance of the discovered resources. The Forest Service HPM and 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. For significant cultural resources, preservation in-place will be the preferred manner of mitigating for impacts. For resources that cannot be preserved in place, a Research Design and Data Recovery Program will be prepared and carried out to mitigate impacts in consultation with the Forest Service HPM, the Tribes, and the State Historic Preservation Office (SHPO). No collection of archaeological or cultural resources will occur on Forest Service property without prior Forest Service HPM consent. Daily logs will be kept by all monitors, and a monitoring report (with appropriate graphics), which describes the results, analyses, and conclusions of the monitoring program, will be prepared at the conclusion of each phase of monitoring. Any new cultural sites or features encountered will be recorded with the South Coastal Information Center. Monitors will also identify and delineate an approved footpath through the archaeological and cultural resource sites for construction crews, as needed.

Table B-13
SDG&E Proposed Applicant Proposed Measures

APM No.	Description
APM CUL-05	SDG&E will implement all applicable site-specific impact avoidance measures identified and described in the Cultural Resources Technical Report, such as avoiding access road improvements within culturally sensitive areas unless improvements are required for safety reasons; replacing poles within the previously disturbed area (two to four feet) represented by the existing pole locations, where necessary, to avoid sensitive resources; and cutting existing poles off at grade level, where specified and landowner approval is provided. Same-hole pole placement will also be utilized on a case-by-case basis. No new pole locations will be placed within cultural resource boundaries unless the appropriate consultation (including Section 106) has taken place. No temporary poles will be located within sites unless the appropriate consultation (including Section 106) has taken place.
APM CUL-06	In consultation with the Forest Service HPM, BIA Archaeologist, the Tribes, and the SHPO, SDG&E will develop a Cultural Resources Treatment Plan that includes procedures for protection and avoidance, evaluation and treatment, and the curation of any potentially register-eligible cultural materials. Specific protective measures, including a monitoring program, will be defined in the Cultural Resources Treatment Plan to reduce potential adverse impacts on unknown cultural resources to less-than-significant levels.
APM CUL-07	Should any previously unidentified prehistoric or historic artifacts; indicators or examples of cultural, archaeological, or paleontological resources; or potential human remains or funerary items be discovered during the course of site preparation, grading, excavation, construction, or other activities, all operations within 50 feet of an inadvertent discovery during such activities shall cease and the PI will contact the Forest Service HPM and SDG&E's Cultural Resource Specialist. Once a find has been identified, the Forest Service HPM and SDG&E's Cultural Resources Specialist will determine if additional cultural resources work, including but not limited to a formal evaluation or Proposed Action redesign, are required treatment. Ground-disturbing work in the vicinity of the discovery will not resume without authorization by the Forest Service HPM and after the appropriate consultation has taken place.
APM CUL-08	A paleontological monitor will be present for excavation activities conducted at locations with underlying PFYC Class 3 geologic deposits where new steel poles are unable to be installed in the same location as of that of the existing wood pole. In the event that fossils are unexpectedly encountered during construction, a qualified paleontologist will have the authority to divert or temporarily halt construction activities in the area of discovery to allow the recovery of fossil remains in a timely fashion. When significant fossils are discovered, the paleontologist will recover them in accordance with professional standards. Fossil remains collected during monitoring and salvage will be cleaned, repaired, sorted, cataloged, and curated in a scientific institution with permanent paleontological collections. The paleontological monitor will follow the procedures outlined in the Paleontological Monitoring and Treatment Plan, which will be prepared and will include information regarding pre-construction field surveys, construction personnel training, necessary permits, research design, monitoring methodology, fossil discovery and recovery protocols, fossil preparation and curation procedures, and the preparation of a final monitoring report.
APM CUL-09	SDG&E will flag potentially sensitive archaeological resources identified in the vicinity of access roads for avoidance and prohibit any grading activities in the vicinity as part of construction or operation and maintenance.
Public Health (Fire Hazards)	
APM HAZ-01	SDG&E will implement its existing Electric Standard Practice (ESP) 113-1, which includes requirements for carrying emergency fire suppression equipment, conducting worker-awareness trainings that cover fire prevention and safety, restrictions on smoking and idling vehicles, and construction restrictions during Red Flag Warnings (RFWs).
APM HAZ-02	SDG&E will implement Electric Distribution Operation 3017 to ensure that the proper steps are taken to maintain fire safety while meeting all operational and service requirements.

Table B-13
SDG&E Proposed Applicant Proposed Measures

APM No.	Description
APM HAZ-03	Prior to starting construction activities, SDG&E will clear dead and decaying vegetation from Proposed Action work areas where personnel are active or where equipment is in use or being stored within ROWs, staging areas, stringing sites, and access roads.
APM HAZ-04	Prescribed fire tools and backpack pumps with water will be kept within 50 feet of work activities to ensure the capability for rapid extinguishment in the event of a fire.
APM HAZ-05	Weather and fire danger will be monitored daily by SDG&E meteorologists and wildland fire specialists in order to provide timely and immediate communication of significant changes which could impact the Proposed Action.
APM HAZ-06	No construction work will occur for areas affected by a RFW or Project Activity Level E designation.
Hydrology and Water Quality	
APM HYD-01	All concrete washouts will be conducted either into excavations where the concrete was poured within designated concrete washout stations, or will be captured using a washout recycling system. Crews will not be allowed to dispose of concrete directly onto the ground.
APM HYD-02	When construction activities are required adjacent to flowing aquatic resources, sediment barriers will be placed between the work area and flowing water.
APM HYD-03	In areas where topsoil has not been salvaged, construction activities will be limited when the environmental monitor determines that the soil is too wet to adequately support vehicles and equipment. Where soil conditions are deemed too wet to work, one of the following measures will apply: • Access will be limited to the minimum area feasible for construction. Where possible, vehicles and equipment will be routed around wet areas so long as the re-route does not cross into sensitive resource areas. If wet areas cannot be avoided and soil moisture is too high to strip topsoil, BMPs—including the use of wide-track or low ground pressure equipment or installation of prefabricated equipment pads or timber mats—will be implemented for use in these areas to minimize rutting and off-site sedimentation.
APM HYD-04	Any areas not surveyed for potentially jurisdictional wetlands or waters due to limited access will be surveyed prior to the start of construction activities and potential impacts will be assessed and the appropriate jurisdictional permits will be obtained as needed.
APM HYD-05	SDG&E will prepare and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP will identify BMPs based on its Water Quality BMPs Manual for each activity that has the potential to degrade surrounding water quality through erosion, sediment run-off, and other pollutants. These BMPs will then be implemented and monitored by a Qualified SWPPP Practitioner.
APM HYD-06	During any construction activities, SDG&E will flag all hydrological resources occurring within work areas for avoidance, and all construction activities will occur outside of these resources.
APM HYD-07	SDG&E will comply with Forest Service requirements pertaining to hydrology and water quality, as detailed in the Forest Service's Water Quality Management for National Forest System Lands in California, BMPs.
APM HYD-08	If dewatering is required, dewatering systems—as outlined in SDG&E's Water Quality BMPs Manual—will be used to dispose of groundwater. Typically, groundwater will be pumped into truck-mounted storage tanks and either discharged to land in accordance with Regional Water Quality Control Board regulations or transported to an authorized discharge location.
APM HYD-09	SDG&E will implement site-specific erosion and sediment control devices and the proper handling of potentially hazardous materials.
APM HYD-10	Following construction, the ROW, work areas, stringing sites, staging areas, and fly yards will be returned to near pre-construction conditions, which include re-establishing drainage patterns and vegetation, where feasible.

Table B-13
SDG&E Proposed Applicant Proposed Measures

APM No.	Description
APM HYD-11	Existing access roads will be utilized to access the replacement structures where helicopter-only access is not required.
Noise	
APM NOI-01	SDG&E will provide notice of the construction schedule to all property owners within 300 feet of the Proposed Action by mail at least one week prior to the start of construction activities. The announcement will state the construction start date, anticipated completion date, and hours of operation, as well as a telephone number to call with questions or complaints during construction.
APM NOI-02	Operating equipment will be positioned to maximize the distance to residences and to maintain safe and effective operation.
APM NOI-03	All internal combustion engine-driven equipment will be equipped with exhaust mufflers that are in good condition and meet or exceed the manufacturer's specifications. All equipment will be maintained and tuned according to manufacturer recommendations.
APM NOI-04	When backup alarms have more than one loudness setting, they will be set to the lowest setting that meets Occupational Safety and Health Administration safety requirements.
APM NOI-05	When located within 80 feet of residences, a temporary noise barrier with an effective height of approximately three feet will be placed between residences and stationary noise-generating equipment during use. The effective height is that of the barrier above the line-of-sight between the noise source and the noise-sensitive receiver.
APM NOI-06	Helicopters will be required to maintain a height of at least 500 feet when passing over residential areas, except when at temporary construction areas or actively assisting with conductor stringing. All helicopters will be required to maintain a lateral distance of at least 500 feet from all schools. No more than 64 flights per day will be conducted.
APM NOI-07	Residents who experience construction noise levels that exceed the applicable noise thresholds will be temporarily relocated, on an as-needed basis, for the duration of the activities that will impact them.
APM NOI-08	In the event that blasting is required within 325 feet of a residential property line, SDG&E will prepare and provide a blasting plan for the Proposed Projects that is consistent with SDG&E's blasting guidelines to reduce noise and vibration impacts from blasting activities. The blasting contractor will be required to obtain a blasting permit and explosive permit per the San Diego County Regulatory Ordinances.
APM NOI-09	Where appropriate, SDG&E will coordinate with the San Diego County noise control officer regarding helicopter flights between 6:30 a.m. and 7:00 a.m. to avoid any conflicts with the County noise ordinance.
APM NOI-10	If construction occurs outside the hours allowed by San Diego County, SDG&E will follow its established protocols and will provide advance notice by mail to all property owners within 300 feet of planned construction activities. The announcement will state the construction start date, anticipated completion date, and hours of construction.
Transportation and Traffic	
APM TRANS-01	To minimize traffic impacts, temporary lane closures will occur during off-peak traffic hours, to the extent practical, in order to minimize disruptions and traffic backups.
APM TRANS-02	Caution signs and/or flagmen will be used to regulate traffic where necessary and to maintain a safe transportation corridor during construction.
APM TRANS-03	Emergency vehicles will be provided access even in the event of temporary road or lane closures.
APM TRANS-04	SDG&E will coordinate isolated, temporary road closures with local jurisdictional agencies, as required, to cross these roadways, and perform work according to agency requirements.
APM TRANS-05	SDG&E will develop and implement a Traffic Control Plan during construction.

Table B-13
SDG&E Proposed Applicant Proposed Measures

APM No.	Description
APM TRANS-06	SDG&E will coordinate flight patterns with local air traffic control and the Federal Aviation Administration prior to construction to prevent any adverse impacts due to increased air traffic.
APM TRANS-07	Where replacement poles will be close to existing pole locations, existing access roads, spur roads, and turnarounds will be used to the extent possible to support construction activities and will continue to be used for future line maintenance.

Source: SDG&E 2013a.

B.8 References

SDG&E. 2013a. *Master Special Use Permit, Cleveland National Forest, Orange and San Diego Counties, California, Revised Plan of Development.* Prepared by Insignia Environmental. Encinitas, California: Insignia Environmental. April 2013. http://www.cpuc.ca.gov/environment/info/dudek/CNF/DR3Response.htm

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SDG&E. 2014a. *Power Line TL626 Alternative Route Analysis for the Cleveland National Forest Power Line Replacements Project.* Prepared by Insignia Environmental. Encinitas, California: Insignia Environmental. February 2014. http://www.cpuc.ca.gov/environment/info/dudek/CNF/SDG&E%20TL626%20Alternatives%20Analysis%20(02-03-14S).pdf.

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SDG&E. 2015b. Response A.12-10-009 to Cleveland National Forest Power Line Replacement Projects PTC Energy Division Data Request 11 (Dated May 8, 2015). CNF ED11-SDGE Questions 1-6. Response dated May 15, 2015.

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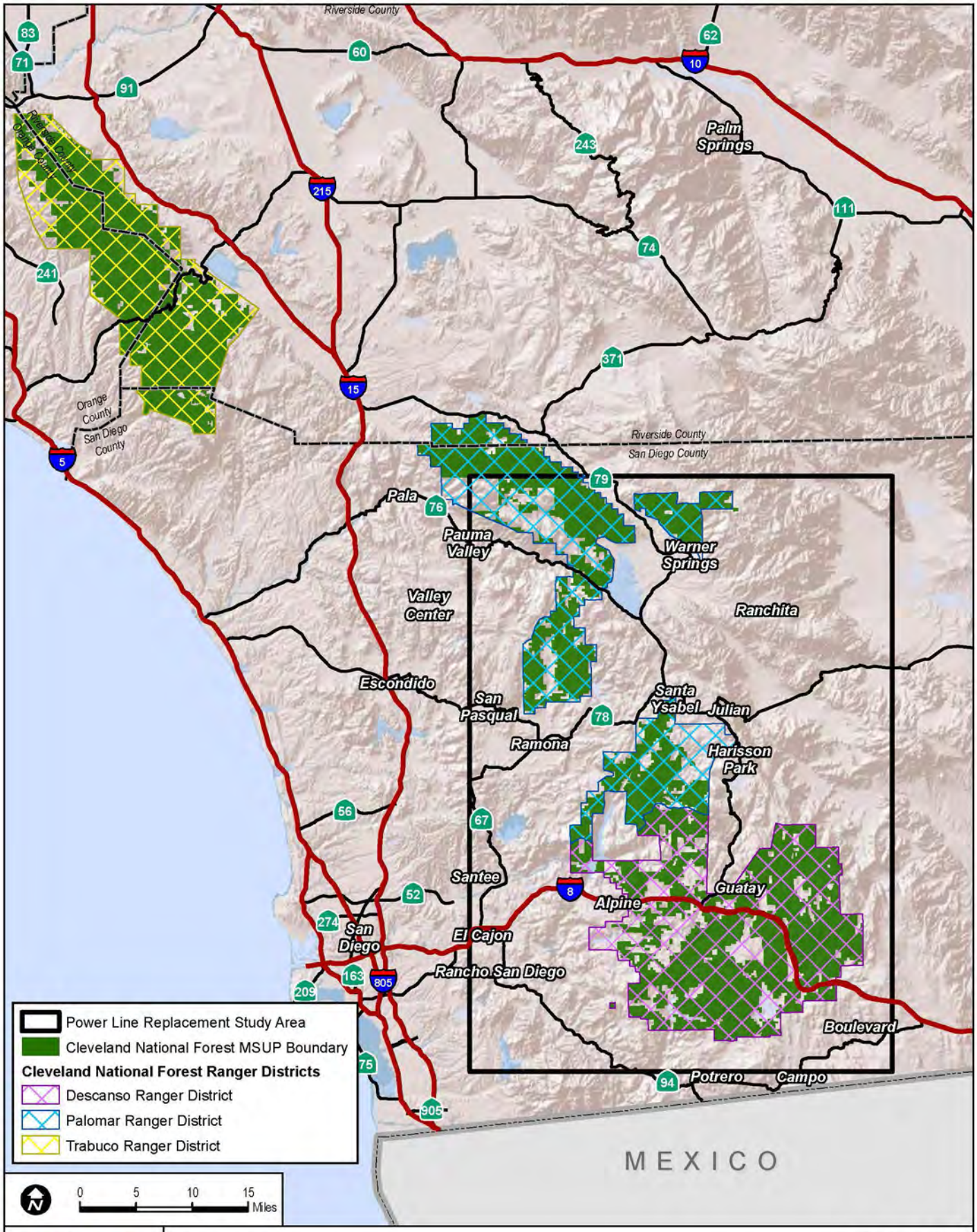

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SOURCE: USFS 2013; SDG&E 2013

FIGURE B-1

Regional Overview Map

MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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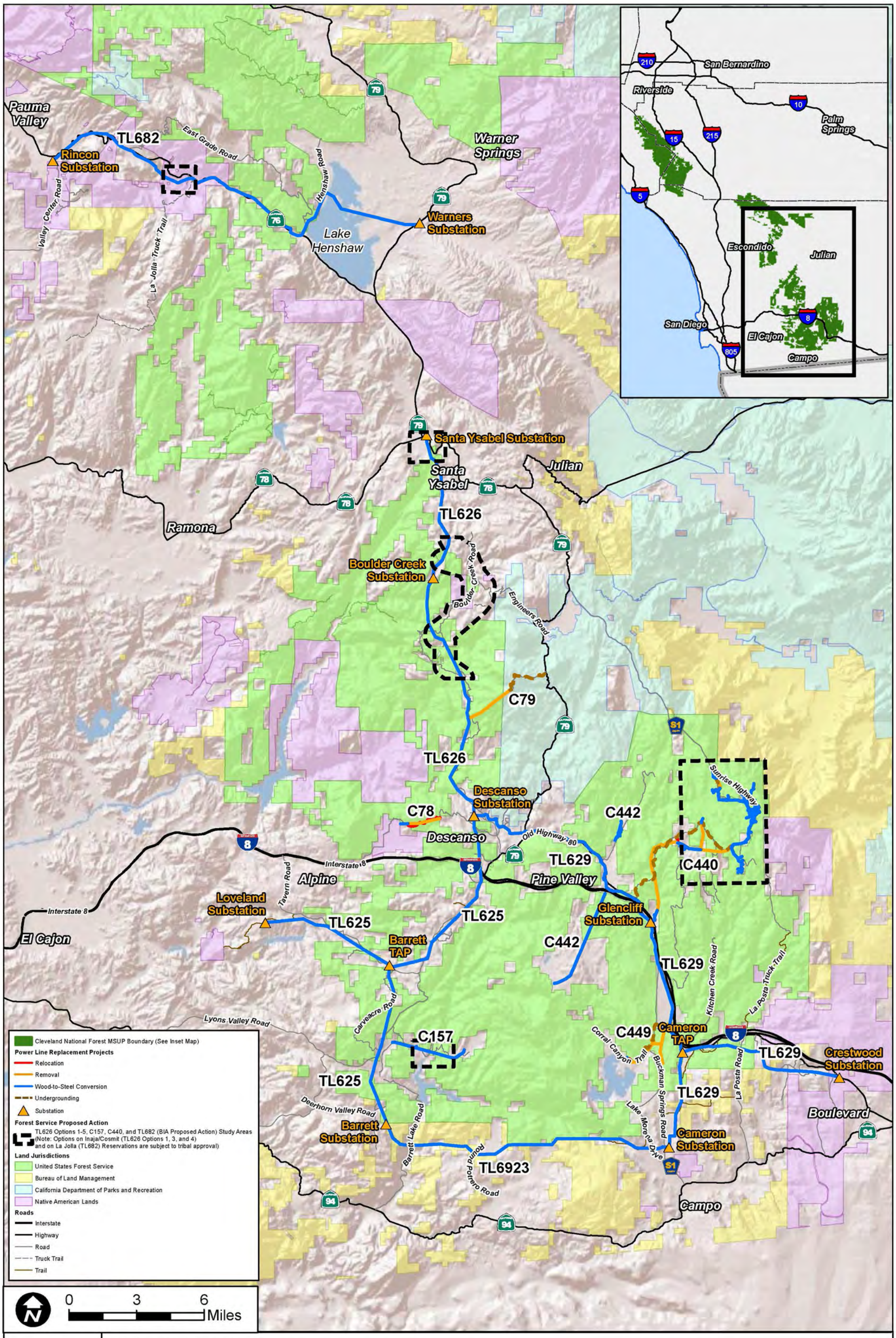

SOURCE: SDG&E 2011; SanGIS 2012; Bing Maps

Figure B-2

Power Line Replacement Projects Overview Map

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MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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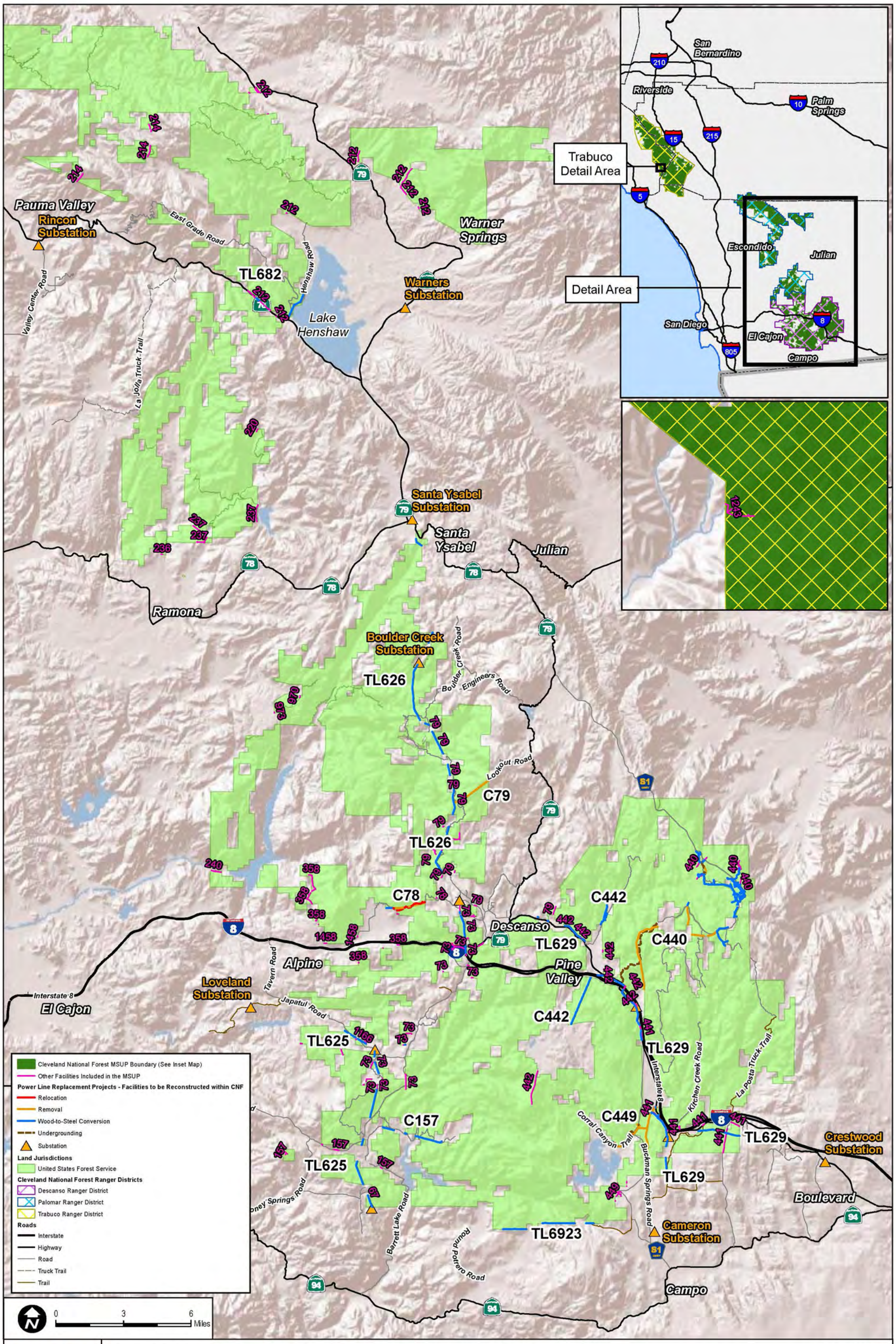

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SOURCE: SDG&E 2011; SanGIS 2012; Bing Maps

FIGURE B-2a

Facilities Included Under the MSUP

MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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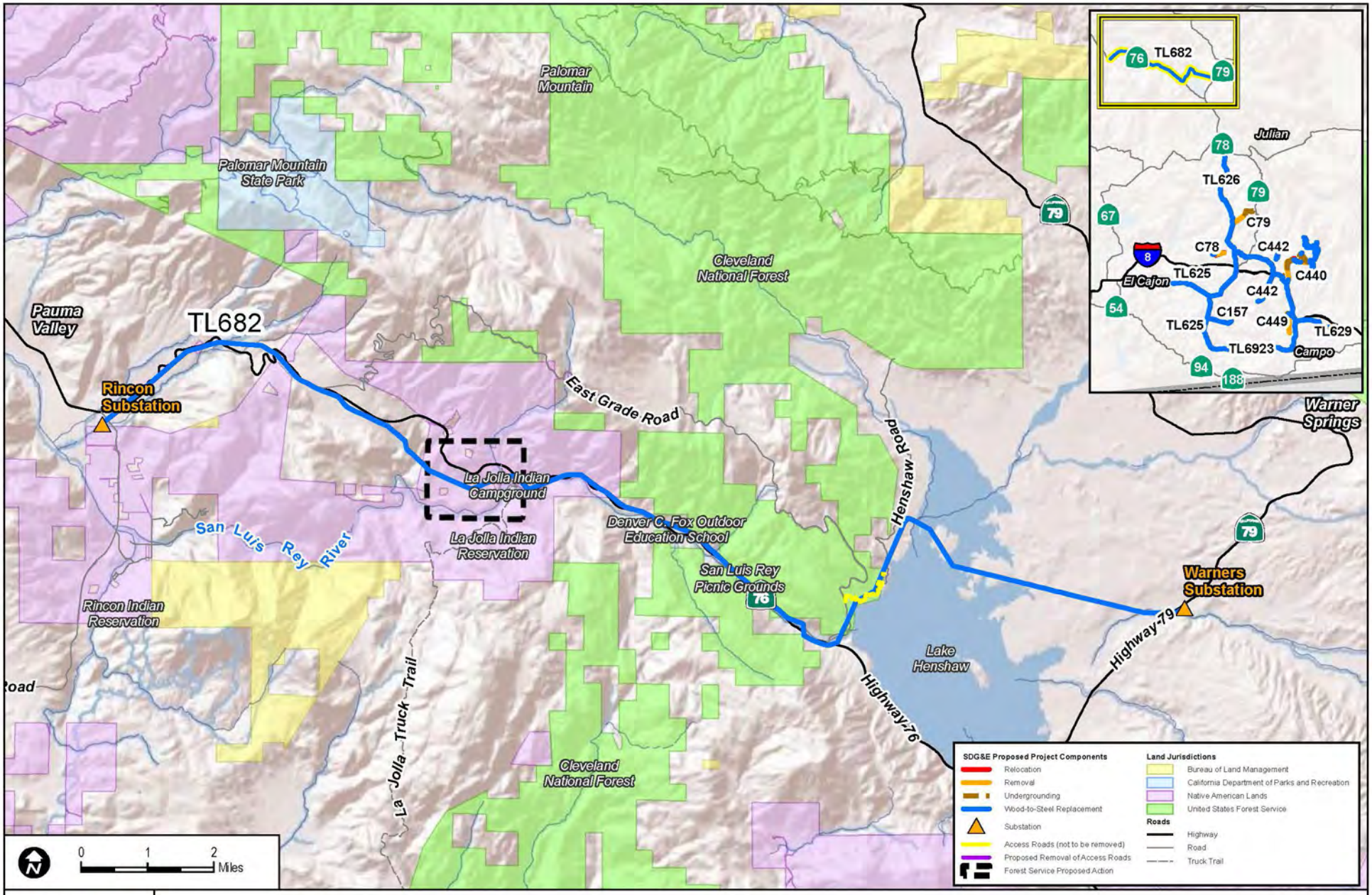

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SOURCE: SDG&E 2011; USGS; SanGIS 2012; Bing Maps

FIGURE B-3

TL682 Overview Map

MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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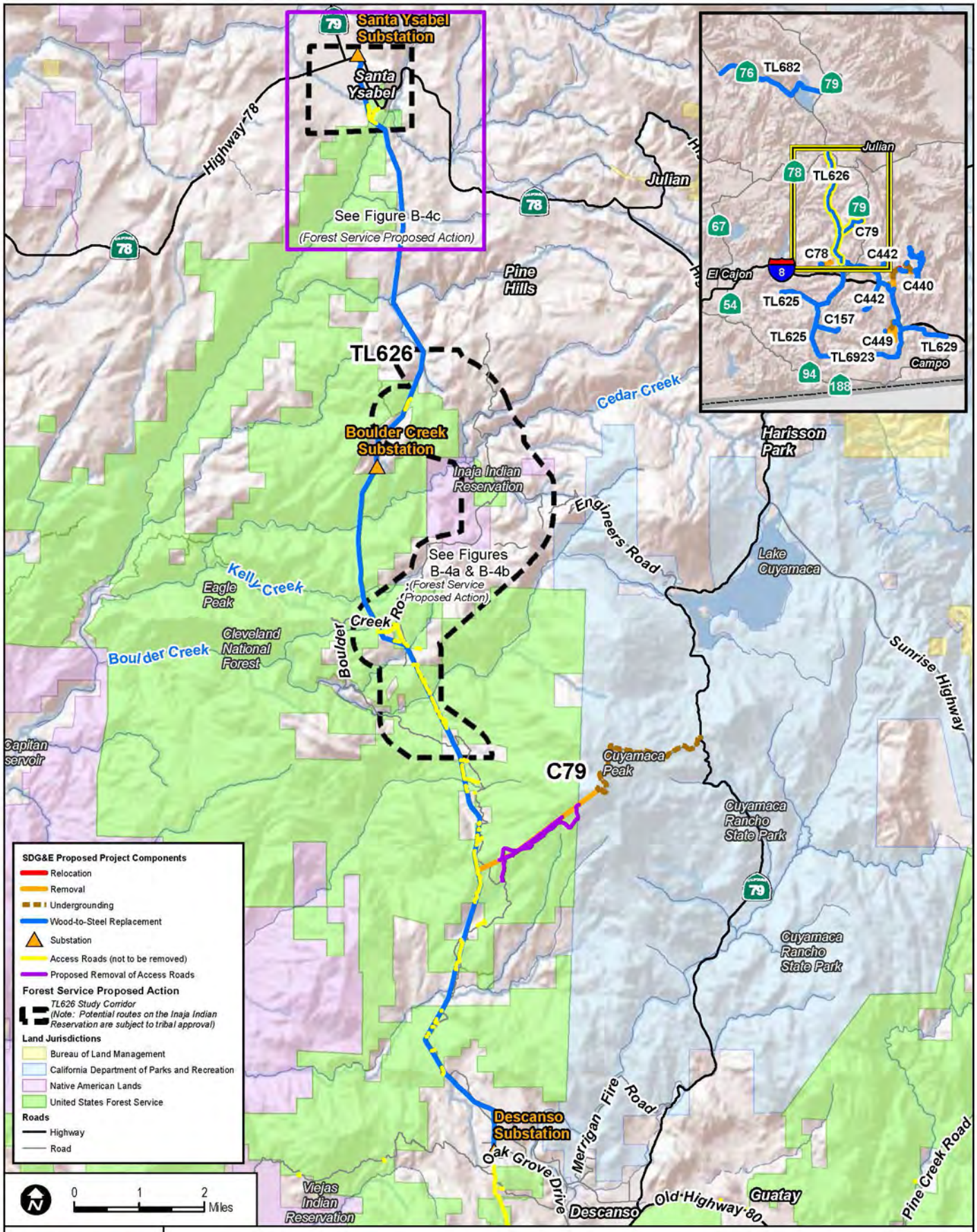

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SOURCE: SDG&E 2011; USGS; SanGIS 2009; Bing Maps

FIGURE B-4

TL626, C79 Overview Map

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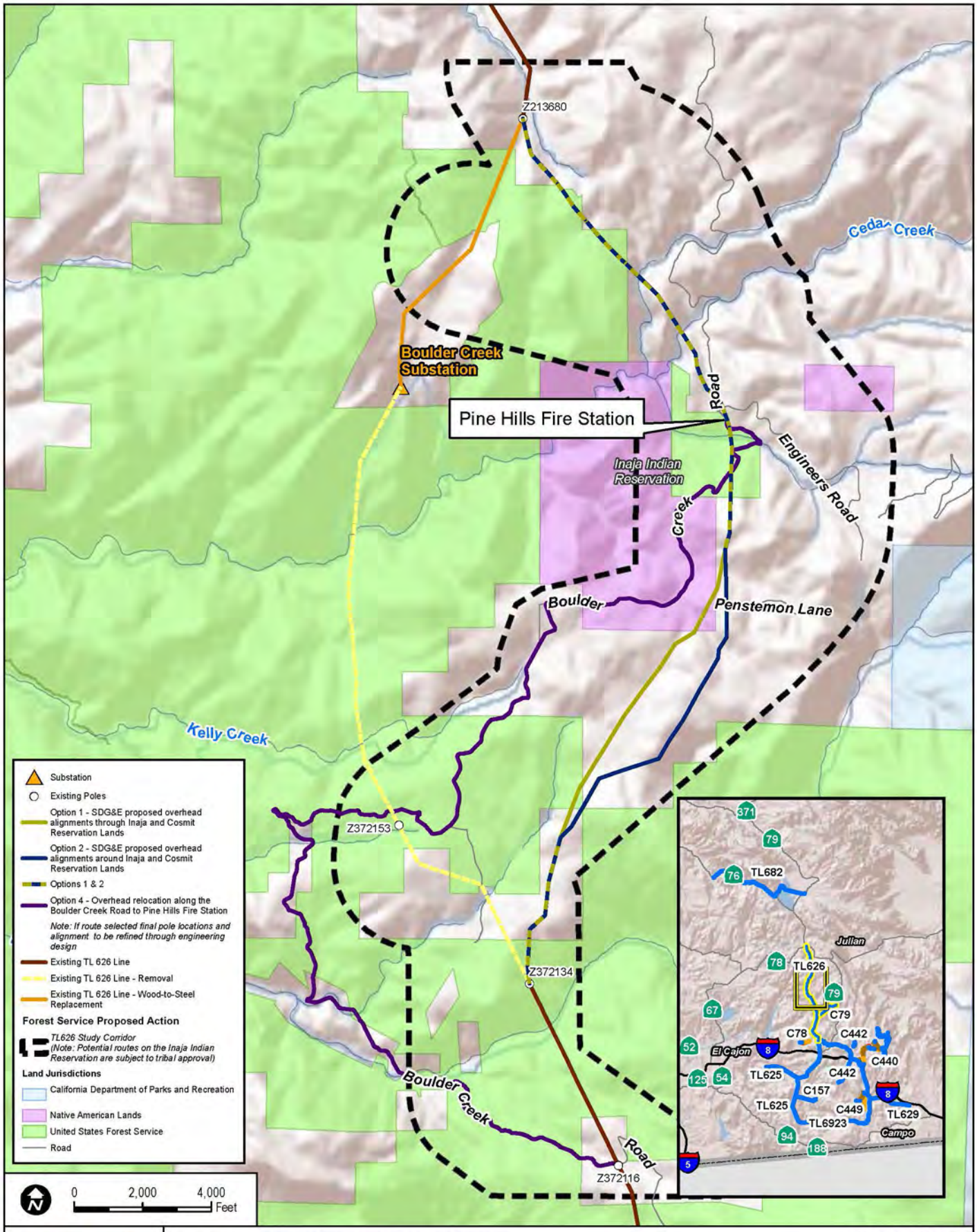

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SOURCE: SDG&E 2011, 2014; USGS; SanGIS 2009, 2012; Bing Maps

FIGURE B-4a

Forest Service Proposed Action - TL626 Alternative Overland Routes

(Options 1, 2 & 4)

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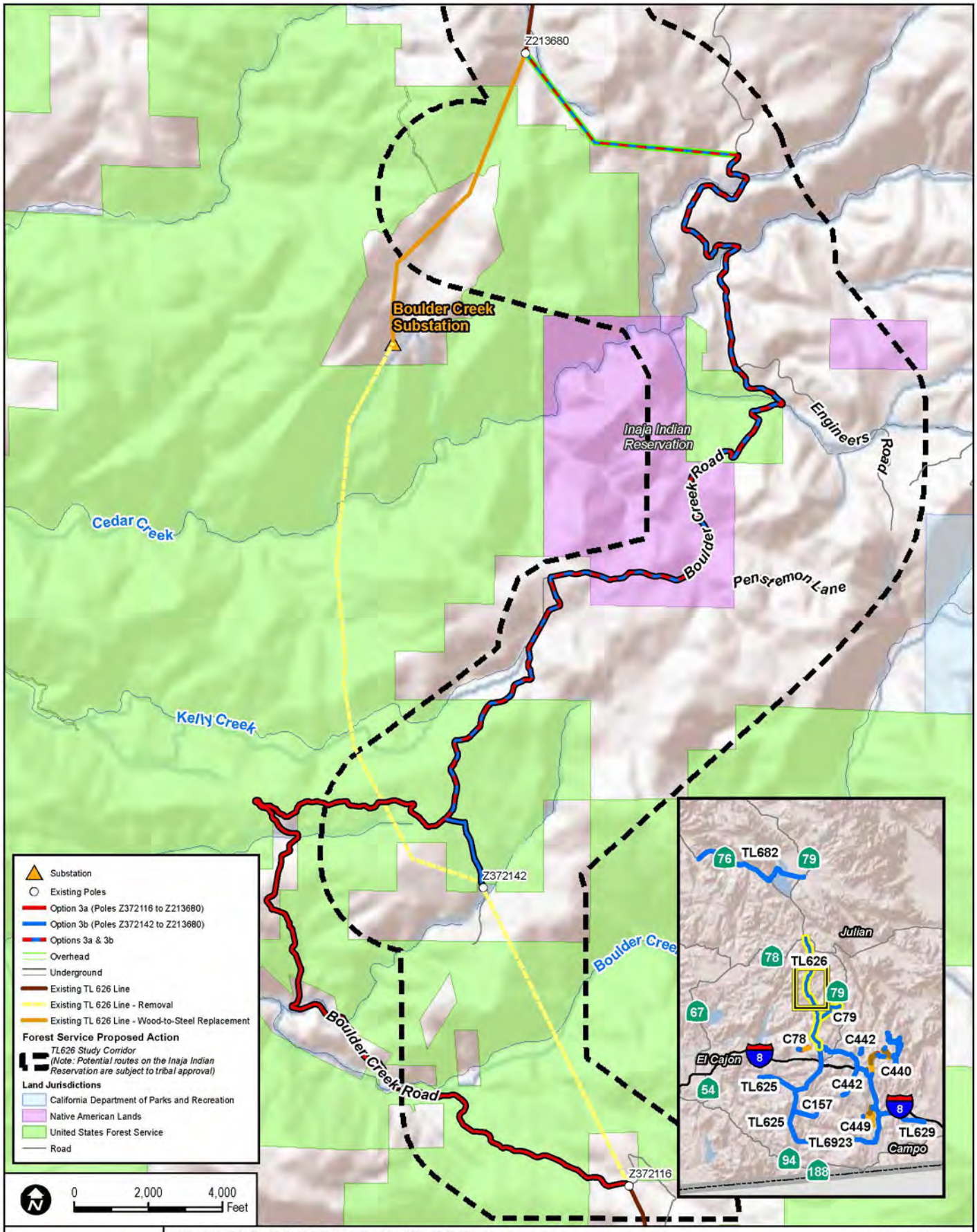

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SOURCE: SDG&E 2011, 2014; USGS; SanGIS 2009, 2012; Bing Maps

FIGURE B-4b

Forest Service Proposed Action - TL626 Underground Relocation in Boulder Creek Road
(Options 3a and 3b)

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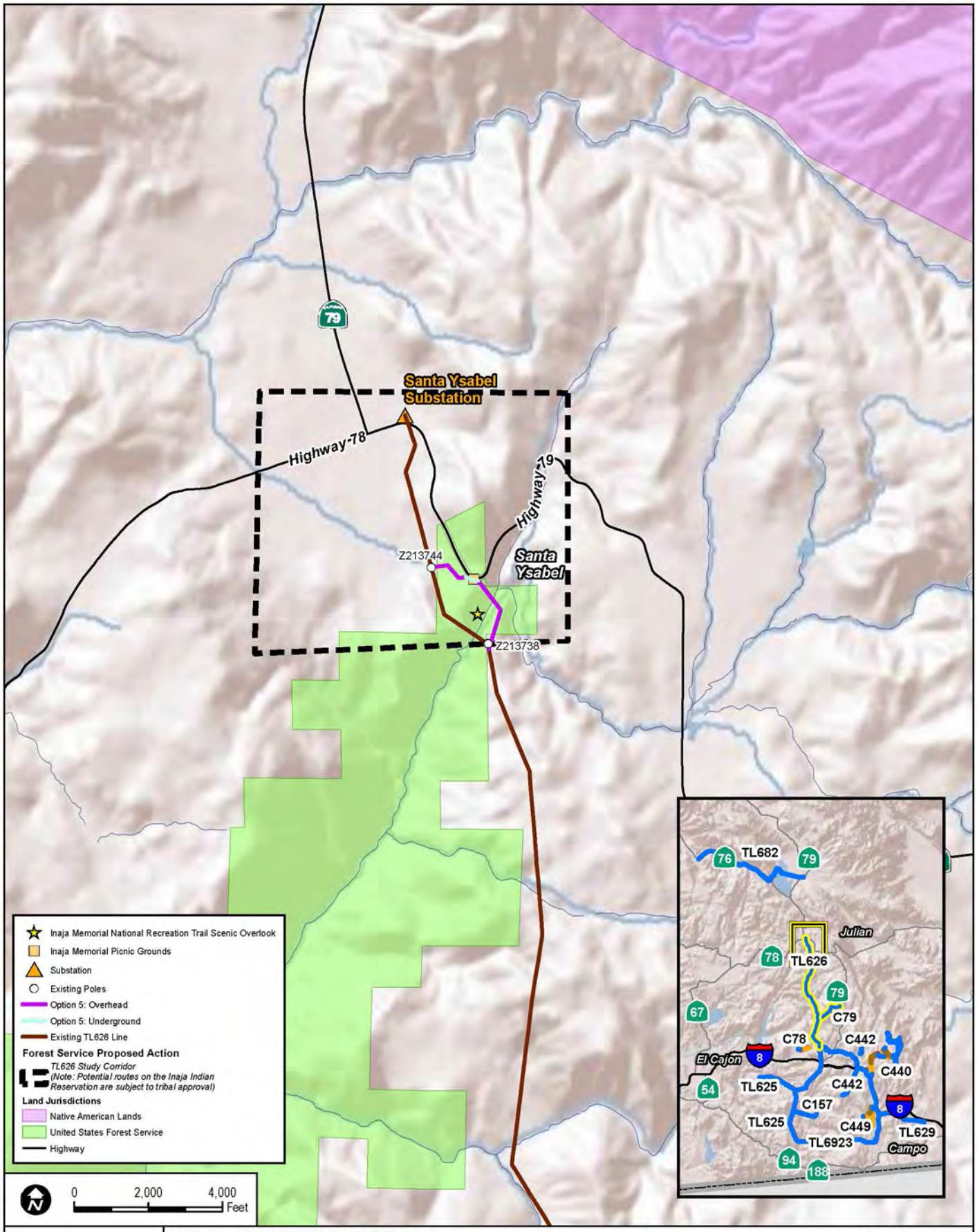

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SOURCE: SDG&E 2011; USGS; SanGIS 2012; Bing Maps

FIGURE B-4c

Forest Service Proposed Action - Reroute and Undergrounding around Inaja Picnic Area *(Option 5)*

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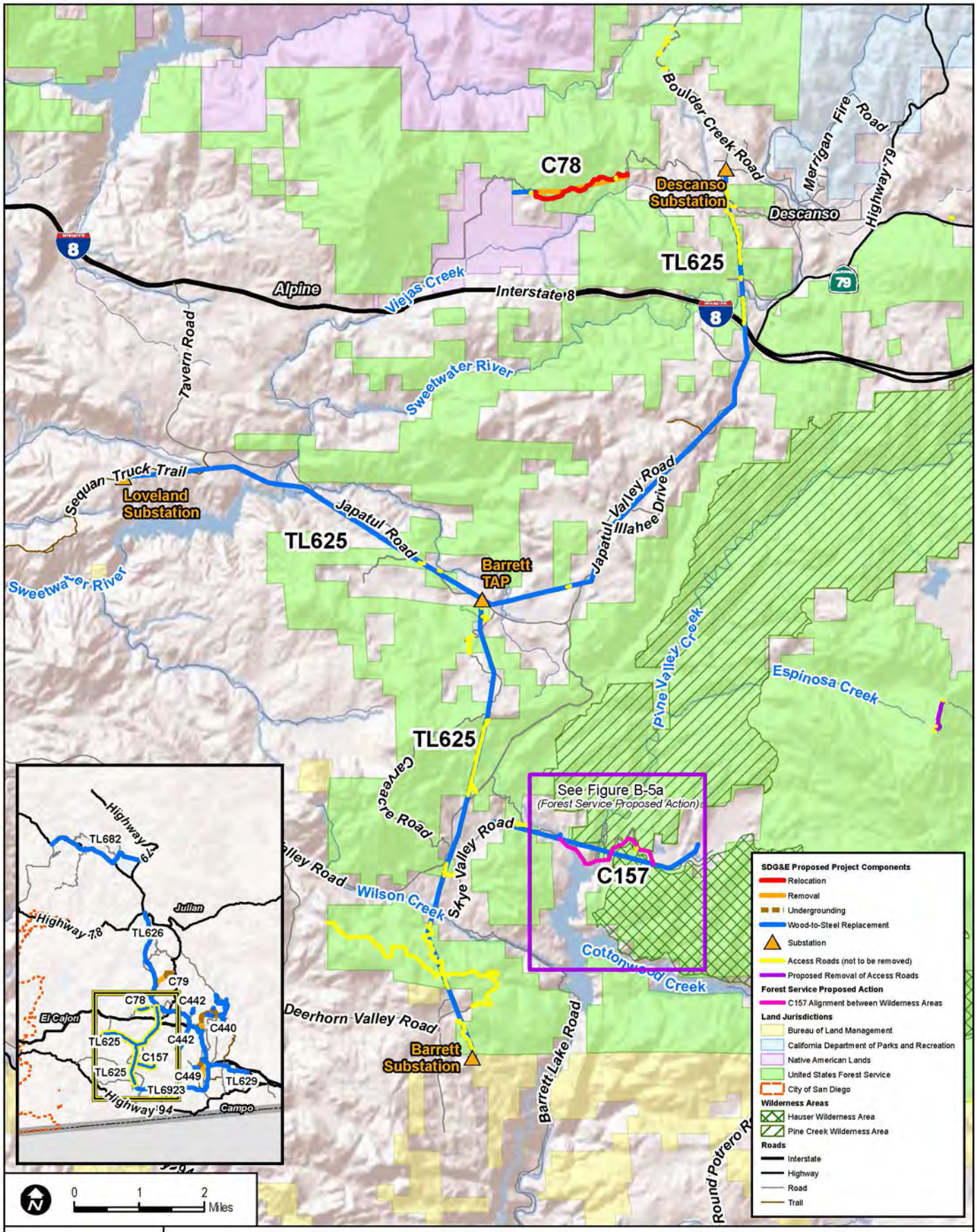

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SOURCE: SDG&E 2011, 2014; USGS; SanGIS 2012; Bing Maps

FIGURE B-5

TL625, C78, C157 Overview Map

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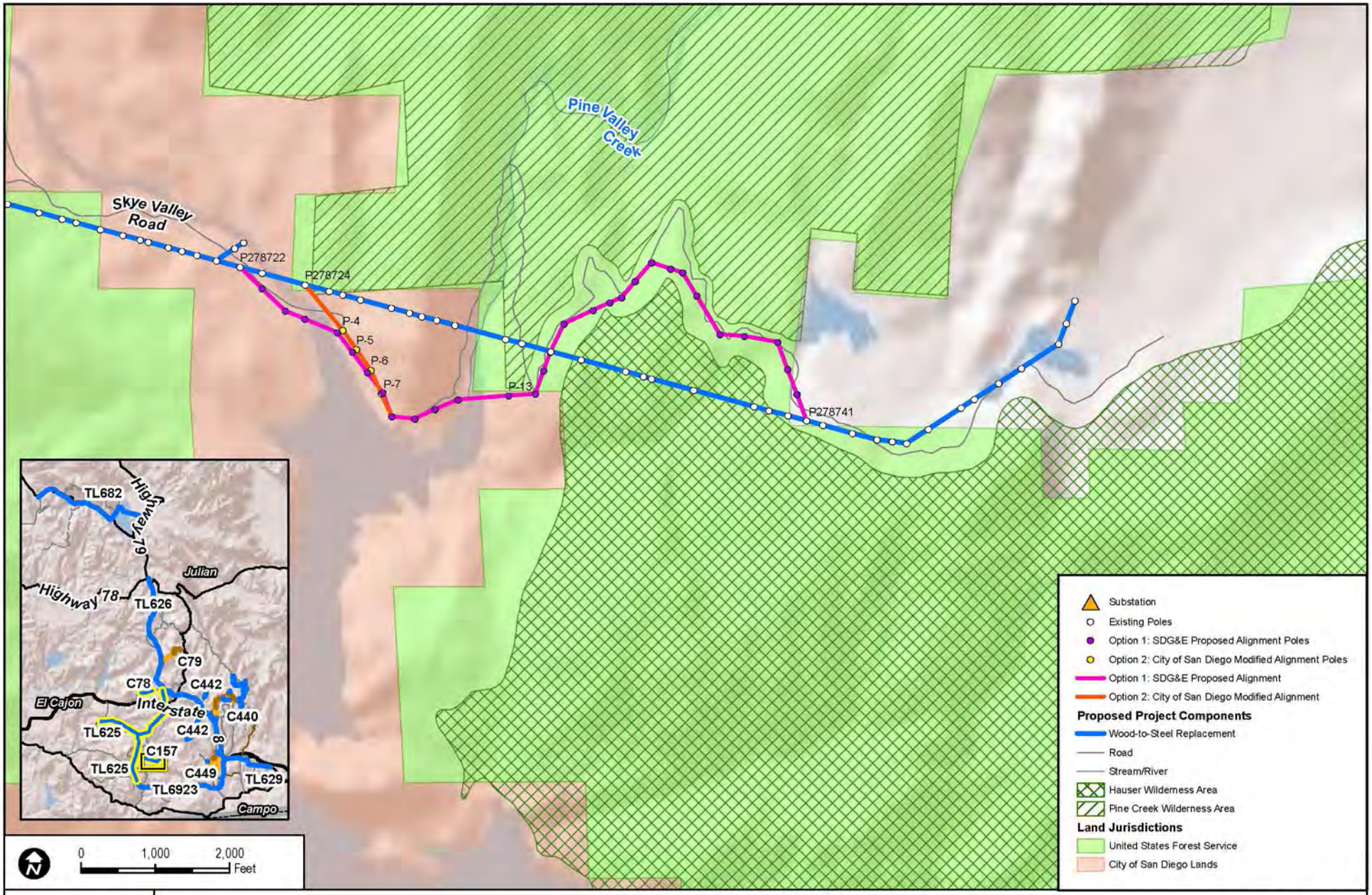

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SOURCE: SDG&E 2011, 2014; USGS; SanGIS 2009, 2012; Bing Maps

FIGURE B-5a

Forest Service Proposed Action - C157 Partial Relocation to Avoid Designated Wilderness

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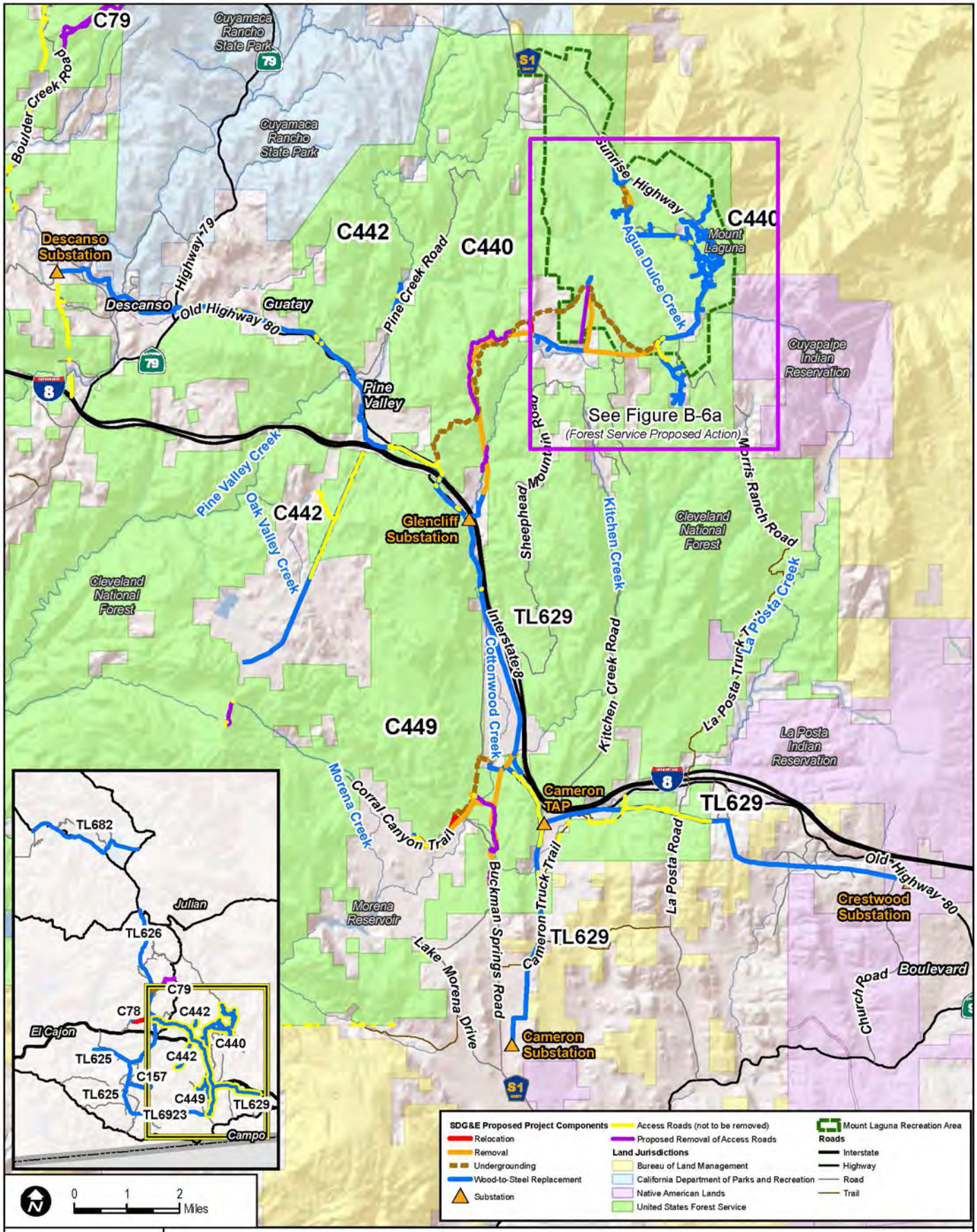

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SOURCE: SDG&E 2011; USGS; SanGIS 2012; Bing Maps

FIGURE B-6

TL629, C440, C442, C449 Overview Map

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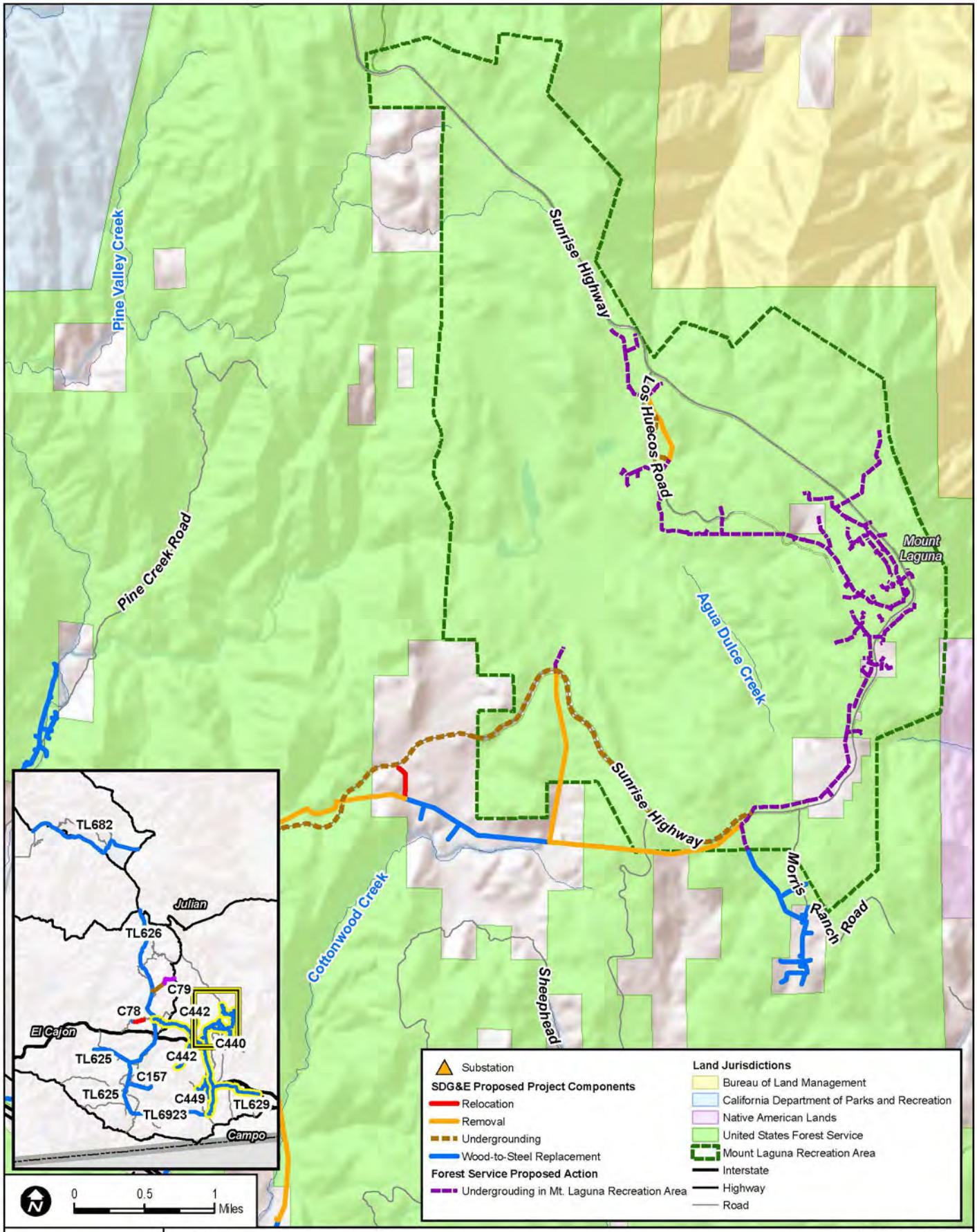

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SOURCE: SDG&E 2011; USGS; SanGIS 2012; Bing Maps

FIGURE B-6a

Forest Service Proposed Action - C440 Mount Laguna Recreation Area Underground Alternative

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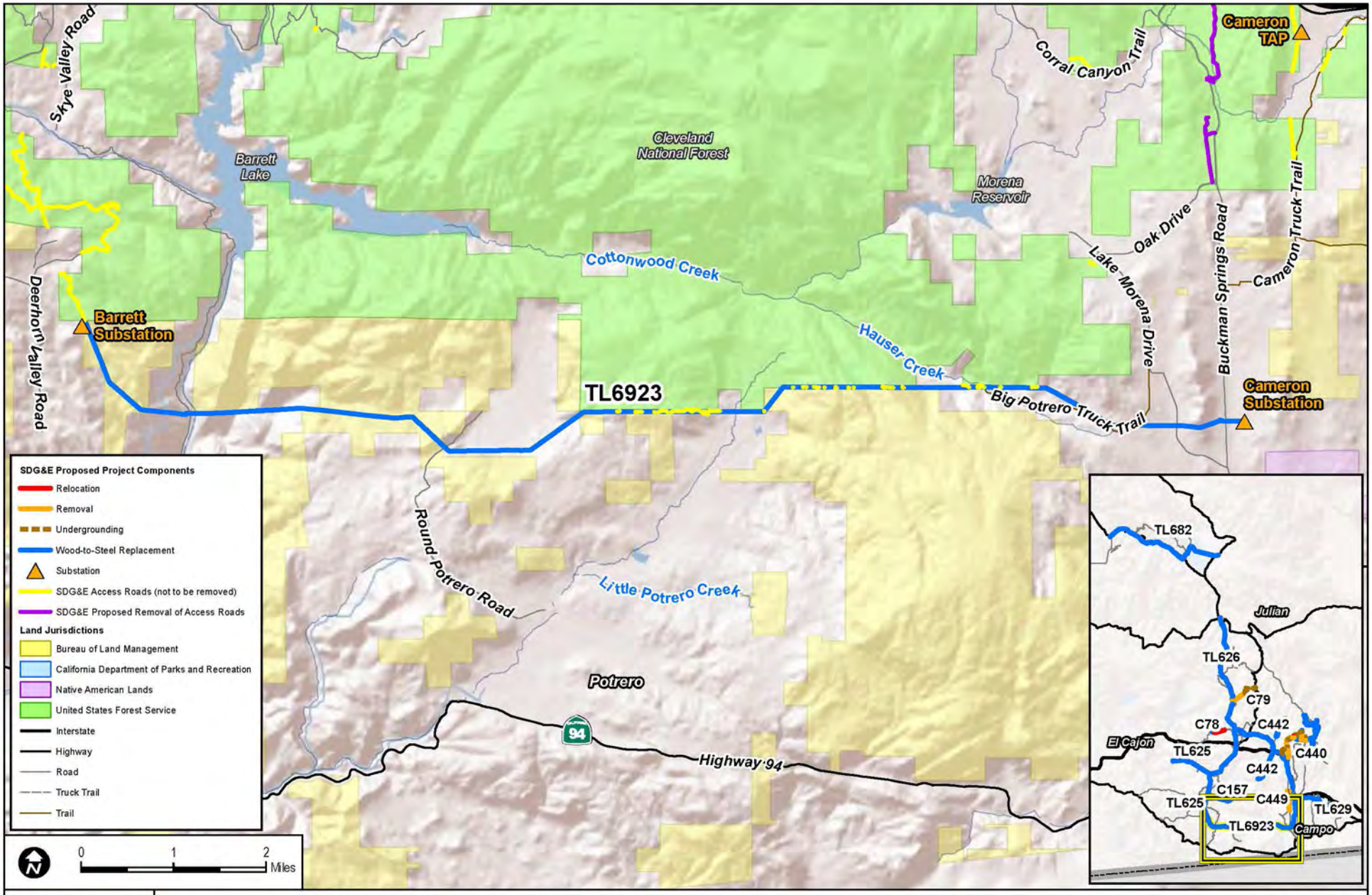

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SOURCE: SDG&E 2011; USGS; SanGIS 2012; Bing Maps

FIGURE B-7

TL6923 Overview Map

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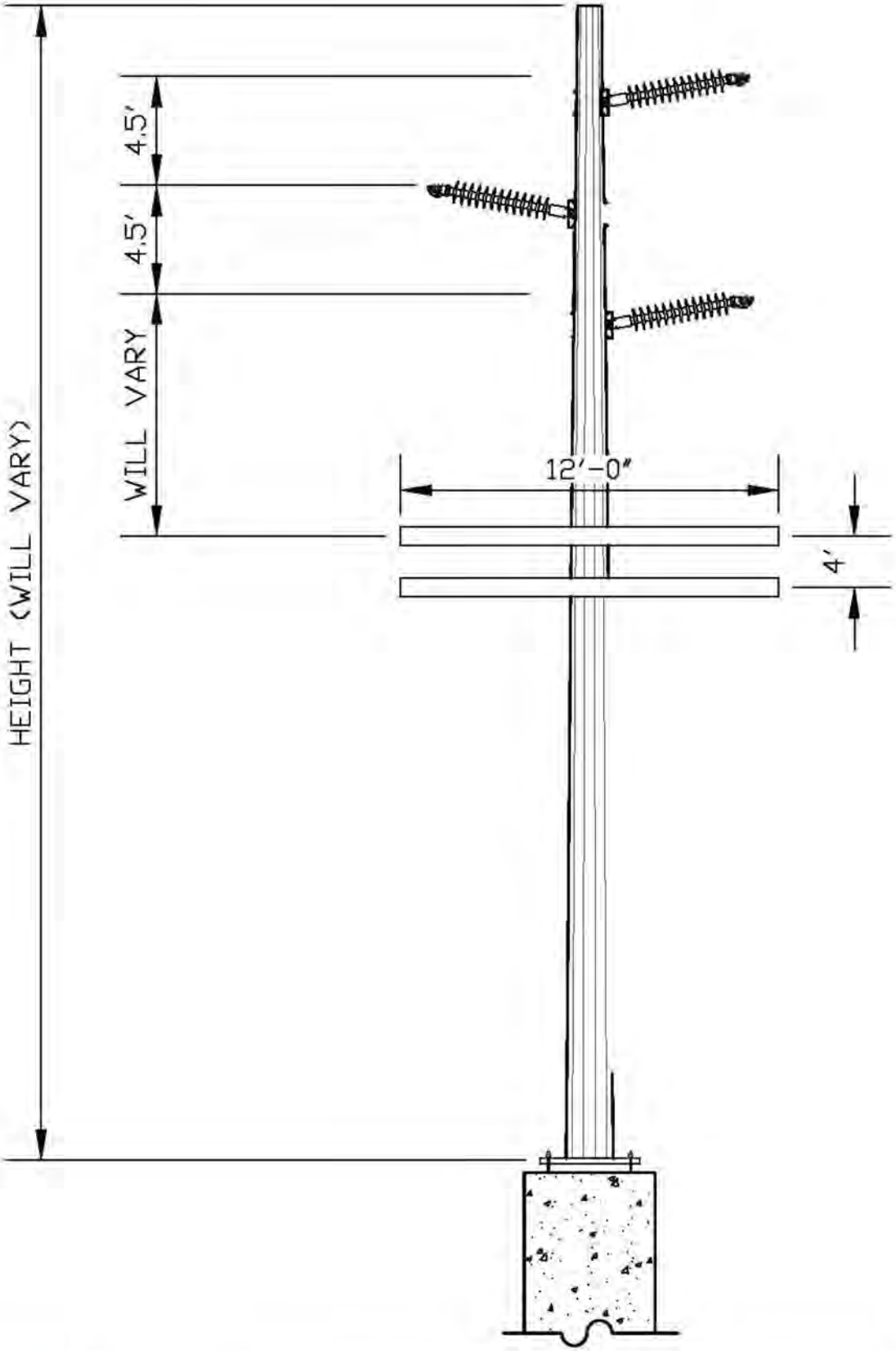

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SOURCE: SDG&E 2013a

FIGURE B-8

Proposed Single-Circuit Tangent Transmission Pole

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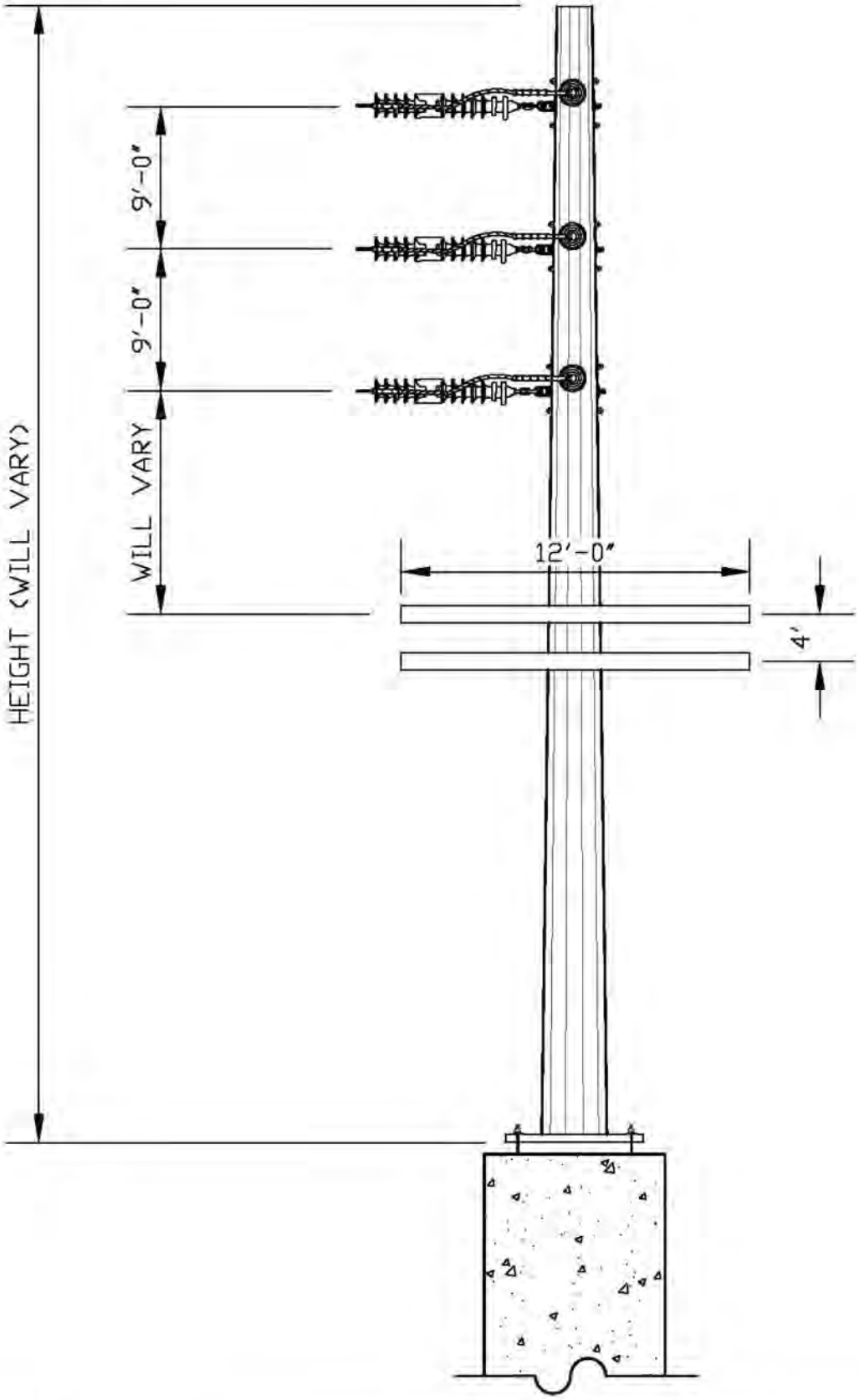

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SOURCE: SDG&E 2013a

FIGURE B-9

Proposed Single-Circuit AngleTransmission Pole

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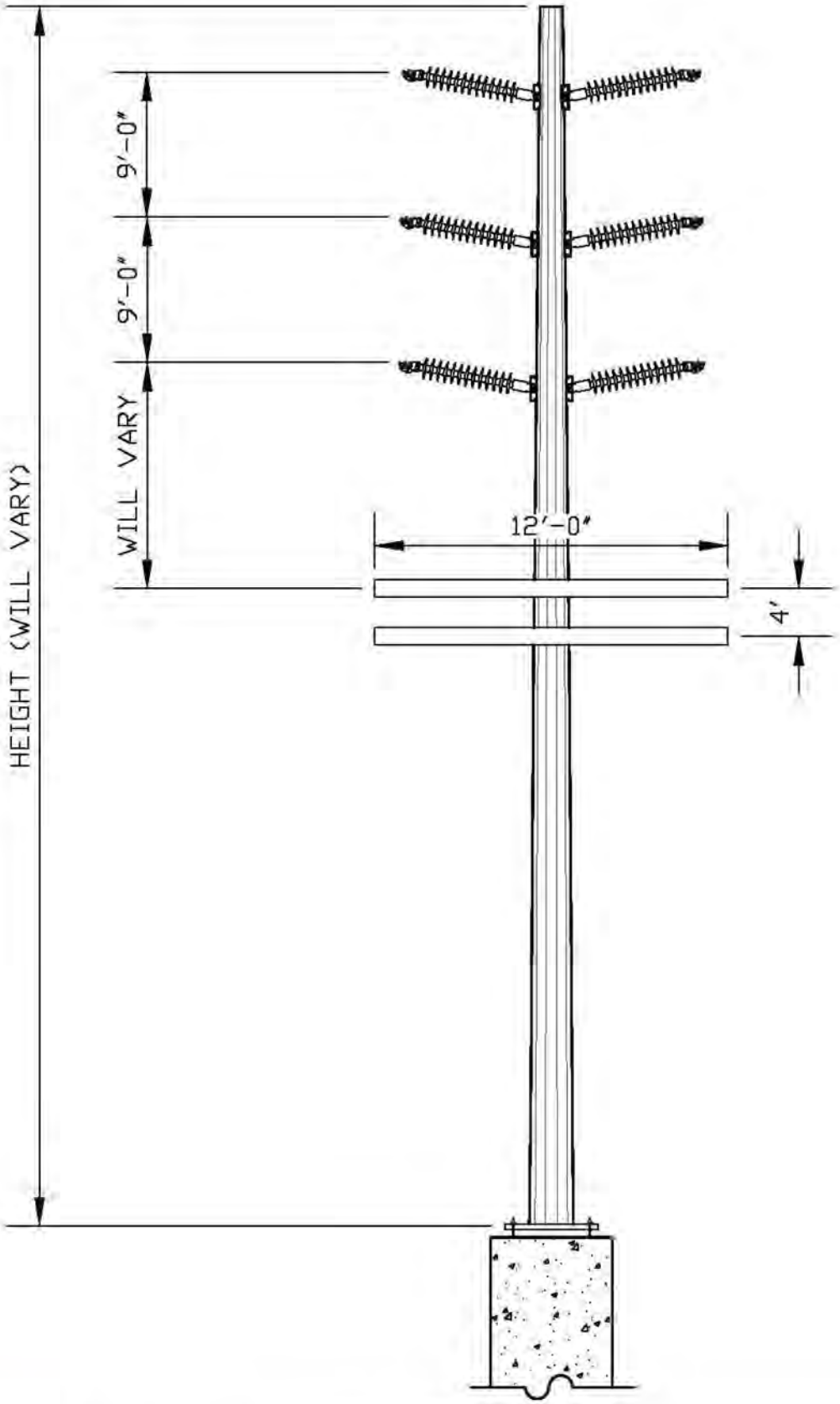

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SOURCE: SDG&E 2013a

FIGURE B-10

Proposed Double-Circuit Tangent Transmission Pole

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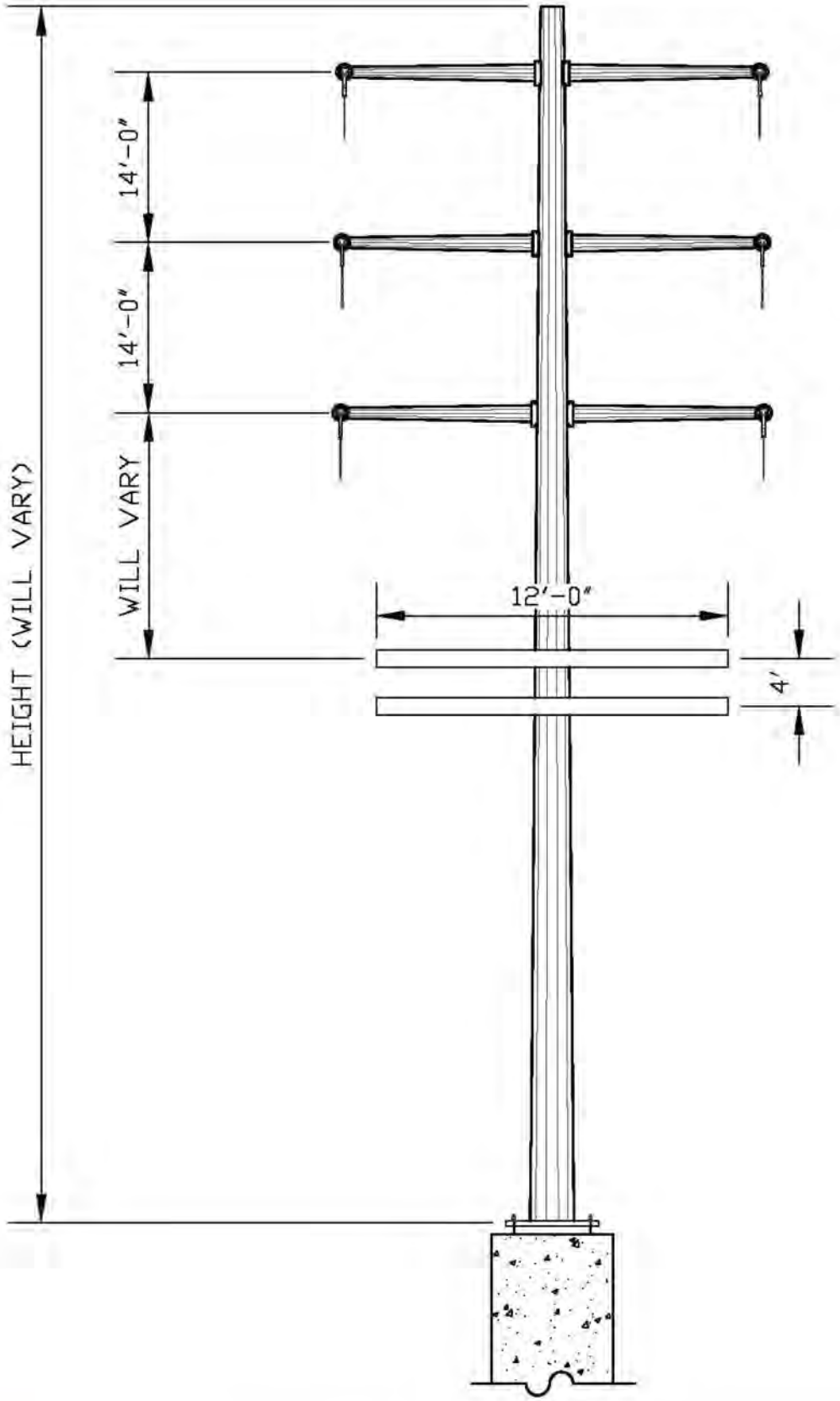

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SOURCE: SDG&E 2013a

FIGURE B-11

Proposed Double-Circuit Transmission Angle Pole

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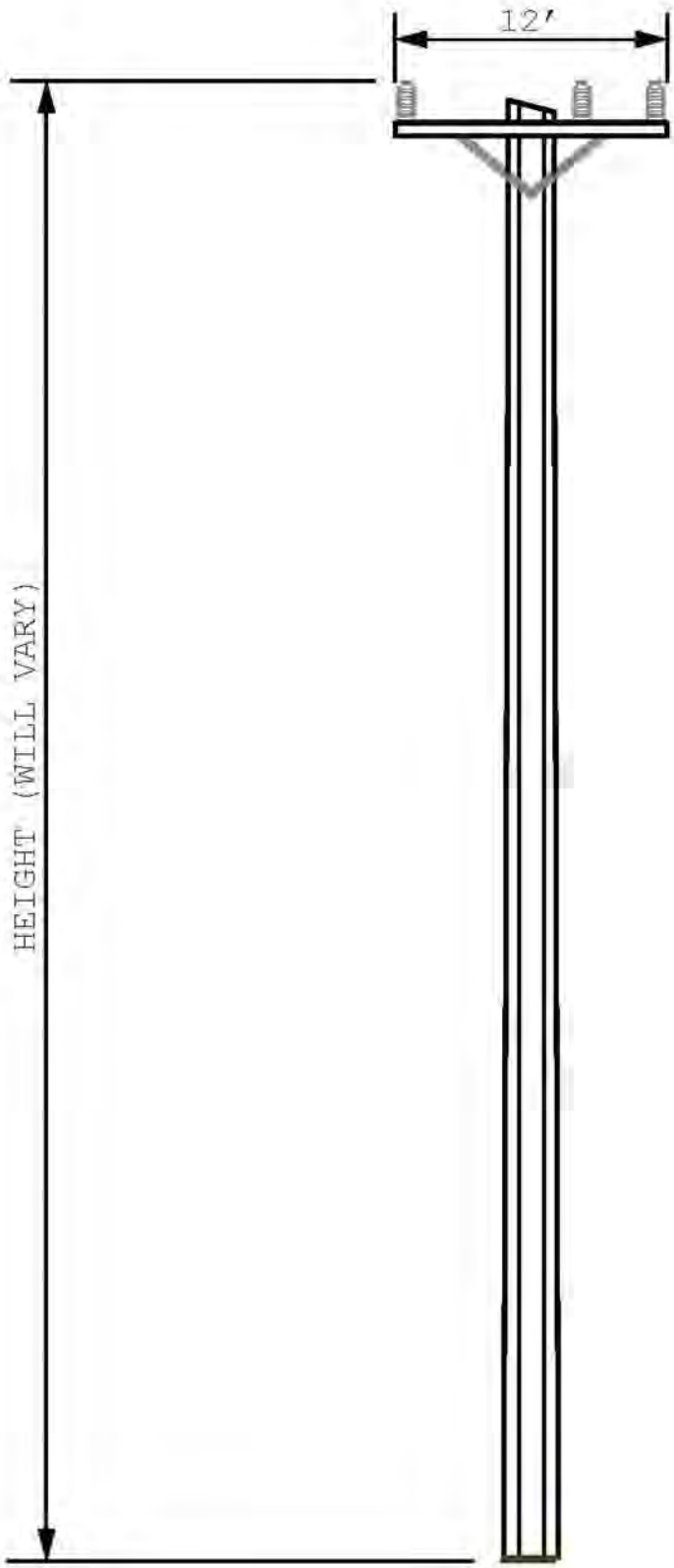

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SOURCE: SDG&E 2013a

FIGURE B-12a

Proposed Steel Distribution Pole

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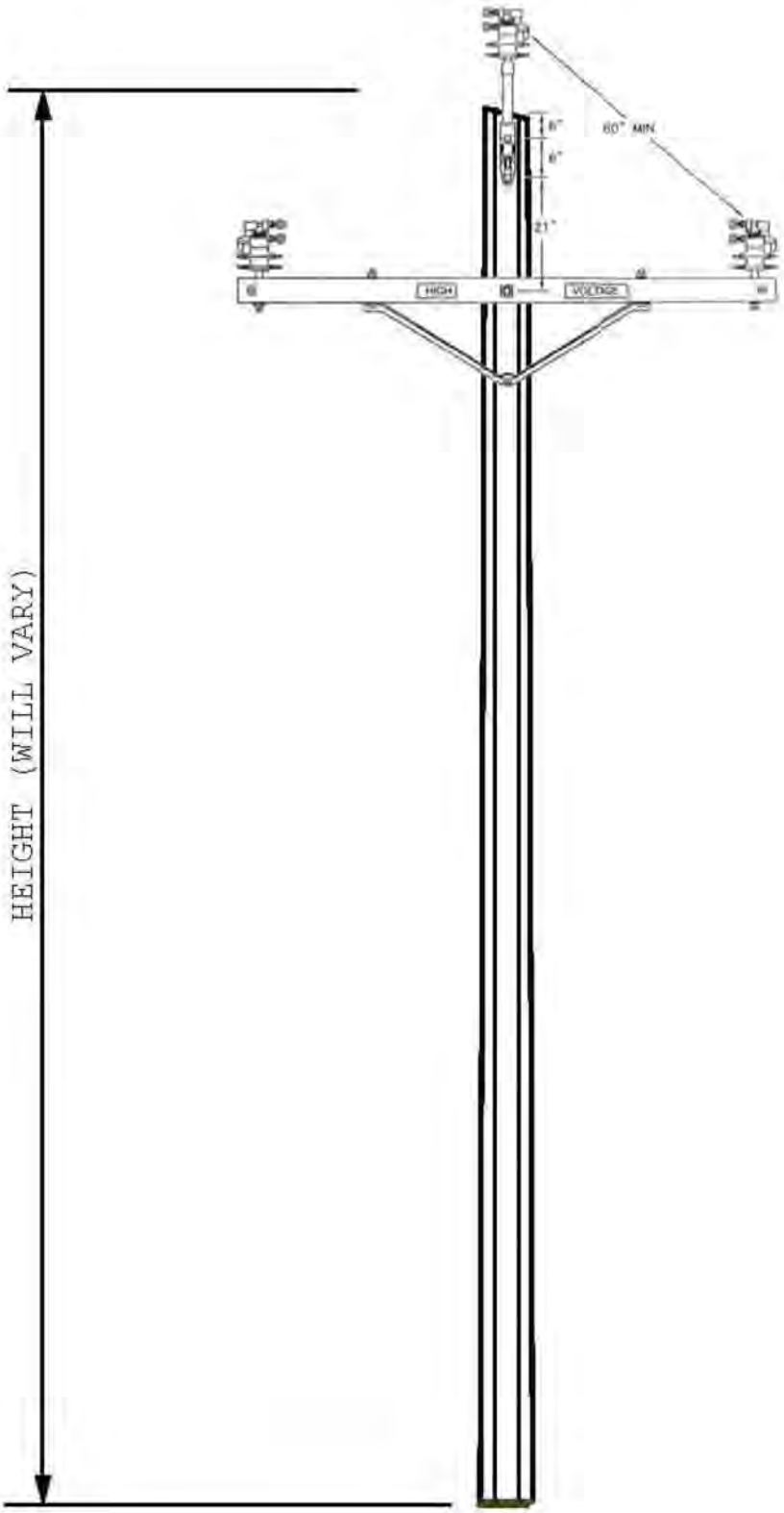

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SOURCE: SDG&E 2013a

FIGURE B-12b

Proposed Steel Distribution Pole

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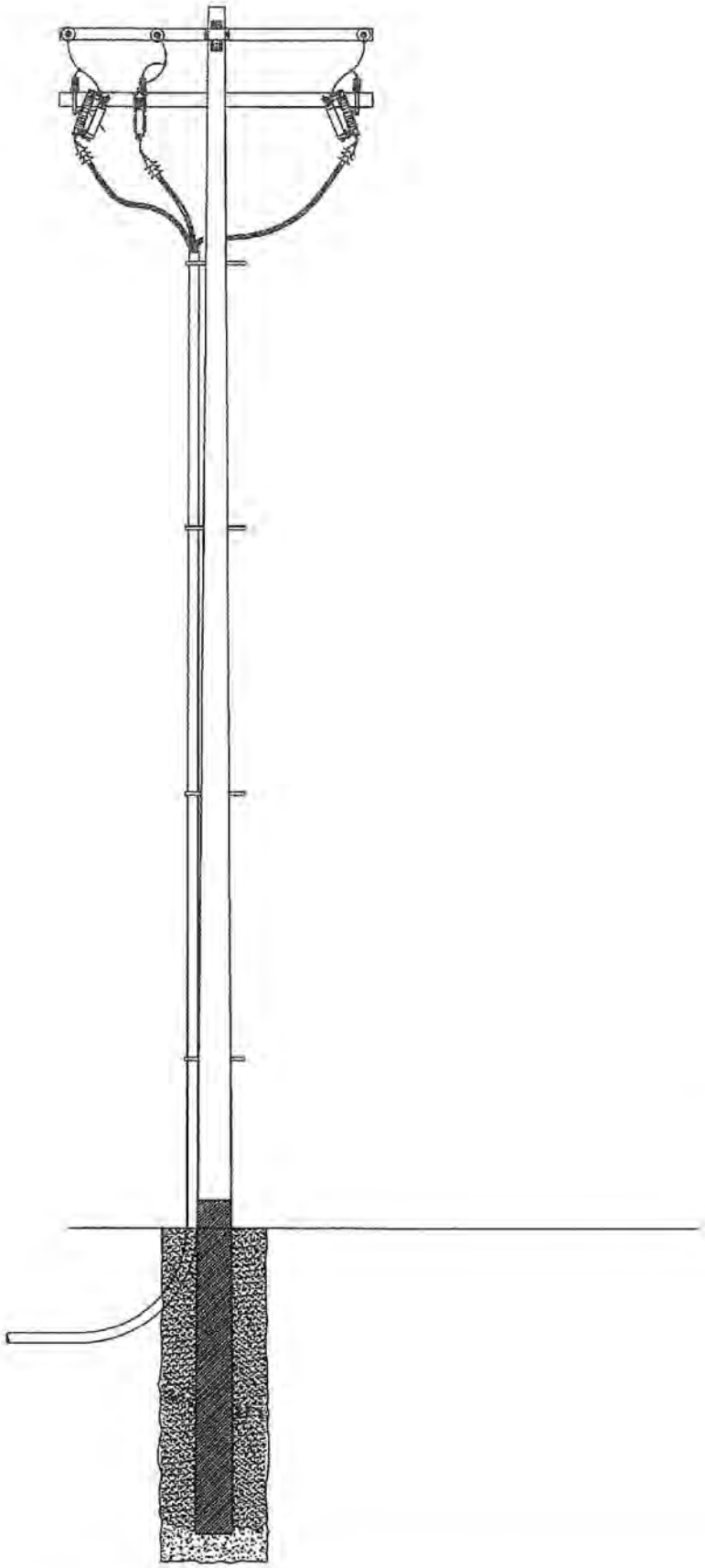

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SOURCE: SDG&E 2013a

FIGURE B-13

Proposed Distribution Riser Pole

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C. ALTERNATIVES DEVELOPMENT AND SCREENING

This section provides an overview of the alternatives development and screening process used to determine which alternatives have been selected for full evaluation in the EIR/EIS for the subject project and those eliminated from further consideration. Section C.1 is an overview of alternatives required by both CEQA and NEPA. Section C.2 provides an overview of the development of additional alternatives. Section C.3 describes the methodology used to consider whether an alternative should be further evaluated in the EIR/EIS or eliminated from further consideration. Section C.4 describes the additional alternatives that have been retained for full EIR/EIS analysis, and Section C.5 describes the alternatives eliminated from full EIR/EIS analysis and rationale for elimination.

C.1 Required Alternatives

In addition to detailed consideration of SDG&E's proposed project, both CEQA and NEPA mandate detailed consideration of the Federal proposed action, the No Project and the No Action Alternatives. These actions and alternatives are discussed in the EIR/EIS in detail as required and are not subject to screening.

C.1.1 SDG&E Proposed Project

SDG&E's proposed project would include issuance of a Master Special Use Permit (MSUP) for the SDG&E system in the Cleveland National Forest (CNF), and would fire harden select lines within the SDG&E System both on and off the CNF; see Figure B-2 and Section B, Project Description, of the EIR/EIS for detailed description.

C.1.2 Federal Proposed Action

The Federal proposed action includes actions proposed by the Forest Service, Bureau of Indian Affairs (BIA), and the Bureau of Land Management (BLM). The Forest Service proposed action would include issuance of an MSUP for the SDG&E system in the Cleveland National Forest and modifies SDG&E's proposed project along TL626 (see Figures B-2 and B-4a through B-4c), C157 (see Figures B-2 and B-5a), and C440 (see Figures B-2 and B-6a) as described in Section B.3.2 of the EIR/EIS. The BIA proposed action also includes upgrades to facilities on La Jolla Reservation lands as proposed by the La Jolla Band of Luiseño Indians, as described in Section B.3.2.4. The BLM proposed action would include portions of SDG&E's proposed power line replacement project for TL629, TL625, and TL6923, as described in Section B.3.2.5.

C.1.3 No Action Alternative – No MSUP Issued

Under NEPA, the No Action Alternative (CFR Section 1502.14(d)) provides the decision makers with a useful comparison of environmental effects of the proposed action and alternatives and demonstrates the consequences of not authorizing the continued occupancy of the existing electrical lines. The impacts of these actions are discussed briefly here and are evaluated in each issue area's analysis in Section D of this EIR/EIS.

Under the No Action Alternative, the MSUP would not be issued for the existing electric lines, and the existing permits would terminate according to their terms. Those expired permits require the holder (SDG&E) to remove the existing 102 miles of electric lines and 45 miles of access road, and restore the site to conditions acceptable to the Forest Service.[1] The Forest Service would manage the land under its jurisdiction consistent with the CNF Land Management Plan (LMP). Accordingly, no pole replacement, ground disturbance, or other project effects would occur associated with SDG&E's proposed project as no pole replacement, construction, or long-term operations and maintenance associated with the electric lines would be authorized on National Forest System lands. Under this alternative, SDG&E would need to redesign the existing electric system to avoid National Forest System lands in order to meet the electric demand in their service territory.

C.1.4 No Project Alternative

CEQA requires an evaluation of the No Project Alternative so that decision makers can compare the impacts of approving the project with the impacts of not approving the project. According to CEQA Guidelines (Section 15126.6[e]; 14 CCR 15000 et seq.), the No Project Alternative must include (a) the assumption that conditions at the time of the Notice of Preparation (NOP) (i.e., baseline environmental conditions) would not be changed since SDG&E's proposed project would not be installed and (b) the events or actions that would be reasonably expected to occur in the foreseeable future if the project were not approved. This section describes reasonably foreseeable events or actions expected to occur if the project is not approved. Section D of this EIR/EIS describes the impacts associated with these reasonably foreseeable events by issue area. Section D also describes conditions at the time the NOP was issued for each environmental issue area as the "environmental baseline," since no impacts of SDG&E's proposed project would be created. Under the No Project Alternative, the existing alignments within the CNF would be maintained as they are currently, under their approximately 70 separate permits and easements. In addition, none

[1] The removal of infrastructure and site restoration is addressed under the existing permits under NEPA. However, these activities will require review under CEQA.

of the proposed fire hardening activities would be authorized. SDG&E would continue to operate its existing facilities. Existing wood poles would be replaced, as needed per standard operations and maintenance practices. Further, single- to double-circuit conversion would not occur on portions of TL625 and TL629. In addition, the Operation and Maintenance Plan, Fire Control Plan, and other plans required under an MSUP would not be prepared for facilities within the CNF. Any operations, maintenance, fire prevention measures, and erosion control work would be based on the requirements of the existing permits.

C.2 Development of Additional Alternatives

Numerous alternatives to SDG&E's proposed project and the Federal proposed action were suggested during the public scoping and supplemental scoping periods by the general public in response to the NOP and Notice of Intent (NOI) as well as additional information provided through the data request process with SDG&E. It should be noted that the undergrounding alternative proposed through scoping for Boulder Creek Road is considered in the Forest Service Proposed Actions. Other alternatives were developed by the project applicant and EIR/EIS preparers in response to issues raised. In total, 17 additional alternatives to those required under CEQA and NEPA were identified in the following categories during scoping:

- Alternatives to TL626
  - TL626 Alternative 1: Relocate Along State Route 79 (SR-79)
  - TL626 Alternative 2: Demand Side Management Options
  - TL626 Alternative 3: Removal from Service (Upgrade TL6931 or TL625)
  - TL626 Location Alternatives.
- Alternatives to C157
  - C157 Partial Underground Alternative
  - C157 Alternative Route 1: Corte Madera Ranch to Skye Valley Ranch
  - C157 Alternative Route 2: Los Pinos to Skye Valley Ranch.
- Additional undergrounding alternatives
  - Underground all Tie-lines and Circuits Alternative
  - Underground Tie-lines and Circuits within Existing Roadways.
- Design Alternatives
  - Partial Removal of Overland Access Roads
  - Alternative Pole Design 1 – Height
  - Alternative Pole Design 2 – Material.

- System Alternatives
  - System Alternative 1: Consolidate TL6923 and TL625 along Sunrise Powerlink
  - System Alternative 2: Additional Consolidation and Removal of Facilities
  - System Alternative 3: No-Wire Alternative
  - System Alternative 4: Fire harden with similar materials and improve fire hardening by increasing vegetation management and system maintenance oversight
  - System Alternative 5: Distributed Generation.

C.3 Screening Methodology

Additional alternatives for consideration in the Draft EIR/EIS were screened using CEQA and NEPA alternatives screening criteria. Under CEQA Guidelines, those criteria include whether the alternative has the potential to meet most project objectives, is feasible, and has the ability to avoid or substantially lessen significant environmental effects (CEQA §15126.6 et seq.). Under NEPA, the regulations require consideration of reasonable alternatives (40 CFR 1502.14). A reasonable alternative meets the purpose and need, addresses an issue, and is practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.

Project objectives criteria compared each alternative using the following project objectives based on applicant-supplied material:

1. Secure Forest Service authorization to continue to operate and maintain existing SDG&E facilities within the National Forest System lands
2. Increase fire safety and service reliability of these facilities by replacing five existing 69-kilovolt (kV) power line facilities and six existing 12 kV distribution line facilities
3. Undertake these activities consistent with California Public Utilities Commission (CPUC) General Orders and North American Electric Reliability Corporation/ Federal Energy Regulatory Commission (NERC/FERC) requirements.

NEPA Purpose and Need criteria compared the alternatives to the Forest Service purpose and need:

1. Continue electric service to a variety of users within and adjacent to the CNF
2. Issue an MSUP consistent with the CNF LMP.

Feasibility criteria included whether the alternative is feasible from a technological perspective, considering engineering requirements, maturity of the technology in the marketplace, and whether restrictions exist that would substantially limit the feasibility of meeting project objectives.

Environmental criteria included comparing potential issues and environmental effects as identified in the project's NOP and NOI with those of each alternative.

C.4 Additional Alternatives Evaluated

In addition to the required alternatives mandated by both CEQA and NEPA, a total of 17 additional alternatives were considered for analysis in the EIR/EIS. Of the 17 alternatives considered, the following 2 additional alternatives have been carried forward for full analysis in the EIR/EIS:

- Partial Removal of Overland Access Roads
- Removal of TL626 from Service (Upgrade TL6931 or TL625).

C.4.1 Partial Removal of Overland Access Roads

Description

A terrain analysis along the exclusive-use SDG&E access roads was conducted to identify locations along the proposed lines that exceed grades of 25%~~ for appreciable distances in proximity to creeks~~. The slope analysis was conducted using geographic information systems (GIS) to approximate the grade of SDG&E's exclusive-use access roads and sum up the length of road segments in different slope classes. The analysis was based on a slope layer created from a digital elevation model with a 10-meter resolution, and access road intervals no greater than 100 feet. Based on this analysis, it was determined that 11.5 miles of SDG&E's exclusive-use access roads are located on slopes that exceed 25%.

The 25% slope break is based in general on the physical inability to effectively control runoff volume and velocity on roads steeper than 25% road grade, even with implementation of standard drainage designs. Not all road segments identified as having a 25% slope or greater have problems associated with drainage; therefore, the exact location of roads segments that are too steep to implement in-place design fixes would need to be determined by a qualified professional geologist, professional engineer, or certified engineering geologist. For purposes of comparison with SDG&E's proposed project in terms of the impacts/benefits of managing SDG&E's electrical facilities within and surrounding the CNF, without road access, this alternative assumes the following. In addition to the 11 miles of access roads that would be removed under the applicant's proposed project, up to 11~~0~~.5 miles of SDG&E exclusive-use access roads were identified as being

problematic from an erosion and sedimentation standpoint due to the potential for slopes to exceed a gradient of 25% (see new Final EIR/EIS Figure C-1A). Even with implementation of engineered designs that address drainage (e.g., out-sloping and cross drains), unpaved access roads exceeding 25% grade would be likely to continue experiencing significant erosion issues unless they were removed. These sections include but are not limited to:

- TL626 south of Eagle Creek Road and north of Boulder Creek Road: Access roads for this segment of the line cross steep terrain on either side of Boulder Creek, Cedar Creek, and Kelly Creek along the flanks of Sill Hill, Mineral Hill, and Sunshine Mountain. Steeply sloped sections of the access roads exceed 400 feet in places.
- TL625 in the Vicinity of Barber Mountain Road: Access roads for this segment of the line cross steep terrain on the sides of Barber Mountain, across Pats Canyon and near Wilson Creek.
- TL625 north of Lyons Valley Road and south of Carveacre Road: Access roads for this segment of the line cross steep terrain east of Lawson and Gaskill Peaks and west of the Pine Creek Wilderness.
- C442 east of Oak Valley and south of Interstate 8 (I-8), on the western flanks of Long Peak: Access roads cut a straight path over hilly terrain, resulting in steep segments along 1 mile of the access roads.
- Short segments of TL629 on either side of Cameron Valley and east of Pine Valley: Access roads have grades that exceed 25%.

Under this alternative, fill would be removed from stream crossings, and the road bed would be ripped and contoured to drain properly, and allowed to passively restore to natural conditions restoring approximately 17 acres (11.5 miles of access roads removed at 12-foot width). Access controls such as locked gates, boulders or other appropriate means would be installed to discourage continued unauthorized access. SDG&E would carry out maintenance activities along these segments using helicopters, as described in SDG&E's Plan of Development (POD) (SDG&E 2013). All other aspects of SDG&E's proposed project would remain unchanged.

Rationale for Full Analysis

The alternative meets screening criteria for project objectives, purpose and need and feasibility as it would meet the reliability needs for existing energy users and would reduce water quality impacts. This alternative would also meet environmental screening criteria as it would remove portions of the existing access roads which due to steep gradients that prevent effective implementation of erosion controls directly impacting riparian areas thereby having the potential

to reduce long-term environmental effects associated with overland access in rugged terrain. Consequently, this alternative has been carried forward for full analysis in this EIR/EIS.

This alternative would require CPUC and Forest Service approval. The roadway segments determined to be improved on forest service managed-lands would be included in the MSUP.

C.4.2 Removal of TL626 from Service

Description

Under this alternative, TL626 would be removed from service. SDG&E would implement the following system upgrades and changes in order to provide service lost due to the removal of TL 626 (SDG&E 2014a):

a. Upgrade the existing 6-mile 69 kV TL6931 by fire hardening ~~and adding a second~~the 69 kV circuit within SDG&E's existing right-of-way (ROW) from the Boulevard Substation to the Crestwood Substation (see Figure C-1). The TL6931 ROW consists of generally undeveloped land and undergrounding in this location would have greater temporary and permanent ground disturbance tha~~t~~n would be caused by fire hardening of the existing overhead TL6931. Undergrounding of this segment was not considered in detail for this reason.~~, or~~

b. Modify existing TL625 by constructing a new 3-mile double circuit overhead loop-in into the Suncrest Substation. The new double circuit 69 kV line would primarily cross National Forest System lands immediately adjacent to the 500 kV Sunrise Powerlink. A new transformer and substation rack would be installed within the existing footprint of the Suncrest Substation to establish the new 69 kV source (see Figure C-2). Due to potential construction challenges within the surrounding undeveloped rugged and steep terrain, which in the majority of the 3-mile alignment route exceeds 12% slope conditions, undergrounding of this segment was not considered as it would cause greater ground disturbance, resulting in increased impacts to environmental resources over that caused for an overhead alignment.

~~b.~~c. In order to ~~serve~~ provide continuing service to existing customers, a 6.8-mile section of TL626 that is co-located with C79 would be converted to a 12 kV fire hardened distribution line. ~~and at Boulder Creek Substation t~~This alternative would also either convert a 6.5-mile section of TL626 from 69 kV to 12 kV distribution between the Santa Ysabel and Boulder Creek Substations or, upon agreement with the existing customer, provide an off-grid solution. The off-grid solution would include the construction of an approximately 5-kilowatt photovoltaic (PV) array and accompanying

battery bank, as well as a diesel- or liquid propane-powered backup generator, in close proximity to the existing customer near the Boulder Creek Substation.

Depending on the options selected above, the TL626 Removal Alternative would require the rebuild/fire hardening of up to 19.3 miles of electric lines (rebuild segments of C79 and TL6931), similar to the proposed TL626 replacement project, which would fire harden 18.8 miles. Therefore, it is anticipated that construction of this alternative would result in temporary and permanent ground disturbance similar to that described for the proposed project.

This alternative would require CPUC approval. In addition, three components of this alternative would require Forest Service approval and would be included in the MSUP, including the modified TL625, the converted TL626 between Santa Ysabel and Boulder Creek Substations if needed, and the fire hardened C79 distribution line. The portion of the upgraded TL6931 that crosses the Campo Indian Reservation would require approval from the tribe and BIA. The off-grid solution would require the existing customer near Boulder Creek Substation to agree to placing an off-grid solution on their property. If agreed to by the existing customer, the off-grid solution for on-site use is not subject to CPUC or Forest Service approval and is allowed by the County of San Diego upon approval of a building permit. A building permit from the County of San Diego is a ministerial action.

Rationale for Full Analysis

This alternative meets screening criteria for project objectives, purpose and need, feasibility, and environmental considerations as it would meet reliability needs for existing energy users. It would eliminate conflicts with the CNF LMP without substantially creating additional impacts due to increased disturbance area. This alternative would also remove approximately 3.5 miles of the existing line and associated access roads that are causing water quality impacts in the Cedar Creek watershed. Converting the remainder of TL626 to a 12 kV distribution line would reduce the visual impacts of the line along the Boulder Creek Road. Upgrading TL625 adjacent to the existing Sunrise Powerlink is consistent with CNF LMP direction to co-locate facilities, and would occur within suitable land use zones. Consequently, this alternative minus the off-grid solution near Boulder Creek Substation has been carried forward for full analysis in this EIR/EIS.

The off-grid solution has not been carried forward for full analysis in the EIR/EIS as a separate and standalone option to meet the energy demands of the customer near the Boulder Creek Substation as approval by the County of a building permit is a ministerial action and not subject to CEQA or NEPA.

C.5 Alternatives Eliminated From Further Consideration

The following alternatives were evaluated for their potential to meet CEQA and NEPA alternatives screening criteria and were ultimately eliminated from further consideration as described in this section.

C.5.1 TL626 Alternative 1: Relocate Along State Route 79

Description

TL626 Alternative 1 would be within the vicinity of the Forest Service TL626 study corridor. As described in SDG&E's data response 5, this alternative would eliminate an approximately 7-mile segment of the TL626 alignment between pole locations Z372116 and Z213680 (see Figure C-3) and instead would meet current demand for energy supplied by TL626 through co-locating this segment along SR-79 to the east (2014b). However, in order to continue to serve existing customers along the existing alignment, approximately 3 existing poles north of pole Z372116 and approximately 23 existing poles south of pole Z213680 to the Boulder Creek Substation would be required to be reconstructed. Under this alternative, TL626 would total more than 30 miles in length between the Descanso and Santa Ysabel substations. All other aspects of SDG&E's proposed project would remain unchanged.

Currently, no 69 kV facilities exist along SR-79; however, portions of one distribution circuit, C79, are located along this roadway for a portion of its length between I-8 and SR-78. In order to co-locate a segment of TL626 along SR-79, the existing C79 poles would need to be removed and replaced with steel poles similar in size and type as those described for the 69 kV poles in Section B of this EIR/EIS (generally 100 feet with a typical diameter of approximately 30 inches (in some instances maximum height would range between 100–120 feet). The existing alignment for TL626 is located in the vicinity of Boulder Creek Road to the west of Cuyamaca Peak, Cuyamaca State Park, and the CNF's Sill Hill Inventoried Roadless Area (IRA); SR-79 is located approximately 5 miles east of the existing TL626 alignment. The realignment of this segment of TL626 to a location along SR-79 would require approximately 4.7 miles of new steel poles traversing the Sill Hill IRA, Cuyamaca State Park, and private lands to reach SR-79 to the east. Once on SR-79 approximately 4.1 miles of new steel poles would be constructed on private lands along SR-79. In order to reconnect the new alignment with the existing alignment at pole Z213680, approximately 5.4 miles of new steel poles would be constructed on private lands. This reroute segment would be approximately 14 miles (see Figure C-3). Table C-1, TL626 System Alternative 1: Relocate along State Route 79 – Approximate Pole Requirements, indicates the estimated number of poles that would be required in the Sill Hill IRA, Cuyamaca State Park, and on private lands in order to relocate this segment of TL626 to along SR-79. In addition, it is estimated that approximately 6.5 miles of new access roads on private lands would need to be established for construction,

operations, and maintenance of the new alignment segment. All poles located within the Sill Hill IRA would be constructed and maintained using helicopter access.

Table C-1
TL626 Alternative 1: Relocate Along State Route 79 –Approximate Pole Requirements

Property	Approximate Number of Miles Crossed	Approximate Number of Poles in Alternative Segment*
Sill Hill IRA	1.6	24
Cuyamaca State Park	2.7	41
Private Lands	9.9	149
Total	**14.2**	**214**

* Based on average of 15 poles per mile.
Note: Number of poles estimated based on the average number of poles per mile along the existing TL626 alignment; actual pole numbers may vary significantly according to local topographical, environmental, and engineering requirements. (SDG&E 2014b).

Rationale for Elimination

Because installation and operation of a 69 kV power line of this length (approximately 30 miles) would not meet reliability needs of existing energy users due to voltage drop and other operational concerns, the screening criteria for project objectives and purpose and need are not met. With respect to environmental screening criteria, this alternative would not lessen or avoid impacts of either SDG&E's proposed wood-to-steel pole replacement of TL626 or the Forest Service Proposed Action which relocates TL626 out of the Cedar Creek riparian area, but rather would displace those effects to a partially new and longer ~~right-of-way (~~ROW~~)~~ with other sensitive resources. As a result it is likely that relocating TL626 along SR-79 would result in potentially new and greater short-term and long-term environmental impacts and therefore this alternative has not been carried forward for further consideration in the EIR/EIS.

C.5.2 TL626 Alternative 2: Demand-Side Management Options

Description

TL626 Alternative 2 would eliminate TL626 from the Descanso Substation to the Santa Ysabel Substation for a distance of approximately 18.78 miles and instead would meet current demand for energy supplied by TL626 through demand side management options (roof-top solar, wind, generator use). All other aspects of SDG&E's proposed project would remain unchanged.

Rationale for Elimination

Reductions in demand through energy programs noted above are an important part of SDG&E's operations and are incorporated into their long-term peak load forecasts. However, as separate and stand-alone options to meet current energy demands provided by TL626, these options

would not meet project objectives or purpose and need screening criteria as they would not provide the reliability needs to existing customers; therefore, this alternative has not been carried forward for further consideration in the EIR/EIS.

C.5.3 TL626 Location Alternatives

Description

Alternative locations to SDG&E's proposed project and the Forest Service Proposed Action for TL626 were requested during public scoping. Under this alternative, a portion of TL626 from the Descanso Substation to the Santa Ysabel Substation would be relocated to the west of the existing alignment or to the east of the Forest Service Proposed Action for TL626. All other aspects of SDG&E's proposed project would remain unchanged.

Rationale for Elimination

Consideration of additional relocation options for TL626 beyond the study corridor identified in the Forest Service Proposed Action or SDG&E's proposed project may not meet screening criteria for feasibility, project objectives, or purpose and need due to potential construction challenges within the surrounding undeveloped rugged terrain and the potential loss to existing customer service/reliability caused by moving TL626 as proposed under this alternative.

With respect to environmental screening criteria, this alternative would not lessen or avoid impacts of either SDG&E's proposed wood-to-steel pole replacement of TL626 or the Forest Service Proposed Action which relocates TL626 out of the Cedar Creek riparian area, but rather would displace those effects to a newly established and longer ROW with other sensitive resources. As a result, it is likely that relocating TL626 to the west of the existing alignment or to the east of the Forest Service Proposed Action would result in potentially new and greater short-term and long-term environmental impacts. Therefore, further consideration of alternative locations for TL626 have not been carried forward for further consideration in the EIR/EIS.

C.5.4 C157 Partial Underground Alternative

Description

The C157 Partial Underground Alternative would relocate C157 underground within Skye Valley Road, and partially through the Pine Creek Wilderness Area where this road passes through that designated area, from approximately pole P278726 for about 3 miles before rejoining the existing alignment at approximately pole P278740 (see Figure C-4). All other aspects of SDG&E's proposed project would remain unchanged.

Rationale for Elimination

The C157 Partial Underground Alternative meets screening criteria for project objectives and purpose and need as it would likely meet the reliability needs for the existing energy user on Skye Valley Road. While terrain conditions along the existing roadway would likely allow for underground construction practices, undergrounding 3 miles of C157 within the existing roadway as proposed under this alternative would result in greater short-term construction-related impacts as well as long-term permanent environmental impacts caused by trenching activities verses pole-replacement activities. Therefore, this alternative would not substantially avoid or reduce environmental effects resulting from replacing existing wood poles as proposed. In addition, this alignment crosses through congressionally designated wilderness, in conflict with the Wilderness Act. As such, this alternative would not meet environmental screening criteria and has not been carried forward for further consideration in the EIR/EIS.

C.5.5 C157 Alternative Route 1: Corte Madera Ranch to Skye Valley Ranch

Description

C157 Alternative Route 1 would relocate a section of the existing C157 out of the Hauser Wilderness into a new alignment to the east of the existing alignment. The section of line that is replaced will be removed and the affected area restored. As shown in Figure C-4, the new alignment would start from Corte Madera Ranch, traveling west from existing 12 kV distribution line C442 along the southern boundary of the Pine Creek Wilderness Area for approximately 7 miles to Skye Valley Ranch (SDG&E 2013). All other aspects of SDG&E's proposed project would remain unchanged.

Rationale for Elimination

This alternative would meet the reliability needs for existing energy users, and therefore screening criteria for project objectives and purpose and need, but may not meet screening criteria for feasibility due to potential construction challenges within the surrounding undeveloped rugged terrain. With respect to environmental screening criteria, this alternative would not lessen or avoid impacts of either SDG&E's proposed wood–to-steel pole replacement of C157 or the Forest Service Proposed Action which relocates C157 to an existing road ROW, but rather would displace those effects to a newly established and longer 7-mile ROW with other sensitive resources. As a result, it is likely that this alternative would result in potentially new and greater short-term and long-term environmental impacts; therefore this alternative has not been carried forward for further consideration in the EIR/EIS.

C.5.6 C157 Alternative Route 2: Los Pinos to Skye Valley Ranch

Description

C157 Alternative Route 2 would relocate a section of the existing C157 out of the Hauser Wilderness into a new alignment to the east of the existing alignment. The section of line that is replaced will be removed and the affected area restored. As shown in Figure C-4, the new alignment would start at Los Pinos traveling west from existing 12 kV distribution line C442 along Espinosa Creek for approximately 3 miles, then traveling south along the eastern boundary of the Pine Creek Wilderness Area for approximately 4 miles to Skye Valley Ranch. All other aspects of SDG&E's proposed project would remain unchanged.

Rationale for Elimination

This alternative would meet the reliability needs for existing energy users, and therefore screening criteria for project objectives and purpose and need, but may not meet screening criteria for feasibility due to potential construction challenges within the surrounding undeveloped rugged terrain. With respect to environmental screening criteria, this alternative would not lessen or avoid impacts of either SDG&E's proposed wood-to-steel pole replacement of C157 or the Forest Service Proposed Action which relocates C157 to an existing road ROW, but rather would displace those effects to a newly established and longer 7-mile ROW with other sensitive resources. As a result, it is likely that this alternative would result in potentially new and greater short-term and long-term environmental impacts; therefore this alternative has not been carried forward for further consideration in the EIR/EIS.

C.5.7 Underground All Tie-Lines and Circuits Alternative

Description

As proposed, the power line replacement projects would replace approximately ~~146~~ 149 miles of 69 kV and 12 kV electric lines by replacing existing wood poles with steel poles as described in Section B.3.1 of this EIR/EIS. In addition, SDG&E's proposed project would relocate and underground approximately 13 miles of 12 kV electric lines. This alternative would underground ~~146~~ 149 miles of existing 69 kV and 12 kV electric lines instead of the wood-to-steel pole replacement as proposed. All other aspects of SDG&E's proposed project would remain unchanged.

Rationale for Elimination

While ~~T~~this alternative would likely meet the reliability needs for existing energy users, and therefore screening criteria for project objectives and purpose and need, it ~~, but~~ may not meet the

screening criteria for feasibility due to potential construction challenges within the surrounding undeveloped rugged and steep terrain, which in many areas exceeds ~~the maximum allowable (~~12%~~)~~ slope conditions. Further, it would not meet the environmental screening criteria due to increased ground disturbance area~~ have greater short-term construction-related as well as long-term permanent environmental impacts~~ caused by trenching activities versus pole-replacement activities. The estimated total permanent footprint to replace all poles as proposed is approximately 0.3 acre. Assuming the estimated permanent footprint of 4 acres required to underground approximately 13 miles of 12 kV electric lines as proposed, undergrounding all ~~146~~ 149 miles of existing electric lines under this alternative would result in a significant increase in permanent disturbance/impact to sensitive resources over that caused by the proposed wood-to-steel pole replacement.

Although Forest Service policy and plan direction favors undergrounding new and existing electric lines under 12 kV, an exception is provided where resource impacts would be greater than overhead construction. The greater impact of undergrounding all existing electric transmission lines and circuits would not be consistent with agency policy.

In consideration of the presence of steep slopes and rugged terrain in the project area and associated construction challenges, combined with ~~Because this alternative may not meet feasibility screening criteria and would result in asubstantialincrease inthe~~ the greater temporary and permanent ground disturbance that would be caused by trenching over- that caused by fire hardening of the existing overhead lines as proposed,~~required permanent disturbance footprint while not substantially avoiding or reducing environmental effects resulting from replacing the existing wood poles as proposed, it~~ it was determined that this alternative~~has not been carried~~ would not be carried forward for further consideration in the EIR/EIS as it would not substantially avoid or reduce environmental effects resulting from replacing existing wood poles as proposed. Additionally, the EIR/EIS fully considers undergrounding of more than 38 miles of electric lines along existing roadways (13 miles SDG&E proposed plus over 25 additional miles of undergrounding identified in the Federal Proposed Action (see Section B.3.2)).

C.5.8 Underground Tie-lines and Circuits Located near Existing Roadways Alternative

Description

This alternative would underground approximately 45 miles of existing 69 kV and 12 kV electric lines located along existing roadways instead of the wood-to-steel pole replacement as proposed. More specifically, this alternative would underground approximately 7 miles of TL625 along Japatul Road and Sequan Truck Trail from the Descanso Substation to the Barrett Tap and the Barrett Tap to the Loveland Substation; approximately 12.7 miles of TL682 along SR-76 from

the Rincon Substation to East Grade Road; approximately 9.7 miles of TL629 along River/Tanglewood Drive, Viejas Boulevard, SR-79, and Old Highway 80 from the Descanso Substation to the Glencliff Substation; and an additional 6 miles of TL629 along Old Highway 80 from the Glencliff Substation to the Cameron Tap. In addition, this alternative would include undergrounding approximately 5 miles of C442 along Pine Creek Road and Pine Creek Tract (north of I-8) and along Forest Service dirt road (Drd) 418611-1 (south of I-8). All other aspects of SDG&E's proposed project would remain unchanged.

Rationale for Elimination

This alternative meets screening criteria for project objectives and purpose and need as it would likely meet the reliability needs for existing energy users. While terrain conditions along existing roadways would likely allow for underground construction practices, portions of this alternative may not meet feasibility criteria due to roadway encroachment issues (i.e., California Department of Transportation and others), as well as other engineering issues associated with service to individual customers. Undergrounding 45 miles of electric lines within existing roadways as proposed under this alternative would result in an increase in short-term construction-related impacts over that caused by the proposed wood-to-steel pole replacement and would not substantially avoid or reduce environmental effects resulting from replacing existing wood poles as proposed. As such, this alternative would not meet environmental screening criteria. Because this alternative would not meet environmental screening criteria and may not meet feasibility screening criteria, it has not been carried forward for further consideration in the EIR/EIS. Additionally, the EIR/EIS fully considers undergrounding of more than 38 miles of electric lines along existing roadways (13 miles SDG&E proposed plus over 25 additional miles of undergrounding identified in the Federal Proposed Action~~See C440 Additional Undergrounding Alternative that has been carried forward for further consideration in the EIR/EIS~~ (see Section B.3.2)).

C.5.9 Alternative Pole Design 1 – Height

Description

As proposed, the power line replacement projects would replace approximately ~~146~~ 149 miles of existing 69 kV and 12 kV electric lines by replacing existing wood poles with weathered steel poles. The maximum height of the proposed 69 kV new steel poles would be generally 100 feet (in some instances maximum height would range between 100–120 feet) with a typical diameter of approximately 30 inches. The maximum height of the proposed 12 kV new steel poles would be 50–60 feet with a typical diameter of approximately 14 inches. The use of taller poles allows for increased spacing of conductors, thereby reducing fire hazards, and also permits the use of heavier conductors which sway less under wind events.

This alternative would modify the proposed replacement poles by replacing existing 69 kV and 12 kV poles with poles of similar height to existing poles (existing maximum for 69 kV pole is approximately 90 feet and for 12 kV poles is 50 feet). In addition, under this alternative the similar poles would carry conductors of the same or similar capacity to the conductors that are on the existing wood poles. All other aspects of SDG&E's proposed project would remain unchanged; however, it may be necessary for the shorter poles to be designed with a wider diameter to accommodate increased stringing tension as noted below.

Rationale for Elimination

The power line replacement projects will need to meet prescribed safety and reliability standards. In so doing there are minimum conductor spacing and line clearances that need to be adhered to. It is presumed that SDG&E's proposed power line replacement projects including the new pole design meet required specifications. In addition, SDG&E's pole design increases the height of certain poles to allow for increased spans to avoid environmentally sensitive areas. In order for this alternative to meet conductor spacing and ground clearance requirements with the proposed new heavier conductor on shorter poles, the conductor will need to be strung with greater tension than what is now proposed. This may require the new shorter poles proposed under this alternative to be designed with additional steel and increased diameter relative to the poles now proposed for the project.

This alternative would not meet project objectives and purpose and need that allow for the under-build of 12 kV and 69 kV facilities as proposed or for the increased spans proposed to avoid certain sensitive resources. The removal of existing wood poles and the introduction of new weathered steel poles with similar vertical profile as proposed under this alternative would not substantially avoid or reduce environmental effects resulting from replacing the existing wood poles as proposed, which in general would resemble those experienced by viewers under existing conditions. Because this alternative, which would replace all poles with poles of similar height, would not substantially avoid or reduce environmental effects (and may increase environmental impacts resulting from a potential larger pole footprint) resulting from replacing the existing wood poles as proposed and may not meet project objectives and feasibility screening criteria, it has not been carried forward further consideration in the EIR/EIS. It should be noted that consideration of the height of poles as mitigation in addressing certain project effects determined to be significant and adverse is considered in the EIR/EIS in Section D, Environmental Analysis.

C.5.10 Alternative Pole Design 2 – Material

Description

As proposed, the power line replacement projects would replace approximately ~~146~~ 149 miles of existing 69 kV and 12 kV electric lines by replacing existing wood poles at a one-to-one ratio with weathered steel poles. This alternative would modify the proposed replacement poles by replacing existing 69 kV and 12 kV poles with poles made of wood or other composite material instead of the weathered steel poles as proposed. All other aspects of SDG&E's proposed project would remain unchanged.

Rationale for Elimination

This alternative does not meet screening criteria for project objectives and purpose and need as it would not implement the increased fire safety component of the expanded MSUP as proposed as the replacement of wood poles with the superior strength and fire resistance of the proposed steel poles relative to wood would not be implemented. This alternative would entail removing existing wood poles and introducing new wood or composite type poles which would not substantially avoid or reduce environmental effects resulting from replacing the existing wood poles as proposed. Under this alternative, views in general would resemble those experienced by viewers under existing conditions, as well as under SDG&E's proposed project where the proposed new weathered steel poles would develop a weathered patina on the surface of the poles which would resemble the hue and aesthetic of existing wood pole structures. Due to routine inspections and preventive maintenance activities, individual pole replacements with weathered steel poles have occurred within the project study area. As such, the use of composite material poles along alignments with steel poles already in place could increase visual impacts due to the use of different materials and the anticipated visual contrast in color and texture. Because this alternative does not meet project objectives and purpose and need screening criteria, and would not substantially avoid or reduce environmental effects resulting from replacing the existing wood poles as proposed, it has not been carried forward for further consideration in the EIR/EIS.

C.5.11 System Alternative 1: Consolidate TL6923 and TL625 along Sunrise Powerlink

Description

This alternative would remove portions of TL6923 and TL625 and co-locate along existing towers used for the Sunrise Powerlink in the vicinity of Barrett Lake, McAlmond Canyon

towards Lake Morena and up through Deer Horn Valley and Lyons valley. All other aspects of SDG&E's proposed project would remain unchanged.

Rationale for Elimination

This alternative does not meet screening criteria for feasibility as the underbuilding as proposed under this alternative cannot be supported by the current engineering design of towers used for the Sunrise Powerlink project. Because this alternative would not meet feasibility screening criteria, it has not been carried forward for further consideration in the EIR/EIS.

C.5.12 System Alternative 2: Additional Consolidation and Removal of Facilities

Description

This alternative would remove and consolidate lines to the extent feasible along with considering the use of dispersed generation (roof-top solar, wind, generator use). All other aspects of SDG&E's proposed project would remain unchanged.

Rationale for Elimination

The power lines and distribution circuits proposed for replacement have been in operation for decades and are needed to ensure continued electric service and reliability to local communities, residences, and government facilities within and adjacent to the CNF. It is anticipated that removal/consolidation of existing facilities and the use of dispersed generation would not feasibly provide the reliability needs of SDG&E as stated in their project objectives and the Forest Service's purpose and need. Therefore, this alternative has not been carried forward for further consideration in the EIR/EIS.

C.5.13 System Alternative 3: No-Wire Alternative

Description

This alternative would remove the 69 kV and 12 kV electric lines in the MSUP/PTC project area and would replace them with a microgrid system to serve electric users in the project area. A microgrid is a small-scale power grid that can operate independently or in conjunction with the area's main electrical grid.

Rationale for Elimination

Present day microgrids typically rely on the interconnection of a local distribution system located within a given electrical boundary and powered by distributed resources within the same area.

Although they may be designed to be completely autonomous from the main grid, most microgrids are designed to be self-contained and capable of disconnecting from the main grid for relatively short periods of time (hours to a few days). Generation within the microgrid generally consists of distributed and intermittent resources (such as wind and solar), storage batteries, and diesel-powered generation.

Most of the time, the microgrid operates interconnected with the area utility grid relying on its internal resources to meet internal load as well as importing or exporting any imbalance between internal generation and load. This allows the load within the microgrid area to be served from the local resources and thereby reducing loading on the utility distribution system and main grid. To the extent it contains sufficient generation to meet internal load it may disconnect and operate as an isolated island. The duration of the isolated operation is dependent upon the load characteristics and operating characteristics of internal generation and any internal storage.

While operating as an island, the microgrid is completely self-dependent and thus limited in the amount of energy and peak load it can provide. These limitations are generally mitigated through reliance on the area utility grid (interconnection). Under the No-Wire Alternative, existing 69 kV power lines and 12 kV distribution circuits within and adjacent to the CNF would be removed; therefore, there would not be lines to enable the microgrid to interconnect with the main utility grid and thus it would have to be self-sufficient, continually providing all of the back-up normally obtained from the main grid. This requirement for complete self-sufficiency (as would be required under a No-Wire Alternative) would degrade the electric service reliability within the microgrid served area.

The power lines and distribution circuits proposed for replacement have been in operation for decades and are needed to ensure continued electric service and reliability to local communities, residences, and government facilities within and adjacent to the CNF. The existing system is considered the backbone to the SDG&E electrical grid system in central and eastern San Diego County. ~~While an alternative microgrid system may meet environmental and project objective screening criteria, it would not meet feasibility criteria.~~Because the No-Wire Alternative would degrade the electric service reliability to local communities, residences, and government facilities within and adjacent to the CNF,~~Because microgrids are an emerging technology and are not a proven large-scale technology at this time, the use of this technology on a system backbone scale is not a viable alternative. Therefore,~~ this alternative was determined not to meet the project objectives~~feasibility~~ screening criteria and therefore has not been carried forward for further consideration in the EIR/EIS.

C.5.14 System Alternative 4: Management and System Maintenance Oversight

Description

Under this alternative, wood poles would not be replaced with steel poles as proposed but rather fire hardening would be improved by increasing vegetation management and system maintenance oversight. All other aspects of SDG&E's proposed project would remain unchanged.

Rationale for Elimination

This alternative would not meet the project objectives or purpose and need as it would not implement the expanded scope of the MSUP as proposed to include the superior strength and fire resistance of steel poles nor implement the proposed undergrounding, relocation, consolidation, or avoidance of certain sensitive resources. Additionally, relying on increased vegetation management and equipment inspections to reduce fire risk does not consider other wildfire causes resulting from the presence of transmission lines. As described in Section D.8 of the EIR/EIS, wildfire ignition can occur during high wind events via line failure, arcing, or through conductor-to-conductor contact (also known as "mid-line" slap), situations that would not be mitigated by increased vegetation management or equipment inspections.~~; t~~ Therefore, this alternative has not been carried forward for further consideration in the EIR/EIS.

C.5.15 System Alternative 5: Distributed Generation

Description

Under this alternative, wood poles would not be replaced with steel poles as proposed and instead this alternative would install distributed generation including but not limited to residential and commercial roof-top solar panels and other renewable distributed energy sources.

Rationale for Elimination

As described in Section C.5.2 under TL626 System Alternative 2, reductions in demand through energy programs are an important part of SDG&E's operations and are incorporated into their long-term peak load forecasts. However, as a single option to meet current energy demand provided by the five power lines and six distribution lines within this study area, the proposed alternative would not meet project objectives or purpose and need screening criteria as distributed generation would not provide the reliability needs to existing customers. Therefore, this alternative has not been carried forward for further consideration in the EIR/EIS.

C.6 References

SDG&E (San Diego Gas & Electric). 2013. *Master Special Use Permit, Cleveland National Forest, Orange and San Diego Counties, California, Revised Plan of Development.* Prepared by Insignia Environmental. Encinitas, California: Insignia Environmental. April 2013. http://www.cpuc.ca.gov/environment/info/dudek/CNF/DR3Response.htm

SDG&E. 2014a. "Response A. 12-10-009 Cleveland National Forest Power Line Replacement Projects PTC ED Data Request 6 (Dated March 21, 2014)." April 3, 2014.

SDG&E. 2014b. SDG&E March 4, 2014. Partial Response A. 12-10-009 Cleveland National Forest Power Line Replacement Projects PTC ED Data Request 5 Dated February 5, 2014. ED-SDGE-005: Alternative 1. http://www.cpuc.ca.gov/environment/info/dudek/CNF/DR5_ResponseCombined.pdf

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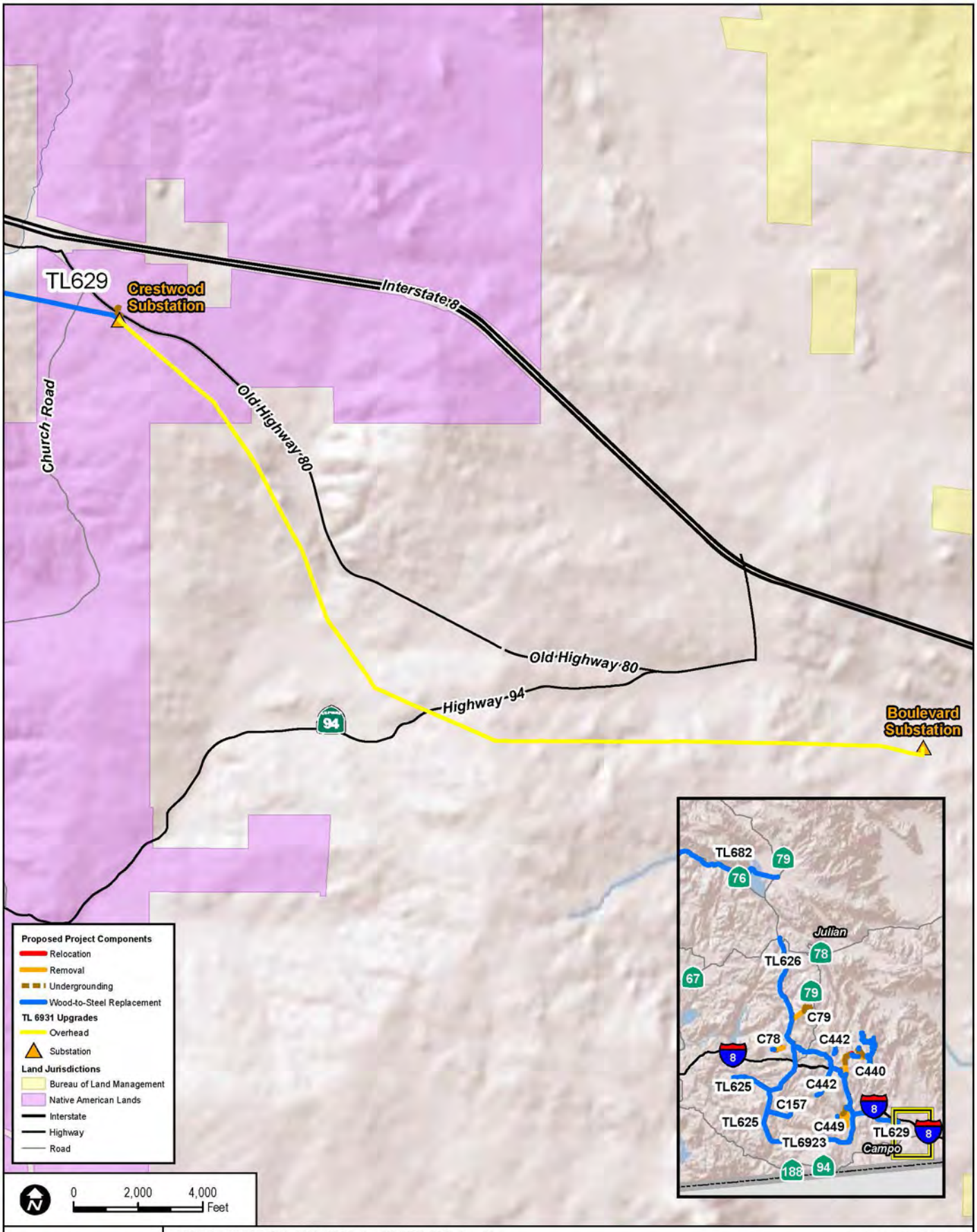

DUDEK

7014

SOURCE: SDG&E 2011, 2014; USGS; SanGIS 2009, 2012; Bing Maps

FIGURE C-1

Remove TL626 from Service - TL6931 Upgrades

MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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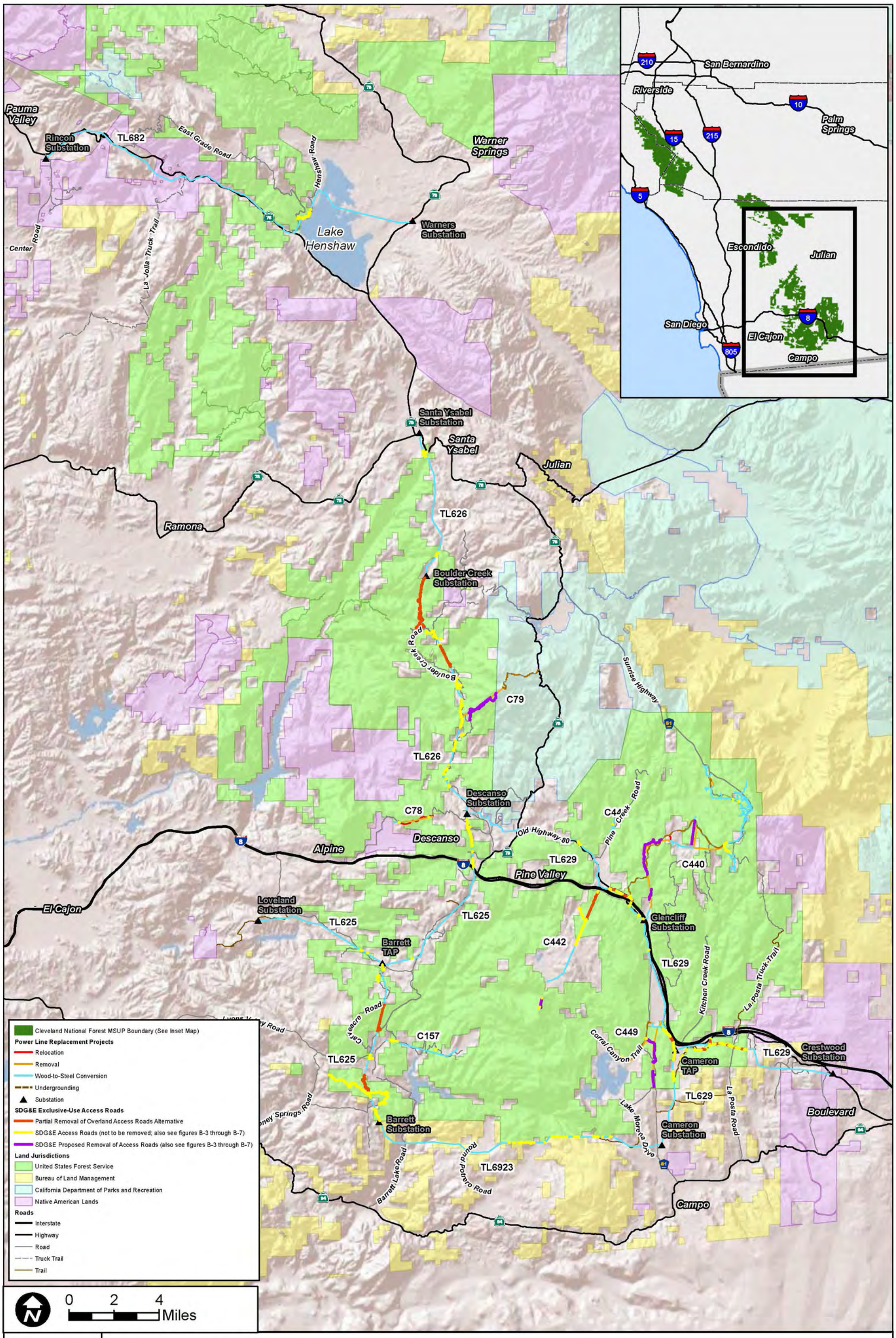

SOURCE: SDG&E 2011; SanGIS 2012; Bing Maps

Figure C-1A

Partial Removal of Access Roads Alternative - NEW

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MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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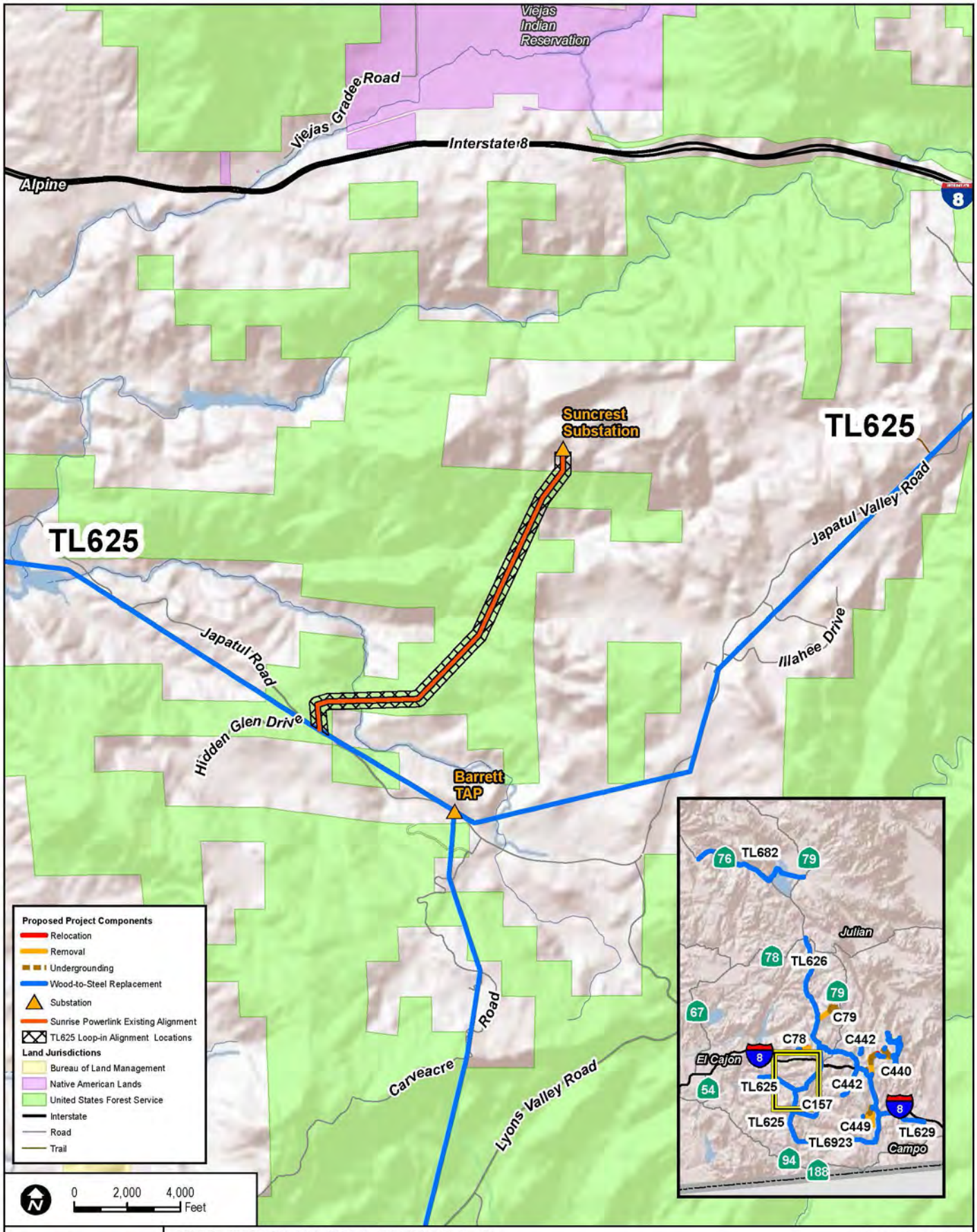

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SOURCE: SDG&E 2011, 2014; USGS; SanGIS 2009, 2012; Bing Maps

FIGURE C-2

Remove TL626 from Service - TL625 Loop-in

MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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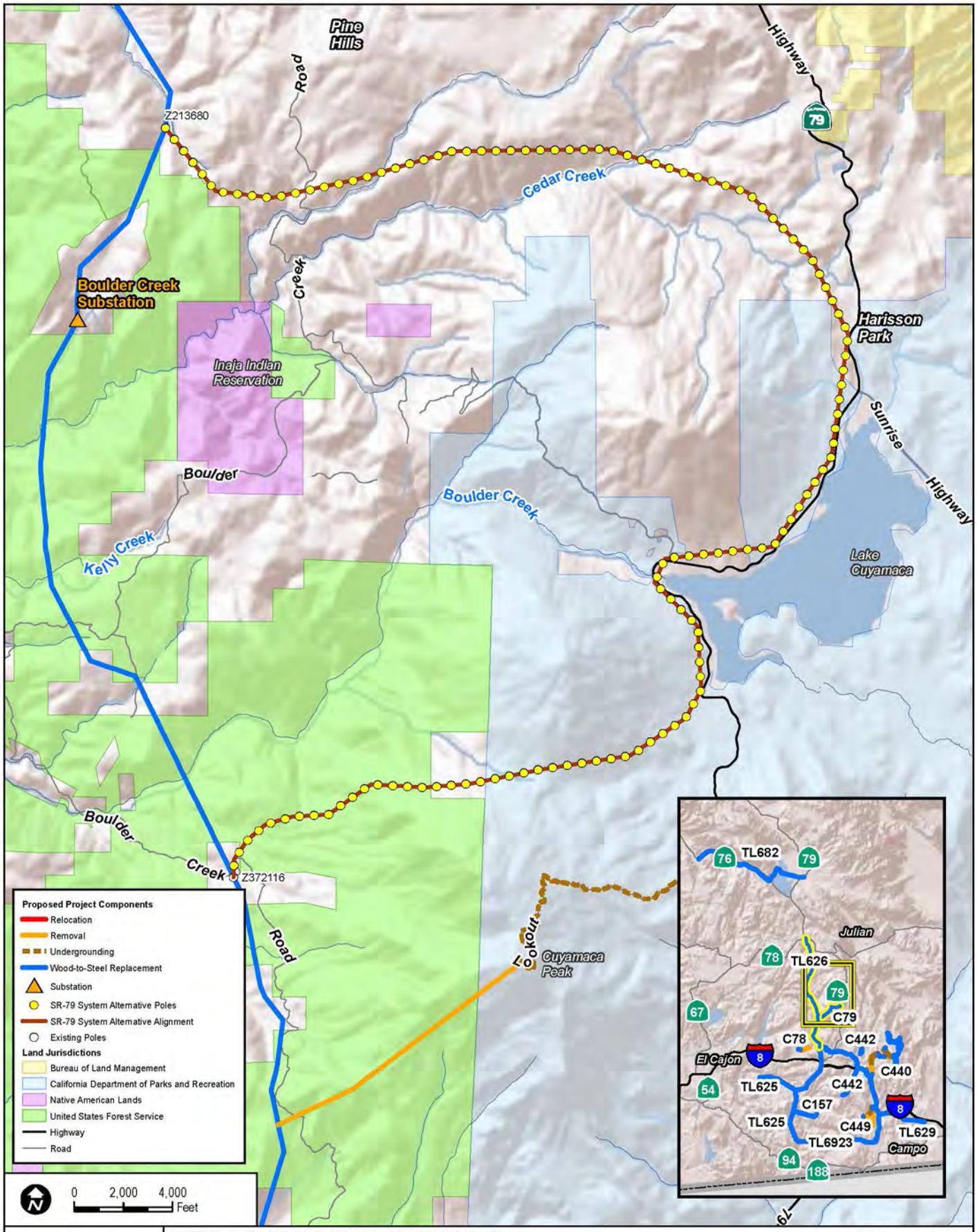

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SOURCE: SDG&E 2011, 2014b; USGS; SanGIS 2009, 2012; Bing Maps

FIGURE C-3

TL626 Alternative 1: Relocate Along State Route 79 - Eliminated

MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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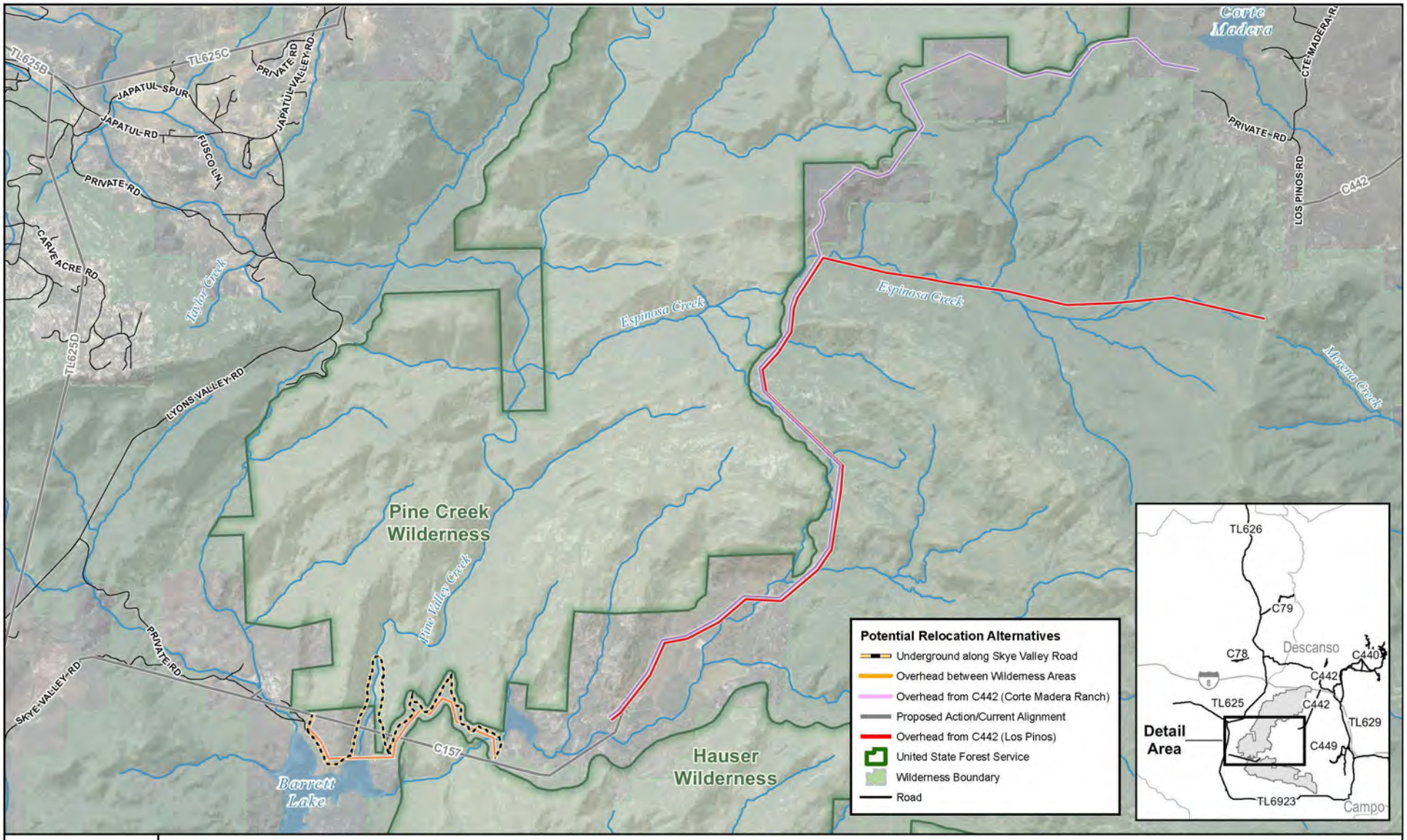

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SOURCE: SDG&E 2013

FIGURE C-4

C157 Overhead and Underground Alternatives - Eliminated

MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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D. ENVIRONMENTAL ANALYSIS

D.1 Introduction to Environmental Analysis

D.1.1 Introduction/Background

This section provides discussion and full public disclosure of the environmental impacts of the Master Special Use Permit and Permit to Construct (MSUP/PTC) Power Line Replacement Projects (SDG&E's proposed project) including consideration of project alternatives as described in Section C of this EIR/EIS.

The environmental analysis includes the following 13 areas:

- D.2 Visual Resources
- D.3 Air Quality
- D.4 Biological Resources
- D.5 Cultural and Paleontological Resources
- D.6 Greenhouse Gas Emissions
- D.7 Public Health and Safety
- D.8 Fire and Fuels Management
- D.9 Hydrology and Water Quality
- D.10 Land Use and Planning
- D.11 Noise
- D.12 Public Services and Utilities
- D.13 Recreation
- D.14 Transportation and Traffic.

Within each issue area in this section, the discussion of project impacts is provided in the following format:

- Environmental setting/affected environment
- Methodology and assumptions
- Applicable regulations, plans, and standards
- Environmental effects of SDG&E's proposed project

- Environmental effects of the federal proposed action. Note: the BLM proposed action does not modify SDG&E's proposed project and therefore is included within the analysis of SDG&E's proposed project.
- Environmental effects of additional alternatives
- Environmental effects of the No Action and No Project Alternatives
- Proposed mitigation monitoring, compliance, and reporting
- Residual effects
- References cited in the specific section.

Note: This EIR/EIS does not consider electromagnetic fields (EMFs) in the context of CEQA/NEPA for determination of environmental impacts because there is no agreement among scientists that EMFs create a health risk and because there are no defined or adopted CEQA/NEPA standards for analyzing health risks from EMFs. As a result, EMF information is presented for the benefit of the public and decision makers in Section D.15 of this EIR/EIS.

D.1.2 Environmental Analysis CEQA/NEPA Methodology

D.1.2.1 Environmental Baseline under CEQA

For the purpose of this document and pursuant to the CEQA Guidelines (Section 15125(a)), the environmental setting used to determine the impacts associated with SDG&E's proposed projects and alternatives is based on the environmental conditions that existed in the project area on September 23, 2013, at the time the Notice of Preparation was published.

It should be noted that operation and maintenance activities are ongoing within the project study area in order for SDG&E to ensure service reliability and public safety. These activities include routine inspections and preventive maintenance activities, as well as emergency work, which could include individual pole replacements. Should a pole replacement be needed, existing poles are replaced with weathered steel poles. The environmental analysis in this document is based on the project description as outlined in Section B of this EIR/EIS and does not consider, as part of the baseline, any poles that may have been replaced due to ongoing operations and maintenance activities.

D.1.2.2 Environmental Baseline under NEPA

For the purpose of this document and pursuant to the NEPA regulations, the no-action alternative provides a baseline for estimating the effects of the other alternatives (see the Council on Environmental Quality (CEQ), "Forty Most Asked Questions" Answer to Question 3 for more

details). Using the no-action alternative allows the analysis to contrast the impacts of the proposed action and any alternatives(s) with the current condition and expected future condition if the proposed action were not implemented.

For this analysis, the federal action would authorize an activity by issuing a permit. "No Action" in this analysis would mean the proposed activity would not take place, and the resulting environmental effects from taking no action would be compared with the effects of permitting the proposed activity or an alternative activity to go forward. No-action does not mean that conditions won't change. As described in section C.1.3, under the No Action Alternative, the MSUP would not be issued and the facilities that would otherwise be authorized on federal land would have to be removed. This comparison of effects between the alternatives that would authorize the continued occupancy of the electrical system and the No Action Alternative will provide the federal decision makers a benchmark to compare the magnitude of environmental effects of the action alternatives.

D.1.2.3 CEQA Significance Criteria

A joint EIR/EIS must comply with both CEQA (state) and NEPA (federal) guidelines. CEQA requires that each effect having a significant impact be identified in the EIR. Therefore, reference to "significant" or "less-than-significant" environmental effects in this EIR/EIS is considered a CEQA-related finding consistent with CEQA Guidelines, Section 21082.2 (14 CCR 15000 et seq.). References to significant impacts in this document are made to fulfill the requirements of CEQA pursuant to the standards of California law. To reflect the requirements of CEQA, a qualitative assessment of impacts is used in this EIR/EIS to disclose whether the impacts are considered significant under CEQA.

While the criteria for determining the significance of an impact under CEQA are unique to each area of the environmental analysis, the following classifications were uniformly applied to denote the significance of environmental impacts under CEQA. Classification of impacts under CEQA are as follows:

- **Class I:** Significant – cannot be mitigated to a level that is less than significant
- **Class II:** Significant – can be mitigated to a level that is less than significant
- **Class III:** Less than significant – no mitigation required
- **Class IV:** Beneficial impact
- **No Impact:** No impact identified.

D.1.2.4 NEPA Effects Analysis

Under NEPA, impacts should be addressed in proportion to their significance (40 CFR 1502.2(b)), meaning that severe impacts should be described in more detail than less consequential impacts. This is intended to help decision makers and the public focus on the project's key effects. The NEPA regulations explicitly require certain impacts to be discussed, including:

- Irreversible or irretrievable commitment of resources (40 CFR 1502.16);
- Tradeoffs between short term uses of the environment and long term productivity (40 CFR 1502.16); and
- Energy requirements and conservation potential of alternatives (40 CFR 1502.16(e)).

Effects include "ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative." Effects may also be both beneficial and detrimental (40 CFR 1508.8). The evaluation of effects considers the magnitude, duration, and significance of the changes. Changes that will improve the existing condition are noted, and detrimental impacts are characterized as adverse.

D.1.2.5 Impacts and Mitigation Measures

This EIR/EIS analyzes the potential direct, indirect, and cumulative environmental impacts of SDG&E's proposed project and alternatives. The impacts identified were compared with predetermined, specific significance criteria, and were classified according to significance categories listed in each issue area. The same methodology was applied to each alternative. A comparative analysis of the proposed power line replacement projects and the alternatives is provided in Section E of this EIR/EIS.

CEQA requires that a diligent effort be taken to identify mitigation measures that would reduce identified significant impacts to less than significant.

Under NEPA, all relevant, reasonable mitigation measures that could improve the project by reducing environmental effects are identified, even if they are outside the jurisdiction of the lead agency or the cooperating agencies. Under NEPA (40 CFR 1508.20), mitigation includes:

a. Avoiding the impact altogether by not taking a certain action or parts of an action.
b. Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
c. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.

d. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.

e. Compensating for the impact by replacing or providing substitute resources or environments.

However, to ensure that environmental effects of a proposed action are fairly assessed, the probability of the mitigation measures being implemented and the effectiveness of those measures must also be discussed.

The impact analysis in this EIR/EIS assumes implementation of all applicant proposed measures (APMs) as part of the applicant's project description. However, where other impacts are identified that are not addressed by these APMs or where the APMs are not considered adequate under both CEQA and NEPA to reduce impacts, additional mitigation measures are provided. The mitigation measures presented in this EIR/EIS are identified in the mitigation monitoring, compliance, and reporting tables at the end of each individual area of environmental analysis (Sections D.2 through D.14). For a discussion of mitigation monitoring and reporting, refer to Section H of this EIR/EIS.

During preparation of this EIR/EIS, APMs were assumed to be part of SDG&E's proposed project description and are not included as CPUC or Forest Service-recommended mitigation measures. However, APMs will be compiled with the CPUC-recommended and Forest Service-recommended mitigation measures into the final Mitigation Monitoring, Compliance, and Reporting Program, which will be completed upon adoption of the final EIR/EIS. Table B-13 in Section B, Project Description, of this EIR/EIS, provides a list of APMs for the project. In addition, each environmental topic area in Section D lists applicable APMs relevant to the topic area.

D.1.3 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

40 CFR 1500–1518. Protection of Environment; Chapter V: Council on Environmental Quality.

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D.2 Visual Resources

This section addresses potential visual resource impacts resulting from construction and operation of proposed power line replacement projects along with the operation and maintenance activities proposed for authorization under the MSUP. Section D.2.1 provides a description of the existing visual setting. Applicable regulations, plans, and standards are provided in Section D.2.2, and the visual impacts/environmental effects of SDG&E's proposed project are discussed in Section D.2.3. The U.S. Forest Service (Forest Service) proposed action is described in Section D.2.4, and Section D.2.5 discusses the Bureau of Indian Affairs (BIA) proposed action. Additional alternatives are discussed in Section D.2.6. Section D.2.7 discusses the No Action Alternative, and Section D.2.8 describes the No Project Alternative. Section D.2.9 provides mitigation monitoring, compliance, and reporting information; Section D.2.10 addresses residual effects of the project; and Section D.2.11 lists the references cited in this section.

D.2.1 Environmental Setting/Affected Environment

D.2.1.1 Methodology and Assumptions

The visual analysis is based on a review of ground-level and aerial photographs; topographic data; public policies regarding visual quality, including those adopted by the Forest Service, U.S. Bureau of Land Management (BLM), and San Diego County; project drawings; and other information provided by SDG&E for the proposed project. SDG&E's Plan of Development (POD) for the MSUP for Cleveland National Forest (SDG&E 2013) served as the primary source for the project description. The existing visual setting was identified through site visits and a review of photographs submitted by the project applicant, topographic data, and plans applicable to lands traversed by the various components of SDG&E's proposed project. The Southern California National Forests Land Management Plan (LMP), and more specifically, Part 2 which pertains specifically to the Cleveland National Forest (CNF) and its distinct "places" and landscapes, was reviewed to better understand the landscape character of areas of the forest traversed by SDG&E's proposed project (Forest Service 2005a). In addition, the Cuyamaca Rancho State Park General Plan, the County of San Diego General Plan, and the subregional and community plans of land areas in which SDG&E's proposed project is located were reviewed for information applicable to the existing visual setting.

For portions of the project situated on Forest Service lands, the visual impact analysis incorporates procedures from the Forest Service Scenery Management System (SMS) (Forest Service 1995). The SMS establishes management standards/Scenic Integrity Objectives (SIOs) to describe the level of modification associated with land use activity that is acceptable in a given area. A SIO is applied to all lands within the CNF in order to establish guidelines for forest management objectives over time. In addition to the Forest Service SMS System,

procedures from the BLM Visual Resources Management (VRM) System (BLM Handbook 8410-1) and the U.S. Department of Transportation Federal Highway Administration (FHWA) Visual Impact Assessment for Highway Projects (Publication No. FHWA-HI-88-054; FHWA 1988) were reviewed to assist in the evaluation and description of the existing and proposed visual quality of the subject landscape. Further, CEQA Guidelines and the *County of San Diego Guidelines for Determining Significance: Dark Skies and Glare* (County of San Diego 2009) were reviewed to identify appropriate significance thresholds and to assist in the organization of the visual impact analysis section.

Central to the analysis of the visual impacts of the proposed power line replacement projects is an evaluation of representative observation points in the project area from which the project would be visible. Key Observation Points (KOPs) were selected by the project applicant's visual consultant based on their ability/usefulness in evaluating the existing landscape setting and characterizing potential visual impacts. In addition, KOPs represent views of SDG&E's proposed project afforded to various viewer groups, including motorists and recreationists, in different landscape types and terrain and from different vantage points and distance zones. Typical KOP locations for SDG&E's proposed project and alternatives include (1) along public County roads, Forest Service roads, and major/significant travel corridors; (2) scenic vista points/scenic lookouts; (3) recreation areas such as campgrounds, trailheads, and trails; (4) residential areas including locations on local Indian reservations; and (5) prominent peaks. For each KOP, the existing visual setting and visual quality of the landscape is described in terms of landscape character elements of form, line, color and texture. For Forest Service lands, the applicable scenic integrity designation is also provided and for all other locations, visual quality is assessed in terms of vividness, intactness and unity. In addition to visual quality and character, viewer concern, viewer exposure and overall visual sensitivity is discussed for each KOP. For the visual impact analysis, changes to the existing visual setting resulting from construction, operation, and maintenance of SDG&E's proposed project are described in terms of consistency with the applicable scenic integrity objective and contrast in the landscape character elements of form, line, color, and texture.

To document the visual changes that will occur, visual simulations depicting SDG&E's proposed project from KOPs were prepared by the project applicant's visual consultant. Visual simulations were subsequently reviewed by the EIR/EIS team to determine accuracy of the images in terms of bulk, scale, and color of project components. In total, 24 photorealistic computer-generated visual simulations were prepared to depict the anticipated visual change resulting from SDG&E's proposed project at KOPs. The computer-generated visual simulations were created through an objective analytical and computer modeling process that included development of an initial three-dimensional (3D) digital model of existing conditions based on topographic data and development of a 3D model of SDG&E's proposed project

components based on project geographic information system (GIS) and engineering design data. Once the models were created, they were combined to produce a complete model of SDG&E's proposed project. Computer-generated perspective plots representing the selected viewpoints were then incorporated into the model, and computer "wireframe" perspective plots were overlain on photographs to verify scale of project component and viewpoint locations. Digital renderings of the 3D model were then combined with selected digital photographs to produce the visual simulations.

In addition to visual simulations prepared for SDG&E's proposed project and based on comments received during public review of the Draft EIR/EIS from the Campo Kumeyaay Nation and the public, five new visual simulations were prepared to portray the anticipated visual change resulting from the Removal of TL626 from Service Alternative (see Section D.2.6.2). More specifically, new simulations were prepared and depict the anticipated visual change resulting from proposed wood-to-steel replacement of TL6931 support poles, a component of the TL626 removal alternative, as viewed from public roadways and the Golden Acorn Casino. The analysis associated with these new visual simulations is presented in Section D.2.6.2, Removal of TL626 from Service.

Key Terms

Key terms used in the visual resources section are defined as follows.

Project Area

The project area for visual resources is defined by the on-site landscapes directly affected by the various components of SDG&E's proposed project and alternatives and the surrounding off-site areas from which SDG&E's proposed project and alternatives may be visible. The study area for the MSUP includes Forest Service lands in Riverside, Orange, and San Diego counties comprising the CNF. However, while the MSUP study area extends into Riverside and Orange counties and encompasses operation and maintenance activities on Forest Service lands, the proposed power line replacement projects analyzed in this document are primarily located in the Palomar and Descanso ranger districts of the CNF within San Diego County. Further and in addition to Forest Service lands, adjacent BLM, County, Tribal, and state park lands are intermittently traversed by existing infrastructure (transmission and distribution towers, wires and access roads) operated by ~~the Forest Service~~SDG&E; therefore, these lands are included in SDG&E's proposed project area.

Scenic Integrity

Scenic integrity indicates the degree of intactness and wholeness of the landscape character. Intactness may be raised or maintained by human alterations; however, more often than not, integrity is weakened by human alterations which result in deviation from the existing landscape character. The Forest Service's SMS—an inventory and assessment system —designates all National Forest lands with SIO classes. SIOs range from Very High to Unacceptably Low and are used to illustrate the desired valued landscape character of a given area and to note the appropriate lack or presence of contrasting elements (i.e., deviations). Further, SIOs define the degree of deviation in form, line, color, scale and texture that may occur at any given time and therefore, provide a basis for an analysis of visual contrast.

Table D.2-1 lists the six SIO classes and provides a summary of the characteristics applicable to each SIO.

Table D.2-1
Forest Service Scenic Integrity Objectives (Summary)

Scenic Integrity Objective (SIO)	Characteristics
Very High (VH)	The valued landscape character "is" intact with only minute if any deviations. The existing landscape character and sense of place is expressed at the highest possible level.
High (H)	The valued landscape character "appears" intact. Deviations may be present but must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such scale that they are not evident.
Moderate (M)	The valued landscape character "appears slightly altered." Noticeable deviations must remain visually subordinate to the landscape character being viewed.
Low (L)	The valued landscape character "appears moderately altered." Deviations begin to dominate the valued landscape character being viewed but they borrow valued attributes such as size, shape, edge effect and pattern of natural openings, vegetative type changes, or architectural styles outside the landscape being viewed.
Very Low (VL)	The valued landscape character "appears heavily altered," and deviations may strongly dominate the valued landscape character. They may not borrow from valued attributes such as size, shape, edge effect and pattern of natural openings, vegetative type changes, or architectural styles within or outside the landscape being viewed; however, deviations must be shaped and blended with the natural terrain (landforms) so that elements such as unnatural edges, roads, landings, and structures do not dominate the composition.
Unacceptably Low (VL)	The valued landscape character being viewed appears extremely altered and deviations are extremely dominant and borrow little if any form, line, color, texture, pattern, or scale from the landscape character. Landscapes at this level of integrity need rehabilitation.

Source: Forest Service 1995.

Visual Quality

Visual quality relates to the visual appeal of a landscape and is typically described according to seven contributing elements: landforms, vegetation, water, color, influences of adjacent scenery,

cultural modifications, and scarcity. Visual quality is evaluated in the EIR by identifying the applicable scenic integrity objectives of Forest Service lands and the vividness, intactness, and unity (generally described as low, medium, and high) displayed on other lands. Visual quality information was provided by the project applicant's visual resource consultant and was verified by the EIR/EIS team during preparation of this document.

Visual Sensitivity

Landscapes are viewed to varying degrees from different locations and subsequently differ in their importance. Visual sensitivity is a measure of the degree of public importance placed on landscapes as viewed from travelways and use areas. Sensitivity is based upon the type of land uses, amount of use, accessibility of areas, public interest, adjacent land use, and special designation of lands. In addition, sensitivity may also be identified through review of public comments received during the scoping process.

Sensitivity is generally described as *High*, *Moderate,* and *Low* and is defined as follows:

- **High Sensitivity.** Areas designated for scenic/visual resource protection or those receiving a high degree of use. Often include primary travelways and recreation areas.
- **Moderate Sensitivity.** Areas lacking designated scenic/visual protection but located adjacent or near areas with protection. May include secondary roads, trails, and recreation facilities.
- **Low Sensitivity.** Often areas that are remote from population centers, primary travelways, and specially designated/protection areas. Landscapes of low concern may also be visually degraded.

Viewer Groups—Number and Types of Viewers

Potentially sensitive viewers are determined based on the type and amount of use various land uses receive. Land uses that derive value from the quality of their settings are considered potentially sensitive. Land uses within the project area that are considered sensitive to visual changes to their settings include residential areas; designated recreation and natural areas; major transportation systems, travelways, and local roadways; and designated and eligible state historic routes and scenic highways.

Distance Zones

The distance from which a project component may be viewed affects the visual dominance and clarity that a feature or component may have within the seen landscape. The Forest Service SMS generally considers four distance zones, plus seldom seen areas, for project-

level planning. Distance zones described in this section include *immediate foreground, foreground, middleground,* and *background*. The characteristics of each distance are summarized below in Table D.2-2.

Table D.2-2
Distance Zones

Zone	Distance from Source	Characteristics
Immediate Foreground	0–300 feet	Viewer can distinguish landscape detail (i.e., individual leaves, flowers, and textures) and movement of leaves and grasses in light winds.
Foreground	0–0.5 mile	Viewer has close range visibility to a given object and can distinguish small boughs of leaf clusters, tree trunks and large branches, individual shrubs, clumps of wildflowers, medium-sized animals, and medium-to-large sized birds.
Middleground	0.5–4 miles	Objects are still distinguishable from adjacent visual features. The middleground is the predominant distance zone at which National Forest landscapes are seen, and at this distance, viewers are able to distinguish individual tree forms, large boulders, flower fields, small openings in the forest and small rock outcrops.
Background	4 miles to horizon	Viewers can distinguish groves or stands of trees, large openings in the forest, and large rock outcrops. Landscapes viewed from the background distance zone are simplified as textures have disappeared and colors have flattened.
Seldom Seen	—	Landscapes are obscured by topography or vegetation and are not typically seen from selected travelways or use areas, but may be seen from aircraft or by the occasional viewer wandering through the forest.

Source: Forest Service 1995

Viewer Concern

Closely associated with expectations of viewers, viewer concern speaks to the interest level or concern of viewers regarding the visual resources of an area. Viewer concern is associated with visual sensitivity as it reflects the degree of public importance placed on landscapes based on existing features including landforms, vegetation patterns, and water features.

Viewer Exposure

Viewer exposure varies depending on a variety of factors including angle of view (i.e., normal, inferior, or superior viewing angles); landscape visibility (i.e., the viewer's ability to see and perceive landscapes); and screening conditions, including whether elements in the landscape are skylined on ridgelines, backscreened by topography and/or vegetation, or screened by structures

or vegetation. Landscape visibility is itself a function of multiple elements including context of viewers, duration of views, degree of discernible detail, seasonal variations, and volume of viewers. In general term, viewer exposure is generally described as long-term for residents, and short-term for travelers along roadways and visitors to park and recreation areas.

Key Observation Points

KOPs are representative viewing locations evaluated in detail for this EIR/EIS section. KOPs are chosen based on the range of sensitive viewers, distance zones, viewing conditions, and visual changes that would result from the proposed power line replacement projects. In total, 24 KOPs are described and evaluated. KOP locations identified by the project applicant's visual resource consultants and subsequently reviewed by the EIR/EIS team to determine appropriateness and whether the locations and available views were representative of both the CNF and SDG&E's proposed project.

Section D.2.1.3 provides an overview of each KOP according to location and viewer groups evaluated. In addition, KOPs are discussed in the context of the impact analysis presented in Sections D.2.4 and D.2.5. KOP locations are shown on Figure D.2-1.

Visual Simulations

Simulations are defined as accurate, photorealistic images of SDG&E's proposed project and are key to documenting visual changes and determining visual contrast levels from specific KOP viewing locations. Visual simulations were prepared by the project applicant's consultant and were reviewed by the EIR/EIS team for completeness and photorealism. The simulations depict the operational phase of SDG&E's proposed project; simulations were not prepared to depict visual contrast associated with construction or maintenance activities.

Visual Contrast

In regards to SIOs, a specific scenic integrity level can be maintained by decreasing the visual contrast of the deviation in question. For lands with Very High scenic integrity, specific alterations may be incapable of complying with integrity levels as the desired condition from a visual perspective is that of an unaltered landscape. For lands with High or Moderate scenic integrity, visual contrast may be reduced and scenic integrity levels may be met through repetition of form, line, color, texture, pattern, and scale common to the valued landscape character being viewed.

Visual contrast was evaluated by the EIR/EIS team and documented. Contrast ratings are defined according to four levels: *none*—contrast is not visible or perceived; *weak*—contrast can be seen but does not attract attention; *moderate*—contrast begins to attract attention and

is not easily overlooked; or *strong*—contrast attracts attention, will not be overlooked, and is dominant in the landscape.

Visual Resource Management

The BLM maintains its VRM System to assess and assist in the conservation of scenic resources on public lands. Through the VRM System, the BLM assigns management class designations (Class I through Class IV) to public lands determined in part by existing scenic quality of landscape elements (i.e., landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modification), viewer sensitivity levels, and distance zones. VRM management classes and the applicable class objectives are listed below in Table D.2-3.

Table D.2-3
BLM VRM Classes and Objective

VRM Management Class	Class Objective
Class I	Preserve the existing character of the landscape. The level of change to the characteristic landscape should be very low and must not attract attention.
Class II	Retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer.
Class III	Partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer.
Class IV	Provide for management activities which require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention.

Source: BLM 1986

D.2.1.2 General Overview

The MSUP study area is located within Orange and San Diego counties on Forest Service lands encompassing the CNF. The majority of the project area, including all of the proposed power line replacement projects, is located within the Palomar and Descanso ranger districts of the CNF within San Diego County. In addition, adjacent BLM, County, Tribal, and state park lands are intermittently traversed by existing infrastructure (transmission and distribution towers, wires, and access roads) operated by ~~the Forest Service~~SDG&E; therefore, these lands are included in the project area.

The description below provides a brief overview of the general visual characteristics of the MSUP study area and, more specifically, Forest Service lands within the Trabuco, Palomar and Descanso ranger districts. Section D.2.1.3 provides descriptions of the visual setting, quality,

and character of each of the landscapes traversed by the power lines (transmission and distribution lines) that comprise SDG&E's proposed project. One or more KOPs were established to depict the existing visual character and represent the general visual resources along that particular transmission or distribution line. The location of KOPs is shown on Figure D.2-1. It should be reiterated that existing infrastructure (transmission and distribution towers, wires, and access roads) operated by ~~the Forest Service~~SDG&E is included in SDG&E's proposed project, and therefore, these structures and features contribute to the baseline environmental setting as it pertains to visual resources.

Trabuco Ranger District

The Trabuco Ranger District lies at the boundary of Orange, Riverside, and San Diego counties and is generally comprised of steep, chaparral-covered topography supporting back country trail-based recreation, including hiking, biking, and horseback riding, and developed campground and picnic sites. The eastern portion of the district includes the undeveloped east-facing slopes of the Santa Ana Mountains which are located adjacent to rapidly developing urban communities situated along the Interstate 15 (I-15) corridor, and primary visitor access to the ranger district is provided by Ortega Highway. In addition to developed recreation amenities (i.e., family and group campgrounds, trailheads) located in the vicinity of the Ortega Highway, federally designated wilderness (i.e., the San Mateo Canyon Wilderness) is located in the southwest corner of the ranger district, as is the Wildomar Off-Highway Vehicle (OHV) area.

Palomar Ranger District

The northern portion of SDG&E's proposed power line replacement projects is located within the Palomar Ranger District of the CNF. The district, named for the Palomar Mountains that are located north of State Route 76 (SR-76) and TL682, intersects the San Dieguito, San Luis Rey, and Santa Margarita watersheds. In addition, TL682 is located adjacent to SR-76 and the San Luis Rey River, and runs west to east from the Rincon Substation to Warners Substation. SR-76 traverses a primarily rural landscape modified by agricultural and dispersed residential development, as well as limited public facilities and recreation amenities. Vegetation in the vicinity ranges from southern mixed chaparral and Diegan coastal sage scrub on the slopes of local hills and mountains, pasturelands where the land has been altered for agricultural development, southern riparian forest along the San Luis Rey River, and grasslands and meadows in the Lake Henshaw drainage basin. Public viewing opportunities of SDG&E's proposed project are generally concentrated along SR-76, but also include local roads, rural residences, recreation areas, and State Route 79 (SR-79). Further to the south near the Santa Ysabel community, the character of the landscape changes and consists of grasslands framed by

rolling hills. Oak woodlands, intermittent streams, narrow canyons, and rising terrain comprise the southern extent of the Palomar Ranger District landscape.

Descanso Ranger District

The northern extent of the Descanso Ranger District consists of chaparral and coastal sage scrub covered hills and ravines located north of Descanso. Further, the eastern slopes of Cuyamaca Peak and the surrounding Cuyamaca Mountains are covered with oak chaparral and pine and coniferous forest. Similarly, the Laguna Mountain area supports pine forest and small, relatively narrow grassland-covered valleys. Further, the southern area of the Descanso Ranger District includes steep slopes covered with coastal sage scrub and chaparral, and dotted with numerous granite boulders and rocky outcrops and canyons supporting oak woodlands and riparian vegetation. Existing infrastructure within the Descanso Ranger District is accessible via an intricate network of wide and narrow access roads traversing a moderately to sparsely populated generally rural landscape which also supports dispersed recreation and remote agriculture opportunities. Public viewing opportunities in the area are numerous and include major transportation corridors and travelways (i.e., I-8, SR-Route 78, and Sunrise Highway), local roads, visitor and recreation areas including trailheads and trailheads, and residences.

D.2.1.3 Environmental Setting – Proposed Power Line Replacement Projects

Table D.2-4, below, summarizes the environmental setting by KOP for the power lines included in SDG&E's proposed project. Viewer concern, exposure, and sensitivity at each KOP location are provided below as are the applicable SIO for KOP locations and landscapes on Forest Service lands. For locations on private or BLM lands, a general visual quality rating ranging from low to high is provided.

Table D.2-4
Environmental Setting – Power Lines

KOP	Location	Applicable SIO/ Visual Quality	Viewer Concern	Viewer Exposure	Viewer Sensitivity
TL682					
1	SR-76 near Palomar Mountain Road (private lands)	Low	Low	Moderate	Low to Moderate
2	La Jolla Indian Reservation (tribal lands)	Low to Moderate	Low	Moderate to High	Moderate
3	SR-76 near San Luis Rey Picnic Grounds (Forest Service land)	High	Moderate to High	Moderate	High
TL626					
4	Inaja Memorial Trail (Forest Service lands)	High	High	Low to Moderate	High

Table D.2-4
Environmental Setting – Power Lines

KOP	Location	Applicable SIO/ Visual Quality	Viewer Concern	Viewer Exposure	Viewer Sensitivity
5	Boulder Creek Road near Tule Springs Road (Forest Service lands)	High	Moderate to High	Low to Moderate	Moderate
6	Boulder Creek Road near Dubois Road (Forest Service lands)	High	High	Low to Moderate	Moderate to High
TL625					
7	Loveland Reservoir Trailhead (private lands)	Moderate	Moderate to High	Moderate	Moderate
8	Japatul Valley Road (private lands)	Low	Low to Moderate	Moderate	Moderate to High
9	I-8 Westbound near SR-79 (private lands)	High	High	Moderate to High	High
10	Lyons Valley Road near Barrett Lake Road (private lands)	High	High	Low to Moderate	Moderate to High
TL629					
11	SR-79 at Viejas Boulevard (private lands)	Low	Low to Moderate	Moderate	Low to Moderate
12	Old Highway 80 near Prut Road (private lands)	Low	Moderate	Moderate	Moderate to High
13	Boulder Oaks Campground (Forest Service lands)	High	Moderate to High	Moderate to High	Moderate to High
14	La Posta Road (Forest Service lands)	High	Low to Moderate	Moderate	Low to Moderate
TL6923					
15	Pacific Crest National Scenic Trail Near Hauser Mountain (Forest Service lands)	High	High	Moderate	High

The environmental setting associated with landscapes traversed by the specific proposed power line replacement projects is discussed in detail below.

TL682

The TL682 alignment is depicted on Figure D.2-1. TL682 is approximately 20.2 miles long and runs west primarily adjacent to SR-76 (an eligible State Scenic Highway) from SDG&E's existing Rincon Substation to SDG&E's existing Warner Substation located along SR-79 near the community of Warner Springs. From the Rincon Substation east to East Grade Road/County Highway S7, TL682 generally follows the alignment of SR-76 and traverses a rural landscape modified by agricultural and dispersed residential development. Also visible in the landscape are

several public facilities including an existing electrical substation, water department buildings and aboveground reservoirs and recreation opportunities including the La Jolla Indian Campground, the Amago Sports Park, and the San Luis Rey Picnic Area. At East Grade Road/County Highway S7, TL682 turns to the north, and existing poles and access roads traverse the western shoreline of Lake Henshaw and woodland and riparian forest vegetation and then cross the San Luis Rey River. From there, existing poles and access roads navigate expansive grasslands and meadows as well as occasional fields/pastures within the Lake Henshaw drainage basin prior to the power line crossing SR-79 and interconnecting to the Warner Substation. The power line traverses private lands, tribal lands associated with the La Jolla Band of Luiseno Indians, and Forest Service lands within the CNF designated with High scenic integrity.

Views of TL682 would be available from SR-76, local roads, rural residences, recreation areas, and SR-79. Along SR-76, tall, weathered, brown to light tan colored wooden poles and the horizontal, slightly concave lines associated with TL682 (as well as the linear, winding form of SR-76 itself) are prominent built features in the landscape. Other notable elements include the tall mounding form of light to dark green lemon and avocado trees, the short, spreading form of seasonally green and brown grasses and low shrubs, and the vertical form of occasional landscape trees. East of Palomar Mountain Road the occurrence of agricultural development in the landscape is reduced, and light brown to green chaparral and scrub covered hills, relatively dense and dark green oak tree clusters and occasional weathered-brown wood poles supporting TL682 comprise the visible features along SR-76. Along East Grade Road/County Highway S7, chaparral and exposed boulder covered hills dominate western views and distant views across the Lake Henshaw drainage basin are intermittently available to the east. However, due to the superior viewing angle afforded to motorists, the screening presence of road cuts, and the lower elevation location of existing infrastructure along the western shoreline of Lake Henshaw, views of TL682 from East Grade Road/County Highway S7 are extremely limited. On the other hand, the landscape visible from SR-79 is relatively flat and contains green and brown short grasses and occasional dark green oak tree clusters surrounded by exposed white granitic boulder outcrops. The tall, vertical forms and regular lines displayed by weathered brown to light tan wood support structures are visible across the flat landscape and increase both in number and visual prominence near the Warner Substation.

Three KOPs were selected to represent the visual setting along the TL682 alignment as viewed from SR-76, rural residences, and recreational areas. A discussion of the existing visual setting for each of the three KOPs is provided below.

KOP 1—SR 76 Near Palomar Mountain Road

KOP 1 was established on SR-76, approximately 0.3 mile west of Palomar Mountain Road/County Highway S6 (see Figure D.2-1). The KOP orientation is to the west along SR-76, and existing TL682 infrastructure is visible north of the road (see Figure D.2-2). KOP 1 captures a representative view of the existing landscape as viewed from SR-76 that provides access to rural residencies in the Pala-Pauma and North Mountain regions of San Diego County, the La Jolla Indian Reservation, and recreation areas including Palomar Mountain State Park and Lake Henshaw. KOP 1 is located on private lands under the jurisdiction of the County of San Diego.

Visual Quality: Low

In addition to short grasslands and tall clusters of oak trees, the juxtaposition of modest rural residential development, tan to green colored undeveloped fields, the tall form of wood support poles, and horizontal, slightly concave power lines are visible in Figure D.2-2. The KOP 1 landscape is characteristic of the existing visual setting as viewed along segments of SR-76. The silhouette of a distant ridgeline to the east provides some vividness to the view; however, existing topography and vegetation partially screen the ridgeline.

Viewer Concern: Low

While motorists along SR-76 are provided views of the pine-covered elevated terrain, expansive grassland meadows and scattered oak tree clusters, the composition of the landscape west of Palomar Mountain Road is marked by existing development (both rural residential and agriculture) and multiple wood poles and lines associated with TL682, and local communication infrastructure contribute to the existing landscape setting. Therefore, the replacement of existing vertical elements with elements of similar form, line, and color would not be seen as an adverse visual change.

Viewer Exposure: Moderate

Transmission infrastructure is visible in the foreground distance from KOP 1, and due to the viewing angle, several structures are skylined as viewed from SR-76. In addition, views of transmission poles are dynamic and remain within the viewshed of the state route as motorists pass through the areas. The number of viewers on the road is assessed as low to moderate and view duration would be extended as the power line generally follows the alignment of the roadway.

Visual Sensitivity: Low to Moderate

While the landscape surrounding SR-76 in the vicinity of KOP 1 carries no scenic resource protection designation, the roadway is easily accessible from the nearby interstate, receives a moderate amount of use, and provides access to residences and recreation areas. As such, overall sensitivity is assessed as low to moderate.

KOP 2—La Jolla Indian Reservation

KOP 2 was established on the La Jolla Indian Reservation and more specifically; approximately 0.3 mile south of SR-76 and La Jolla Road (see Figure D.2-1). The KOP orientation is to the northeast toward existing residential structures and flat terrain in the immediate foreground that abruptly transitions to a rising, mounded hill displaying scattered oak trees in the foreground distance. Existing wood poles supporting TL682 are visible from KOP 2, and while one pole is entirely backscreened by existing topography and vegetation, the other two are located atop elevated terrain and conductors and portions of the poles are skylined (see Figure D.2-3). Although KOP 2 is located on the La Jolla Indian Reservation, KOP 2 provides a representative view of TL682 afforded to rural residences located along SR-76.

Visual Quality: Low to Moderate

The visible landscape is comprised of flat valley terrain featuring short grasses displaying red and yellow hues and a relatively low rolling hill in the foreground distance populated with the tall, spreading form of scattered oak trees (see Figure D.2-3). Green and brown colors displayed by higher elevation terrain to the northeast and in the middleground distance provides some variety in landform, vegetation, and color (adjacent higher elevation scenery also enhances the overall visual quality of the landscape); however, as viewed from KOP 2, the existing setting features little contrast in vegetation, landform, and color, and the individual elements are fairly common within the region. Lastly, development (i.e., residential structures and TL682) are noticeable but display an appropriate scale and character for the surrounding rural area.

Viewer Concern: Low

Electrical infrastructure is present in and contributes to the existing visual setting. While viewer concern regarding the introduction of disparate forms, lines, and colors displayed by new development not currently present in the landscape may register as high, viewer concern pertaining to the replacement of existing electrical infrastructure with poles and lines displaying similar forms, lines, and colors is anticipated to be low. In addition, residences anticipate views of a rural landscape traversed by existing electrical infrastructure.

Viewer Exposure: Moderate to High

Residents on the La Jolla Indian Reservation are currently afforded long-term, permanent views of TL682 as the power line traverses reservation the existing landscape between SDG&E's Rincon and Warner substations. SDG&E's proposed project would replace existing wood poles with weathered steel poles along the same general TL682 alignment; therefore, viewer exposure conditions would not change from the existing and proposed project scenario. Due to the presence of existing topography and vegetation (which backscreens select poles from views and reduces the visibility of the project) and the dispersed residential development pattern on the reservation, viewer exposure is assessed as moderate to high.

Visual Sensitivity: Moderate

Although the KOP 2 landscape lacks scenic resource protection designation, surrounding land uses include rural residential, and residents in the immediate area are afforded long-term views of the landscape. As such, it is assumed that they would be moderately sensitive to visual changes occurring in the area, including changes associated with the replacement of existing electrical infrastructure.

KOP 3—SR 76 Near San Luis Rey Picnic Grounds

KOP 3 was established on SR-76 approximately 0.4 mile east of the San Luis Rey Picnic Area and 1.2 miles northwest of East Grade Road/County Highway S7 (see Figure D.2-1). The KOP orientation is to the east and provides a relatively long and uninterrupted view of SR-76 and adjacent vegetation. Three existing skylined wood support poles and multiple power lines associated with TL682 are located north of SR-76 (existing electrical infrastructure is partially screened by existing vegetation – see Figure D.2-4). Lastly, KOP 3 and over 4 miles of TL682 are located on Forest Service lands designated with High scenic integrity.

Applicable Scenic Integrity Objective: High

The view from KOP 3 encompasses the horizontal line and form and the cool grey color of SR-76, the spreading, relatively continuous form and green hues of oak trees and smaller shrubs adjacent to the roadway, and skylined, vertical lines displayed by portions of wood poles supporting TL682. The character of the landscape appears intact as SR-76 and TL682 are of appropriate scale, color, and texture for the surrounding rural/natural area.

Viewer Concern: Moderate to High

Although electrical infrastructure is present in the foreground viewing distance of KOP 3, the applicable SIO designation of High denotes scenic resources of value in the landscape and

applies a certain level of protection and guidelines that new development must comply with. Therefore, as the landscape has been designated as scenic by the Forest Service, viewer concern is assessed as moderate to high.

Viewer Exposure: Moderate

Transmission infrastructure is visible in the foreground distance from KOP 3, and portions of several poles are skylined; however, existing infrastructure is partially screened from view by existing vegetation and the visual prominence of electrical infrastructure decreases with distance from KOP 3. In addition, viewer exposure to individual poles would be relatively brief as views from eastbound travel lanes of SR-76 would be made in passing and would be somewhat enclosed by roadside adjacent vegetation. As such, views of existing infrastructure are dynamic in nature as motorists and recreationists pass through the area. Because of the variables discussed above, exposure is rated as moderate.

Visual Sensitivity: High

The KOP 3 landscape is designated as containing High scenic integrity and therefore, the degree of public importance place on the landscape is assumed to be high.

TL626

The TL626 alignment is depicted on Figure D.2-1. TL626 is approximately 19 miles long, is located in the central portion of CNF in San Diego County, and traverses the Palomar and Descanso ranger districts between the communities of Santa Ysabel and Descanso. South of the Santa Ysabel Substation, TL626 crosses SR-79 in relatively close proximity to residential and commercial land uses and then briefly traverses private County lands supporting oak woodland vegetation. The power line then enters the CNF; passes the Inaja Memorial Picnic Area and Trail (an approximate 1-mile-long designated National Recreation Trail); traverses a steep canyon and the San Diego River; and then crosses an open savannah featuring an expanse of low grasses, scattered oak tree clusters, and occasional rural residences. From there the power line proceeds in a southerly direction across variable terrain supporting oak woodland, chaparral, and forest riparian vegetation. TL626 passes near the King Creek Research Natural Area and crosses multiple creeks, and as the line approaches the community of Descanso via Boulder Creek Road, the surrounding landscape is increasingly developed with scattered rural residences. National Forest lands traversed by TL626 contain High scenic integrity.

In addition to motorists on primary travel ways and recreationists on unpaved Forest Service roads, views of TL626 are available to commercial and residential land uses within the community of Santa Ysabel, recreationists at the Inaja Memorial Picnic Area and National

Recreation trail, dispersed rural residences located east of the San Diego River within the community of Julian, and the rural community of Descanso. Three KOPs were selected to represent the visual setting along the TL626 alignment as viewed from scenic recreation areas and Boulder Creek Road. A discussion of the existing visual setting for each of the KOPs is provided below.

KOP 4—Inaja Memorial National Recreation Trail

KOP 4 was established on the Inaja Memorial National Recreation Trail, approximately 400 feet south of SR-79 and 1 mile southeast of SDG&E's Santa Ysabel Substation (see Figure D.2-1). The KOP orientation is to the south and shows a landscape framed by steep, chaparral-covered terrain flanking the San Diego River and distant ridgelines further to the south. KOP 4 is representative of the view afforded to recreationists at the Inaja Memorial Picnic Grounds, including hikers on the Inaja Memorial National Recreation Trail. Several wood poles supporting TL626 are visible on both sides of the canyon, and TL626 spans the San Diego River in the foreground distance zone (poles are approximately 0.2 mile from KOP 4). Power line conductors are barely noticeable; however, red and yellow aerial marker balls strung on the TL626 span across the river are visible and seem to hover above the canyon terrain (see Figure D.2-5). KOP 4 and the portions of TL626 are located on Forest Service lands designated with High scenic integrity.

Applicable Scenic Integrity Objective: High

National Forest lands traversed by TL626 and included in the KOP 4 landscape are designated High SIO by the Forest Service.

While scattered oak trees intermixed with lightly covered exposed boulders populate immediate foreground views, steep, dark to slightly dull green chaparral and grayish boulder-covered terrain dominates the KOP 4 landscape. Power line poles are located approximately 0.2 mile from KOP 4 and the tall, narrow form and dark silhouette of these features are skylined. Several power line marker balls are strung across the San Diego River canyon and along with wooden support poles, power line infrastructure tends to detract from existing views of natural landscape elements (see Figure D.2-5). While the overall intactness of the existing scene is impaired by support pole silhouettes and spherical, orange and yellow marker balls, the canyon landscape is striking and flowing ridgelines and dark green to brown colors displayed by distant terrain to the south help to create an overall memorable landscape.

Viewer Concern: High

Recreationists are the most likely viewer group afforded views of the KOP 4 landscape, and given the relatively remote location of the Inaja Memorial Trail from population centers, the

visual expectations of hikers would include views of primarily natural landscape dominated by vegetation and topography and containing little or no cultural modifications. In addition, hikers navigate the Inaja Memorial Trail at a relatively slow pace and would continuously take in views of the surrounding landscape; therefore, recreationists would be perceptive to changes occurring in the visual landscape.

Viewer Exposure: Low to Moderate

While the Inaja Memorial Trail is a recreation trail and recreationists are afforded short-term views of the landscape from the trail, vertical development atop the canyon walls would be skylined and highly visible due to a lack of intervening screening elements and the inferior viewing angle provided to trail users. Overall, visibility would, however, be somewhat reduced by an assumed low-to-moderate volume of viewers on the trail.

Visual Sensitivity: High

The KOP 4 landscape is designated as containing High scenic integrity; therefore, the degree of public importance place on the landscape is assumed to be high. The high scenic integrity designation denotes that the existing character of the landscape is relatively intact and that new development must repeat the character elements (i.e., form, lime color, and texture) present in the landscape. Also, while the Inaja Memorial Trail is relatively remote from large populated areas, the trail is easily accessible from SR-79 (the parking area for the trail is located adjacent to the highway), and the trail distance is short (less than 1 mile) which increases the overall accessibility of views of the KOP 4 landscape.

KOP 5—Boulder Creek Road near Tule Springs Road

KOP 5 was established on Boulder Creek Road, approximately 200 feet north of Tule Springs Road and 750 feet west of TL626 (see Figure D.2-1). The KOP orientation is to the northeast towards a remote residence, shipping container, and aboveground water tank, and provides a representative view afforded to motorists and residents of the characteristic landscape of the area featuring gently rolling hills; open chaparral vegetation comprised of short, rough textured shrubs displaying dark green to red-orange colors; exposed tan soils; and scattered oak trees. Three wood poles and several conductors associated with TL626 traverse the landscape in the foreground, and with the exception of the skylined portion of one pole, existing infrastructure is backscreened by topography and vegetation. KOP 5 and the portions of TL626 depicted in Figure D.2-6 are located on Forest Service lands designated with High scenic integrity.

Applicable Scenic Integrity Objective: High

Existing transmission poles and lines are visible in the KOP 5 landscape; however, poles are backscreened by topography and vegetation which effectively reduces the visibility and visual prominence of these features (see Figure D.2-6). Some variety in vegetation is visible in the landscape as evidence by the short, rough-textured and colorful shrubs in the immediate foreground and foreground distance, and the tall, spreading and dark green colored crowns of oak trees located in the foreground to middleground distance. Colors are muted but a variety of red, yellow, brown, green hues are displayed, and distant ridgelines and higher elevation terrain populated with rock outcrops and chaparral vegetation enhance the visual quality of the KOP 5 landscape. Cultural modifications display a rural scale and character and tend not to contribute overly discordant elements.

Viewer Concern: Moderate to High

While the KOP 5 landscape contains some variety in vegetation and color, the assemblage of open chaparral vegetation is typical for the area, as is the presence of existing electrical infrastructure traversing the landscape. In addition, the slightly rolling terrain displaying short shrubs and grasslands, exposed soils, and scattered oaks exhibits moderate visual interest. However, given the designated High scenic integrity of the landscape and the visual expectations of both residents and recreationists as a function of the remote location of KOP 5 from population centers, visual concern is assessed as moderate to high.

Viewer Exposure: Low to Moderate

From KOP 5 views of the landscape are wide and relatively open; however, the volume of viewers is limited to several residences in the immediate area and occasional recreationists accessing Forest Service lands via Boulder Creek Road. The duration of views would be long-term for residents and short-term for motorists, and because poles and conductors are largely backscreened by topography and vegetation (a portion of one pole depicted in in Figure D.2-6 is skylined), the details of existing infrastructure and other elements at a foreground-to-middleground viewing distance are slightly difficult to discern.

Visual Sensitivity: Moderate

KOP 5 is relatively remote, and views of the characteristic landscape depicted in Figure D.2-6 are available to a limited number of residents and an assumed low volume of recreationists travelling on Boulder Creek Road. In addition, access to the area is limited to narrow, dirt roads, and the applicable land use zone (back country) suggests that the volume of infrastructure be restricted to a low to moderate level. Still, given the designated High scenic integrity of the

landscape and the visual expectations of both residents and recreationists given its remote location from population centers, visual sensitivity is assessed as moderate.

KOP 6—Boulder Creek Road near Dubois Road

KOP 6 was established on Boulder Creek Road, approximately 350 feet east of Dubois Road and more than 200 feet west of TL626 (see Figure D.2-1). The KOP orientation is slightly to the northeast across a relatively narrow ravine and rising chaparral and rock outcrop-covered terrain to a series of distant mounded ridgelines. KOP 6 provides a representative view afforded to motorists of the characteristic landscape comprised of relatively high vertical relief; clumps of short, rough texture chaparral vegetation and exposed soils on west and east-facing slopes; and riparian forest associated with river valley bottoms (see Figure D.2-7). A local distribution line is located in the immediate foreground distance from KOP 6, and several transmission poles descend the west-facing slope and follow an existing dirt access road up and beyond the east-facing slope. KOP 6 and the portions of TL626 depicted in Figure D.2-7 are located on Forest Service lands designated with High scenic integrity.

Applicable Scenic Integrity Objective: High

While the tall form and vertical line displayed by existing wood poles and the lightly colored horizontal band created by the power line access road are visible in the landscape, electrical infrastructure elements are not visually prominent. The narrow form of wood poles and distance from KOP 6 reduces the visibility of these components, and while the horizontal line of the existing access road breaks the continuity of chaparral vegetation across the east-facing slope, the line is relatively short and narrow and does not compromise the overall vividness or intactness of the view (see Figure D.2-7). In addition, instances of lightly colored exposed soils in the foreground, as well as the horizontal band of lightly colored soil associated with Boulder Creek Road in the distance, reduce the overall color contrast attributed the access road. From KOP 6, the landscape is dominated by interesting, high-elevation landforms covered in chaparral and rock outcrops, and the dark-green diagonal line displayed by the crowns of riparian forest vegetation at the bottom of the foreground ravine adds visual interest to the landscape.

Viewer Concern: High

Given the expansiveness of the view and the visual prominence of topography and vegetation in the KOP 6 landscape, viewer concern is assessed as High. In addition, the variable topography and vegetation, as well as the presence of large rock outcrops on east-facing slopes, creates high visual interest in the landscape.

Viewer Exposure: Low to Moderate

Recreationists and motorists are provided short-term views of the KOP 6 landscape. Screening elements such as intervening vegetation and topography are generally not present between KOP 6 and existing electrical infrastructure; however, existing poles are backscreened by topography and vegetation to the point that the narrow form and vertical line of these elements is slightly difficult to discern in the landscape. The overall visibility of the existing access roads is largely a factor of viewing angle. More specifically, an angular view of the landscape (such as from south of KOP 6) would slightly obscure the visual effect associated with the road; however, as viewed from KOP 6, the horizontal band of the road is in-line with the orientation of the viewer which allows motorists the opportunity to visually follow the extent of the road as it travels to the northeast. Lastly, the volume of viewers on this particular segment of Boulder Creek Road is anticipated to be low to moderate because of the remote location of the area and the presence of other access roads in the landscape.

Visual Sensitivity: Moderate to High

Similar to KOP 5, KOP 6 is relatively remote, and views of the terrain and vegetation-dominated landscape depicted in Figure D.2-7 are available to a low-to-moderate volume of motorists and recreationists travelling on Boulder Creek Road. In addition, access to the area is limited to narrow, dirt roads, and the applicable land use zone (developed area interface) suggests that the level of infrastructure may be higher than in other land use zones applied to the CNF. Still, because the majority of the visible landscape is designated as containing High scenic integrity and because the landform and vegetation components create high visual interest, visual sensitivity is assessed as moderate to high.

TL625

The TL625 alignment is depicted on Figure D.2-1. TL625 is approximately 22.5 miles long and primarily traverses mountainous chaparral and exposed boulder covered terrain featuring dispersed residential development and recreation opportunities in and around the communities of Alpine, Descanso, and Dulzura in the southern portion of the CNF in San Diego County. With the exception of Japatul Valley Road, TL625 primarily travels alongside existing unpaved roads, and in addition to crossing I- 8, the power line spans several local roads and creeks. While segments of TL625 are located on Forest Service lands within the CNF, the power line also traverses private lands, and between the Barrett Tap and the Barrett Substation, TL625 briefly traverses BLM-managed lands. While the majority of CNF lands traversed by TL625 are designated with High scenic integrity, several short segments of the line would traverse isolated pockets of the CNF designated with Moderate scenic integrity. BLM-managed lands traversed by TL625 are designated VRM Class III.

Views of TL626 are available to motorists on I-8, SR-79, and local paved and unpaved roads; rural residences within the communities of Alpine, Descanso, and Dulzura; and dispersed recreationists (primarily hikers) on local trails. Four KOPs were selected to represent the visual setting along the TL625 alignment as viewed from a recreation area (Loveland Reservoir), Japatul Valley Road, I-8, and Lyons Valley Road. A discussion of the existing visual setting for each of the KOPs is provided below.

KOP 7—Loveland Reservoir Trailhead

KOP 7 was established at the Loveland Reservoir trailhead and parking area, located adjacent to Japatul Road and 0.3 mile north of the northern shoreline of the reservoir (see Figure D.2-1). The KOP orientation is to the south past signage at the trailhead and densely vegetated terrain in the foreground to existing wooden H-frame structures supporting TL625 that recede into the southwestern horizon and finally to prominent chaparral and exposed boulder-covered terrain in the foreground to middleground distance (see Figure D.2-8). Five existing H-frame structures, multiple power lines, and a short horizontal line created by access road development towards the southwestern horizon are visible from KOP 7. KOP 7, and the surrounding landscape is located on private lands.

Visual Quality: Moderate

While the tall form and vertical line displayed by existing H-frame structures and the slightly concave line exhibited by visible power lines are present, the visual prominence of existing electrical infrastructure is reduced by the backscreening effect of topography and vegetation that allows these features to slightly recede into the landscape (see Figure D.2-8). Further, the natural elements in the landscape including chaparral and boulders covered terrain, the slowly rolling horizon line, and the variable green and yellow displayed by vegetation in the foreground distance add visual interest to the landscape. However, several cultural modifications are visible: signage and transmission infrastructure displays a consistency in materiality that appears appropriate in the surrounding primarily natural landscape. As such, visual quality was assessed as moderate.

Viewer Concern: Moderate to High

Given the visual dominance of topography and vegetation in the KOP 7 landscape, as well as the fact that anglers and hikers use the Loveland Reservoir trailhead as a starting point for enjoying recreation opportunities within CNF, viewer concern for the KOP 7 landscape is assessed as moderate to high.

Viewer Exposure: Moderate

Recreationists are provided short-term views of the surrounding landscape from the Loveland Reservoir trailhead. In addition, topography and vegetation in the foreground partially screen portions of existing H-frame structures from view and provide opportunities for backscreening which reduces the overall visibility of TL625 in the landscape. Although the trailhead and nearby parking area are easily accessible from Japatul Road, the community of Alpine, and I-8, access to the lake is limited to a relatively steep unpaved trail, and boat fishing is not permitted (a 5 mile-segment of the reservoir shoreline comprises the extent of fishing opportunities at the reservoir). As such, viewer volume is anticipated to be moderate as is overall viewer exposure.

Visual Sensitivity: Moderate

While the Loveland Reservoir trailhead itself carries no special scenic protection designation and is not a designated scenic vista, views of higher elevation chaparral covered terrain are available. Further, while recreationists are provided short-term views of the landscape, they traverse the area at a slow, walking pace and are thus able to perceive visual changes occurring in their surroundings. Therefore, the visual sensitivity of the KOP 7 landscape is assessed as moderate.

KOP 8—Japatul Valley Road

KOP 8 was established on Japatul Valley Road, approximately 4 miles southwest of I-8 and SR-79 (see Figure D.2-1). The KOP orientation is to the south and provides a long view of Japatul Valley Road, adjacent vegetation, and existing electrical and communication infrastructure. Four existing wood poles, cross arms, conductors, and several lines associated with TL625 are visible within the western right-of-way (ROW) of Japatul Valley Road (see Figure D.2-9). KOP 8 and the portion of Japatul Valley Road depicted in Figure D.2-9 are located on private land.

Visual Quality: Low

The KOP 8 visual landscape is dominated by the long, horizontal form, straight lines, and cool gray color of the Japatul Valley Road, which is flanked by tall, vertical wood poles supporting electrical and communication structure (see Figure D.2-9). In addition, the tall, spreading form of vegetation is present alongside the road and backscreens several shorter wood communication poles and partially screens larger transmission poles; however, the tall form of more distant poles and the inferior viewing angle afforded to motorists reduces screening opportunities. While the landscape visible from the road appears intact (infrastructure is concentrated alongside the roadside) and contains a diverse assemblage of vegetation displaying warm and cool colors, overall visual quality was assessed as low.

Viewer Concern Low to Moderate

Although the landscape contains High scenic integrity, cultural modifications dominate the views of motorists, and the relatively short form of vegetation acts as a subordinate element to built features. Vegetation partially blocks off-site views of distant rolling terrain and low horizon lines to the south, and the resulting composition of the landscape appears horizontal and flat. Given that infrastructure is abundantly present alongside the Japatul Valley Road, viewers would not be overly concerned with the replacement of existing infrastructure with infrastructure displaying similar form and character; however, the designation of high scenic integrity suggests that viewer concern may approach a low to moderate level.

Viewer Exposure

Moderate. Motorists are exposed to dynamic, inferior angle views of existing transmission infrastructure as they travel south on Japatul Valley Road (see Figure D.2-9). In addition, given the inferior viewing angle and the large, vertical form of transmission poles, screening and backscreening opportunities that could reduce the visual prominence of these features is not generally available. Duration of views would, however, be short and made in passing, and given the prominence of built features in the landscape (in addition to electrical infrastructure, the landscape visible from Japatul Valley Road has also been modified by agriculture and rural residential development), the visual expectations of motorists is assumed to be low. Given the proximity to I-8 and the communities of Alpine and Descanso, viewer volume is anticipated to be moderate; therefore, overall viewer exposure is assessed as moderate.

Visual Sensitivity: Moderate to High

While the roadway and existing infrastructure dominate the visual setting from KOP 8 (see Figure D.2-9), between Lyons Valley Road and I-8, Japatul Valley Road is a County of San Diego designated scenic route (County of San Diego 2011). As such, overall viewer sensitivity is considered moderate to high.

KOP 9—I-8 Westbound near SR-79

KOP 9 was established on the shoulder of the westbound travel lanes of I-8, approximately 300 feet west of SR-79 and Japatul Valley Road. The KOP orientation is to the northwest and provides a view of the westbound travel lanes of the interstate, the interstate on-ramp from SR-79, a vegetated median featuring short shrubs and grasses, the sparsely vegetated and sloping terrain adjacent to the interstate, and the distant high relief terrain covered with mixed chaparral and rock outcrops. In addition to interstate signage and markers, existing light poles are installed adjacent to westbound and eastbound travel lanes. Two existing H-frame structures and several

red and yellow aerial marker balls spanning I-8 are visible from KOP 9 (the structure south of the interstate is located atop sloping terrain and is skylined, and the structure located north of the interstate is backscreened by distant terrain and topography and is rather difficult to distinguish in the landscape) (see Figure D.2-10).

Applicable Scenic Integrity Objective: High

Short, yellow grasses and patchy light to dark green shrubs dot the interstate median and gradually rising terrain located to the south and north. Dark green chaparral and brown-red boulder-covered rugged terrain located to the northwest is particularly striking and appears unaltered by cultural modifications. Interstate support infrastructure (i.e., signage, markers, and lighting) is visible from KOP 9; however, these elements are appropriate for transportation development and do not represent discordant features in the landscape. Tall, light brown wood H-frame structures and red spherical marker balls associated with TL625 are skylined; however, these features do not substantially obstruct or block views of rugged ridgelines that comprise the dominant visual elements in the landscape (see Figure D.2-10).

Viewer Concern: High

While wooden H-frame support structures and red, spherical marker balls associated with TL625 are visible along the I-8 corridor, visible development on interstate-adjacent lands is scarce. In addition, near SR-79, the interstate-adjacent landscape consists of gently rolling terrain interrupted by occasional low valleys. Prominent rugged ridgelines covered with chaparral vegetation and exposed boulders are common background elements in available views from the interstate. Given the prevalence of existing scenic features, the high scenic integrity assigned to the area, and relative scarcity of cultural modifications in the interstate-adjacent landscape, it is assumed that viewer groups would be highly concerned with new development or visual features that would detract from existing views of the landscape.

Viewer Exposure: Moderate to High

Similar to KOP 8, from KOP 9 and as they travel through the landscape, motorists are exposed to dynamic, inferior angle views of existing transmission infrastructure (see Figure D.2-10). While backscreening opportunities limit the overall visibility of transmission infrastructure located north of the interstate, the inferior viewing angle afforded to motorists and the location of existing H-frame structures atop sloping terrain south of the interstate would create a skylined effect that would enhance viewer exposure. While the duration of views would be relatively short, the volume of motorists exposed to views would be high, and as such, viewer exposure is assessed as moderate to high.

Visual Sensitivity: High

From the El Cajon city limits to the Imperial County line, I-8 is a County of San Diego designated scenic route (County of San Diego 2011). As such, overall viewer sensitivity is considered to be high.

KOP 10—Lyons Valley Road near Barrett Lake Road

KOP 10 was established on Lyons Valley Road, approximately 0.7 mile north of Barrett Lake Road and 2 miles west of Barrett Lake (see Figure D.2-1). The elevation of KOP 10 is approximately 2,180 feet, and the KOP orientation is to the south across descending, chaparral-covered terrain in the immediate foreground; a relative flat and narrow meadow in the foreground; and rising, chaparral-covered foothills and mountainous terrain in the foreground to middleground distance (see Figure D.2-11). In addition to the tan color and smooth texture of a narrow, unpaved access road visible on distant, rising terrain to the south, existing wood poles supporting TL625 traverse the foreground landscape. While two wood poles are located within the meadow area and are slightly discernible on account of resulting color contrast, other poles south of the meadow are entirely backscreened by the muted greens and browns of chaparral vegetation, and the resulting visibility of these features is greatly reduced (see Figure D.2-11). While KOP 10 is located on Forest Service lands within the CNF, visible transmission infrastructure is located on private lands designated by the County of San Diego for Open Space (Conservation).

Visual Quality: High

Rising terrain and the diagonal line displayed by ridgelines to the south are dominant components and create visual interest in the landscape. A variety of vegetation including chamise chaparral, meadow, and scrub oak chaparral are present in the KOP 10 landscape and display a variety of colors ranging from pale green, red-orange, grey-green, chartreuse, and olive to dark green (see Figure D.2-11). Cultural modification (i.e., electrical infrastructure and access roads) are present in the landscape but are not visually prominent and tend to recede into background vegetation and terrain. The view to the south is enclosed by mountainous terrain; however, a narrow canyon to the southeast (along Barrett Lake Road) extends the view and includes the mounded form and green color of oak tree crowns. As such, visual quality is assessed as high.

Viewer Concern: High

Based on the assessed high visual quality of the intact landscape and the dominance of natural scenic features (i.e., mountainous terrain and vegetation), viewer concern is assessed as high.

Viewer Exposure: Low to Moderate

Motorists on Lyons Valley Road are afforded brief, passing views of the KOP 10 landscape in which terrain and vegetation are visually prominent. Use of Lyons Valley Road is assumed to be low to moderate, and due to distance (the nearest existing wood poles is located over 1,100 feet from KOP 10) and the superior viewing angle provided to passing motorists, transmission infrastructure tends to visually recede into the background vegetation and terrain making these elements slightly difficult to discern. As shown on Figure D.2-11, there are no tall screening elements at KOP 10 that obstruct or limit views of the existing landscape. As such, viewer exposure is assessed as low to moderate.

Visual Sensitivity

Moderate to High. KOP 10 was determined to display high visual quality and between SR-94 and the CNF, Lyons Valley Road is a designated scenic route (County of San Diego 2011). While the narrow meadow traversed by TL625 in the foreground is not located on Forest Service lands (this area is designated Open Space – Conservation by the County of San Diego General Plan), KOP 10 and the mountainous terrain in the foreground to middleground distance (see Figure D.2-11) are located on Forest Service lands containing High scenic integrity. Therefore, visual sensitivity is assessed as moderate to high.

TL629

The TL629 alignment is depicted on Figure D.2-1. TL629 is approximately 34.5 miles long, is located in the southern portion of the CNF in San Diego County, and stretches from the community of Descanso south to the Cameron Substation (located east of Lake Morena) and southeast to the Crestwood Substation on the Campo Indian Reservation. Between the Descanso and Glencliff substations, TL629 generally follows the alignment of Old Highway 80 and traverses a landscape marked by existing rural residential development (the line passes through the communities of Descanso, Guatay, and Pine Valley), utility development, and rolling to more mountainous terrain supporting chaparral, grasslands, and woodland vegetation. This segment of TL629 spans creeks and roads including Sunrise Highway and I-8. Between the Glencliff Substation and the Cameron Tap, TL629 travels in a southerly direction along Old Highway 80 and parallel to I-8. In addition to transportation development, the landscape includes mountainous, mixed chaparral covered terrain, Cottonwood Creek (located west of the TL629 alignment through Boulder Oaks) and Kitchen Creek, and grasslands and oak woodland populated areas located north and south of Kitchen Creek. In addition to existing electrical and communication infrastructure installed adjacent to Old Highway 80, the visual landscape includes utility poles, water towers, and buildings associated with the SDG&E Mountain Empire training facility, lighting poles at Buckman Springs Road, vacant barn structures, the

distant yet visible buildings associated with Mountain Empire Unified High School and signage for the Forest Service-managed Boulder Oaks Campground. South of the Cameron Tap to the Cameron Substation, TL629 briefly traverses a largely intact meadow landscape via an existing Forest Service access road, crosses La Posta Creek, and then travels alongside Cameron Truck Trail which is flanked by scrub, field/pasture, and mixed chaparral vegetation and dispersed rural residential development. Lastly, between the Cameron Tap and the Crestwood Substation, TL629 traverses a narrow, grassland and seep populated drainage area associated with La Posta Creek, developed land uses south of Old Highway 80 including a Homeland Security facility (see Section D.4, Land Use and Planning for additional detail), chaparral- and sage-covered terrain, and dispersed rural residential development south of Old Highway 80 and Miller Creek. In addition to Forest Service lands designated as containing high scenic integrity, TL629 also traverses private lands, public lands managed by the BLM, and tribal lands on the Campo Indian Reservation.

In addition to motorists on primary and secondary travel ways and recreationists on unpaved Forest Service roads, views of TL629 are available to commercial and residential land uses within the communities of Descanso, Guatay, Pine Valley, and Lake Morena Village, and recreationists at the Boulder Oaks Campground and on the Pacific Crest National Scenic Trail. Four KOPs were selected to represent the visual setting along the TL629 alignment as viewed from SR-79, Old Highway 80, Boulder Oaks Campground, and La Posta Road. A discussion of the existing visual setting for each of the KOPs is provided below.

KOP 11—SR-79 at Viejas Boulevard

KOP 11 was established on SR-79, approximately 200 feet south of Viejas Boulevard and 700 feet north of the intersection of SR-79 and Old Highway 80 (see Figure D.2-1). The KOP orientation is to the north toward commercial, semi-rural residential, and rural land uses adjacent to SR-79. As shown in Figure D.2-12, the presence of mature oak trees adjacent to SR-79 partially screens distant mountainous terrain and ridgelines from view and portions of existing wood poles supporting TL629 are also obscured by the crowns of existing oak trees (the tall, grey-tinged pole featuring six conductors is located approximately 200 feet north of KOP 11 and is not screened by existing features). Both KOP 11 and the visible portions of TL629 depicted in Figure D.2-12 are located on private lands.

Visual Quality: Low

The KOP 11 landscape is comprised of low, slightly rising terrain and with the exception of distant ridgelines screened by vegetation, contains no interesting landform features. Vegetation includes short, non-native, ruderal plants; the tall, mounded form of oak and pine trees; and chaparral vegetation on a distant hill to the northwest. Colors range from yellow to dark green

hues (all of which are muted) and the grey and light brown color of existing wood poles and commercial and residential structures (see Figure D.2-12). The limited extent of the view from KOP 11 and the lack of visually striking or interesting landforms decreases the vividness of the view, and the presence of numerous cultural modifications (i.e., communication and electrical infrastructure, structures, and roadway development) are relatively dominant in the foreground distance. Therefore, visual quality was determined to be low.

Viewer Concern: Low to Moderate

While the visual quality of the KOP 11 landscape was assessed as low, the alteration/removal of existing oaks trees flanking SR-79 would likely be a concern to passing motorists and residents in the immediate area. However, SR-79 is afforded no special scenic resource protection, and existing communication and electrical infrastructure is visually prominent along the road. Therefore, viewer concern would be low to moderate.

Viewer Exposure: Moderate

Motorists are provided brief, passing views of the KOP 11 landscape; however, there are no vertical features in the immediate foreground distance that obscure or screen views of the existing angular wood pole located at the intersection of SR-79 and Viejas Boulevard (portions of other existing wood poles are however screened by oak and pine trees – see Figure D.2-12). While SR-79 is relatively remote, the volume of viewers is moderate as the roadway provides access to popular recreation destinations including Cuyamaca Rancho State Park, Lake Cuyamaca, and the community of Julian. A limited number of residents in the immediate area are exposed to long-term views of the landscape and would be perceptive to visual changes occurring. Therefore, viewer exposure is moderate.

Visual Sensitivity: Low to Moderate

KOP 11 was determined to display overall low visual quality and the segment of SR-79 depicted in Figure D.2-12 does not carry any scenic resource protection. In addition, although KOP 11 is located north and east of Forest Service lands designated as containing High scenic integrity, the composition of those lands is largely natural and dominated by chaparral and scrub vegetation whereas the KOP 11 landscape is comprised of urban/developed and non-native vegetation. Still, oak trees located adjacent to SR-79 create some visual interest in the existing landscape, and motorists and residents may be sensitive to visual changes associated with these features. As such, visual sensitivity is considered low to moderate.

KOP 12—Old Highway 80 near Prut Road

KOP 12 was established on Old Highway 80, approximately 0.5 mile northeast of the intersection of SR-79 and Old Highway 80 (see Figure D.2-1). The KOP orientation is to the west and provides a relatively short view of Old Highway 80 abutted by scrub and chaparral vegetation and local communication infrastructure to the south and disturbed lands, electrical infrastructure, and the tall, spreading form of oak trees to the south (see Figure D.2-13). As shown in Figure D.2-13, multiple wood poles, cross arms, conductors, and lines associated with TL629 are located adjacent to Old Highway 80 and contribute tall, narrow forms and dark colored horizontal lines to the existing visual environment. Lastly, KOP 12 and the landscape captured in Figure D.2-13 are located on private lands.

Visual Quality: Low

The grey-colored surface and slightly curved form of Old Highway 80 and the tall, vertical form of existing electrical infrastructure are visually prominent in the landscape, and the volume of largely horizontal power lines (some of which span the road) contribute slight visual chaos to the existing setting (see Figure D.2-13). In addition, relatively flat composition of the landscape does not contain any particularly interesting landforms and colors are generally muted and lack vividness. While the curving form and line created by oak and chaparral vegetation and the presence of higher elevation terrain located east and south of KOP 12 contributes some visual interest to the landscape, the visibility of built features, the lack of variety in vegetation and, the generally muted tones displayed by existing vegetation reduces the overall visual quality of the landscape.

Viewer Concern: Moderate

The removal of existing oaks trees and chaparral vegetation adjacent to Old Highway 80 would likely be a concern to passing motorists, and from SR-79 to the unincorporated community of Jacumba, Old Highway 80 is a County-designated scenic route (County of San Diego 2011). Still, due to the visual prominence of existing electrical infrastructure and the availability of dynamic views of wood poles and multiple power lines as motorists pass through the area, the visual expectations of viewer groups would be somewhat reduced. Therefore, viewer concern is assessed as moderate.

Viewer Exposure: Moderate

Old Highway 80 motorists are afforded passing views of a landscape heavily marked by existing vegetation and the linear arrangement of existing electrical infrastructure. The volume of viewers on Old Highway 80 is anticipated to be moderate, and the scale of electrical infrastructure as

well as the location of infrastructure in front of vegetation limits screening opportunities. Portions of poles are backscreened by vegetation; however, with the exception of the more distant pole depicted in Figure D.2-13, the proximity of KOP 12 to electrical infrastructure (the nearest pole is located 155 feet away) reduces the ability of the visual details of foreground elements to recede into background features. As such, viewer exposure is assessed as moderate.

Visual Sensitivity: Moderate to High

While Old Highway 80 is a County-designated scenic route, the volume of viewers along this particular segment of Old Highway 80 is expected to be moderate, and motorists are afforded dynamic, albeit passing, views of the adjacent landscape. In addition, visual changes would be discernible from the highway, and the lack of screening elements and proximity would enhance the visibility of changes occurring within the highway ROW.

KOP 13—Boulder Oaks Campground

KOP 13 was established as the Boulder Oaks Campground, approximately 360 feet west of Old Highway 80 and 0.3 mile south of Kitchen Creek (see Figure D.2-1). The KOP orientation is to the northwest and provides a relatively short extent view of the project area landscape enclosed by chaparral and occasional boulder-covered rising terrain to the north and the spreading form of a prominent oak tree to the south (see Figure D.2-14). North of the picnic table and exposed tan soils of the campground site, the rough texture and silvery-grey color of sage vegetation appears briefly and then gives way to characteristic chaparral vegetation and the occasional mounded form of scattered oak trees. Existing electrical infrastructure associated with TL629 and C449 converge in the distance and dot the foreground landscape north of the Boulder Oaks Campground (see Figure D.2-14). KOP 13 and the project components depicted in Figure D.2-14 are located on Forest Service lands designated as containing High scenic integrity.

Applicable Scenic Integrity Objective: High

While prominent landforms are not present in the KOP 13 landscape, the mounded, rising form of chaparral and scattered boulder terrain to the northwest adds some visual interest to the scene. Further, vegetation in the immediate foreground and foreground distances display variable forms and textures, and the colors expressed by exposed soils, sage shrubs, and granitic boulders contrast well with the characteristic dark green color of chaparral and oak trees crowns (see Figure D.2-14). In addition to mountainous terrain to the east and west, adjacent scenery includes expanses of grasslands and a linear corridor of riparian forest associated with Kitchen Creek to the north of KOP 13 that enhances the overall visual quality of the landscape by introducing disparate forms and textures of vegetation. Cultural modifications including the picnic table in the immediate foreground and more distant infrastructure associated with TL629 and C449

contributes narrow, vertical forms; short horizontal lines; and light brown colors to the landscape. However, the distance between KOP 13 and existing infrastructure reduces the visual prominence of these features, and several poles are backscreened by vegetation and terrain.

Viewer Concern: Moderate to High

Major alterations to the existing KOP 13 landscape such as the removal of expanses of vegetation or modification of existing landforms would be a concern to campers and hikers and would conflict with the visual expectations of these viewers groups. While the campground is located adjacent to Old Highway 80, the influence of the roadway is dampened by rising terrain to the northwest (the highway is located at a higher elevation than the campground) and intervening vegetation. In addition, large oak trees are scattered throughout the campsite and further screen views of the highway and vehicular traffic. As shown on Figure D.2-14, vegetation in the landscape appears intact and is relatively dominant. Therefore, visual concern is assessed as moderate to high.

Viewer Exposure: Moderate

Although campers and hikers are afforded temporary views of the landscape, their experience in the outdoors proceeds at a slower pace than that of other recreationists such as cyclists or OHV enthusiasts. Moreover, camping and hiking provide opportunities for solitude and reflection; therefore, recreationists afforded views of the KOP 13 landscape would be observant of visual changes occurring within view of the Boulder Creek Campground and Pacific Crest National Scenic Trail. However, tall oak trees are scattered throughout the campground and along the Old Highway 80 corridor and these features tend to restrict views and screen more distant elements in the landscape. In addition, rising, dark green chaparral-covered terrain creates dynamic, backscreening opportunities for several of the wood poles converging north of KOP 13 (see Figure D.2-14). According to the Forest Service, “thousands” of hikers and equestrians traverse sections of the Pacific Crest National Scenic Trail each year (Forest Service 2013a) and a parking/staging area is provided at the Boulder Oaks campground. Therefore, while the campground receives light use (Forest Service 2014), the Pacific Crest National Scenic Trail parking/staging area increases the number of viewers afforded views of the KOP 13 landscape. As such, viewer exposure is assessed as moderate.

Visual Sensitivity: High

While the Boulder Oaks Campground receives light use, the Pacific Crest National Scenic Trail passes through the campground just south of KOP 13. In addition, a designated trail parking/staging area is located in the campground. Furthermore, the KOP 13 landscape is designated by the Forest Service as containing High scenic integrity. Because recreationists would

be the primary viewer groups afforded views at KOP 13 and because the landscape surrounding the campground is relatively rugged and remote, visual sensitivity is assessed as high.

KOP 14—La Posta Road

KOP 14 was established on La Posta Road, approximately 0.6 mile south of Old Highway 80 and 0.7 mile south of I-8 (see Figure D.2-1). The KOP orientation is to the northeast and provides a view of the landscape adjacent to La Posta Road which, in addition to sagebrush scrub, flat-topped buckwheat, mixed chaparral vegetation, and gently rising terrain, features existing electrical and communication infrastructure (see Figure D.2-15). As shown on Figure D.2-15, an existing H-frame structure supporting several conductors and lines associated with TL629 is located east of La Posta Road, and TL629 traverses the landscape west to east (TL629 crosses La Posta Road). Additional electrical and communication infrastructure including simple wood poles, lightly colored power line, and darkly colored communication cable is also present in the landscape and runs parallel to La Posta Road. KOP 14 and the project components depicted in Figure D.2-15 are located on Forest Service lands designated as containing High scenic integrity.

Applicable Scenic Integrity Objective: High

Distant, prominent mountainous terrain is located to the north and creates a long, undulating horizon line that adds visual intrigue to the landscape. As discussed above, some variety of vegetation is present in the immediate foreground and foreground distance and contributes short and moderate height forms and rough to medium coarse textures (see Figure D.2-15). The presence of exposed soils adds some smooth textures and light colors to the KOP 14 landscape which otherwise features muted green-grey colors. Adjacent scenery including the continuation of distant mountainous terrain to the northwest and northeast enhances the visual quality of the view by providing depth and vivid, high relief elements. Cultural modifications include electrical infrastructure adjacent to La Posta Road, the lightly colored band/line of exposed soils created by TL629 access that traverses the landscape from west to east along the power line alignment, and the elevated travel lanes of I-8 to the north as it traverses a narrow valley which the La Posta Road and La Posta Creek are located. While the crossing of power lines near KOP 14 creates slight visual chaos, the scale and character of the support structures are appropriate given the rural character of the surrounding area and surrounding land uses.

Viewer Concern; Low to Moderate

While the visual expectations of motorists would be reduced due to the presence of existing support structures and multiple power lines located adjacent to La Posta Road, major alterations to the landscape, such as the removal of vegetation, would be a point of concern for viewer groups. In addition, as motorists approach I-8, the visual environment becomes increasingly

developed and views include cleared pasturelands, and rural residential development. Electrical infrastructure is a constant presence in the views of La Posta Road motorists. As such, viewer concern is assessed as low to moderate.

Viewer Exposure: Moderate

While motorists are provided brief, passing views of the landscape, tall, vertical elements adjacent to La Posta Road are viewed at an inferior viewing angle, and portions are skylined against the characteristic desert sky. As shown on Figure D.2-15, backscreening opportunities are available for more distant and less visually prominent support poles; however, the H-frame structure and power line of TL629 break the horizon line and protrude into the sky. Sage and chaparral shrubs in the foreground partially screen electrical infrastructure from view; however, the short form of existing vegetation is incapable of fully concealing TL629 from passing motorists. Because a small volume of rural residences are accessible off of La Posta Road between Old Highway 80 and SR-94 to the south, the volume of viewers on the roadway is assumed to be low. As such, viewer exposure is assessed as moderate.

Visual Sensitivity: Low to Moderate

While La Posta Road is not included in the County Scenic Highway System and is assumed to receive a low volume of use, the landscape depicted in Figure D.2-15 was determined to contain High scenic integrity by the Forest Service. However, visual sensitivity is reduced by the existing presence of electrical infrastructure and associated access roads within the La Posta Road viewshed. Therefore, a low to moderate level of visual sensitivity was determined for KOP 14.

TL6923

The TL6923 alignment is depicted on Figures D.2-1. TL6923 is approximately 13.5-miles long and traverses a mountainous and rugged landscape between the Barrett Substation and the Cameron Substation. Further, TL6923 is located in the southernmost portion of the CNF and south of the Hauser Wilderness and traverses largely undeveloped lands populated with scrub and chaparral vegetation in the western and central portions of the alignment and sparsely developed rural residential lands near the Cameron Substation. In addition to passing south of the Hauser Wilderness, TL6923 traverses the northern edge of the BLM-managed Hauser Mountain Habitat Management Area, crosses the Pacific Crest National Scenic Trail three times near Hauser Mountain, and spans several local roadways including Lake Morena Drive and Buckman Springs Road (included in the County Scenic Highway System).

In addition to motorists on local roadways near the eastern portion of the alignment near Cameron Corners, recreationists on the Pacific Crest National Scenic Trail are afforded views of TL6923 as

the power line currently spans the trail alignment near Hauser Mountain. In addition to TL6923, the existing 500-kilovolt (kV) Sunrise Powerlink transmission line also traverses the Pacific Crest National Scenic Trail in the Hauser Mountain area (TL6923 is located approximately 100 feet north of the Sunrise Powerlink transmission line). The transmission line and the power line travel parallel to one another for approximately 5 miles from east of the Round Potrero Drive and Horizon View Drive intersection to Hauser Creek. One KOP was selected to represent the visual setting along the TL6923 alignment as viewed from the Pacific Crest National Scenic Trail. A discussion of the existing visual setting for the KOP is provided below.

KOP 15—Pacific Crest National Scenic Trail Near Hauser Mountain

KOP 15 was established on the Pacific Crest National Scenic Trail, approximately 0.5 mile south of the Hauser Wilderness and approximately 3.5 miles west of Buckman Springs Road. The KOP orientation is to the southwest and provides a limited extent view of the mixed chaparral and boulder-covered mountainous terrain located south of the Hauser Wilderness. As shown on Figure D.2-16, vegetation is relatively dense, and continuity is broken by the occasional presence of exposed, large, and lightly colored boulders (a wall-like assemblage of granitic boulders and scattered vegetation rises in the distant foreground viewing distance).

In addition, three existing wood poles; several horizontal, slightly concave power lines; and the diagonal band of exposed tan soils displayed by the TL6923 access road are also visible and contribute to the existing visual setting of the KOP 15 landscape. However, existing infrastructure is backscreened by dark green chaparral vegetation and stark-white to grey exposed boulders (chaparral vegetation backscreening is more successful at reducing the visibility of wood support poles; see Figurer D.2-16), and only a portion of an existing pole is skylined. KOP 15 and the project components depicted in Figure D.2-16 are located on Forest Service lands designated as containing High scenic integrity.

Applicable Scenic Integrity Objective: High

Rising terrain covered with dark green with brown-tinged chaparral vegetation and large, prominent rock outcrops comprise the scenic elements in the KOP 15 landscape. While the color contrast resulting from the diagonal band of exposed soils associated with the power line access road contrasts with the colors and textures of surrounding vegetation, the worn, grey color and moderate height of existing transmission poles help them to blend in with the dark green to gray chaparral and boulder-covered terrain (see Figure D.2-16). With the exception of the central transmission pole that pierces the rocky horizon line, electrical infrastructure is backscreened by existing topography and vegetation. In addition, mountainous terrain and the canyon landscape to the north, as well as the riparian forest corridor associated with Hauser Creek (to the north), enhance the overall visual quality of the view.

Viewer Concern: High

KOP 15 is representative of views of the Hauser Mountain area afforded to recreationists on the Pacific Crest National Scenic Trail as it traverses the southernmost extent of the CNF. In addition, KOP 15 and the existing components of TL6923 in the foreground distance are located on Forest Service lands of High scenic integrity. While regional electrical infrastructure contributes to the existing visual setting (see Figure D.2-16), the remote location and lack of nearby trailheads and parking facilities suggests that the expectations of recreationists at KOP 15 would consist of a remote, semi-desert landscape comprised of native vegetation and variable terrain with limited development. In addition, the pace of the recreationist as they pass through the landscape would be slow, which would increase opportunities for views to detect details in the surrounding area. As such, recreationists would be able perceive changes in the landscape; therefore, viewer concern is assessed as high.

Viewer Exposure: Moderate

The superior viewing angle afforded to recreationists at KOP 15 increases backscreening opportunities and reduces the degree of discernible detail associated with transmission poles, lines, and conductors (see Figure D.2-16). It should be noted however, that other at other locations on the Pacific Crest National Scenic Trail (such as approximately 400 feet southeast of KOP 15) recreationists are afforded inferior angle views of existing infrastructure, and portions of wood poles are skylined. As stated previously, although recreationists are exposed to passing views of the surrounding area landscape, the slow pace of hikers and equestrians increases their exposure to the landscape such that perception of the landscape is enhanced. Volumes of viewers on the Pacific Crest National Crest Trail is assumed to be low to moderate, and while Figure D.2-16 suggests that backscreening opportunities are generally available, screening opportunities are likely to be less common along the trail. Therefore, viewer exposure is assessed as moderate.

Visual Sensitivity: High

KOP 15 is situated on the Pacific Crest National Scenic Trail, and a portion of the landscape depicted in Figure D.2-16 displays High scenic integrity. As such, visual sensitivity was determined to be high.

Table D.2-5, below, summarizes the environmental setting by KOP for the distribution lines included in SDG&E's proposed project.

Table D.2-5
Environmental Setting – Distribution Lines

KOP	Location	Applicable SIO/ Visual Quality	Viewer Concern	Viewer Exposure	Viewer Sensitivity
C79					
16	Boulder Creek Road, West of TL626 (Forest Service lands)	High	Low to Moderate	Low	Low to Moderate
17	Cuyamaca Peak (State Park lands)	High	Moderate to High	Moderate	Moderate to High
C78					
18	Mar-Tar-Aw RV Park (tribal lands)	High	Moderate	Low to Moderate	Low to Moderate
19	Viejas Grade Road (Forest Service lands)	High	Low to Moderate	Low	Low to Moderate
C157					
20	Skye Valley Road at the Pine Valley Creek Crossing (Forest Service lands)	Very High	High	Low	High
C442					
21	Bear Valley Trailhead (Forest Service lands)	High	Low	Low to Moderate	Moderate
C440					
22	Sunrise Highway (Forest Service lands)	High	High	High	High
23	Forest Service Volunteer Activity Center (Forest Service lands)	High	Moderate	Moderate	Moderate to High
C449					
24	Pacific Crest National Scenic Trail near Boulder Oaks Campground (Forest Service lands)	High	High	High	High

The environmental setting associated with landscapes traversed by the distribution line included in the proposed power line replacement projects is discussed in detail below.

C79

C79 runs from Boulder Creek Road east to Cuyamaca Peak and then to SR-79 via Lookout Road (see Figure D.2-1). East of Boulder Oaks Road, C79 traverses a largely undisturbed landscape via an existing unpaved Forest Service access road surrounded by mixed chaparral and oak forest. As stated in Section D.4, Land Use and Planning, a relatively short segment of C79 traverses the King Creek Research Natural Area. The access road abruptly ends at the base of the

west-facing slopes of Cuyamaca Peak; however, C79 climbs the rising, pine forest covered terrain to the peak and then follows an existing paved and unpaved access road through Cuyamaca Rancho State Park to SR-79. The access road, which experiences low-to-moderate use from campers and recreationists utilizing the day parking area at the Paso Pichaco Campground located adjacent to SR-79, is flanked by chaparral, coniferous, and pine forest vegetation.

In addition to occasional recreationists on Boulder Creek Road, recreationists at Cuyamaca Peak, on Lookout Road, and at Paso Pichaco Campground are afforded views of C79. In addition, motorists on SR-79 are briefly afforded views of the east end of C79 as they pass the Paso Pichaco Campground entrance, approximately 2 miles south of Cuyamaca Lake. Two KOPs were selected to represent the visual setting along the C79 alignment as viewed from the Boulder Creek Road and Cuyamaca Peak. A discussion of the existing visual setting for each of the KOPs is provided below.

KOP 16—Boulder Creek Road, West of TL626

KOP 16 was established on Boulder Creek Road, within the CNF and approximately 2.2 miles southwest of Cuyamaca Peak (see Figure D.2-1). The KOP orientation is to the northeast and provides a view of a semi-desert landscape limited in extent by rising, chaparral-covered terrain to the east-northeast (see Figure D.2-17). In addition to the curving form of Boulder Creek Road in the immediate foreground distance, the bright red-orange color displayed by exposed soils, provides color contrast when juxtaposed and viewed against the generally muted green-grey tones of manzanita, yucca, and other chaparral shrubs prevalent in the KOP 16 landscape. An existing wood structure supporting C79 is located approximately 100 feet east of KOP 16, and additional structures climb the topography and traverse the distant ridgeline (see Figure D.2-17). According to the Forest Service, the KOP 16 landscape depicted in Figure D.2-17 displays High scenic integrity.

Applicable Scenic Integrity Objective: High

As shown in Figure D.2-17, the landscape is primarily comprised of natural elements, and while a portion of the wood support pole in the immediate foreground (as well as several in the foreground distance) are skylined, the scale and character of these elements is appropriate given the character of the surrounding area. Vegetation consists of chaparral; however, individual constituents of the community are detectable in the immediate foreground distance and the assemblage of a variety of plants displays noticeable variation in muted color tones. The rising terrain and the gently rolling ridgeline enhance the overall visual quality of the view, and existing electrical infrastructure is visually subordinate to surrounding terrain and vegetation.

Viewer Concern: Low to Moderate

Although the assemblage of vegetation and occurrence of rising topography are relatively common in the project area, the KOP 16 landscape exhibits High scenic integrity; therefore, it is assumed that changes in the landscape would be a cause for concern among the low volume of motorists anticipated along Boulder Creek Road.

Viewer Exposure: Low

Although portions of existing electrical infrastructure in the immediate foreground would be skylined as viewed from KOP 16 (see Figure D.2-17), overall visibility of C79 is reduced due to the backscreening of more distant wood poles by the green-brown color and rough texture of chaparral vegetation and topography. In addition, motorists are afforded brief, passing views of the KOP 16 landscape, and while there are no screening elements present to obscure the tall, vertical form of the nearest wood support pole from view, the rising, diagonal line of intervening foreground topography partially blocks other poles from view. Given the remote location of Boulder Creek Road and the lack of designated recreation areas in the vicinity, viewer volume is anticipated to be low, and therefore, overall viewer exposure is low.

Visual Sensitivity: Low to Moderate

While area displays high scenic integrity, the KOP 16 landscape is afforded no scenic resource protection and is not located in the immediate vicinity of areas carrying specific protection. In addition, KOP 16 is located away from recognized recreation areas including trails and other facilities; therefore, visual sensitivity is assessed as low to moderate.

KOP 17—Cuyamaca Peak

KOP 17 was established within the Cuyamaca Rancho State Park atop Cuyamaca Peak, approximately 2 miles west of SR-79 and the Paso Pichaco Campground (see Figure D.2-1). The KOP orientation is to the southwest and provides a long, panoramic, and superior angle view of the western slopes of Cuyamaca Peak, the CNF, the El Capitan Reservoir, and distant mountainous terrain (see Figure D.2-18). Several existing wood poles, conductors, and power lines traverse the western slopes of Cuyamaca Peak and continue west towards Boulder Creek Road along a thin and relatively straight band of exposed tan soil associated with the C79 access road. Visible wood support poles, conductors, and power lines depicted in Figure D.2-18 are located on state lands within Cuyamaca Rancho State Park. The access road traversing the undulating terrain toward Boulder Creek Road in the foreground to middleground distance is located within the CNF.

Visual Quality: High

As shown in Figure D.2-18, from Cuyamaca Peak recreationists are afforded long, panoramic views of the undulating, chaparral- and occasional boulder-covered mountainous terrain located west of KOP 17, and while hazy and difficult to discern, views of the distant Pacific Ocean are also available. In addition to the long, panoramic views offered, the visibility of various ridgelines and peaks contribute to a vivid, seemingly intact view. Due to the superior viewing angle available at KOP 17, a variety of vegetation patterns and textures are visible as is an assemblage of muted grey, green, and brown colors. The view atop Cuyamaca Peak is distinctive; however, the generally mountainous terrain of the Cuyamaca and Laguna mountain ranges in the project area provide additional opportunities for long, panoramic views of the region. Cultural modifications, including electrical infrastructure, various unpaved access roads, and development around the Viejas Indian Reservation, are visible from KOP 17. However, due to the expansiveness and superior viewing angle of the view (as well as the visual dominance of natural elements including topography and vegetation), the visual prominence of built elements is reduced, and these features are difficult to discern in the landscape (see Figure D.2-18). Therefore, resulting visual quality is high.

Viewer Concern: Moderate to High

Depending on the location of activities, major alteration of the existing landscape visible from KOP 17 may be perceptible to recreationists atop Cuyamaca Peak; however the peak itself and its western slopes are located within a state park, and national forest lands are located immediately to the west. While the surrounding land uses and jurisdictional authority limits opportunities for large-scale development near the peak, construction activities or the introduction of new elements that obscure or block the long, panoramic views available from Cuyamaca Peak would be a cause for concern among recreationists; therefore, viewer concern is assessed as moderate to high.

Viewer Exposure: Moderate

Although Cuyamaca Peak is located near Paso Pichaco Campground and an adjacent day-use parking area accessible from SR-79, an inclined 2.5-mile hike or bike ride via Lookout Road is required to access the peak and the view depicted in Figure D.2-18. As such, it is assumed that some potential viewers would elect not to visit the peak, and therefore, resulting viewer volume is anticipated to be low to moderate. The superior viewing angle provided at KOP 17 and the lack of screening elements atop the peak creates opportunities for expansive, open views that increase the visibility of the landscape. Further, while the overall duration of views would be relatively short for recreationists, the visual experience atop a peak or scenic vista entails a relatively stationary viewing position from which the viewer (i.e., a hike or cyclist) scans and

"takes in" the visible landscape; therefore, the pace of the scenic observer enhances the overall visibility of the landscape.

Visual Sensitivity: Moderate to High

The lack of development in the foreground to middleground distance, as well as the confluence of state park and national forest lands near KOP 17 suggests that visual sensitivity would be high. However, as mentioned above, both the accessibility of the peak and the associated anticipated viewer volume (low to moderate) reduces the overall visual sensitivity to a moderate to high level.

C78

Located north of I-8 and adjacent to the Viejas Indian Reservation in the central portion of the project area (see Figure D.2-1), C78 is an approximate 1.5-mile-long distribution line that runs east from the Viejas Indian Reservation, briefly spans lands featuring scattered rural residences, and traverses the chaparral-covered southern slopes of Poser Mountain. Also, further to the east, C78 spans Viejas Grade Road several times and proceeds across undeveloped lands supporting mixed chaparral vegetation prior to terminating at Via Arturo. While existing poles and distribution lines associated with C78 are located entirely on Forest Service lands within the CNF, C78 passes near residences and an RV campground on the Viejas Indian Reservation.

In addition to residences on the Viejas Indian Reservation, RV campers at the Ma-Tar-Awa RV Park (located on the reservation), and motorists on Via Arturo and Viejas Grade Road Peak are afforded views of C78. Two KOPs were selected to represent the visual setting along the C78 alignment as viewed from the Ma-Tar-Awa RV Park and Viejas Grade Road. A discussion of the existing visual setting for each of the KOPs is provided below.

KOP 18—Mar-Tar-Aw RV Park

KOP 18 was established within the Ma-Tar-Awa RV Park, a hookup and campsite facility, with a capacity of 99 RVs, located approximately 0.75 mile north of I-8 on the Viejas Indian Reservation. The KOP orientation is to the north and provides a normal to inferior viewing area of the surrounding landscape comprised of an asphalt surfaced road, short shrubs, oak trees, and scattered cottonwood and sycamore trees in the immediate foreground (see Figure D.2-19). Beyond the tree line, the chaparral-covered terrain rises to the north, and existing residential structures are visible atop low hills in the foreground distance. In addition, the southern slopes of Poser Mountain are visible to the north and northwest, and existing wood poles associated with C78 traverse the mountainous terrain in the middleground distance, approximately 0.7 mile north of KOP 18. While a portion of one existing wood pole is skylined, the silhouette of the dark-

colored pole against the characteristic blue sky is difficult to discern because of the distance between C78 and KOP 18. Lastly, while KOP 18 is located on the Viejas Indian Reservation, C78 spans Forest Service lands displaying High scenic integrity.

Applicable Scenic Integrity Objective: High

As shown on Figure D.2-19, the southern slopes of Poser Mountain display a consistent rugged appearance defined by chaparral vegetation, rising terrain, and a lack of visible development. As such, the existing landscape character appears intact, and the barely discernible presence of C78 poles and distribution lines exhibit an appropriate scale and character that does not detract from the rugged, mountainous character of the immediate surroundings.

Viewer Concern: Moderate

While campers generally seek opportunities for solitude and interaction with nature, the Ma-Tar-Awa RV Park is located within 1 mile of I-8 on the Viejas Indian Reservation and offers long-term rental space opportunities for RV enthusiasts. In addition, trails and/or recreation areas are generally not located in the vicinity (recreation opportunities in the immediate area are limited), and existing views of rural residential development are available from the RV park. Therefore, the visual expectations of visitors to the park would be somewhat reduced because of the ease of accessibility, lack of recreation opportunities, and the presence of existing development in the surrounding area. On the other hand, lack of development and the general intactness of the visual character of the slopes of Poser Mountain may increase viewer concern. Therefore, overall concern is assessed as moderate.

Viewer Exposure: Low to Moderate

While RVers at Ma-Tar-Awa would generally be afforded temporary views of the surrounding area landscape, long-term campers are exposed for a longer duration and may be more perceptive to changes in the landscape. However, the presence of tall trees within the immediate foreground distance (see Figure D.2-19) provides screening opportunities for activities occurring in the foreground distance; therefore, the visibility of this portion of the landscape is limited. Moreover, due to distance, activities occurring within the middleground area on the chaparral-covered terrain to the north may be difficult to discern, but would ultimately dependent on the scale of the activity in question. Views of the distant landscape are generally open, and screening and backscreening are generally not available. However, viewer volume at the RV park is assumed to be low to moderate. Therefore, viewer exposure is assessed as low to moderate.

Visual Sensitivity: Low to Moderate

Other than the High scenic integrity displayed by the southern slopes on Poser Mountain located within the CNF, the landscape depicted in Figure D.2-19 is not designated for scenic resource protection. Further, because of the location and lack of recreation resources in the area surrounding the Ma-Tar-Awa RV Park, it is assumed that the park receives a low to moderate level of use. In addition, as depicted in Figure D.2-19, existing residential development is present in the KOP 18 landscape; however, the mountainous terrain is intact and has not been degraded. Therefore, overall visual sensitivity is assessed as low to moderate.

KOP 19—Viejas Grade Road

KOP 19 was established on Viejas Grade Road, a narrow unpaved access road located north of Viejas Creek and approximately 1.5 miles north of I-8 on Forest Service and tribal lands near Poser Mountain (see Figure D.2-1). The KOP orientation is to the west and provides a view of the C78 alignment along Viejas Grade Road and across and over the southern slopes of Poser Mountain prior to the distribution line descending the mountainous terrain towards the Viejas Indian Reservation (sees Figure D.2-20). In addition to chaparral-covered terrain in the immediate foreground and foreground distance, views of middleground hills and silhouettes of distant ridgelines are visible to the west and southwest, and development on the Viejas Indian Reservation is slightly discernible. Distribution lines, multiple conductors, and five wood support poles are visible from KOP 19, and as shown on Figure D.2-20, several poles are backscreened. However, the cross arms of the nearest poles and the entirety of two distant poles are skylined. Lastly, C78 traverses Forest Service lands displaying High scenic integrity.

Applicable Scenic Integrity Objective: High

Similar to the view from KOP 18, from KOP 19 the southern slopes of Poser Mountain display a consistent rugged appearance defined by chaparral vegetation, rising terrain, and a lack of large-scale development. As shown on Figure D.2-20, vegetation and terrain in the foreground are visually prominent in the landscape, and the backscreening of existing wood support poles helps these features to recede into the landscape. In addition, more distant wood poles are slightly difficult to discern, and the narrow, thin form displayed by these features is not visually prominent. As such, the existing landscape character appears largely intact, and existing distribution poles and lines display an appropriate scale and character consistent with the rugged, mountainous character of the immediate area.

Viewer Concern: Low to Moderate

Motorists are provided brief, passing views of C78 as they traverse the landscape northeast and north of the Viejas Indian Reservation. However, the linear organization of distribution infrastructure creates dynamic viewing opportunities (a series of poles remains in the visual field longer than a single object) that increase the overall viewing duration. While vegetation and terrain dominant the landscape adjacent to Viejas Grade Road, electrical distribution infrastructure displays a near constant presence along the roadway (development on the Viejas Indian Reservation is also visible) and thus lowers the expectations of motorists for an intact, entirely natural semi-desert landscape (see Figure D.2-20). Therefore, viewer concern is assessed as low to moderate.

Viewer Exposure: Low

As stated above, motorists are provided dynamic viewing opportunities of existing distribution infrastructure as they traverse the KOP 19 landscape. In addition, because of the rising terrain of Poser Mountain, activities occurring north of Viejas Grade Road are viewed at an inferior viewing angle, and activities to the south are viewed at a normal to inferior viewing angle. Moreover, as shown on Figure D.2-20, backscreening opportunities north of Viejas Grade Road are available because of the rising chaparral-covered terrain of Poser Mountain; however, vertical screening features are not present along the road. Viewer volume along the road is anticipated to be low due to unpaved surface of the road and availability of more direct access routes to the Viejas Indian Reservation in the area. Therefore, overall viewer exposure is assessed as low.

Visual Sensitivity: Low to Moderate

While the southern slopes of Poser Mountain exhibit High scenic integrity, the remaining landscape depicted in Figure D.2-20 is not designated for scenic resource protection. However, I-8 (a County-designated scenic route) is located 1.5 miles to the south, and Viejas Grade Road traverses the southern slopes of Poser Mountain and provides unique, superior angle views of the Viejas Indian Reservation and distant views of Viejas Mountain. The assumed low level of use of the roadway and the presence of electrical infrastructure and rural residential development along the roadway reduces the overall visual sensitivity of the landscape visible from the road. However, the presence of facilities containing scenic resource protection and the mountainous terrain of Poser Mountain increase the visual sensitivity to a low to moderate level.

C157

C157 is an approximately 3.5-mile-long distribution line running from Skye Valley Road (approximately 0.6 mile east of Lyons Valley Road) east across Barrett Lake, the Pine Creek Wilderness and the Hauser Wilderness, and to Skye Valley Ranch (see Figure D.2-1). The distribution line primarily traverses rugged and undeveloped mountainous terrain covered with mixed chaparral as well as several roads including Skye Valley Road and unpaved Forest Service access roads. As stated previously, existing wood poles are located within and the distribution line spans two wildernesses within the CNF and these areas are appropriately designated by the Forest Service as containing Very High scenic integrity. After exiting the Hauser Wilderness, C157 proceeds to the east, crosses intermittent creeks, and briefly spans agricultural fields prior to terminating at Skye Valley Ranch.

Viewer groups including motorists on Skye Valley Road and unpaved Forest Service access roads, persons associated with Camp Barrett (a work camp managed by the County of San Diego Probation Department for seriously delinquent males; see Section D.4, Land Use and Planning, for additional detail), recreationists at Lake Barrett and area wilderness, and residents at Skye Valley Ranch are afforded views of C157. One KOP was selected to represent the visual setting along the C157 alignment as viewed from Skye Valley Road. A discussion of the existing visual setting for the KOP is provided below.

KOP 20—Skye Valley Road at the Pine Valley Creek Crossing

KOP 20 was established on Skye Valley Road, a narrow unpaved roadway providing a connection between Lyons Valley Road and Skye Valley Ranch. The KOP is located approximately 80 feet west of Pine Valley Creek (the crowns of cottonwood trees and other vegetation adjacent to the creek are visible in the immediate foreground of KOP 20; see Figure D.2-21) and within several hundred feet south and west of the Pine Creek Wilderness. The KOP orientation is to the east across Pine Valley Creek and abruptly rising terrain featuring clumped chaparral vegetation and occasional road outcrops. A diagonal line in the foreground distance denotes the location of Skye Valley Road as it winds its way up terrain to the east (the Hauser Wilderness is located beyond the diagonal line of the road), and several wood poles and lines associated with C157 climb the terrain on their way to Skye Valley Ranch. As shown in Figure D.2-21, three wood poles are backscreened by terrain and vegetation, and two woods poles located atop the eastern ridgeline are skylined. Existing electrical distribution infrastructure depicted in Figure D.2-21 is located on Forest Service lands displaying Very High or High scenic integrity.

Applicable Scenic Integrity Objective: Very High

As shown in Figure D.2-21, the KOP 20 landscape contains riparian and chaparral vegetation displaying a variety of colors (both muted and vibrant) and textures, and the abruptly rising terrain to the east contributes dominant scenic features to an intact rugged and mountainous visual character. Wood poles associated with C157 are backscreened, which significantly reduces their visual prominence in the landscape, and the apparent scale of the skylined wood pole appears very small because of distance.

Viewer Concern: High

Both the remote location of Skye Valley Road and the Pine Creek and Hauser wildernesses suggest that viewer concern associated with changes in the surrounding visual landscape would be high.

Viewer Exposure: Low

Because of the unpaved condition and remote location of Skye Valley Road, viewer volume is anticipated to be low. In addition, only one residence is located on Skye Valley Ranch and while Skye Valley Road provides access to additional areas to the north and east of the ranch, the roadway traverses primarily undeveloped mountainous terrain. As shown on Figure D.2-21, backscreening opportunities are available due to the presence of rising terrain and vegetation and with the exception of riparian vegetation associated with Pine Valley Creek, the characteristic short chaparral shrubs provide limited screening opportunities. Further, view duration for motorists would be brief and made in passing and while recreationists in the Pine Creek and Hauser wildernesses would be afforded slower and dynamic views of the landscape, there are no trails located in the wildernesses in the immediate vicinity of C157. As such, viewer exposure is low.

Visual Sensitivity: High

While viewer exposure was determined to be low, C157 traverses wilderness areas designated by the Forest Service as displaying very high scenic integrity. The Very High scenic integrity objective suggests that the existing landscape character "is" intact and contains only minute deviations (if any). In addition, as stated in Section D.13, Recreation, of this EIR/EIS, and per the Wilderness Act of 1964 (16 U.S.C. 1131 et seq.), certain uses including structures and installations are prohibited from occurring on federally designated wilderness; therefore, the visual sensitivity of the KOP 20 landscape is assessed as high.

C442

C442 includes distribution line segments located north and south of I-8 serving the rural communities of Pine Valley and limited and dispersed residences on private lands in Corte Madera Valley (see Figure D.2-1). North of I-8, C442 is located along Pine Creek Road; traverses chaparral, sage, and oak woodland vegetation; and provides electrical service to the Pine Creek recreation residence tract, a small rural community of single-family residences located on Forest Service lands near the Noble Canyon Trailhead. South of I-8, C442 begins near the Bear Valley Trailhead (the trailhead provides access to the Bear Valley OHV Trail and the Corral Canyon OHV Area further to the south) and is aligned along an existing unpaved access road flanked by chaparral and mixed oak vegetation to the west and east. Approximately three residences are located near the southern extent of C442, and along the majority of the alignment, the distribution line follows existing access roads across a largely natural landscape. With the exception of the southern extent of C442 in the Corte Madera Valley that traverses private lands, C442 is located on Forest Service lands in the CNF displaying High scenic integrity.

In addition to motorists and residents on Pine Creek Road, OHV enthusiasts and other recreationists at the Bear Valley Trailhead (and for a brief period on the Bear Valley OHV Trail), motorists on Forest Service access roads travelling south of the Bear Valley Trailhead and into the Corte Madera Valley, and a limited number of residences in the valley are afforded views of C442. One KOP was selected to represent the visual setting along the C442 alignment as viewed from the Bear Valley Trailhead. A discussion of the existing visual setting for the KOP is provided below.

KOP 21—Bear Valley Trailhead

KOP 21 was established at the Bear Valley Trailhead, located approximately 600 feet south of the eastbound travel lanes of I-8 and south of the southern terminus of Pine Valley Road. The KOP orientation is the to the southwest towards an existing unpaved Forest Service access road and densely vegetated CNF lands (see Figure D.2-22). Exposed tan soils associated with the access road and adjacent signage and fencing are visible in the immediate foreground; however, the winding access road quickly disappears behind oak, sage, and chaparral vegetation. Vegetation is consistently dense in the foreground distance, and rising terrain to the southwest features dense chaparral vegetation. A single wood pole associated with C442 is visible from KOP 22 and is skylined atop a small hill to the south-southwest (see Figure D.2-22). According to the Forest Service, the portion of CNF depicted in Figure D.2-22 displays High scenic integrity.

Applicable Scenic Integrity Objective: High

The density of vegetation as well as the presence of rising terrain and the utter lack of cultural modifications presents a consistent and intact rugged visual character. Exposed tan soils and the access road are well-hidden by terrain and vegetation, and distance between the KOP and lone distribution pole substantially reduces the apparent scale and visual prominence of these built features. A variety of vegetation types are present in the landscape and exhibit grey-green to dark green colors and rough to smooth textures that add interest to the landscape (see Figure D.2-22).

Viewer Concern: High

Expansive strands of dense vegetation, variable topography, and the utter lack of cultural modifications suggests that viewer concern associated with alterations to the KOP 21 landscape would be high.

Viewer Exposure: Low

Despite the inferior viewing angle of the rising terrain to the south afforded to recreationists at the Bear Valley Trailhead (see Figure D.2-22), distance reduces the apparent scale of the existing wood pole associated with C442, and the presence of tall vegetation including oak trees along the access road would provide screening opportunities for surrounding areas. In addition, rising chaparral-covered terrain provides backscreening opportunities for less visually prominent features in the landscape. It should also be noted that recreationists would experience the view depicted in KOP 22 briefly as they pass through the Bear Valley Trailhead and access the Bear Valley OHV Trail. After passing the trailhead, the Bear Valley Trail proceeds in a southeasterly direction, and C442 quickly exits the visual field of OHV drivers. Although C442 would be a constant presence in the visual field of recreationists on the access road along which the distribution line is aligned, there are few established recreation areas and facilities in the Corte Madera Valley and a limited number of residences; therefore, viewer volume is anticipated to be low. As such, viewer exposure is assessed as low.

Visual Sensitivity: Low to Moderate

The Bear Valley Trailhead and OHV Trail lack scenic/visual resource protection and receive a low to moderate amount of use. Unlike hikers, OHV enthusiasts experience the visual landscape at a relatively quick pace, and solitude and reflection are generally not vital components to the recreational experience. In addition, views of C442 are very brief at the trailhead and nearly disappear from view when OHV drivers begin their experience on the Bear Valley Trail. Still, the area was designated as displaying High scenic integrity, and the largely intact landscape would be sensitive to large-scale changes. Visual sensitivity is therefore assessed as low to moderate.

C440

C440 is generally located north of I-8 and running parallel to Sunrise Highway in the Mount Laguna area of the CNF. Consisting of numerous contiguous segments, the distribution line runs north from the Glencliff Substation, crosses I-8, briefly traverses private lands, and then enters the CNF southeast of Sunrise Highway (see Figure D.2-1). After spanning Sunrise Highway, the line generally follows the alignment of the highway into the rural and forested Mount Laguna area. In the higher elevation mountainous areas (elevations along the alignment range from 4,100 feet at the Glencliff Substation to nearly 6,000 feet near Mount Laguna), views along the highway are generally limited in extent by adjacent dense pine forest vegetation; however, intermittent open views are available along short segments of the roadway where adjacent meadow and freshwater seep vegetation occur. In addition to natural vegetation; terrain; and wood poles, conductors, and overhead lines associated with C440, motorists on Sunrise Highway are also afforded views of recreational cabins, picnic areas, campgrounds, trails, fencing, and occasional signage. A small (less than 100) number of persons permanently reside in the community of Mount Laguna, and the surrounding area (the Laguna Mountain Recreation Area) is extensively used for recreational pursuits.

In addition to motorists on Sunrise Highway and small Forest Service access roads, recreationists at the various campgrounds, trails, and other recreational facilities within the Laguna Mountain Recreation Area and residents (permanent and temporary) near Sunrise Highway and existing distribution infrastructure are afforded views of C440. Two KOPs were selected to represent the visual setting along the C440 alignment as viewed from Sunrise Highway and the Forest Service Volunteer Activity Center. A discussion of the existing visual setting for each of the KOPs is provided below.

KOP 22—Sunrise Highway

KOP 22 was established on Sunrise Highway, approximately 1.2 miles northeast of the intersection of Sunrise Highway and Old Highway 80, and 1.3 miles northeast of I-8. The KOP orientation is to the north towards the curving alignment of the highway and west-facing montane chaparral-vegetated mountainous terrain of the CNF (see Figure D.2-23). In addition to the lightly colored, faded grey surface of the highway and adjacent railing, exposed tan soils of large, arching roadcuts are visible on nearby terrain in the foreground, as are short, white and orange colored plastic tubular poles in the immediate foreground. Chaparral shrubs of low to moderate height are also visible as is the curving line and asphalt surface of a vehicle turnout located west of the highway. C440 infrastructure including two existing wood poles, several conductors, and horizontal distribution lines are visible in the immediate foreground to foreground viewing distance, and as shown on Figure D.2-23, the existing distribution line spans

the highway. According to the Forest Service, the portions of C440 depicted in Figure D.2-23 traverses CNF lands displaying High scenic integrity.

Applicable Scenic Integrity Objective: High

Rising, high-elevation terrain to the north and west is relatively dominant and attracts the attention of passing motorists as they transition from the generally open landscape of the I-8 corridor into the forested landscape of the Laguna Mountain area. As shown on Figure D.2-23, chaparral vegetation is widely distributed, and the assemblage of shrubs includes various forms and bright to muted colors. While views to the north and west are limited in extent by higher elevation terrain, views to the west are somewhat open and include surrounding ridgelines and lower elevation valley bottoms near the Pine Valley community. The volume of cultural modifications along this segment of Sunrise Highway are relatively limited, and vegetation and rising terrain provides opportunities for backscreening and related reduction in the visual prominence of select features (see Figure D.2-23).

Viewer Concern: High

The presence of dominant and relatively dense vegetation and rising terrain as well as the presence of subordinate built elements that tend to slightly recede into surrounding natural elements suggests that viewer concern associated with major alterations to the KOP 22 landscape would be high.

Viewer Exposure: High

Despite the inferior viewing angle afforded to motorists as they pass through the CNF via the Sunrise Highway, views of existing electrical infrastructure and the surrounding landscape are brief and made in passing. Furthermore, as shown on Figure D.2-23, backscreening opportunities are available and electrical infrastructure is often viewed against the backdrop of surrounding chaparral and pine forest vegetation. Still, because C440 is generally aligned along Sunrise Highway, views of wood poles, conductors, and distribution lines are dynamic and available throughout the viewshed. The presence of dense forested areas near Laguna Mountain reduces the prominence of existing electrical infrastructure as wood poles and other infrastructure are screened or partially screened by pine trees and other vegetation. Viewer volume on the highway is however anticipated to be high as the Laguna Mountain Recreation Area is a popular year-round recreation destination for San Diego County residents. As such, viewer exposure is assessed as high.

Visual Sensitivity: High

In addition to the High scenic integrity displayed by the KOP 22 landscape, Sunrise Highway is designated by the Forest Service as a National Forest Scenic Byway (official designation occurred June 22, 1990) and from SR-79 south to Old Highway, the highway is a County designated scenic route (County of San Diego 2011). As such, visual sensitivity associated with the KOP 22 landscape is assessed as high.

KOP 23—Forest Service Volunteer Activity Center

KOP 23 was established at the Forest Service Red-Tailed Roost Volunteer Activity Center, a modest single-story structure located off of Sunrise Highway near the Mount Laguna Fire Department station and approximately 6 miles northeast of the Glencliff Substation (see Figure D.2-1). The KOP orientation is to the north across the asphalt surface of the volunteer activity center parking lot, past a portion of the activity center structure and an adjacent small uncovered picnic table area, and to a narrow cleared area of land in the foreground distance surrounded by Jeffrey pine (*Pinus jeffreyi*) forest vegetation characteristic of the Laguna Mountain area. Several overhead distribution lines, two wood poles, and multiple conductors associated with C440 are visible in the immediate foreground and foreground distance, and as shown on Figure D.2-24, C440 spans the parking lot, picnic area, and cleared area of land. According to the Forest Service, the portion of the CNF depicted in Figure D.2-24 displays High scenic integrity.

Applicable Scenic Integrity Objective: High

In addition to the tall, upright form of Jeffrey pine trees, short green- and brown-hued grasses and the wide, spreading form of trees near the activity center picnic area create a diverse vegetation pattern and contribute contrasting forms and colors to the landscape. The visible land is consistently flat, and adjacent scenery includes dense strands of forested lands and occasional structures displaying a modest, rural character. Cultural modifications including existing distribution infrastructure and the activity center itself are present in the landscape but these elements display a coherent and complimentary rural scale and character embodied by the brown color, relatively smooth texture and straight lines of wood poles and building materials (see Figure D.2-24).

Viewer Concern: Moderate

While visitors afforded views at KOP 23 are anticipated to spend the bulk of their time in the activity center structure, the presence of picnic tables suggest that outdoor usage of the surrounding area also occurs. Although existing views from the picnic area and parking lot include the activity center structure and C440 components, these built structures display weak

visual contrast when viewed in the context of the surrounding landscape (see Figure D.2-24). Given the presence of the cleared area in the foreground distance as well as the contributions of existing built elements to the KOP 23 landscape, viewer concern is assessed as low to moderate.

Viewer Exposure: Moderate

While volunteers and other visitors are provided brief views of the KOP 23 landscape, portions of existing distribution infrastructure are skylined (see Figure D.2-24) which enhances the overall visibility of wood poles, conductors, and horizontal distribution lines. However, backscreening opportunities created by surrounding vegetation are generally available and partially or entirely backscreening existing distribution line components (see Figure D.2-24). The closest pole to KOP 23 is located approximately 150 feet to the north and directly adjacent to the picnic area, and the visual details of this component would be clearly discernible to viewer groups. The apparent scale of the more distant pole located approximately 550 feet to the north is reduced because of distance and visual prominence is lessened by the background presence of tall vegetation. The volume of viewers to the activity center is anticipated to be low to moderate, and therefore, overall viewer exposure is assessed moderate.

Visual Sensitivity: Moderate to High

Although the Red-Tailed Roost volunteer activity center is located off of the Sunrise Highway, the center and adjacent landscape are located within the highway viewshed, and therefore, partially comprise the visual landscape adjacent to the Forest Service-designated scenic byway. In addition and as stated previously, the portion of the landscape depicted in Figure D.2-24 was determined to display High scenic integrity; therefore, visual sensitivity is assessed as moderate to high.

C449

C449 is situated east of Old Highway 80 near the Boulder Oaks Campground and adjacent to the Pacific Crest National Scenic Trail (see Figure D.2-1). From its origination point adjacent to Old Highway 80, the distribution line travels west, crosses the highway, and then turns in a southwesterly direction and crosses the northern loop of the Boulder Oaks Campground. Approximately 1,400 feet southwest of the Old Highway 80 crossing, C449 branches, and in addition to extending approximately 2,000 feet to the southeast toward TL629, the existing distribution line travels south over open live oak woodland and riparian vegetation, spans La Posta Creek, and then proceeds to the south along Buckman Springs Road to its terminus at Oak Drive. In addition, the western most extension of C449 traverses coast live oak wood, grassland, and riparian scrub vegetation east of Cottonwood Creek, and then travels in a southwesterly direction along Morena Stokes Valley Road (a narrow unpaved Forest Service access road

flanked by scattered tall oak trees, occasional rock outcrops, and low, chaparral-covered hills) to Camp Morena, an active military facility surrounded by barbed wire-topped chain-link fencing.

In addition to motorists on Buckman Springs Road, Morena Stokes Valley Road, Oak Drive, and I-8, campers at the Boulder Oaks Campground and recreationists on the Pacific Crest National Scenic Trail are afforded views of wood poles; conductors; and horizontal, slightly concave distribution lines associated with C449. One KOP was selected to represent the existing visual conditions along the C449 alignment as viewed from the Pacific Crest National Scenic Trail. The existing visual setting for KOP 24 is provided below.

KOP 24—Pacific Crest National Scenic Trail near Boulder Oaks Campground

KOP 24 was established on the Pacific Crest National Scenic Trail, generally between Cottonwood Creek to the east and Buckman Springs Road to the west, and approximately 0.25 mile south of the Forest Service Cottonwood Fire Station. As shown on Figure D.2-25, the KOP orientation is to the north and provides a short extent view of the scenic trail surface comprised of exposed soils and short, ruderal grasses and shrubs; nearby shrubs and tall trees; and distant, mountainous terrain. In addition to the rectangular and brown-colored Forest Service trail marker visible in the immediate foreground distance, three wood support poles, several conductors, and multiple dark-colored distribution lines associated with C449 are included in the KOP 24 landscape and contribute to the existing visual setting along this particular segment of the scenic trail. As shown in the Figure D.2-25, the visibility of the two more distant poles is greatly reduced because of the backscreening effect of vegetation and distant terrain.

A portion of the closest wood pole (located approximately 220 feet north of KOP 24) and associated conductors, distribution lines, and guy wire in the immediate foreground distance are skylined, and due to distance, surrounding vegetation does not substantially reduce the overall visibility of this feature in the landscape. Lastly, the portion of the CNF depicted in Figure D.2-25 has been designated as displaying High scenic integrity.

Applicable Scenic Integrity Objective: High

While immediate foreground and foreground elements comprise the majority of the view, distant, mountainous terrain is visible to the north through a narrow clearing of vegetation, and the high vertical relief creates visual interest and increases the vividness of the view. As shown in Figure D.2-25, a variety of vegetation types including short, ruderal grasses scattered between exposed tan soils of the trail surface; low, green and yellow colored shrubs immediately adjacent to the trail; and large, spreading trees that pierce the distance horizon line and enclose views are present and contribute interesting forms and textures to the KOP 24 landscape. Colors are generally muted and include tan soils, chartreuse to dark green grasses, shrubs and

trees, and the dark grey to black silhouette of distant topography to the north. Mountainous terrain to the north and rising, chaparral-covered topography to the west and east generally enhances the visual quality of the view; however, as shown on Figure D.2-25, vegetation adjacent to the scenic trail limits the extent of views. Cultural modifications (i.e., signage and electrical distribution infrastructure) are present in the landscape but display a rural scale and character complimentary of the surrounding rural landscape.

Viewer Concern: High

KOP 24 is located on a Congressionally designated National Scenic Trail, and a limited number of built elements are included along this particular trail segment. As shown in Figure D.2-25, at KOP 24 the trail is surrounded by dense vegetation consisting of low grasses and shrubs and large, spreading trees. Tall, wooden support poles and lightly colored horizontal conductor lines associated with C449 interrupt the intactness of the primarily natural-appearing landscape. As such, alterations that would further affect the existing character of the KOP 24 landscape would be noticed by passing recreationists, and accordingly, viewer concern is assessed as high.

Viewer Exposure: High

Recreationists on the Pacific Crest National Scenic Trail are provided passing views of the landscape and C449 is located in the trail viewshed generally between the La Posta Creek crossing and the Old Highway 80 crossing. Distribution infrastructure and surrounding vegetation and terrain is generally viewed at an inferior viewing angle and at a close proximity which enhances both the visibility and discernible details of landscape elements. Backscreening opportunities are available; however, this effect is dynamic and as recreationists approach individual wood support poles, the viewing angle increases and the ability of vegetation to fully backscreen elements wanes. The volume of viewers on the trail is anticipated to be low to moderate, and seasonal variation in overall usage of this particular trail segment is assumed based on the severity of summer temperatures. As such, viewer exposure is assessed as moderate.

Visual Sensitivity: High

In addition to the High scenic integrity displayed by the KOP 24 landscape, C449 is situated within the viewshed of the Pacific Crest National Scenic Trail, one of the original National Scenic Trails established by Congress in the 1968 National Trails System Act (Forest Service 2013a). As such, visual sensitivity is assessed as high.

D.2.2 Applicable Regulations, Plans, and Standards

This section discusses federal, state, and regional regulations, plans, and standards applicable to SDG&E's proposed project. In addition to the federal regulations identified below in Table D.2-6, portions of SDG&E's proposed project (i.e., TL682 and TL629) traversing tribal lands may be subject to the Bureau of Indian Affairs' policies and regulations, as well as policies of the La Jolla Band of Luiseno Indians and the Campo Kumeyaay Nation. As noted below, the protection and management of visual resources is addressed in various federal, state, and local plans, and programs including the Southern California National Forests Land Management Plan, the Forest Service Landscape Aesthetics Scenery Management Handbook and Scenic Management System, and the California Department of Transportation (Caltrans) Scenic Highway Program. Table D.2-6 lists plans and regulations applicable to the components of the proposed power line replacement projects.

Table D.2-6
Applicable Plans and Regulations by Project Component

Project Component	Applicable Plans and Regulations[1, 2]
TL682	Forest Service Scenic Management System
	Southern California National Forest LMP
	Southern California National Forest LMP Amendment
	Caltrans Scenic Highway Program
TL626	Forest Service Scenic Management System
	Southern California National Forest LMP
	Southern California National Forest LMP Amendment
	Caltrans Scenic Highway Program
TL625	Forest Service Scenic Management System
	Southern California National Forest LMP
	Southern California National Forest LMP Amendment
	VRM System
	BLM South Coast Resource Management Plan
	BLM South Coast Resource Management Plan Draft Revision
	Caltrans Scenic Highway Program
TL629	Forest Service Scenic Management System
	Southern California National Forest LMP
	Southern California National Forest LMP Amendment
	VRM System
	BLM South Coast Resource Management Plan
	BLM South Coast Resource Management Plan Draft Revision
	Caltrans Scenic Highway Program

Table D.2-6
Applicable Plans and Regulations by Project Component

Project Component	Applicable Plans and Regulations[1, 2]
TL6923	Forest Service Scenic Management System
	Southern California National Forest LMP
	Southern California National Forest LMP Amendment
	VRM System
	BLM South Coast Resource Management Plan
	BLM South Coast Resource Management Plan Draft Revision
C79	Forest Service Scenic Management System
	Southern California National Forest LMP
	Southern California National Forest LMP Amendment
	Cuyamaca Rancho State Park General Plan
	Cuyamaca Rancho State Park Draft General Plan
C78	Forest Service Scenic Management System
	Southern California National Forest LMP
	Southern California National Forest LMP Amendment
C157	Forest Service Scenic Management System
	Southern California National Forest LMP
	Southern California National Forest LMP Amendment
C442	Forest Service Scenic Management System
	Southern California National Forest LMP
	Southern California National Forest LMP Amendment
	Caltrans Scenic Highway Program
C440	Forest Service Scenic Management System
	National Forest Scenic Byways Program
	Southern California National Forest LMP
	Southern California National Forest LMP Amendment
	Caltrans Scenic Highway Program
C449	Forest Service Scenic Management System
	Southern California National Forest LMP
	Southern California National Forest LMP Amendment
	Caltrans Scenic Highway Program

Notes:

1 Pursuant to Article 12, Section 8, of the California Constitution, SDG&E's proposed project would not be subject to local plans, policies, or regulations. The CPUC and Forest Service have independent jurisdiction and approval authority for the project; the CPUC is the lead agency under California law and the Forest Service is the lead federal agency. However, state agencies such as the CPUC are required to consider local policies and regulations when making decisions. Therefore, while the County Scenic Highway System is not listed as an applicable regulation or plan in Table D.2-6, it is discussed in Section D.2.3 (see Impact VIS-2).

2 As all power line replacement projects would traverses Forest Service lands, all would be subject to the Federal Land Policy Management Act. Similarly, all power line replacement projects would be subject to Forest Service Manual 2300 – Chapter 2380, Landscape Management.

Federal

Southern California National Forest Land Management Plan

The Southern California National Forest LMP describes the strategic direction at a broad program-level for managing the Angeles, Los Padres, San Bernardino, and Cleveland national forests (collectively referred to as the Southern California National Forests). The LMP consists of three interrelated parts (Parts 1, 2, and 3) that work together to "facilitate the use of adaptive management and the development of the management activities" in order to move the National Forest towards their desired outcome (Forest Service 2005a, 2005b, 2005c). Part 1 of the LMP is a vision document that identifies existing management challenges, strategic goals, and desired conditions on National Forest lands (Forest Service 2005b). Part 2 consists of the CNF LMP and discusses the various land use designations (and suitable uses for each designation), place-based programs, and special designation overlays applicable to the national forest (Forest Service 2005a). Part 3 provides design criteria/forest plan standards and guidelines applicable to the Southern California National Forests including the CNF (Forest Service 2005c). The key items contained within Parts 1 through 3 of the Southern California National Forests LMP are discussed below to emphasize their relevancy to SDG&E's proposed project.

<u>Part 1 Southern California National Forest Vision</u>

The following goal identified in Part 1 of the Southern California National Forest Land LMP is associated with the desired conditions for wilderness. As SDG&E's proposed project (more specifically, C157) is located within existing wilderness, Goal 3.2 is applicable to SDG&E's proposed project:

Goal 3.2 Retain a Natural Evolving Character within Wilderness.

In addition, Appendix A of the LMP—Government Performance and Results Act Priority National Goals—discusses the goals identified in the Forest Service Strategic Plan (Forest Service 2007) and identifies applicable objectives that support the goals. In regards to established direction to help meet energy resource needs, Appendix A explains that "the nation's forests and energy and unless otherwise restricted, National Forest System lands are available for energy exploration, development, and infrastructure occupancy (e.g., well sites, pipelines, and transmission lines)" (Forest Service 2005b).

<u>Part 2 Cleveland National Forest Strategy (Cleveland National Forest LMP)</u>

In addition to scenic integrity objectives that establish management standards to describe the level of acceptable modification on lands within the CNF, placed-based program emphasis is

of key importance to the SMS described above. The LMP delineates all lands within the CNF into geographic units ("Places") that display a unique landscape character, theme, and setting, and have an identified desired condition (essentially the highest quality goal for a given landscape) and program emphasis (the activities that the Forest Service will place emphasis on in order to achieve the desired condition) (Forest Service 2005a). SDG&E's proposed project would traverse and be located in several identified Places of the CNF. In addition to the landscape character, theme, and setting, the desired condition and program emphasis for each applicable Place is summarized below.

Palomar Mountain Place

Palomar Mountain Place encompasses elevations ranging from less than 3,000 feet at the Lake Henshaw spillway to over 6,100 feet at the summit of Palomar Mountain (this elevation range also includes the West Fork of the San Luis Rey River). While most of Palomar Mountain Place is covered with a dense mixed conifer forest, the lower elevation areas support a variety of vegetation communities including chaparral and riparian. Access to Palomar Mountain Place is provided by SR-76, and most visitors access the area from population centers to the west. The desired condition of the area is that it be maintained as a natural appearing landscape supporting valued landscape attributes including dark night skies, built elements that harmonize and complement the cultural and natural character of the area, and scenic vistas points along County Road S6 and S7 (Forest Service 2005a). Visual resource-based program emphasis for the area includes the maintenance of scenic drives, dark skies, and opportunities for stargazing.

Sweetwater Place

Sweetwater Place is a transition zone between the southwestern deserts and the urbanized communities along the Southern California coast. More specifically, Sweetwater Place encompasses the urban fringe of San Diego, including the communities of Alpine, Descanso, Pine Valley, Guatay, Japatul Valley, and the Viejas Indian Reservation, and the character and appearance of the area is a mix of natural and rural/urban elements. Further, the landscape supports a variety of vegetation types including oak woodlands, chaparral, and riparian. The desired condition of the area is that it be maintained as a natural appearing landscape and valued landscape attributes to be preserve include the undeveloped character of Forest Service lands in an otherwise highly developed rural area, opportunities for unobstructed panoramic views from the I-8 corridor (especially on the eastern side), the scenic integrity of important local landmarks including peaks, and built elements that are unobtrusive and exhibit a consistent architectural theme (Forest Service 2005a). Visual resource-based program emphasis for the area includes management of development within the I-8 road corridor to conserve panoramic views from the highway.

Upper San Diego River Place

Upper San Diego River Place is described as a remote, primitive landscape featuring rugged river canyons, waterfalls, and scenic vistas within a rapidly urbanizing area to the west (USDA 2005). Upper San Diego River Place includes the headwaters of the San Diego River and its tributaries, as well as the Boulder Creek, Cedar Creek, and San Diego River Creek canyons that display an undeveloped and remote character. Located in the central portion of the CNF, between the community of Ramona and Cuyamaca Rancho State Park, Upper San Diego River Place encompasses areas traversed by SDG&E's proposed project including the Inaja Memorial Picnic Area and the King Creek Research Natural Area. Elevations range from 750 feet at the El Capitan spillway to over 3,400 feet at the Inaja Memorial Picnic Area, and vegetation includes a diverse assemblage of communities that change with elevation. The desired condition of the area is that it be maintained as a remote, natural appearing landscape functioning as a respite for the surrounding urban population. In addition, the valued landscape attributes to be preserved include broad, undisturbed expanses of landscape that frame panoramic vistas; opportunities for viewing unique landscape features include deep canyons, waterfalls, and distant landmarks from vista points; and road and trail corridors, and built elements that are rustic and unobtrusive (Forest Service 2005a). Visual resource-based program emphasis for the area includes maintenance of the natural-appearing setting for dispersed recreation activities.

Pine Creek Place

Pine Creek Place includes the southern portal of the Pacific Crest National Scenic Trail, Horsethief Trailhead (and Horsethief Canyon Trail), existing wilderness (the Pine Creek Wilderness and the Hauser Wilderness), and recommended wilderness (Pine Creek and Hauser South). According to the LMP, most of the area is covered with coastal sage and broadleaf chaparral, and granite boulders and rocky outcroppings dot the landscape (Forest Service 2005a). Further, streams are dry throughout most of the year; however, riparian and oak woodlands are present in grassy canyons. The desired condition for Pine Creek Place is that it be maintained as a predominately naturally evolving area that functions as a "remote, undeveloped, wilderness landscape where only ecological changes are evident" (Forest Service 2005a). Valued landscape attributes to be preserved include pristine canyon woodland communities; the undisturbed character of the Pine Creek Wilderness; and views of the natural landscape from the I-8 corridor, the Pacific Crest National Scenic Trail corridor, and from key vista points along these corridors. Visual resource-based program emphasis is to maintain the current character and level of development, promote wilderness values and managed wilderness areas in accordance with up-to-date wilderness plans, maintain scenic views from the I-8 corridor, move towards the elimination of existing roads and power lines within wilderness areas, and minimize trespass with motorized vehicles (Forest Service 2005a).

Laguna Place

Located in the heart of the Laguna Mountains, Laguna Place has a high concentration of private and public recreation uses including recreation residences, resorts, clubs, campground, picnic areas, interpretive sites, trails and trailheads, and a visitor information center (Forest Service 2005a). In addition to the Noble Canyon National Recreation Trail and the Pacific Crest National Scenic Trail that pass through Laguna Place and the Laguna Mountain Recreation Area, Laguna Place supports livestock grazing operations, communication sites, and the abandoned Mount Laguna Air Force Base (Forest Service 2005a). The desired condition for Laguna Place is a natural appearing landscape that functions as a popular year-round recreation and local scenic touring National Forest destination. Visual resource-based program emphasis for management of Laguna Place includes protection of the area's unique scenic attributes and ecosystems, maintenance of the natural appearance of the landscape, and the maintenance of views along the Sunrise Scenic Byway, Noble Canyon National Recreation Trail, and the Pacific Crest National Scenic Trail (Forest Service 2005a).

Morena Place

Morena Place encompasses the Corral Canyon OHV area, the Boulder Oaks Campground, Cottonwood Creek (an eligible Wild and Scenic River), and some of the southernmost segments of the Pacific Crest National Scenic Trail. Morena Place, which consists of gently covered rolling terrain covered with chaparral interrupted by scattered oak covered drainages, also hosts a number of short-term recreational events including mountain bike races, motorcycle enduros, and long-distance equestrian and running (Forest Service 2005a). Program emphasis for Morena Place includes maintaining the remote undeveloped character of the Corral Canyon OHV area and protecting scenic values along the I-8 corridor and the Pacific Crest National Scenic Trail (Forest Service 2005a).

Forest-Specific Design Criteria

- CNF 6 – Place new power lines (33 kV or less), telephone lines, and television cables underground wherever possible.
- CNF S12 – Pacific Crest National Scenic Trail – Protect scenic values in accordance with adopted scenic integrity objectives. Protect foreground views from the footpath as well as designated viewpoints. Where practicable, avoid establishing unconforming land uses within the viewshed of the trail.

Part 3 Design Criteria for Southern California National Forests (Forest Service 2005c)

- S9 – Design management activities to meet the Scenic Integrity Objectives (SIOs) shown on the Scenic Integrity Objectives Map.
- S10 – Scenic Integrity Objectives will be met with the following exceptions:
  - Minor adjustments not to exceed a drop of one SIO level is allowable with the Forest Supervisor's approval.
  - Temporary drops of more than one SIO level may be made during and immediately following project implementation providing they do not exceed three years in duration.

Southern California National Forests LMP Amendment

While the ~~proposed~~ adopted LMP Amendment ~~would~~ did not establish new land use zones within the CNF, it ~~would~~ increased Back County Non-motorized and Recommended Wilderness land use zone allocations in the Coldwater, Ladd, and Trabuco inventoried roadless areas (IRAs) in south Orange County and southwestern Riverside County and in select IRAs in San Diego County. Nearly all National Forest System lands within the Caliente, Barker Valley, Upper San Diego River, Cedar Creek, Eagle Peak, Sill Hill and No Name IRAs in San Diego County were ~~would be~~ redesignated Recommended Wilderness as a result of the LMP amendment (Forest Service ~~2012~~2014). The recommended wilderness land use zone is managed similar to existing wilderness, and as such, recommended wilderness lands are assigned a Very High SIO.

Proposed power line replacement projects located within or near IRAs subject to the redesignation of land use zones per the LMP Amendment include TL682 (Barker Valley IRA), TL626 (Upper San Diego River, Cedar Creek, Eagle Peak, Sill Hill, and No Name IRAs), and C79 (Sill Hill IRA).

USDA Forest Service SMS

For purposes of managing visual resources of lands within their jurisdiction, the Forest Service applies an inventory and assessment system known as the Scenery Management System (SMS). Adopted in 1995 and defined in the Forest Service's Landscape Aesthetics: A Handbook for Scenery Management (Forest Service 1995), the SMS establishes management standards to describe the level of modification associated with land use activity that is acceptable in a given area. These standards or SIOs range from "Very High," which is typically applied only to highly sensitive landscapes such as wilderness areas or special classified areas, to "Unacceptably Low," a standard that allows land use activity that may appear extremely dominant in relationship to the natural landscape (Forest Service 1995). Only one SIO class applies to any given area. It is important to note that the SIO does not

necessarily represent current scenery conditions, but instead is a guideline for forest management objectives over time. SIO ratings are described in Table D.2-1.

Forest Service Manual 2300 – Recreation, Wilderness, and Related Resource Management

Chapter 2380, Landscape Management, of the Forest Service Manual 2300, establishes the framework for the management of landscape aesthetics and scenery within the National Forest System. Per Section 2380.3, it is Forest Service policy to "inventory, evaluate, manage, and, where necessary, restore scenery as a fully integrated part of the ecosystems of National Forest System lands" and to "employ a systematic, interdisciplinary approach to scenery management to ensure the integrated use of the natural and social sciences and environmental design" (Forest Service 2003).

National Forest Scenic Byways Program

Part of the larger system that includes National Scenic Byways, All-American Roads, state-designated byways, backcountry byways, and local byway designations, National Forest Scenic Byways "connect the American public to some of the country's most spectacular landscapes within our public lands" (Forest Service 2008). The goals of the National Forest Scenic Byways Program include supporting and enhancing rural economic development, showcasing outstanding National Forest and grassland scenery, and meeting the growing demand of driving for pleasure as a significant recreation use. Within the project area, Sunrise Highway has been designated by the USDA as a National Forest Scenic Byway and offers travelers opportunities to enjoy pristine mountain meadows and vistas (Forest Service 2013b). The National Forest Scenic Byway Program places an emphasis on promoting community tourism, and designated byways are eligible to receive funding made available by the federal government for corridor management plans, safety improvements, byway facilities, resource protection and access to recreation (Forest Service 2008).

Federal Land Policy and Management Act

Portions of the project traverse public lands managed by the BLM and therefore, the following sections of the Federal Land Policy and Management Act (43 U.S.C. 1701 et seq.) that emphasize the protection of the quality of scenic resources on public lands are relevant:

> Section 102 (a) (8): "The public lands [shall] be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values: that, where appropriate, will preserve and protect certain public lands in their natural condition."

Section 505 (a): "Each right-of-way shall contain terms and conditions which will… minimize damage to the scenic and esthetic values."

BLM South Coast Resource Management Plan

The South Coast Resource Management Plan (RMP) and the Draft RMP revision are the applicable planning documents for BLM lands in the project study area. According to the South Coast RMP, public lands in the planning area boundary outside of an established Area of Critical Environmental Concern (ACEC) are managed consistent with the VRM Class III objective which, as stated in Table D.2-3, is to "partially retain the existing character of the landscape" (BLM 1994).

The proposed power line replacement projects do not traverse established ACECs, and therefore, VRM Class III is the applicable VRM for public lands traversed by TL625, TL6923, and TL629.

BLM South Coast RMP – Draft Revision

The BLM is currently in the process of preparing a draft revision to the existing South Coast RMP. Appendix M to the Draft RMP consists of a 2007 visual resource inventory conducted for public lands within the South Coast RMP planning area to reassess management direction and appropriate visual resource management objectives. As part of this process, public lands within the San Diego Borderlands Resource Area including those in the Potrero–McAlmond area and the Hauser Mountain area were inventoried, and management class considerations were suggested. More specifically, VRM Class II was suggested for both the Potrero–McAlmond area and the Hauser Mountain area (the Hauser Mountain Wilderness Study Area is managed according to VRM Class I objectives). As stated in Table D.2-3, the VRM Class II management objective is to "retain the existing character of the landscape." While the management class suggestions included in the visual resources inventory conducted for the Draft RMP have not been adopted by the BLM at this time (the RMP remains in draft status), adoption of the Draft RMP could alter the VRM objectives of public lands crossed by TL6923. According to the BLM, the Proposed RMP/Final EIS is anticipated to be released in 2014 (BLM 2013).

Federal Aviation Administration Advisory Circular 70/7460-1K

Advisory Circular 70/7460-1K, Obstruction Marking and Lighting, details the Federal Aviation Administration (FAA) standards for marking and lighting structures to promote aviation safety. Per Advisory Circular 70/7460-1K, any temporary or permanent structure (including all appurtenances) that exceeds an overall height of 200 feet above ground level should normally be marked and/or lit (FAA 2007). In addition, the FAA may also recommend marking and/or

lighting a structure that does not exceed 200 feet above ground level because of its particular location (such as at a canyon, lake, river or freeway crossing). When it is impractical to make them conspicuous by painting, markers are used to highlight structures and appurtenances. Spherical aviation orange, white, and/or yellow markers/balls of no less than 36 inches in diameter and spaced at intervals of approximately 200 feet are used to identify overhead wires.

State

Cuyamaca Rancho General Plan

According to the existing General Plan for Cuyamaca Rancho State Park, approximately half of the state park acreage is currently used as scenic open space (California Department of Parks and Recreation 1986). The General Plan does not, however, contain policies related to management of visual resources and/or aesthetics. The Department of Parks and Recreation is currently in the process of preparing an update to the existing General Plan and accompanying EIR; however, neither document was available for review during preparation of this report. The third and final public meeting regarding the General Plan update occurred on November 12, 2013 (California Department of Parks and Recreation 2013).

Caltrans California Scenic Highway Program

The California Scenic Highway Program was created in 1963 to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to California highways. The State Scenic Highway system includes both "eligible" scenic highways and "designated" scenic highways: an "eligible" state highway becomes "designated" after a local jurisdiction adopts a scenic corridor protection program, applies to the Caltrans for scenic highway approval, and receives the designation (Caltrans 2013). Within the project area, there are no designated state scenic highways; however, I-8, SR-79, SR-78, and SR-76 are "eligible" state scenic highways (Caltrans 2014).

Also, pursuant to California Public Utilities Code Section 320, all future electric and communication facilities proposed to be erected in proximity to any designated state scenic highway and which would be visible from such scenic highways if erected aboveground are required to be installed underground. Further, 74 California Public Utilities Code 457, Decision 80864 (which implemented Section 320) defined "in proximity to" as being within 1,000 feet from edge of the right-of-way of a designated state scenic highway. While several eligible state scenic highways are located in the project area (see discussion in previous paragraph), none have been officially designated by Caltrans.

Local

County of San Diego General Plan

The County of San Diego General Plan does not contain a separate element for visual or aesthetic resources; however, the General Plan addresses visual and scenic resources including scenic corridors and scenic viewsheds in the Conservation and Open Space Element. In addition, the County has established a Scenic Highway System that identifies interstates, highways, and roads with particularly scenic features and that offer scenic views of natural landscapes (County of San Diego 2011). In total, 53 roadways, including a number of facilities in the project area, are included in the County Scenic Highway System. A summary of identified scenic routes from which the power line replacement projects would be visible is listed below in Table D.2-7.

Table D.2-7
Designated County Scenic Routes in the Project Area

Roadway	Visible Project Components
Buckman Springs Road	TL629, TL6923,C449
Japatul Road	TL625
Lake Morena Drive	TL6923, C449
Lyons Valley Road	TL625
Oak Drive	C449
Sunrise Highway	C440
SR-76	TL682
SR-78	TL626
SR-79	TL629, TL626, TL682,
Interstate 8	TL625, TL629, C440, C442, C449
Old Highway 80	TL625, TL629,C440, C449

Source: County of San Diego 2011.

D.2.3 Environmental Effects

D.2.3.1 Definition and Use of CEQA Significance Criteria/Indicators under NEPA

The CEQA criteria and guidelines described as follows are also used as indicators of adverse effect under NEPA. The criteria used to assess the significance of visual impacts resulting from SDG&E's proposed project are based on Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.), which identify four criteria that can lead to a determination of significant visual impact. These criteria are described in the following list.

A development project could have a significant impact on aesthetics if the project would:

a. Have a substantial adverse effect on a scenic vista
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway
c. Substantially degrade the existing visual character or quality of the site and its surroundings
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area
e. Result in an inconsistency with applicable scenic integrity objective or visual resource management system objective.

D.2.3.2 Applicant Proposed Measures

SDG&E has proposed Applicant Proposed Measures (APMs) APM VIS-01 through APM VIS-05, which include measures to reduce general visibility of SDG&E's proposed project. These APMs are part of the project, and the impact analysis assumes all APMs will be implemented as defined in Section B.7 of this EIR/EIS.

D.2.3.3 Direct and Indirect Effects

Impact VIS-1 Adverse effect on a scenic vista

According to the Forest Service field map for the CNF (Forest Service 2006), designated scenic vistas located on Forest Service lands in San Diego County consist solely of the Henshaw Scenic Vista (perched above the western shores of Lake Henshaw and accessed via East Grade Road) and Storm Canyon Vista (located east of the Al-Bahr Shrine Camp in the Laguna Mountain Recreation Area). The Henshaw Scenic Vista provides broad, panoramic views of the Lake Henshaw valley, and the Storm Canyon Vista provides easterly oriented views into Storm Canyon and to the distant desert floor below. The Desert View Picnic Area in the Laguna Mountain Recreation Area also offers visitors scenic views of the distant desert landscape; however, given the easterly orientation of the views from the picnic area (and from the Storm Canyon Vista), the proposed power line replacement projects, including distribution circuit C440, would not affect available views from these scenic viewing locations.

In addition to the Henshaw Scenic Vista, the Inaja Memorial National Recreation Trail and Cuyamaca Peak were identified as scenic vistas from which views of the proposed power line replacement projects could be available. Therefore, these three scenic vistas form the basis of the analysis below.

Table D.2-8 lists identified scenic vistas, describes scenic resources within the surrounding viewshed, and details the visible projects component.

Table D.2-8
Identified Scenic Vistas and Visible Project Components

Available Scenic Vistas	Type of Landscape	Existing Scenic Resources within Viewshed	Visible Project Components
Henshaw Scenic Vista	Panoramic	Broad views of the Lake Henshaw valley, the West Fork of the San Luis Rey River, the Aguanga Mountains, and San Felipe Hills are available from this elevated scenic vista.	TL682
Inaja Memorial National Recreation Trail	Focal	Focal views of the San Diego River canyon landscape are available, as are views of El Capitan Mountain. Viewers are led towards a focal point in the canyon landscape created by the curvature of the San Diego River and the convergence of canyon terrain. Chaparral vegetation is prevalent in the landscape.	TL626
Cuyamaca Peak	Panoramic	Expansive views of the ridge and valleys landscapes of eastern San Diego County are available from Cuyamaca Peak (6,512 feet elevation). Westward views are long and extend to the Pacific Ocean on clear days.	C79

TL682

Near the SR-76/East Grade Road intersection, the TL682 alignment turns to the north and negotiates the rocky, chaparral and occasional oak woodland-covered terrain between the western shores of Lake Henshaw and East Grade Road. Accessible via East Grade Road, the Henshaw Scenic Vista offers visitors expansive views of the Lake Henshaw valley, and the physical extent of views is only limited by the presence of distant mountains and hilly terrain to the northeast, east, and southeast. Dominant visual features in the vast landscape include Lake Henshaw, distant rugged ridgelines to the north, east, and southeast, the expansive tan grassland and occasional dark green chaparral-dotted Lake Henshaw valley to the east, and the sinuous form and line of the San Luis Rey River as it empties to Lake Henshaw.

A wooden viewing platform maintained by the Forest Service is perched high above the Lake Henshaw valley and provides viewers with a superior-angle perspective of the natural and man-made features populating the visual landscape. Visible development in the valley is scarce and the landscape displays an altogether rural and natural character. From the Henshaw Scenic Vista viewing platform, TL682 wood poles, H-frame structures, and a narrow access road pass through the landscape in the foreground from south to north as the alignment proceeds towards the San Luis Rey River crossing location. Poles and structures are relatively difficult to detect in the landscape because of the elevated viewing perspective and the backscreening of infrastructure by dark mixed chaparral and oak woodland vegetation. East of the San Luis Rey River, TL682 turns

to the south and then east heading towards the Warner Substation. Along this eastern route, poles and H-frame structures are backscreened by the tan color of grasses and darker green hues of clumped chaparral vegetation making their weathered wood exterior somewhat difficult to detect from the scenic vista. Approximately 1.5 miles east of the scenic vista, a thin, slight undulating line created by the exposed lightly colored soils of an existing access road is visible as it cuts through the Lake Henshaw valley heading east. TL682 follows this access road for over 1 mile prior to deviating from the alignment and proceeding in a relatively straight line to the Warner Substation.

Taller and slightly wider brownish-red weathered steel replacement poles would be located at or near (i.e., within 8 feet) of existing wood poles and H-frame structure locations. Replacement poles would feature a 12-inch band of yellow striping around the circumference of the pole and approximately 40 inches below the lowest conductor for high voltage marking. The most visible replacement poles would be those located within 1 mile of the scenic overlook and west of the San Luis Rey River. Approximately 13 replacement poles located west of the San Luis Rey River would be visible from the scenic overlook and vegetation clearing would be required at certain pole locations situated off the existing access road and overgrown with chaparral vegetation. Replacement poles would be backscreened by chaparral and oak woodland vegetation; however, the brownish-red color and increased width of poles would create a stronger, bolder line in the landscape. The yellow markings around the circumference of the pole would also be visible as this feature would be viewed against the backdrop of dark vegetation. Poles located east of the San Luis Rey River would also be visible from the scenic overlook as the wider and taller weathered steel poles would be viewed against the light tan colored grassland vegetation.

While approximately 25 replacement poles would be located within 1.5 miles of the scenic overlook and the dark colored line and yellow horizontal bands displayed by weathered steel poles would create a stronger color contrast than that associated with existing wood poles and H-frame structures, effects to Lake Henshaw scenic vista views would not be significant. Replacement poles would be located at or near existing pole locations. Where necessary, the effects of vegetation removal at individual pole locations would be visible; however, with implementation of APM VIS-01, all temporary work areas will be restored to near pre-construction conditions. Poles located within 1 mile of the overlook would be backscreened by chaparral and oak woodland vegetation, which would tend to reduce their visual prominence in the landscape. Furthermore, viewers at the overlook tend to be drawn to dominant features in the landscape. Lake Henshaw, the tan grassland covered Lake Henshaw valley, distant dark rugged rideglines, and the sinuous form and line of the San Luis Rey River attract the attention of viewers at the scenic vista. As a result, viewers tend to look over and beyond foreground elements such as the descending, dark color chaparral terrain and electrical infrastructure located below the overlook. Similar to existing poles and H-frame structures, replacement poles would

be viewed from a superior viewing angle that would decrease the scenic vista viewer's perception of the spatial dominance and prominence of these features. The darker and wider vertical line of replacement poles and yellow markings would be visible from the scenic vista; however, the resulting color contrasts would be primarily detectable in the foreground viewing distance where poles would be backscreened by dark chaparral and oak woodland vegetation. Furthermore, the introduction of taller, wider weathered steel replacement poles would not substantially affect the availability of expansive views and would not impair, block, or screen views of dominant features in the landscape. Therefore, impacts to existing views available from the Henshaw Scenic Vista resulting from implementation of TL682 as proposed would not be adverse under NEPA, and under CEQA would be less than significant (Class III).

TL626

After exiting the Santa Ysabel Substation, the TL626 alignment traverses the southern extent of the Santa Ysabel Valley and proceeds towards the San Diego River along an existing access road. Southeast of the Inaja Memorial Picnic Grounds, the access road and TL626 climb a topographical saddle between two promontories (the elevated knoll on which the Inaja National Recreation Trail is aligned is located to the north of the alignment) and then spans the San Diego River. Two wood support poles are located on the east rim of the river canyon approximately 400 feet south of the southernmost portion of the looped national recreation trail. From the picnic a ground trailhead, the trail meanders through various types of chaparral vegetation intermixed with exposed granitic boulders and climbs the terrain to reveal an overlook above the San Diego River. From the overlook, long views of the San Diego River canyon are available, and views tend to converge on the confluence of canyon walls to the south. While the wooden support poles on the east rim of the canyon are backscreened by chaparral-covered canyon terrain, the brown color of the existing poles contrasts with the dark greens of chaparral vegetation and therefore, the existing poles detract from the altogether natural and scenic view.

As proposed by SDG&E, existing TL626 wood poles would be replaced with taller and wider weathered steel poles, and replacement poles would be configured to carry three 69 kV conductors. Weathered steel poles would have a maximum height of 100 feet and a typical diameter of 36 to 60 inches (existing wood poles range in height from 40 to 90 feet and are approximately 20 inches in diameter). Existing stays and guy wires would generally not be needed to support replacement poles, and therefore, the majority of these components would be removed. Although the pole location is downslope from the trail overlook, the increased height and width of the replacement pole would create a strong, bold line in the landscape that would attract more attention from trail users than the existing narrow wood pole. The spatial dominance and visual prominence of the replacement poles would be greater than that of the existing wood poles. In addition, the upper segment of the taller replacement pole located 400 feet south of the

scenic vista may rise above the background canyon terrain and vegetation to be silhouetted against the sky. Replacement poles would also feature 12-inch-wide bands of yellow striping located approximately 40 inches below conductors to indicate high voltage. Short, thin metallic climbing pegs would also be installed on the face and back of the replacement pole. Yellow bands and metallic pegs would create noticeable color contrast when viewed against the backdrop of dark green canyon vegetation. Lastly, similar to existing conditions, spherical marker balls would be strung across the San Diego River canyon and the red and yellow line markers would be visible against the backdrop of dark green chaparral vegetation.

Views from the overlook tend to naturally converge on the confluence of canyon walls to the south, and the replacement pole would not physically obstruct or screen views of this focal area. However, the installation of the replacement pole in the existing pole location impairs the overall scenic quality of the view and detracts from views of the canyon landscape. The replacement pole would be in the direct line of sight of viewers at the national recreation trail overlook and would represent the lone mark of man-made development in the otherwise natural landscape. In addition, red and yellow line marker balls strung across the canyon create noticeable color contrast as these features would continue to be viewed against the backdrop of the darker colored, steep sloping terrain of the canyon landscape. As opposed to motorists that move through the landscape quickly and are afforded brief, passing views of landscape features, hikers travel at much more deliberate pace, and overlooks provide opportunities to stop, rest, and closely examine the environment. Due to the proximity of replacement poles to the overlook and the anticipated form, line, and color contrasts associated with replacement poles and line marker balls, removal and replacement of TL626 would detract from and interrupt views available at the Inaja National Recreation Trail scenic overlook. As such, potential impacts to the scenic overlook resulting from removal and replacement of TL626 are considered adverse under NEPA and significant under CEQA. Therefore, Mitigation Measure MM VIS-1 would be implemented to address anticipated impacts associated with SDG&E's proposed replacement of TL626 as experienced by recreationists at the Inaja National Recreation Trail scenic overlook.

MM VIS-1 Prepare and Implement a Scenery Conservation Plan. ~~Within 1 year after permit issuance, or prior to any ground-disturbing activities,~~ SDG&E shall file with the CPUC a Scenery Conservation Plan that is approved by the Forest Service and provided to other applicable jurisdictional agencies for review and comment. Each 69 kV power line or 12 kV distribution line segment will be covered under an individual section of the plan, and each section will be reviewed and approved by the appropriate agencies prior to any ground-disturbing activities for the specific segment. The purpose of this plan is to identify and implement specific actions that will minimize the project's visual disturbance to the naturally established scenery. Specific actions shall also be identified and

> implemented for individual poles to protect existing views from established scenic vistas and roadways located outside of the CNF. Power and distribution line support towers shall be designed to minimize their visual prominence and contrast to the natural landscape. Individual poles anticipated to create adverse effects to scenic vistas and/or particularly noticeable visual contrast in existing views shall be designed, located, shaped, textured, and/or screened as necessary to minimize their visual contrast, blend and complement the adjacent forest and community character. Methods such as limiting the number of climbing pegs and identifying less visually intrusive pole markings for high voltage lines, consistent with CPUC requirements, shall be considered. SDG&E shall also be required to provide photorealistic visual simulations of typical proposed designs ~~and mitigation measures~~ that include design features that may be incorporated into poles identified for visual treatment to demonstrate ~~their~~ the effectiveness of such features in reducing visual contrast and prominence as viewed from sensitive viewsheds.

At the scenic overlook, visible replacement poles would be located approximately 400 feet to the south and 1,300 feet to the southeast atop the San Diego River canyon. By restricting pole height and designing replacement poles in the scenic overlook viewshed to match as closely as possible the design of existing poles, the visual prominence of replacement poles and resulting form and line contrasts would be reduced. Limiting the number of climbing pegs and identifying a less visually intrusive color for high voltage markings on poles would also reduce anticipated color contrasts. Despite the implementation of such design measures, weathered replacement poles would be smoother in texture and wider and darker in color than existing wood poles. Such characteristics would create bold forms and lines that would detract from and interrupt existing views of the San Diego River canyon landscape. Compared to wood poles, replacement poles would be more visually dominant in views from the overlook as they would have greater spatial presence due to increased width. Also, the presence of marker balls across the canyon would continue to present noticeable color contrast that would detract from the overall quality of existing views. Therefore, at the Inaja National Recreation Trail scenic overlook, effects to existing views under NEPA would be adverse and unavoidable, and under CEQA, this impact (Impact VIS-1) would be significant and unavoidable (Class I).

C79

From Cuyamaca Peak, long and expansive views to the west are available. The ridge and valley landscapes of eastern San Diego County are easily recognizable, and views extend to the western horizon. The existing C79 alignment climbs the western slopes of Cuyamaca Peak, and from publicly accessible viewing locations atop the peak, several dark brown wood poles affixed with

tan cross arms and white porcelain insulators are visible in the foreground viewing distance. In addition, the C79 distribution line spans the peak, and segments of line located closest to the viewing location are viewed against the background sky. Existing poles, cross arms, and insulators are viewed from a superior viewing angle and backscreened by vegetation. However, the background vegetation displays a dark green to almost silver color that somewhat impairs opportunities for poles to visually blend into the background landscape.

The proposed power line replacement projects would remove C79 poles and line from the western slopes of Cuyamaca Peak, and existing disturbed areas such as access roads would be restored. Pole and line removal would enhance the quality of views available from Cuyamaca Peak by removing man-made features from the landscape and the restoration of access roads would reduce noticeable line and contrasts in the environment. The establishment of vegetation at access road locations may require a season to ensure success; however, overall the removal of visible aboveground infrastructure and the enhancement of views from a scenic viewpoint would produce a tangible beneficial impact. Therefore, the removal of C79 as proposed and the resulting enhancement of views from atop Cuyamaca Peak would result in a beneficial impact.

Operation and maintenance of other SDG&E electric facilities proposed to be covered under the MSUP including power lines, distribution circuits, ancillary facilities, and access roads would continue to be present in existing views available from recognized scenic vistas, and therefore would not exceed the significance threshold. As such, with the exception of impacts described above for the proposed power line replacement projects, impacts to scenic vistas due to operation and maintenance would not be adverse under NEPA and would be less than significant under CEQA (Class III).

Impact VIS-2: Damage to scenic resources, including trees, rock outcroppings, and historic buildings within a state scenic highway

While there are no designated state scenic highways in the MSUP study area, several eligible state scenic highways are located in Orange and San Diego counties near or on Forest Service lands, and the Sunrise Scenic Byway travels through the Laguna Mountain Recreation Area. While not an eligible or officially designated state scenic highway, the Sunrise Scenic Byway is an officially designated National Forest Scenic Byway, and therefore, for purposes of this analysis, it is considered a scenic highway. Table D.2-9 lists the eligible state scenic highways (and the Sunrise Scenic Byway) from which views of proposed power line replacement projects would be visible and summarizes the visibility conditions to existing power line and distribution circuit infrastructure.

Table D.2-9
Project Visibility from Designated Scenic Roadways in the Project Area

Roadway	Scenic Designation	Visible Project Components	Visibility Summary
Interstate 8	Eligible State Scenic Highway	TL625, TL629, C440, C442, C449	TL625 spans I-8 approximately 0.3 mile west of SR-79. From southbound lands, several TL625 poles to the south of I-8 are visible as the alignment negotiates a ridgeline prior to descending into the Japatul Valley. TL629 spans I-8 west of Sunrise Highway and parallels Old Highway 80 between the Glencliff Substation and the Cameron Tap, and from the Cameron Tap to Cameron Truck Trail. Along these segments, TL629 is backscreened by vegetation and terrain. C440 spans I-8 near the Pine Valley border patrol checkpoint and Glencliff Substation. Visible to the west of I-8, existing C440 wood poles and line are backscreened by the Laguna Mountain foothills. A single skylined pole supporting C442 on Forest Service lands is visible from I-8 at the Pine Valley Road crossing. C449 poles are visible from I-8 near Kitchen Creek but are backscreened by vegetation and mountainous terrain located west of Cottonwood Valley.
SR-79	Eligible State Scenic Highway	TL629, TL626, TL682,	TL629 spans SR-79 at Viejas Boulevard in the community of Descanso. Several poles are briefly skylined. Existing TL626 poles located immediately south of the Santa Ysabel Substation are visible to southbound SR-79 motorists at SR-78. TL682 spans SR-79 approximately 0.20 mile southwest of Warner Substation.
SR-78	Eligible State Scenic Highway	TL626	TL626 spans SR-78 south of the Santa Ysabel Substation and remains in the highway viewshed for approximately 0.75 mile between the substation and the Inaja Memorial Picnic Grounds. After eastbound motorists pass the substation, the highway climbs the terrain, and poles in the Santa Ysabel Valley are visible from a superior viewing angle and are backscreened.
SR-76	Eligible State Scenic Highway	TL682	TL626 parallels SR-76 from the Rincon Substation to East Grade Road. Poles tend to be located north of the highway and atop elevated terrain. Views are generally enclosed and several poles are skylined.
Sunrise Scenic Byway	National Forest Scenic Byway	TL629, C440	TL629 spans Sunrise Scenic Byway immediately north of the westbound I-8 off- and on-ramps. Several poles are visible as motorists descend the scenic byway and travel towards I-8; however, poles are backscreened by chaparral-covered terrain. The C440 alignment parallels the scenic byway outside of and within the Laguna Mountain Recreation Area.

Table D.2-9
Project Visibility from Designated Scenic Roadways in the Project Area

Roadway	Scenic Designation	Visible Project Components	Visibility Summary
Buckman Springs Road	County of San Diego Scenic Route	TL629, TL6923,C449	TL629 spans Buckman Springs Road west of I-8 and southeast of the SDG&E Mountain Empire Operator Training Facility (an existing support pole is located at the southwestern corner of the Buckman Springs Road/Old Highway 80 intersection). TL6923 spans Buckman Springs Road approximately 0.5 mile north of the Buckman Springs Road/Lake Morena Drive intersection. An addition to TL6923 and wood poles supporting communication infrastructure, an existing distribution circuit (C449) supported by wood and occasional steel poles runs parallel to Buckman Springs Road north of Lake Morena Drive to Morena Village Road. North of Morena Village Drive, C449 parallels and crosses Buckman Springs Road and remains in the viewshed for approximately 3 miles.
Japatul Road	County of San Diego Scenic Route	TL625	West of the Barrett TAP, TL625 generally parallels Japatul Road for approximately 5 miles. TL625 spans the roadway on three separate occasions and at times is obscured from view by higher elevation terrain adjacent to Japatul Road. West of Hidden Glen Road, TL625 crosses Japatul Road and is located in a topographical valley. As viewed from the westbound lane of Japatul Road, this segment of the power line is backscreened by chaparral vegetation and rising terrain.
Lake Morena Drive	County of San Diego Scenic Route	TL6923, C449	East of Big Potrero Truck Trail, TL6923 spans a narrow valley that supports grazing activities and is populated with occasional oaks. TL6923 crosses Lake Morena Drive, and an existing wood support pole is located in the ROW near a private driveway. Near the crossing, existing wood poles supporting communication lines parallel Lake Morena Drive. In addition, existing distribution lines are located east and west of the roadway and several Sunrise Powerline towers are located on the ridgeline located north of the TL6923 alignment at the Lake Morena Drive crossing.
Lyons Valley Road	County of San Diego Scenic Route	TL625	Tl625 spans Lyons Valley Road approximately 0.5 mile south of Skye Valley Road. Portions of several poles located south of Lyons Valley Road are skylined as viewed by north and southbound motorists. Views along the road are generally broad and expansive but are occasionally shortened by road cuts and tall, roadside adjacent vegetation.
Oak Drive	County of San Diego Scenic Route	C449	Oak Drive is spanned by the southernmost extent of C449 included in the power line replacement projects. Existing poles visible at the Oak Drive crossing are unobtrusive and are rather submissive features in the generally natural appearing landscape.

Table D.2-9
Project Visibility from Designated Scenic Roadways in the Project Area

Roadway	Scenic Designation	Visible Project Components	Visibility Summary
Old Highway 80	County of San Diego Scenic Route	TL629,C440, C449	North of I-8, TL629 parallels the Old Highway 80 alignment for approximately 6 miles. North of I-8, TL625 parallels the Old Highway 80 between the Glencliff Substation and Cameron Truck Trail. C440 support poles are visible from the highway near Glencliff Substation, and C449 crosses the highway south of Kitchen Creek and north of the Boulder Oaks Campground.

As discussed in Section B, Project Description, replacement poles would be installed at the same location as (or one nearby) existing poles along the power line and distribution circuit alignments. New poles would be taller and wider than existing and would be composed of weathered steel as opposed to wood. Despite the increased scale and mass of poles and the change in materials, replacement poles would not substantially affect available views from eligible state scenic highways or County scenic routes. Locating new poles at the same location (or close nearby) would minimize the potential for necessary removal of scenic resources such as trees and rocks outcroppings to accommodate new poles and associated work areas. In addition, the replacement of poles visible from an eligible state scenic highway would not entail damage to historic buildings because there are no historic buildings located within the existing power line and distribution circuit alignments. The increased scale and mass of replacement poles would likely be noticeable to passing motorists; however, wood poles and power and distribution circuits lines are existing features in the landscape and contribute to the overall scenic quality of available views. Taller and wider replacement poles on ridgelines and elevated terrain such as those at the TL625 crossing at I-8, at the C449 crossing of Old Highway 80, or those visible along SR-76 would be skylined and structurally prominent as a result of the inferior viewing angle afforded to motorists. While weathered steel replacement poles would be taller and wider than existing wood poles and would feature 12-inch-wide yellow bands to indicate high voltage, existing poles at these locations in the landscape create noticeable view blockage of background sky and rideglines. Existing poles that are backscreened affect scenic quality by blocking views of surrounding terrain and vegetation. Therefore, the installation of replacement poles would essentially replicate the existing view blockage condition in the landscape and the taller and wider poles would not substantially impair, obscure, or screen features that are not currently subject to similar treatment by existing infrastructure. As such, the eligibility of scenic highways and County scenic routes for future official state designation and the quality of existing views available from these scenic roadways is not anticipated to be substantially affected by the proposed power line replacement projects. Therefore, impacts to eligible state scenic highways and County scenic routes would not be adverse under NEPA, and under CEQA, impacts would be less than significant (Class III).

In regards to the Sunrise Scenic Byway, a substantial segment of the existing C440 overhead alignment would be removed from its current location and placed underground within the roadway. However, as proposed by SDG&E, the majority of the C440 alignment in the Laguna Mountain Recreation Area would undergo wood-to-steel pole replacement. As discussed in Section B, Project Description, the maximum height for steel replacement poles for the C440 distribution would be 62 feet, and the existing height of wood poles ranges from 19 to 52 feet. Further, as discussed in Section D.2.2, the Sunrise Scenic Byway has been designated as such in part due to offering travelers views of pristine mountain meadows and amazing vistas. As shown on Figure B-6, between I-8 and Crouch Valley the existing overhead alignment would be removed and installed underground along the scenic byway. A short segment of C440 in the Crouch Valley area that would undergo wood-to-steel pole replacement would deviate from the scenic byway alignment, and new weathered steel poles would be installed to the south along Sheephead Mountain Road. These new poles would be installed where poles do not currently exist. Existing southerly views at this location consist of a meadow interrupted by occasional pine-covered knolls and Sheephead Mountain which is prominent in the background viewing distance. Given the proximity of proposed locations to the byway, several poles may be skylined and be viewed as structurally prominent features in the landscape. New poles may also result in sequential view blockage of the mountain meadow landscape. Assuming a travelling speed of 40 miles per hour, new poles would be in this portion of the byway viewshed for approximately 10 seconds. The remaining wood-to-steel pole replacement segment of C440 through the Crouch Valley area would be located 0.5 mile or greater to the south of the byway and would be backscreened or obscured by mountainous terrain. Despite the relatively brief exposure of views of project components, views from the byway as it travels through Crouch Valley contain landscape features (i.e., mountain meadows and vistas) for which the byway was officially designated as scenic. In addition, Crouch Valley is a primarily natural-appearing landscape, and the introduction of weathered steel poles up to 62 feet in height where no poles currently exist could result in particularly noticeable view blockage from the scenic byway. Therefore, impacts to the Sunrise Scenic Byway in the Crouch Valley area would be considered adverse under NEPA and significant under CEQA. However, with implementation of Mitigation Measure MM VIS-1, impacts would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

Within the Laguna Mountain Recreation Area, C440 is proposed to undergo wood-to-steel pole replacement. Similar to existing wood poles, replacement poles would be routinely obscured from view by mature pine trees adjacent to the byway; however, new poles would be taller and constructed of weathered steel. As a result, replacement poles may be visible above trees and the reddish-brown coloring and materiality of new poles may not blend in as well with the landscape as the dark brown wood coloring of existing poles. Individual replacement poles

would also occasionally be located close to the byway ROW. These poles would be clearly visible to passing motorists; however, views would be brief, and poles would largely be backscreened by surrounding pine vegetation. Near the Burnt Rancheria and Red Tail Roost Volunteer Center, C440 may be more apparent to travelers as individual replacement poles would be located close to the byway, and the byway would be spanned on several occasions. However, Forest Service development including lodges, a post office, and fire station structures occurs along this stretch of the road, and views are enclosed. Mountain meadow and vista views are limited, and the remaining replacement poles located in the scenic byway viewshed would be partially obscured or backscreened by mature pine trees. In addition, because the C440 alignment tends to be setback from the byway and poles are (and would be) located amongst mature pines, poles would be relatively difficulty to detect in the landscape. Therefore, wood-to-steel replacement of C440 poles in the Laguna Mountain Recreation Area would not adversely impact scenic resources visible from the Sunrise Scenic Byway, and under CEQA, impacts would be less than significant (Class III).

Operation and maintenance activities required for other SDG&E electric facilities proposed to be covered under the MSUP would require routine and periodic equipment testing, pole brushing and other ongoing maintenance tasks, similar to those currently conducted by SDG&E. These activities would not increase in duration or intensity with implementation of SDG&E's proposed project in such a way as to alter or adversely affect the existing views from scenic highways and therefore would not exceed the significance threshold. As such, with the exception of impacts described above for the proposed power line replacement projects, impacts to views from a scenic highway due to operation and maintenance would not be adverse under NEPA and would be less than significant under CEQA (Class III).

Impact VIS-3: Degrade the existing visual character or quality of the site and its surroundings

Construction activities associated with SDG&E's proposed project would be concentrated along existing power line and distribution circuit alignments and would be visible to motorists, recreationists and residents. Impacts to existing visual character and quality could occur because of an influx in construction vehicles, equipment, and workers to the landscapes where existing electrical infrastructure is located. In addition, the establishment of temporary work areas and stringing sites may create impacts as a result of necessary vegetation removal and site preparation activities. Disturbances to existing vegetation and terrain could create noticeable and long-lasting contrast in form, line, and color in the landscape if not properly addressed following construction. While construction impacts would be temporary and relatively mobile as result of the linear nature of power line and distribution circuit alignments, both the visibility of construction vehicles and equipment and disturbances in the landscape associated with the preparation of construction work area could degrade existing character. However,

implementation of APM VIS-01 and APM VIS-02 would reduce the potential for visual impacts during construction by requiring the restoration of all temporary work areas to near pre-construction conditions (when construction has been completed) and by screening construction storage and staging areas from close-range view with opaque fencing (where practical). Therefore, with implementation of APM VIS-01 and APM VIS-02, construction impacts to existing visual character and quality of the site and surroundings would not be adverse under NEPA, and under CEQA impacts would be less than significant (Class III).

The potential long-term impacts to visual character and quality resulting from the proposed power line replacement projects are summarized below. As stated previously, KOPs were identified for each power line and distribution circuit included in the power line replacement projects and comprise representative views of project components. Table D.2-10 provides a description of the anticipated visual contrast between the existing and proposed condition at each KOP and lists the anticipated contrast in the landscape character elements of form, line, color, and texture. Ratings of none, weak, moderate, and strong are provided for landscape element contrasts and are explained in the contrast summary column.

Table D.2-10
Visual Contrast Rating Summary

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
1	SR-76 Near Palomar Mountain Road	TL682	Moderate	Weak	Moderate	Weak	The taller form of replacement poles would be evident along the SR-76 corridor near Palomar Mountain Road, and overall visual contrast would be moderate. The larger scale of replacement poles would attract more attention in the landscape (a greater portion of poles would be skylined along SR-76) and while the horizontal line of replacement pole cross arms and insulators would appear similar to those features on existing poles, color contrasts would be moderate. The drab brown-grey color of existing wood poles tends to recede into the background landscape; the reddish-brown replacement poles and yellow markers would stand out against the backdrop of vegetation and sky. Texture contrasts would be relatively weak as the smooth finish of steel would not be overly discernable or visually distinct from that of wood poles when viewed by passing motorists travelling at prevailing speeds.
2	La Jolla Indian Reservation	TL682	Moderate	Weak	Weak	Weak	The taller form of replacement poles would slightly increase view blockage of the background sky; however, due to distance between KOP 2 and TL682, the mass and width of replacement poles would appear similar to that of existing wood poles. Line contrasts would increase slightly as new 69 kV line would be more visible when viewed against the backdrop of the sky. Where backscreened, the reddish-brown color of existing vegetation would help replacement poles to blend into the landscape but yellow markers would tend to attract attention. Where poles are skylined, color contrasts would not be substantially different as the reddish-brown of replacement poles would be perceived similar to the dark brown of existing wood poles. Due to distance of the KOP to pole locations, texture contrasts would not be readily apparent. Overall, visual contrasts at KOP 2 resulting from wood-to-steel replacement of TL682 would be weak.

Table D.2-10
Visual Contrast Rating Summary

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
3	SR-76 Near San Luis Rey Picnic Grounds	TL682	Weak	Weak	Moderate	Weak	As viewed from KOP 3, existing and replacement poles are partially obscured by roadside adjacent vegetation, but the tall form of poles break the irregular line created by oak trees and are visible north of SR-76. Replacement poles would be installed in similar locations as existing poles and due to the presence of mature oaks trees in the view, the relative scale of replacement and existing poles would be similar. Horizontal and concave lines associated with cross arms, hardware, and the power lines themselves of the replacement poles would be visually similar to those features of the existing TL682 alignment. The reddish-brown and yellow markers of replacement poles would be more apparent in the landscape than the existing wood poles as the alternating bands of brown and yellow would enhance the visibility of poles where backscreened by the sky. Texture contrast would not be overly apparent to passing motorists which would be afforded a more focal perspective of the landscape as they drive along SR-76. Overall visual contrast resulting from wood-to-steel replacement of TL682 as viewed from KOP 4 would be weak.
4	Inaja National Recreation Trail	TL626	Moderate	Moderate	Moderate	Weak	The taller form of replacement poles would be apparent to regular visitors of the trail, and the overall visual contrast created by wood-to-steel replacement of TL626 would be moderate as viewed from KOP 4. Existing (and proposed replacement) poles frame the available view at KOP 4, and the larger scale of replacement poles would make these features structurally prominent in the landscape. While portions of existing wood poles are skylined, they tend to display a thin, narrow form which allows them to somewhat recede into the surrounding landscape. In addition to scale, the increased width of replacement poles would also be evident to viewers as would the stronger horizontal lines created by larger cross arms and insulators. While the difference between the dark brown of existing poles and the reddish-brown of replacement-weathered poles would be subtle as viewed from KOP 4, yellow markings indicating high voltage would be visible and the bright hue is not currently associated with existing poles or

Table D.2-10
Visual Contrast Rating Summary

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
							seen in the landscape. As such, color contrasts would be moderate. Also, similar to existing conditions, red and yellow aerial marker balls would be strung on the segment of the replaced transmission line spanning the San Diego River. As viewed from KOP 4 and most locations in the surrounding area, aerial marker balls would be skylined viewed against the backdrop of the expansive sky. These features would also create color contrasts in the landscape however, aerial marker balls are currently strung across the San Diego River and are visible from KOP 4. In regards to texture contrasts, the ~~As such, color contrasts would be moderate. Due to~~ distance between TL626 ~~the~~ poles and the KOP would make it difficult to ~~,~~discern the materiality of replacement poles and therefore, texture contrasts ~~in textures in the landscapes associated with~~between existing and replacement TL626 poles would not be readily apparent. While they would not dominate the scene, skylined replacement poles would attract attention and affect natural-appearing character of the view.

Table D.2-10
Visual Contrast Rating Summary

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
5	Boulder Creek Road near Tule Springs Road (Forest Service lands)	TL626	Moderate	Weak	Moderate	Weak	From KOP 5, the taller form of replacement poles would create a slight increase in visual contrast but overall effects to the existing character of the landscape would be weak. Taller poles would entail slightly increased view blockage of the background sky; however, the majority of visible poles in the landscape would be viewed against the backdrop of rolling terrain. Vertical and horizontal lines displayed by poles and associated cross arms and insulators would be similar in the existing and proposed condition, and therefore, line contrasts would be weak. Although brown colors are present in exposed soils and vegetation in the landscape, they display a drab tone. Therefore, the reddish-brown color of replacement would be more apparent to viewers than the weathered brown-grey wood of existing poles. In addition, the yellow bands affixed to replacement poles would be particularly evident when viewed against the backdrop of the sky and the backdrop of dark green chaparral vegetation. Therefore, overall visual contrast associated with wood-to-steel pole replacement of TL626 would be moderate as viewed from KOP 5.
6	Boulder Creek Road near Dubois Road (Forest Service lands)	TL626	Weak	Weak	Moderate	Weak	With the exception of the two TL626 poles located closest to KOP 6, replacement poles (similar to existing poles) would be relatively difficult to detect in the Boulder Creek Road landscape. All visible poles would be backscreened by the green-grey color of chaparral-covered terrain which would reduce their visual prominence in the landscape. The taller vertical form of replacement poles would not be overly apparent (color contrast and more specifically, the reddish-brown of poles and yellow bands/markers viewed against grey-green vegetation, would be responsible for the increased visibility of poles), and line contrasts would not be evident. Backscreening and distance between the KOP and visible poles would also reduce the potential for detectable color contrast. As such, overall increases in visual contrast attributed to wood-to-steel replacement of TL626 would be weak.

Table D.2-10
Visual Contrast Rating Summary

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
7	Loveland Reservoir Trailhead (private lands)	TL625	Moderate	Weak	Weak	Weak	Despite the moderate contrast in form between existing H-frame wood structures and replacement tubular steel poles, wood-to-steel replacement of TL625 poles would produce weak visual contrast as viewed from KOP 7. The taller form of replacement poles would be most evident in the topographical saddle occurring to the southwest of KOP 7. At this location, the terrain converges and creates a low point on the horizon in which TL626 poles would be skylined. However, increased view blockage would not be substantial. Line contrasts in this location would be reduced as three H-frame structures (a total of six poles) would be removed and replaced with three tubular steel poles. Color contrasts associated with the differing hues of brown displayed by existing and replacement poles may be noticeable. However, the contrast would be altogether weak and the color of replacement poles would be similar to that of signage posts located in the foreground at KOP 7. Due to distance, differences in wood and weathered steel pole textures would be difficult to detect.
8	Japatul Valley Road (private lands)	TL625	Moderate	Weak	Moderate	Weak	KOP 8 provides an inferior angle view of TL625, and while the taller form of replacement poles would be noticeable to Japatul Valley Road motorists, overall visual contrast would be weak to moderate. From this viewing location, the larger form of replacement poles would entail slightly greater view blockage of the background sky and a small portion of an additional pole in the TL625 alignment would be skylined. The greater width of replacement poles would not be overly apparent, and lines associated with cross arms and insulators would appear similar to lines created by existing wood pole components and hardware. However, in addition to a slight increase in color contrast attributed to the reddish-brown hue of weathered steel poles in the landscape (with the exception of the road, the KOP 8 landscape displays brown and green colors associated with exposed soils,

Table D.2-10
Visual Contrast Rating Summary

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
							grasses, and vegetation), yellow bands installed around replacement poles above cross arms would be noticeable and would attract attention. Contrasts in texture may be noticeable due to the distance of the viewing location to the TL625 alignment, but motorists would be provided passing views of replacement poles and texture contrast would not be prominent or memorable. Overall, weak to moderate visual contrast is anticipated at KOP 8.
9	I-8 Westbound near SR-79 (private lands)	TL625	Moderate	Moderate	Moderate	Weak	The larger form of the replacement pole atop elevated terrain at the I-8 crossing would create slightly greater view blockage of the background sky, and visual contrast would be moderate as viewed from KOP 9. The taller form of replacement poles would entail a greater skylined portion of TL625 poles, and while the vertical form display by wood and steel poles would be similar, the horizontal lines of cross arms and conductors are not currently prominent on existing poles. The increased width of replacement poles would create a stronger, bolder line in the landscape compared to the relatively thin, narrow line of existing poles. Color contrasts would be moderate as the darker reddish-brown color of the replacement poles and yellow bands indicating high voltage would attract attention and be relatively bold when viewed against the backdrop of the sky. Also, due to the increased height of replacement poles, additional marker balls strung across the interstate would be visible. Due to the distance between the KOP and TL625 alignment, texture contrast would not be overly apparent to interstate motorists travelling at prevailing speeds. While replacement poles would not result in a substantial increase in view blockage of mountainous terrain, the replacement pole proposed north of the interstate would be perched atop an elevated roadcut and would be structurally prominent.

Table D.2-10
Visual Contrast Rating Summary

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
10	Lyons Valley Road near Barrett Lake Road (private lands)	TL625	Weak	Weak	Weak	None	Due to the superior-angle view offered at KOP 10 as well as the distance of the viewing location to the TL625 alignment, wood-to-steel replacement of TL625 poles would produce weak visual contrast as viewed from KOP 10. From this location and viewing angle, the tall form and vertical line of replacement poles would mimic that of existing wood poles, and similar to wood poles, reddish-brown replacement poles would be viewed against the backdrop of the green-brown color of the Barber Mountain foothills. The color contrast between wood and weathered steel poles would be relatively weak as both are able to successfully blend into the surrounding landscape. New replacement poles would however be affixed with 12-inch wide bands of yellow striping below conductors to indicate high voltage. Although yellow horizontal bands would interrupt the consistent weathered brown color and the regular vertical line displayed by replacement poles, which could create perceptible color contrasts and increase the visibility of these features, yellow bands would be installed on poles located between 1,000 and 3,000 feet away from KOP 10. Therefore, due to the distance between KOP 10 and poles in the landscape, the resulting color contrasts associated with pole replacement activities would be relatively weak. Due to distance and the back screening effect of existing vegetation, contrasts in texture between existing wood poles and weathered steel poles would not be apparent to viewers. In addition to the hues of green-colored vegetation, the prominent form and rugged line of mountainous terrain would remain dominant in the view.
11	SR-79 at Viejas Boulevard (private lands)	TL629	Strong	Moderate	Moderate	Weak	From KOP 11, the increased scale and mass of replacement poles would be visible, and the angular steel pole at the SR-79 and Viejas Boulevard intersection would be structurally dominant in the landscape. The tall, vertical form and lines of the angular pole would appear significantly larger than like features of the existing wood

Table D.2-10
Visual Contrast Rating Summary

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
							pole. The reddish-brown color of weathered steel and yellow markers affixed to replacement poles would stand out in the scene. However, the reddish-brown color would be more compatible with the dark greens displayed by oak trees than the existing lightly colored wood poles. While existing wood poles to the north of the intersection are well hidden by vegetation, replacement poles would rise above the tree lines, and the alternating color brown and yellow pattern of weathered steel and high voltage markers would stand out against the backdrop of the background sky. Therefore, from KOP 11, overall visual contrast would be moderate to strong.
12	Old Highway 80 near Prut Road (private lands)	TL629	Weak	Weak	Moderate	Weak	The apparent scale of replacement poles installed along Old Highway 80 near Prut Road would appear similar to the scale of existing wood poles. Replacement poles would be installed in similar locations as existing poles, and from KOP 12, the taller form of steel poles would not be overly apparent. In addition, the horizontal line of cross arms and insulators and the curving, concave line of power lines would be slightly larger in mass on replacement poles but would altogether similar to the same component of existing TL629 poles. The reddish-brown color of weathered steel poles would create slightly greater color contrast in the landscape than the dull tones of existing weathered wood poles when viewed against the backdrop of the dull greens of oak trees and the sky. Also, yellow bands/marker wrapped around poles would attract attention as these features would be skylined. Changes in the texture of poles from rough wood to smooth steel may be visible to motorists due to proximity of poles to the highway; however, motorists would be moving through the landscape quickly, and texture contrast would be submissive to color contrasts. Overall visual contrast at KOP 12 resulting from wood-to-steel replacement of TL629 would be weak.
13	Boulder Oaks Campground	TL629	Weak	Moderate	Moderate	Weak	~~While the taller form of replacement poles would produce slightly greater view blockage of the sky~~ As viewed from KOP 13, the increased height

Table D.2-10
Visual Contrast Rating Summary

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
	(Forest Service lands)						and width~~larger scale~~ of replacement steel poles ~~compared to existing poles~~ would not be readily apparent. The tall form of ~~E~~existing wood poles break the flat to rising ridgeline to the northeast and as a result, these features are skylined. ~~and break the nearby ridgeline, and r~~Replacement poles would replicate this skylined condition. Although ~~T~~the ~~regular, vertical lines of replacement poles and~~ horizontal/slightly angular lines of insulators and cross arms on replacement poles would be similar to the same features on existing poles, the darker, reddish color displayed by weathered steel poles would produce bolder ,more ~~The increased width of replacement poles would however create a bolder, stronger, more dominant line in the landscape to which viewers would be drawn to. The~~definite vertical lines in the landscape. Furthermore, the ~~darker,~~ reddish-brown color of replacement poles and occasional yellow band~~s~~ of high voltage markers would create increased color contrast that would enhance the visibility of power and distribution line poles in the landscape. Also, ~~W~~where new poles are skylined, the reddish-brown ~~color of~~ poles would create a relatively bold color contrast with the background sky. Elsewhere, where replacement poles viewed against the backdrop of ~~the~~ dark green ~~color of~~ chaparral vegetation, these features~~y~~ would more successfully blend into the landscape than existing wood poles. Due to distance, texture contrasts between wood and steel poles would not be overly evident from KOP 13. As result, anticipated visual contrast associated with wood-to-steel replacement of TL629 would be moderate as viewed from Boulder Oaks campground (i.e., KOP 13).

Table D.2-10
Visual Contrast Rating Summary

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
14	La Posta Road (Forest Service lands)	TL629	Moderate	Weak	Moderate	Weak	The taller vertical form of the visible TL629 replacement poles would be evident to passing motorists as a significant portion of the pole would be skylined. However, replacement of the existing H-frame structure with a tubular steel pole would reduce the existing line contrast in the landscape. The H-frame structure consists of two adjacent poles of unequal height, and thinner diagonal poles connect the poles to one another. While the straight, vertical line of the replacement steel pole would be less chaotic in nature and would mimic the line of existing distribution circuit poles located along La Posta Road to the north, a slight increase in color contrast would occur. The drab weathered wood of existing poles is a rather submissive feature in the landscape but upon project implementation, a substantial portion of the dark reddish-brown color of the replacement pole and associated yellow bands/markers would be viewed against the backdrop of the sky and would attract more attention. Texture contrasts may increase slightly due to a greater portion of the replacement pole being silhouetted against the sky, which would make the pole more visible to motorists; however, contrasts in form and color would be more apparent than changes in texture. Overall visual contrast would be weak to moderate as viewed from KOP 14.
15	Pacific Crest National Scenic Trail Near Hauser Mountain (Forest Service lands)	TL6923	Moderate	Moderate	Moderate	Weak	From the elevated viewing location at KOP 15, replacement poles would be primarily backscreened by the chaparral vegetation and rock outcrops; however, the taller form of poles would entail increased skylining. In addition, the greater width of the angular steel poles present in the landscape would be apparent and would contribute to an overall moderate level of form contrast. Line contrasts would also be slightly increased as the greater height and width of poles would entail additional sections of support poles being viewed against the backdrop of the sky. The increased width and height would also create bolder lines in the landscape that would be

Table D.2-10
Visual Contrast Rating Summary

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
							more apparent to viewers. The reddish-brown color and yellow markers of replacement poles would stand out against the background of dark green vegetation, white-grey boulders, and the sky, and would result in moderate color contrast as the dull wood of existing poles tends to recede into the landscape. Due to distance between the KOP and poles, the texture of replacement poles would not be overly apparent or substantially different from the medium texture of unfinished wood poles. Resulting visual contrast at KOP 15 due to wood-to-steel replacement of TL6923 would be moderate.
16	Boulder Creek Road, West of TL626 (Forest Service lands)	C79	Weak	Weak	Weak	Weak	As proposed, C79 would be removed from the western slopes of Cuyamaca Peak and placed underground within the Lookout Road right-of-way in Cuyamaca Rancho State Park. Pole and line removal would have a beneficial impact on existing views from KOP 16 as the existing form and line contrasts between existing poles and the surrounding landscape would be removed. The straight vertical form of poles and the straight horizontal lines of cross arms contrast with the rugged form and line of the nearby mountainous terrain. Therefore, removal of these features would enhance views, and existing visual contrast would be reduced.
17	Cuyamaca Peak (State Park lands)	C79	Weak	Weak	Weak	Weak	Similar to the effects discussed above for KOP 16, C79 pole and line removal would have a beneficial impact on views from Cuyamaca Peak. Poles and line would be removed, and man-made elements in the scene would be substantially reduced. Existing form and color contrasts would be removed from views, and the rugged, natural character of the area would be enhanced.

Table D.2-10
Visual Contrast Rating Summary

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
18	Mar-Tar-Aw RV Park (Tribal lands)	C78	Weak	None	Weak	None	Due to distance, visual contrast associated with relocation and replacement of existing C78 poles would be difficult to perceive from the Mar-Tar-Aw RV Park. Replacement poles would be visible, yet not prominent, and they would not attract attention. In addition, due to distance between the KOP and the C78 alignment, contrast in form, line, scale, and texture between existing and replacement poles would not be readily apparent. Vegetation in the foreground and rising terrain in the middleground would remain the dominant features in views from KOP 18. Overall visual contrast would be weak.
19	Viejas Grade Road (Forest Service lands)	C78	Weak	Weak	Weak	Weak	The taller form of replacement poles may be detectable to motorists on Viejas Grade Road but the overall visual contrast would be weak. A taller form would entail poles proximal to the viewing location having a greater presence in the sky; however, relocating the existing C78 alignment along Viejas Grade Boulevard would remove distant skylined poles from the landscape. Most replacement poles along the road would be viewed against the backdrop of existing terrain and vegetation which would reduce their structural prominence in views. Line contrasts would be similar to the existing condition, and color contrast would be subtle and weak as the red-brown of replacement poles is able to effectively blend into the landscape. Overall visual contrast associated with C78 relocation and replacement as viewed from KOP 19 would be weak.

Table D.2-10
Visual Contrast Rating Summary

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
20	Skye Valley Road at the Pine Valley Creek Crossing (Forest Service lands)	C157	Weak	Weak	Weak	Weak	The incremental change in visual contrast associated with wood-to-steel replacement of C157 as viewed from KOP 20 would be difficult to perceive and would be weak. Form and line contrast between existing and replacement poles would not be overly apparent. With the exception of one skylined pole at the summit of rising terrain in the view, poles would be viewed against the backdrop of green-hued vegetation. In addition, the linear features (cross arms and insulators) of replacement poles would be similar to the features of existing wood poles, and as viewed from KOP 20, the reddish-brown color of new poles would not be visually distinct from the dark brown color of existing poles. Textures would be difficult to discern in the landscape, and overall, replacement poles would appear similar as existing wood poles. Therefore, visual contrast resulting from C157 wood-to-steel pole replacement would be weak as viewed from KOP 20.
21	Bear Valley Trailhead (Forest Service lands)	C442	Weak	Weak	Weak	Weak	With the exception of an additional skylined pole that would be added to the view, the visual contrast associated with wood-to-steel replacement of C442 would be difficult to perceive. Similar to existing poles, replacement poles would display a tall yet narrow form and would create both vertical and horizontal lines that would be viewed against the backdrop of the sky. The reddish-brown color of weathered steel poles would not be detectable from KOP 21, and replacement poles would produce similar color contrasts as existing wood poles when silhouetted against the sky. Texture contrasts between wood and steel poles would be difficult to comprehend due to distance and where backscreened, replacement poles would be difficult to detect in the landscape. Overall visual contrast would be weak as replacement poles would look similar to existing poles in views available from the Bear Valley Trailhead (i.e., KOP 21).

Table D.2-10
Visual Contrast Rating Summary

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
22	Sunrise Highway (Forest Service lands)	C440	Weak	Weak	Weak	Weak	Removal of the existing overhead alignment of C442 alignment outside of the Laguna Mountain Recreation Area would reinforce the natural character and existing scenic qualities of the landscape visible from the highway. The existing form, line, and color contrast created by the presence of existing wood poles and associated hardware in the landscape would be removed, and the visual character of the view would be strengthened. Although not depicted in the visual simulation prepared for KOP 22, construction of an underground trench and disturbance to the existing surface of Sunrise Highway would be visible and may create line and color contrasts; however, these effects would be concentrated on the roadway surface and would not substantially affect the overall scenic qualities of the view.
23	Forest Service Volunteer Activity Center (Forest Service lands)	C440	Moderate	Weak	Weak	Moderate	The taller form of weathered steel replacement poles would be apparent to visitors to the Red Roost Volunteer Center, and due to the inferior viewing angle offered to receptors, replacement poles could be perceived to have a similar height as pine trees in the vicinity. The increased width of replacement poles would also be evident due to the proximity of poles to the KOP location. However, line contrasts would be weak as cross arms, insulators, and distribution circuit lines on replacement poles would display a similar look as features on existing poles. The reddish-brown color of replacement poles may be more apparent than the brown finish of existing poles when viewed against the backdrop of dark green colors displayed by vegetation, but the variation in brown ~~tones~~ hues would be relatively subtle. While not depicted in Figure D.2-24, 12-inch wide yellow bands signifying high voltage would also be affixed to replacement poles. These bands would interrupt the consistent reddish-brown color displayed by replacement pole and would enhance the visibility of more distant poles that, as viewed from KOP 23, are backscreened by existing vegetation. While the introduction of yellow bands on replacement poles would slightly

Table D.2-10
Visual Contrast Rating Summary

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
							increase color contrast when compared to existing conditions, existing wood poles in the KOP 23 landscape display a relatively dark brown hue and as discussed previously, variations in the brown hues of existing and new poles would be relatively subtle. As a result, overall ~~and would~~ color contrast ~~produce weak color contrast~~would be weak. Because viewers would be located in close proximity to poles, the smooth texture of replacement poles may be detectable within an otherwise rough textured landscape.
24	Pacific Crest National Scenic Trail near Boulder Oaks Campground (Forest Service lands)	C449	Weak	Weak	Weak	Weak	Under SDG&E's proposed project, the existing overhead alignment of C442 and wood support poles would be removed from the particular orientation of KOP 24 views on the Pacific Crest National Scenic Trail. Removal of existing line and poles would reinforce the rustic, natural-character of the surrounding landscape and would reduce existing contrast associated with the C449 distribution line and poles in the foreground viewing distance.

As discussed above, the removal, relocation, replacement, and undergrounding of existing power lines and distribution circuits in the Palomar and Descanso ranger districts would primarily result in weak visual contrast when compared to existing conditions. Power lines, distribution circuits, ancillary facilities, and access roads are located in existing landscape and contribute to the existing visual character of views and places in and outside of the CNF. Proximity to project activities, presence of backscreening elements, and the surrounding visual context are important factors in assessing overall impacts to visual character. For example, where pole replacement activities are viewed from relatively distant locations (such as from Mar-Tar-Aw RV Park (KOP 18) and the Bear Valley Trailhead (KOP 21)) visual contrast between existing and proposed conditions would be difficult to detect as the apparent scale of replacement poles would appear similar to existing poles. Similarly, while the inclusion of 12-inch wide yellow bands on replacement steel poles would introduce color and striping patterns not currently supported by existing wood poles in the landscape, the visibility of this anticipated color contrast would lessen with distance and would be somewhat dampened by the presence of backscreening vegetation. Generally speaking and as discussed in Table D.2-10, wood-to-steel replacement of existing distribution circuits would produce weak visual contrast in the landscape as the form, line and color of replacement poles would appear visually similar to existing wood poles. In addition, where replacement poles would be viewed against the backdrop of vegetation or terrain (such as from Lyons Valley Road near Barrett Lakes Road (KOP10)) their taller form and reddish-brown color would be relatively submissive to the natural dominant features and would tend to blend into the background landscape.

While Table D.2-10 demonstrates that visual contrast resulting from pole replacement, relocation, removal, and undergrounding activities would generally be weak as SDG&E's proposed project would essentially replicate existing forms, line, colors, textures, and patterns currently visible in the project area landscape, moderate visual contrasts were identified at a limited number of foreground viewing locations. For example, from SR-76 near Palomar Mountain Road (KOP 1), moderate form and color contrasts resulting from wood-to-steel replacement of TL682 is anticipated and while new poles would occupy similar locations as existing poles, the large, vertical form of replacement poles would appear substantially larger and would appear inconsistent with scale of the surrounding rural residential landscape. Similarly, as viewed from SR-79 at Viejas Boulevard (KOP 11), replacement poles would be installed in similar locations as existing wood poles, but their taller form and greater width would result in greater spatial dominance that would attract attention and dominate views. While mobile viewers would be exposed to relatively brief views of the proposed power line replacement projects, replacement poles located adjacent to roadways within rural residential landscape could create noticeable visual contrast in form and line when compared to existing poles. However, because power line and distribution circuit poles and lines are existing features in the landscape, the introduction of replacement poles would not substantially affect the existing visual character

or quality of the site and surroundings. Views would continue to include power line and distribution circuit infrastructure juxtaposed against rural and mountainous landscapes and partially screened (or backscreened) by vegetation and terrain. Further, in locations where noticeable visual contrast between replacement and existing poles would occur (such as at KOP 1 and KOP 11), implementation of Mitigation Measure MM VIS-1 would minimize the visual prominence and contrast of potentially problematic replacement poles through location, shape, scale, and other design considerations. Therefore, because resulting views would generally be similar to existing conditions and with implementation of MM VIS-1 which includes replacement pole design considerations, adverse impacts would be mitigated under NEPA, and under CEQA, significant impacts would be reduced to less than significant (Class II) with implementation of MM VIS-1.

Operation and maintenance activities required for other SDG&E electric facilities proposed to be covered under the MSUP would require routine and periodic equipment testing, pole brushing, and other ongoing maintenance tasks, similar to those currently conducted by SDG&E. These activities would not increase in duration or intensity with implementation of SDG&E's proposed project in such a way as to alter or adversely affect the existing landscape, and therefore would not exceed the significance threshold. As such, with the exception of impacts described above for the proposed power line replacement projects, impacts to visual character due to operation and maintenance would not be adverse under NEPA and would be less than significant under CEQA (Class III).

Impact VIS-4:Creation of a substantial new source of light or glare that would adversely affect day or nighttime views in the area

Construction activities would generally be limited to no more than 12 hours per 24-hour period; however, on occasion, construction activities may be required at night to minimize impacts to schedules and to facilitate cutover work, and as required by other property owners or agencies, such as the California Independent System Operator (CAISO). In instances where nighttime construction activities would be necessary, required lighting would be limited to individual pole work areas and will not exceed more than 2 hours per evening (see APM VIS-5). Given the occasional nature of nighttime construction activities and that when needed, nighttime lighting would be directed onto individual work areas and restricted to no more than 2 hours per evening, impacts under NEPA would not be adverse. Under CEQA, impacts would be less than significant (Class III).

As proposed, existing wood poles supporting power lines and distribution circuits would be replaced with new weathered steel poles and conductors. In addition, certain facilities and segments of power line and distribution circuits would be removed and undergrounded, and

would also undergo single-circuit to double-circuit conversion. While the use of non-treated steel or galvanized steel poles could produce noticeable glare capable of being received by motorists or recreationists in the surrounding landscape, weathered steel replacement poles would produce a patina that would not reflect light during the daytime, and therefore would not result in a new source of glare. In addition, per APM VIS-03, new conductors would be non-specular which would minimize potential for reflectivity and glare received from these features in the surrounding area. The removal and/or undergrounding of existing distribution facilities as proposed would remove old line, conductors, and other potentially reflective hardware from the visual landscape. Single-circuit to double-circuit conversion of certain facilities would entail additional insulators; however, porcelain insulators do not generate a substantial amount of noticeable glare and would not be considered a new source of glare (insulators are installed on existing power and distribution infrastructure). While new facilities proposed under the power line replacement projects may generate a sheen that could be noticeable during certain atmospheric conditions; this visual feature would diminish over time and would not be particularly prominent when viewed in the context of the surrounding landscape. Therefore, with implementation of APM VIS-03, the proposed power line replacement projects would not introduce a new source of substantial light or glare, and impacts under NEPA would not be adverse, and under CEQA, impacts would be less than significant (Class III).

Operation and maintenance activities required for other SDG&E electric facilities proposed to be covered under the MSUP would require routine and periodic equipment testing, pole brushing, and other ongoing maintenance tasks, similar to those currently conducted by SDG&E. These activities would not increase in duration or intensity with implementation of SDG&E's proposed project in such a way as to create a new source of light and glare, and therefore would not exceed the significance threshold. As such, impacts due to new sources of light and glare due to operations and maintenance would not be adverse under NEPA, and would be less than significant under CEQA (Class III).

Impact VIS-5: Result in an inconsistency with applicable scenic integrity objective or visual resource management system objective

Scenic Integrity Objectives – Power Line Replacement Projects

With the exception of existing and recommended wilderness (assigned a Very High SIO), CNF lands are assigned a High or Moderate SIO level. Accordingly, lands displaying High scenic integrity are to be managed such that deviations to the intact landscape character are permitted provided they replicate existing forms, lines, colors, textures, and patterns common to the landscape so completely that the deviations are not evident. Generally speaking, existing wood poles and replacement steel poles display a similar form, line, color, and texture and the

installation of replacement poles in the same or similar location as existing poles would create a similar pattern in the landscape. While existing wood and replacement steel poles both display a tall vertical form, in certain foreground viewing locations (as discussed in Impact VIS-3 above) replacement poles would be taller than existing poles, and in these instances, deviations in scale would be apparent and would be most noticeable when viewed from foreground viewing distances. For example, due to noticeable deviations in form, line, and color of energy infrastructure, the existing condition at KOP 4 (TL626 – Inaja Memorial National Recreation Trail), KOP 13 (TL629 and C449 – Boulder Oaks Campground), and KOP 15 (TL6923 – Pacific Crest National Scenic Trail near Hauser Mountain) is considered to be in conflict with the established High scenic integrity objective. The ongoing inconsistency with the High scenic integrity objective would continue under SDG&E's proposed project and is considered a conflict under NEPA and potentially significant under CEQA. A project-specific plan amendment, as described by Mitigation Measure MM VIS-2, would provide an exception for the project.

MM VIS-2 If the Forest Service selects to fire-harden TL626, TL629, TL6923 or C157 or relocate TL626 Options 1, 2, 3a, 3b, 4 and 5, it would have to ~~In order to allow for existing and proposed facilities, the Forest Service will~~ approve a project-specific CNF Land Management Plan Amendment contemporaneously with the decision to authorize the MSUP and pole replacement project. The project-specific plan amendment would amend the Land Management Plan to allow project-specific exemptions for inconsistencies with the CNF Land Management Plan scenic integrity objectives. SDG&E would be required to compensate the Forest Service for the loss in scenic quality associated with the negative scenery effects that are inconsistent with the LMP scenic integrity objectives. Compensation shall be accomplished through agency approved scenery restoration activities, fee-payment for scenery restoration projects, or preservation of comparable lands.

With implementation of MM VIS-2, inconsistencies with the High scenic integrity objective along the TL626, TL629, C449, and TL6923 alignments would be allowed and therefore conflicts with the CNF LMP would be addressed as required by the National Forest Management Act and resolved under NEPA. Under CEQA, impacts would be less than significant with mitigation (Class II). While MM VIS-2 would provide an exception for the project and allow authorization of the project, it does not reduce the project effects that caused the conflicts with the plan. Those impacts are analyzed under impacts to scenic vistas, scenic roads, existing visual character and quality, and existing day and nighttime views (Impact VIS-1, VIS-2, VIS-3, and VIS-4).

Wood-to steel-replacement of C157 and TL626 ~~(pending approval of the LMP Amendment)~~ would conflict with the preservation of the very high scenic integrity normally associated with

unaltered wilderness lands and large tracts of natural and primarily road-less areas. According to the Landscape Aesthetics: A Handbook for Scenery Management, Very High scenic integrity refers to landscapes that appear intact and unaltered. Deviations from the natural, unaltered character may be present but must be minute (Forest Service 1995). The Very High SIO is the most restrictive in terms of permissible deviations from a naturally appearing landscape character, and it is used to preserve the unaltered and undeveloped appearance of select Forest Service lands. To that end, the Very High SIO level is generally associated with unaltered lands and landscapes; not merely lands that appear unaltered, but lands that display a natural-appearing, primeval character in which the "imprints of man's work are substantially unnoticeable" (Forest Service 1995).

C157 and TL626 (~~upon~~ with the adoption of the ~~pending~~ LMP Amendment in October 2014) traverse lands assigned a Very High SIO by the Forest Service. As viewed from KOP 20 (Figure D.2-21) and KOPs 5 and 6 (Figures D.2-6 and D.2-7), existing and proposed C157 and TL626 infrastructure is (and would be) visible from surrounding areas. While distribution and power line infrastructure features would not be visually prominent and would not dominate views, their presence on lands assigned a Very High SIO level would undermine the achievement of very high scenic integrity and preservation of an unaltered and natural-appearing landscape character. As such, wood-to-steel replacement of C157 and TL626 ~~(upon adoption of the pending LMP Amendment)~~ would be inconsistent with the Very High SIO and is therefore considered a conflict under NEPA and potentially significant under CEQA. With implementation of MM VIS-2, inconsistencies with the Very High scenic integrity objective would be allowed and conflicts with the CNF LMP would be resolved as required by the National Forest Management Act. Under CEQA, impacts would be less than significant with mitigation (Class II). While MM VIS-2 would provide an exception for the project and allow authorization of the project it does not reduce the project effects that caused the conflicts with the plan. Those effects are analyzed in the Impact VIS-1, VIS-2, VIS-3, and VIS-4 discussions. MM VIS-2 would be included in any decision that authorizes SDG&E's Proposed Project.

With the exception of designated and recommended wilderness (assigned an SIO of Very High), lands within the CNF are assigned a High or Moderate SIO. SIO levels are discussed in greater detail in Section D.2.1 (see Table D.2-1). Because operations and maintenance activities that would be authorized by the MSUP currently occur in the CNF, the visual effects resulting from these activities contribute to the existing valued landscape character of the CNF. Existing infrastructure and operations and maintenance activities tend to be subordinate to the landscape character being viewed and therefore, inconsistencies with the Moderate scenic integrity objective do not generally occur. However, due to visible contrast in form, line, color, and texture, power and distribution line infrastructure visible at KOP 4 (TL626 – Inaja Memorial National Recreation Trail), KOP 13 (TL629 and C449 – Boulder Oaks Campground), and KOP

15 (TL6923 – Pacific Crest National Scenic Trail near Hauser Mountain) create noticeable deviations that contrast with Forest Service lands managed according to High scenic integrity objectives. As such, SDG&E's proposed project would continue to be inconsistent with the established High scenic integrity objectives of the CNF LMP and is considered a conflict under NEPA and potentially significant under CEQA. With implementation of MM VIS-2, inconsistencies with the High scenic integrity objective would be allowed and therefore conflicts with the CNF LMP would be resolved as required by the National Forest Management Act. Under CEQA, impacts would be less than significant with mitigation (Class II). While MM VIS-2 would provide an exception for the project and allow authorization of the project, it does not reduce the project effects that caused the conflicts with the plan. Those effects are analyzed under impacts to scenic vistas, scenic roads, existing visual character and quality, and existing day and nighttime views (Impact VIS-1, VIS-2, VIS-3, and VIS-4). MM VIS-2 would be included in any decision that authorizes SDG&E's Proposed Project.

Similar to anticipated impacts associated with the power line replacement projects discussed above, the continued presence of C157 and TL626 and reauthorization of operations and maintenance activities would conflict with the preservation of the very high scenic integrity normally associated with designated and recommended wilderness lands. While the visual effects associated with operations and maintenance of C157 and TL626 are present in the existing landscape, the reauthorization and continuation of such activities and resulting visual effects would undermine the scenic management objective of preservation of an unaltered landscape and achievement of very high scenic integrity. The presence of C157 and~~, upon adoption of the LMP Amendment,~~ TL626~~,~~ on lands displaying very high scenic integrity would require regular or as-needed operations and maintenance activities. Both the continued presence of distribution and power line infrastructure and the visual effects associated with operations and maintenance activities are considered "deviations" that would undermine the preservation of very high scenic integrity by continually altering landscape elements and manipulating vegetation and terrain. Therefore, potential impacts to CNF lands displaying very high scenic integrity resulting from the continued operation of C157 and TL626 and reauthorization of operations and maintenance activities is considered a conflict under NEPA and potentially significant under CEQA. With implementation of MM VIS-2, inconsistencies with the Very High scenic integrity objective would be allowed and conflicts with the CNF LMP would be resolved as required by the National Forest Management Act. Under CEQA, impacts would be less than significant with mitigation (Class II). While MM VIS-2 would provide and exception for the project and allow authorization of the project, it does not reduce the project effects that caused the conflicts with the plan. Those effects are analyzed under impacts to scenic vistas, scenic roads, existing visual character and quality, and existing day and nighttime views (Impact VIS-1, VIS-2, VIS-3, and VIS-4). MM VIS-2 would be included in any decision that authorizes SDG&E's Proposed Project.

Visual Resources Management Objectives – Power Line Replacement Projects

As stated above, the Class III VRM objective is one of the least restrictive in terms of permissible alterations to existing landscape character and requires only that existing landscape character be "partially retained." Because the replacement of existing wood poles with weathered steel poles along the TL625, TL629, and TL6923 alignments would generally result in weak to moderate visual contrast (see Table D.2-10) and would, by replacing existing poles, essentially replicate existing forms, lines, color, and texture currently supported in the landscape. As such, the existing character of BLM lands traversed by the power line replacement projects would largely be retained, and while new poles may attract attention on account of their larger vertical profile, they would not tend to dominate views available to casual observers along the alignment. Therefore, the power line replacement projects would be consistent with the Class III VRM objective applied to BLM lands traversed by the power line replacement projects. Under NEPA, impacts associated with inconsistencies with the VRM System would not be adverse, and under CEQA, impacts would be less than significant (Class III).

The continuation of operation and maintenance of power lines traversing BLM lands assigned a Visual Resource Management (VRM) objective of Class III (VRM Class III) would be consistent with the established characteristics of Class III lands and permissible modifications to Class III lands. VRM Class III is one of the least restrictive in terms of permissible alterations to existing landscape character and requires only that existing character be "partially retained." Because operation and maintenance of TL625, TL629, and TL6923 currently occurs on BLM lands and the proposed MSUP would permit the continuation of similar activities, changes to the existing landscape character would not be substantial and would not dominate views. Further, because these activities are currently performed in the landscape, it is likely that the "casual" observer would not recognize the visual effects of such activities. Therefore, impacts associated with continued operation and maintenance of power lines, distribution circuits, ancillary facilities, and access roads, and potential conflicts with applicable scenic integrity objective or visual resource management system objectives would not be adverse under NEPA. Under CEQA, impacts would be less than significant (Class III).

D.2.4 Forest Service Proposed Actions

D.2.4.1 TL626 Alternative Routes

Environmental Setting/Affected Environment

Each of the five Forest Service proposed action options for TL626 would relocate a segment of TL626. Options 1 through 4 would reroute TL626 overhead between proposed poles Z213680 and Z372134 to the east of the existing TL626 alignment and would traverse a tree- and shrub-

covered hill and valley landscape composed primarily of private and peripheral CNF-managed lands. In addition, a relatively short segment of Option 1 would traverse the southeastern most corner of the Inaja and Cosmit Indian Reservation near Boulder Creek Road (see Figure B-4a). While the new ROWs would largely span undeveloped or sparsely developed rural lands, Options 1, 2, and 4 would generally place new steel poles in close proximity to public County-maintained roads, including Boulder Creek Road, Eagle Peak Road, and Engineers Road, and rural residences in the Pine Hills-Julian area. Option 3 would also be located in close proximity to County-maintained roads and rural residences, but a portion of this alternative route would be installed underground in Boulder Creek Road. Option 5 would relocate an approximately 0.5-mile segment of TL626 between proposed poles Z213744 to Z213738 around the Inaja National Recreation Trail and Memorial Picnic Ground. From proposed pole Z213744, Option 5 would travel east, briefly spanning private lands and then traversing CNF land prior to crossing the San Diego River northeast of the existing TL626 crossing (see Figure B-4c). Option 5 would generally place new steel poles in closer proximity to SR-79 (an eligible state scenic highway) and existing residences located east and upslope of the San Diego River on Mountainbrook Road. However, Option 5 would also entail removal of an existing, visually prominent support pole, multiple power lines, and aerial markers from foreground views available from the scenic overlook located on the Inaja National Recreation Trail. Due to the availability of focal views of the San Diego River Canyon landscape and distant views to El Capitan Mountain, the scenic overlook was identified in Section D.2.3 as a scenic vista.

With the exception of the relocated segments of TL626, all other aspects and impacts of SDG&E's proposed project would remain unchanged.

Options 1 and 2 SDG&E Proposed Overhead Alignments Through/Around Inaja and Cosmit Reservation Lands

Option 4 Overhead Relocation along Boulder Creek Road

Environmental Effects

Impacts VIS-1 and VIS-2: Under the Forest Service proposed actions for TL626 (Options 1, 2, and 4), the relocated overhead segment of the power line between proposed poles Z213680 and Z372134 (Options 1 and 2) and poles Z213680 and Z372116 (Option 4) would not be visible from a national scenic byway, a designated or eligible state scenic highway, or a local roadway included in the County of San Diego Scenic Highway system. Options 1, 2, and 4 would not however relocate or alter the segment of TL626 visible in southerly foreground views available at the Inaja Memorial National Recreation Trail scenic overlook; therefore, impacts to scenic vistas and roadways would be similar to those described in Section D.2.3 for SDG&E's proposed project (Impact VIS-1). By relocating the power line to the east, the Forest Service

Proposed Action for TL626 (Options 1, 2, and 4) would be located approximately 2 miles closer to SR-79 (an eligible state scenic highway); however, views to the relocated overhead segment of TL626 would be screened by existing vegetation and topography located east of SR-79 and north of Lake Cuyamaca. Therefore, under NEPA, impacts VIS-2 would not be adverse, and under CEQA, impacts would be less than significant (Class III).

Impacts VIS-3 and VIS-5: Options 1, 2, and 4 would establish a new overhead ROW and introduce weathered steel poles with an estimated maximum height of 120 feet to a primarily undeveloped/sparsely developed rural landscape. New poles would generally create noticeable contrast in form, line, color, and texture when viewed alongside existing natural elements in the landscape (e.g., trees, shrubs). In addition, the establishment of a new ROW and overhead power line alignment across undeveloped or sparsely developed rural lands would create a new, linear pattern in the natural-appearing landscape where none are currently visible. As a result, Options 1, 2, and 4 for TL626 would create an adverse impact to the exiting visual character (Impact VIS-3). Mitigation Measure VIS-1 has been provided to minimize the visual prominence and contrast. However, due to the height of poles, open visibility of the new overhead ROW under Options 1, 2, and 4, and proximity of residences, there are no effective screening methods available to reduce the significant visual contrast of the introduction of a new overhead 69 kV transmission line ROW where none currently exists. Therefore Impact VIS-3 would be unmitigable under NEPA and under CEQA would be significant and unmitigable (Class I).

Lastly, as viewed from the Inaja National Recreation Trail scenic overlook, Options 1, 2, and 4 would be inconsistent with the established High scenic integrity objective of the CNF LMP. Inconsistencies with the scenic integrity objectives of the LMP is considered a conflict under NEPA and potentially significant under CEQA. With implementation of MM VIS-2, inconsistencies with the High scenic integrity objective would be allowed and conflicts with the CNF LMP would be resolved as required by the National Forest Management Act. Under CEQA, impacts would be less than significant with mitigation (Class II). While MM VIS-2 would provide an exception for the project and allow authorization of the project, it does not reduce the project effects that caused the conflicts with the plan. Those effects are analyzed under impacts to scenic vistas, scenic roads, existing visual character and quality, and existing day and nighttime views (Impact VIS-1, VIS-2, VIS-3, and VIS-4). MM VIS-2 would be included in any decision that authorizes this alternative.

Impact VIS-4: Impact VIS-4 would reflect impact findings previously discussed in Section D.2.3.3 for SDG&E's proposed project for TL626. As with SDG&E's proposed project, Options 1, 2, and 4 may require occasional nighttime construction activities during which lighting would be in operation. During instances of necessary nighttime construction activity, APM VIS-05 would be implemented and would limit lighting to individual pole work areas. Lighting would be

restricted to no more than two hours per evening. Therefore, given the occasional nature of nighttime construction activities and with implementation of APM VIS-05, nighttime views would not be substantially affected during construction. Also, similar to SDG&E's proposed project, Options 1, 2, and 4 consist of overland TL626 routes that would be supported by new replacement poles. These poles would be composed of materials resembling the wood of existing pole structures once the outer layer patina becomes weathered. Implementation of APM-VIS-03 (i.e., the use of non-specular conductors) and the use of weathered steel replacement poles would minimize the potential for visible glare during operations. Therefore, under NEPA, VIS-4 impacts would not be adverse with implementation of APMs and under CEQA, impacts would be less than significant (Class III).

Option 3 Partial Underground Relocation in Boulder Creek Road

Environmental Effects

Impacts VIS-1 and VIS-2: Option 3 consists of two alternative underground alignments within Boulder Creek Road. The rerouted underground segment of Option 3a is approximately 11.4 miles long and the rerouted segment of Option 3b is approximately 6.3 miles long (each option includes an approximately 1-mile overland segment to interconnect back into the existing TL626 alignment). Between proposed pole Z213680 and approximately 0.40 mile northwest of proposed pole Z372142, Option 3a and Option 3b share a similar underground alignment (see Figure B-4b). However, at this point, the alignments diverge; Option 3a follows the alignment of Boulder Creek Road to proposed pole Z372116 and Option 3b follows a Forest Service access road south to proposed pole Z372142. Along the Option 3 alignments, Boulder Creek Road is generally a narrow, dirt roadway (a portion of the road in Pine Hills is paved) that traverses a sparsely developed to undeveloped rural landscape populated with rolling tree- and shrub-covered terrain interrupted by occasional valleys and canyons. Option 3 would not relocate or alter the segment of TL626 visible in southerly foreground views available at the Inaja Memorial National Recreation Trail scenic overlook or from SR-78 and SR-79; therefore, impacts to scenic vistas and roadways would be similar to those described in Section D.2.3 for SDG&E's proposed project.

Impacts VIS-3 and VIS-5: Options 3a and 3b would be installed underground primarily along Boulder Creek Road through a sparsely developed to undeveloped rural landscape. By installing the identified segment of TL626 underground within an existing area of disturbance (i.e., an existing roadway), potential line and color contrasts associated with establishment of a new ROW along Boulder Creek Road would be avoided. However, between proposed pole Z213680 and Boulder Creek Road, establishment of a new ROW and approximately 1-mile-long overhead alignment would be required through rugged, tree- and shrub-covered terrain.

New poles would generally create noticeable contrast in form, line, color, and texture when viewed alongside existing natural elements in the landscape (i.e., trees, shrubs, etc.). In addition, the establishment of a new ROW and overhead power line alignment across undeveloped or sparsely developed rural lands would create a new, linear pattern in the natural-appearing landscape where none is currently visible. As a result, Options 3a and 3b for TL626 would create an adverse impact to the exiting visual character (Impact VIS-3). Mitigation Measure MM VIS-1 has been provided to minimize visual prominence of and contrast associated with new poles. However, due to the height of poles and establishment of a new overhead line across a sparsely developed landscape, Impact VIS-3 would be unmitigable under NEPA and under CEQA would be significant and unmitigable (Class I). Option 3 would not relocate or alter the overhead segment of TL626 visible in southerly foreground views available at the Inaja Memorial National Recreation Trail scenic overlook or from KOP 4. Therefore, similar to SDG&E's proposed project, Option 3 would conflict with the established High scenic integrity objective of Forest Service lands traversed by a segment of the power line. Inconsistencies with the scenic integrity objectives of the LMP is considered a conflict under NEPA and potentially significant under CEQA. With implementation of MM VIS-2, conflicts with the High scenic integrity objective would be allowed and conflicts with the CNF LMP would be resolved as required by the National Forest Management Act. Under CEQA, impacts would be less than significant with mitigation (Class II). While MM VIS-2 would provide an exception for the project and allow authorization of the project, it does not reduce the project effects that caused the conflicts with the plan. Those effects are analyzed under impacts to scenic vistas, scenic roads, existing visual character and quality, and existing day and nighttime views (Impact VIS-1, VIS-2, VIS-3, and VIS-4). MM VIS-2 would be included in any decision that authorizes this alternative.

Impact VIS-4: As with SDG&E's proposed project, Option 3 may require occasional nighttime construction activities during which lighting would be needed. However, with implementation of APM VIS-05, the use of nighttime lighting would be limited to individual pole work areas and would be restricted to no more than 2 hours per evening. Therefore, given the occasional nature of nighttime construction activities and with implementation of APM VIS-5, nighttime views would not be substantially affected during nighttime construction. Under NEPA, VIS-4 impacts would not be adverse with implementation of APMs and under CEQA, impacts would be less than significant (Class III).

Option 5 Reroute and Undergrounding around Inaja Picnic Area

Environmental Effects

Impact VIS-1: Option 5 would reroute a less than 0.5-mile segment of TL626 near the Inaja Memorial Picnic Ground. As shown on Figure B-4c, the segment would be rerouted between proposed poles Z213744 and Z213738 to reduce the visual prominence of and view blockage attributed to existing poles, line, and aerial markers visible ~~from~~ in southwesterly views from the Inaja Memorial National Recreation Trail scenic overlook and towards the San Diego River. As a result of the reroute and removal of pole Z213739 from southerly foreground views ~~at~~ near the scenic overlook, the quality of the view and the perceived intactness of the visual character of the landscape would be enhanced. New riser poles installed between poles Z213744 and Z213738 would be approximately 83 feet tall and would be situated atop the west-facing slope of canyon terrain located to the northeast and east of the scenic overlook. Aerial marker balls may also be required on the new alignment at the San Diego River crossing. While new poles and aerial marker balls would be visible in northeasterly and easterly views from the overlook, existing pole Z213739, overhead line, and aerial marker balls spanning the San Diego River would be removed from the valued focal view to the southwest towards the convergence of east- and west-facing canyon terrain and the San Diego River. ~~and t~~Therefore, under Option 5, no impacts to the focal scenic vista~~s~~ at the Inaja Memorial National Recreation Trail scenic overlook would occur.

Impact VIS-2: Option 5 would locate weathered steel poles in close proximity to SR-79 (an eligible state scenic highway) near the Inaja Memorial Picnic Ground. While existing support poles are located along the highway in the Santa Ysabel area, support poles are not visually prominent or particularly noticeable as east- and west-bound motorists pass the picnic grounds. Vegetation may be removed in order to establish a new ROW for TL626 east of pole Z213744 and south of SR-79 to pole Z213738; however, resulting disturbances would largely be screened from views of motorists by terrain and vegetation and would not be overly noticeable when travelling at prevailing speeds. As such, impacts to eligible state scenic highways would not be adverse under NEPA, and under CEQA, impacts would be less than significant (Class III).

Impacts VIS-3 through VIS-5: Option 5 would entail a relatively short reroute of TL626 near the Inaja Memorial Picnic Grounds. Because the rerouted segment of the power line would be installed overhead and in close proximity to the TL626 alignment described in Section D.2.1, impacts to visual character and quality, day and nighttime views, and inconsistencies with applicable scenic integrity objective would be similar to those discussed in Section D.2.3.3 for SDG&E's proposed project. Option 5 would however entail the removal of existing poles located in the foreground viewing distance to the south of the Inaja Memorial National Recreation Trail scenic overlook. Due to the removal of these existing poles and with implementation of APMs VIS-01 through VIS-04

(and MM VIS-1 for visible poles to the southeast atop the San Diego River canyon), adverse and significant Impact VIS-3 would be mitigated under NEPA, and under CEQA impacts would be less than significant with mitigation (Class II). Implementation of APMs VIS-03 through APM VIS-05 would limit the generation of glare during operation and nighttime lighting during construction. Therefore, with implementation of APMs, under NEPA, impacts would not be adverse with implementation of APMs and under CEQA, impacts would be less than significant (Class III). Lastly, while Option 5 would avoid the installation of taller and wider weathered steel replacement poles approximately 400 feet south of the Inaja Memorial National Recreation Trail scenic overlook, replacement poles measuring approximately 83 feet would be installed atop west-facing slopes of canyon terrain located to the northeast and east of the scenic overlook. New riser poles would be visible in northeasterly and easterly views from the scenic overlook and ~~would remain visible from the scenic overlook and~~ from KOP 4. Aerial marker balls may also be required on the new alignment at the San Diego River crossing. Similar to existing poles installed atop the west-facing slope of the San Diego River canyon (see Figure D.2-5), new weathered steel poles along the reroute alignment would be skylined. The new poles would however follow an existing line and pattern created by existing transmission infrastructure located atop canyon terrain. In addition, the San Diego River crossing of the new alignment would occur to the east of the scenic overlook and trail and removal of existing pole Z213739, overhead line, and aerial marker balls in southwesterly and foreground views of trail users at the scenic overlook would enhance the visual quality of the view.

Between pole Z213744 and Z213738, an approximate 2,000-foot-long segment of Option 5 would be installed overhead in the CNF and would traverse High SIO lands. Southeast of the Inaja Picnic Area, an overhead segment of Option 5 would span the San Diego River canyon and weathered steel replacement poles would be installed atop the west-facing canyon ~~walls~~terrain (see Figure B-4c). Therefore, similar to SDG&E's proposed project for TL626, Option 5 would conflict with the established High scenic integrity objective of Forest Service lands. Inconsistencies with the scenic integrity objectives of the LMP is considered a conflict under NEPA and potentially significant under CEQA. With implementation of Mitigation Measure VIS-2, conflicts with the High scenic integrity objective would be allowed and conflicts with the CNF LMP would be resolved as required by the National Forest Management Act. Under CEQA, impacts would be less than significant with mitigation (Class II). While MM VIS-2 would provide an exception for the project and allow authorization of the project, it does not reduce the project effects that caused the conflicts with the plan. Those effects are analyzed under impacts to scenic vistas, scenic roads, existing visual character and quality, and existing day and nighttime views (Impact VIS-1, VIS-2, VIS-3, and VIS-4). MM VIS-2 would be included in any decision that authorizes this alternative.

D.2.4.2 C157 Partial Relocation to Avoid Designated Wilderness

Option 1 SDG&E Proposed Alignment Between Two Wilderness Areas

Option 2 City of San Diego Modified Alignment

Environmental Setting/Affected Environment

The Forest Service proposed actions for C157 would relocate approximately 1.1 miles of the existing distribution circuit alignment between proposed poles P278722 to P278741 to along Sky Valley Road to avoid the Congressionally designated Pine Creek Wilderness and Hauser Wilderness (see Figure B-5a). Skye Valley Road and the proposed relocated segment of C157 traverse rugged and undeveloped mountainous terrain primarily covered with mixed chaparral and exposed boulders and is within the visual setting identified for SDG&E's proposed project in Section D.2.1 and D.2.2.

With the exception of the relocated segments of C157, all other aspects of SDG&E's proposed project would remain unchanged.

Environmental Effects

Impacts VIS-1 and VIS-2: Under the Forest Service proposed action for C157, Options 1 and 2, the distribution circuit would be realigned to follow the jagged alignment of Skye Valley Road for approximately 3 miles before rejoining the existing alignment west of Skye Valley Ranch at pole P278741. Similar to SDG&E's proposed project, the segment of C157 that would be realigned/altered under Options 1 and 2 would not be visible from a scenic vista or eligible or designated scenic roadways. Therefore, Options 1 and 2 would not result in impacts to scenic resources located within the viewshed of an eligible or designated scenic roadway. Under NEPA impacts would not be adverse, and under CEQA, impacts would be less than significant (Class III).

Impact VIS-3: The Forest Service proposed action for C157 (Options 1 and 2) would remove existing poles from designated wilderness and install replacement poles along Skye Valley Road. The visual changes associated with the Forest Service proposed action for C157 would be visible from Skye Valley Road (i.e., KOP 20), and the visual contrast visible from the roadway would be difficult to perceive. Because the majority of visible poles would be backscreened by vegetation and terrain, form and line contrast between existing and replacement poles would not be overly apparent and the reddish-brown color of new poles would not be visually distinct from the dark brown color of existing poles. Therefore, similar to SDG&E's proposed project for C157, the Forest Service proposed action for C157 (Option 1 and 2) would create relatively weak visual

contrast as viewed from Skye Valley Road and KOP 20. Under NEPA, impacts would not be adverse and under CEQA, impacts would be less than significant (Class III).

Impact VIS-4: Options 1 and 2 would entail similar construction methods and distribution, circuit materials (i.e., weathered steel poles, non-specular conductors, etc.) as identified in Section D.2.3.3 for SDG&E's proposed project. Nighttime lighting would not be required during project operations, and potential glare would be minimized through implementation of APM-VIS-03 (i.e., the use of non-specular conductors). During construction, nighttime lighting may be required for necessary nighttime activities but would be limited and minimized through implementation of APM VIS-05. The potential for generation of glare would be primarily associated with the temporary influx of construction vehicles and equipment to the area and these potential sources of glare would not generate glare that would substantially affect daytime views in the vicinity of the C157 alignment. Therefore, under NEPA, impacts would not be adverse with implementation of APMs and under CEQA, impacts would be less than significant (Class III).

Impact VIS-5: By avoiding designated wilderness (i.e., Pine Creek Wilderness and Hauser Wilderness) the relocated segment of C157 would avoid CNF lands managed according to Very High scenic integrity objectives. Instead, relocated segment of C157 and the remaining segments of the distribution circuit would traverse lands managed by the Forest Service according to High scenic integrity objectives. As viewed from Skye Valley Road (i.e., KOP 20), the form, line, color, and texture of weathered replacement poles would appear similar as existing wood poles and would create similar patterns in the landscape; however, due to the increased maximum height of poles, deviations in scale may be perceptible to viewers located within a foreground viewing distance. To minimize the perceived scale of replacement poles along the rerouted segment of C157 and avoid inconsistencies with the High scenic integrity objective, Mitigation Measures MM VIS-1 and MM VIS-2 would be implemented. With implementation of MM VIS-2, conflicts with the High scenic integrity objective would be allowed and conflicts with the CNF LMP would be resolved as required by the National Forest Management Act. Under CEQA, impacts would be less than significant with mitigation (Class II). While MM VIS-2 would provide an exception for the project and allow authorization of the project, it does not reduce the project effects that caused the conflicts with the plan. Those effects are analyzed under impacts to scenic vistas, scenic roads, existing visual character and quality, and existing day and nighttime views (Impact VIS-1, VIS-2, VIS-3, and VIS-4). MM VIS-2 would be included in any decision that authorizes this alternative.

D.2.4.3 C440 Mount Laguna Underground Alternative

Environmental Setting/Affected Environment

This alternative would underground all segments of C440 located within the Laguna Mountain Recreation Area (see Figure B-6a). Because additional undergrounding would generally following the existing overhead alignment of C440 and the landscape located along the overhead alignment was previously discussed for SDG&E's proposed project for C440, the environmental setting associated with this alternative would be similar to that identified in Section D.2.1.

Environmental Effects

Impact VIS-1: While undergrounding C440 in the Laguna Mountain Recreation Area would enhance the overall scenic quality of the federally designated area and would enhance the experience of area recreationists, no designated scenic vistas from which views of C440 would be visible were identified in Section D.2.3.3. No scenic vistas were identified along the C440 alignment, and as a result, proposed undergrounding would neither reduce or increase anticipated impacts to scenic vistas resulting from replacement of C440 distribution circuit poles and lines. Under NEPA, impacts would not be adverse and under CEQA, impacts would be less than significant (Class III).

Impact VIS-2. Undergrounding C440 within the Laguna Mountain Recreation Area would enhance the overall scenic quality of views available from the Sunrise Scenic Byway. However, as discussed in Section D.2.3.3, the C440 alignment tends to be setback from the byway and poles are (and would be) located among mature pines and as a result would be relatively difficulty to detect in the landscape. In addition, outside of the Laguna Mountain Recreation Area and more specifically within Crouch Valley, new weathered steel poles would be installed where poles do not currently exist along Sheephead Mountain Road and would be visible briefly from the Sunrise Scenic Byway. Crouch Valley is a primarily natural-appearing landscape, and the introduction of weathered steel poles up to 62 feet in height where no poles currently exist could result in particularly noticeable view blockage from the scenic byway. Therefore, even with the additional undergrounding proposed by this alternative, impacts to the Sunrise Scenic Byway would still be considered adverse under NEPA and significant under CEQA. However, with implementation of Mitigation Measure MM VIS-1, impacts would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

Impact VIS-3: Undergrounding C440 within the Laguna Mountain Recreation Area would minimize anticipated form and texture contrasts associated with the removal of existing wood

poles and installation of taller, weathered steel poles; however, underground trenching would generally create noticeable color and line contrast as existing paved and natural surfaces would be disturbed along primarily linear alignments. Anticipated color and line contrasts would be reduced with implementation of APM VIS-01, which requires that all temporary work areas be restored to near pre-construction conditions following construction activities. Outside of the Laguna Mountain Recreation Area and Crouch Valley, weak to moderate visual contrast is anticipated to occur due to pole replacement activities. As described within the Impact VIS-2 discussion, Mitigation Measure MM VIS-1 would be implemented to ensure that the visual prominence and contrast of specific poles in the Crouch Valley area is minimized to the extent feasible. Therefore, with implementation of APMs and mitigation measures, impacts would not be adverse under NEPA. Under CEQA, impacts would be less than significant (Class II).

Impact VIS-4: This alternative would have the same overall light and glare visual effects as described in Section D.2.3.3 for SDG&E's proposed project for C440. Undergrounding the entirety of the existing overhead C440 alignment located within the Laguna Mountain Recreation Area may entail a slightly longer construction duration than pole replacement activities; however, occurrences of nighttime lighting would be limited and with implementation APM VIS-05, lighting would be limited to active work areas and would not exceed more than 2 hours per evening. As such, substantial effects to nighttime views during construction are not anticipated. Nighttime lighting would not be required during operation of C440 or any of the power line replacement projects. Underground installation of C440 would reduce project-generated glare by avoiding the installation of overhead conductors in the recreation area and with implementation of APM VIS-03 along the overhead segments of C440, potential glare would be reduced with the use of non-specular conductors. Therefore, within implementation of APMs, potential lighting and glare impacts during construction and operations would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

Impact VIS-5: This underground alternative would generally follow the existing C440 overland route within the Laguna Mountain Recreation Area. The Forest Service manages the majority of the recreation area according to High scenic integrity objectives. Undergrounding the distribution circuit within the recreation area would avoid introducing elements (i.e., weathered steel poles) that would create noticeable deviations from the established visual character of the landscape. Potential line and color contrasts that could occur because of underground trench work would be minimized through implementation of APM VIS-01 and because temporarily impacted areas would be restored to near pre-construction conditions following construction, additional measures to ensure consistency with applicable SIO characteristics are not anticipated to be necessary. Outside of the Laguna Mountain Recreation Area and within Crouch Valley, new steel poles visible from the Sunrise Scenic Byway would be located outside of the CNF and would therefore not be subject to the scenic management system of the Forest Service.

Therefore, potential conflicts with High scenic integrity objectives resulting from the Forest Service proposed action for C440 would not be adverse under NEPA. Under CEQA, impacts would be less than significant (Class III).

D.2.5 BIA Proposed Action

Environmental Setting/Affected Environment

Section D.2.1 describes the existing environmental setting associated with Applicant Proposed Project for TL682. While the BIA proposed action for TL682 would be similar to SDG&E's proposed project, this alternative would remove and relocate poles and underground approximately 1,500 feet of the power line on La Jolla Indian Reservation tribal lands. While the underground segment of the TL682 would traverse a sparsely developed rural landscape, the underground trench and relocated poles would generally follow a similar alignment as the existing TL682 overland route. Therefore, because the underground and relocated segment of TL682 proposed in this alternative would be located along the same general alignment as discussed for SDG&E's proposed project for TL682, the environmental setting would be similar to that identified in Section D.2.1.

Environmental Effects

Impact VIS-1: This alternative would not affect the visibility of TL682 from the single scenic vista identified along the TL682 alignment. The Henshaw Scenic Vista is located approximately 4 miles east of the La Jolla Indian Reservation and provides long scenic views of the valley and mountain landscape to the east. Views to the west from the Henshaw Scenic Vista are extremely limited in extent due to rising, mountainous terrain populated with moderate to tall shrubs and trees. Because the BIA proposed action for TL682 would not underground, relocate, or otherwise alter segments of TL682 visible from the Henshaw Scenic Vista, impacts would be similar as previously discussed in Section D.2.3.3 for SDG&E's proposed project. More specifically, the anticipated color contrast between existing wood and replacement weathered steel poles would not substantially affect the availability of expansive views and would not impair, block, or screen features in the landscape. As such, impacts to scenic vista impacts would not be adverse under NEPA, and under CEQA would be less than significant (Class III).

Impact VIS-2: While the BIA proposed action for TL682 would underground and remove a segment of the power line from the SR-76 viewshed, the relatively short length of the underground segment (approximately 1,500 feet) would not substantially reduce impacts to scenic resources along the eligible state scenic highway. TL682 generally parallels SR-76 from the Rincon Substation to East Grade Road (approximately 10 miles), and therefore undergrounding a 1,500-foot segment of the power line would have little effect on the overall visibility of poles and lines

from SR-76. Similar to SDG&E's proposed project, this alternative would also be visible from and span SR-79 near the Warners Substation. Therefore, impacts to scenic resources would be similar to those discussed in Section D.2.3.3 for SDG&E's proposed project for TL682. The installation of replacement poles along the TL682 alignment would essentially replicate the existing view blockage condition in the landscape, and taller and wider poles would not substantially impair, obscure, or screen features that are not currently subject to similar treatment by existing infrastructure. Therefore, impacts to eligible state scenic highways (SR-78 and SR-79) would not be adverse under NEPA, and under CEQA, impacts would be less than significant (Class III).

Impact VIS-3: With the exception of the approximately 1,500-foot underground segment proposed by the TL682 Partial Underground and Relocation alternative, the anticipated visual contrast associated with the removal of existing wood poles and replacement with taller, wider weathered steel poles would be similar as discussed in Section D.2.3.3 for SDG&E's proposed project. This alternative would not affect segments of TL682 that would be visible from identified KOPs on SR-76 (i.e., near Palomar Mountain Road and near the San Luis Rey Picnic Grounds), and as a result, visual contrast associated with those segments is anticipated to be weak to moderate. Undergrounding a segment of TL682 on the La Jolla Indian Reservation would slightly decrease existing view blockage and occurrences of skylining associated with support poles; however, overall visual contrast associated with TL682 would remain weak to moderate. As detailed in Section D.2.3.3, when viewed from foreground distances (such as from SR-76 near Palomar Mountain Road), the large, vertical form of replacement poles would appear substantially larger than existing wood poles and would appear inconsistent with scale of the surrounding rural residential landscape. However, with implementation of Mitigation Measure MM VIS-1 for select poles along the TL682 alignment (see Table D.2-13~~1~~ for specific poles), adverse impacts would be mitigated under NEPA, and under CEQA, significant impacts would be reduced to less than significant (Class II).

Impact VIS-4 and VIS-5: Impacts VIS-4 and VIS-5 would reflect impact findings previously discussed in Section D.2.3.3 for SDG&E's proposed project for TL682. Undergrounding a short segment of TL682 across the La Jolla Indian Reservation would not substantially alter the anticipated construction schedule such that the need for nighttime lighting would be substantially increased. In addition, implementation of APM VIS-05 would limit occurrences of nighttime lighting during construction such that nighttime views would not be substantially affected. In addition, while the BIA proposed action for TL682 would remove poles and potentially reflective materials (i.e., conductors) from the landscape, implementation of APM VIS-03 and the use non-specular conductors would minimize the potential for glare during project operations. Regarding SIOs, the underground and relocated segment of TL682 would be located on the La Jolla Indian Reservation and would not be subject to Forest Service scenic management programs. The segments of TL682 located in the CNF traverse lands managed according to High scenic integrity objectives. To minimize the anticipated visual prominence and

contrast associated with certain poles along the overhead alignment (see Table D.2-13~~1~~ for specific poles), Mitigation Measure MM VIS-1 would be implemented. Therefore, with implementation of APM VIS-03 and APM VIS-05, Impact VIS-4 would not be adverse under NEPA, and under CEQA, impacts would be less than significant. Also, with implementation of Mitigation Measure MM VIS-1, Impact VIS-5 would be mitigated under NEPA, and under CEQA, would be less than significant (Class II).

D.2.6 Additional Alternatives

D.2.6.1 Partial Removal of Overland Access Roads

Environmental Setting/Affected Environment

Under this alternative, overland access in rugged terrain and that exceed grades of 25% for appreciable distances in proximity to creeks (as outlined in Section C.4.2) would be removed and the areas restored. Because this alternative would remove up to 11~~0~~.5 miles of existing overland access route associated with power lines and distribution facilities in SDG&E's proposed project area, the environmental setting would be the same as that identified in Section D.2.1.

Environmental Effects

Impacts VIS-1 and VIS-2: Under this alternative, overland access in rugged terrain and that exceed grades of 25% for appreciable distances in proximity to creeks (as outlined in Section C.4.2) would be removed and the areas restored. Because overland access displaying these characteristics is not generally visible in available views from Henshaw Scenic Vista, Inaja Memorial National Recreation Trail or Cuyamaca Peak, this alternative would not substantially reduce anticipated impacts to scenic vistas and therefore impacts would be similar to those described for SDG&E's proposed project in Section D.2.3.3.

Particularly steep access roads are also not generally visible from eligible or designated scenic routes in the project area and therefore: the partial removal of overland access proposed by this alternative would not reduce anticipated impacts to scenic resources within scenic roadways as previously identified in Section D.2.3.3 for SDG&E's proposed project.

Impacts VIS-3 through VIS-5: The removal of select overland access routes would not alter potential inconsistencies with SIOs as previously discussed in Section D.2.3.3 for SDG&E's proposed project. While access roads themselves contribute contrasting lines and colors to the landscape and their removal and restoration would reduce visible color, line, and texture contrast in the landscape, the primary conflict between scenery and visual resource management objectives would occur as a result of pole removal and replacement activities. Because this

alternative would not underground, relocate, or otherwise alter the power line replacement projects as they relate to power lines and distribution circuits poles and lines, this alternative would result in similar impacts to scenery and visual resource management systems as SDG&E's proposed project.

D.2.6.2 Removal of TL626 from Service

Environmental Setting/Affected Environment

This alternative would remove TL626 from service and replace it with system upgrades, either with TL6931 upgrades or a TL625 loop-in as described below. In order to serve existing customers, segments of TL626 would also be converted from 69 kV to 12 kV. The setting associated with these upgrades is described as follows:

1. Upgrade the existing 69 kV TL6931 from the Crestwood Substation to the Boulevard Substation (see Figure C-1): ~~The setting associated with this component is largely described in SDG&E's TL6931 Fire Hardening Project Proponent's Environmental Assessment (PEA) (SDG&E 2012). As described in SDG&E's PEA, the~~ TL6931~~ROW~~ crosses SR-94 and may also be seen briefly from I-8. The TL6931 area includes electric transmission, distribution, and substation facilities that are visible within the public viewshed (~~;~~ see below for further discussion). ~~the identified 6-mile segment of TL6931 would traverse County of San Diego lands and would therefore not be subject to Forest Service or BLM scenery or visual resource management systems.~~
2. Loop-in TL625 into the Suncrest Substation: The 3-mile loop-in of TL625 would be located along the TL625 powerline between the Loveland and Barrett Substations and would generally follow the existing Sunrise Powerlink ROW (see Figure C-2). The loop-in is largely within undeveloped land located primarily within the CNF and has been described in the Sunrise Powerlink Project Final EIR/EIS. The loop-in would largely traverse the ridge and canyon landscape bordering Japatul Valley area on the east and would span several peaks and locally prominent terrain. I-8, located north of the loop-in and approximately 2 miles north of the Suncrest Substation, SR-79, and Japatul Valley Road serve as the principal connections within the area. The open landscape and nearby Loveland Reservoir attract recreational users. In addition to scattered rural residences in Japatul Valley, the local population tends to be settled in Alpine or in smaller rural communities, such as Descanso. Several small tribal reservations, including Viejas Indian Reservation and Sycuan Indian Reservation, are also located in the general area.
3. Convert a 6.5-mile portion of TL626 between the Santa Ysabel and Boulder Creek substations from 69 kV to 12 kV along with a 6.8-mile section that is co-located with C79

within the same study area as SDG&E's proposed project; therefore, the environmental setting would be the same as that identified in Sections D.2.1 for this component.

TL6931 from the Crestwood Substation to the Boulevard Substation. The existing TL6931 alignment is depicted on Figure D.2-26. TL6931 is approximately 6 miles long and briefly runs adjacent to Old Highway 80 from SDG&E's existing Crestwood Substation and crosses SR-94 approximately 0.35 mile west of Tierra del Sol Road prior to proceeding in a relatively straight alignment across private lands to the Boulevard Substation. Both Old Highway 80 and SR-94 are eligible state scenic highways and are included in the County of San Diego's scenic highway system. From the Crestwood Substation southeast to SR-94, TL6931 generally traverses a rural residential landscape featuring sparse and modest residential structures west of Old Highway 80, undeveloped natural lands supporting chaparral vegetation and occasionally marked by granitic boulder outcrops and the lightly colored, straight band of tan soils displayed by dirt access roads. Clusters of mature oak trees line a narrow depression located adjacent to Old Highway 80 and near Live Oak Springs Road (views of TL6931 are obscured) and near the noticeable curve in the highway, TL6931 traverses the eastern ridge of a narrow valley populated with low grasses and bordered by dark brown and green chaparral vegetation. Within this valley landscape, TL6931 is setback from Old Highway 80 and weathered wooden poles are difficult to detect against the background of dark chaparral vegetation. West and east of the SR-94 crossing, the existing landscape features sparse rural residential development surrounding by undeveloped lands supporting low to spreading chaparral vegetation and occasional clumps of mature oak trees. Small, dirt roads also bisect the area. Existing distribution and communication lines parallel SR-94 east of the TL6931 crossing and the transmission line crosses Tierra del Sol Road, Jewel Valley Road, and McCain Lane prior to interconnecting with the Boulevard Substation. Sparse rural residential development is sprinkled throughout the landscape along this segment of the alignment and tends to be clustered north of the alignment, along Old Highway 80 and near the Boulevard Substation.

Approximately 1 mile of the TL6931 alignment between the Crestwood and Boulevard Substation traverses tribal lands of the Campo Kumeyaay Nation. The remaining length (approximately 5.3 miles) is located within existing SDG&E ROW that traverses private lands.

Views of TL6931 are available from Golden Acorn Casino, Old Highway 80, SR-94, local roads, and rural residences on Campo Kumeyaay Nation tribal lands and in the unincorporated communities of Live Oak Springs and Boulevard.

Five KOPs were selected to represent the visual setting along the TL6931 alignment near the Crestwood Substation and east to the Boulevard Substation as viewed from Golden Acorn Casino, Old Highway 80, SR-94, and Jewel Valley Road. A discussion of the existing visual

setting for each of the KOPs is provided below. Table D.2-11 summarizes the environmental setting by KOP according to visual quality. The location and orientation of new KOPs is identified on Figure D.2-26. Viewer concern, exposure, and sensitivity at each KOP location are provided below and because all of the KOPs are located on private or tribal lands, a general visual quality rating ranging from low to high is provided. The rationale for visual quality ratings is provided in the discussions of each of the KOPs below.

Table D.2-11
Environmental Setting – Upgrades to TL6931
(Removal of TL626 from Service Alternative)

KOP	Location	Visual Quality	Viewer Concern	Viewer Exposure	Viewer Sensitivity
25	Golden Acorn Casino (tribal lands)	Low to Moderate	Low	Low	Low
26	Old Highway 80 (east bound) at Crestwood Substation (private lands) [1]	Low Moderate	Low to Moderate	Moderate	Moderate
27	SR-94 (west bound; private lands)	Moderate	Moderate	Moderate	Moderate to High
28	Jewel Valley Road (private lands)	Low	Low to Moderate	Low	Low to Moderate
29	Old Highway 80 (east bound) at Boulevard Substation (private lands)	Low	Low to Moderate	Low to Moderate	Low to Moderate

Note:
[1] While Old Highway 80 is maintained by the County of San Diego, tribal lands of the Campo Kumeyaay Nation are located north and south of KOP 25.

KOP 25—Golden Acorn Casino

KOP 25 was established on the driveway (Golden Acorn Way) leading to the Golden Acorn Casino travel center, approximately 500 feet northeast of Old Highway 80 and 620 feet northwest of the existing Crestwood Substation (see Figure D.2-27). The KOP orientation is to the southeast across a disturbed, undeveloped lot situated between Golden Acorn Way, the Crestwood Substation, and Old Highway 80. In addition to the Crestwood Substation and existing TL629 and TL6931 poles and lines along Old Highway 80, tall and narrow street lamps installed along a secondary driveway to the casino parking used primarily by semi-trailer trucks ("big rigs"). KOP 25 captures a representative view of the existing landscape as viewed from Golden Acorn Casino and is located on tribal lands of the Campo Kumeyaay Nation.

Visual Quality: Low to Moderate

The immediate view from KOP 25 is dominated by exposed tan-colored soils and isolated clumps of low grasses (see Figure D.2-27). A slight uplift in the foreground terrain is noticeable but then falls away towards the Crestwood Substation and Old Highway 80. Bands of dense, dark-green/brown chaparral vegetation and pockets of tan-colored soils are located north and south of Old Highway 80 (and north and south of the Crestwood Substation). Relatively transparent chain-link fencing to the western perimeter of the substation and vertical and rectangular grey and metallic structures and bays are located inside the substation fence line. A tall and thick metallic telecommunications structure rises from the substation floor and is surrounded by relatively thin, vertical, wooden transmission line support poles. Typical and angled poles associated with TL6931 are visible south of Old Highway 80 and shorter wood poles supporting TL629 are visible south of the highway. Rising and darkly colored terrain is located in the background distance and the hazy silhouette of distant mountains in Mexico provides a backdrop to the scene. The vertical form and line of transmission structures, the horizontal, slightly concave line of transmission lines, and the disturbed nature of the lot in the immediate foreground detract from the vividness of the view and create a somewhat jumbled scene in the foreground viewing distance.

Viewer Concern: Low

Visitors afforded views of the KOP 25 landscape are assumed to primarily consist of motorists visiting the travel center and adjacent casino. As such, receptors at KOP 25 would not generally be focused on the surrounding landscape. Given the presence of existing development (i.e., Golden Acorn Casino, Crestwood Substation, transmission and distribution line infrastructure) and the disturbed and scantily vegetated lot in the immediate foreground, the existing view lacks intactness and unity.

Viewer Exposure: Low to Moderate

Visitors to the Golden Acorn Casino are afforded brief views of the KOP 25 landscape, including existing TL6931 infrastructure, as they travel the short, winding driveway from Old Highway 80 to the travel center and/or main parking lot. While the duration of the view would occur for a matter of seconds, the number of daily visitors to the casino and travel is assessed as low to moderate. In addition, transmission infrastructure and substation development remains in the Old Highway 80 viewshed after motorists depart the casino/travel center and therefore, viewer exposure is extended beyond the momentary glimpse afforded to motorists at KOP 25.

Visual Sensitivity: Low

While Old Highway 80 is an eligible state scenic highway and is included in the county scenic highway program, KOP 25 is located north of Old Highway 80 and along the primary driveway to the Golden Acorn Casino. Furthermore, the proximity of existing substation development and the chaotic visual scene resulting from the concentration of multiple support poles, telecommunication infrastructure, and transmission lines, suggests that viewer sensitivity to changes in the KOP 25 landscape would overall be low.

KOP 26—Old Highway 80 at Crestwood Substation

KOP 26 was established on Old Highway 80, approximately 90 feet south of the Crestwood Substation and 1,000 feet southeast of the Golden Acorn Casino (see Figure D.2-26). KOP orientation is to the southeast across Old Highway 80 to existing electrical transmission and distribution infrastructure, undeveloped rural lands, and distant low ridgelines. KOP 26 is representative of the views afforded to highway motorists from Old Highway 80 near the Crestwood Substation.

Visual Quality: Low to Moderate

The foreground view from KOP 26 consists of the flat horizontal form of Old Highway 80, mounded, green and brown shrubs and occasional dark green and spreading shrubs/trees located immediately south of the highway right-of-way. Existing tall and narrow wooden poles also dot the foreground landscape and associated thin and darkly colored transmission line/conductor is visible against the backdrop of the expansive desert sky. As shown on Figure D.2-28, numerous wooden support poles and multiple lines are visible from KOP 26. Southeasterly views from Old Highway 80 at KOP 26 extend to the middleground and background viewing distances and include the hazy silhouette of a distant horizontal ridgeline. A distant southern ridgeline in Mexico is noticeable but due to its primarily horizontal composition, it is not a visually prominent feature in the scene. Therefore, because existing views display moderately low vividness and are dominated by Old Highway 80 and TL6931 infrastructure, visual quality is considered low to moderate.

Viewer Concern: Low to Moderate

Given the degree of visible man-made development (i.e., casino and substation development, wind turbines, and transmission infrastructure) experienced by motorists at KOP 26, viewer concern is assessed as low to moderate. As viewers approach and pass the Crestwood Substation, existing southerly views are dominated by wooden support poles and multiple transmission lines

and since these features are established uses along the corridor, the concern of viewers regarding visual resources in the area would be somewhat subdued.

Viewer Exposure: Moderate

While views of the KOP 26 landscape are experienced in passing, Old Highway 80 motorists are afforded inferior angle views of transmission line infrastructure (wood poles and transmission lines/conductors are skylined) and the generally low form of vegetation limits opportunities for screening. Although views are brief, the daily volume of traffic on Old Highway 80 near KOP 26 is approximately 1,800 vehicles (SANDAG 2012) and infrastructure is clearly visible. Therefore, for purposes of this analysis, viewer exposure is assessed as moderate.

Visual Sensitivity: Moderate

While Old Highway 80 is an eligible state scenic highway and included in the County scenic highway system, the concentration of commercial and industrial development (i.e., casino, wind turbine and substation development, and transmission infrastructure) near KOP 26 reduces the visual sensitivity of passing motorists to a moderate level.

KOP 27—SR-94 at TL6931 Crossing

KOP 27 is located on SR-94, approximately 385 feet east of the TL6931 crossing of the highway, and 0.3 mile west of Tierra del Sol Road (see Figure D.2-26). The KOP orientation is to the west along SR-94 and includes densely vegetated undeveloped lands north and south of the highway, sparse rural residential development, and the hazy silhouette of distant Hauser Mountain in the background viewing distance (the pyramidal form of Tecate Peak is also visible in the distance). KOP 27 is a representative view of the existing landscape traversed by TL6931 and is located on a public highway.

Visual Quality: Moderate

The local terrain rises to the north and falls to the south of the highway and creates a diagonal, slightly rolling line from north to south (see Figure D.2-29). Hauser Mountain displays a dark colored wide, mounded form that contrasts with the rugged, pyramidal form of Tecate Peak. Vegetation is typically dense and includes low grey and red grasses/shrubs in the ROW, dark green and brown, patchy-textured chaparral shrubs and clusters of tall vegetation to the north and south and tall and spreading landscape trees near residential development. Single-story residential structures are located north of the highway and with the exception of a noticeable, lightly colored garage door, structures generally display warm earth-tone exterior colors and slightly pitched roofs. A cylindrical and metallic water tank at a rural residence is also visible

from KOP 27. Communication infrastructure (i.e., thin wood poles and four parallel lines strung between each pole) is installed immediately south of the highway and disrupts the line displayed by distant mountainous terrain. A portion of these features is skylined. Lastly, two tall and narrow wooden poles with short crossarms descend higher in elevation to the north towards the highway and an additional support pole displaying similar form and line is located south of the highway. Due to the expanse of low white color in the background sky, transmission lines/conductors of TL6931 are difficult to detect from KOP 27.

Viewer Concern: Moderate

The view from KOP 27 is typical of the landscape traversed by the TL6931 alignment. Modest and sparse rural residential development is intermixed with expanses of undeveloped, natural terrain and native vegetation and the landscape is marked by paved roadways, dirt access roads, and communication and electrical transmission line infrastructure. While portions of wooden support poles are skylined, communication and electrical transmission infrastructure displays an altogether rural scale and character and is not visually prominent in the scene. SR-94 is an eligible state scenic highway and is included on the county scenic highway program and because the landscape displays a relatively consistent rural visual character and scale, viewer concern for changes in the landscape is assessed as moderate.

Viewer Exposure: Moderate

Similar to views from Old Highway 80, views of the adjacent landscape from SR-94 are experienced by motorists in passing. Tall, wood poles and darkly colored and horizontal communication lines are relatively commonplace along the highway corridor and transmission and distribution line infrastructure parallels the highways and dots the visible landscape to the north and south. Vegetation in the area surrounding KOP 27 generally consists of low, mounded shrubs between 1 and 6 feet in height (shrubs are occasionally taller than 6 feet – see Figure D.2-29) and opportunities for screening distribution and transmission infrastructure is generally limited. Although views are brief, the daily volume of traffic on SR-94 near KOP 26 is approximately 1,900 vehicles (SANDAG 2012). Therefore, for purposes of this analysis, viewer exposure is assessed as moderate.

Visual Sensitivity: Moderate to High

As stated above, electrical transmission infrastructure visible from KOP 27 displays a rural scale and character that is complimentary and compatible with rural residential development and undeveloped natural lands in the surrounding area. In addition, SR-94 is an eligible state scenic highway and is included on the county scenic highway program. Therefore, because the landscape displays a relatively consistent rural visual character and scale and given the scenic

designation of the highway and availability of long, distant views, viewer sensitivity to changes in the landscape is assessed as moderate.

KOP 28—Jewel Valley Road at TL6931 Crossing

KOP 28 is located on Jewel Valley Road, approximately 0.5 mile south of Old Highway 80, 0.2 mile north of Jewel Valley Way, and 1 mile southwest of the Boulevard Substation (see Figure D.2-26). The view orientation is to the northeast towards an existing developed rural residential lot featuring two single-story structures displaying cool, light blue exterior paint bordered by white trim and topped by low angled pitched roofs (see Figure D.2-30). From KOP 28, motorists are afforded inferior angle views to the northeast to noticeably rising terrain and the TL6931 alignment. KOP 28 is a representative view of the existing landscape traversed by TL6931 near the community of Boulevard and is located on a public highway.

Visual Quality: Low

The KOP 28 view is focused on the Jewel Valley Road adjacent rural residential lot and the existing H-frame structure supporting TL6931. East of the roadway, the modified terrain rises to an elevated building pad and vegetation within the fence line is sparse, primarily consisting of low clumped grasses and occasional low shrubs, and immature trees. The west-facing slope of the building pad is noticeably lighter in color than comparatively flat terrain closer to Jewel Valley Road and two tall and grey deciduous trees are located atop the building pad. Chaparral vegetation located north of the developed lot is dense and 4 to 6 feet in height. While not visible in Figure D.2-30, a disturbed, denuded dirt road parallels TL6931 and provides access to poles to the east and west of KOP 28. The KOP 28 landscape lacks prominent landforms (and any other particularly vivid features) and displays noticeable breaks in the continuity of vegetation in the foreground viewing distance. Therefore, for purposes of this analysis, visual quality is assessed as low.

Viewer Concern: Low to Moderate

Based on the lack of prominent landforms and the rather weak intactness and unity in the scene, visual quality of the KOP 28 landscape was assessed as low. However, the community of Boulevard generally displays a rural residential character typified by modest, single-story residences and undeveloped natural lands populated with chaparral vegetation and occasional boulder outcrops. Viewer concern in the community may be slightly heightened given the concentration of substation and regional transmission infrastructure in the community and therefore, viewer concern is considered low to moderate.

Viewer Exposure: Low

Motorists are afforded passing, inferior angled views of TL6931 at KOP 28. Located approximately 550 feet to the northeast, the existing H-frame structure is partially skylined and the transmission line is difficult to detect due to distance. Viewer volume on Jewel Valley Road is anticipated to be low (SANDAG does not compile daily traffic volumes for the road) as it is used primarily by local area residents and occasionally by border patrol vehicles. As such, viewer exposure is considered to be low.

Visual Sensitivity: Low to Moderate

Despite the noted low visual quality of the KOP 28 landscape, visible electrical transmission infrastructure displays a rural scale and character that is complimentary and compatible with existing features in the landscape. While Jewel Valley Road does not contain any scenic designation/status, potential public interest in the Boulevard community regarding changes to the existing landscape and the existing rural residential character of the landscape raises visual sensitivity to a low to moderate level.

KOP 29—Old Highway 80 at Boulevard Substation

KOP 29 is located on Old Highway 80, approximately 1 mile east of Ribbonwood Road and 460 feet northwest of the rebuilt Boulevard Substation (see Figure D.2-26). View orientation is southeast across the rising terrain of a rural residential lot featuring low yellow and grey grasses, spreading green and yellow colored shrubs, occasional boulders, and the red, slightly pitched roof of a single-story residence. Both the existing and rebuilt Boulevard Substation are visible (see Figure D.2-31) as is opaque, low fencing installed along Ozz Road and oak trees located south of the rebuilt substation. One partially skylined wood pole supporting TL6931 is visible west of the existing Boulevard Substation.

Visual Quality: Low

From KOP 29, the terrain abruptly rises to the south and is at first sparsely populated with low grasses and then more densely populated with relatively low and mounded green, grey and yellow colored shrubs. The spreading, tall form of oak trees are visible at the horizon but are partially screened by substation development. Opaque, tan-colored fencing runs the length of the rebuilt substation's western boundary and tall, rectangular and angular metallic racks and bays rise from substation floor. A tall, rectangular and brown colored shielding wall is located south of the angular rack. Southwest of the under construction substation, the existing Boulevard Substation displays a lower and less visually prominent vertical profile; however, the concentration of existing distribution and transmission lines and support poles in the vicinity and

along Ozz Road creates a jumbled visual scene and degrades intactness and unity. In addition, no prominent landforms or vivid contrasts in landforms are visible from KOP 29 and therefore, visual quality is assessed as low.

Viewer Concern: Low to Moderate

Based on the low visual quality of the landscape as viewed from KOP 29 and the concentration of existing (and under construction) substation development and transmission and distribution line infrastructure in the scene, visual concern is assessed as low to moderate.

Viewer Exposure: Low to Moderate

Views to the existing and rebuilt Boulevard Substation are experienced in passing by Old Highway 80 motorists generally from Tule Jim Lane on the west to the Caltrans Boulevard Station driveway and Evening Shadow Lane (a distance of approximately 0.40 mile). Views along this short segment of the highway include rural residential development, dense natural vegetation covering rising and unaltered terrain, the existing and rebuilt Boulevard Substations and the Caltrans maintenance station. From the eastbound travel lanes of the highway, substation and transmission line infrastructure is routinely obscured by tall, mature oak trees located to the south and as a result, views are broken and non-continuous. Still, daily traffic on Od Highway 80 near KOP 28 is approximately 1,200 vehicles (SANDAG 2012) and therefore, viewer exposure is considered low to moderate.

Visual Sensitivity: Low to Moderate

While Old Highway 80 is an eligible state scenic highway and is included in the county scenic highway system, the visual quality of the KOP 29 landscape was assessed as low and brief, intermittent views of substation development and the TL6931 are available to passing motorists. In addition, and as shown on Figure D.2-31, the immediate area surrounding the existing and rebuilt Boulevard Substation is marked by approximately 10 tall and wooden distribution and transmission support poles and multiple lines strung between poles and into the existing substation. Therefore, the concentration of substation and distribution and transmission infrastructure reduces anticipated visual sensitivity to a low to moderate level.

Environmental Effects

The Reconstruction of TL6931

Impacts VIS-1 and VIS-2: Under this alternative, existing wood poles and line along a 6-mile portion of TL6931 would be removed and replaced with new weathered steel poles and new line between the Crestwood Substation to the Boulevard Substation. ~~As stated in the PEA, t~~There are

no recognized scenic vistas within the viewshed of the 6-mile segment of TL6931 included in this alternative, and as such, impacts to scenic vistas would not be adverse under NEPA and under CEQA, impacts would be less than significant (Class III). The 6-mile segment of TL6931 between the Crestwood and Boulevard Substations would span SR-94 ~~(an eligible state scenic highway and a County scenic route)~~ and would be visible from Old Highway 80. While both of these roadways are designated as eligible state scenic highway by Caltrans and are included in the County scenic highway system, neither is an officially designated state scenic highway. Distant views of the power line may also be visible from I-8, but views would be made in passing at high travel speeds. Due to the presence of existing transmission and distribution facilities in the area and ~~because of~~ the screening effect of intervening vegetation and topography along particular segments of the alignment (such as near the community of Live Oak Springs), the reconstruction of TL6931 would not substantially affect views from these roadways. In addition, replacement weathered steel poles would be installed at or near existing wood pole locations and would not substantially affect scenic resources such as trees or rock outcroppings within the viewshed of a scenic roadway. Therefore, ~~U~~under NEPA, impacts would not be adverse, and under CEQA, impacts would be less than significant (Class III).

Impacts VIS-3 through VIS-5: The replacement of existing poles with new replacement steel poles along an existing alignment is not anticipated to result in substantial visual contrast. See Table D.2-12 for a summary of anticipated form, line, color, and texture contrast at KOPs 25 through 29. A description of the overall visual contrast at each KOP is also included in Table D.2-12. While replacement poles would be ~~slightly~~ taller and wider than existing poles and would be affixed with 12-inch, yellow bands below conductors to denote high voltage, they would display a similar straight, vertical line, weathered brown color, and seemingly smooth texture as existing poles, and as a result, visual change in the landscape is anticipated to be somewhat subdued. In addition, with implementation of Mitigation Measure MM VIS-1, visual contrast associated with poles viewed from a foreground viewing distance would be minimized. Therefore, with implementation of Mitigation Measure MM VIS-1, adverse Impacts VIS-3 through VIS-5 would be mitigated under NEPA. Under CEQA, significant impacts would be reduced to less than significant with mitigation (Class II).

Table D.2-12
Visual Contrast Rating Summary – Removal of TL626 from Service and Upgrades to TL6931

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
25	Golden Acorn Casino	TL6931	Strong	Moderate	Weak	Weak	As shown in Figure D.2-27, an existing wood riser pole located south of the Crestwood Substation and Old Highway 80 (this pole is labeled "TL6931 Going East" in the existing conditions photo) would be removed and replaced with a taller and wider weathered steel riser pole. The new steel riser pole would be approximately 130 feet in height and would feature multiple crossarms and insulators. Three existing wood poles supporting TL6931 located east of the riser pole would also be removed and replaced with taller weathered steel poles featuring thin bands of bright yellow color near and above the lowest crossarm. Lastly, an existing wood pole located immediately west of the labeled wood riser pole supporting TL6931 (see Figure D.2-27) would be removed but would not be replaced. While not specifically associated with TL6931, this existing pole contains a nonstandard switch tie that connects TL6931 and TL629 together and allows them to stay online while the Crestwood Substation is offline for maintenance. This functionality is needed under existing conditions however; upon implementation of proposed wood to steel replacement of TL6931, the pole would no longer be needed. In addition to TL6931 upgrades, an existing wood riser pole supporting TL629 would be removed and replaced with a taller and wider steel riser pole (see Figure D.2-27 – the pole to be replaced is labeled "TL629 Going West" in the existing conditions photo). The new, approximately 130-foot-tall weathered steel riser pole would be installed south of Old Highway 80 and approximately 250 feet west of the existing wood riser pole. This pole would replace an existing riser pole and an existing tangent pole. Although proposed wood to steel replacement of TL6931 would result in a reduced total number of transmission support poles present in the KOP 25 landscape, the larger vertical scale of steel riser and tangent poles and the comparatively hard horizontal and angular lines displayed by crossarms and insulators would largely subdue any noticeable benefit to the visual landscape. Furthermore, in addition to the height and width of new steel riser pole(s), the line displayed by crossarms, insulators, and overhead transmission line would draw the attention of motorists. The KOP 25 landscape would however be experienced briefly by visitors to the Golden Acorn Casino and the quality of existing views has been noticeably affected by existing substation and transmission development. Due to the concentration of substation and transmission infrastructure development in the viewshed and the jumbled visual appearance of multiple tall and thin wood support poles and crossing overhead lines near the Crestwood Substation, the KOP 25 landscape displays low visual quality. Despite the presence of transmission infrastructure in existing views from KOP 25, new steel riser poles would be taller and wider than existing wood poles installed along Old Highway 80 and light poles along the secondary casino driveway. Moreover, due to the increased height and width, the steel cable riser poles would be visually prominent. Therefore, as viewed from KOP 25, the increased scale, width, and complexity of the new steel cable riser poles would create overall moderate visual contrast when compared to existing wood poles and existing visual conditions.
26	Old Highway 80 at Crestwood Substation	TL6931	Moderate	Weak to Moderate	Weak	Weak	From KOP 26, consolidation of existing infrastructure resulting from installation of weathered steel poles would address the visual clutter associated with the confusing assortment of overhead lines, risers, guy wires, and insulators on a cluster of wood poles located south of Old Highway 80 (see Figure D.2-28, Existing Conditions photo). As shown on Figure D.2-28, an existing TL6931 wood riser pole affixed with multiple insulators and supported by several guy wires would be removed and replaced with a single (albeit taller) weathered steel pole in the same general area. In addition, an existing TL629 wood riser pole would be removed and replaced with a taller and wider steel riser pole to be located approximately 250 feet to the west. In addition, an existing wood pole supporting a nonstandard switch tie that facilitates continued operation of TL6931 and TL629 when Crestwood Substation is offline for maintenance would no longer be needed upon implementation of proposed wood to steel replacement of TL6931 and as such, the existing pole would be removed. Lastly, five existing TL6931 wood poles located east of the riser poles would be removed and replaced with five new steel poles. While the new steel riser and tangent poles would be taller and wider than existing wood poles and would include 12-inch yellow bands below conductors, replacement poles and consolidation of existing electrical transmission would result in a more orderly and less jumbled visual scene. Therefore, despite the noticeable contrast in form and line between proposed weathered steel poles and existing wood poles, overall visual contrast resulting from TL6931 upgrades as viewed from KOP 26 would be moderately weak.

Table D.2-12
Visual Contrast Rating Summary – Removal of TL626 from Service and Upgrades to TL6931

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
27	SR-94	TL6931	Moderate	Moderate	Weak	Weak	At KOP 27, existing wood poles located in the foreground across the rural residential property to the west and south of SR-94 near existing communication line infrastructure would be removed and replaced with new weathered steel poles. An additional steel pole would also be introduced to the scene and would be located north of the highway. The increased height of the new steel poles and yellow, high voltage bands would increase the visual prominence and visibility of these features yet the width of the new poles would appear similar to the width of existing communication line poles. New poles located north of the highway would be located closer to motorists than existing poles, which, as a result, would increase the absolute and apparent scale of these vertical structures. The dark brown hue of replacement steel poles would be compatible with the earth tones displayed by vegetation in the foreground and, similar to existing wood poles, steel poles would display a seemingly smooth texture from a distance. The dark color of overhead lines and bright yellow bands around new steel poles would be visible to passing motorists and would contribute to overall line contrasts associated with TL6931 upgrades. While views of the highway adjacent landscape are relatively open and opportunities for full screening of transmission line infrastructure is limited due to the relatively low and mounded form of chaparral vegetation, new replacement poles would be located at or near existing wood poles and would display an altogether similar line, color, and texture and existing infrastructure in the landscape. As a result, overall visual contrast would be relatively weak.
28	Jewel Valley Road	TL6931	Moderate	Moderate	Weak	Weak	From KOP 28, TL6931 upgrades would entail the removal of the existing weathered wood H-frame structure and would be replaced with a tall and thin weathered steel pole. While the new pole (approximately 100 feet tall) would display a taller form than the H-frame structure, the width and line would be comparable to the individual legs of the H-frame structure and the narrow and comparatively short wood communication line pole located in the front yard of the foreground rural residential lot. The new weathered steel pole would display a dark brown hue (the existing wood pole is tan colored) but resulting color contrasts would be relatively weak as the dark brown would be compatible with the color of chaparral vegetation at the base. Additional overhead lines would be strung on the taller poles (lines would be viewed against the backdrop of the characteristic light blue desert sky) and would slightly increase anticipated line contrasts. The inferior angled view available from KOP 28 would emphasize the larger vertical scale of the new steel pole; however, views to the TL6931 alignment would be made in passing and the transmission line is an existing feature that contributes to the relatively low visual quality of the visual landscape. Therefore, while the considerably taller form of the weathered steel poles, yellow high voltage bands, and introduction of up to four additional overhead lines would be apparent, overall visual contrast would be weak to moderate.
29	Old Highway 80 at Boulevard Substation	TL6931	Moderate	Moderate	Weak	Weak	Two taller and thicker weathered steel poles would be installed adjacent to the existing Boulevard Substation and within the fenced boundary of the rebuilt Boulevard Substation. Two poles would be necessary in order to interconnect TL6931 to the rebuilt Boulevard Substation (the line currently terminates at the existing substation). The new poles (approximately 65 and 92 feet tall, respectively) would be angled and noticeably taller and wider than existing wooden distribution poles in the landscape. However, similar to existing poles, new poles would display a tall, vertical line (new poles would be skylined as viewed from KOP 29) and a weathered, brown hue that would appear increasingly less vivid after installation and during operations. Twelve-inch-wide yellow bands would be affixed to new poles to indicate high voltage and would introduce a color not currently represented on existing distribution and infrastructure poles. Despite the noticeable contrast in form and line associated with the height and width of the new steel poles when compared to existing support poles, new poles would be sited near existing substation development and skylined distribution infrastructure. In addition, viewing opportunities to the existing (and rebuilt) substation and TL6931 are limited due to the presence of existing mature oak trees present south of the highway. Therefore, the overall visual contrast attributed to wood-to-steel replacement of TL6931 as viewed from KOP 29 would be weak.

Development of the New 3-mile Loop-in of TL625

Impact VIS-1: Between the Loveland and Barrett Substations, a new double-circuit 69 kV power line would be constructed from the existing TL625 alignment and would parallel the Sunrise Powerlink ROW for approximately 3 miles into the Suncrest Substation. While prominent terrain including Middle Mountain and Bell Bluff are located in the area and views of the new 3-mile loop-in may be available from these locations, there are no known public use trails to either peak and neither Middle Mountain or Bell Bluff are designated as scenic vistas by the Forest Service. Further, the presence of the Sunrise Powerlink project in existing southerly and southeasterly oriented views and the broad, open nature of views available from these elevated viewing locations suggests that the introduction of a new 69 kV power line alongside an existing 500 kV transmission line would not substantially affect existing views. Therefore, impacts to scenic vistas (i.e., Impact VIS-1) would not be adverse under NEPA and under CEQA, impacts would be less than significant (Class III).

Impact VIS-2: Due to the screening effect of topography, views of the new loop-in and the Suncrest Substation are not available from I-8 and SR-79 (eligible state scenic highways). The new loop-in would, however, be visible from Japatul Road, a local two-lane road included in the County of San Diego Scenic Highway System. From the existing TL625 alignment located north of Japatul Road, new weathered steel poles and non-specular conductor would be installed near Sunrise Powerlink towers, and due to the presence of mountainous terrain to the north, it is likely that new poles and lines would be backscreened. Because rock outcrops, mature trees, and historic buildings do not appear to be located along the portions of the Sunrise Powerlink ROW visible from the roadway, construction of the new loop-in is not anticipated to substantially affect existing scenic resources visible from Japatul Valley Road. In addition, with implementation of Mitigation Measure MM VIS-1, visual contrast associated with poles viewed from a foreground viewing distance would be minimized. Therefore, with implementation of Mitigation Measure MM VIS-1, adverse Impact VIS-2 would be mitigated under NEPA. Under CEQA, significant impacts would be reduced to less than significant with mitigation (Class II).

Impact VIS-3: While the 500 kV Sunrise Powerlink is an existing feature in the landscape and contributes to the local visual character, Japatul Valley retains a largely rural and rugged visual character defined by pockets of low-lying sparsely developed valleys bordered by mountainous, chaparral, and occasional boulder-covered terrain. Weathered steel support poles for the new 3-mile 69 kV power line would be smaller in scale than tall steel lattice towers associated with the Sunrise Powerlink; however, unlike steel lattice, the narrow, continuous form and reddish-brown color of the weathered poles would tend not to recede into the background landscape. In addition, the introduction of approximately 100-foot-tall, narrow, reddish-brown steel poles alongside existing steel lattice towers would likely create noticeable form, line, and color contrast. Therefore,

in order to reduce anticipated visual contrast, Mitigation Measure MM VIS-1 would be implemented at specific pole locations visible from public viewing locations such as Japatul Valley Road. Within implementation of Mitigation Measure MM VIS-1, adverse impacts would be mitigated under NEPA, and under CEQA, significant impacts would be reduced to less than significant with mitigation (Class II).

Impact VIS-4: Similar to SDG&E's proposed project, during construction of the new TL625 loop-in alternative nighttime activities may be required. Nighttime activities may be required to minimize impacts to schedules and to facilitate cutover work, and as required by other property owners or agencies. With implementation of APM VIS-05, use of lighting would be limited to individual pole locations to no more than 2 hours per night and would not substantially affect nighttime views in vicinity of construction activities. Nighttime lighting would not be required during project operations. Regarding glare, APM VIS-03 (i.e., the use of non-specular conductors) would be implemented and would minimize project-generated glare such that glare would not substantially affect daytime views in the area, and the removal of access roads would not affect the potential generation of daytime glare associated with pole and line replacement activities. Therefore, with implementation of APMs VIS-05 and APM VIS-03, impacts to day and nighttime views in the project area would not be adverse under NEPA.

Impact VIS-5: The new 3-mile TL625 loop-in would traverse CNF lands managed according to High scenic integrity objectives. While the new poles and lines would be installed along the existing Sunrise Powerlink ROW, weathered steel poles would display a different form, line, and color than steel lattice towers and deviations in scale would also be noticeable. Therefore, Mitigation Measure VIS-1 would be implemented in order to identify and implement specific design considerations to minimize contrast with the existing landscape character. Mitigation Measure VIS-2 would also be implemented and would consist of a project-specific LMP Amendment to resolve conflicts with Forest Service lands managed according to the High scenic integrity objective. With implementation of Mitigation Measure VIS-2, conflicts with the High scenic integrity objective would be allowed and conflicts with the CNF LMP would be resolved as required by the National Forest Management Act. Under CEQA, impacts would be less than significant with mitigation (Class II). While MM VIS-2 would provide an exception for the project and allow authorization of the project, it does not reduce the project effects that caused the conflicts with the plan. Those effects are analyzed under impacts to scenic vistas, scenic roads, existing visual character and quality, and existing day and nighttime views (Impact VIS-1, VIS-2, VIS-3, and VIS-4). MM VIS-2 would be included in any decision that authorizes this alternative.

Convert Segments of TL626 from 69 kV to 12 kV

Impact VIS-1: Under this alternative, segments of TL626 would be converted from 69 kV to 12 kV facilities. As stated in Section D.2.3.3, the scenic overlook along the Inaja Memorial National Recreation Trail was the sole scenic vista identified along TL626 between the Santa Ysabel and Boulder Creek Substations. Removal of the existing 69 kV wood pole and lines visible from the overlook and replacement with a 12 kV weathered steel pole and non-specular lines (per APM VIS-03) would enhance the scenic quality of the view and reduce view blockage. In addition, the shorter, narrower form of the 12 kV pole (maximum estimated height of 60 feet for 12 kV vs. 120 feet for the 69 kV pole) is not anticipated to be visually prominent as viewed from the scenic overlook. As a result, impacts would not be adverse under NEPA, and under CEQA, impacts would be less than significant (Class III).

Impact VIS-2: Converting 69 kV facilities to 12 kV would reduce the visual prominence of poles and lines visible from SR-79 and SR-78 between the Santa Ysabel substation and the Inaja Memorial Picnic Grounds. The shorter form of 12 kV poles (maximum estimated height of 60 feet for 12 kV vs. 120 feet for the 69 kV pole) would generally make them less noticeable in the landscape such that they would not normally attract the attention of casual motorists in the vicinity. In addition, replacement poles would be located at or near existing pole location, and as a result, impacts to scenic resources (trees, rock outcrops, etc.) would be minimized. Therefore, impacts associated with this alternative would not be adverse under NEPA, and under CEQA, impacts would be less than significant (Class III).

Impact VIS-3: Removal of 69 kV facilities and replacement with 12 kV would tend to reduce existing visual contrast associated with disparate tall, narrow forms and lines visible to the public within an otherwise natural-appearing landscape. New 12 kV poles would be shorter than existing power line poles and the reduced scale would reduce the visual prominence of these features when viewed from public locations. Because replacement poles would be shorter than existing poles and the weathered steel finish would resemble the existing wood of 69 kV poles, resulting visual contrast is anticipated to be relatively weak. As such, impacts would not be adverse under NEPA and would be less than significant (Class III) under CEQA.

Impact VIS-4: Nighttime activities and lighting may be required during pole removal and replacement activities. However, similar to SDG&E's proposed project, use of lighting would be limited to individual pole locations and would be operable for no more than 2 hours per night with implementation of APM VIS-03. Therefore, with implementation of APM VIS-03 and because of the limited need for nighttime activities and lighting, construction would not substantially affect existing nighttime views. During operations, nighttime lighting would occur only on an as-needed basis to maintain service during emergencies. As with SDG&E's proposed

project, this alternative would implement APM VIS-05 and would install non-specular conductors that would minimize the potential for glare generation during project operations. Therefore, with implementation of APMs, impacts to day and nighttime views would not be adverse under NEPA, and under CEQA, impacts would be less than significant (Class III).

Impact VIS-5: Because the replacement 12 kV poles and lines would be located at or near existing 69 kV pole and line locations, this alternative would essentially maintain existing patterns and occurrences of man-made features and their attributes (i.e., form, line, color and texture) in the landscape. Also, because 12 kV facilities would display a smaller scale than 69 kV, deviations in scale would be visible but would enhance scenic quality by reducing existing view blockage and visual dominance. As such, conflicts with lands managed according to High scenic integrity are not anticipated to occur. Under NEPA, impacts would not be adverse, and under CEQA, impacts would be less than significant (Class III).

The removal of existing TL626 poles and lines between the Santa Ysabel and Boulder Creek substations would enhance the scenic quality of CNF lands managed according to High scenic integrity objectives. Skylined poles and lines would be removed from primarily natural-appearing area, and view blockage attributed to power lines would be reduced.

D.2.7 No Action Alternative

Environmental Effects

Impacts VIS-1 through VIS-5: Under the No Action Alternative, the MSUP would not be issued and SDG&E would be required to remove the existing electric lines and facilities on CNF-managed lands as well as develop additional transmission upgrades elsewhere as described in Section C.1.4 of this EIR/EIS. While none of the facilities associated with SDG&E's proposed project would be constructed and removal of the electric lines and restoration activities within the CNF would reduce some of the visual impacts including ongoing conflicts with the Forest Service LMP High scenic integrity objectives, the overall impact levels would be greater due to development of additional power lines in conformance with CAISO requirements and/or alternative means of delivering electrical service elsewhere as potentially new ROWs and alignments where none currently exist may be required.

D.2.8 No Project Alternative

Environmental Effects

Impacts VIS-1 through VIS-5: Under the No Project Alternative, the proposed power line replacement projects, would not be built. Operation and maintenance of SDG&E electrical

facilities would continue and would be based on the requirements of the existing permits. As with existing conditions, over the long-term it is anticipated that SDG&E would replace individual wood poles with steel poles on an as-needed basis due to possible safety issues. Therefore, over time, impacts to visual resources would be similar to SDG&E's proposed power line replacement projects.

In addition, ongoing conflicts with the Forest Service LMP High scenic integrity objectives would continue as existing wood poles are individually removed and replaced by steel poles. Therefore, over time, long-term impacts to scenic vistas, scenic roads, and existing visual character resulting from implementation of the No Project Alternative would be similar as discussed for the proposed project.

D.2.9 Mitigation Monitoring, Compliance, and Reporting

Table D.2-13~~1~~ presents the mitigation monitoring, compliance, and reporting program for visual resources for the power line replacement projects and alternatives.

Table D.2-~~11~~13
Mitigation Monitoring, Compliance, and Reporting – Visual Resources

Mitigation Measure	**MM VIS-1**	**Prepare and Implement a Scenery Conservation Plan.** ~~Within 1 year after permit issuance, or prior to any ground-disturbing activities,~~ SDG&E shall file with the CPUC a Scenery Conservation Plan that is approved by the Forest Service and provided to other applicable jurisdictional agencies for review and comment. Each 69 kV power line or 12 kV distribution line segment will be covered under an individual section of the plan, and each section will be reviewed and approved by the appropriate agencies prior to any ground-disturbing activities for the specific segment. The purpose of this plan is to identify and implement specific actions that will minimize the project's visual disturbance to the naturally established scenery. Specific actions shall also be identified and implemented for individual poles to protect existing views from established scenic vistas and roadways located outside of the CNF. Power and distribution line support towers shall be designed to minimize their visual prominence and contrast to the natural landscape. Individual poles anticipated to create adverse effects to scenic vistas and/or particularly noticeable visual contrast in existing views shall be designed, located, shaped, textured, and/or screened as necessary to minimize their visual contrast, blend and complement the adjacent forest and community character. Methods such as limiting the number of climbing pegs and identifying less visually intrusive pole markings for high voltage lines, consistent with CPUC requirements, shall be considered. SDG&E shall also be required to provide photorealistic visual simulations of typical proposed designs ~~and mitigation measures~~ that include design features that may be incorporated into poles identified for visual treatment to demonstrate ~~their~~ the effectiveness of such features in reducing visual contrast and prominence as viewed from sensitive viewsheds.
Location	*SDG&E's Proposed Project:* **TL625** (Z273002, Z272998, Z272997, Z272996, Z272995, Z272993, Z272992, Z272991, Z272990, Z272989, Z272980, Z272972, Z272971, Z272970, Z272969, Z272960, Z272934,	

Table D.2-~~11~~13
Mitigation Monitoring, Compliance, and Reporting – Visual Resources

	Z239692, Z272922, Z272901, Z272886, Z272885, Z272870); **TL626** (Z213734, Z213735, Z213736, Z213737, Z213738, Z213739); **TL629** (along River Drive, Viejas Boulevard and SR-79 through Descanso, Z812701, Z173133, Z173134, Z173135, Z173136, Z173137, Z173138, Z173139, P373878, Z173141, Z173142); **TL682** (Z118035, Z118036, Z711236, Z118037, Z118038, and Z118144); **C440** (P-304, P-60, P-303, P-305, P-306, P40368, P109956, P40370) *Project Alternatives:* Forest Service proposed actions (TL626 Options 1–5; C157 Options 1 and 2; undergrounding C440); BIA proposed action (TL682) and Removal of TL626 from Service (TL625 and TL6931)
Compliance Documentation(a) and Consultation	a. Provide final design for review (appropriate design considerations are identified and implemented for poles along the TL625, TL626, TL629, TL682 and C440 alignments) b. CPUC/Forest Service Monitor: Line item in compliance monitoring report (individual treatment for replacement poles identified in "Location" is consistent with the plan) ~~replacement poles resemble existing poles to the extent feasible and do not dominate existing views)~~
Timing	a. Prior to project final design for each power line replacement project b. Final monitoring report for each power line replacement project
Responsible Agency	*SDG&E's Proposed Project:* CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629) *Forest Service Proposed Actions:* CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action:* CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Removal of TL626 from Service:* CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM VIS-2** If the Forest Service selects to fire harden TL626,TL629, TL6923 or C157 or relocate TL626 (Options 1,2,3a,3b,4 and 5, it would have to~~In order to allow for existing and proposed facilities, the Forest Service will~~ approve a project-specific CNF Land Management Plan Amendment contemporaneously with the decision to authorize the MSUP and pole replacement project. The project-specific plan amendment would amend the Land Management Plan to allow project-specific exemptions for inconsistencies with the CNF Land Management Plan scenic integrity objectives. SDG&E would be required to compensate the Forest Service for the loss in scenic quality associated with the negative scenery effects that are inconsistent with the LMP scenic integrity objectives. Compensation shall be accomplished through agency approved scenery restoration activities, fee-payment for scenery restoration projects, or preservation of comparable lands.
Location	Existing High SIO lands traversed by TL626, TL629, TL6923 as viewed from KOP 4, 13, and 15 and Very High SIO lands traversed by C157 and TL626 (for SDG&E's proposed project and Forest Service proposed action TL626 Options 1, 2, 3a, 3b, 4, and 5).
Compliance Documentation[(a)] and Consultation	a. Forest Service amends the Land Management Plan contemporaneously with the authorization of the MSUP and approval to rebuild, operate, and maintain TL626, TL629, TL6923, C157, and TL626 (Options 1, 2, 3a, 3b, 4, and 5). b. The Land Management Plan Amendment is described in any project Record of Decision authorizing TL626, TL629, TL6923, C157, and TL626 (Options 1, 2, 3a, 3b, 4, and 5) as proposed.
Timing	a. Contemporaneously with the Record of Decision.
Responsible Agency	Forest Service

[a] All compliance documentation and consultation records to be available for CPUC and Forest Service staff review upon request.

D.2.10 Residual Unavoidable Effects

With the exception of impacts resulting from TL626 to the Inaja Memorial National Recreational Trail scenic lookout (Impact VIS-1), SDG&E's proposed project would result in adverse but mitigated impacts under NEPA. Mitigation measures summarized in Section D.2.9, along with APMs provided in Section D.2.3.2, would mitigate most visual impacts for SDG&E's proposed project. Under CEQA, implementation of mitigation measures presented in Section D.2.9 would mitigate most significant visual impacts to less than significant for SDG&E's proposed project.

Compared to wood poles, replacement poles associated with TL626 would be more visually dominant in views from the Inaja Memorial National Recreational Trail scenic overlook as they would have greater spatial presence due to increased width. Also, the presence of marker balls across the canyon would continue to present noticeable color contrast that would detract from the overall quality of existing views. While Mitigation Measure VIS-1 has been provided to minimize the visual prominence and contrast, there are no effective screening methods available to reduce the significant visual effect at the Inaja Memorial National Recreational Trail scenic overlook and therefore, under NEPA Impact VIS-1 would be adverse and unavoidable, and under CEQA, would be significant and unavoidable (Class I).

Under the Forest Service proposed action for TL626 Options 1 through 4, a new overhead ROW would be established introducing weathered steel poles to a primarily undeveloped/sparsely developed rural landscape. The establishment of a new ROW and overhead power line alignment would create a new, linear pattern in the natural-appearing landscape where none are currently visible. As discussed in Section D.2.4.1, Options 1 through 4 for TL626 would create an adverse impact to the exiting visual character (Impact VIS-3). While Mitigation Measure MM VIS-1 has been provided to minimize the visual prominence and contrast, there are no effective screening methods available to reduce the significant visual contrast of the introduction of a new overhead 69 kV transmission line ROW where none currently exists. Therefore, Impact VIS-3 would be unmitigable under NEPA and would be significant and unmitigable (Class I) under CEQA.

D.2.11 References

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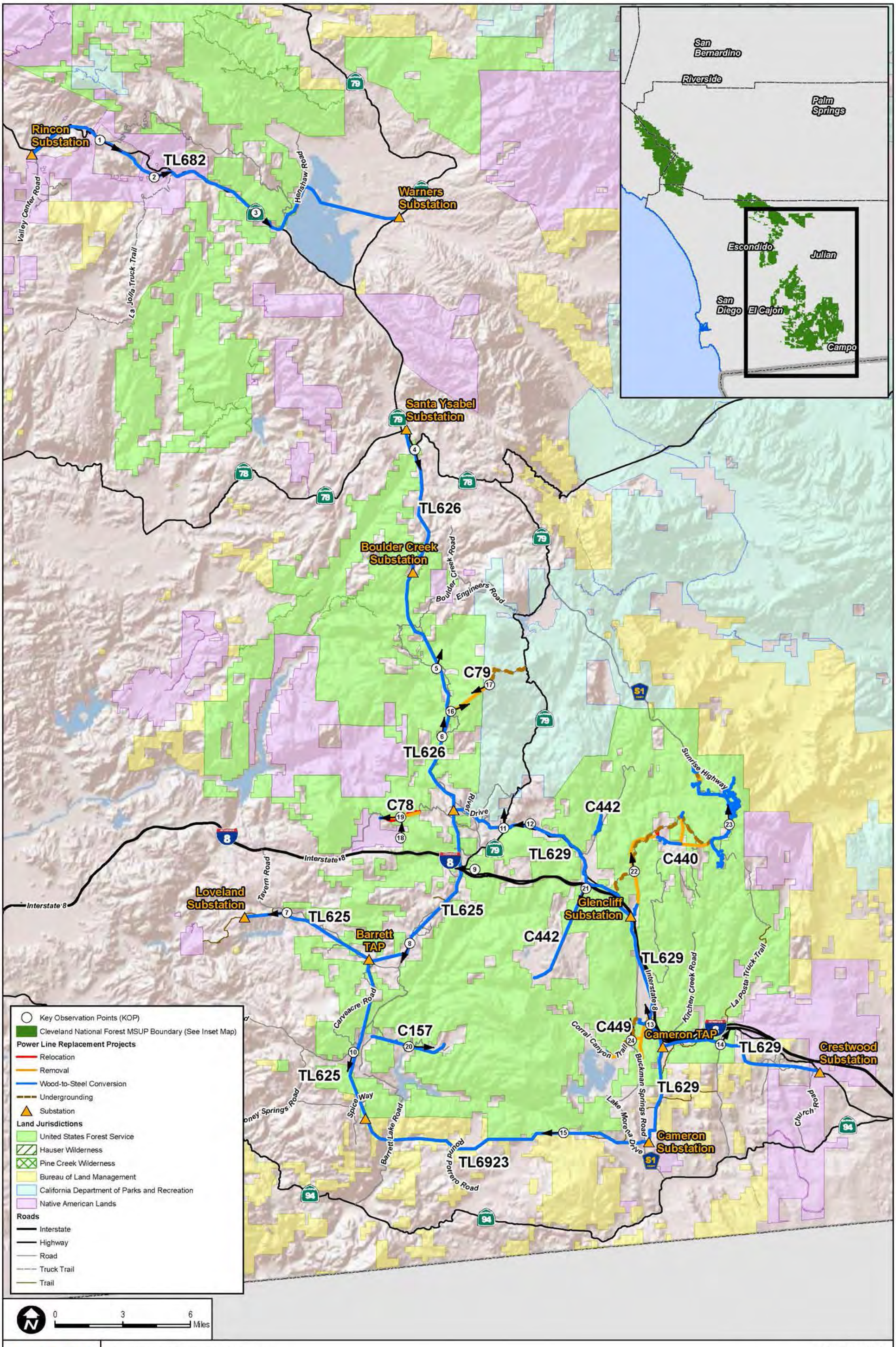

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SOURCE: SDG&E 2011; SanGIS 2012; Bing Maps

FIGURE D.2-1

Key Observation Points

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-2

KOP 1 – State Route 76 near Palomar Mountain Road
View east towards TL682

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-3

KOP 2 – La Jolla Indian Reservation
View northeast towards TL682

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-4

KOP 3 – State Route 76 near San Luis Rey Picnic Grounds
View east towards TL682

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-5

KOP 4 – Inaja Memorial National Recreation Trail
View south towards TL626

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-6

KOP 5 – Boulder Creek Road near Tule Springs Road
View northeast towards TL626

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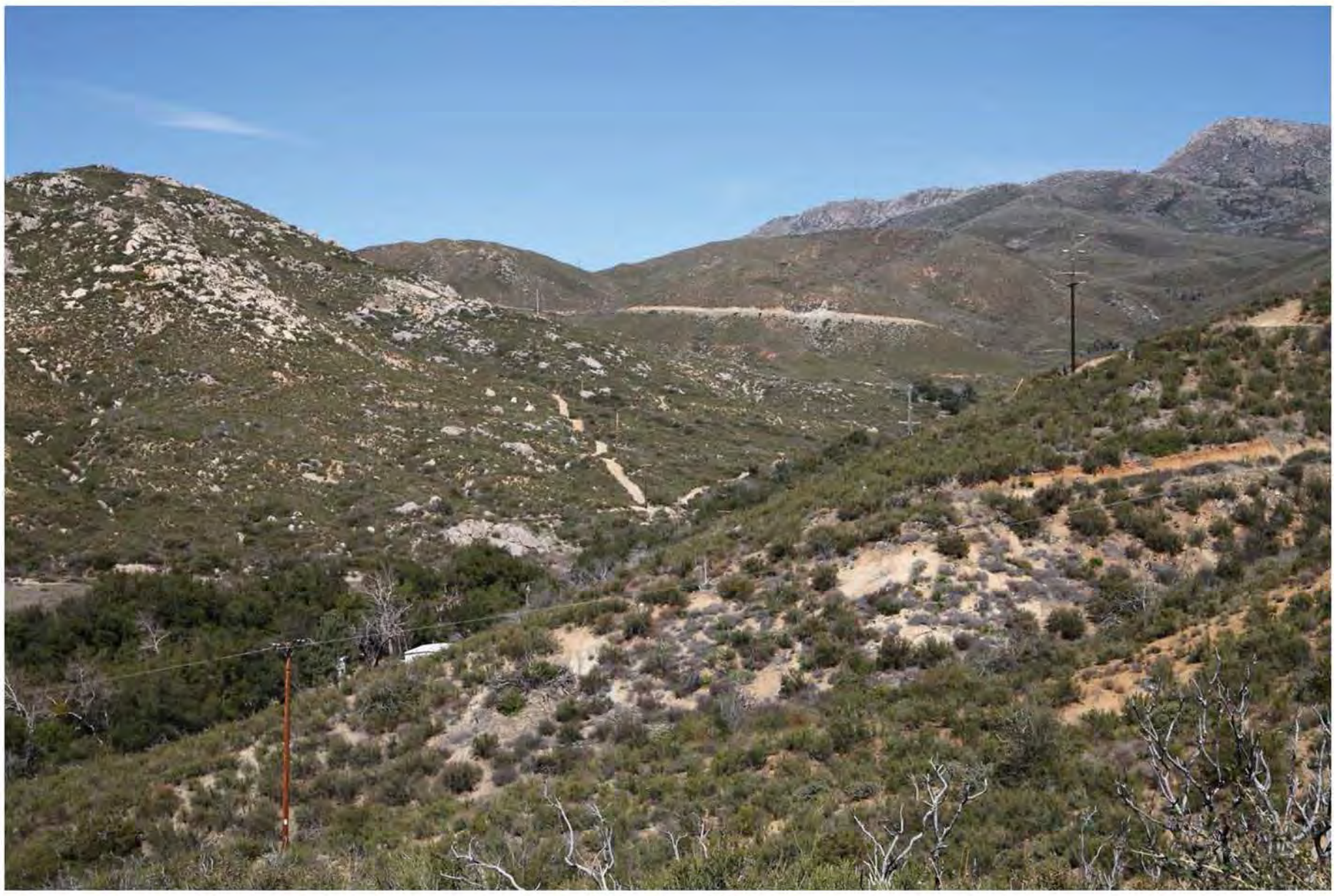

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-7

KOP 6 – Boulder Creek Road near Dubois Road
View northeast towards TL626

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-8

KOP 7 – Loveland Reservoir Trailhead
View southwest towards TL625

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-9

KOP 8 – Japatul Road
View south towards TL625

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-10

KOP 9 – Interstate 8 Westbound near State Route 79
View northwest toward TL625

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-11

KOP 10 – Lyons Valley Road near Barrett Lake Road
View south towards TL625

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-12

KOP 11 – State Route 79 at Viejas Boulevard
View north towards TL629

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-13

KOP 12 – Old Highway 80 near Prut Road
View west towards TL629

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-14

KOP 13 – Boulder Oaks Campground
View northwest towards TL629 and C449

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-15

KOP 14 – La Posta Road
View northeast towards TL629

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-16

KOP 15 – Pacific Crest National Scenic Trail near Hauser Mountain
View southwest towards TL6923

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-17

KOP 16 – Boulder Creek Road, West of TL 626
View northeast towards C79

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-18

KOP 17 – Cuyamaca Peak
View southwest toward C79

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-19

KOP 18 – Ma-Tar-Awa RV Park
View north towards C78

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-20

KOP 19 – Viejas Grade Road
View west toward C78

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Existing Conditions

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-21

KOP 20 – Skye Valley Road at Crossing of Barrett Lake
View east towards C157

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-22
KOP 21 – Bear Valley Trailhead
View southwest towards C442

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-23

KOP 22 – Sunrise Highway View north towards C440

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-24

KOP 23 – USFS Volunteer Activity Center near Sunrise Highway
View north towards C440

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SOURCE: ENVIRONMENTAL VISION 2012

FIGURE D.2-25

KOP 24 – Pacific Crest National Scenic Trail Near Boulder Oaks Campground
View north towards C449

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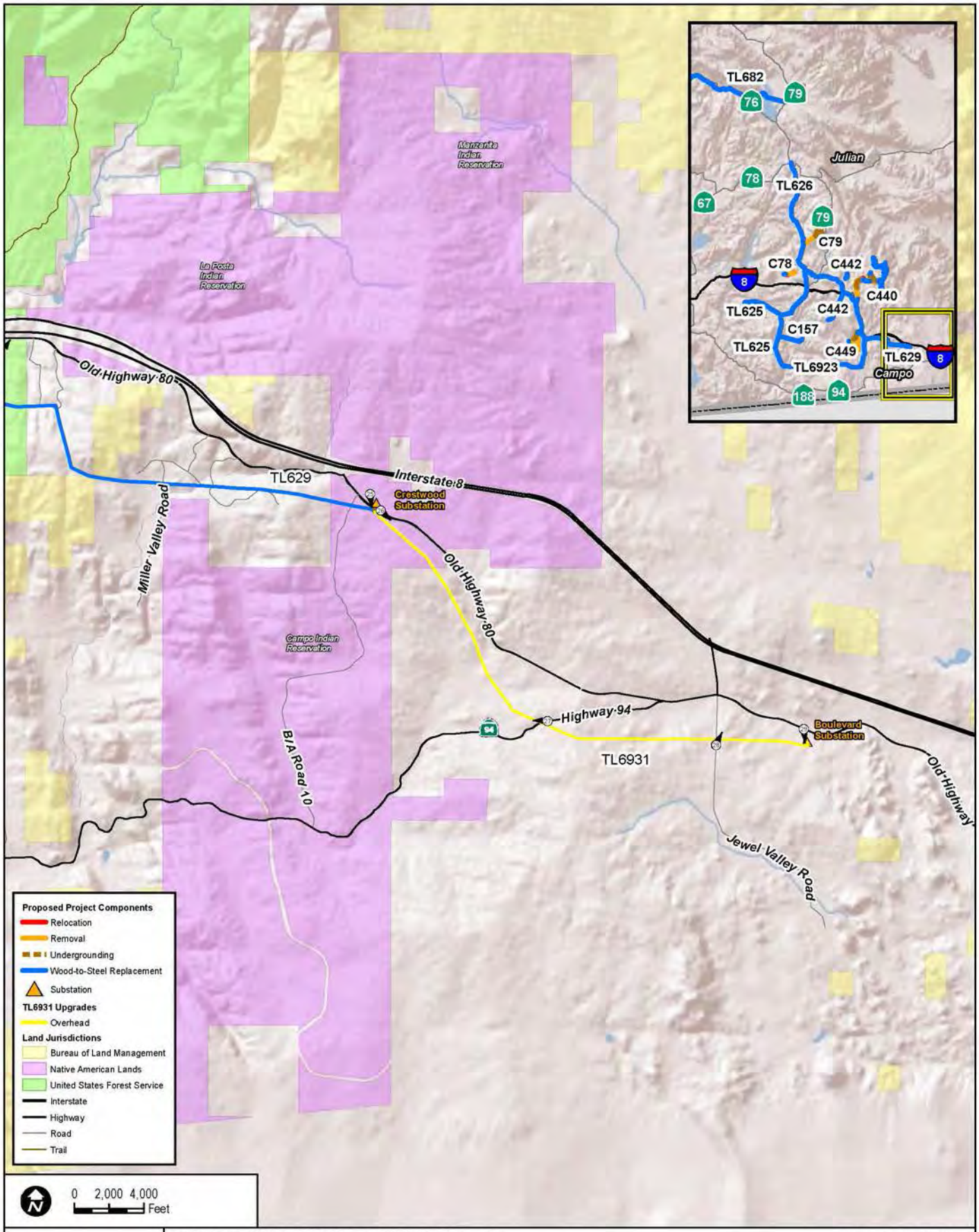

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SOURCE: SDG&E 2011, 2014; USGS; SanGIS 2009, 2012; Bing Maps

FIGURE D.2-26

Key Observation Points - Remove TL626 from Service Alternative - TL6931 Upgrades

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SOURCE: ENVIRONMENTAL VISION 2015

FIGURE D.2-27

KOP 25 – Golden Acorn Casino View

View southeast towards TL6931, TL629, and Crestwood Substation

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SOURCE: ENVIRONMENTAL VISION 2015

FIGURE D.2-28

KOP 26 – Old Highway 80
View southeast towards TL6931

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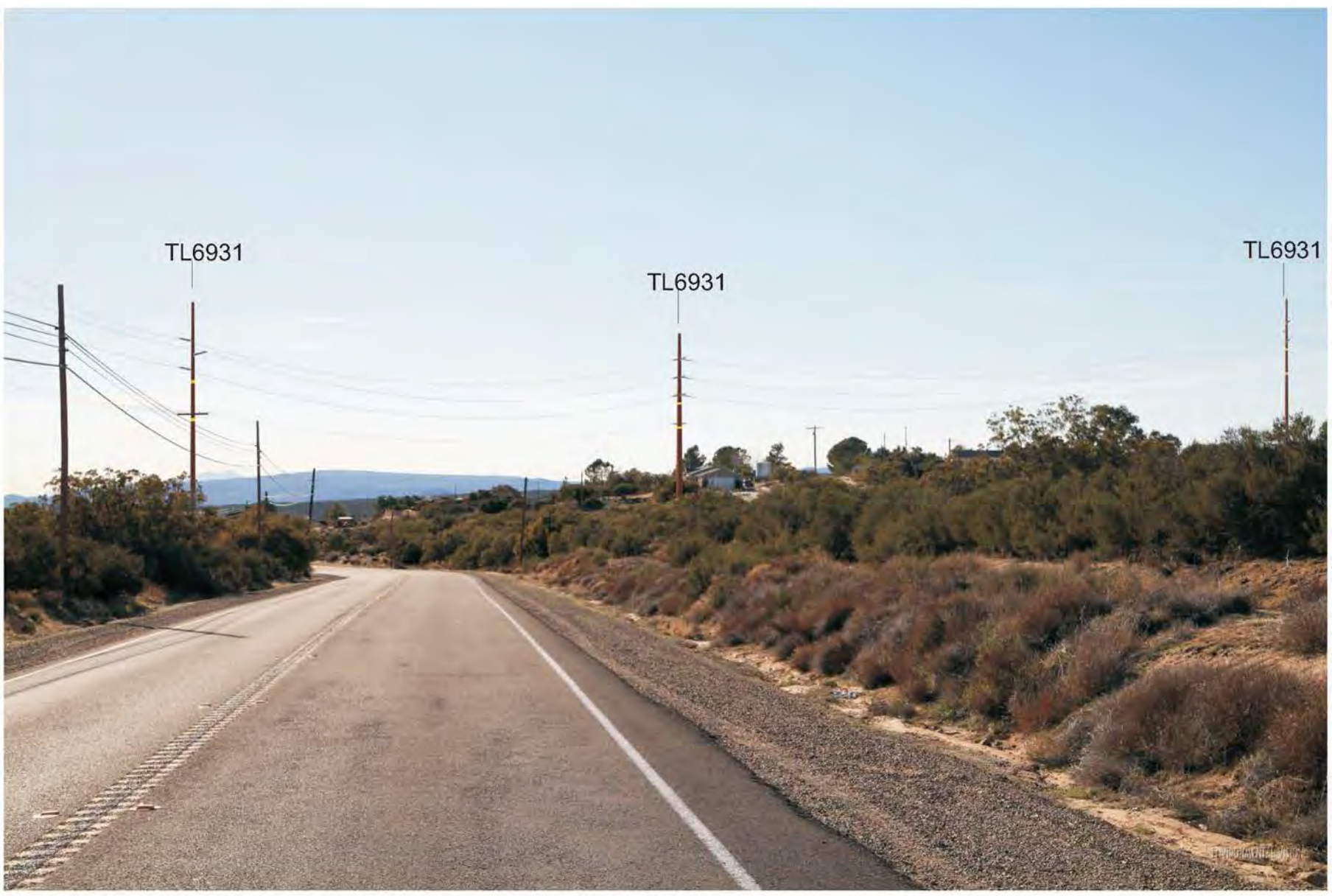

Visual Simulation

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SOURCE: ENVIRONMENTAL VISION 2015

FIGURE D.2-29
KOP 27 – SR-94
View west towards TL6931

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SOURCE: ENVIRONMENTAL VISION 2015

FIGURE D.2-30

KOP 28 – Jewel Valley Road
View northeast towards TL6931

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SOURCE: ENVIRONMENTAL VISION 2015

FIGURE D.2-31

KOP 29 – Old Highway 80

View southeast towards TL6931 and rebuilt Boulevard Substation

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D.3 Air Quality

This section addresses potential air quality impacts resulting from construction and operation of the proposed power line replacement projects along with the operation and maintenance activities proposed for authorization under the MSUP. Section D.3.1 provides a description of the existing setting/affected environment for air quality in the project study area, and the applicable air quality management plans, regulations, and requirements are introduced in Section D.3.2. An analysis of impacts/environmental effects of SDG&E's proposed project and discussion of mitigation are provided in Section D.3.3. The U.S. Forest Service (Forest Service) proposed action is described in Section D.3.4, and Section D.3.5 discusses the Bureau of Indian Affairs (BIA) proposed action. Additional alternatives are discussed in Section D.3.6. Section D.3.7 discusses the No Action Alternative and Section D.3.8 describes the No Project Alternative. Section D.3.9 provides mitigation monitoring, compliance, and reporting information. Section D.3.10 addresses residual effects of the project, and Section D.3.11 lists the references cited in this section.

D.3.1 Environmental Setting/Affected Environment

This section provides a description of existing air quality conditions including regional climate and meteorological conditions, ambient air quality, criteria pollutants, toxic air contaminants, types of emission sources, and sensitive receptors as relevant within SDG&E's proposed project area.

Methodology and Assumptions

The existing SDG&E electric facilities (power lines, access roads, and other facilities) to be covered under the proposed MSUP are located within both the San Diego Air Basin (SDAB) and South Coast Air Basin (SCAB) with the majority of the study area including all of the proposed power line replacement projects located within the SDAB. These existing facilities are routinely maintained and repaired as needed. The emissions associated with these past actions are part of the baseline for the analysis of SDG&E's proposed project and alternatives. Baseline information reviewed for this section includes SDG&E's Plan of Development (POD) for the Cleveland National Forest (CNF) Power Line Replacement Projects (SDG&E 2012a), the CPUC's and Bureau of Land Management's (BLM's) *Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) and Proposed Land Use Amendment for the Sunrise Powerlink Project* (CPUC and BLM 2008a), and the CPUC's and BLM's *Recirculated Draft EIR/Supplemental Draft EIS and Proposed Land Use Amendment for the Sunrise Powerlink Project* (CPUC and BLM 2008b). Ambient air quality data and statistics were obtained from the California Air Resources Board's (CARB's) iADAM Air Quality Data Statistics and U.S. Environmental Protection Agency's (EPA) AirData websites (CARB 2014, EPA 2013a).

D.3.1.1 General Overview

This section presents a discussion of the regional climate and meteorological conditions and ambient air quality in the project area.

Climate and Meteorology

Climate and air quality are determined by the geographic location, topography, and urbanization of an area. This section describes pertinent characteristics of the air basins and provides an overview of the physical conditions affecting pollutant dispersion in SDG&E's proposed project area.

The majority of MSUP study area (including all of the proposed power line replacement projects) is located within the SDAB and is subject to the San Diego Air Pollution Control District (SDAPCD) guidelines and regulations. The SDAB is one of 15 air basins that geographically divide the State of California.

The SDAB lies in the southwest corner of California and comprises the entire San Diego region, covering 4,260 square miles, and is an area of high air pollution potential. The basin experiences warm summers, mild winters, infrequent rainfalls, light winds, and moderate humidity. This usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds.

The SDAB experiences frequent temperature inversions. Subsidence inversions occur during the warmer months as descending air associated with the Pacific High Pressure Zone meets cool marine air. The boundary between the two layers of air creates a temperature inversion that traps pollutants. Another type of inversion, a radiation inversion, develops on winter nights when air near the ground cools by heat radiation and air aloft remains warm. The shallow inversion layer formed between these two air masses also can trap pollutants. As the pollutants become more concentrated in the atmosphere, photochemical reactions occur that produce ozone (O_3), commonly known as smog.

Light daytime winds, predominately from the west, further aggravate the condition by driving air pollutants inland, toward the mountains. During the fall and winter, air quality problems are created due to carbon monoxide (CO) and oxides of nitrogen (NO_x) emissions. CO concentrations are generally higher in the morning and late evening. In the morning, CO levels are elevated due to cold temperatures and the large number of motor vehicles traveling. Higher CO levels during the late evenings are a result of stagnant atmospheric conditions trapping CO in the area. Since CO is produced almost entirely from automobiles, the highest CO concentrations in the basin are associated with heavy traffic. Nitrogen dioxide (NO_2) levels are also generally higher during fall and winter days.

Under certain conditions, atmospheric oscillation results in the offshore transport of air from the Los Angeles region to San Diego County. This often produces high O_3 concentrations, as measured at air pollutant monitoring stations within the County. The transport of air pollutants from Los Angeles to San Diego has also occurred within the stable layer of the elevated subsidence inversion, where high levels of O3 are transported.

Site-Specific Meteorological Conditions

The local climate in southeastern San Diego County, which is primarily desert, consists of dry, hot summers (temperatures reaching 120° Fahrenheit (°F)) and milder winters (daytime temperature in the 80s). The average summertime high temperature in the project vicinity is approximately 90°F, although record highs have approached 120°F in July. The average wintertime low temperature is approximately 33°F, although record lows have approached 10°F in January. Average precipitation in the local area is approximately 9 inches per year, with the bulk of precipitation falling during January and February.

Existing Air Quality

Pollutants and Effects

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include: O_3, NO_2, CO, sulfur dioxide (SO_2), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$), and lead. These pollutants are discussed below.[1] In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants.

Ozone. O_3 is a colorless gas that is formed in the atmosphere when volatile organic compounds (VOCs), sometimes referred to as reactive organic gases (ROGs), and NO_x react in the presence of ultraviolet sunlight. O_3 is not a primary pollutant; it is a secondary pollutant formed by complex interactions of two pollutants directly emitted into the atmosphere. The primary sources of VOCs and NO_x, the precursors of O_3, are automobile exhaust and industrial sources.

[1] The following descriptions of health effects for each of the criteria air pollutants associated with project construction and operations are based on the EPA's "Six Common Air Pollutants" (EPA 2012) and the CARB "Glossary of Air Pollutant Terms" (CARB 2012) published information.

Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. Short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. It should be noted that weather patterns and climate conditions in Southern California are generally stagnant year-round, including those in the proposed project area. As such, the potential for ozone formation would not be substantially greater in the summer months as opposed to the winter months, particularly regarding helicopter use. In other parts of the country where weather patterns are substantially different in the summer and winter months (i.e., summer months tend to be clearer with fewer or no clouds and hotter temperatures, and winter months are typically overcast with greater precipitation such as rain or snow, and windier), ozone formation potential is greater in the spring and summer.

Nitrogen Dioxide. Most NO_2, like O_3, is not directly emitted into the atmosphere but is formed by an atmospheric chemical reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO_2 are collectively referred to as NO_x and are major contributors to O_3 formation. High concentrations of NO_2 can cause breathing difficulties and result in a brownish-red cast to the atmosphere with reduced visibility. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis, and some increase in bronchitis in children (2 and 3 years old) has also been observed at concentrations below 0.3 parts per million by volume (ppm).

Carbon Monoxide. CO is a colorless and odorless gas formed by the incomplete combustion of fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, automobile exhaust accounts for the majority of CO emissions. CO is a non-reactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions—primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas between November and February. The highest levels of CO typically occur during the colder months of the year when inversion conditions are more frequent. In terms of health, CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can be dizziness, fatigue, and impairment of central nervous system functions.

Sulfur Dioxide. SO_2 is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Main sources of SO_2 are coal and oil used in power plants and industries;

as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels. SO_2 is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. SO_2 can also yellow plant leaves and erode iron and steel.

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Fine particulate matter, or $PM_{2.5}$, is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., motor vehicles, power generation, and industrial facilities), residential fireplaces, and wood stoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x, and VOC. Inhalable or coarse particulate matter, or PM_{10}, is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances, such as lead, sulfates, and nitrates, can cause lung damage directly or be absorbed into the blood stream, causing damage elsewhere in the body. Additionally, these substances can transport absorbed gases, such as chlorides or ammonium, into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, as well as produce haze and reduce regional visibility.

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paint, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phase-out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phase-out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emission sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance including intelligence quotient performance, psychomotor performance, reaction time, and growth.

Volatile Organic Compounds. Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O_3 are referred to and regulated as VOCs. Combustion engine exhaust, oil refineries, and fossil-fueled power plants are sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects of VOCs result from the formation of O_3 and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate health standards for VOCs as a group.

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic noncancer health effects. A toxic substance released into the air is considered a toxic air contaminant (TAC). Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources such as automobiles; and area sources such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced either on short-term (acute) or long-term (chronic) exposure to a given TAC. CARB has identified diesel engine exhaust particulate matter as the predominant TAC in California. Diesel particulate matter (DPM) is emitted into the air by diesel-powered mobile vehicles, including heavy-duty diesel trucks, construction equipment, and passenger vehicles. Certain ROGs may also are designated as TACs.

SDAB Attainment Designation

An area is designated in attainment when it is in compliance with the National Ambient Air Quality Standards (NAAQS) and/or the California Ambient Air Quality Standards (CAAQS). These standards are set by the EPA and CARB, respectively, for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or the public welfare.

The criteria pollutants of primary concern that are considered in this air quality assessment include O_3, NO_2, CO, SO_2, PM_{10}, and $PM_{2.5}$. Although there are no ambient standards for VOCs or NO_x, they are important as precursors to O_3.

The SDAB is designated by EPA as an attainment (maintenance) area for the 1997 8-hour NAAQS for O_3 and as a marginal nonattainment area for the 2008 8-hour NAAQS for O_3. The SDAB was designated in attainment for all other criteria pollutants under the NAAQS with the exception of PM_{10}, which was determined to be unclassifiable. For CO specifically, the SDAB is designated as an attainment (maintenance) area under the NAAQS. The SDAB is currently designated nonattainment for O_3 and particulate matter, PM_{10} and $PM_{2.5}$, under the CAAQS. It is designated attainment for the CAAQS for CO, NO_2, SO_2, lead, and sulfates.

Table D.3-1, SDAB Attainment Classification, summarizes the SDAB's federal and state attainment designations for each of the criteria pollutants.

Table D.3-1
SDAB Attainment Classification

Pollutant	Federal Designation[a]	State Designation[b]
O_3 (1-hour)	Attainment*	Nonattainment
O_3 (8-hour – 1997) (8-hour – 2008)	Attainment (Maintenance) Nonattainment (Marginal)	Nonattainment
CO	Attainment (Maintenance)	Attainment
PM_{10}	Unclassifiable**	Nonattainment
$PM_{2.5}$	Attainment	Nonattainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	(no federal standard)	Attainment
Hydrogen Sulfide	(no federal standard)	Unclassified
Visibility-Reducing Particles	(no federal standard)	Unclassified

Sources:
[a] EPA 2013b
[b] CARB 2013a.
* The federal 1-hour standard of 0.12 ppm was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in State Implementation Plans.
** At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable.

Air Quality Monitoring Data

The SDAPCD operates a network of ambient air monitoring stations throughout San Diego County, which measure ambient concentrations of pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. The SDAPCD monitors air quality conditions at

10 locations throughout the basin. Due to its proximity to the site and similar geographic and climactic characteristics, the Alpine – Victoria Drive monitoring station concentrations for all pollutants, except PM10, CO, and SO2, are considered most representative of the project site. The Chula Vista monitoring station is the nearest location to the project site where CO and SO2 concentrations are monitored, and the El Cajon – Redwood Avenue monitoring station is the nearest location to the project site where PM10 concentrations are monitored. Ambient concentrations of pollutants from 2008 through 2012 are presented in Table D.3-2, Ambient Air Quality Data. The number of days exceeding the AAQS is shown in Table D.3-3, Frequency of Air Quality Standard Violations. The state 8-hour and 1-hour O3 standards and the federal 8-hour O3 standard were exceeded in 2008, 2009, 2010, 2011, and 2012. The state 24-hour PM10 standard was exceeded in 2009; the state annual PM10 standard was exceeded in 2008, 2009, and 2010; the state annual PM2.5 standard was exceeded in 2008; and the federal 24-hour PM2.5 standard was exceeded in 2009 and 2011. Air quality within the project region was in compliance with both CAAQS and NAAQS for NO2, CO, PM10 (NAAQS only), and SO2 during this monitoring period.

Table D.3-2
Ambient Air Quality Data (ppm unless otherwise indicated)

Pollutant	Averaging Time	2008	2009	2010	2011	2012	Most Stringent Ambient Air Quality Standard	Monitoring Station
O_3	8-hour	0.110	0.098	0.088	0.093	0.084	0.070	Alpine – Victoria Drive
	1-hour	0.139	0.119	0.105	0.114	0.101	0.090	
PM_{10}	Annual	27.3 µg/m^3	25.3 µg/m^3	21.3 µg/m^3	23.7 µg/m^3	23.4 µg/m^3	20 µg/m^3	El Cajon – Redwood Avenue
	24-hour	41.4 µg/m^3	57.0 µg/m^3	42.0 µg/m^3	41.9 µg/m^3	47.2 µg/m^3	50 µg/m^3	
$PM_{2.5}$	Annual[1]	14.0 µg/m^3	12.2 µg/m^3	10.8 µg/m^3	10.6 µg/m^3	NA	12 µg/m^3	Alpine – Victoria Drive
	24-hour	37.3 µg/m^3	29.7 µg/m^3	23.4 µg/m^3	25.5 µg/m^3	25.5 µg/m^3	35 µg/m^3	
NO_2	Annual	0.008	0.008	0.007	0.006	NA	0.030	Alpine – Victoria Drive
	1-hour	0.047	0.056	0.052	0.040	0.047	0.180	
CO	8-hour[2]	1.87	1.43	1.56	1.46	3.70	9.0	Chula Vista
	1-hour*	3.0	2.0	2.0	1.7	1.7	20	
SO_2	Annual	0.002	0.002	0.001	0.002	0.002	0.030	Chula Vista
	24-hour	0.004	0.003	0.002	NA	NA	0.040	

Sources: CARB 2014; EPA 2013a
Notes: A new 1-hour NAAQS for NO_2 became effective in April 2010. Data reflect compliance with the 1-hour CAAQS.
Data represent maximum values.
NA = data not available
* Data were taken from EPA 2013a.
1 2009, 2010, and 2011 data were taken from El Cajon – Redwood Avenue monitoring station.

[2] 2011 data were taken from El Cajon – Redwood Avenue monitoring station.

Table D.3-3
Frequency of Air Quality Standard Violations

Monitoring Site	Year	Number of Days Exceeding Standard				
		State 1-Hour O_3	*State 8-Hour O_3*	*National 8-Hour O_3*	*State 24-hour PM_{10}**	*National 24-hour $PM_{2.5}$**
Alpine – Victoria Drive	2008	13	61	31	—	ND
	2009	6	43	22	—	ND
	2010	4	20	12	—	ND
	2011	4	30	10	—	ND
	2012	1	22	7	—	ND
El Cajon – Redwood Avenue/Alpine – Victoria Drive	2008	—	—	—	—	—
	2009	—	—	—	6.0 (1)	—
	2010	—	—	—	—	—
	2011	—	—	—	—	—
	2012	—	—	—	—	—

Source: CARB 2014.
Notes: Exceedances of federal and state standards are only shown for ozone and particulate matter. All other criteria pollutants did not exceed either federal or state standards during the years shown.
ND – insufficient data to determine the value.
* Measurements of PM_{10} and $PM_{2.5}$ are usually collected every 6 days and 3 days, respectively. "Number of days exceeding the standards" is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.

Types of Emission Sources

Construction Emissions

Project-related construction air quality pollutants contribute to regional air pollution. On- and off-road construction vehicles, along with on-site portable equipment such as generators and air compressors, generate exhaust emissions. Construction vehicles and equipment operation can also cause unacceptable levels of entrained fugitive dust (PM_{10}). Even though they are temporary, construction emissions in some cases may be quantitatively greater on a daily basis than emissions from the operation of the development once it is built.

Operational Emissions

Most development projects also generate what are known as area source emissions. Area source emissions are relatively small quantities of air pollutants when considered individually but may cumulatively represent significant emissions. Generators, water heaters, fireplaces, and the application of paints and lacquers are examples of area source emissions. Operation of SDG&E's proposed project would not involve these types of area sources, but periodic maintenance trips to project component sites would generate air pollutant emissions during the operational phase.

Sensitive Receptors

The potential for adverse air quality impacts increases as the distance between the source of emissions and members of the public decreases. Impacts on sensitive receptors are of particular concern. Sensitive receptors are facilities that house or attract children, the elderly, and people with illnesses, or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent facilities, and residential areas are examples of sensitive receptors.

Air quality problems typically arise when sources of air pollutants and sensitive receptors are located near one another. Localized impacts to sensitive receptors generally occur in one of two ways:

- A (new) source of air pollutants is proposed to be located close to existing sensitive receptors. For example, an industrial facility is proposed for a site near a school.
- A (new) sensitive receptor is proposed near an existing source of air pollutants. For example, a residential development is proposed near a wastewater treatment plant.

Sensitive receptors in the vicinity of SDG&E's proposed project area include residential uses and schools as further discussed under Impact AIR-5.

D.3.2 Applicable Regulations, Plans, and Standards

The following discussion summarizes the federal, state, and local plans and requirements as they relate to SDG&E's proposed project.

D.3.2.1 Federal

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The EPA is responsible for implementing most aspects of the Clean Air Act, including the setting of NAAQS for major air pollutants, hazardous air pollutant standards, approval of state attainment plans, motor vehicle emission standards, stationary source emission standards and permits, acid rain control measures, stratospheric O_3 protection, and enforcement provisions. NAAQS are established for "criteria pollutants" under the Clean Air Act, which are O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for O_3, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O_3, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect

public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a State Implementation Plan that demonstrates how those areas will attain the standards within mandated time frames.

D.3.2.2 State Laws and Regulations

The federal Clean Air Act delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts (AQMDs) and air pollution control districts (APCDs) at the regional and county levels. CARB, which is part of the California Environmental Protection Agency (CalEPA), is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products.

CARB has established CAAQS, which are generally more restrictive than the NAAQS. The CAAQS describe adverse conditions; that is, pollution levels must be below these standards before a basin can attain the standard. The CAAQS for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, and $PM_{2.5}$ and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. The NAAQS and CAAQS are presented in Table D.3-4, Ambient Air Quality Standards.

Table D.3-4
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]	National Standards[2]	
		Concentration[3]	*Primary[3,4]*	*Secondary[3,5]*
O_3	1-hour	0.09 ppm (180 μg/m³)	—	Same as Primary Standard
	8-hour	0.070 ppm (137 μg/m³)	0.075 ppm (147 μg/m³)	
CO	1-hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	—
	8-hour	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	
NO_2[6]	1-hour	0.18 ppm (339 μg/m³)	0.100 ppm (188 μg/m³)	Same as Primary Standard
	Annual Arithmetic Mean	0.030 ppm (57 μg/m³)	0.053 ppm (100 μg/m³)	
SO_2[7]	1-hour	0.25 ppm (655 μg/m³)	0.75 ppm (196 μg/m³)	—
	3-hour	—	—	0.5 ppm (1300 μg/m³)
	24-hour	0.04 ppm (105 μg/m³)	0.14 ppm (for certain areas)[7]	
	Annual Arithmetic Mean	—	0.030 ppm (for certain areas)[7]	—

Table D.3-4
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]	National Standards[2]	
		Concentration[3]	*Primary[3,4]*	*Secondary[3,5]*
PM_{10}[8]	24-hour	50 μg/m³	150 μg/m³	Same as Primary Standard
	Annual Arithmetic Mean	20 μg/m³	—	
$PM_{2.5}$[8]	24-hour	—	35 μg/m³	Same as Primary Standard
	Annual Arithmetic Mean	12 μg/m³	12.0 μg/m³	15.0 μg/m³
Lead[9,10]	30-day Average	1.5 μg/m³	—	—
	Calendar Quarter	—	1.5 μg/m³ (for certain areas)[10]	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 μg/m³	
Hydrogen sulfide	1-hour	0.03 ppm (42 μg/m³)	—	—
Vinyl chloride[9]	24-hour	0.01 ppm (26 μg/m³)	—	—
Sulfates	24-hour	25 μg/m3	—	—
Visibility reducing particles[11]	8-hour (10:00 a.m. to 6:00 p.m. PST)	See footnote 11	—	—

ppm= parts per million by volume μg/m³ = micrograms per cubic meter mg/m³= milligrams per cubic meter

Source: CARB 2013b.

1 California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1-hour 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. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2 National standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For NO_2 and SO_2, the standard is attained when the 3-year average of the 98th and 99th percentile, respectively, of the daily maximum 1-hour average at each monitor within an area does not exceed 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 μg/m³ is equal to or less than one. 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 expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25° Celsius (°C) and a reference pressure of 760 torr.
Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; 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.

5 National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

6 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.

7 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.

8 On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12 µg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

9 CARB has identified lead and vinyl chloride as 'toxic air contaminants' 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.

10 The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/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.

11 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 standards, respectively.

D.3.2.3 Regional Policies, Plans, and Regulations

San Diego Air Pollution Control District

While CARB is responsible for the regulation of mobile emission sources within the state, local AQMDs and APCDs are responsible for enforcing standards and regulating stationary sources. The project is located within the SDAB and is subject to SDAPCD guidelines and regulations. In San Diego County, O_3 and particulate matter are the pollutants of main concern, since exceedances of CAAQS for those pollutants are experienced here in most years. For this reason, the SDAB has been designated as a nonattainment area for the state PM_{10}, $PM_{2.5}$, and O_3 standards. The SDAB is also a federal O_3 nonattainment area and a CO maintenance area (western and central part of the SDAB only); the project area is in the CO maintenance area.

The SDAPCD and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The *Regional Air Quality Strategy* (RAQS) for the SDAB was initially adopted in 1991, and is updated on a triennial basis (most recently in 2009). The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for O_3. The RAQS relies on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in San Diego County and the cities in the County, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by San Diego County and the cities in the County as part of the development of their general plans.

The *Eight-Hour Ozone Attainment Plan for San Diego County* indicates that local controls and state programs would allow the region to reach attainment of the federal 8-hour O_3 standard by 2009 (SDAPCD 2007). In this plan, SDAPCD relies on the RAQS to demonstrate how the region will comply with the federal O_3 standard. The RAQS details how the region will manage and reduce O_3 precursors (NO_x and VOCs) by identifying measures and regulations intended to

reduce these contaminants. The control measures identified in the RAQS generally focus on stationary sources; however, the emissions inventories and projections in the RAQS address all potential sources, including those under the authority of CARB and the EPA. Incentive programs for reduction of emissions from heavy-duty diesel vehicles, off-road equipment, and school buses are also established in the RAQS.

In December 2005, SDAPCD prepared a report titled *Measures to Reduce Particulate Matter in San Diego County* to address implementation of Senate Bill (SB) 656 in San Diego County, which required additional controls to reduce ambient concentrations of PM_{10} and $PM_{2.5}$. In the report, SDAPCD evaluates sources of particulate matter and potential source control measures, and focuses on the implementation of additional source-control measures that would reduce particulate matter emissions associated with residential wood combustion and fugitive dust from construction sites and unpaved areas (SDAPCD 2005).

As stated above, the SDAPCD is responsible for planning, implementing, and enforcing federal and state ambient standards in the SDAB. The following rules and regulations would apply to the construction of SDG&E's proposed project and alternatives:

1. **SDAPCD Regulation IV: Prohibitions; Rule 51: Nuisance.** Prohibits the discharge, from any source, of such quantities of air contaminants or other materials that cause or have a tendency to cause injury, detriment, nuisance, annoyance to people and/or the public, or damage to any business or property (SDAPCD 1969).
2. **SDAPCD Regulation IV: Prohibitions; Rule 55: Fugitive Dust.** Regulates fugitive dust emissions from any commercial construction or demolition activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as track-out and carry-out onto paved roads beyond a project site (SDAPCD 2009).

San Diego County

During construction of the project, the construction contractor would be required to comply with County Code Section 87.428 and implement appropriate dust control measures.

County Code Section 87.428, Dust Control Measures. As part of the San Diego County Grading, Clearing, and Watercourses Ordinance, County Code Section 87.428 requires all clearing and grading to be carried out with dust control measures adequate to prevent creation of a nuisance to persons or public or private property. Clearing, grading, or improvement plans shall require that measures such as the following be undertaken to achieve this result: watering, application of surfactants, shrouding, control of vehicle speeds, paving of access areas, or other operational or technological measures to reduce dispersion of dust. These project design

measures are to be incorporated into all earth-disturbing activities to minimize the amount of particulate matter emissions from construction (County of San Diego 2004).

D.3.3 Environmental Effects

D.3.3.1 Definition and Use of CEQA Significance Criteria/ Indicators under NEPA

The CEQA criteria and guidelines described as follows are also used as indicators of adverse effect under NEPA. The State of California has developed guidelines to address the significance of air quality impacts based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.), which provide guidance as to whether a project would have a significant environmental impact. Air quality impacts would be considered significant if a proposed project would:

- 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 project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for O_3 precursors)
- Expose sensitive receptors to substantial pollutant concentrations
- Create objectionable odors affecting a substantial number of people.

Use of Air Quality Thresholds

As part of its air quality permitting process, the SDAPCD has established thresholds in Rule 20.2 requiring the preparation of Air Quality Impact Assessments (AQIA) for permitted sources. The SDAPCD sets forth quantitative emission significance thresholds below which a project would not have a significant impact on ambient air quality. Project-related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table D.3-5 are exceeded.

For CEQA purposes, these screening criteria can be used as numeric methods to demonstrate that a project's total emissions would not result in a significant impact to air quality. Since the SDAPCD does not have AQIA thresholds for emissions of VOCs, the County of San Diego's significance thresholds for VOCs (County of San Diego 2007) are appropriate. The hourly and yearly significance thresholds are most appropriately used in situations where temporary emissions such as emergency generators or similar stationary sources are proposed as a part of

the project. The daily thresholds are most appropriately used for the standard construction and operational emissions and are used in this analysis.

Table D.3-5
SDAPCD Air Quality Significance Thresholds

Pollutant	Total Emissions		
	Pounds per Hour	*Pounds per Day*	*Tons per Year*
Volatile Organic Compounds (VOC)	—	75	13.7
Oxides of Nitrogen (NO_x)	25	250	40
Carbon Monoxide (CO)	100	550	100
Respirable Particulate Matter (PM_{10})	—	100	15
Fine Particulate Matter ($PM_{2.5}$)	—	55	10
Sulfur Oxides (SO_x)	25	250	40
Lead and Lead Compounds	—	3.2	0.6

Sources: SDAPCD 1999, Rule 20.2(d)(2) for all pollutants except VOC and $PM_{2.5}$; County of San Diego 2007 for VOC and $PM_{2.5}$.

General Conformity

Portions of SDG&E's proposed project are on lands managed by the Forest Service, BIA, and BLM. The construction of SDG&E's proposed project would result in direct emissions during construction. There are no indirect emissions associated with operation of SDG&E's proposed project over which the Forest Service, BIA, and BLM would have continuing control of the operational activities and their emissions, defined as follows.

Under the general conformity regulations, both the direct and indirect emissions associated with a federal action must be evaluated. Title 40, Code of Federal Regulations, Part 93 (40 CFR 93), Subpart B, defines direct emissions as:

> [T]hose emissions of a criteria pollutant or its precursors that are caused or initiated by the Federal action and originate in a nonattainment or maintenance area and occur at the same time and place as the action and are reasonably foreseeable.

Indirect emissions are defined as:

> [T]hose emissions of a criteria pollutant or its precursors:
>
> (1) That are caused or initiated by the Federal action and originate in the same nonattainment or maintenance area but occur at a different time or place as the action
>
> (2) That are reasonably foreseeable

(3) That the agency can practically control

(4) For which the agency has continuing program responsibility.

For the purposes of this definition, even if a federal licensing, rulemaking, or other approving action is a required initial step for a subsequent activity that causes emissions, such initial steps do not mean that a federal agency can practically control any resulting emissions.

A conformity determination is required for each criteria pollutant or precursor where the total of direct and indirect emissions of the criteria pollutant or precursor in a federal nonattainment or maintenance area would equal or exceed specified annual emission rates, referred to as "de minimis" thresholds. For O_3 precursors and PM_{10}, the de minimis thresholds depend on the severity of the nonattainment classification; for other pollutants, the threshold is set at 100 tons per year.

As indicated in Table D.3-1, SDAB is designated by EPA as a maintenance area for the 1997 8-hour NAAQS for O_3 and as a marginal nonattainment area for the 2008 8-hour NAAQS for O_3. The western and central portions of the SDAB are designated as a CO maintenance area. The SDAB is in attainment with all remaining NAAQS. The relevant de minimis thresholds for the SDAB are 100 tons per year for VOCs (O_3 precursor), NO_x (O_3 precursor), and CO.

The Forest Service, BIA, and BLM, the federal agencies with approval responsibility over portions of SDG&E's proposed project, would not have practical control over the ongoing operation of SDG&E's proposed project and the associated emissions. Therefore, general conformity would not apply to the indirect (operational) emissions associated with SDG&E's proposed project.

D.3.3.2 Applicant Proposed Measures

SDG&E has proposed Applicant Proposed Measures (APMs) AIR-01 through AIR-05, which would include construction dust and emission controls, and which would be implemented as part of SDG&E's proposed project to reduce impacts related to air quality (see Section B.7 of this EIR/EIS).

D.3.3.3 Direct and Indirect Effects

Impact AIR-1: Generate dust and exhaust emissions of criteria pollutants and toxic air contaminants during construction

Construction of SDG&E's proposed project would result in a temporary addition of pollutants to the local airshed caused by soil disturbance, fugitive dust emissions, and combustion pollutants from on-site construction equipment, as well as from off-site trucks hauling construction

materials. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions. Therefore, such emission levels can only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts. Fugitive dust (PM_{10} and $PM_{2.5}$) emissions would primarily result from ground-disturbing activities. NO_x and CO emissions would primarily result from the use of construction equipment and motor vehicles. Construction activities would take approximately 5 years to complete. Table D.3-6 provides estimated emissions that would be generated during construction.

Table D.3-6
Proposed Project Estimated Construction Emissions

	Pollutant (pounds/day)					
	VOC	*NO_x*	*CO*	*SO_x*	*PM_{10}*	*$PM_{2.5}$*
Estimated Emissions (maximum daily)	**136.56**	**1,082.40**	**571.08**	**1.52**	**71.18**	**63.18**
Threshold	75	250	550	250	100	55
Exceed Threshold?	Yes	Yes	Yes	No	No	Yes

Source: SDG&E 2013.
VOC = volatile organic compounds; NO_x = nitrogen oxides; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = particulate matter less than or equal to 10 microns; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns

As shown, daily construction emissions would not exceed the thresholds for SO_x and PM_{10}. However, VOC, NO_x, CO, and $PM_{2.5}$ emissions associated with proposed project construction would exceed their thresholds. Although emissions are shown to potentially exceed the threshold for $PM_{2.5}$ emissions, emissions of $PM_{2.5}$ are anticipated to be minor because ground disturbance at each pole would be small in size, and fugitive dust generation would be concentrated to areas surrounding the pole sites and electric lines. APMs AIR-01 through AIR-05 would be implemented to reduce emissions; however, VOC, NO_x, CO, and $PM_{2.5}$ emissions would remain above the thresholds after implementation of applicable APMs. Impacts associated with VOC, NO_x, CO, and $PM_{2.5}$ emissions would be adverse under NEPA, and would be considered significant and unavoidable under CEQA (Class I).

With regard to TACs, diesel exhaust particulate matter would be emitted from heavy equipment and trucks used in the construction process. Because diesel exhaust particulate matter is considered to be carcinogenic, long-term exposure to diesel exhaust emissions could result in adverse health impacts. Implementation of SDG&E's proposed project would result in short-term, temporary emissions of diesel exhaust from construction equipment. The emissions would not occur 24 hours per day, 7 days per week, but would be more likely to occur during daytime working hours with varying uses over that time of equipment and vehicles dependent on diesel fuel. In addition, heavy equipment and trucks would tend to be located at any one site for a short time. Because of the temporary short-term nature and frequency of construction emissions, diesel

exhaust particulate matter would not be generated in substantial pollutant concentrations; therefore, impacts due to emissions of toxic air contaminants would not be adverse under NEPA, and the impact would be considered less than significant under CEQA (Class III).

Impact AIR-2: Generate dust and exhaust emissions of criteria pollutants and toxic air contaminants during operation, maintenance, and inspections

Operations and maintenance of SDG&E's proposed project along with other SDG&E electric facilities proposed to be covered under the MSUP would require routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks, similar to those currently administered by SDG&E. These activities would not increase in duration, intensity, or frequency with implementation of SDG&E's proposed project compared to existing conditions due to fewer poles required for the proposed alignments and increased reliability in the transmission facilities, which are anticipated to necessitate fewer maintenance hours by SDG&E staff. Emissions resulting from operations and maintenance would not exceed the significance thresholds; therefore, they would not contribute substantially to an existing or projected air quality violation. As such, identified impacts would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

Impact AIR-3: Generate exhaust emissions of VOC, NO_x, and CO that would not exceed the general conformity de minimis thresholds during construction

As previously discussed, a conformity determination is required for each criteria pollutant or precursor where the total of direct and indirect emissions of the criteria pollutant or precursor in a federal nonattainment or maintenance area would equal or exceed specified annual emission rates, referred to as "de minimis" thresholds. For O_3 precursors, the de minimis thresholds depend on the severity of the nonattainment classification; for other pollutants, the threshold is set at 100 tons per year. As indicated in Table D.3-1, SDAB is designated by the EPA as a maintenance area for the 1997 8-hour NAAQS for O_3 and as a marginal nonattainment area for the 2008 8-hour NAAQS for O_3, for which the threshold is 100 tons per year. The western and central portions of the SDAB are designated as a CO maintenance area; the de minimis threshold is 100 tons per year. The SDAB has been designated attainment for all other criteria pollutants under the NAAQS with the exception of PM_{10}, which was determined to be unclassifiable.

As discussed in Impact AIR-1 above, construction of SDG&E's proposed project would result in a temporary addition of pollutants to the local airshed caused by soil disturbance, fugitive dust emissions, and combustion pollutants from on-site construction equipment, as well as from off-site trucks hauling construction materials. NO_x and CO emissions would

primarily result from the use of construction equipment and motor vehicles. VOC emissions are generally emitted in the highest amount during the application of architectural coatings, but construction equipment and motor vehicles are also VOC sources. The relevant de minimis thresholds for the SDAB are 100 tons per year for VOC and NOx, which are both ozone precursors, and for CO. Table D.3-7 provides estimated annual project emissions during construction in relation to the de minimis threshold.

Table D.3-7
Estimated Annual Construction Emissions

	Pollutant Emissions (tons per year)		
	VOC	*NO_x*	*CO*
Estimated Emissions	4.2	33.0	17.5
De Minimis Threshold	100	100	100
Exceeds Threshold?	No	No	No

Source: SDG&E 2013.

As shown, construction emissions would not exceed the federal de minimis thresholds for VOC, NO_x, and CO emissions. Therefore, the project would be considered to be in compliance with the general conformity requirements and would not conflict with local air quality attainment or maintenance plans to achieve or maintain federal ambient air quality standards. Accordingly, identified impacts would not be adverse.

Impact AIR-4: Conflict with or obstruct the implementation of applicable local air quality plans

Regional planning efforts to improve air quality include a variety of strategies to reduce emissions from motor vehicles and minimize emissions from stationary sources. As discussed above, the SDAPCD is the agency principally responsible for comprehensive air pollution control in San Diego County. The SDAPCD develops rules and regulations, establishes permitting requirements for stationary sources, inspects sources, and enforces such measures through educational programs or fines, when necessary.

The applicable air quality plan for San Diego County is the RAQS. The RAQS is based on SANDAG growth forecasts for the region, and incorporates measures to meet state and federal requirements. Under this threshold, significance of air quality impacts is based on the degree to which the project is consistent with SANDAG's growth forecasts. If a project is consistent with growth forecasts, its resulting impacts were anticipated in the RAQS and are considered to be less than significant. Growth forecasts in the RAQS are based on approved General Plans, Community Plans, and Redevelopment Plans.

Approval of SDG&E's proposed project would authorize the continued operation and maintenance of SDG&E electric facilities within the CNF and improvements under SDG&E's proposed project which would safeguard the alignments from wildland fire impacts and to increase the reliability of electrical service to existing customers. As a fire-hardening and replacement project, SDG&E's proposed project would replace existing poles with new poles, install new power lines and distribution lines on the new steel poles, and underground portions of the facilities. SDG&E's proposed project is consistent with the current designated uses of the sites and would not alter or introduce new conflicts with land use designations. The project does not include development of new homes or businesses; therefore, it would not induce population growth in the SDAB. Emissions during construction of the project would be temporary, and operation of the project would result in very minimal emissions from occasional vehicle trips to maintain SDG&E's electric facilities, similar to existing conditions. The types and quantities of construction equipment that would be used for SDG&E's proposed project would be typical of the industry and would not be of sufficient magnitude in quantity to exceed those assumptions used in the preparation of construction equipment emissions in the RAQS. Construction emissions generated by SDG&E's proposed project would be consistent with those included in the emissions inventory of the RAQS; therefore, they would be consistent with construction-related emissions projected in the RAQS. Thus, no conflict with or obstruction of implementation of the applicable air quality plan would occur. No impact would result under CEQA and no impact would result under NEPA.

Impact AIR-5: Expose sensitive receptors to substantial pollutant concentrations

For the purposes of CEQA analysis in the County of San Diego, the definition of a sensitive receptor includes schools (preschool-12th grade), hospitals, resident care facilities, day-care centers, and residents (County of San Diego 2007). For the purposes of air quality analyses, parks and outdoor recreational facilities are not considered sensitive receptors. The nearest sensitive receptors to SDG&E's proposed project are shown in Table D.3-8.

Table D.3-8
Sensitive Land Uses within 1,000 feet of SDG&E Project Components

Project Component	Sensitive Land Use	Description of Impact	Significance of Impact
TL682	Rural Residential ~~and Athletic Facility~~	TL682 passes within 1,000 feet of approximately 96 residences ~~and within 1,000 feet of the Amago Sports Park~~.	Less than Significant under CEQA and not adverse under NEPA (Class III)
TL626	Rural Residential	TL626 passes within 1,000 feet of approximately 66 residences.	Less than Significant under CEQA and not adverse under NEPA (Class III)
TL625	Rural Residential	TL625 passes within 1,000 feet of approximately 147 residences.	Less than Significant under CEQA and not adverse under NEPA (Class III)

Table D.3-8
Sensitive Land Uses within 1,000 feet of SDG&E Project Components

Project Component	Sensitive Land Use	Description of Impact	Significance of Impact
TL629	Rural Residential, Elementary Schools	TL629 passes within 1,000 feet of approximately 461 residences. TL629 also passes within 1,000 feet of Descanso Elementary School (intersection of Tanglewood Drive and Viejas Boulevard) and Pine Valley Elementary School.	Less than Significant under CEQA and not adverse under NEPA (Class III)
TL6923	Rural Residential	TL6923 passes within 1,000 feet of approximately 16 residences.	Less than Significant under CEQA and not adverse under NEPA (Class III)
C78	Rural Residential	C78 passes within 1,000 feet of approximately 6 residences located on the Viejas Indian Reservation.	Less than Significant under CEQA and not adverse under NEPA (Class III)
C157	Rural Residential	C157 passes within 1,000 feet of an existing residence.	Less than Significant under CEQA and not adverse under NEPA (Class III)
C442	Rural Residential	C442 passes within 1,000 feet of approximately 39 residences.	Less than Significant under CEQA and not adverse under NEPA (Class III)
C440	Rural Residential	C440 passes within 1,000 feet of approximately 158 residences.	Less than Significant under CEQA and not adverse under NEPA (Class III)
C449	Rural Residential, Mountain Empire High School	C449 passes within 1,000 feet of approximately 2 residences, Mountain Empire High School.	Less than Significant under CEQA and not adverse under NEPA (Class III)

As listed in Table D.3-8, power lines proposed to be replaced traverse or border terrain supporting sensitive land uses including rural residences and schools.

Construction

Construction activities associated with SDG&E's proposed project could potentially result in temporary construction-related air pollutants near sensitive receptors. As stated in Section D.10, Land Use, for purposes of this analysis it is assumed that construction activities occurring within 1,000 feet of a sensitive land use could result in potentially significant impacts associated with criteria pollutant emissions, particularly fugitive dust. For those residences and other sensitive land uses greater than 1,000 feet from the proposed route and construction activities, construction-related impacts would be considered less than significant due to their distance from SDG&E's proposed project and the attenuation of impacts that distance would afford.

As stated previously, diesel-fueled construction equipment and vehicles would emit DPM while in operation during construction of SDG&E's proposed project. Construction would not involve any substantial sources of DPM that would occur at any single location for an extended period of time. The DPM emissions from construction equipment and vehicles would be distributed over the entire project area and roadway network. In addition, off-road construction equipment and heavy-duty diesel trucks are subject to CARB Airborne Toxic Control Measures, which will reduce DPM emissions from these fleets over time. More specifically, APM-AIR-01 will reduce equipment idling time and APM-AIR-04 will require the use of lower-emitting equipment using Tier 2 engines at minimum or a lower horsepower engine. In addition, APMs AIR-02, AIR-03, and AIR-05 would be implemented to reduce fugitive dust emissions. Moreover, since construction activities at any given location will be short-term and would move along the various alignments linearly, construction activities would not expose sensitive receptors to substantial pollutant concentrations as construction activities and emissions would not occur in any one place for an extended period of time. Accordingly, identified impacts would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

Operation

Once operational, the project would not create any air emissions beyond those associated with maintenance and repair of the project. Operations and maintenance would require routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks, similar to those currently administered by SDG&E for the existing facilities. These activities would not increase in duration, intensity, or frequency with implementation of SDG&E's proposed project and would not exceed the significance thresholds identified above. Moreover, since operation and maintenance activities at any given location will be short-term, emissions associated with these activities would not expose sensitive receptors to substantial pollutant concentrations and therefore would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

D.3.4 Forest Service Proposed Actions

Environmental Setting/Affected Environment

Sections D.3.1 and D.3.2 describe the existing air quality setting associated with proposed project. Each of the Forest Service Proposed Action alternatives would be in the same air basin as SDG&E's proposed project; therefore, the environmental setting is the same as that identified in Sections D.3.1 and D.3.2 for SDG&E's proposed project.

D.3.4.1 TL626 Alternative Routes

Options 1 and 2 SDG&E Proposed Overhead Alignments Through/Around Inaja and Cosmit Reservation Lands

Environmental Effects

Impact AIR-1: Construction would temporarily increase exhaust emissions of criteria pollutants along the proposed alignments identified under options 1 and 2. Construction activities, worker crews, construction schedule, and operational activities would increase due to the development of a new ROW under Option 1 (5.5 miles) and Option 2 (5.6 miles), and the requirement to grade new access along these alignments compared to reconstruction of a 3.7-mile segment of TL626 in place as proposed. Because SDG&E's proposed project would generate construction-related emissions over the significance thresholds, as shown in Table D.3-6, Options 1 and 2 would result in an incremental increase in adverse and unavoidable impacts associated with VOC, NO_x, CO, and $PM_{2.5}$ emissions. APM AIR-01 through APM AIR-05 would be implemented to reduce emissions; however, VOC, NO_x, CO, and $PM_{2.5}$ emissions would remain above the thresholds after implementation of applicable APMs under this alternative. Impacts associated with VOC, NO_x, CO, and $PM_{2.5}$ emissions would be adverse under NEPA, and would be considered significant and unavoidable under CEQA (Class I). All other impacts for criteria pollutants and toxic air contaminants would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

Impacts AIR-2 through AIR-5: Impacts AIR-2 through AIR-5 would reflect impact findings similar to those discussed in Section D.3.3.3 for SDG&E's proposed project.

Option 3 Partial Underground Relocation in Boulder Creek Road

Environmental Effects

Impact AIR-1: The additional trenching activity and soil disturbance required to underground would increase construction-generated emissions for criteria pollutants when compared to SDG&E's proposed project. Increased emissions would result from both trenching equipment emissions and an increase in fugitive dust associated with an increase in disturbance area. Increased disturbance would result from the estimated 10- to 12-foot-wide construction area required over the 11.4-mile underground segment identified in Option 3a compared to reconstruction of a 4.9-mile segment in place as proposed, or the 6.3-mile underground segment identified under Option 3b compared to reconstruction of a 3.2-mile segment in place as proposed. In addition, a 1-mile segment overland alignment would be constructed to interconnect into the existing TL626 alignment under both Options 3a and 3b. Because SDG&E's proposed

project would generate construction-related emissions over the significance thresholds, as shown in Table D.3-6, Option 3 would result in an incremental increase in adverse and unavoidable impacts associated with VOC, NO_x, CO, and $PM_{2.5}$ emissions. APM AIR-01 through APM AIR-05 would be implemented to reduce emissions; however, VOC, NO_x, CO, and $PM_{2.5}$ emissions would remain above the thresholds after implementation of applicable APMs under this alternative. Impacts associated with VOC, NO_x, CO, and $PM_{2.5}$ emissions would be adverse under NEPA, and would be considered significant and unavoidable under CEQA (Class I). All other impacts for criteria pollutants and toxic air contaminants would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

Impacts AIR-2 through AIR-5: Impacts AIR-2 through AIR-5 would reflect impact findings previously discussed in Section D.3.3.3 for SDG&E's proposed project. Operational impacts associated with the undergrounding portions of TL626 in Boulder Creek Road (Impact AIR-2) would differ marginally from SDG&E's proposed project, as undergrounding a portion of TL626 would reduce operational activities along this segment; therefore, impacts would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

Although construction activities due to additional heavy equipment for tasks such as trenching would generate increased emissions when compared to SDG&E's proposed project, exhaust emissions—as they are relevant to general conformity requirements—are so far below the thresholds for SDG&E's proposed project that changes in construction equipment would not be substantial as to generate emissions that would exceed the significance thresholds (Table D.3-7, Impact AIR-3). Therefore, impacts would not be considered adverse under NEPA and would remain less than significant under CEQA (Class III). This alternative would be in compliance with all applicable air quality plans (Impact AIR-4). This alternative would not conflict with local air quality attainment or maintenance plans; therefore, this alternative would not result in an adverse impact under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

Under this alternative, undergrounding activities could occur near additional sensitive receptors near Boulder Creek Road (Impact Air-5); however, construction activities would not expose sensitive receptors to substantial pollutant concentrations as construction activities and emissions would not occur in any one place for an extended period of time. Accordingly, identified impacts would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III). Operations and maintenance activities would not expose sensitive receptors to substantial pollution concentrations, and therefore would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

Option 4 Overhead Relocation along Boulder Creek Road

Environmental Effects

Impact AIR-1: While the rerouted portion of TL626 under Option 4 would be placed along an existing road ROW requiring no new access, construction activities would marginally increase due to the overall greater disturbance area resulting from the longer alignment under Option 4 (4.7 miles longer). Because SDG&E's proposed project would generate construction-related emissions over the significance thresholds, as shown in Table D.3-6, Option 4 would result in an incremental increase in adverse and unavoidable impacts associated with VOC, NO_x, CO, and $PM_{2.5}$ emissions. APM AIR-01 through APM AIR-05 would be implemented to reduce emissions; however, VOC, NO_x, CO, and $PM_{2.5}$ emissions would remain above the thresholds after implementation of applicable APMs under this alternative. Impacts associated with VOC, NO_x, CO, and $PM_{2.5}$ emissions would be adverse under NEPA, and would be considered significant and unavoidable under CEQA (Class I). All other impacts for criteria pollutants and toxic air contaminants would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

Impacts AIR-2 through AIR-5: Impacts AIR-2 through AIR-5 would reflect impact findings previously discussed in Section D.3.3.3 for SDG&E's proposed project.

Option 5 Reroute and Undergrounding around Inaja Picnic Area

Environmental Effects

Impact AIR-1: The rerouted portion of TL626 under Option 5 would marginally increase construction activities due to the less than 0.5 mile overland reroute and 400-foot underground segment within an existing parking lot. In addition, increased helicopter use would be required to construct the new poles located in steep terrain. This additional activity would~~, however,~~ increase construction-generated emissions for criteria pollutants when compared to SDG&E's proposed project. Because SDG&E's proposed project would generate construction-related emissions over the significance thresholds, as shown in Table D.3-6, this alternative would result in an incremental increase in VOC, NO_x, CO, and $PM_{2.5}$ emissions associated with trenching activities related to undergrounding the electric lines and increased helicopter use. Identified impacts would be unavoidable and adverse under NEPA, as the significance thresholds would be exceeded. APM AIR-01 through APM AIR-05 would be implemented to reduce emissions; however, VOC, NO_x, CO, and $PM_{2.5}$ emissions would remain above the thresholds after implementation of applicable APMs under this alternative. Impacts associated with VOC, NO_x, CO, and $PM_{2.5}$ emissions would be adverse under NEPA, and would be considered significant and unavoidable under CEQA (Class I). All other impacts for criteria pollutants and toxic air

contaminants would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

Impacts AIR-2 through AIR-5: Although an increase in helicopter use may result during maintenance activities, the increase is not anticipated to be substantial; therefore, similar to SDG&E's proposed project, operations and maintenance would not exceed the significance thresholds. Impacts AIR-2 through AIR-5 would reflect similar impact findings previously discussed in Section D.3.3.3 for SDG&E's proposed project.

D.3.4.2 C157 Partial Relocation to Avoid Designated Wilderness

Environmental Effects

Option 1 SDG&E Proposed Alignment between Two Wilderness Areas

Option 2 City of San Diego Modified Alignment

Impact AIR-1: Impact AIR-1 would reflect impact findings previously discussed in Section D.3.3.3 for SDG&E's proposed project. As such, construction activities, worker crews, construction schedule, and operational activities would essentially be the same as the proposed replacement of C157 as well as the project as a whole. Impacts associated with temporary construction impacts to air quality would be unavoidable and adverse under NEPA for VOC, NO_x, CO, and $PM_{2.5}$. APM AIR-01 through APM AIR-05 have been provided; however, the identified impact cannot be mitigated. Under CEQA, impacts would be significant and cannot be mitigated to a level that is considered less than significant (Class I). All other impacts for criteria pollutants and toxic air contaminants would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

Impacts AIR-2 through AIR-5: Impacts AIR-2 through AIR-5 would reflect impact findings previously discussed in Section D.3.3.3 for SDG&E's proposed project.

D.3.4.3 C440 Mount Laguna Underground Alternative

Impact AIR-1: Construction activities would increase from SDG&E's proposed project as open trenching operations would be required for undergrounding an additional 14.3 miles of C440 within existing roads when compared to SDG&E's proposed project. This additional trenching activity would increase construction-generated emissions for criteria pollutants when compared to SDG&E's proposed project, resulting from both trenching equipment emissions and an increase in fugitive dust levels. Because SDG&E's proposed project would generate construction-related emissions over the significance thresholds, as shown in Table D.3-6, this alternative would result in an incremental increase in adverse and unavoidable impacts

associated with VOC, NO_x, CO, and $PM_{2.5}$ emissions. APM AIR-01 through APM AIR-05 would be implemented to reduce emissions; however, VOC, NO_x, CO, and $PM_{2.5}$ emissions would remain above the thresholds after implementation of applicable APMs under this alternative. Impacts associated with VOC, NO_x, CO, and $PM_{2.5}$ emissions would be adverse under NEPA and would be considered significant and unavoidable under CEQA (Class I). All other impacts for criteria pollutants and toxic air contaminants would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

Impacts AIR-2 through AIR-5: Impacts AIR-2 through AIR-5 would reflect impact findings previously discussed in Section D.3.3.3 for SDG&E's proposed project. Operational impacts associated with the undergrounding portions of C440 (Impact AIR-2) would differ marginally from SDG&E's proposed project, as undergrounding portions of C440 would reduce operational activities along these segments; therefore, impacts would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

Although construction activities due to additional heavy equipment for tasks such as trenching could potentially generate increased emissions when compared to SDG&E's proposed project, exhaust emissions—as they are relevant to general conformity requirements—are so far below the thresholds for SDG&E's proposed project that changes in construction equipment would not be substantial as to generate emissions that would exceed the significance thresholds (Table D.3-7, Impact AIR-3). Therefore, impacts would not be considered adverse under NEPA and would remain less than significant under CEQA (Class III). This alternative would be in compliance with all applicable air quality plans (Impact AIR-4). This alternative would not conflict with local air quality attainment or maintenance plans; therefore, this alternative would not result in an adverse impact under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

Under this alternative, undergrounding activities could occur near additional sensitive receptors in and around the Laguna Mountain Recreation Area and in the Pine Valley area (Impact Air-5); however, construction activities would not expose sensitive receptors to substantial pollutant concentrations as construction activities and emissions would not occur in any one place for an extended period of time. Accordingly, identified impacts would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III). Operations and maintenance activities would not expose sensitive receptors to substantial pollution concentrations; therefore, they would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

D.3.5 BIA Proposed Action

Environmental Effects

Impact AIR-1: Construction activities would increase from SDG&E's proposed project as open trenching operations would be required for undergrounding a portion of TL682 on Tribal lands. This additional trenching activity and soil disturbance would increase construction-generated emissions for criteria pollutants when compared to SDG&E's proposed project, resulting from both trenching equipment emissions and an increase in fugitive dust levels. Because SDG&E's proposed project would generate construction-related emissions over the significance thresholds, as shown in Table D.3-6, this alternative would result in an incremental increase in VOC, NO_x, CO, and $PM_{2.5}$ emissions associated with trenching activities related to undergrounding the electric lines. Identified impacts would be unavoidable and adverse under NEPA, as the significance thresholds would be exceeded. APM AIR-01 through APM AIR-05 would be implemented to reduce emissions; however, VOC, NO_x, CO, and $PM_{2.5}$ emissions would remain above the thresholds after implementation of applicable APMs under this alternative. Impacts associated with VOC, NO_x, CO, and $PM_{2.5}$ emissions would be adverse under NEPA, and would be considered significant and unavoidable under CEQA (Class I). All other impacts for criteria pollutants and toxic air contaminants would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

Impacts AIR-2 through AIR-5: Impacts AIR-2 through AIR-5 would reflect impact findings previously discussed in Section D.3.3.3 for SDG&E's proposed project.

D.3.6 Additional Alternatives

Environmental Setting/Affected Environment

Sections D.3.1 and D.3.2 describe the existing air quality setting associated with SDG&E's proposed project. Each of the additional alternatives considered would be in the same air basin as SDG&E's proposed project; therefore, the environmental setting is the same as that identified in Sections D.3.1 and D.3.2 for SDG&E's proposed project.

D.3.6.1 Partial Removal of Overland Access Roads

Environmental Effects

Impact AIR-1: Impact AIR-1 would reflect impact findings previously discussed in Section D.3.3.3 for SDG&E's proposed project. As such, construction activities, worker crews, construction schedule, and operational activities would essentially be the same as SDG&E's

proposed project as well as the project as a whole. Impacts associated with temporary construction impacts to air quality would be unavoidable and adverse under NEPA for VOC, NO_x, CO, and $PM_{2.5}$. APM AIR-01 through APM AIR-05 have been provided; however, the identified impact cannot be mitigated. Under CEQA, impacts would be significant and cannot be mitigated to a level that is considered less than significant (Class I). All other impacts for criteria pollutants and toxic air contaminants would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

Impacts AIR-2 through AIR-5: Impacts AIR-2 through AIR-5 would reflect impact findings previously discussed in Section D.3.3.3 for SDG&E's proposed project as the construction of the transmission lines and circuits as proposed would still occur under this alternative. Although an increase in helicopter use may result during operations, the increase is not anticipated to be substantial; therefore, similar to SDG&E's proposed project, operations and maintenance would not exceed the significance thresholds (Impact AIR-2); the annual emissions of VOC and NO_x would not exceed the de minimis thresholds (Impact AIR-3); there would be no conflict with applicable air quality plans (Impact AIR-4); and no new sensitive receptors would be exposed to air quality impacts (Impact AIR-5). Therefore, this alternative would not result in adverse impacts under NEPA, and under CEQA, impacts would be considered less than significant (Class III).

D.3.6.2 Removal of TL626 from Service

Environmental Effects

Impact AIR-1: Impact AIR-1 would reflect impact findings previously discussed in Section D.3.3.3 for SDG&E's proposed project as removed facilities would be replaced with facilities requiring a similar disturbance footprint (approximately 12.5 miles compared to 18.8 miles as proposed) within existing electric utility ROWs where no new access would be required. While helicopter use may increase in order to construct the 3-mile loop-in of TL625, overall, construction activities, worker crews, construction schedule, and operational activities would essentially be the same as SDG&E's proposed project as well as the project as a whole (SDG&E 2012b, 2014). Impacts associated with temporary construction impacts to air quality would be unavoidable and adverse under NEPA for VOC, NO_x, CO, and $PM_{2.5}$. APM AIR-01 through APM AIR-05 have been provided; however, the identified impact cannot be mitigated. Under CEQA, impacts would be significant and cannot be mitigated to a level that is considered less than significant (Class I). All other impacts for criteria pollutants and toxic air contaminants would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

Impacts AIR-2 through AIR-5: Impacts AIR-2 through AIR-5 would reflect impact findings previously discussed in Section D.3.3.3 for SDG&E's proposed project as removed facilities would be replaced with facilities requiring a similar disturbance footprint within existing electric utility ROWs. Although an increase in helicopter use may result during operations, the increase is not anticipated to be substantial; therefore, similar to SDG&E's proposed project, operations and maintenance would not exceed the significance thresholds (Impact AIR-2); the annual emissions of VOC and NO_x would not exceed the de minimis thresholds (Impact AIR-3); there would be no conflict with applicable air quality plans (Impact AIR-4); and no new sensitive receptors would be exposed to air quality impacts (Impact AIR-5). Therefore, this alternative would not result in adverse impacts under NEPA, and under CEQA, impacts would be considered less than significant (Class III).

D.3.7 No Action Alternative

Environmental Effects

Impacts AIR-1 through AIR-5: Under the No Action Alternative, the MSUP would not be issued, and SDG&E would be required to remove the existing electric lines and facilities on CNF-managed lands as well as develop additional transmission upgrades elsewhere as described in Section C.1.4 of this EIR/EIS. While none of the facilities associated with SDG&E's proposed project would be constructed, removal of the electric lines and restoration activities within the CNF, along with the development of additional transmission lines in conformance with California ISO requirements and/or alternatives means of delivering electrical service elsewhere, would result in similar construction emissions as described in Section D.3.3, and therefore overall impacts to air quality would not be reduced. Similar to SDG&E's proposed project, impacts associated with temporary construction impacts to air quality due to removal and restoration of the project sites along with development of new electric lines elsewhere would be unavoidable and adverse under NEPA for VOC, NO_x, CO, and $PM_{2.5}$. Under CEQA, impacts would be significant and cannot be mitigated to a level that is considered less than significant (Class I). All other impacts for criteria pollutants, toxic air contaminants, operational impacts, exhaust emissions, local air quality plans, and sensitive receptors would be similar to SDG&E's proposed project and would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

D.3.8 No Project Alternative

Environmental Effects

Impacts AIR-1 through AIR-5: Under the No Project Alternative, SDG&E's proposed power line replacement projects would not be built, and the existing SDG&E electric facilities would remain; therefore, none of the construction impacts described in Section D.3.3 would occur.

Operation and maintenance of SDG&E electrical facilities would continue and include routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks and would be based on the requirements of the existing permits. These activities would not increase in duration, intensity, or frequency over existing conditions; therefore, no impacts over existing conditions to regional climate and meteorological conditions, ambient air quality, criteria pollutants, toxic air contaminants, types of emission sources, and sensitive receptors would occur.

D.3.9 Mitigation Monitoring, Compliance, and Reporting

As described in Section D.3.3.2, SDG&E has proposed APMs AIR-01 through AIR-05, which would include construction dust and emission controls, which would be implemented as part of SDG&E's proposed project to reduce impacts related to air quality (see Section B.7 of this EIR/EIS). However, VOC, NO_x, CO, and $PM_{2.5}$ emissions would remain above the thresholds after implementation of APMs AIR-01 through AIR-05. Section D.3.10 provides the residual effects.

D.3.10 Residual Unavoidable Effects

SDG&E's proposed project and alternatives (except the No Project Alternative) would result in short-term unavoidable adverse impacts during construction (Impact AIR-1). APMs provided in Section D.3.3.2 would be implemented to reduce emissions; however, VOC, NO_x, CO, and $PM_{2.5}$ emissions would remain above the thresholds after implementation of applicable APMs and cannot be avoided or reduced with mitigation or selection of an alternative, except for the No Project Alternative which eliminates Impact AIR-1 entirely. Therefore, Impact AIR-1 associated with VOC, NO_x, CO, and $PM_{2.5}$ emissions would be adverse under NEPA and would be considered significant and unavoidable under CEQA (Class I).

D.3.11 References

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D.4 BIOLOGICAL RESOURCES

This section addresses potential impacts to biological resources resulting from construction and operation of the proposed power line replacement projects along with the operations and maintenance activities proposed for authorization under the Major Special Use Permit (MSUP). Section D.4.1 provides a summary of the existing environmental setting/affected environment for biological resources in the project study area. Applicable regulations, plans, and standards are described in Section D.4.2. An analysis of potential impacts/environmental effects of San Diego Gas & Electric's (SDG&E's) proposed project and discussion of mitigation measures to lessen/reduce project effects are provided in Section D.4.3. The U.S. Forest Service (Forest Service) proposed action is described in Section D.4.4, and the Bureau of Indian Affairs (BIA) proposed action is described in Section D.4.5. Additional alternatives are presented in Section D.4.6. Section D.4.7 discusses the No Action Alternative and Section D.4.8 describes the No Project Alternative. Section D.4.9 provides mitigation monitoring, compliance, and reporting information. Section D.4.10 addresses residual effects of the project and Section D.4.11 lists the references cited in this section.

D.4.1 Environmental Setting/Affected Environment

This section summarizes the existing biological resources within SDG&E's proposed project area located in, and around, the Forest Service administrative boundary for the Cleveland National Forest (CNF) extending approximately 4.5 miles north of the U.S.–Mexico border, 14.5 miles west of the Imperial County border, 8.5 miles south of the Riverside County border, and 14.5 miles east of the City of San Diego. Biological resources include living organisms and the physical environment in which they occur. Biological resources are categorized in this report into an overview of biological resource surveys, a regional overview of the project sites (Section D.4.1.1), vegetation communities and associated wildlife (Section D.4.1.2), jurisdictional wetlands and waters (Section D.4.1.3), and special-status plant and wildlife species within the project individual component areas (Section D.4.1.4). Additional discussion includes critical habitat (Section D.4.1.5), regional wildlife corridors (Section D.4.1.6), and special habitat management areas (Section D.4.1.7).

Methodology and Assumptions

SDG&E's proposed project study area is located in the Trabuco, Palomar, and Descanso ranger districts of the CNF within Orange and San Diego counties, with the majority of the study area (including all of the proposed power line replacement projects) located within and surrounding the Palomar and Descanso ranger districts in southeastern San Diego County. The power line replacement projects study area includes private, state, BIA/tribal, Bureau of Land Management (BLM), and other public lands (see Table B-2). The construction of existing SDG&E power

lines, exclusive use roads, and related facilities within the MSUP study area have resulted in the loss of approximately 100 acres of habitat, some of which might have been previously occupied by federally listed or Regional Forester's sensitive list species (Forest Service 2009a). The biological resources impacts associated with these past actions are part of the baseline for the analysis of SDG&E's proposed project.

This section considers information included in reports prepared for SDG&E's proposed project; this information has been developed specific to this project and is presented in the SDG&E Revised Plan of Development (SDG&E 2013a); Environmental Assessment for San Diego Gas & Electric Master Special Use Permit, Cleveland National Forest, Orange and San Diego Counties, California (Forest Service 2009a); Biological Assessment (Forest Service 2006a); Biological Evaluation/Assessment (Forest Service 2006b) and updates (Forest Service 2007a, 2009b, 2009c, 2009d, 2010); Spotted Owl Conservation Strategy (Forest Service 2004); Forest Service/U.S. Fish and Wildlife Service (USFWS) correspondence (Forest Service 2006c, 2007b; USFWS 2006, 2007); Forest Service geographic information system (GIS) files (Forest Service 2012, 2013f); Technical Report for the Electric Safety and Reliability Plan Project (Chambers Group Inc. 2012a), the Arroyo Toad Focused Survey Report (Chambers Group Inc. 2011a), the California Spotted Owl Habitat Assessment and Focused Survey Report (Chambers Group Inc. 2011b), the Coastal California Gnatcatcher Focused Survey Report (Chambers Group Inc. 2011c), the Hermes Copper Butterfly Focused Survey Report (Chambers Group Inc. 2011d), the Least Bell's Vireo Focused Survey Report (Chambers Group Inc. 2011e), the Quino Checkerspot Butterfly Focused Survey Report (Chambers Group Inc. 2010), the Southwestern Willow Flycatcher Focused Survey Report (Chambers Group Inc. 2011f), the Stephens' Kangaroo Rat Focused Survey Report (Chambers Group Inc. and SJM Biological Consultants 2012~~b~~), and the Rare Plant Survey Report (Chambers Group Inc. 2012b).

The following sources were also reviewed: the California Department of Fish and Wildlife (CDFW; formerly California Department of Fish and Game [CDFG]) California Natural Diversity Database (CDFW 2013a, 2014[1]); USFWS database (USFWS 2014); the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2013); Region 5 Regional Forester's 2013 Sensitive Species Lists (for CNF; Forest Service 2013a and 2013b); Management Indicator Species (MIS) species list (Forest Service 2013c), and recommended survey areas, critical habitat designations, and conservation plans (USFWS 1997, 1998, 1999, 2000, 2002, and 2003); CDFW publications on special-status species (CDFG 2008, 2011); applicable USFWS recovery plans; the San Diego County Bird Atlas (Unitt 2004); the County of San Diego Final Multiple Species Conservation Program

[1] Follow-up review conducted for CDFW and USFWS database searches in June 2014.

(MSCP) (incorporated subarea plans), and San Diego MSCP South County Subarea (County of San Diego 1998).

Sources used for determining species special-status, biological nomenclature, life history, and ranges of species and communities include the following:

- **Wildlife:** CDFW Special Animals List (CDFG 2011); California Natural Diversity Database (CDFW 2013a, 2014); USFWS database (USFWS 2014); County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources (County of San Diego 2010), SDG&E Subregional Natural Community Conservation Plan (SDG&E Subregional NCCP) (SDG&E 1995); County of San Diego MSCP (County of San Diego 1998); CNF Management Indicator Species List Forest Service (2013a); Region 5 Regional Forester's 2013 Sensitive Animal Species Lists (for CNF; Forest Service 2013d); Biological Assessment (Forest Service 2006a); Biological Evaluation/Assessment (Forest Service 2006b) and updates (Forest Service 2007a, 2009b, 2009c, 2009d, 2010); Forest Service GIS files (Forest Service 2012); *North American Mammals* (Smithsonian Institution 2014); A Guide to the Reptiles and Amphibians of California (CaliforniaHerps.com 2013); Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in our Understanding (Crother 2008); San Diego County Bird Atlas (Unitt 2004); Check-List of North American Birds: List of the 2,083 Bird Species Known From the AOU Check-List Area (AOU 2013); Checklist of North American Butterflies Occurring North of Mexico (NABA 2001); and California Wildlife Habitat Life History Accounts and Range Maps (CDFW 2013b).
- **Plants and vegetation communities:** CDFW Special Plants List (CDFW 2013c); California Natural Diversity Database (CDFW 2013a, 2014); USFWS database (USFWS 2014); Inventory of Rare and Endangered Plants (CNPS 2013; including any revisions provided on http://www.cnps.org/inventory, accessed March 19–24, 2013); SDG&E Subregional NCCP (SDG&E 1995); County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources (County of San Diego 2010); County of San Diego MSCP (1998); Biological Assessment (Forest Service 2006a); Biological Evaluation/Assessment (Forest Service 2006b) and updates (Forest Service 2007a, 2009b, 2009c, 2009d, 2010); Forest Service GIS files (Forest Service 2013f); Region 5 Regional Forester's 2013 Sensitive Plant Species Lists (for CNF; Forest Service 2013b); BLM sensitive species list (BLM 2012); *The Jepson Manual: Higher Plants of Californi*a (Hickman 1996); *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986); and Draft Vegetation Communities of San Diego County (Oberbauer et al. 2008).

Biological Resource Surveys

The footprint surveyed was conducted for all existing and proposed facilities (Forest Service 2006a, 2006b, 2007, 2009b, 2009c, 2009d, 2010, 2013f), including the proposed power line replacement projects (Chambers Group Inc. 2012a). Forest Service field surveys of the power lines and associated facilities was conducted for the Descanso, Palomar, and Trabuco Ranger Districts. Chambers Group Inc. survey areas within the CNF crossed through Descanso, Palomar, and Trabuco ranger districts. Survey areas also intersected lands belonging to private land owners, the BLM, the Vista Irrigation District, the La Jolla Band of Luiseño Indians, and the Campo Kumeyaay Nation. Survey areas consisted of Transmission Lines (TL) TL682, TL626, TL629, TL625, and TL6923; Circuits (C) C78, C157, C449, C440, C79, and C442; access roads; temporary work spaces; and associated facilities including staging areas, stringing areas, and helicopter landing areas. Chambers Group Inc. biological surveys were conducted during the spring, summer, and fall of 2010. Spring surveys were conducted between April 20, 2010 and June 4, 2010; summer surveys were conducted between June 7, 2010 and June 30, 2010; and fall surveys were conducted between August 2, 2010 and August 17, 2010, and between September 7, 2010 and September 15, 2010. Focused surveys were limited to Forest Service listed species. Plant areas not surveyed on foot were mapped according to coloration patterns on the aerial photographs and adjacent similar habitats.

Vegetation communities were identified, qualitatively described, and mapped onto an aerial photograph. The mapped plant communities were digitized in a geographic information system (GIS), and acreages were calculated based on the vegetation types within the buffer of each TL or circuit (Table D.4-1 and Table D.4-2). Areas not surveyed on foot were mapped according to coloration patterns on the aerial photographs and adjacent similar habitats. Although Chambers Group (2012a, c) originally mapped plant communities in accordance with Holland (1986) or Gray and Bramlet (1992), vegetation communities here are described based on San Diego County descriptions (Oberbauer et al. 2008). Plant nomenclature follows that of *The Jepson Manual: Higher Plants of California* (Hickman 1996). The sensitive plants with a potential to occur within the survey areas are described below.

Chambers Group Inc. (2012a, 2012c) noted all plant species observed on the site. Chambers Group Inc. surveyed project areas for 39 specific sensitive plant species that had a potential to occur. Focused rare plant surveys were conducted between April 20, 2010, and June 4, 2010; between June 7, 2010, and June 30, 2010; and between August 2, 2010, and September 15, 2010. Focused rare plant surveys were performed in accordance with survey protocols set forth by the CDFW, the California Native Plant Society (CNPS 2001), and USFWS Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants (USFWS 2000). The Biological Technical Report and Rare Plant Surveys conducted by

Chambers Group Inc. (2012a, 2012c) reports, combined with Forest Service data (Forest Service 2006a, 2006b, 2007, 2009b, 2009c, 2009d, 2010, 2013f) indicate 98 plant species have the potential to occur. An additional 96 (for a combined total of 194) special-status species with some potential to occur were identified by Dudek in 2013 (as described in Tables D.4-3 and D.4-4). Of these additional 96 species, 2 were previously detected during the Chambers Group's (2012b) rare plant survey efforts and none were additionally detected by Forest Service efforts (Forest Service 2006a, 2006b, 2007a, 2009b, 2009c, 2009d, 2010, 2013f). Chambers Group Inc. did not survey certain areas due to dense vegetation, land management requirements, locked gates, location on private properties, sensitive utility customers, unimproved access roads, and routine Forest Service maintenance work. Otherwise, all accessible areas were surveyed for rare plants throughout all TL/Circuits (Chambers Group Inc. 2012b).

Prior to conducting focus surveys, Chambers Group evaluated suitable habitat areas to determine where surveys should be conducted. Combined, these analyses included investigating modeled habitat for threatened and endangered species,[2] as well as helicopter surveys of the project area. Surveys for arroyo toad (*Anaxyrus californicus*) were conducted within the areas of Lake Henshaw, Ramona to Santa Ysabel, Boulder Creek Road, Horsethief Canyon, Loveland Reservoir, Barrett Lake, Descanso, and Potrero (Chambers Group Inc. 2011a). Surveys for Coastal California Gnatcatcher (*Polioptila californica californica*) were conducted within the areas of the La Jolla Indian Reservation, Vista Ramona Road/Rutherford Road, Loveland Reservoir, east of Bee Valley Road near Dulzura Creek, and Barrett Lake area along Skye Valley Road (Chambers Group Inc. 2011c). Hermes copper butterfly (*Hermelycaena hermes*) surveys were conducted within the areas of Boulder Creek Road, Japatul Valley Road, Lyons Valley Road, Barrett Lake Area, Cottonwood Creek, and Mount Potrero (Chambers Group Inc. 2011d). Least Bell's vireo (*Vireo bellii pusillus*) surveys were conducted within the areas of San Luis Rey River – Lake Henshaw, Descanso, Loveland Reservoir, Barrett Lake, Kitchen Creek, Cottonwood Creek, Pine Valley Creek, and Boulder Creek (Chambers Group Inc. 2011e). Quino checkerspot butterfly (*Euphydryas editha quino*) surveys were conducted at specified locations within the project area (see Chambers Group Inc. 2010). Stephens' kangaroo rat (*Dipodomys stephensi*) trapping surveys were conducted in the areas of Moreno Lake, La Posta, Lake Henshaw, and Julian (Eagle Creek) (Chambers Group Inc. 2012b). California spotted owl (*Strix occidentalis occidentalis*) surveys were conducted in the general areas of West Lake Henshaw, Loveland Reservoir, and Lyons Valley (Chambers Group Inc. 2011b). Southwestern willow flycatcher (*Empidonax traillii extimus*) surveys were conducted in the areas of San Luis Rey

[2] Threatened and endangered (TE) modeled habitat developed by the Forest Service and USFWS.

River – Lake Henshaw, Descanso, Loveland Reservoir, Barrett Lake, Kitchen Creek, Cottonwood Creek, and Pine Valley Creek (Chambers Group Inc. 2011f).

During biological surveys, assessment of potential jurisdictional wetlands and waters of the United States for all project areas was not conducted. A formal jurisdictional delineation would be required prior to project implementation by the various regulatory agencies to determine if permitting would be necessary (as described further below).

D.4.1.1 Regional Overview

Trabuco Ranger District

The northernmost section of the CNF is Trabuco Ranger District (Trabuco). Trabuco lies at the boundary of Orange and Riverside counties and incorporates the Santa Ana Mountain Range (Forest Service 2005a). Elevations within Trabuco ranges from approximately 1,220 feet above mean sea level (amsl) at the San Juan Fire Station to approximately 5,687 feet amsl at the Santiago Peak (Forest Service 2013d) with very steep topography and over 90% of landscape covered in chaparral (Forest Service 2005b). Please see the Forest Service's CNF Land Management Plan (LMP) (Forest Service 2005a, 2005c, 2005d) for additional details on the Trabuco Ranger District.

Palomar Ranger District

Located between the Trabuco and Descanso ranger districts, the Palomar Ranger District (Palomar) is entirely within San Diego County. Elevations within Palomar range from 750 feet amsl at El Capitan Lake to 6,140 feet amsl at High Point (Forest Service 2013a). This district was named for the Palomar Mountains located in the middle of the district with a peak at 6,126 feet (Forest Service 2005b). Palomar intersects the San Dieguito, San Luis Rey, and Santa Margarita watersheds. Please see the CNF LMP (Forest Service 2005a, 2005c, 2005d) for additional details on the Palomar Ranger District.

Descanso Ranger District

The southernmost district in CNF is the Descanso Ranger District (Descanso) Descanso is located in southern San Diego County and is intersected east to west by Interstate 8 (I-8). Elevations within Descanso range from 651 feet amsl at El Capitan Dam to 6,271 feet amsl at Monument Peak (Forest Service 2013a). Descanso intersects the San Diego, Sweetwater, Otay, Anza Borrego, and Tijuana watersheds. Please see the CNF LMP (Forest Service 2005a, 2005c, 2005d) for additional details on the Descanso Ranger District.

D.4.1.2 Vegetation Communities and Associated Wildlife Habitats

This section addresses the vegetation communities and associated wildlife habitat that occur within the proposed power line replacement projects area. Topography along the proposed power line replacement projects range from relatively flat pasturelands to steep, rocky cliffs in higher mountain areas. The majority of the surveyed areas were characterized as rolling foothills and canyons. Tables D.4-1 and D.4-2 summarize the existing acreages of vegetation communities[3]. Vegetation communities that are considered sensitive include all wetland and riparian communities and the sensitive communities identified in the List of Terrestrial Natural Communities Recognized by the California Natural Diversity Database (CNDDB) (CDFG 2010). Vegetation communities along each of the proposed power line replacement projects are shown on Figures D.4-1a through D.4-1e. Community vegetation type is followed by County of San Diego's Vegetation Community Element Code (Oberbauer et al. 2008). In addition to the vegetation communities observed for the power line replacement projects, Table D.4-14~~5~~d provides vegetation communities that were observed along lines not part of the power line replacement projects to be covered under the MSUP. Table D.4-14~~5~~d includes the same vegetation communities as described for the power line replacement projects with the exception of Redshank Chaparral (37300; also occurring along C441, C212) and Great Basin sage scrub (35200; also occurring along TL629, TL6923, C441, C212, C449, C440, C1243).

Table D.4-1
Existing Vegetation Communities and Land Cover Power Line Replacement Projects

Transmission Line (TL) / Circuit (C)	Vegetation Communities (County Code)	Acres
TL682 (see Figure D.4-1a)	01 Mixed Oak Woodland (77000)	194.2
	03 Southern Riparian Forest (61300)	20.8
	04 Oak Savanna (71161)[1]	2.3
	05 Southern Mixed Chaparral (37120)	178.0
	07 Diegan Coastal Sage Scrub (32500)	65.3
	12 Non-native Grassland (42200)	242.6
	13 Pastureland/Cultivated Agriculture (18300)	74.1
	14 Urban and Developed/Ornamental Landscaping (12000)	35.6
	15 Disturbed (Ruderal/Barren) (11300)	3.0
	Total	**815.90**
TL626 (see Figure D.4-1b)	01 Mixed Oak Woodland (77000)	96.3
	03 Southern Riparian Forest (61300)	71.8

[3] Acreage represents existing vegetation communities in all areas surveyed, which consists of a 150-foot buffer around each transmission/distribution pole centerline and extended to a 250-foot radius around each pole where the overhead line makes an angle greater than 2 degrees (Chambers Group Inc. 2012a; SDG&E 2012).

Table D.4-1
Existing Vegetation Communities and Land Cover Power Line Replacement Projects

Transmission Line (TL) / Circuit (C)	Vegetation Communities (County Code)	Acres
	04 Oak Savanna[1] (71161)	83.1
	05 Southern Mixed Chaparral (37120)	546.1
	10 Freshwater Seep/Open Water[2] (45400/64100)	4.4
	12 Non-native Grassland (42200)	58.3
	14 Urban and Developed/Ornamental Landscaping (12000)	28.8
	15 Disturbed (Ruderal/Barren) (11300)	1.2
	Total	**890.0**
TL629 (see Figure D.4-1c)	01 Mixed Oak Woodland (77000)	34.1
	03 Southern Riparian Forest (61300)	66.4
	04 Oak Savanna[1] (71161)	119.5
	05 Southern Mixed Chaparral (37120)	291.0
	06 Chamise Chaparral (37200)	150.1
	07 Diegan Coastal Sage Scrub (32500)	48.5
	08 Semi-Desert Chaparral (37400)	206.7
	10 Freshwater Seep/Open Water[2] (45400/64100)	0.5
	11 Native Grassland (42100)	14.3
	12 Non-native Grassland (42200)	31.3
	13 Pastureland/Cultivated Agriculture (18300)	62.8
	14 Urban and Developed/Ornamental Landscaping (12000)	151.7
	15 Disturbed (Ruderal/Barren) (11300)	28.8
	Total	**1,205.7**
TL625 (see Figure D.4-1d)	01 Mixed oak Woodland (77000)	109.2
	03 Southern Riparian Forest (61300)	4.9
	04 Oak Savanna[1] (71161)	4.5
	05 Southern Mixed Chaparral (37120)	369.0
	06 Chamise Chaparral (37200)	119.3
	07 Diegan Coastal Sage Scrub (32500)	114.2
	10 Freshwater Seep/Open Water[2] (45400/64100)	2.0
	11 Native Grassland (42100)	15.0
	12 Non-native Grassland (42200)	1.7
	13 Pastureland/Cultivated Agriculture (18300)	50.2
	14 Urban and Developed/Ornamental Landscaping (12000)	99.8
	15 Disturbed (Ruderal/Barren) (11300)	24.6
	16 Scrub Oak Chaparral (37900)	0.1
	Total	**914.5**
TL6923 (see Figure D.4-1e)	01 Mixed Oak Woodland (77000)	5.8
	03 Southern Riparian Forest (61300)	4.3
	04 Oak Savanna[1] (71161)	6.6
	05 Southern Mixed Chaparral (37120)	249.6
	06 Chamise Chaparral (37200)	79.1

Table D.4-1
Existing Vegetation Communities and Land Cover Power Line Replacement Projects

Transmission Line (TL) / Circuit (C)	Vegetation Communities (County Code)	Acres
	07 Diegan Coastal Sage Scrub (32500)	130.0
	10 Freshwater Seep/Open Water[2] (45400/64100)	4.5
	11 Native Grassland (42100)	30.4
	12 Non-native Grassland (42200)	12.7
	14 Urban and Developed/Ornamental Landscaping (12000)	14.0
	Total	**537.0**
C78 (see Figure D.4-1d)	05 Southern Mixed Chaparral (37120)	15.1
	07 Diegan Coastal Sage Scrub (32500)	43.3
	11 Native Grassland (42100)	3.8
	14 Urban and Developed/Ornamental Landscaping (12000)	1.1
	Total	**63.3**
C157 (see Figure D.4-1d)	01 Mixed Oak Woodland (77000)	11.5
	03 Southern Riparian Forest (61300)	20.3
	05 Southern Mixed Chaparral (37120)	122.1
	08 Semi-Desert Chaparral (37400)	52.6
	10 Freshwater Seep/Open Water[2] (45400/64100)	0.3
	11 Native Grassland (42100)	56.7
	12 Non-native Grassland (42200)	6.0
	13 Pastureland/Cultivated Agriculture (18300)	5.4
	14 Urban and Developed/Ornamental Landscaping (12000)	0.9
	Total	**275.8**
C449 (see Figure D.4-1c)	01 Mixed Oak Woodland (77000)	31.1
	03 Southern Riparian Forest (61300)	10.8
	04 Oak Savanna[1] (71161)	52.2
	05 Southern Mixed Chaparral (37120)	98.6
	08 Semi-Desert Chaparral (37400)	4.4
	12 Non-native Grassland (42200)	6.6
	14 Urban and Developed/Ornamental Landscaping (12000)	5.7
	15 Disturbed (Ruderal/Barren) (11300)	3.9
	Total	**213.3**
C440 (see Figure D.4-1c)	01 Mixed Oak Woodland (77000)	4.8
	02 Montane Forest[3] (84000/85000)	527.5
	03 Southern Riparian Forest (61300)	9.5
	04 Oak Savanna[1] (71161)	3.6
	05 Southern Mixed Chaparral (37120)	190.8
	06 Chamise Chaparral (37200)	57.5
	07 Diegan Coastal Sage Scrub (32500)	9.4
	09 Wet montane Meadow (45110)	97.0
	10 Freshwater Seep/Open Water[2] (45400/64100)	0.0
	11 Native Grassland (42100)	3.5

Table D.4-1
Existing Vegetation Communities and Land Cover Power Line Replacement Projects

Transmission Line (TL) / Circuit (C)	Vegetation Communities (County Code)	Acres
	12 Non-native Grassland (42200)	18.5
	13 Pastureland/Cultivated Agriculture (18300)	65.5
	14 Urban and Developed/Ornamental Landscaping (12000)	26.6
	15 Disturbed (Ruderal/Barren) (11300)	14.3
	Total	**1,028.5**
C79 (see Figure D.4-1b)	02 Montane Forest[3] (84000/85000)	52.5
	05 Southern Mixed Chaparral (37120)	98.4
	14 Urban and Developed/Ornamental Landscaping (12000)	0.7
	Total	**151.6**
C442 (see Figure D.4-1c)	01 Mixed Oak Woodland (77000)	62.8
	02 Montane Forest[3] (84000/85000)	27.2
	05 Southern Mixed Chaparral (37120)	181.8
	07 Diegan Coastal Sage Scrub (32500)	8.3
	10 Freshwater Seep/Open Water[2] (45400/64100)	2.9
	14 Urban and Developed/Ornamental Landscaping (12000)	1.3
	15 Disturbed (Ruderal/Barren) (11300)	1.7
	Total	**286.0**

Source: Chambers Group Inc. 2012a; SDG&E 2012
Notes: Calculation does not include paved roads. Forest Service (2006b) also includes the detection of Great Basin sage scrub (35200) along the following lines as part of the power line replacement projects: C440, C449, and TL629; however, acreages are not provided.
1 The assumed County Code analog is Open Coast Live Oak Woodland.
2 This category includes two County Codes: 45400 – freshwater seep and 64100 – open water.
3 The assumed County Code analog is Lower Montane Coniferous Forest.

Table D.4-2
Existing Vegetation Communities and Land Cover Type Totals

Power Line Replacement Projects Vegetation Communities	TL682	TL626	TL629	TL625	TL6923	C78	C157	C449	C440	C79	C442	Total
01 Mixed Oak Woodland (77000)	194.2	96.3	34.1	109.2	5.8	0.0	11.5	31.1	4.8	0.0	62.8	**549.8**
02 Montane Forest[1] (84000/85000)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	527.5	52.5	27.2	**607.2**
03 Southern Riparian Forest (61300)	20.8	71.8	66.4	4.9	4.3	0.0	20.3	10.8	9.5	0.0	0.0	**208.8**
04 Oak Savanna[2] (71161)	2.3	83.1	119.5	4.5	6.6	0.0	0.0	52.2	3.6	0.0	0.0	**271.8**
05 Southern Mixed Chaparral (37120)	178.0	546.1	291.0	369.0	249.6	15.1	122.1	98.6	190.8	98.4	181.8	**2,340.5**
06 Chamise Chaparral (37200)	0.0	0.0	150.1	119.3	79.1	0.0	0.0	0.0	57.5	0.0	0.0	**406.0**
07 Diegan Coastal Sage Scrub (32500)	65.3	0.0	48.5	114.2	130.0	43.3	0.0	0.0	9.4	0.0	8.3	**419.0**
08 Semi-Desert Chaparral (37400)	0.0	0.0	206.7	0.0	0.0	0.0	52.6	4.4	0.0	0.0	0.0	**263.7**
09 Wet montane Meadow (45110)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	97.0	0.0	0.0	**97.0**
10 Freshwater Seep/Open Water[3] (45400/64100)	0.0	4.4	0.5	2.0	4.5	0.0	0.3	0.0	0.0	0.0	2.9	**14.6**
11 Native Grassland (42100)	0.0	0.0	14.3	15.0	30.4	3.8	56.7	0.0	3.5	0.0	0.0	**123.7**
12 Non-native Grassland (42200)	242.6	58.3	31.3	1.7	12.7	0.0	6.0	6.6	18.5	0.0	0.0	**377.7**
13 Pastureland/Cultivated Agriculture (18300)	74.1	0.0	62.8	50.2	0.0	0.0	5.4	0.0	65.5	0.0	0.0	**258**
14 Urban and Developed/Ornamental Landscaping (12000)	35.6	28.8	151.7	99.8	14.0	1.1	0.9	5.7	26.6	0.7	1.3	**366.2**
15 Disturbed (Ruderal/Barren) (11300)	3.0	1.2	28.8	24.6	0.0	0.0	0.0	3.9	14.3	0.0	1.7	**77.5**
16 Scrub Oak Chaparral (37900)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.1**
Total	**815.90**	**890.0**	**1,205.7**	**914.5**	**537.0**	**63.3**	**275.8**	**213.3**	**1,028.5**	**151.6**	**286.0**	**6,381.6**

Source: Chambers Group Inc. 2012a; SDG&E 2012.
Notes:
1 The assumed County Code analog is Lower Montane Coniferous Forest.
2 The assumed County Code analog is Open Coast Live Oak Woodland.
3 This category includes 2 County Codes 45400 – freshwater seep and 64100 – open water

Mixed Oak Woodland (77000)

Mixed oak woodlands are typically found at higher elevations where more than one oak (*Quercus* sp.) species is dominant. These communities can range from pure, closed canopies of oaks to mixtures of conifer and broadleaf trees to open savannas. These communities can be found in canyon bottoms and steep, north-facing slopes with various soil types. Common species include California live oak (*Quercus agrifolia*), canyon live oak *(Q. chrysolepis),* California black oak (*Q. kelloggii*), and Engelmann oak (*Quercus engelmannii)*. Engelmann oak is considered an MIS for oak regeneration in the CNF. This community description type is based on the County of San Diego's mixed oak woodland (Element Code 77000) (Oberbauer et al. 2008).

Montane Forest (84000/85000)

Montane forests may be composed of lower or upper montane coniferous forests are dominated by various tall evergreen coniferous species. Lower montane coniferous forests are typically found between 2,500 and 8,000 feet amsl in elevation, and may be composed of various coniferous species such as pine (*Pinus* spp.), cypress (*Cupressus* spp.), fir (*Abies* spp.), and bigcone Douglas-fir, the latter being an MIS for bigcone Douglas-fir forests in the CNF (Forest Service 2013c). Upper montane coniferous forests are typically found between 5,000 and 9,000 feet amsl in elevation. This community is categorized as Jeffrey pine forests and consists of tall, open forests dominated by Jeffrey pines (*Pinus jeffreyi*) with sparse understories. This community is typically on dry, cold sites especially on well-drained slopes, ridges, or cold air accumulation basins. These community types are based on the County of San Diego's lower montane forest and upper montane forest (Element Code 84000/85000) (Oberbauer et al. 2008).

Southern Riparian Forest (61300)

Southern riparian forests are typically found along streams and rivers. Southern riparian forest is characterized by tall, open, broadleaved riparian species. Willows and riparian shrubs typically dominate the understory. This community type is based on the County of San Diego's southern riparian forest (Element Code 61300) (Oberbauer et al. 2008). Common species include willows (*Salix* spp.), cottonwoods (*Populus* spp.), sycamores (*Platanus racemosa*), alders (*Alnus* spp.), and many wetland plants. Many dominant species require moist soil for establishment.

Oak Savanna (71161)

Chambers Group (2012a) previously described this community type as consisting of "annual grasses or perennial needlegrass (*Nassella* spp.) species with widely scattered trees that consist of less than 10% to 20% of the canopy cover. Oak Savanna, particularly in San Diego County, is mainly coast live oak (*Quercus agrifolia*). The Oak Savanna community usually integrates with

Oak Woodlands (Gray and Bramlet 1992). The County of San Diego does not include a category for "oak savanna." Due to the open description of this community, the closest County of San Diego code is "open coast live oak woodland" (Element Code 71161)

Open coast live oak woodlands are typically found along drainages at desert margins on north-facing slopes. This community type may also be mixed with Engelmann oak. This community type has a canopy cover less than 50%. In addition, to a limited extent, California live oak is present and often co-dominant with other riparian, chaparral, or woodland types. This subtype occurs on the ecological margins of denser woodlands.

Southern Mixed Chaparral (37120)

Southern mixed chaparral communities are typically found at elevations below 3,000 feet amsl. This community is adapted to repeated fires and typically located in dry, rocky, steep slopes. In San Diego, the community is often found on north-facing slopes and typically occurs east of southern maritime chaparral and west of montane chaparral. This community is characterized by broad-leaved woody shrubs ranging from 5 to 10 feet in height. Southern mixed chaparral is dominated by scrub oak (Quercus *berberidifolia*), chamise (*Adenostoma fasiculatum*), several manzanita (*Arctostaphylos* spp.), and ceanothus (*Ceanothus* spp.) species with patches of bare soil. This community type is based on the County of San Diego's southern mixed chaparral (Element Code 37120) (Oberbauer et al. 2008).

Scrub Oak Chaparral (37900)

Scrub oak chaparral communities are typically found at elevations of up to approximately 5,000 feet amsl and may extend up to 20 feet in height. This community is composed of a dense, evergreen chaparral that is typically dominated by Nuttall's scrub oak (*Quercus dumosa*) with birchleaf mountain mahogany (*Cercocarpus betuloides*). In San Diego, scrub oak is usually the dominant species with over 50% vegetation cover. This community type is based on the County of San Diego's chamise chaparral (Element Code 37900) (Oberbauer et al. 2008).

Chamise Chaparral (37200)

Chamise chaparral communities are typically found at elevations between 2,500 to 3,000 feet amsl and range from 3 to 10 feet in height. This community is strongly dominated by chamise (*Adenostoma fasciculatum*). Chamise chaparral is a dense, drought- and fire-adapted community of woody shrubs. Mature stands are densely interwoven with little herbaceous understory. The community often develops on xeric slopes and ridges. This community type is based on the County of San Diego's Chamise Chaparral (Element Code 37200) (Oberbauer et al. 2008).

Diegan Coastal Sage Scrub (32500)

Diegan coastal sage scrub communities are typically found at elevations below 1,500 feet amsl and consist of low, soft-wood shrubs approximately 3 feet in height. Diegan coastal sage scrub is the most common type of coastal sage scrub in San Diego County. The community mostly consists of drought deciduous species such as California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasiculatum*), white sage (*Salvia apiana*), laurel sumac (*Malosma laurina*), and black sage (*Salvia mellifera*). This community type is based on the County of San Diego's Diegan Coastal Sage Scrub (Element Code 32500) (Oberbauer et al. 2008).

Semi-Desert Chaparral (37400)

Semi-desert chaparral communities are typically found at elevations from 2,000 to 5,000 feet amsl. In San Diego County, this community is found on the high desert plateaus and escarpment of the Peninsular Range. This community is similar to southern mixed chaparral but with a more open vegetation canopy and not as tall (5 to 10 feet). This community is typically dominated by broad, leathery-leaved, woody shrubs such as scrub oak, chamise, several manzanita species, and ceanothus species. Semi-desert chaparral is an open to dense assemblage of chamise, scrub oak species, ceanothus, and mountain mahogany. This community type is based on the County of San Diego's semi-desert chaparral (Element Code 37400) (Oberbauer et al. 2008).

Wet Montane Meadow (45110)

Wet montane meadows are typically found at elevations from 5,000 to 9,000 feet amsl. This community is dominated by a dense growth of sedges (*Carex* spp.), Mexican rush (*Juncus mexicanus*), deergrass (*Muhlenbergia rigens*), Rocky Mountain iris (*Iris missouriensis*), and other wetland plants. This community type may also be associated with vernal pools or seeps and other meadow habitats. This community type is based on the County of San Diego's wet montane meadow (Element Code 45110) (Oberbauer et al. 2008).

Freshwater Seep/Open Water (45400/64100)

Freshwater seeps in San Diego County are typically found at elevations ranging from 2,000 to 4,000 feet amsl. This community consists of mostly perennial herbs such as sedges and grasses. Characteristic species include sedges, rushes (*Juncus* spp.), watercress (*Nasturtium officinale*), mulefat (*Braccharis salicifolia*), dwarf checkerbloom (*Sidalcea malviflora*), and deergrass (*Muhlenbergia rigens*). Vegetation is often low growing and forms a complete cover, but may grow taller. This community type is based on the County of San Diego's Element Codes for both freshwater seep and open water (Element Codes 45400 and 64100 respectively) (Oberbauer et al. 2008).

Native Grassland (42100)

Native grasslands typically occur at elevations less than 6,000 feet amsl. This community is typically dominated by native perennial bunchgrasses such as needlegrass (*Stipa* spp.). Native and introduced annual species may grow between the perennials and may exceed the bunchgrasses in vegetative cover. Native species in this community may be low at times; however, the community may still be considered native grassland if 20% aerial cover of native species is present. This community type is based on the County of San Diego's native grassland (Element Code 42100) (Oberbauer et al. 2008).

Non-native Grassland (42200)

Non-native grasslands are typically found at elevations below 3,000 feet amsl. This community consists of a dense to sparse cover of annual grasses with flowering culms between 0.5 to 3 feet in height. Annual grasses may include oats (*Avena* sp.), bromes (*Bromus* sp.), stork's bill (*Erodium* spp.), and ryegrass (*Lolium* sp.). Non-native grassland is an herbaceous community characterized by a dense to sparse cover of annual grasses and associated with numerous native and non-native herbaceous species. In the vicinity of the project, the presence of *Avena*, *Bromus*, *Erodium*, and *Brassica* are common indicators (Oberbauer et al. 2008). This vegetation community occurs in association with disturbed areas, private properties, pastures, and fields and is based on the County of San Diego's non-native grassland (Element Code 42200) (Oberbauer et al. 2008).

Pastureland/Cultivated Agriculture (18300)

Pastureland is characterized as extensive agriculture (18300; Oberbauer et al. 2008). This community typically forms a dense habitat of nearly 100% cover. Planted fields are usually monoculture crops that require irrigation, artificial planting, and maintenance. These species include barley (*Hordeum* spp.), wild oat (*Avena* spp.), alfalfa (*Medicago* spp.), and grasses (*Cynodon* spp., *Sorghum* spp.). This community type is based on the County of San Diego's pastureland/cultivated agriculture (Element Code 18300) (Oberbauer et al. 2008).

Urban and Developed/Ornamental Landscaping (12000)

Urban/developed areas have been physically altered to an extent that native vegetation is not supported. Areas where no natural land is apparent due to debris or other situated material may also be considered urban/developed. These areas may also be characterized by unvegetated or landscaped areas with a variety of ornamental (usually non-native) plants. This community type is based on the County of San Diego's urban/developed (Element Codes 12000) (Oberbauer et al. 2008).

Disturbed (Ruderal/Barren) (11300)

Disturbed habitats are areas that have been physically disturbed and no longer recognizable as native or naturalized vegetation association. These areas may continue to retail soil substrate. If vegetation is present it is nearly entire composed of non-native vegetation, such as ornamentals or ruderal exotic species. Examples of these areas may include graded landscapes or areas, graded firebreaks, graded construction pads, construction staging areas, off-road vehicle trails, areas repeatedly cleared for fuel management, or areas repeatedly used that prevent revegatation (e.g., parking lots, trails that have persisted for years). This community type is based on the County of San Diego's disturbed (Element Code 11300) (Oberbauer et al. 2008).

D.4.1.3 Wetlands

A number of blue-line streams may occur within the proposed power line replacement projects area, and these features may support scattered wetlands and riparian communities. Sensitive biological communities that occur within the proposed power line replacement projects area include southern riparian forests, freshwater seep/open water, and wet montane meadows. Collectively, these three vegetation types occur within all but two power/distribution lines (C78 and C79) and only freshwater seep/open water occurs within C422 (see Tables D.4-1 and D.4-2).

Project components come in close proximity to or cross over various unnamed rivers, creeks, and other water bodies including Sweetwater River, Taylor Creek, Wilson Creek, San Diego River, Sentenac Creek, Temescal Canyon Creek, Kelly Creek, Boulder Creek, Samagatuma Creek, Pine Valley Creek, Kitchen Creek, La Posta Creek, San Luis Rey River, Prisoner Creek, Wigham Creek, Cottonwood Creek, Potrero Creek, Hauser Creek, Viejas Creek, and Oak Valley Creek. In additional, many unnamed, intermittent creeks and drainages are present throughout the project areas.

Major watersheds that intersect the project areas include San Dieguito, San Diego, Sweetwater, Otay, Tijuana, and Anza Borrego. Aside from these scattered wetland communities and major watersheds, sensitive biological resources in the project area may predominantly consist of narrow, sandy ephemeral washes and streambeds.

During biological surveys, assessment of potential jurisdictional wetlands and waters of the United States for all project areas was not conducted. However, assessments for potentially jurisdictional wetlands or waters of the United States (based on the presence of hydrophytic vegetation, ordinary high water mark (OHWM), connectivity to blue-line drainages, and hydrology) was assessed during hydrological studies for some project areas. Assessments were not made for all project areas due to access issues. However, a wetland delineation (in accordance with the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual) was not

performed during these assessments. A further description of this effort is provided in the SDG&E Revised Plan of Development (SDG&E 2013a, see 10.4 Hydrology). A formal jurisdictional delineation would be required prior to project implementation by the various regulatory agencies to determine if permitting would be necessary.

D.4.1.4 Special-Status Plant and Animal Species

This section provides a description of special-status plant and wildlife species that occur or potentially occur within the vicinity of the proposed power line replacement projects.

Special-status species are those species that have been given special recognition by federal, state, or local conservation agencies and organizations due to limited, declining, or threatened population sizes. This includes those species listed by the state and federal government as threatened or endangered, those species proposed for state and/or federal listing or candidates for listing, species listed as sensitive by the BLM, species listed as sensitive by the Forest Service, those plant species with a California Rare Plant Rank (CRPR) of 1B (CNPS 2013), County List A species, and other locally sensitive species. The special-status plant and animal species evaluated in this EIR/EIS are consistent with the definition of species of special interest as provided in the Forest Service Land Management Plan and also includes species considered special-status at the state and local level for purposes of evaluation under CEQA.

Special-status species detected or potentially occurring on the project site, include 194 special-status plant and 179 wildlife species. Special-status plant species that occur or have a moderate to high potential to occur within 5 miles of SDG&E's proposed project areas are described herein. A brief description of the life history, associated vegetation communities in the project area, and occurrence or potential occurrence are included for each species. This section identifies which special-status species were identified within each component of SDG&E's proposed project.

Special-Status Plant Species

Of 194 special-status plant species, Appendix BIO-1 describes 118 of these species that are: (1) considered absent, (2) have a low potential to occur, or (3) have a moderate to high potential to occur and a "Low Rank," which include those species with a CRPR 3.0, 4.0, or without a CRPR status; County List C; or only designated as NCCP and/or MSCP.

The remaining 76 species are categorized as "High Ranked Special-Status Plant Species Observed or with a Moderate to High Potential to Occur" or "Low Ranked Special-Status Plant Species Observed," further described below. Potential to occur tables for plants are provided in Appendix BIO-2. Figures D.4-2a through D.4-2e show CNDDB occurrence points for special-status wildlife and plants in the vicinity of SDG&E's proposed project. Figures D.4-3a through

D.4-3e show USFWS critical habitat in the vicinity of SDG&E's proposed project. Appendix BIO-6 provides a description of special-status plant species that were observed along lines not part of the power line replacement projects to be covered under the MSUP. Tables D.4-14~~5~~a and D.14-14~~5~~b include the same species as described for the power line replacement projects except for Vail Lake ceanothus (*Ceanothus ophiochilus*), slender horned spineflower (*Dodecahema leptoceras*), San Diego button-celery (*Dodecahema leptoceras*), San Bernardino bluegrass (*Poa atropurpurea*), and Parry's tetracoccus (*Tetracoccus dioicus*), which may also occur. All species and their status and habitat associations can be found in Appendix BIO-2.

High Ranked Special-Status Plant Species Observed or with a Moderate to High Potential to Occur

Of 76 special-status plant species described in this document, the following 59 species include those that have species occurrences documented within the project area, or a moderate or high potential to occur within the survey area of the TL/circuits. Additionally, these species are also listed as one or more of the following: CRPR 1 or 2, County List A or B, federally listed, or state listed.

Chaparral Sand-verbena

Chaparral sand-verbena (*Abronia villosa* var. *aurita*), an annual herb, is a CRPR 1B.1, BLM sensitive species (BLMS), Forest Service sensitive species (FSS), and a County List A. It is associated with chaparral, coastal scrub, and desert dunes in sandy soils between 246 and 5,249 feet amsl in elevation. Its blooming period is between January and September. Within the project area, suitable habitat is generally limited to southern mixed chaparral, chamise chaparral, semi-desert chaparral, and scrub oak chaparral. This species has a moderate to high potential along TL682 (K. Winter, pers. comm.).

San Diego Thornmint

San Diego thornmint (*Acanthomintha ilicifolia*), an annual herb, is a federally threatened and state endangered species, a CRPR 1B.1, County List A, and within the MSCP and covered under the SDG&E NCCP. It is associated with openings of chaparral, coastal scrub, valley and foothill grassland, and vernal pools/clay, between 33 and 3,150 feet amsl in elevation. Its blooming period is between April and June. Within the project area, suitable habitat is generally limited to chamise chaparral or Diegan coastal sage scrub. This species has occurrences along C78 (Chambers Group Inc. 2012a; CDFW 2014; Forest Service 2013f) and a moderate to high potential along TL625 (Forest Service 2006b, 2013f).

Otay Manzanita

Otay manzanita (*Arctostaphylos otayensis*), a perennial evergreen shrub, is a CRPR 1B.2, County List A, BLM sensitive species, and covered under the MSCP and SDG&E Subregional NCCP. It is associated with chaparral and cismontane woodlands and metavolcanic rock outcrops between 902 and 5,577 feet amsl in elevation. Its blooming period is between January and April. Within the project area, suitable habitat includes mixed oak woodland, oak savanna, southern mixed chaparral, chamise chaparral, semi-desert chaparral, and scrub oak chaparral. This species has occurrences along TL629 (CDFW 2014).

Dean's Milk-Vetch

Dean's milk-vetch (*Astragalus deanei*), a perennial herb, is a CRPR 1B.1, County List A, Forest Service sensitive (FSS) species, and BLM sensitive species. It is associated with chaparral, cismontane woodland, coastal scrub, and riparian forest, between 246 and 2,280 feet amsl in elevation. Its blooming period is between February and May. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, Diegan coastal sage scrub, montane forest, and southern riparian forest. This species has occurrences along C157, TL6923, and TL626 (Chambers Group Inc. 2012a; CDFW 2014; Forest Service 2006b, 2013f) and a high potential to occur along TL625 (Forest Service 2006b, 2013f).

Jacumba Milk-Vetch

Jacumba milk-vetch (*Astragalus douglasii* var. *perstrictus*), a perennial herb, is a CRPR 1B.2, County List A, FSS, and BLM sensitive species. It is found in San Diego County and Baja California, Mexico. It is associated with chaparral, cismontane woodland, pinyon and juniper woodland, riparian scrub, valley and foothill grassland, between 2,953 and 4,495 feet amsl in elevation. Its blooming period is between April and June. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, montane forest, southern riparian forest, and native and non-native grasslands. This species has occurrences along C157, C442, C449, TL625, and TL629 (Chambers Group Inc. 2012a; Forest Service 2013f) and a moderate to high potential to occur along TL6923 (Forest Service 2006b, 2010).

San Diego Milk-Vetch

San Diego milk-vetch (*Astragalus oocarpus*), a perennial herb, is a CRPR 1B.2, County List A, FSS, and BLM sensitive species. It is associated with openings of chaparral and cismontane woodland, between 1,001 and 5,000 feet amsl in elevation. Its blooming period is between May and August. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and montane forests. This species has

occurrences along C157, C440, C442, TL626, TL629, and TL6923 (Chambers Group Inc. 2012a; CDFW 2014) and a moderate to high potential to occur along TL682 (Forest Service 2006b).

San Diego Goldenstar

San Diego goldenstar *(Bloomeria [= Muilla] clevelandii*), a perennial bulbiferous herb, is a CRPR 1B.1, County List A, BLM sensitive species, within the MSCP, and covered under the SDG&E NCCP. It is associated with clay soils in chaparral, coastal scrub, valley and foothill grassland, and vernal pools, between 164 and 1,526 feet amsl in elevation. Its blooming period is between April and May. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, Diegan coastal sage scrub, wet montane meadow, and native and non-native grasslands. This species has a moderate potential to occur along the following circuit/TL areas: TL625 and TL626.

Johnston's Rock Cress

Johnston's rock cress (Hirshberg's rock-cress) (*Boechera johnstonii [=Arabis hirshbergia]*), a perennial herb, is a CRPR 1B.2, County List A species. It is often on eroded clay within chaparral and lower montane coniferous forest, between 4,429 and 7,054 feet amsl in elevation. Its blooming period is between February and June. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and montane forests. This species has a moderate potential to occur along C79.

Orcutt's Brodiaea

Orcutt's brodiaea (*Brodiaea orcuttii*), a perennial, bulbiferous herb, is a CRPR 1B.1, County List A, FSS, and BLM sensitive species, within the MSCP, and covered under the SDG&E NCCP. It is associated with closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools/mesic, clay, and sometimes serpentinite, between 98 and 5,551 feet amsl in elevation. Its blooming period is between May and July. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, montane forest, wet montane meadow, freshwater seep/open water, and native and non-native grasslands. This species has occurrences along C157, C440, C442, TL625, TL626, and TL682 (Chambers Group Inc. 2012a; CDFW 2014; Forest Service 2006b, 2013f) and a moderate to high potential to occur along C78, C79, and TL629 (Forest Service 2006b).

Dunn's Mariposa Lily

Dunn's mariposa lily (*Calochortus dunnii*), a bulbiferous herb, is a State Rare, CRPR 1B.2, County List A, FSS, and BLM sensitive species, within the MSCP, and covered under the SDG&E NCCP. It is associated with gabbroic, metavolcanic, and rocky soils of closed-cone coniferous forest, chaparral, valley and foothill grassland, between 607 and 6,004 feet amsl in elevation. Its blooming period is between April and June. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and native and non-native grasslands. This species has occurrences along C79, C442, TL629, TL626, and TL625 (Chambers Group Inc. 2012a; CDFW 2014; Forest Service 2006b, 2013f; Winter, pers. comm. 2015) and a moderate to high potential to occur along C78 and C157 (Forest Service 2006b).

Lakeside Ceanothus

Lakeside ceanothus (*Ceanothus cyaneus*), a perennial evergreen shrub, is a CRPR 1B.2, County List A, FSS, BLM sensitive species within the MSCP and covered under the SDG&E Subregional NCCP. It is associated with closed-cone coniferous forest and chaparral between 771 and 2,477 feet amsl in elevation. Its blooming period is between April and June. Within the project area, suitable habitat includes montane forest, southern mixed chaparral, chamise chaparral, semi-desert chaparral, and scrub oak chaparral. This species has occurrences along C79, TL625, and TL629 (CDFW 2014).

Parish's Chaenactis

Parish's chaenactis (*Chaenactis parishii*), a perennial herb, is a CRPR 1B.3 and County List A species. It is associated with rocky chaparral, between 4,265 and 8,202 feet amsl in elevation. Its blooming period is between May and July. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, and scrub oak chaparral. This species has occurrences along C79 (Forest Service 2013f) and a high potential to occur along C440.

Parry's Spineflower

Parry's spineflower (*Chorizanthe parryi* var. *parryi*), an annual herb, is a CRPR 1B.1, FSS, and BLM sensitive species. It is often associated with sandy or rocky openings in chaparral, cismontane woodland, coastal scrub, and valley and foothill grasslands between 902 and 4,00. feet amsl in elevation. Its blooming period is between April and June. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, mixed oak woodland, Diegan coastal sage scrub, and native and non-native grasslands. This species has a moderate to high potential to occur along TL682 (Forest Service 2006b).

Long-Spined Spineflower

Long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*), an annual herb, is a CRPR 1B.2, County List A, and BLM sensitive species. It is often associated with clay soils in chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, and vernal pools, between 98 and 5,020 feet amsl in elevation. Its blooming period is between April and July. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, Diegan coastal sage scrub, wet montane meadow, and native and non-native grasslands. This species has occurrences along the following circuit/TL areas: C78, C442, C449, TL625, TL629, and TL682 (Chambers Group Inc. 2012a; CDFW 2014; Forest Service 2006b, 2013f) and a moderate to high potential to occur along C78, C79, and TL626 (Forest Service 2006b).

Delicate Clarkia

Delicate clarkia (*Clarkia delicata*), an annual herb, is a CRPR 1B.2, and County List A. It is often associated with gabbroic in chaparral and cismontane woodland, between 771 and 3,281 feet amsl in elevation. Its blooming period is between April and June. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and montane forests. This species has occurrences along the following circuit/TL areas: C79, C157, C440, C449, C78, TL625, TL626, TL682, and TL6923 (Chambers Group Inc. 2012a; CDFW 2014; Forest Service 2013f) and a moderate to high potential to occur along C442 (Forest Service 2006b).

Tecate Tarplant

Tecate tarplant (*Deinandra floribunda*), an annual herb, is a CRPR 1B.2, County List A, FSS, and BLM sensitive species. It is associated with chaparral and coastal scrub, between 230 and 4,003 feet amsl in elevation. Its blooming period is between August and October. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and Diegan coastal sage scrub. This species has occurrences along the following circuit/TL areas: TL625, TL626, and TL6923 (Chambers Group Inc. 2012a; CDFW 2014) and a moderate to high potential to occur along C440, C449, and TL629 (Forest Service 2006b).

Cuyamaca Larkspur

Cuyamaca larkspur (*Delphinium hesperium* spp. *cuyamacae*), a perennial herb, is a CRPR 1B.2, County List A, FSS, State Rare, and BLM sensitive species. It is associated with lower montane coniferous forests, meadows, seeps, and vernal pools in mesic environments between 4,003 and

5,351 feet amsl in elevation. Its blooming period is between May and July. Within the project area, suitable habitat includes montane forest, wet montane meadow, and freshwater seep/open water. This species has a moderate to high potential to occur along C440 and TL626 (Forest Service 2006b).

Mount Laguna Aster

Mount laguna aster (*Dieteria asteroides* var. *lagunensis [=Machaeranthera asteroides* var. *lagunensis]*), a perennial herb, is a State Rare, County List B, CRPR 2.1, FSS, and BLM sensitive species. It is associated with cismontane woodlands and lower montane coniferous forests between 2,625 and 7,874 feet amsl in elevation. Its blooming period is between July and August. Within the project area, suitable habitat includes montane forest. This species has occurrences within C440 (Chambers Group Inc. 2012a; CDFW 2014; Forest Service 2013f).

Variegated Dudleya

Variegated dudleya (*Dudleya variegata*), a perennial herb, is a CRPR 1B.2, County List A and BLM sensitive species within the MSCP and covered under SDG&E NCCP. It is associated with clay soils in chaparral, cismontane woodland, coastal scrub, valley and foothill grasslands, and vernal pools, between 10 and 1,903 feet amsl in elevation. Its blooming period is between April and June. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, montane forest, Diegan coastal sage scrub, native and non-native grasslands, and wet montane meadows. This species has a moderate potential to occur along TL625.

Laguna Mountains Goldenbush

Laguna Mountains goldenbush (*Ericameria cuneata* var. *macrocephala*), a perennial shrub, is a CRPR 1B.3, County List A species. It is associated with chaparral (granitic), between 3,921 and 6,070 feet amsl in elevation. Its blooming period is between September and December. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, and scrub oak chaparral. This species has occurrences within C440 (Chambers Group Inc. 2012a; CDFW 2014).

Vanishing Wild Buckwheat

Vanishing wild buckwheat (*Eriogonum evanidum*), an annual herb, is a CRPR 1B.1, County List A, and FSS species. It is associated with sandy soils in chaparral, cismontane woodland, lower montane coniferous forest, and pinyon and juniper woodlands, between 3,609 and 7,300 feet amsl in elevation. Its blooming period is between July and October. Within the project area,

suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and montane forests. This species has occurrences along C440 and C442 (Chambers Group Inc. 2012a) and a moderate to high potential to occur along TL626 and TL629 (Forest Service 2007a; Forest Service 2006b).

Mexican Flannelbush

Mexican flannelbush (*Fremontodendron mexicanum*), a perennial evergreen shrub, is a federally endangered, state rare species, CRPR 1B.1, and County List A. It is associated with gabbroic, metavolcanic, or serpentinite in closed-cone coniferous forest, chaparral, and cismontane woodland, between 33 and 2,349 feet amsl in elevation. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and montane forests. This species has occurrences within TL6923 (Chambers Group Inc. 2012a).

San Jacinto Mountains Bedstraw

San Jacinto Mountains bedstraw (*Galium angustifolium* ssp. *jacinticum*), a perennial herb, is a CRPR 1B.3, County List A, and FSS species. It is associated with lower montane coniferous forest, between 4,429 and 6,890 feet amsl in elevation. Its blooming period is between June and August. Within the project area, suitable habitat includes montane forests. This species has a moderate potential to occur along the following circuit/TL areas: C440, TL626, and TL6923.

Sticky Geraea

Sticky geraea (*Geraea viscida*), a perennial herb, is a CRPR 2.3 and County List B sensitive species. It is associated with chaparral often in disturbed areas between 1,476 and 5,577 feet amsl in elevation. Its blooming period is between May and June. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, and scrub oak chaparral. This species has occurrences along C157, C440, C449, TL625, TL629, and TL6923 (Chambers Group Inc. 2012a; CDFW 2014).

San Diego Gumplant

San Diego gumplant (*Grindelia hallii*), a perennial herb, is a CRPR 1B.2 and County List A and BLM sensitive species. It is associated with chaparral, lower montane coniferous forest, meadows and seeps, and valley and foothill grassland habitat, between 607 and 5,725 feet amsl in elevation. Its blooming period is between July and October. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, montane forest, wet montane meadow, and native and non-native grasslands. This species has occurrences along C440, C442, TL625, TL626, and TL629 (CDFW 2014; Forest

Service 2013f) and a moderate to high potential to occur along the following circuit/TL areas: C79, TL682, and TL6923.

Tecate Cypress

Tecate cypress (*Hesperocyparis* [=*Cupressus*] *forbesii),* a perennial evergreen, is a CRPR 1B.1, County List A, BLM sensitive, and FSS species, within the MSCP, and covered under the SDG&E NCCP. It is associated with clay, gabbroic or metavolcanic in closed-cone coniferous forest, and chaparral, between 262 and 4,921 feet amsl in elevation. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, and scrub oak chaparral. This species has occurrences within C440 and TL626 (Chambers Group Inc. 2012a observed a planted individual; CDFW 2014).

Cuyamaca Cypress

Cuyamaca cypress (*Hesperocyparis stephensonii* [=*Cupressus arizonica* ssp. *arizonica*]), a perennial evergreen tree, is a CRPR 1B.1, County List A, and FSS species. It is associated with gabbroic soils in closed-cone coniferous forest, chaparral, cismontane woodland, and riparian forest, between 3,396 and 5,594 feet amsl in elevation. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, montane forest, and southern riparian forests. This species has occurrences within C440, C79, and TL629 (Chambers Group Inc. 2012a observed a planted individual; CDFW 2014).

Laguna Mountains Alumroot

Laguna Mountains alumroot (*Heuchera brevistaminea*), a perennial rhizomatous herb, is a CRPR 1B.3, County List A, and BLM sensitive species. It is associated with rocky areas in broadleafed upland forest, chaparral, cismontane woodland, and riparian forest, between 4,495 and 6,562 feet amsl in elevation. Within the project area, suitable habitat includes montane forest, southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, montane forest, southern riparian forest, and mixed oak woodlands. This species has occurrences along C79 (CDFW 2014) and has a high potential to occur along the following circuit/TL areas: C440 and C79.

San Diego County Alumroot

San Diego County alumroot (*Heuchera rubescens* var. *versicolor*), a perennial rhizomatous herb, is a CRPR 2.3 and County List B sensitive species. It is associated with chaparral, lower montane coniferous forests within rocky sites between 4,921 and 13,123 feet amsl in elevation. Its blooming period is between May and June. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and

montane forest. This species has occurrences along C79, TL626, and TL6923 (Chambers Group Inc. 2012a; CDFW 2014) and a moderate potential to occur within TL682.

Ramona Horkelia

Ramona horkelia (*Horkelia truncata*), a perennial herb, is a CRPR 1B.3, County List A, and FSS species. It is associated with clay and gabbroic soils in chaparral, cismontane woodland habitat, between 1,312 and 4,265 feet amsl in elevation. Its blooming period is between May and June. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and montane forests. This species has occurrences within TL626 and TL625 (Chambers Group Inc. 2012a; CDFW 2014; Forest Service 2006b, 2013f) and a moderate to high potential to occur along C157, C442, C78, C79, and TL629 (Forest Service 2006b).

San Diego Sunflower

San Diego sunflower (*Hulsea californica*), a perennial shrub, is a CRPR 1B.3, County List A, and BLM sensitive species. It is associated with chaparral, lower montane coniferous forest, upper montane coniferous forest, openings, and burned areas between 3,002 and 9,564 feet amsl in elevation. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and montane forests. This species has occurrences along C157, C440, C442, C449, C79, TL625, TL626, and TL629 (Chambers Group Inc. 2012a; CDFW 2014; Forest Service 2013f) and a high potential to occur along the following circuit/TL areas: C449, TL682, and TL6923.

Santa Lucia Dwarf Rush

Santa Lucia dwarf rush (*Juncus luciesis*), an annual herb, is a CRPR 1B.2 species. It is associated with chaparral, Great Basin scrub, lower montane coniferous forest, meadows and seeps, and vernal pools, between 984 and 6,693 feet amsl in elevation. Its blooming period is between April and July. Within the project area, suitable habitat includes montane forest, wet montane meadow. This species has a high potential to occur along C79.

Lemon Lily

Lemon lily (*Lilium parryi*), a perennial bulbiferous herb, is a CRPR 1B.2, County List A, and FSS. It is associated with lower/upper montane coniferous forest, meadows, seeps, and riparian forest with mesic soils between 4,003 and 9,006 feet amsl in elevation. Its blooming period is between July and August. Within the project area, suitable habitat includes montane forest,

southern riparian forest, wet montane meadow, and freshwater seep/open waters. This species has occurrences along C79 (CDFW 2014).

Warner Springs Lessinga

Warner Springs lessinga (*Lessingia glandulifera* var. *tomentosa*), an annual herb, is a CRPR 1B.3, County List A, and FSS. It is associated with chaparral, grassland, hillsides, roadsides, and generally sandy soils between 2,854 and 4,003 feet amsl in elevation. Its blooming period is between August and October. Within the project area, suitable habitat includes oak savanna, southern mixed chaparral, chamise chaparral, semi-desert chaparral, and native/non-native grasslands. This species has a moderate potential to occur along TL682 (CDFW 2014).

Robinson's Pepper-Grass

Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*), an annual herb, is a CRPR 1B.2, County List A, and BLM sensitive species. It is associated with chaparral and coastal scrub, between 3 and 2,904 feet amsl in elevation. Its blooming period is between January and July. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and Diegan coastal sage scrub. This species has occurrences along TL625 (CDFW 2014) and a moderate potential to occur along TL6923.

Short-sepaled Lewisia

Short-sepaled lewisia (*Lewisia brachycalyx*), a perennial herb, is a CRPR list 2B.2, County List B, and FSS species. It is associated with mesic soils of lower montane coniferous forests, meadows, and seeps between 4,495 and 7,546 feet above mean sea level (amsl) in elevation. Its blooming period is between February and July. Within the project area, suitable habitat includes montane forest, wet montane meadow, and freshwater seep/open water. This species has high potential to occur along the following circuit/TL areas: TL626 and C78.

Parish's Slender Meadowfoam

Parish's slender meadowfoam (*Limnanthes alba* ssp. *parishii [=Limnanthes gracilis* ssp. *parishii*]), an annual herb, is a state endangered, CRPR 1B.2, County List A, and BLM and FSS sensitive species. It is associated with vernally mesic soils in lower montane coniferous forest, meadows and seeps, and vernal pools between 1,969 and 6,562 feet amsl in elevation. Its blooming period is between April and June. Within the project area, suitable habitat includes montane forest, wet montane meadow. This species has occurrences within C440 (Chambers Group Inc. 2012a; CDFW 2014; Forest Service 2013f).

Desert Beauty

Desert beauty (*Linanthus bellus*), an annual herb, is a CRPR 2.3 and County List B sensitive species. It is associated with sandy chaparral habitats between 3,281 and 4,593 feet amsl in elevation. Its blooming period is between April and May. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, and scrub oak chaparral. This species has occurrences along TL629 and C440 (Chambers Group Inc. 2012a; CFDW 2014).

Orcutt's Linanthus

Orcutt's linanthus (*Linanthus orcuttii*), an annual herb, is a CRPR 1B.3, County List A, BLM, and FSS sensitive species. It is associated with openings in chaparral, lower montane coniferous forest, and pinyon and juniper woodland habitat, between 3,002 and 7,037 feet amsl in elevation. Its blooming period is between May and June. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and montane forests. This species has occurrences along C440 and C442 (Chambers Group Inc. 2012a; CDFW 2014; Forest Service 2013f) and a moderate to high potential to occur along TL682 (Forest Service 2006b).

Mountain Springs Bush Lupine

Mountain Springs bush lupine (*Lupinus excubitus* var. *medius*), a perennial shrub, is a CRPR 1B.3, County List A, and BLM sensitive species. It is associated with pinyon and juniper woodland and Sonoran desert scrub, between 1,394 and 4,495 feet in elevation. Its blooming period is between March and May. Within the project area, suitable habitat includes montane forest. This species has occurrences along C440 (CDFW 2014).

Felt-Leaved Monardella

Felt-leaved monardella (*Monardella hypoleuca* ssp. *lanata*), a perennial rhizomatous herb, is a CRPR 1B.2, County List A and FSS species, within the MSCP, and covered under the SDG&E NCCP. It is associated with chaparral and cismontane woodland, between 984 and 5,167 feet amsl in elevation. Its blooming period is between June and August. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and montane forests. This species has occurrences along C78, C79, C157, and TL625 (Chambers Group Inc. 2012a; CDFW 2014; Forest Service 2006b, 2013f) and a moderate to high potential to occur along C442 and TL629 (Forest Service 2006b).

Hall's Monardella

Hall's monardella (*Monardella macrantha* ssp. *hallii*), a perennial rhizomatous herb, is a CRPR 1B.3, County List A, and FSS species. It is associated with broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland, between 2,395 and 7,201 feet amsl in elevation. Its blooming period is between June and October. Within the project area, suitable habitat includes montane forests, southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, native and non-native grasslands, and mixed oak woodlands. This species has a moderate to high potential to occur along the following circuit/TL areas: C440 and TL682.

San Felipe Monardella

San Felipe monardella (*Monardella nana* ssp. *leptosiphon*), a perennial rhizomatous herb, is a CRPR 1B.2, County List A, BLM sensitive, and FSS species. It is associated with chaparral, lower montane coniferous forest, between 3,927 and 6,086 feet amsl in elevation. Its blooming period is between June and July. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and montane forests. This species has a moderate to high potential to occur along C440 (Forest Service 2006b), TL682, and TL626.

Mud Nama

Mud nama (*Nama stenocarpum*), a perennial/generally annual herb, is a CRPR list 2B.2 and County List B species. It is associated with marshes, swamps, lake margins, and riverbanks between 16 and 1,640 feet above mean sea level (amsl) in elevation. Its blooming period is between January and July. Within the project area, suitable habitat includes wet montane meadow, freshwater seep/open water, and along lake margins and riverbanks throughout the project site. This species has occurrences along TL682 (CDFW 2014).

Baja Navarretia

Baja navarretia (*Navarretia peninsularis*), an annual herb, is a CRPR 1B.2, County List A, and FSS species. It is associated with chaparral, lower montane coniferous forest, meadows, seeps, pinyon juniper woodlands and mesic soils between 4,921 and 7,546 feet amsl. Its blooming period is between June and August. Within the project area, suitable habitat includes montane forest, southern mixed chaparral, chamise chaparral, wet montane meadow, freshwater seep/open water, and scrub oak chaparral. This species occurs along C79 (CDFW 2014).

Chaparral Nolina

Chaparral nolina (*Nolina cismontane*), a perennial evergreen shrub, is a CRPR 1B.2, County List A, and FSS. It is associated with dry chaparral of the coastal mountains and coastal scrub with sandstone or gabbor soils between 459 and 4,183 feet amsl. Its blooming period is between May (with detections as early as March) and July. Within the project area, suitable habitat includes oak savanna, southern mixed chaparral, Diegan coastal sage scrub, semi-desert chaparral, and scrub oak chaparral. This species has a moderate potential to occur along C78 and TL625 (CDFW 2014).

California Orcutt Grass

California Orcutt grass (*Orcuttia californica*), an annual herb, is a federally and state endangered species, CRPR 1B.1, County List A species, within the MSCP, and covered under the SDG&E NCCP. It is associated with vernal pools, between 49 and 2,165 feet amsl in elevation. Its blooming period is between April and August. Within the project area, suitable habitat includes wet montane meadows. This species has a moderate potential to occur along TL682.

Gander's Butterweed

Gander's butterweed (*Packera [=Senecio] gaderi*), a perennial herb, is a state rare, CRPR 1B.2, BLM sensitive and FSS species, and covered under the SDG&E NCCP. It is associated with burns, gabbroic outcrops in chaparral, between 1,312 and 3,937 feet amsl in elevation. Its blooming period is between April and June. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, and scrub oak chaparral. This species has occurrences within TL625 (Chambers Group Inc. 2012a; CDFW 2014; Forest Service 2006b, 2013f) and a moderate to high potential to occur along C157 and C442 (Forest Service 2006b).

Cedros Island Oak

Cedros Island oak (*Quercus cedrosensis*), a perennial evergreen tree, is a CRPR list 2B.2 and County List B species. It is associated with closed-cone coniferous forests, chaparral, and coastal scrub between 837 and 3,150 feet amsl in elevation. Its blooming period is between April and May. Within the project area, suitable habitat includes montane forest, southern mixed chaparral, chamise chaparral, Diegan coastal sage scrub, semi-desert chaparral, and scrub oak chaparral. This species has a moderate potential to occur along TL692.

Moreno Currant

Moreno currant (*Ribes canthariforme*), a perennial deciduous shrub, is a CRPR 1B.3, County List A, BLM sensitive, and FSS species. It is associated with chaparral and riparian scrub,

between 1,115 and 3,937 feet amsl in elevation. Its blooming period is between February and April. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and southern riparian forests. This species has occurrences within C157, C442, TL625, and TL6923 (Chambers Group Inc. 2012a; CDFW 2014; Forest Service 2006b, 2013f) and a moderate to high potential to occur along C449 (Forest Service 2006b).

Southern Skullcap

Southern skullcap (*Scutellaria bolanderi* ssp. *austromontana*), a perennial rhizomatous herb, is a CRPR 1B.2, County List A species, and FSS. It is associated with mesic soils in chaparral, cismontane woodland, and lower montane coniferous forest, between 1,394 and 6,562 feet amsl in elevation. Its blooming period is between June and August. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and montane forests. This species has occurrences along C442, C79, TL625, and TL629 (Chambers Group Inc. 2012a; CDFW 2014).

Cove's Cassia

Cove's cassia (*Senna covesii*), a perennial rhizomatous herb, is a CRPR 2B.2 and County List B species. It is associated with gravelly or rocky soils within chaparral, and Sonoran desert scrub between 656 and 2,953 feet above mean sea level (amsl) in elevation. Its blooming period is between May and July (typically June). Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, and scrub oak chaparral. This species has occurrences along TL625 (CDFW 2014) and has a high potential to occur along TL625.

Hammitt's Claycress

Hammitt's claycress (*Sibaropsis hammittii*), an annual herb, is a CRPR 1B.2, County List A, and FSS species. It is associated with chaparral openings and valley and foothill grasslands in clay soils between 2,362 and 3,494 feet amsl in elevation. Its blooming period is between March and April. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, Diegan coastal sage scrub, semi-desert chaparral, and native and non-native grasslands. This species has occurrences along C78 (CDFW 2014; Forest Service 2013f).

Salt Spring Checkerbloom

Salt spring checkerbloom (*Sidalcea neomexicana*), a perennial herb, is a CRPR 2B.2 species. It is associated with alkaline and mesic soils within chaparral, coastal scrub, lower montane coniferous forests, Mojavean desert scrub and playas between 49 and 5,020 feet amsl in

elevation. Its blooming period is between March and June. Within the project area, suitable habitat includes montane forest, southern mixed chaparral, chamise chaparral, Diegan coastal sage scrub, and oak scrub chaparral. This species has a moderate potential to occur along C78.

Prairie Wedge Grass

Prairie wedge grass (*Sphenopholis obtusata*), a perennial herb, is a CRPR 2B.2 species. It is associated with mesic soils within cismontane woodlands, meadows, and seeps between 984 and 6,562 feet amsl in elevation. Its blooming period is between April and July. Within the project area, suitable habitat includes mixed oak woodlands, oak savanna, wet montane meadow, and freshwater seep/open water. This species has occurrences along C79 and TL626 (CDFW 2014).

Southern Jewelflower

Southern jewelflower (*Streptanthus campestris*), a perennial herb, is a CRPR 1B.3, County List A, and BLM sensitive and FSS species. It is associated with rocky areas in chaparral, lower montane coniferous forest, and pinyon and juniper woodland, between 2,953 and 7,546 feet amsl in elevation. Its blooming period is between May and July. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and montane forests. This species has occurrences along C440, C442, C79, TL626, TL629, and TL6923 (Chambers Group Inc. 2012a; CDFW 2014).

San Bernardino Aster

San Bernardino aster (*Symphyotrichum defoliatum*), a perennial, rhizomatous herb, is a CRPR 1B.2, and BLM sensitive and FSS species. It is associated near ditches, streams, and springs in cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, and within vernally mesic soils in valley and foothill grassland habitat, between 7 and 6,693 feet amsl in elevation. Its blooming period is between July and November. Within the project area, suitable habitat includes montane forest, Diegan coastal sage scrub, wet montane meadow, and native and non-native grasslands. This species has occurrences within C440, C442, and TL626 (Chambers Group Inc. 2012a; CDFW 2014; Forest Service 2013f).

Velvety False-lupine

Velvety false-lupine (*Thermopsis californica* var. *semota*), a perennial rhizomatous herb, is a CRPR 1B.2, County List A, and FSS and BLM sensitive species. It is associated with cismontane woodland, lower montane coniferous forest, meadows and seeps, and valley and foothill grassland habitat, between 3,281 and 6,135 feet in elevation. Its blooming period is between March and June. Within the project area, suitable habitat includes montane forest, wet

montane meadows, and native and non-native grasslands. This species has occurrences along C440, TL629, and TL626 (Chambers Group Inc. 2012a; CDFW 2014; Forest Service 2013f).

Rigid Fringepod

Rigid fringepod (*Thysanocarpus rigidus*), an annual herb, is a CRPR 1B.2, FSS, and BLM sensitive species. It is associated with oak/pine woodlands among dry rocky slopes between 1,969 and 7,218 feet amsl in elevation. Its blooming period is between February and May. Within the project area, suitable habitat includes mixed oak woodland, montane forest, oak savanna, and scrub oak. This species has occurrences along C440 (CDFW 2014).

Low Special-Status Plant Species Present

Of 76 special-status plant species described in this document, the following 17 special-status plant species include those that have species occurrences recorded within the project area but that have a CRPR of 4.0 or County List D, or do not have a status.4 Tables D.4-14~~5~~a and D.4-14~~5~~b provide a description of special-status plant species that were observed along lines not part of the power line replacement projects to be covered under the MSUP. These tables include the same species as described for the power line replacement projects except for Vail Lake ceanothus, slender horned spineflower, San Diego button-celery, San Bernardino bluegrass, and Parry's tetracoccus which also may occur. All species and their status and habitat associations can be found in Appendix BIO-2.

San Diego County Viguiera

San Diego County viguiera (*Bahiopsis* [=*Viguiera*] *laciniata*), a perennial shrub, is a CRPR 4.2 and County List D sensitive species. It is associated with chaparral and coastal scrub between 197 and 2,461 feet amsl in elevation. Its blooming period is between February and August. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and Diegan coastal sage scrub. This species has occurrences along C157 and TL625 (Chambers Group Inc. 2012a).

Fire Reedgrass

Fire reedgrass (*Calamagrostis koelerioides*), a perennial herb, is an MSCP and NCCP species. It is associated with meadows, slopes, dry hills, and ridges between 0 and 7,545 feet amsl in elevation. Its blooming period is between June and August. Within the project area, suitable

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[4] See *Opuntia engelmannii* var. *engelmanii.*

habitat includes mixed oak woodland, montane forest, southern riparian forest, oak savanna, southern mixed chaparral, chamise chaparral, Diegan coastal sage scrub, semi-desert chaparral, native grassland, non-native grassland, and scrub oak chaparral. This species has occurrences along TL626, C79, and TL625 (Forest Service 2013f).

Brewer's Calandrinia

Brewer's calandrinia (*Calandrinia breweri*), an annual herb, is a CRPR 4.2 and County List D sensitive species. It is associated with chaparral and coastal scrub in sandy or loamy disturbed and burned sites between 33 and 4,003 feet amsl in elevation. Its blooming period is between March and June. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and Diegan coastal sage scrub. This species has occurrences along TL625 (Chambers Group Inc. 2012a).

Payson's Jewel-Flower

Payson's jewel-flower (*Caulanthus simulans*), an annual herb, is a CRPR 4.2, County List D and FSS species, and covered under the SDG&E NCCP. It is associated with chaparral and coastal scrub in sandy or granitic sites between 295 and 7,218 feet amsl in elevation. Its blooming period is between February and June. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and Diegan coastal sage scrub. This species has occurrences along TL625 and TL629 (Chambers Group Inc. 2012a).

Southern Mountain Misery

Southern mountain misery (*Chamaebatia australis*), a perennial evergreen shrub, is a CRPR 4.2 and County List D sensitive species. It is associated with gabboric or metavolcanic chaparral between 984 and 3,346 feet amsl in elevation. Its blooming period is between November and May. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, and scrub oak chaparral. This species has occurrences along TL625 (Chambers Group Inc. 2012a).

Palmer's Grappling-Hook

Palmer's grappling-hook (*Harpagonella palmeri*), an annual herb, is a CRPR 4.2 and County List D sensitive species, and is covered under the SDG&E NCCP. It is associated with chaparral, coastal scrub, valley and foothill grasslands in clay soils between 66 and 3,133 feet amsl in elevation. Its blooming period is between March and May. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral,

Diegan coastal sage scrub, and native and non-native grasslands. This species has occurrences along C78 (Chambers Group Inc. 2012a) and a high potential to occur within TL625.

Wright's Hymenothrix

Wright's hymenothrix (*Hymenothrix wrightii*), a perennial herb, is a CRPR 4.3 and County List D sensitive species. It is associated with cismontane woodlands, lower montane coniferous forests, valley and foothill grasslands between 4,593 and 5,085 feet amsl in elevation. Its blooming period is between June and October. Within the project area, suitable habitat includes montane forests, and native and non-native grasslands. This species has occurrences along C440 (Chambers Group Inc. 2012a).

Pride-of-California

Pride-of-California (*Lathyrus splendens*), a perennial herb, is a CRPR 4.3 and County List D sensitive species. It is associated with chaparral habitats between 656 and 5,003 feet amsl in elevation. Its blooming period is between March and June. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, and scrub oak chaparral. This species has occurrences along TL6923 (Chambers Group Inc. 2012a).

Low bush Monkeyflower

Low bush monkeyflower (*Mimulus aurantiacus* var. *aridus*), an annual herb, is a CRPR 4.3 sensitive species. It is associated with rocky chaparral and Sonoran desert scrub habitats between 2,461 and 3,937 feet amsl in elevation. Its blooming period is between April and July. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, and scrub oak chaparral. This species has occurrences along TL629 (Chambers Group Inc. 2012a).

Cleveland's Bush Monkeyflower

Cleveland's bush monkeyflower (*Mimulus clevelandii*), a perennial rhizomatous herb, is a CRPR 4.2 and County List D sensitive species. It is associated with chaparral, cismontane woodlands, and lower montane coniferous forests in gabboric sites that are often in disturbed areas, openings or rocky locations. This species occurs between 1,476 and 6,562 feet amsl in elevation. Its blooming period is between April and July. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and montane forests. This species has occurrences along C442, C79, TL625, and TL626 (Chambers Group Inc. 2012a).

Johnston's Monkeyflower

Johnston's monkeyflower (*Mimulus johnstonii*), an annual herb, is a CRPR 4.3 sensitive species. It is associated with lower montane coniferous forests in scree, disturbed areas, rocky, gravelly, or roadside locations between 3,199 and 9,580 feet amsl in elevation. Its blooming period is between May and August. Within the project area, suitable habitat includes montane forests. This species has occurrences along TL629 (Chambers Group Inc. 2012a).

Palomar Monkeyflower

Palomar monkeyflower (*Mimulus palmeri*), an annual herb, is a CRPR 4.3 sensitive species. It is associated with chaparral and lower montane coniferous forests in sandy or gravelly sites between 4,003 and 6,004 feet amsl in elevation. Its blooming period is between April and June. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and montane forests. This species has occurrences along C442, TL625, and TL629 (Chambers Group Inc. 2012).

Cactus Apple

Cactus apple (*Opuntia engelmannii* var. *engelmannii*), a shrub, is an uncommon species in California without status. It is associated with desert scrub and dry oak woodland habitat types between 2,953 and 4,921 feet amsl in elevation. Its blooming period is between March and May. Within the project area, suitable habitat includes oak savannahs, and mixed oak woodlands. This species has occurrences along TL625 (Chambers Group Inc. 2012a).

Cooper's Rein Orchid

Cooper's rein orchid (*Piperia cooperi*), a perennial herb, is a CRPR 4.2 and County List D sensitive species. It is associated with chaparral, cismontane woodlands, valley, and foothill grasslands sites between 49 and 5,200 feet amsl in elevation. Its blooming period is between March and June. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, montane forests, and native and non-native grasslands. This species has occurrences along TL625 (Chambers Group Inc. 2012a).

Engelmann Oak

Engelmann oak, a perennial deciduous tree, is a CRPR 4.2 and County List D sensitive species. It is associated with chaparral, cismontane woodlands, riparian woodlands, valley, and foothill grasslands sites between 164 and 4,265 feet amsl in elevation. Its blooming period is between March and June. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, montane forests, southern riparian

forests, and native and non-native grasslands. This species has occurrences along TL626 and C440 (Chambers Group Inc. 2012a; Forest Service 2013f).

Laguna Mountains Jewelflower

Laguna Mountains jewelflower (*Streptanthus bernardinus*), a perennial herb, is a CRPR 4.3 and County List D. It is associated with chaparral and lower montane coniferous forests between 2,198 and 8,202 feet amsl in elevation. Its blooming period is between May and August. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and montane forests. This species has occurrences along C79 (Chambers Group Inc. 2012a) and a moderate to high potential to occur along C440 (Forest Service 2006b).

Rush-like Bristleweed

Rush-like bristleweed (*Xanthisma [=Machaeranthera] junceum*), a perennial herb, is a CRPR 4.3 and County List D sensitive species. It is associated with chaparral and coastal scrub between 787 and 3,281 feet amsl in elevation. Its blooming period is between June and January. Within the project area, suitable habitat includes southern mixed chaparral, chamise chaparral, semi-desert chaparral, scrub oak chaparral, and Diegan coastal sage scrub. This species has occurrences along TL625 (Chambers Group Inc. 2012a).

Special-Status Wildlife Species

Of 179 special-status wildlife species, Appendix BIO-3 describes 105 that are considered absent from the entire project area or have a low potential to occur and/or have a low status. The remaining 74 species are described below. Potential to occur tables for wildlife are described in Appendix BIO-4. Figures D.4-2a through D.4-2e show CNDDB occurrence points for special-status wildlife and plants in the vicinity of SDG&E's proposed project. Figures D.4-3a through D.4-3e show USFWS critical habitat in the vicinity of SDG&E's proposed project. Tables D.4-1~~5~~4a and D.4-1~~5~~4b provide a description of special-status wildlife species that were observed along lines not part of the power line replacement projects to be covered under the MSUP. These tables include the same species as described for the power line replacement projects. All species and their status and habitat associations can be found in Appendix BIO-2.

The following 74 special-status wildlife species include those that have species occurrences or a moderate to high potential to occur within the survey area of the TL/circuits. Additionally, these species are also listed as one or more of the following: County Group 1, federally listed, state listed, BLM sensitive species, or Forest Service sensitive (FSS) species. A description of each species, their life history and habitat associations, along with potential to occur within the

project site is provided below. Please refer to Appendix BIO-4 for potential to occur description of all species.

Amphibians

Arroyo Toad

The arroyo toad (*Anaxyrus californicus*) is federally listed as endangered, a California Species of Special Concern, International Union for Conservation of Nature (IUCN) endangered species, San Diego County sensitive species (Group 1), covered under the MSCP and SDG&E NCCP, and a CNF MIS for aquatic habitats. This species inhabits low-gradient streams both in coastal and desert drainages. It may also be found in high-elevation valleys in southern California and northern Baja California, Mexico. The arroyo toad occupies aquatic, riparian, and upland habitats at various points in the year based on an individual's stage of development, the time of year, and the weather. For example, aquatic habitats are used for breeding and larval development; drying stream beds, terraces adjacent to breeding sites, and nearby upland are used for foraging, aestivation, and overwintering. Arroyo toads seek shelter by burrowing into sand during the day (CaliforniaHerps.com 2013). Thus, areas of sandy or friable (readily crumbled) soils are the most important habitat for the species, and these soils can be interspersed with gravel or cobble deposits (70 FR 19562–19633). The breeding season is primarily between March to July; however, it may sometimes extend into September (CDFG 2008). This species has occurrences along C78, C157, C449, C440, C442, TL682, TL625, TL6923, and TL629 (Chambers Group Inc. 2012; CDFW 2014; Forest Service 2006b, 2012; USFWS 2014) and a moderate to high potential to occur along TL626 (Forest Service 2006b).

California Red-Legged Frog

The California red-legged frog (*Rana draytonii*) is federally threatened, CDFW California Species of Special Concern, San Diego sensitive species (Group 1) and covered under the MSCP and SDG&E NCCP. This species breeds in streams, deep pools, backwaters within streams and creeks, ponds, marshes, sag ponds, dune ponds, lagoons, and stock ponds. Red-legged frogs can occur in ephemeral ponds or permanent streams and ponds, but populations probably cannot persist in ephemeral streams (Jennings and Hayes 1985). Deep still or slow-moving water and dense, shrubby riparian or emergent vegetation is often used by adults (Hayes and Jennings 1988), but frogs have been observed in areas lacking vegetation cover. Many frogs have been detected in deep water ponds with dense stands of overhanging willows (*Salix* sp.) and a fringe of cattails (*Typha latifolia*) between the willow roots and overhanging willow limbs (Jennings 1988; Rathbun et al. 1993). Breeding for this species occurs during the winter as early as late November through April and May. This species has historical occurrences along C440 and TL629 (Forest Service 2012).

Western Spadefoot Toad

The western spadefoot toad (*Spea hammondii*) is a CDFW California Species of Special Concern and BLM sensitive species. It is a San Diego sensitive species (Group 2) and covered under the SDG&E NCCP. The species ranges from the north end of California's Central Valley near Redding, south, west of the Sierras and the deserts, and into northwest Baja California, Mexico (Jennings and Hayes 1994; Stebbins 2003). Although the species primarily occurs in lowlands, it also occupies foothill and mountain habitats. Within its range, the western spadefoot toad occurs from sea level to 4,000 feet amsl, but mostly at elevations below 3,000 feet amsl (Stebbins 2003).

The western spadefoot toad is almost completely terrestrial, entering water only to breed. The species aestivates in upland habitats near potential breeding sites in burrows approximately 3 feet in depth (Stebbins 1972). The species prefers open areas with sandy or gravelly soils in a variety of habitats, including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, river floodplains, alluvial fans, playas, and alkali flats (Stebbins 2003; CaliforniaHerps.com 2013). According to Chambers Group Inc. (2012a), this species has a moderate to high potential to occur along the following circuit/TL areas: C157, C449, TL625, TL682, and TL6923.

Large-Blotched Salamander

The large-blotched salamander (*Ensatina klauberi*) is a California Species of Special Concern and a FSS species. This species inhabits the peninsular ranges of Southern California, sections of the eastern San Bernardino Mountains, along with isolated populations in the Sierra de San Pedro Mártir and the Sierra Juárez of northern Baja California (CaliforniaHerps.com 2013). This species is located in moist, shaded, evergreen and oak woodland forests where it seeks cover under logs, rocks, and bark. It remains inside cover (e.g., logs, burrows, woodrat nests, tree roots) during dry or cold weather (CaliforniaHerps.com 2013). This species has a moderate to high potential to occur along C157, C440, C442, C449, TL629, TL625, TL626 and TL682 (Chambers Group Inc. 2012a; Forest Service 2006b).

Coronado Island Skink

The Coronado Island skink (*Plestidon skiltonianus interparietalis*) is a California Species of Special Concern, BLM sensitive species, San Diego County sensitive species (Group 2), and covered under the SDG&E NCCP. It is located in the coastal plain and Peninsular Ranges west of the deserts from approximately San Gorgonio Pass (Riverside County) southward to San Quintín (Baja California), Mexico. This species may be found in coastal sage, chaparral, oak woodlands, pinyon–juniper, and riparian woodlands to pine forests; but tends to prefer early successional stages and areas with adequate rocky cover. According to Chambers Group Inc. (2012a), this species a high potential to occur along TL625 and TL6923.

Coast Range Newt

The Coast Range newt (*Taricha torosa torosa*) is a California Species of Special Concern and County of San Diego sensitive species (Group 2) in Southern California. This species occupies terrestrial habitats (e.g., grasslands, woodlands, and forests) where it utilizes pools, ponds, reservoirs, and slow-moving streams as breeding sites. This species inhabits most of coastal California and it may be located up to 7,800 feet amsl in elevation. This species also has a moderate to high potential to occur along TL626 (Chambers Group Inc. 2012a; Forest Service 2012).

Reptiles

Southwestern Pond Turtle

The Southwestern pond turtle (*Actinemmys marmorata pallida*) is a California Species of Special Concern, FSS species,[5] BLM sensitive species, San Diego County sensitive species (Group 1), IUCN vulnerable, MSCP covered species, and covered under the SDG&E NCCP. This species occurs along the coast of North America from Baja California up to San Francisco Bay and can be found from 0 to over 5,900 feet amsl in elevation (CaliforniaHerps.com 2013). It inhabits many habitat types that include permanent to nearly permanent bodies of water, including ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches with abundant vegetation (CaliforniaHerps.com 2013). Although this species is considered aquatic, it spends much time on land and requires basking sites (e.g., logs, vegetation mats, or open areas). This species will hibernate under water in mud. This species has occurrences along C157, C442, TL625, and has a moderate to high potential to occur along the following circuit/TL areas[6]: C440, C449, TL626, TL629, TL682, and TL6923 (Chambers Group Inc. 2012a; CDFW 2014; Forest Service 2006b).

California Legless Lizard

The California legless lizard (*Anniella pulchara*) is a California Species of Special Concern, FSS species, and San Diego County special species (Group 2). This species inhabits the Los Padres, Angeles, San Bernardino, and Cleveland national forests between 0 and 5,900 feet amsl (Fisher and Case 2013; CaliforniaHerps.com 2013). Due to this species' burrowing behavior, it can be difficult to detect. However, it is usually located in areas with loose, loamy soils, or under sparse vegetation of beaches, chaparral, pine-oak woodlands. They may also be detected under vegetation (e.g., sycamores, oaks) on stream terraces, logs, rocks, and leaf litter (Stephenson and Calcarone 1999). In the CNF, suitable habitats may occur in sandy washes, north-facing slopes,

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[5] Designation given to full species.
[6] Full species (*A. marmorata*) occurrences along TL629 and TL682 (CDFW 2014).

and other areas where leaf-litter, logs, and rocks may offer shelter and moisture. This species has occurrences along C440 (Chambers Group Inc. 2012a) and a moderate to high potential to occur along C157, C442, C449, C79, TL629, TL625, TL626, TL629, TL682, and TL6923 (Forest Service 2006b, 2010).

San Diego Ring-Necked Snake

The San Diego ring-necked snake (*Diadophis punctatus similis*) is a USFS Sensitive Species, San Diego County sensitive species (Group 2), and covered under the NCCP. In Southern California, this subspecies is found along the Southern California coast from northern San Diego County south to Baja California, Mexico (Stebbins 2003). The ring-neck snake is found in forest, woodland, grassland, cropland/hedgerow, desert, savanna, shrubland, chaparral, and woodland habitats (NatureServe 2014; Stebbins 2003). In arid regions, the ring-neck snake occurs in forests, woodlands, sage scrub, chaparral, and riparian corridors (Stebbins 2003). This species forages on earthworms, salamanders, small frogs, amphibian larvae, slugs, and other organisms. This species has a moderate to high potential to occur along C157, C440, C442, C449, C78, C79, TL629, TL625, TL626, TL682, and TL6923 (Forest Service 2006b, 2010).

Coast Horned Lizard

The coast horned lizard (*Phrynosoma coronatum blainvillii*) is a BLM sensitive and FSS species, California Species of Special Concern, San Diego sensitive species (Group 2), and covered under San Diego MSCP and SDG&E NCCP. It is found from the Sierra Nevada foothills and central California to coastal Southern California. The species occupies a variety of habitat including valley–foothill hardwood, conifer, and riparian habitats; pine–cypress, juniper, annual grasslands, sandy areas, washes, flood plains, and wind-blown deposits in open country (CDFG 2008). However, the key elements of these habitats are loose, fine, sandy soils; open areas for basking; and low shrubs for cover and abundant food sources (i.e., native ants). This species has occurrences along C440, C449, C79, TL625, TL626, TL629, and TL682 (Chambers Group Inc. 2012a; CDFW 2014; Forest Service 2012). This species also has a moderate to high potential to occur along the following circuit/TL areas: C157, C442, C449, C78, and TL6923 (Chambers Group Inc. 2012a; Forest Service 2006b, 2010).

Belding's Orange-Throated Whiptail

The orange-throated whiptail (*Aspidoscelis hyperythra beldingi*) is a FSS species,[7] California Species of Special Concern, San Diego County sensitive species (Group 2), and covered under the

[7] Designation given to full species.

MSCP and SDG&E NCCP. It is located in southwestern California and Baja California, Mexico, from the southern edges of Orange County (Corona del Mar) and San Bernardino County (near Colton), southward to the Mexican border. This species is located on the coastal slope of the Peninsular Ranges and extends from near sea level to 3,412 feet amsl (northeast of Aguanga, Riverside County) (Jennings and Hayes 1994). It commonly occurs in California buckwheat, California sagebrush, black sage, white sage, chamise, and redshank (*Adenostoma sparsifolium*) sage scrub, coastal sage scrub, chaparral, grassland, juniper, and oak woodland. This species has a moderate to high potential to occur along TL625 and TL682[8] (Chambers Group, 2012a); and C157, C440, C442, C449, C78, TL626, TL629, and TL6923 (Californiaherps.com 2014[9]).

San Diego Banded Gecko

The San Diego banded gecko (*Coleonyx variegatus abbotti*) is a San Diego sensitive species (Group 1) and covered under the SDG&E NCCP. This species inhabits coastal and cismontane Southern California from interior Ventura County south, although absent from the extreme outer coast. It is uncommon in coastal scrub and chaparral, most often occurring in granite or rocky outcrops in these habitats (CDFG 2008). This species may inhabit a wide variety of habitats including rocky areas in coastal sage and chaparral and granite or rocky outcrops in coastal and cismontane Southern California from interior Ventura County south. The San Diego banded gecko is more often found in rocky or granite outcrops (CDFG 2008). This species has a moderate potential to occur along the following circuit/TL areas: C157, C78, TL625, and TL6923 (Chambers Group Inc. 2012a).

Northern Red-Diamond Rattlesnake

The northern red-diamond rattlesnake (*Crotalus ruber ruber*) is a FSS species, California Species of Special Concern, San Diego County sensitive species (Group 2), and covered under the SDG&E NCCP. It is found in a variety of habitats from the coast to the deserts, from San Bernardino County into Baja California, Mexico (below 5,000 feet amsl in elevation). The red-diamond rattlesnake occurs in rocky areas and in dense vegetation including chaparral, woodland, and arid desert habitat (CDFG 2008). This species has a high potential to occur along

[8] Full species (*A. hyperythra*) has occurrences along TL625 and TL682 (CDFW 2014).
[9] Habitat suitability for this species generally described using range maps provided by Californiaherps.com 2014. C79 is above suitable elevational range for this species (Zeiner et al. 1990a).

TL625 and TL6923[10] (Chambers Group Inc. 2012a; Forest Service 2012); and C157, C440, C442, C449, C78, C79, TL626, TL682, and TL629 (Californiaherps.com 2014[11]).

San Diego Mountain Kingsnake

The San Diego mountain kingsnake (*Lampropeltis zonata pulchra*) is a California Species of Special Concern, a FSS species, and a San Diego County sensitive species (Group 2). This California endemic subspecies of the mountain kingsnake is found between approximately 1,640 and 5,900 feet amsl of elevation (Jennings and Hayes 1994). In the interior, this species occurs in ponderosa, Jeffrey, and Coulter pines, and black oak and is infrequently found below the coniferous forest associations. At lower elevations, it is associated with mixed oak–coniferous forest in riparian woodlands, usually in canyon bottoms that have western sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii*), coast live oak, willows, wild rose (*Rosa* spp.), and blackberry (*Rubus ursinus*). Rocks or rocky outcrops may be important habitat characteristics that provide this species hibernation/refuge sites and food resources (Jennings and Hayes 1994).This species has occurrences along C440 and C79 (Chambers Group Inc. 2012a; Forest Service 2012; CDFW 2014) and a moderate to high potential to occur along the following circuit/TL areas: C442, TL626, TL629, and TL682 (Chambers Group Inc. 2012; Forest Service 2006b).

Coastal Rosy Boa

The coastal rosy boa (*Lichanura trivirgata roseofusca*) is an FSS Species,[12] San Diego County sensitive species (Group 2), and covered under the SDG&E NCCP. The species is widely and sparsely distributed in desert and chaparral habitats throughout Southern California, south of Los Angeles, from the coast to the Mojave and Colorado deserts. It is absent in extreme eastern California and in the vicinity of the Salton Sea (CDFG 2008). It occurs at elevations from sea level to 5,000 feet amsl in the Peninsular and Transverse mountain ranges.

The rosy boa inhabits habitats with a mixture of brush cover and rocky soil and may occur in coastal canyons and hillsides, desert canyons, washes and mountains. They have been found under rocks, in boulder piles, and along rock outcrops and vertical canyon walls (CDFG 2008). In the desert it is found on scrub flats with good cover (CDFG 2008). This species has a

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[10] Full species (*C. ruber*) occurrences along TL6923 (CDFW 2014).

[11] Habitat suitability for this species generally described using range maps from Californiaherps.com (2014).

[12] FSS coastal rosy boa (or 3-lined boa) *Lichanura orcutti*. This species consists of *L. t. roseofusca* (excluding extreme southern San Diego County boas) and *L. t. gracia*, including the "Arizona rosy boa" phase (Californiaherps.com 2014).

moderate to high potential to occur along the following circuit/TL areas: C157, C440, C442, C449, C78, C79, TL629, TL625, TL626, TL682, and TL6923 (Forest Service 2006b, 2010).

Two-Striped Garter Snake

The two-striped garter snake (*Thamnophis hammondii*) is a California Species of Special Concern and BLM sensitive and FSS species, San Diego County sensitive species (Group 1), and covered under the SDG&E NCCP. This species is located in disjunct populations from the San Francisco area in California to northwest Baja California, Mexico. This aquatic species inhabits areas with permanent and intermittent freshwater habitats, including streams, rivers, ponds, and small lakes, from sea level to approximately 8,000 feet amsl in elevation. Freshwater habitats may be surrounded by a variety of vegetation communities, including oak woodlands, brush lands, sparse coniferous forests, and riparian forests. This species has occurrences along C442 and C449 (CDFW 2014; Forest Service 2006b, 2012) and a moderate to high potential to occur along the following circuit/TL areas: C157, C440, TL625, TL626, TL629, TL682, and TL6923 (Chambers Group Inc. 2012a; Forest Service 2006b, 2010).

South Coast Garter Snake

The south coast garter snake (*Thamnophis sirtalis* spp.) is a California Species of Special Concern and San Diego County sensitive species (Group 2). This endemic California species occurs in scattered areas along the southern coastal plain from the Santa Clara River Valley south to the vicinity of San Pasqual. These locations may range from 0 to 2,500 feet amsl in elevation (Jennings and Hayes 1994). This species is restricted to marsh and upland habitats near permanent water sources with riparian vegetation (Jennings and Hayes 1994). According to Chambers Group Inc. (2012a), this species has a moderate potential to occur along TL682.

Coast Patch-Nosed Snake

The coast patch-nosed snake (*Salvadora hexalepis virgultea*) is listed as a California Species of Special Concern, San Diego County sensitive species (Group 2) and covered under the SDG&E NCCP. It occurs from the northern Carrizo Plains of San Luis Obispo County southward into Baja California between 0 and 9,000 feet amsl in elevation (Jennings and Hayes 1994). It occupies semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains (CaliforniaHerps.com 2013). This species has occurrences along TL625 (CDFW 2014) and has a moderate to high potential to occur along the following circuit/TL areas: C449, and TL6923 (Chambers Group Inc. 2012a).

Birds

Cooper's Hawk

The Cooper's hawk (*Accipiter cooperii*; nesting) is a CDFW Watch List species, San Diego County sensitive species (Group 1), and covered under the MSCP and SDG&E NCCP. It is found throughout California in wooded areas. It inhabits live oak, riparian, deciduous, or other forest habitats near water. Nesting and foraging usually occur near open water or riparian vegetation. Nests are built in dense stands with moderate crown depths, usually in second-growth conifer or deciduous riparian areas. Cooper's hawks use patchy woodlands and edges with snags for perching while they are hunting (CDFG 2008). In general, suitable foraging habitat may include big sagebrush scrub, chamise chaparral, emergent wetland, non-native grassland, Peninsular juniper woodland and scrub, redshank chaparral, northern mixed chaparral, semi-desert chaparral, southern north slope chaparral, and shadscale scrub in addition to the nesting habitat. This species has been observed along or near C442 and C449 (Forest Service 2012) and has occurrences along TL625 (CDFW 2014). This species has a high potential to nest along the following circuit/TL areas: C157, C440, C442, C449, C79, TL626, TL629, TL682, and TL6923.

Western Grebe

The western grebe (*Aechmophorus occidentalis*) is a San Diego County sensitive species (Group 1). It is found along the coast in marine subtidal and estuary waters, and is uncommon to fairly common on large lakes near coast and inland at low elevations. This species breeds on large, marshy lakes. In general, suitable foraging and nesting habitat may include habitats within or adjacent to large bodies of water. This species has a moderate potential to occur along the following circuit/TL areas: TL682, C440, TL625, and C449.

Tricolored Blackbird

The tricolored blackbird (*Agelaius tricolor;* nesting colony) is a USFWS Birds of Conservation Concern and California Species of Special Concern with regard to its nesting colony status. Its status includes American Bird Conservancy U.S. Watch List of Birds of Conservation Concern (WLBCC), BLM sensitive, IUCN endangered, San Diego County sensitive species (Group 1), and covered under the MSCP and SDG&E NCCP. It is found throughout the Central Valley of California and the coastal areas from Sonoma County south to San Diego County (CDFG 2008). Locally, it breeds in southern and western San Diego County.

Tricolored blackbirds are highly gregarious in all seasons and forage/roost in large flocks. This species breeds in colonies that may vary in size from a minimum of 50 nests to over 20,000 in an area of 10 acres or less (CDFG 2008). These birds prefer to breed in freshwater marshes with

dense growths of emergent vegetation dominated by cattails (*Typha* spp.) or bulrushes (*Schoenoplectus* spp.), but have also established colonies in willows, blackberries (*Rubus* spp.), thistles (*Cirsium* and *Centaurea* spp.), and nettles (*Urtica* sp.). More recently, the breeding habitat has included diverse upland and agricultural areas. Breeding individuals forage away from the nest sites, often well out of sight of the colony. According to Chambers Group Inc. (2012a), this species has a moderate potential to occur along TL6923.

Southern California Rufous-Crowned Sparrow

The Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) is a CDFW Watch List species, San Diego County sensitive species (Group 1), and covered under the MSCP and SDG&E NCCP. The rufous-crowned sparrow is a resident of the southwest region of the United States. The current distribution of the Southern California rufous-crowned sparrow is restricted to a narrow belt of semiarid coastal sage scrub and sparse chaparral from Santa Barbara south to the northwestern corner of Baja California, Mexico.

The rufous-crowned sparrow occupies moderate to steep hillsides that are rocky, grassy, or covered by coastal sage scrub or chaparral. It is a secretive species, seeking cover in shrubs, rocks, grass, and forb patches. The species often occurs near the edges of denser scrub and chaparral associations, but usually does not occur within these associations. This species has occurrences along TL625 (CDFW 2014), TL626, and C78 (pers. comm. K. Winter[13]). This species has a moderate to high potential to occur along the following circuit/TL areas: C157, C440, C442, C449, TL629, TL682, and TL6923.

Grasshopper Sparrow

The grasshopper sparrow (*Ammodramus savannarum*) is a Species of Special Concern, San Diego sensitive species (Group 1), and covered under the MSCP and SDG&E NCCP. The grasshopper sparrow is an uncommon and local, summer resident. This species breeds in foothills and lowlands west of the Cascade–Sierra Nevada crest from Mendocino and Trinity counties south to San Diego County. In Southern California this species mainly occurs on hillsides and mesas in coastal districts but has been known to breed up to 5,000 feet amsl in the San Jacinto Mountains (CDFG 2008). This species is frequently found in dense, dry, or well-drained grasslands, especially native grasslands that contain a mixture of grasses and forbs for foraging and nesting (CDFG 2008). This species has a moderate potential to occur along the following circuit/TL areas: C157, C440, C78, TL625, TL629, and TL6923.

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[13] Species also documented along the following lines to be included in the MSUP and not part of the Power Line Replacement Projects: C358, C237, TL637

Bell's Sparrow

The Bell's sparrow (*Artemisiospiza belli;* Includes nominate form of species, *Amphispiza belli belli*) is a USFWS Birds of Conservation Concern species, CDFW Watch List species, WLBCC, and San Diego County sensitive species (Group 1). It occurs as a non-migratory resident on the western slope of the central Sierra Nevada Range, and in the coastal ranges of California southward from Marin County and Trinity County, extending into north–central Baja California, Mexico (County of Riverside 2008a). The range of Bell's sparrow overlaps with that of at least one other subspecies of sage sparrow (County of Riverside 2008a).

Bell's sparrow occupies semi-open habitats with evenly spaced shrubs that are 3.3 to 6.6 feet high (County of Riverside 2008a). For site selection, specific shrub species may be less important than overall vertical structure, habitat patchiness, and vegetation density (Wiens and Rotenberry 1981). Bell's sage sparrow is uncommon to fairly common in dry chaparral and coastal sage scrub along the coastal lowlands, inland valleys, and lower foothills of the mountains within its range. In general, suitable habitat may include big sagebrush scrub, chamise chaparral, redshank chaparral, northern mixed chaparral, semi-desert chaparral, southern north slope chaparral, shadscale scrub, Sonoran mixed woody succulent scrub, and upper Sonoran subshrub scrub. This species has occurrences along TL625, TL626, and C78 (pers. comm. K. Winter[14]) and a high potential to occur along the following circuit/TL areas: C157, C440, C442, C449, C79, TL629, TL682, and TL6923.

Golden Eagle

The golden eagle (*Aquila chrysaetos*; nesting and wintering) is a federally protected species under the Bald and Golden Eagle Protection Act and is also fully protected by the State of California. It is a federal Bird of Conservation Concern, BLM sensitive species, CDFW Watch List species, California Department of Forestry and Fire Protection (CAL FIRE) sensitive species, San Diego sensitive species (Group 1), and covered under the MSCP and SDG&E NCCP. This species is mostly located in western North America, from Alaska south to central Mexico. The golden eagle prefers mountainous or hilly terrain, hunting over open country for small mammals, snakes, birds, or carrion. It is a yearlong, diurnally active species that is a permanent resident and migrant throughout California. The species is sparsely distributed throughout California, and it is found in Southern California occupying primarily mountain, foothill, and desert habitats. Foraging habitat for this species is very broad and in California

[14] Species also documented along the following lines to be included in the MSUP and not part of the Power Line Replacement Projects: C358, C237, TL637

includes open habitats with scrub, grasslands, desert communities, and agricultural areas. This species nests on cliffs within canyons and escarpments and in large trees (generally occurring in open habitats) and is primarily restricted to rugged, mountainous country (Garrett and Dunn 1981; Johnsgard 1990). Most nests are located on cliffs or trees near forest edges or in small stands near open fields (Kochert et al. 2002). This species may nest on cliff faces, walled canyons, or in tall trees. This species has been observed within the survey area along C440, TL625, TL626, TL629, TL6923 (Forest Service 2012) and nesting near TL626 (Forest Service 2006b). Within 4,000 feet of SDG&E's proposed project, this species has occurrences along TL625, TL6923, TL629, C440, ~~and~~ TL626, and TL682 (Forest Service 2012, 2013f; ~~;~~ CDFW 2013a). ~~This species has a high potential to occur along TL682 (Chambers Group Inc. 2012a).~~

Burrowing Owl

The burrowing owl (*Athene cunicularia*) is a federal Bird of Conservation Concern, BLM sensitive species, California Species of Special Concern, San Diego County sensitive species (Group 1), and covered under the MSCP and SDG&E NCCP. It breeds in open plains from western Canada and the western United States, Mexico through Central America, and into South America to Argentina (USFWS 2002a). The winter range is much the same as the breeding range, except that most western burrowing owls apparently vacate the northern areas of the Great Plains and the Great Basin (County of Riverside 2008b) in winter. In California, western burrowing owls are yearlong residents of flat, open, dry grassland and desert habitats at lower elevations (Bates 2006). They can inhabit annual and perennial grasslands and scrublands characterized by low-growing vegetation. They may be found in areas that include trees and shrubs if the cover is less than 30% (Bates 2006); however, they prefer treeless grasslands. Although western burrowing owls prefer large, contiguous areas of treeless grasslands, they have also been known to occupy fallow agriculture fields, golf courses, cemeteries, road allowances, airports, vacant lots in residential areas and university campuses, and fairgrounds when nest burrows are present (Bates 2006; County of Riverside 2008b). They typically require burrows made by fossorial mammals, such as California ground squirrels. This species inhabits dry, open, native or non-native grasslands, deserts, occupy golf courses, cemeteries, road ROWs, airstrips, abandoned buildings, irrigation ditches, and vacant lots with holes or cracks suitable for use as burrows (TLMA 2006). It is also found occupying rodent or other burrows for shelter and nesting (CDFG 2008); however, may utilize man-made structures (e.g., pipes, culverts, nest boxes) when burrows are not readily available (TLMA 2006). According to Chambers Group Inc. (2012a), this species has a high potential to occur along C157.

Redhead

The redhead (*Aythya americana*; nesting) is a California Species of Special Concern, WLBCC, and San Diego County sensitive species (Group 2). The redhead nests overwater in relatively tall, dense emergent vegetation. They inhabit lacustrine waters, foothills and coastal lowlands, and along the coast and Colorado River. In general, suitable foraging and nesting habitat may include habitats within large bodies of water. This species has a moderate potential to occur along the following circuit/TL areas: TL682, C440, TL625, and C449.

Red-Shouldered Hawk

The red-shouldered hawk (*Buteo lineatus*) is a San Diego County sensitive species (Group 1). Red-shouldered hawks inhabit a broad range of North American forests, but favor mature, mixed deciduous-coniferous woodlands, especially bottomland hardwood, riparian areas, flooded deciduous swamps, oak woodlands, eucalyptus groves, and suburban areas with nearby woodlots (Dykstra et al. 2008). In general, suitable foraging and nesting habitat for this species may occur throughout the project areas. This species has been observed along C442, C449, and TL629 (Forest Service 2012). This species has a moderate potential to occur along all circuit/TL areas.

Turkey Vulture

The turkey vulture (*Cathartes aura*) is a San Diego County sensitive species (Group 1). In the western United States, this species tends to occur most regularly in areas of pastured rangeland, non-intensive agriculture, or wild areas with rock outcrops suitable for nesting. Landscape features that contain suitable breeding-season habitat requirements vary geographically, and it is difficult to identify suitable habitat on a broad scale (Kirk and Mossman 1998). This species is almost exclusively a scavenger and may prefer farmlands with pasture and abundant carrion and undisturbed forested areas for perching, roosting, and nesting. This species nests in dark recesses beneath boulders, on cliff edges, in hallow trees, logs, stumps, and abandoned buildings (Kirk and Mossman 1998). In general, suitable foraging and nesting habitat for this species may occur throughout the project areas. This species has been observed along C157, C449, C442, TL629, and TL625 (Forest Service 2006b, 2012). This species also has a moderate potential to occur along all remaining circuits/TL areas.

Olive-Sided Flycatcher

The olive-sided flycatcher (*Contopus cooperi*; nesting) is a California Species of Special Concern, federal Bird of Conservation Concern, a Diego County sensitive species (Group 2), and WLBCC. This species is a summer resident in a wide variety of forest and woodland habitats, and its preferred nesting habitats include mixed conifer, montane hardwood–conifer, Douglas-fir,

redwood, red fir, and lodgepole pine. This species is found throughout California excluding deserts, Central Valley and other lowland valleys and basins, below 2,800 meters. In general, this species occurs throughout all forests and woodlands within the project site, including montane forests, mixed oak woodlands, and oak savannas. This species has a moderate potential to occur along all circuit/TL areas.

Yellow Warbler

The yellow warbler (*Dendroica petechial brewsteri*; nesting) is a California Species of Special Concern, federal Bird of Conservation Concern, and San Diego County sensitive species (Group 2). The yellow warbler is widely distributed, with a breeding range from northern Alaska eastward to Newfoundland and southward to northern Baja California, Mexico, and Georgia. This species is a migrant throughout much of North America and winters from Southern California, Arizona, and the Gulf Coast southward through Mexico (Lowther et al. 1999). Yellow warblers breed in riparian woodlands southward from the northern border of California, generally west of the Sierra Nevada to the coastal slopes of Southern California, and from coastal and desert lowlands up to 8,860 feet amsl in the Sierra Nevada and other montane chaparral and forest habitats (Lowther et al. 1999; Grinnell and Miller 1944). This species breeds most commonly in wet, deciduous thickets, especially those dominated by willows, and in disturbed and early successional habitats (Lowther et al. 1999). During migration they may occur in scrub/shrub and semi-open, second-growth forest habitats often associated with wetlands (Lowther et al. 1999). According to Chambers Group Inc. (2012a), this species has occurrences along the following circuit/TL areas: C157, C442, C449, TL625, TL629, and TL682.

White-Tailed Kite

The white-tailed kite (*Elanus leucurus*; nesting) is CDFW Fully Protected and a San Diego County sensitive species (Group 1). This species occurs in California, Texas, Florida, Oregon Washington, and the middle portions of North America (Eisenmann 1971). It is nonmigratory and populations inhabit the same geographic region year round. This species is a common to uncommon year-long resident in coastal and valley lowlands up to the western Sierra Nevada foothills and southeast deserts (Small 1994; County of Riverside 2003). It is common in the Central Valley of California and along the entire length of the coast. Although it is generally a resident bird throughout most of its breeding range, some dispersal occurs during the non-breeding season, resulting in some range expansion during the fall and winter. The white-tailed kite is commonly associated with agriculture areas (Grinnell and Miller 1944), but it also inhabits low-elevation grasslands, savanna-like habitats, open sage scrub, meadows, wetlands, and oak woodlands, particularly in areas with a dense population of voles (Waian and Stendell 1970). Riparian areas adjacent to open space areas are typically used for nesting (County of

Riverside 2003), where kites prefer dense, broad-leafed deciduous trees for nesting and roosting (Brown and Amadon 1968). The white-tailed kite breeds from February to October, with a peak from May to August. This species has a moderate potential to nest along C449, TL629, and TL626 (Unitt 2004).

California Horned Lark

The California horned lark (*Eremophila alpestris actia*) is a CDFW Watch List and San Diego County sensitive species (Group 2). This species inhabits open habitats, grassland, rangeland, shortgrass prairie, montane meadows, coastal plains, and fallow grain fields. This species is a resident in the coastal range and San Joaquin Valley to northern Baja California. In general, this species may occur in meadows and grasslands within the project sites. This species has a moderate potential to occur along the following circuit/TL areas: TL682, TL626, TL625, TL629, TL6923, C78, C157, C440, and C440.

Southwestern Willow Flycatcher

The southwestern willow flycatcher (*Empidonax traillii extimus*; hereafter, SWFL) (nesting) is a federally listed as endangered subspecies of willow flycatcher. They also retain the status of federal Bird of Conservation Concern, state endangered, WLBCC, San Diego County sensitive species (Group 1), and covered under the MSCP and SDG&E NCCP. Their summer breeding range includes Southern California (from the Santa Ynez River south), Arizona, New Mexico, extreme southern portions of Nevada and Utah, extreme southwest Colorado, and western Texas (60 FR 10694–10715). The breeding distribution of the southwestern willow flycatcher in California is from the Mexican border north to Independence in the Owens Valley, the South Fork Kern River, and the Santa Ynez River in Santa Barbara County (Craig and Williams 1998). The southwestern willow flycatcher is a riparian obligate species restricted to dense streamside vegetation. In California, typical habitat is composed of a single species (e.g., Goodding's or other willow species) or a mixture of broadleaf trees and shrubs, including cottonwood, willow, box elder (*Acer negundo* spp.), ash (*Fraxinus* spp.), alder, and buttonbush (*Cephalanthus* spp.) from approximately 10 to 50 feet tall and characterized by trees of different size classes yielding multiple layers of canopy (Sogge et al. 1997). This species has occurrences along TL682 and C440 (Forest Service 2006b, 2012; CDFW 2014; USFWS 2014) and a moderate to high potential to occur along C442, TL626, TL629, C449, and TL6923 (Forest Service 2006b).

Prairie Falcon

The prairie falcon (*Falco mexicanus*; nesting) is a federal Bird of Conservation Concern, CDFW Watch List, and San Diego County sensitive species (Group 1). The prairie falcon is an uncommon permanent resident ranging from southeastern deserts northwest throughout the

Central Valley and along the inner Coast Ranges and Sierra Nevada (Polite and Pratt 2005). This species is distributed from annual grasslands to alpine meadows but primarily is associated with grasslands, savannas, rangeland, some agricultural fields, and desert scrub. Prairie falcons usually nest in a scrape on a sheltered ledge of a cliff overlooking large, open areas and may nest on old raven or eagle nests on cliffs, bluffs, or rock outcrops (Polite and Pratt 2005). This species has occurrences along C449, C79, TL626, TL629, TL682, and TL6923 (CDFW 2014).

American Peregrine Falcon

The American peregrine falcon (*Falco peregrinus anatum*; nesting) is a federally and state delisted, federal Bird of Conservation Concern, State Endangered, CDFW Fully Protected, California Department of Forestry and Fire Protection sensitive, and San Diego County sensitive species (Group 1). This species is also covered under the MSCP and NCCP. In California, the American peregrine falcon is an uncommon breeder or winter migrant throughout much of the state. It is absent from desert areas (Zeiner et al. 1990b). Active nests have been documented along the coast north of Santa Barbara, in the Sierra Nevada, and in other mountains of northern California. As a transient species, the American peregrine falcon may occur almost anywhere that suitable habitat is present (Garrett and Dunn 1981). Peregrine falcons in general use a large variety of open habitats for foraging, including tundra, marshes, seacoasts, savannahs, grasslands, meadows, open woodlands, and agricultural areas. Sites are often located near rivers or lakes (AOU 1998; Luensmann 2010). Riparian areas, as well as coastal and inland wetlands, are also important habitats year-round for this species. The species breeds mostly in woodland, forest, and coastal habitats (Zeiner et al. 1990b). Within Southern California, American peregrine falcons are primarily found at coastal estuaries and inland oases during migration periods and during the winter months (Garrett and Dunn 1981). The high mobility, extensive hunting areas, remote nest sites, and preferences of individual pairs make it difficult to identify what might be typical peregrine falcon habitat (USFWS 1984), and no particular terrestrial biome appears to be preferred over others (White et al. 2002). This species was documented nesting near a power line at Corte Madera Mountain (Forest Service 2009d). This species has also been documented nesting along TL626 (Winter, pers. comm. 2015). However, since a precise location for this nest was not provided it is likely that, given its described nesting location, the nest occurs adjacent to an MSUP facility (C442; directly southwest of the southern end of C442 to be covered under the power line replacement projects). There is a high potential for this species to occur along C442 ~~and TL626~~ (Forest Service 2009d).

Bald Eagle

The bald eagle (*Haliaeetus leucocephalus*) is federally delisted, FSS, federal Bird of Conservation Concern, State Endangered, CDFW Fully Protected, and San Diego County

sensitive species (Group 1 for winter). This species is also covered under the MSCP and NCCP. While bald eagles occur throughout much of California, breeding populations are now restricted mostly to Butte, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Trinity Counties (Polite and Pratt 2005). Within mainland Southern California, the species primarily winters at larger bodies of water in the lowlands and mountains (Garrett and Dunn 1981). It is fairly common as a local winter migrant at a few favored inland waters in Southern California, with the largest numbers occurring at Big Bear Lake, Cachuma Lake, Lake Mathews, Nacimiento Reservoir, San Antonio Reservoir, and along the Colorado River (Polite and Pratt 2005). Bald eagles typically breed in forested areas adjacent to large bodies of water (Buehler 2000). Actual distance to water varies within and among populations, and in some cases, distance to water is not as important as the foraging quality that is present, as defined by diversity, abundance, and vulnerability of the prey base (Livingston et al. 1990) as well as by the absence of human development (McGarigal et al. 1991). Diurnal perch habitat is characterized by the presence of tall, easily accessible trees adjacent to foraging habitat, usually away from human disturbance (Buehler 2000). This species has occurrences along C442, C440, C157, and TL682 (Forest Service 2006b, 2009c, 2012) and a high potential to occur along C449 (Forest Service 2012)

Yellow-Breasted Chat

The yellow-breasted chat (*Icteria virens;* nesting) is a California Species of Special Concern and San Diego County sensitive species (Group 1). This species has a broad geographic range occurring in several disjunct areas in the United States, southwestern portions of Canada, and Mexico (Eckerle and Thompson 2001). Its breeding range includes the eastern United States from Wisconsin south to the Gulf Coast, and east to the Atlantic Coast. Western breeding populations occur along the Pacific Coast, within the Great Basin valleys, lower montane portions of the Rocky Mountains, and south into Arizona and New Mexico, with isolated populations in Texas (Dunn and Garrett 1997, as cited in Eckerle and Thompson 2001). In California, the yellow-breasted chat is still widely distributed, but is rare or absent from the Central Valley and southern coastal slope (Comrack 2008). In Southern California, the yellow-breasted chat nests in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories. Nesting areas are associated with the narrow border streams, creeks, sloughs, and rivers (Comrack 2008). In general, this species may nest within southern riparian forests along the project areas. This species has a moderate potential to occur along the following circuit/TL areas: TL682, TL626, TL625, TL629, TL6923, C157, C440, and C440.

Loggerhead Shrike

The loggerhead shrike (*Lanius ludovicianus*) is federal Bird of Conservation Concern, California Species of Special Concern, and San Diego County sensitive species (Group 1). This species is widespread throughout the United States, Mexico, and portions of Canada (Humple 2008). They are a yearlong resident species in most of the United States, including from California east to Virginia and south to Florida, and in Mexico. They also summer and breed in portions of southern Alberta, Saskatchewan, in Canada (Humple 2008). The largest populations are concentrated in Texas and Louisiana (Humple 2008). In California, while shrikes are widespread at the lower elevations, the largest breeding populations are located in portions of the Central Valley, the Coast Ranges, and the southeastern deserts (Humple 2008). Preferred habitats for the loggerhead shrike are open areas that include scattered shrubs, trees, posts, fences, utility lines, or other structures that provide hunting perches with views of open ground, as well as nearby spiny vegetation or man-made structures (such as the top of chain-link fences or barbed wire) that provide a location to impale prey items for storage or manipulation (Humple 2008). Loggerhead shrikes occur most frequently in riparian areas along the woodland edge, grasslands with sufficient perch and butcher sites, scrublands, and open-canopied woodlands, although they can be quite common in agricultural and grazing areas, and can sometimes be found in mowed roadsides, cemeteries, and golf courses. Loggerhead shrikes occur only rarely in heavily urbanized areas. This species has a moderate potential to occur along all circuit/TL areas.

Song Sparrow

The song sparrow (*Melospiza melodia*) is considered a CNF MIS for riparian habitats. They range from southern Alaska across central and southern Canada south through the United States into northern Mexico and Baja California. Song sparrows in coastal western United States, southwestern, and southern parts of the range are primarily sedentary and are resident year round (Arcese et al. 2002). Song sparrows nest in dense vegetation that provide cover from predators. Song sparrows require exposed ground for foraging and can be found in low, fairly dense stands of shrubs. In transmontane California, they are found in sagebrush, alkali desert scrub, desert scrub, and similar habitats. This species has a high potential to occur along the following circuit/TL areas: C157, C440, C442, C449, C78, C79, TL625, TL626, TL629, TL682, and TL6923.

Osprey

The osprey (*Pandion haliaetus;* nesting) is a CAL FIRE sensitive species, WL, and San Diego County sensitive species (Group 1). This species' habitat varies greatly (from boreal forests to temperate coasts/lakes to subtropical coasts and desert salt-flat lagoons); however, similar habitat features include fish, shallow waters, open nests sites free from predators, and ice-free seasons

long enough to allow fledging of young (Poole et al. 2002). This species typically breeds from Cascade Ranges south to Lake Tahoe and along northwest coast, and is an uncommon breeder along the Colorado River and coast of Southern California. In general, suitable foraging and nesting habitat may include habitats within large bodies of water. This species has a moderate potential to occur along the following circuit/TL areas: TL682, C440, TL625, and C449.

Double-Crested Cormorant

The double-crested cormorant (*Phalacrocorax auritus*; nesting) is a WL and San Diego County sensitive species (Group 2; non-breeding). This species occupies diverse aquatic habitats in all seasons, and non-breeding birds are distributed more widely (Hatch and Weseloh 1999). During the breeding season, this species occurs on ponds, lakes, artificial impoundments, slow-moving rivers, lagoons, estuaries, and open coastlines (Hatch and Weseloh 1999). In California, most individuals nest coastally, and small numbers occur in San Francisco Bay, Central Valley, and lower Colorado River with declining numbers on the Salton Sea and very locally elsewhere (Hatch and Weseloh 1999). In general, suitable foraging and nesting habitat may include habitats within large bodies of water. This species has a moderate potential to occur along the following circuit/TL areas: TL682, C440, TL625, and C449.

Coastal California Gnatcatcher

The coastal California gnatcatcher (*Polioptila californica californica*) is a federally listed as threatened species, a California Species of Special Concern, WLBCC, San Diego County sensitive species (Group 1), and covered under the MSCP and SDG&E NCCP. Historically, this species occurred from the coast and foothills of Ventura County and south through Los Angeles, southwestern San Bernardino, western Riverside, Orange, and San Diego counties of California into northwestern Baja California, Mexico. However, populations have become more fragmented in recent history. This species permanently resides in Diegan, Riversidian, and Venturan sage scrub sub-associations found from 0 to 2,500 feet amsl in elevation. This species has occurrences along TL625 (CDFW 2014; Forest Service 2012) and a moderate potential to occur along TL626 (Forest Service 2012).

Purple Martin

The purple martin (*Progne subis*) is a California Species of Special Concern and San Diego sensitive species (Group 1). In California, purple martins are widely but locally distributed in forest and woodland areas at low to intermediate elevations (Airola and Williams 2008). In the southwestern portion of the state, purple martins are most abundant in the Palomar Mountains (especially Laguna and Cuyamaca Mountains of San Diego) and rarely occur in the Transverse Ranges (western Transverse Ranges, San Gabriel and San Bernardino Mountains) and Peninsular

Ranges (rare in Santa Ana and San Jacinto Mountains)(Airola and Williams 2008). This species occurs as a summer resident and migrant primarily breeding from mid-March to late September. This species has been found to nest in an area with a concentration of nesting cavities, relatively open air space above nest sites, and relatively abundant aerial insect prey (Airola and Williams 2008). This species may utilize a variety of nest substrates including tree cavities, bridges, utility poles, lava tubes, and buildings; however, the species remains selective of habitat conditions nearby (Airola and Williams 2008). As a result of the availability of aerial prey, martins are most abundant in mesic habitats near wetlands and large bodies of water and upper slopes and ridges where aerial insects may gather (Airola and William 2008). This species has a moderate potential to nest along C442, C79, C440, TL626, TL629, and TL682 (Unitt 2004).

California Spotted Owl

The California spotted owl (*Strix occidentalis occidentalis*) is a BLM sensitive species, FSS species, USFWS Bird of Conservation Concern, WLBCC, California Species of Special Concern, San Diego County sensitive (Group 1), and an MIS for montane coniferous forests. The California spotted owl inhabits oak and oak-conifer habitats. This species feeds upon a variety of small mammals, small birds, bats, and large arthropods. This species uses dense, multi-layered canopy for roosting on north-facing slopes in the summer and in oak habitats during the winter. Nesting usually occurs in a tree or snag cavity or in the broken top of a large tree. Occasionally, this species will nest in large mistletoe clumps, abandoned raptor or raven nests, caves, or crevices on the cliff or ground. This species is nocturnal year-round and breeds from early March through June. As described below, within Forest Service land, this species has a limited operating period prohibiting activities within approximately 0.25 mile of nest sites or activity centers. Within 0.25 mile of the project lines, this species has occurrences along C79, C442, C440, TL682, and TL626 (Chambers Group Inc. 2012a; Forest Service 2012) and a moderate potential to occur along the following circuit/TL areas: TL625 and TL629 (Chambers Group Inc. 2012a; Forest Service 2012).

Least Bell's Vireo

The least Bell's vireo (*Vireo bellii pusillus*; nesting) is a federally and state-listed endangered subspecies of the Bell's vireo. It also holds status for WLBCC and San Diego County sensitive species (Group 1), and is covered under the MSCP and SDG&E NCCP. The least Bell's vireo subspecies is restricted to coastal California and Baja California, Mexico, and a few inland populations. Its winter range extends along the Pacific Coast from northern Mexico south to northern Nicaragua. Historically, this species was formerly a common and widespread summer resident below approximately 2,000 feet amsl elevation in the western Sierra Nevada, throughout the Sacramento and San Joaquin valleys, and in the coastal valleys and foothills from Santa Clara

County south (CDFG 2008). Least Bell's vireo also was common in coastal Southern California from Santa Barbara County south, east of the Sierra Nevada below approximately 4,000 feet amsl (Grinnell and Miller 1944). This riparian obligate species typically nests in low, dense, scrubby vegetation in early successional areas. This species has occurrences along C449, TL625, TL629, TL682, and TL6923 (Chambers Group Inc. 2012; CDFW 2014; Forest Service 2012; USFWS 2014). This species also has a moderate to high potential to occur along the following circuit/TL areas: C442, C157, and TL626 (Chambers Group Inc. 2012a; CDFW 2014; Forest Service 2012).

Gray Vireo

The gray vireo (*Vireo vicinior*) is a federal Bird of Conservation Concern, FSS and BLM sensitive species, California Species of Special Concern, and WLBCC. The gray vireo is an uncommon, local, summer resident in arid pinyon-juniper, juniper, oak scrub associations, and chamise redshank chaparral habitats from 2,000 to 6,500 feet amsl in elevation (Barlow et al. 1999; Zeiner et al. 1990b). Breeding in this species was historically more broad and included west to Walker Pass, Kern County, in northern and western foothills of San Gabriel Mountains, and many locations in San Bernardino, Riverside, and San Diego Counties (Zeiner et al. 1990b). This species feeds on insects and other vertebrates from shrub and low trees. Nests are built in shrubs or small trees approximately 2 to 8 feet above the ground (Zeiner et al. 1990b). Within the project area, this species has occurrences along C442 and TL629 (pers. comm. K. Winter 8/14/2014) and a moderate potential to occur along C440, C449, TL625, and TL626 within suitable habitats (eBird 2014; Unitt 2004, pers. comm. K. Winter 8/14/2014).

Fish

Arroyo Chub

The arroyo chub (*Gila orcutti*) is a California Species of Special Concern and FSS species, is considered vulnerable by the American Fisheries Society, and is a San Diego County sensitive species (Group 1). This species is located in only a few streams in coastal Southern California where it is native to the San Juan Creek, San Luis Rey, and Santa Margarita Rivers. It occurs in slow-moving or backwater sections of warm to cool (10ºC to 24ºC) streams with mud or sand substrates; it thrives in low-gradient systems (Swift et al. 1993). This species has a moderate to high potential to occur along TL682 (Chambers Group Inc. 2012a; Forest Service 2006b).

Invertebrates

Mormon Metalmark

The Mormon metalmark (*Apodemia mormo peninsularis*) is a San Diego sensitive species (Group 1). This subspecies occurs in meadows and uses *Eriogonum wrightii* ssp. *membranaceum* as a larval host plant. This species has occurrences along TL625 (Forest Service 2012).

Quino Checkerspot Butterfly

The Quino checkerspot butterfly (*Euphydryas editha quino*; QCB) is a federally listed as endangered subspecies of *Euphydryas editha*. The subspecies is considered critically imperiled by the Xerces Society, and is a San Diego County sensitive species (Group 1). This subspecies inhabits areas from northern Baja California to Canada along the Pacific Coast and east to Colorado. Historically, this subspecies occupied the coastal plains and inland valleys of Southern California and northern Baja California, including many sites in San Diego, Orange, Los Angeles, and western Riverside counties. Habitats that favor this species include those that contain adult nectar sources' have topographic features that include bare, open soils and ridge tops; and include its primary larval host plant, western plantain (*Plantago erecta*) and other host plants such as bird's beak (*Cordylanthus rigidus*) and owl's clover (*Castilleja exserta*). Habitats where these host plants occur tend to be in clay or cryptogamic soils in areas mostly devoid of tall, weedy growth and/or a dense cover of shrubs. This species has occurrences along C157, TL625, TL629, and TL6923 (USFWS 2014). This species has a high potential to occur along TL626 (Chambers Group Inc. 2012; Forest Service 2006b).

Hermes Copper Butterfly

The Hermes copper butterfly (*Hermelycaena [Lycaena] hermes*) is currently a candidate for listing as federally endangered or threatened species by the USFWS, IUCN vulnerable species, FSS species, and is a San Diego County sensitive species (Group 1). This species is endemic and occupies a restricted range within San Diego County and northern Baja California, Mexico. This species inhabits coastal sage scrub and southern mixed chaparral and is dependent on its larval host plant, spiny redberry (*Rhamnus crocea*), to complete its lifecycle. This species has occurrences along the following circuit/TL areas: C79, TL625, TL626, TL6923 (Chambers Group Inc. 2012a; CDFW 2014), and TL629 (pers. comm. K. Winter 8/14/2014; Forest Service 2013h). This species also has a moderate to high potential to occur along the following circuit/TL areas: C157, C442, C449, and C78 (pers. comm. K. Winte 8/14/2014; Forest Service 2013h).

Laguna Mountains Skipper

The Laguna Mountains skipper (*Pyrgus ruralis lagunae*) is federally endangered, considered critically imperiled by the Xerces Society, and a San Diego County sensitive species (Group 1). This species inhabits only habitat at higher elevations. At this time, it is known to occur in only two locations in San Diego County: four populations at Mt. Palomar and one population in the Laguna Mountains (Berkeley.edu 2013). This species is found in montane meadows within yellow pine forests at elevations between 4,000 and 6,000 feet amsl (Black and Vaughan 2005).

Larvae of the Laguna Mountains skipper forage exclusively on Cleveland's horkelia (*Horkelia clevelandii*), and adults rely heavily on this species as a nectar source (Black and Vaughan 2005). In addition, this species lays its eggs on underside of the Cleveland's horkelia leaves (Black and Vaughan 2005). This species has occurrences along C440 (Forest Service 2012; USFWS 2014).

Mammals

Pallid Bat

The pallid bat (*Antrozous pallidus*) is listed as a California Species of Special Concern, a FSS species, a BLM Sensitive Species, San Diego County sensitive species (Group 2), and Western Bat Working Group high priority species. It is widespread throughout the western United States; southern British Columbia, Canada; and mainland and Baja California, Mexico (Hermanson and O'Shea 1983). Within the United States, it ranges east into southern Nebraska, western Oklahoma, and western Texas. The pallid bat is locally common in arid deserts (especially the Sonoran life zone) and grasslands throughout the western United States, and also occurs in shrublands, woodlands, and forests at elevations up to 8,000 feet amsl (Hermanson and O'Shea 1983). Although this species prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging, it may be observed far from such areas (Hermanson and O'Shea 1983). This species has occurrences along TL625 (CDFW 2014) and a moderate to high potential to occur along the following circuit/TL areas: C157, C440, C442, C449, C78, C79, TL626, TL629, TL682, and TL6923 (Chambers Group Inc. 2012a; Forest Service 2006b).

Dulzura Pocket Mouse

The Dulzura pocket mouse (*Chaetodipus californicus femoralis*) is a California Species of Special Concern, San Diego County sensitive species (Group 2), and covered under the SDG&E NCCP. This species inhabits the western slope of the Peninsular Range of California from Riverside County into northern Mexico. Scattered locations are also known in the Marine Corps Base Camp Pendleton area. This species occupies chaparral, dense coastal sage scrub slopes,

and, occasionally, desert grasslands. This species has occurrences along C440, C449, TL625, TL626, and TL629 (CDFW) and a high potential to occur along the following circuit/TL areas: C440, C449, TL625, TL626, TL629, and TL6923 (Chambers Group Inc. 2012a).

Northwestern San Diego Pocket Mouse

The northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) is a California Species of Special Concern, San Diego County sensitive species (Group 2), and covered under the SDG&E NCCP. This species inhabits areas of western Riverside, southwestern San Bernardino, eastern Orange, and San Diego counties in California, as well as northwestern Baja California, Mexico. The San Diego pocket mouse associates with coastal scrub, chamise–redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon–juniper, and annual grassland (CDFG 2008). According to Chambers Group Inc. (2012a), this species has a high potential to occur along TL6923.

Pallid San Diego Pocket Mouse

The pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*) is a California Species of Special Concern, San Diego county sensitive species (Group 2), and covered under the SDG&E NCCP. This species is found on the margins of the Mojave Desert in California, on the northern slopes of the San Bernardino Mountains, in high elevations of eastern San Diego County, and on the edge of the Colorado Desert, south to the Mexican border. This species is particularly known to inhabit arid, desert areas of southern California (e.g., Riverside County southwest of Palm Springs, in San Bernardino County from Cactus Flat to Oro Grande, and east to Twenty-nine Palms). This species prefers dry environments in high elevation plateaus and can be located in areas up to 6,000 feet amsl in elevation (e.g., Cactus Flat, along the north slope of the San Bernardino Mountains). This species utilizes sandy, herbaceous areas, usually in association with rocks or coarse gravel (CDFG 2008). In general, this species can be found in many habitat types such as dry alluvial fans, dry desert slopes, sparse scrublands and grasslands, grassland/ chaparral/ sage scrub ecotones, redshank chaparral, and pinyon–juniper woodlands. This species has occurrences along C440 (CDFW 2014).

Mexican Long-Tongued Bat

The Mexican long-tongued bat (*Choeronycteris mexicana*) is a California Species of Special Concern and Western Bat Working Group Moderate Priority species. This species is known to inhabit desert and montane riparian, desert succulent scrub, desert scrub, and pinyon–juniper woodland. This species roosts in caves, mines, and buildings, and is considered a summer resident in San Diego County. This species has moderate potential to occur throughout all circuit/TL areas.

Townsend's Big-Eared Bat

The Townsend's big-eared bat (*Corynorhinus townsendii*) is a State Candidate for Endangered, FSS species, and BLM sensitive species. It is considered high priority under the Western Bat Working Group, a San Diego County sensitive species (Group 2), and covered under the SDMSCP. In California, this species is found throughout the state; however, the details of its distribution are not well known. The species was once considered common throughout the state; however, now it is considered uncommon (CDFG 2008). The species is considered most abundant in mesic habitats and requires caves, mines, tunnels, buildings, or other similar structures (e.g., man-made) for roosting. Townsend's big-eared bats may use separate sites for night, day, hibernation, or maternity roosts (CDFG 2008). This species may feed on small moths (primarily) along with beetles and a variety of soft-bodied insects. Prey are often gleaned from brush or trees, and this species feeds along habitat edges (CDFG 2008). This species has occurrences along C440, C449, TL626, TL629, and TL6923 (CDFW 2014[15]; Forest Service 2012) with a moderate to high potential to occur along the following circuit/TL areas: C157, C442, C78, C79, TL625, and TL682 (Forest Service 2006b).

Stephens' Kangaroo Rat

The Stephens' kangaroo rat (*Dipodomys stephensi*) is a federally listed as endangered and state-listed as threatened species. It is a San Diego County sensitive species (Group 1) and covered under the SDG&E NCCP. Current populations exist only in the San Jacinto Valley, western Riverside County, and northwestern San Diego County, California. This species may occur in non-native annual and native perennial grasslands with sparse perennial vegetation. It may also occur in sparse coastal sage scrub and sagebrush communities with sparse canopy coverage. Some characteristic plant species in their habitats may include buckwheat, chamise, brome grasses, and filarees (*Erodium* spp.). This species prefers areas with well-drained, gravelly or sandy soils for digging its burrows. This species has occurrences along TL682 (Chambers Group Inc. 2012a; CDFW 2014; Forest Service 2012; USFWS 2014) and a moderate to high potential to occur along C157, TL625, TL626, and TL629 (Forest Service 2012).

Western Mastiff Bat

The western mastiff bat (*Eumops perotis*) is listed as a state Species of Special Concern and a BLM sensitive species, high priority by the Western Bat Working Group, San Diego County sensitive species (Group 2), and covered under the SDMSCP. The western mastiff

[15] Of six occurrences crossing project lines, four were auditory/visual detections and two were detections of night/day roosting habitats (see CDFW 2014 Occurrence No. 238 and 263).

bat (*Eumops perotis californicus*) is found from San Francisco Bay across Southern California, Nevada, Arizona, and New Mexico to eastern Texas and into Mexico (Smithsonian Institution 2014). In California, its yearlong range includes the San Joaquin Valley, the coastal region from the San Francisco Bay area south to San Diego, and the Transverse and Peninsular mountain ranges and Mojave and Colorado deserts of Southern California (CDFG 2008). The western mastiff bat occurs in a wide variety of habitats including open, semi-arid to arid, conifer, deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub and urban (CDFG 2008). This species requires crevices in cliff faces, high buildings, trees, or tunnels for roosting (CDFG 2008). As such, suitable habitat consists of extensive open areas with abundant roost locations provided by crevices in rock outcrops and buildings. The species is considered to be non-migratory, but apparently moves among alternate daytime roosts (CDFG 2008). This species has occurrences along C449, C440, and TL629 (Chambers Group Inc. 2012a; CDFW 2014). This species also has a moderate to high potential to occur along C440, C442, TL625, TL626, TL629, and TL6923.

Western Red Bat

The western red bat (*Lasiurus blossevillii*) is a California Species of Special Concern, San Diego County sensitive species (Group 2), and high priority under the Western Bat Working Group. The western red bat is locally common in some areas of California, occurring from Shasta County to the Mexican border, west of the Sierra Nevada/Cascade crest and deserts (CDFG 2008). The winter range includes western lowlands and coastal regions south of San Francisco Bay. This species may be found outside its normal range as there is migration between summer and winter ranges. This species roosts in forests and woodlands from sea level up through mixed conifer forests (CDFG 2008). This species is not found in desert areas. The western red bat feeds over a wide variety of habitats including grasslands, shrublands, open woodlands, forests, and croplands (CDFG 2008). This species prefers edges or habitat mosaics that have trees for roosting and open areas for foraging. This species has a moderate to high potential to occur along the following circuit/TL areas: C157, C78, C79, C440, C442, C449, TL625, TL626, TL629, TL682, and TL6923 (Chambers Group Inc. 2012a; Forest Service 2006b).

Hoary Bat

The hoary bat (*Lasiurus cinereus*) is considered medium priority by the Western Bat Working Group. This species is the most widespread North American bat and is detected at many California locations. This species is solitary and winters along the coast and in Southern California (CDFG 2008). This species breeds inland and north of its wintering range. Suitable habitats for bearing young include all woodlands and forests with medium to large-size trees

and dense foliage. During migration in Southern California, males are detected in the foothills, deserts, and mountains whereas the females are detected in lowlands and coastal valleys (CDFG 2008). Hoary bats typically roost in dense foliage of medium to large trees and prefer open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding (CDFG 2008). This species has occurrences along C440 (CDFW 2014) and has a moderate to potential to occur along the following circuit/TL areas: C157, C440, C442, C449, C78, C79, TL625, TL626, TL629, TL682, and TL6923.

California Leaf-Nosed Bat

The California leaf-nosed bat (*Macrotus californicus*) is a California Species of Special Concern, BLM sensitive species, San Diego sensitive species (Group 2), and high priority under the Western Bat Working Group. This species is detected in Southern California, southern Nevada, western and southern Arizona, and northwestern Mexico to the tip of Baja California. Some individuals of this species migrate to Mexico for the winter; other individuals occur year-round. Usually, this species is found in desert riparian, desert wash, desert scrub, desert succulent shrub, alkali desert scrub, and palm oasis habitats. This species may roost colonially in tunnels, rock shelters, mines, caves, buildings, and bridges. California leaf-nosed bat forages on insects, primarily moths, beetles, and cicadas. This species may be observed foraging quietly and close to the ground, usually over flats and washes, appearing well after sunset. This species has a moderate to high potential to occur along C440, C449, TL629 (Forest Service 2006b), and TL6923.

Western Small-Footed Myotis

The western small-footed myotis (*Myotis ciliolabrum*) is a BLM sensitive species and moderate priority under the Western Bat Working Group. This species occurs over much of the western United States into southern Canada and Mexico, from 0 to over 8,900 feet amsl in elevation. The species is found along the California coast from Contra Costa County south to the Mexican border, on both the east and west sides of the Sierra Nevada, and in the Great Basin and desert habitats from Modoc County to San Bernardino County (CDFG 2008). As such, this species is detected in a wide range of habitats including rock outcrops on open grasslands to canyons in the foothills to lower mountains with yellow pine woodlands. This species prefers humid roost sites and has a high tolerance for cold. During the day, this species may roost in cracks and crevices in cliffs, beneath tree bark, in mines and caves, and occasionally in dwellings of humans. At night, roosts may vary from natural to human-erected structures; however, this species is also found associating with other bat species (e.g., Townsend's big eared bat (*Plecotus townsendii*)) and is found in their roosts. This species hibernates in caves, mines, and tunnels, where individuals usually hang singly, often exposed. Maternity colonies of 12 to 20 females and young have been detected in buildings, caves, and mines (CDFG 2008). This species has occurrences along C440,

C449, and TL629 (CDFW 2014) and a moderate potential to occur along the following circuit/TL areas: C157, C442, C78, C79, TL625, TL626, and TL682.

Long-Eared Myotis

The long-eared myotis (*Myotis evotis*) is a BLM Sensitive Species and moderate priority by the Western Bat Working Group. This species is found across much of western North America from British Columbia to Southern California and New Mexico. Typically, this species is found in coniferous forests at higher elevations ranging from 7,000 to 9,600 feet amsl; however, this species has also been detected at sea level. Typically, this species roosts in tree cavities beneath exfoliating bark in both living trees as well as in dead snags. Interestingly, this species is one of only two that may be detected roosting at ground level in, for example, fallen trees, tree stumps, and rock crevices. This species has occurrences along C440, C449, and TL629 (CDFW) with a high potential to occur in the following circuit/TL areas: C157, C442, C78, C79, TL625, TL626, and TL682.

Fringed Myotis

The fringed myotis (*Myotis thysanodes*) is designated as a sensitive species by BLM and FSS, and high priority by the Western Bat Working Group. This species is detected over much of the western United States including throughout California, except for the Central Valley and the Mojave and Colorado deserts. This species inhabits localized distributions in these areas. Given that they have a wide range, this species is also detected in a wide variety of habitats that may range from 0 to 9,000 feet amsl in elevation. Suitable habitats include pinyon–juniper, valley foothill hardwood, hardwood-conifer, and mature riparian areas. Roots may be located in mines, caves, buildings, and crevices and forages in more open areas near water. Female maternity colonies of up to 200 females and young are common throughout late April through September. All individuals of this species may roost together during hibernation that occurs from October to March. This species forages in open habitats in early successional stages, streams, lakes, and ponds for foraging areas (CDFG 2008). This species has occurrences along C440 (CDFW 2014) and has a moderate to high potential to occur in the following circuit/TL areas: C157, C440, C442, C449, C78, C79, TL625, TL626, TL629, and TL682 (Zeiner et al. 1990c[16]).

Long-Legged Myotis

The long-legged myotis (*Myotis volans*) is considered a high priority species by the Western Bat Working Group. This species occupies woodland and forest habitats over 4,000 feet in elevation

[16] Habitat suitability for this species generally described using range maps provided by Zeiner et al. 1990c.

and feeds over open water and over open habitats such as chaparral and coastal scrub, using denser woodlands and forests for cover and reproduction. Roosts in rock crevices, buildings, under tree bark, in snags, mines, caves. Found in the coastal ranges, Cascade/Sierra Nevada ranges, Great Basin, and ranges in the Mojave Desert (CDFG 2008). This species forages on flying insects, usually moths. This species may be found flying low to the ground or over water, close to trees or cliffs, and in openings in woodland and forests. This species is not agile in flight and may be seen making single attempts at capturing individuals; however, this species has great visual capabilities and may detect prey at long (10-meter [33 feet]) distances (CDFG 2008). This species often congregates with other bat species at locations of high density insects that are temporally transient.

Roosting locations (which may differ for night and day use) may include rock crevices, buildings, under tree bark, snags, mines, and caves. Caves and mines are only used during night, and a few records exist for this species hibernation in caves. Trees may be the most important roosting resource, especially in the day. This species forms nursing colonies usually under bark or in hollow trees, and sometimes in crevices or buildings. This species has occurrences along C440 (CDFW 2014) and a moderate to high potential to occur along the following circuit/TL areas: C157, C442, C449, C78, C79, TL625, TL626, TL629, TL682, and TL6923.

Yuma Myotis

The Yuma myotis (*Myotis ymanensis*) is recognized as a sensitive species by BLM and is a moderate species by the Western Bat Working Group. This species is common in California and widespread; however, it is uncommon in the Mojave and Colorado Desert regions, except for the mountain ranges bordering the Colorado River Valley. This species may be found in a variety of habitats that range from 0 to 11,000 feet amsl in elevation, but is rare above 8,000 feet amsl. The best suited habitats for this species include open forests and woodlands with sources of water over which to feed. This species forages over water sources (e.g., ponds, streams, and stock tanks). Roosting habitats include buildings, mines, caves, or crevices. Abandoned swallow nests and under bridges may also be utilized as roosting sites. Separate night roosts may also be used. This species prefers warm, dark sites for maternal colonies of several thousand females and young. These nursing locations may be in buildings, caves, mines, and under bridges. This species has a moderate potential to occur along the following circuit/TL areas: C157, C440, C442, C449, C78, C79, TL625, TL626, and TL682.

Pocketed Free-Tailed Bat

The pocketed free-tailed bat (*Nyctinomops femorosaccus*) is a California Species of Special Concern, San Diego County sensitive species (Group 2), and moderate priority by the Western Bat Working Group. This species is usually found in Mexico south to the state of Michoacan and

occurs in the southwestern U.S. from Southern California, southern Arizona, southeastern New Mexico, and western Texas. In California, although rarely encountered, this species has been detected in Riverside, San Diego, and Imperial counties. It typically is located in pinyon juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert washes, alkali desert scrub, Joshua tree, and palm oasis habitats. Roosts may number to 100 individuals and may be located rock crevices, caverns, roof tiles, and buildings. Little wintering and migration information is lacking for this species; however, it is likely a year-long resident. This species has occurrences along C440, C449, and TL629 (CDFW 2014) and a moderate to high potential to occur along the following circuit/TL areas: TL625, TL626, TL682, and TL6923.

Big Free-Tailed Bat

The big free-tailed bat (*Nyctinomops macrotis*) is a California Species of Special Concern and Western Bat Working Group moderate to high priority. It is widely but locally distributed from

Iowa and southwestern British Columbia in the north, southward through Mexico and the West Indies to Uruguay (South America). It is rarely detected in California, but a few records of its presence have been documented; however, no roosts for this species have been identified to date.

This colonial nesting species, which may number up to 150 individuals, prefers to roost on rugged cliff faces, slopes, and outcrops. Roosts are typically associated with natural substrates and rarely found in human structures. This species inhabits a wide variety of habitats including woodland, desert, and scrub associations. This species occurs along C440 (CDFW 2014) and has a moderate to high potential to occur along the following circuit/TL areas: C442, C449, C78, C79, TL625, TL626, TL629, TL682, and TL6923 (Chambers Group Inc. 2012a).

Southern Mule Deer

Southern mule deer (*Odocoileus hemionus fuilginata*) is a CNF MIS for healthy diverse habitats, San Diego County sensitive species (Group 2), and covered under the MSCP and SDG&E NCCP. This species is common year-round resident (or elevational migrant) with a wide distribution throughout most of California (CDFG 2008). They occur in early–intermediate successional stages of most forest, woodland, and brush habitats. They tend to prefer habitats with various-aged vegetation which provides woody cover, meadow, shrubby openings, and water (providing protective cover and foraging/young bearing opportunities; CDFG 2008). Brushy areas and tree thickets are important for escape cover and important for thermal regulation. This species seeks out suitable habitat that consists of a mosaic of vegetation, providing an interspersion of herbaceous openings, dense brush or tree thickets, riparian areas, and abundant edge. This species has a high potential to occur along the following circuit/TL areas: C157, C440, C442, C449, C78, C79, TL625, TL626, TL629, TL682, and TL6923.

Jacumba Pocket Mouse

The Jacumba pocket mouse (*Perognathus longimembris internationalis*) is a California Species of Special Concern, San Diego County sensitive species (Group 2), and covered under the SDG&E NCCP. It inhabits arid coastal scrub and chaparral habitats where sandy soils are present. It has been observed in desert wash, desert scrub, desert riparian, and sagebrush habitats. It occurs in central San Diego County south to Baja California, Mexico. This species has a moderate to high potential to occur along the following circuit/TL areas: C157, C440, C442, C449, C78, C79, TL625, TL626, TL629, TL682, and TL6923.

Mountain Lion

The mountain lion (*Puma concolor*) is considered a CNF MIS for fragmentation, a San Diego sensitive species (Group 2), and covered under the MSCP and SDG&E NCCP. It is also considered a Specially Protected Mammal under California Fish and Game Code Section 4800. Its range throughout California extends from deserts to humid forests in the Coast Ranges and from sea level to 10,000 feet amsl, but mountain lions do not inhabit xeric regions of the Mojave and Colorado deserts. They are most abundant in habitats that support their primary prey, mule deer, and their seasonal movements tend to follow migrating deer herds. Mountain lions prefer habitats that provide cover, such as thickets in brush and timber in woodland vegetation (CDFG 2008). They also utilize caves and other natural cavities for cover and breeding. They require extensive areas of riparian vegetation and brushy stages of various habitats, with interspersions of irregular terrain, rocky outcrops, and tree–brush edges. This species has a high potential to occur along the following circuit/TL areas: C157, C440, C442, C449, C78, C79, TL625, TL626, TL629, TL682, and TL6923.

American Badger

The American badger (*Taxidea taxus*) is a California Species of Special Concern, San Diego County sensitive species (Group 2), and covered under the MSCP and SDG&E NCCP. It is found throughout California in drier open stages of most shrub, forest, and herbaceous habitats; they require friable soils since they are fossorial species (CDFG 2008). This species ranges from the western U.S and upper midwestern U.S., south into central Mexico. This species may occupy a variety of habitats, especially grasslands, savannas, montane meadows, sparse scrublands, and deserts. Usually, this species prefers friable soils for burrowing and relatively open, uncultivated ground. This species occurs along TL626 (CDFW 2014) and has a moderate to high potential to occur along TL625 and TL682 (Chambers Group Inc. 2012a; CDFW 2014).

D.4.1.5 Critical Habitat

Under the federal Endangered Species Act (FESA), the USFWS, to the extent prudent and determinable, is required to designate critical habitat for endangered and threatened species (16 U.S.C. 1533 (a)(3)). Critical habitat describes the areas of land, water, and air space containing the physical and biological features essential for the survival and recovery of endangered and threatened species. Designated critical habitat includes sites for breeding and rearing, movement or migration, feeding, roosting, and shelter.

Designated critical habitat requires special management and protection of existing resources, such as water quality and quantity, host animals and plants, food availability, pollinators, sunlight, and specific soil types. Critical habitat designation delineates all suitable habitat, occupied or not, essential to the survival and recovery of the species. A critical habitat designation affects only projects subject to federal action. Under projects subject to federal action, potential impacts to designated or proposed critical habitat will be evaluated by the USFWS under Section 7 of FESA. SDG&E's proposed project is a federal action in that it occurs within U.S. Forest Service jurisdiction and may be required to obtain a Section 404 permit from the U.S. Army Corps of Engineers (ACOE). The Forest Service or ACOE will determine whether it will consult with USFWS under Section 7 with respect to critical habitat. Figures D.4-3a through D.4-3e identify USFWS critical habitat in the vicinity of SDG&E's proposed project.

San Diego Thornmint (Federally Threatened)

In 2008, the USFWS designated 671 acres of critical habitat for the San Diego thornmint in San Diego County (73 FR 50454–50496). Based on the current knowledge of the species, the USFWS determined the primary constituent elements for the San Diego thornmint to be: clay lenses that provide substrate for seedling establishment and space for growth and development of San Diego thornmint that are: (a) within chaparral, grassland, and coastal sage scrub; (b) on gentle slopes ranging from 0 to 25 degrees; (c) derived from gabbro and soft calcareous sandstone substrates with a loose, crumbly structure and deep fissures approximately 1 to 2 feet (30 to 60 cm); and (d) characterized by a low density of forbs and geophytes, and a low density or absence of shrubs (73 FR 50454–50496).

Critical habitat within the project area for the San Diego thornmint is located within C78 only.

Arroyo Toad (Federally Endangered)

In 2005, the USFWS designated 95,544 acres of critical habitat for the arroyo toad (70 FR 19562–19633). In 2011, the critical habitat was revised to include 86,671 acres of habitat in Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego

counties (76 FR 7245–7467). Based on the current knowledge of the species, the USFWS determined the primary constituent elements for the arroyo toad to be: (1) rivers or streams with hydrologic regimes that supply water to provide space, food, and cover needed to sustain eggs, tadpoles, metamorphosing juveniles, and adult breeding toads. Breeding pools must persist for a minimum of 2 months for the completion of larval development; however, the location of suitable breeding pools may vary from year to year due to Southern California's dynamic nature of riparian systems and flooding regimes. The conditions necessary to allow for successful reproduction of arroyo toads are: (a) breeding pools that are less than 6 inches deep, (b) areas of flowing water with current velocities less than 1.3 feet per second, and (c) surface water that lasts for a minimum of 2 months during the breeding season. (2) Riparian and adjacent upland habitats, especially low-gradient (typically less than 6%) stream segments and alluvial streamside terraces with sandy or fine gravel substrates that support the formation of shallow pools and sparsely vegetated sand and gravel bars for breeding and rearing of tadpoles and juveniles; and adjacent valley bottomlands that include areas of loose soil where toads can burrow underground, to provide foraging and living areas for juvenile and adult arroyo toads. (3) A natural flooding regime, or one sufficiently corresponding to natural, that: (A) is characterized by intermittent or near-perennial flow that contributes to the persistence of shallow pools into at least mid-summer; (B) maintains areas of open, sparsely vegetated, sandy stream channels and terraces by periodically scouring riparian vegetation; and (C) also modifies stream channels and terraces and redistributes sand and sediment, such that breeding pools and terrace habitats with scattered vegetation are maintained. (4) Stream channels and adjacent upland habitats that allow for movement to breeding pools, foraging areas, overwintering sites, upstream and downstream dispersal, and connectivity to areas that contain suitable habitat (76 FR 7245–7467).

Critical habitat within the project area for the arroyo toad is located within C157, C442, C449, TL625, TL629, TL682, and TL6923.

Quino Checkerspot Butterfly (Federally Endangered)

In 2002, the USFWS designated 171,605 acres of critical habitat for the Quino checkerspot butterfly (67 FR 18356–18395). In 2009, the critical habitat was revised to include 62,125 acres of habitat in San Diego and Riverside counties (74 FR 28776–28862). Based on the current knowledge of the species, the USFWS determined the primary constituent elements for the Quino checkerspot butterfly to be open areas within scrublands at least 21.5 square feet in size that (1) (A) contain no woody canopy cover; and (B) contain one or more of the host plants, dotseed plantain (*Plantago erecta)*, woolly plantain (*Plantago patagonica*), Coulter's snapdragon (*Antirrhinum coulterianum*), or Chinese houses (*Collinsia concolor*) used for Quino checkerspot butterfly growth, reproduction, and feeding; or (C) contain one or more of the host plants, stiffbranch bird's beak (*Cordylanthus rigidus*) or owl's clover that are within

328 feet of the host plants listed in (B); or (D) contain flowering plants with a corolla tube less than or equal to 0.43 inch used for Quino checkerspot butterfly feeding; (2) consist of open scrubland areas and vegetation within 656 feet of the open canopy areas used for movement and basking; and (3) are hilltops or ridges within scrublands that contain an open, woody-canopy area at least 21.5 square feet in size used for Quino checkerspot butterfly mating (hill topping behavior) and are contiguous with (but not otherwise included in) open areas and natural vegetation (74 FR 28776–28862).

Although critical habitat for the Quino checkerspot butterfly is not directly within the project area, there are adjacent designated critical habitats located approximately 1 mile east of the southern section of TL629 and approximately 4.5 miles west of the southern portion of TL625.

San Bernardino Bluegrass (Federally Endangered)

In 2008, the USFWS designated 2,489 acres of critical habitat in San Bernardino and San Diego counties (73 FR 47706–47767). Based on the current knowledge of the species, the USFWS determined the primary constituent elements for the San Bernardino bluegrass (*Poa atropurpurea*) to be: (1) wet meadows subject to flooding during wet years in the San Bernardino Mountains in San Bernardino County at elevations of 6,700 to 8,100 feet amsl, and in the Laguna and Palomar Mountains of San Diego County at elevations of 6,000 to 7,500 feet amsl, that provide space for individual and population growth, reproduction, and dispersal; and (2) well-drained, loamy alluvial to sandy loam soils occurring in the wet meadow system, with a 0% to 16% slope, to provide water, air, minerals, and other nutritional or physiological requirements to the species (73 FR 47706–47767).

Critical habitat within the project area for San Bernardino bluegrass is located within C440. Two additional critical habitat designations are located near (not within) project area: 3 miles north of TL682 and approximately 1.7 miles southwest of the junction of C440 and TL629.

Coastal California Gnatcatcher (Federally Threatened)

In 2007, the USFWS designated a total of 197,303 acres of critical habitat in San Diego, Orange, Riverside, San Bernardino, Los Angeles, and Ventura counties (72 FR 72010–72213). This final critical habitat designation is a reduction of 298,492 acres from the 2003 revised proposed rule. Based on the current knowledge of the species, the USFWS determined the primary constituent elements for the coastal California gnatcatcher to be: (1) dynamic and successional sage scrub habitats: Venturan coastal sage scrub, Diegan coastal sage scrub, Riversidean sage scrub, maritime succulent scrub, Riversidean alluvial fan scrub, southern coastal bluff scrub, and coastal sage-chaparral scrub in Ventura, Los Angeles, Orange, Riverside, San Bernardino, and San Diego counties that provide space for individual and population growth, normal behavior,

breeding, reproduction, nesting, dispersal and foraging; and (2) non-sage scrub habitats such as chaparral, grassland, riparian areas, in proximity to sage scrub habitats as described above that provide space for dispersal, foraging, and nesting (72 FR 72010–72213).

Although critical habitat does not lie directly within the project area, critical habitat is designated approximately 1 mile west of TL626 and approximately 4 miles southwest of the western section of TL625.

Laguna Mountains Skipper (Federally Endangered)

In 2005, the USFWS proposed to designate 6,662 acres of critical habitat (70 FR 73699–73717). In 2006, the USFWS designated a total of 6,242 acres as critical habitat in San Diego County in a final ruling (71 FR 74592–74615). Based on the current knowledge of the species, the USFWS determined the primary constituent elements for the San Diego fairy shrimp to be: (1) the host plants, *Horkelia clevelandii* or *Potentilla glandulosa*, in meadows or forest openings needed for reproduction. (2) Nectar sources suitable for feeding by adult Laguna Mountains skippers, including *Lasthenia* spp., *Pentachaeta aurea*, *Ranunculus* spp., and *Sidalcea* spp. found in woodlands or meadows. (3) Wet soil or standing water associated with features such as seeps, springs, or creeks where water and minerals are obtained during the adult flight season (71 FR 74592–74615).

Critical habitat within the project area is located within C440 (Forest Service 2006b).

D.4.1.6 Regional Wildlife Corridors

Wildlife corridors are defined as areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features, such as canyon drainages, ridgelines, or areas with vegetation cover, provide corridors for wildlife travel. Wildlife corridors are important because they provide access to mates, food, and water; allow the dispersal of wildlife from high-density areas; and facilitate the exchange of genetic traits between populations (Beier and Loe 1992). Wildlife corridors are considered sensitive by resource and conservation agencies.

SDG&E's proposed project area encompasses most of San Diego County's open and largely intact mountainous area. This area functions as a large block of live-in habitat which allows for wildlife to move freely. Wildlife may live within the area, or may move through and within the area over single or multiple generations. Some large roadways do intersect portions of the proposed project area, and these roadways may impede some wildlife movement, but overall wildlife is free to move throughout the area. The Pacific Flyway is a major north–south migration route for birds that travel between North and South America. In Southern California, birds typically use the coast and inland areas. The Pacific Coast route is used by gulls, ducks,

and other water birds. The longest and most important route of the Pacific Flyway is that originating in northeastern Alaska. This route, that includes most waterfowl and shorebirds, passes through the interior of Alaska and then branches such that large flights continue southeast into the Central and Mississippi flyways or they may turn in a southwestern direction and pass through the interior valleys of California ending or passing through the Salton Sea (Birdnature 2013). The southward route of long-distance migratory land birds of the Pacific Flyway that typically overwinter south of the United States, extends through the interior of California to the mouth of the Colorado River and on to their winter quarters that may be located in western Mexico (USGS 2013). Migration timing varies from species to species, and for some, there is little documentation of the timing; for others, the arrival and departure has been well documented species by species (Unitt 2004). In general, bird migration occurs during the months of March through April and August through November.

Although many species of migrants have been documented to migrate at high altitudes, from 500 to 2,000 feet amsl (Williams 1950), most migrants flying over or near the ocean migrate at lower altitude, below 300 feet amsl (Hüppop et al. 2006). Birds migrating over terrestrial locations appear to migrate at higher altitudes, but do not frequently exceed 1,500 feet amsl (Cooper and Ritchie 1995). Larger birds, such as ducks and geese, are frequently observed up to 7,000 feet amsl (FAA 2010).

D.4.1.7 Special Habitat Management Areas

Several regional habitat management programs exist in San Diego County. The project site intersects several areas in which special habitat management plans are in effect including: (1) Forest Service Special Management Areas including modeled/occupied designated habitats, (2) Forest Service Riparian Conservation Areas, (3) CNF MIS, (4) BLM Sensitive Species, (5) the MSCP San Diego County Management Framework Plan (MFP), (6) the BLM Eastern San Diego County Resource Management Plan (RMP), and (7) Cuyamaca California State Parks.

Forest Service Special Management Areas

The Forest Service has designated land for the management of sensitive biological resources. Within the CNF, there are (a) Critical Biological Areas and (b) Research Natural Areas. Sensitive biological resources modeled or occupied in each TL/Circuit habitat is also provided below.

Critical Biological Areas

Land Use Zones were used to map the CNF in order to identify the appropriate management types of “uses.” The Critical Biological Areas are designated as a Land Use Zone and compose approximately 2,131 acres (0.5%) of the national forest (UDSA 2005a). This zone is composed

of the most important areas of the forest for protection of species-at-risk. As a result, facilities in these areas are minimal to discourage human use. Currently, an existing power line and two access roads serving the Cuyamaca Peak communication site are located within the boundary of the King Creek Critical Biological Area.

Research Natural Areas

The Research Natural Area (RNA) land classification consists of relatively undisturbed areas of the national forest that provide a long-term network of ecological resources designated for research, education, and the maintenance of biodiversity (Forest Service 2005a). These areas are selected to preserve a wide range of relatively pristine areas that encompass a wide range of natural variability within important natural ecosystems and environments. These areas also have unique characteristics of scientific interest. Currently, an existing power line and two access roads serving the Cuyamaca Peak communication site are located within the established King Creek RNA. This RNA was established for the small, rare population of Cuyamaca cypress which requires a long fire-free interval to develop a seed back. In the 2003 Cedar Fire, a large area of the cypress population was burned.

Additionally, an existing power line that serves the Anderson Valley area is located adjacent to proposed Viejas Mountain Research Natural Area. Viejas Mountain is representative of the chamise chaparral vegetation communities and is recognized as having high biodiversity along with research potential. Viejas Mountain RNA also provides habitat for San Diego thornmint as well as six additional Forest Service sensitive plant species.

Species Modeled/Occupied by TL/Circuit

TE species modeled and occupied habitat has also been provided by the Forest Service (Winter, pers. comm. 2012; Forest Service 2006b, 2012, 2013f, 2013g, 2013h), CDFW (2014), and USFWS (2014), . Species modeled habitats represent potentially suitable habitat as mapped by the Forest Service and USFWS. Species-occupied habitats represent areas with known occurrences of TE and Regional Forester's species. In addition to species listed below for the power line replacement projects, Tables D.4-14~~5~~a through D.4-14~~5~~c provide occurrence data for species detected along all lines to be covered under the MSUP (Forest Service 2006b). These tables include the same species as described for the power line replacement projects except for Vail Lake ceanothus, slender horned spineflower, San Diego button-celery, San Bernardino bluegrass, and Parry's tetracoccus, which also may occur. All species and their status and habitat associations can be found in Appendix BIO-2.

TL682 This location is directly adjacent to bald eagle habitat and California spotted owl occupied habitat. Modeled habitat includes Stephens' kangaroo rat, arroyo toad, bald

eagle, California gnatcatcher, and California red-legged frog. Occupied habitat includes arroyo toad, , coast horned lizard, bald eagle, least Bell's vireo, southwestern willow flycatcher, California spotted owl, Stephens' kangaroo rat, and Orcutt's brodiaea.

TL626 This location includes modeled habitat for arroyo toad, Stephens' kangaroo rat, and California red-legged frog. Occupied habitat includes coast horned lizard, golden eagle, California spotted owl, Townsend's big-eared bat, Hermes copper butterfly, delicate clarkia, Dean's milk vetch, Engelmann oak, San Bernardino aster, Tecate tarplant, southern jewelflower, and Ramona horkelia.

TL625 This location includes modeled habitat for Stephens' kangaroo rat, arroyo toad, bald eagle, California gnatcatcher, and California red-legged frog. Occupied habitat includes arroyo toad, coast horned lizard, southwestern pond turtle, least Bell's vireo, California gnatcatcher, golden eagle, pallid bat, Hermes copper butterfly, Dunn's mariposa lily, long-spined spineflower, Ramona horkelia, felt-leaved monardella, Gander's butterweed, Tecate tarplant, and Orcutt's brodiaea.

TL629 This location includes modeled habitat for arroyo toad, Stephens' kangaroo rat, California red-legged frog, and bald eagle. Occupied habitat includes arroyo toad, coast horned lizard, California red-legged frog, Townsend's big eared bat, least Bell's vireo, gray vireo, golden eagle, Hermes copper butterfly, Dunn's mariposa lily, southern jewelflower, and Jacumba milk-vetch.

TL6923 This location includes modeled habitat for arroyo toad, Stephens' kangaroo rat, California red-legged frog and coastal California gnatcatcher. Occupied habitat consists of arroyo toad, least Bell's vireo, golden eagle, Townsend's big-eared bat, Hermes copper butterfly, Tecate tarplant, southern jewelflower, and Moreno currant.

C79 This location contains modeled habitat for bald eagle. Occupied habitat includes coast horned lizard, San Diego mountain kingsnake, bald eagle, California spotted owl, Hermes copper butterfly, southern jewelflower, and Dunn's mariposa lily.

C78 This location does not contain any specific modeled habitat. Occupied habitat includes arroyo toad, San Diego thornmint, felt-leaved monardella, and Hammitt's claycress,

C157 This circuit contains modeled habitat for Stephens' kangaroo rat, arroyo toad, bald eagle, California gnatcatcher, and California red-legged frog. Additionally, there is occupied habitat information for bald eagle, arroyo toad, southwestern pond turtle, Orcutt's brodiaea, felt-leaved monardella, Moreno currant, and Dean's milk-vetch.

C442 This location includes modeled habitat for arroyo toad and California red-legged frog. This location also contains occupied habitat for two-striped garter snake, southern jewelflower, San Bernardino aster, California spotted owl, gray vireo, arroyo toad, southwestern pond turtle, two-striped garter snake, southwestern willow flycatcher, and bald eagle.

C440 This location includes modeled habitat for arroyo toad, bald eagle, and California red-legged frog. Occupied habitat includes fringed myotis, Townsend's big eared bat, arroyo toad, San Diego mountain kingsnake, bald eagle, golden eagle, southwestern willow flycatcher, California spotted owl, Laguna Mountains skipper, California red-legged frog, coast horned lizard, California legless lizard, Mount Laguna aster, Parish's slender meadowfoam, Orcutt's linanthus, San Bernardino aster, southern jewelflower, rigid fringepod, Engelmann oak, and velvety false lupine.

C449 This location contains modeled habitat for Stephens' kangaroo rat, arroyo toad, bald eagle, and California red-legged frog. Additionally, there is occupied habitat for coast horned lizard, two-striped garter snake, least Bell's vireo, Townsend's big-eared bat, Jacumba milk-vetch, arroyo toad, and two-striped garter snake.

Riparian Conservation Areas

The Forest Service provides management goals and strategies for riparian and aquatic ecosystems (Forest Service 2005c, Goal 5.2 – Improve Riparian Conditions). Riparian Conservation Areas (RCAs) are land allocations designated along streams and around water/riparian features that are identified to protect riparian and aquatic ecosystems and the dependent natural resources associated with them during site-specific project planning and implementation. RCAs are composed of aquatic and terrestrial features and lands adjacent to perennial, intermittent, and ephemeral streams, as well as in and around meadows, lakes, reservoirs, ponds, wetlands, vernal pools, seeps, springs and other bodies of water. Many species in Southern California are dependent upon water and riparian areas throughout the national forests. Riparian-dependent resources are those natural resources that owe their existence to the area, such as fish, amphibians, reptiles, fairy shrimp, aquatic invertebrates, plants, birds, mammals, soil, and water quality. The freshwater riparian habitat has been the most dramatically human-altered ecosystem in Southern California. Since national forest management activities can disrupt riparian ecosystem processes, RCAs serve to provide protection to sensitive environments. As part of the Soil, Water, Riparian and Heritage Standards, requirements applicable within RCAs are described in the LMP (Forest Service 2005d, pp. 11–12 and Appendix E). Within the project area, RCAs occur throughout every circuit and power line.

Cleveland National Forest Management Indicator Species

CNF MIS are representative species whose habitat conditions and/or population changes are used to assess the impacts of management activities on species in similar habitats in a particular area. MIS are selected because their population or habitat trends are believed to indicate the effects of management activities (36 CFR 219.19(a)(1) [1982]; 36 CFR 219.14 [2005]), and as a focus for monitoring (36 CFR 219.19(a)(6) [1982]). Species considered for designation as MIS were assessed using the following criteria to determine their appropriateness:

- Changes in the species' population or habitat should reflect the effects of national forest management activities; and
- Population or habitat trends for the species must be capable of being effectively and efficiently monitored and evaluated.

Table D.4-3 lists the MIS that were selected for the various habitats.

Table D.4-3
Indicators of Management and Management Indicator Species

Indicators of Management	Management Indicator Species
Fragmentation	Mountain Lion
Healthy Diverse Habitats	Mule Deer
Aquatic Habitat	Arroyo Toad
Riparian Habitat	Song Sparrow
Oak Regeneration	Engelmann Oak
Bigcone Douglas-fir Forest	Bigcone Douglas-fir
Coulter Pine Forest	Coulter Pine
Montane Coniferous Forest	California Spotted Owl; California Black Oak; and White Fir

Source: Forest Service 2013a

Bureau of Land Management Special-Status Species

"BLM special status species are: (1) species listed or proposed for listing under the Endangered Species Act (ESA), and (2) species requiring special management consideration to promote their conservation and reduce the likelihood and need for future listing under the ESA, which are designated as Bureau sensitive by the State Director(s)" (BLM 2008a). The BLM special-status species policy objectives include conserving and/or recovering ESA-listed species and the ecosystems on which they depend, and initiating proactive conservation measures to reduce or eliminate threats to these species in order to minimize the need for listing these species under the ESA (BLM 2008a).

San Diego Multiple Species Conservation Plan

The San Diego MSCP is designed to preserve the unique, native habitats and wildlife within San Diego County. The MSCP is a regional conservation effort that relies on multiple jurisdictions and agencies to ensure conservation goals and policies are implemented and successful. The MSCP includes three subareas each containing a separate conservation plan. The three subareas are South County, East County, and North County. Only the South County MSCP Subarea Plan has been approved (in 1997). The East County MSCP is currently in preparation, and a Preliminary Draft Map has been completed. The overall intent of the East County Plan is to create a large, connected preserve that addresses the regional habitat needs for multiple species. It is unknown at this time when the East County Plan will be approved. The North County MSCP has recently restarted its efforts towards plan approval. The project is located within the boundaries of all three MSCP plans.

Among other goals, the MSCPs are designed to establish and maintain a balance between natural resource preservation along with regional and economic growth, provide the general public access to natural preserves for recreation and improved quality of life, attract new business to the region, provide conservation management for sensitive species, and establish partnerships with various agencies and sectors on conservation efforts. Under the MSCP, 85 species are covered (County of San Diego 1998). Plant and wildlife species covered under MSCP are included in Appendix BIO-3 and Appendix BIO-4. The San Diego MSCP intersects the project area only at TL625.

One small section of SDG&E's proposed project (section of "work area") at the northernmost section of TL626 intersects Santa Ysabel Open Space Preserve (SYOSP; County of San Diego 2008). The SYOSP will be included in the East County MSCP. Upon completion of the East County MSCP, the SYOSP RMP (County of San Diego 2008) will be revised per the specifications of the East County MSCP agreement. Therefore, the intent of the SYOSP RMP is to guide the Department of Parks and Recreation in the adaptive management of SYOSP. The current RMP (County of San Diego 2008) is a draft adaptive management plan expected to be revised to conform to the management and monitoring requirements following and after the adoption of the East County MSCP.

Bureau of Land Management Eastern San Diego County Plan

California State Parks

The BLM Eastern San Diego County RMP (BLM 2008b) is located in eastern San Diego County and incorporates vegetation and wildlife resource management. The goals of vegetation resource management include, but are not limited to, promoting biological diversity, maintaining and enhancing a mosaic of native plants, restoring upland and riparian sites, promoting wildlife

forage and habitat values, maintaining riparian areas, protecting or restoring native species, ensuring forage on rangelands to support wildlife, protecting plant communities, maintaining plant communities that protect from erosion and enhance air quality, and meeting criteria 3 and 4 in Standards of Rangeland Health (see Section 2.1, RHS-03 and RHS-04) (BLM 2008b). Specific desired plant communities outlined (and found within the project area) include: riparian habitats, oak woodlands, and semi-desert chaparral. The goals of the wildlife resource plan include, but are not limited to, promoting and maintaining key wildlife habitat areas; promoting wildlife resources that meet conservation, socio-economic, and tribal needs; providing well-distributed habitat and connectivity corridors; providing suitable habitat for maintaining or increasing wildlife population trends; maintaining waters for ecological integrity and biological diversity; reducing human-caused disturbance; ensuring livestock waters are usable for wildlife; and maintaining or restoring appropriate amount, distribution, and characteristics of life-stage habitats for general wildlife. Priority wildlife species, such as raptors, non-game migratory birds, bats, game animals, and special-status management species (including federally listed and designated critical habitats) are addressed. Specifically, the following species are addressed: least Bell's vireos, southwestern willow flycatchers, arroyo toads, Quino checkerspot butterflies, Laguna Mountains skippers, Swainson's hawk, and BLM sensitive species.

BLM jurisdiction crosses the project site at TL6923, TL629, and TL625.

In April 1986, the Cuyamaca Rancho State Park (SP) General Plan was approved (CSP 2013a). Cuyamaca Rancho SP is located near east-central San Diego County and is located at the northern range of the project site. The CNF surrounds the park on nearly all of its borders. At its highest peak, Cuyamaca Peak is estimated to be approximately 6,512 feet amsl (CSP 2013b). Overall, the parks elevation ranges from 3,400 to 6,512 feet amsl. The park is also located within five watersheds (Sweetwater, Boulder Creek, King Creek, Upper Pine Valley Creek, and Cedar Creek). This park contains a variety of habitats, wildlife, and plant species including riparian, meadow-grasslands, chaparral, mixed conifer forest, pine-oak woodland, and aquatic habitats; wildlife such as mountain lion, southern mule deer (*Odocoileus hemionus*), coyote, red-tailed hawk (*Buteo jamaicensis*), California quail, Stellar's jay (*Cyanocitta stelleri*), Pacific rattlesnake, and western skink, among others.

Cuyamaca Rancho SP is the only SP which intersects the project area. In 1985 the park was estimated to be 24,623.82 acres. The project location crosses Cuyamaca Rancho SP in two locations: TL629 and C79.

This section discusses federal, state, and regional environmental regulations, plans, and standards applicable to SDG&E's proposed project.

D.4.2 Applicable Regulations, Plans, and Standards

D.4.2.1 Federal Regulations

Federal Land Policy and Management Act

The Federal Land Policy and Management Act (FLPMA) grants the Secretary of Agriculture authority to issue rights-of-way (ROWs) for the "transmission, and distribution of electric energy" (43 U.S.C. 1761) provided that each ROW contains "terms and conditions which will (i) carry out the purposes of this Act and rules and regulations issued thereunder; (ii) minimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment; (iii) require compliance with applicable air and water quality standards established by or pursuant to applicable Federal or State law; and (iv) require compliance with State standards for public health and safety, environmental protection, and siting, construction, operation, and maintenance of or for rights-of-way for similar purposes if those standards are more stringent than applicable Federal standards" (43 U.S.C. 1765; also see DOI and OS 2001).

The Forest Service has identified all public lands that will be occupied by facilities associated with the construction, operation, and maintenance of the project. The general terms and conditions for all public land ROWs are described in FLPMA Section 505 and include measures to minimize damage and otherwise protect the environment, require compliance with air and water quality standards, and compliance with more stringent state standards for public health and safety, environmental protection, siting, construction, operation, and maintenance of ROWs.

The National Forest Management Act

The National Forest Management Act provides the statutory direction for the development of Land and Resource Management Plans. It also requires that "Resource plans and permits, contracts, and other instruments for the use and occupancy of National Forest System lands shall be consistent with the land management plans" (16 U.S.C. 1604(i)).

U.S. Forest Service Land Management Plan

The Forest Service LMP (Forest Service 2005a, 2005c, 2005d) for the Southern California national forests includes the Angeles National Forest, CNF, Los Padres National Forest, and the San Bernardino National Forest. SDG&E's proposed project is located within the CNF. The LMP consists of three parts. Part 1 describes the vision and conditions desired in the long-term (Forest Service 2005c). Part 2 describes the strategic management direction (Forest Service 2005a); and Part 3 provides the guidance for designing actions and activities that meet the vision and desired conditions described in Part 1 (Forest Service 2005d).

The CNF is broken down into various land use zones—Developed Areas Interface, Back Country, Back Country Motorized Use Restricted, Back County Non-Motorized, Critical Biological, and Wilderness—for the purposes of identifying appropriate management types of uses that would be consistent with the vision and desired conditions described in Part 1 of the LMP. Appendix BIO-5 provides a consistency evaluation of how project components meet LMP standards applicable to biological resources (Forest Service 2005a, 2009a). In addition, a consistency analysis concerning SDG&E's proposed and relevant land use planning policies of the Forest Service LMP is presented in Appendix LU-1b.

Clean Water Act

Increasing public awareness and concern for controlling water pollution led to enactment of the Federal Water Pollution Control Act Amendments of 1972. As amended in 1977, this law became commonly known as the Clean Water Act (CWA) (33 U.S.C. 1251 et seq.). The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. The CWA established basic guidelines for regulating discharges of pollutants into the waters of the United States. The CWA requires that states adopt water quality standards to protect public health, enhance the quality of water resources, and ensure implementation of the CWA. Please see Section D.9, Hydrology and Water Quality, of this EIR/EIS for a detailed description regarding CWA Sections 208, 303, 304, 401, 402, and 404.

Endangered Species Act

The federal Endangered Species Act (FESA) authorizes the determination and listing of species as endangered and threatened; prohibits unauthorized taking, possession, sale, and transport of endangered species; provides authority to acquire land for the conservation of listed species, using Land and Water Conservation Funds; authorizes establishment of cooperative agreements and grants-in-aid to states that establish and maintain programs for endangered and threatened wildlife and plants; authorizes the assessment of civil and criminal penalties for violating FESA or regulations; and, authorizes the payment of rewards to anyone furnishing information leading to arrest and conviction for any violation of FESA or any regulation issued there under.

Section 7 of FESA requires federal agencies to insure that any action authorized, funded or carried out by them is not likely to jeopardize the continued existence of listed species or modify their critical habitat. Section 7(a)(1) identifies the affirmative conservation duties of agencies and requires all federal agencies to carry out programs aimed at recovery of listed species.

Under Section 7 of FESA, a federal agency that authorizes, funds, or carries out a project that "may affect" a listed species or its critical habitat must consult with USFWS. In a Section 7 consultation, the lead agency (e.g., ACOE) prepares a Biological Assessment that analyzes

whether the project is likely to adversely affect listed wildlife or plant species or their critical habitat and proposes suitable avoidance, minimization, or compensatory mitigation measures. If the action would adversely affect the species, USFWS has up to 135 days to complete the consultation process and develop a Biological Opinion determining whether the project is likely to jeopardize the continued existing species or result in adverse modification of critical habitat. If a "no jeopardy" opinion is provided, "the action agency may proceed with the action as proposed, provided no incidental take is anticipated. If incidental take is anticipated, the agency or the applicant must comply with the reasonable and prudent measures and implementing terms and conditions in the Services' [USFWS's] incidental take statement to avoid potential liability for any incidental take" (USFWS 1998). If a jeopardy or adverse modification opinion is provided, USFWS may suggest "reasonable and prudent alternatives for eliminating the jeopardy or adverse modification of critical habitat in the opinion." The action agency may choose to implement the Regional Planning Agreement or "choose to take other action if it believes, after a review of the biological opinion and the best available scientific information, such action satisfies section 7(a)(2)" (USFWS 1998).

Executive Order 11990 – Protection of Wetlands

Executive Order 11990 directs federal agencies to avoid to the extent possible the impacts associated with the destruction or modification of floodplains and wetlands. Agencies are directed to avoid construction and development in flood plains and wetlands whenever there are any feasible alternatives. Specifically, measures should be taken to "avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative."

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 U.S.C. 661–666) authorizes the ~~secretaries~~ Secretary of the Interior~~of Agriculture and Commerce~~ to provide assistance to and cooperate with other federal and state agencies to protect, rear, stock, and increase the supply of game and fur-bearing animals, as well as to study the effects of domestic sewage, trade wastes, and other polluting substances on wildlife. The Act also authorizes the preparation of plans to protect wildlife resources, the completion of wildlife surveys on public lands, and the acceptance by federal agencies of funds or lands for related purposes provided that land donations receive the consent of the state in which they are located.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) controls the taking, killing, possessing, transportation, and importation of migratory birds. The MBTA implements international treaties between the United States and other nations that protect migratory birds (including their eggs and nests) from killing, hunting, pursuing, capturing, selling, and shipping unless expressly authorized or permitted. The list of migratory birds is extensive, and includes American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), and northern mockingbird (*Mimus polyglottos*) (16 U.S.C. 703–712).

Bald Eagle Protection Act

The bald eagle and golden eagle are federally protected under the Bald Eagle Protection Act, passed in 1940 to protect the bald eagle and amended in 1962 to include the golden eagle (16 U.S.C. 668a–d). This act provides for the protection of the bald eagle and the golden eagle by prohibiting, except under certain specified conditions, the taking, possession and commerce of such birds. Specifically, this act prohibits the take, possession, sale, purchase, barter, offering to sell or purchase, export or import, or transport of bald eagles and golden eagles and their parts, eggs, or nests without a permit issued by the USFWS. The definition of "take" includes to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb. The act prohibits any form of possession or taking of both eagle species and the statute imposes criminal and civil sanctions as well as an enhanced penalty provision for subsequent offenses. Further, the act provides for the forfeiture of anything used to acquire eagles in violation of the statute. The statute exempts from its prohibitions on possession the use of eagles or eagle parts for exhibition, scientific, and Indian religious uses.

However, there is allowance within the act that, after investigation, the Secretary of the Interior may determine that direct and purposeful taking is compatible with the preservation of the bald eagle or the golden eagle. If so, then the Secretary may permit the taking, possession, and transportation of specimens for the scientific or exhibition purposes of public museums, scientific societies, and zoological parks, or for the religious purposes of Indian tribes. The Secretary may also determine that it is necessary to permit the taking of eagles for the protection of wildlife or of agricultural or other interests in any particular locality. This permitting may be for the seasonal protection of domesticated flocks and herds, and may also permit the taking, possession, and transportation of golden eagles for the purposes of falconry if the eagles may cause depredations on livestock or wildlife. Finally, the Secretary of the Interior may permit the taking of golden eagle nests that interfere with resource development or recovery operations, or in an emergency.

In November 2009, the USFWS published the Final Eagle Permit Rule (74 FR 46836–46879) providing a mechanism to permit and allow for incidental (i.e., non-purposeful) take of bald and golden eagles pursuant to the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). Disturb means "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior." These regulations may apply to projects such as wind turbines and transmission lines, and were followed by issuance of guidance documents for inventory and monitoring protocols and for avian protection plans (Pagel et al. 2010). In February 2011, the USFWS released Draft Eagle Conservation Plan Guidance, aimed at clarifying expectations for acquiring take permits acquisition by wind power projects consistent with the 2009 rule.

D.4.2.2 State Laws and Regulations

California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code, Section 2050 et seq.) provides protection and prohibits the take of plant, fish, and wildlife species listed as rare, threatened, or endangered by the State of California. Unlike FESA, state-listed plants have the same degree of protection as wildlife. Take authorization may be obtained by the project applicant from CDFW under CESA Section 2081. Section 2081 allows take of a listed species for educational, scientific, or population-management purposes. In this case, private developers consult with CDFW to develop a set of measures and standards for managing the listed species, including full mitigation for impacts, and funding of implementation and monitoring of mitigation measures.

A CESA permit may not authorize the take of fully protected species that are protected in other provisions of the California Fish and Game Code, discussed further below.

California Environmental Quality Act

In addition to state-listed or federally listed species, special-status plants and animals receive consideration under CEQA. Special-status species include wildlife Species of Special Concern listed by CDFW and plant species with a CRPR of 1A, 1B, or 2.

California Fish and Game Code

Birds and Mammals

According to Sections 3511 and 4700 of the California Fish and Game Code, which regulate birds and mammals, respectively, a "fully protected" species may not be taken or possessed and "incidental takes" of these species are not authorized. However, the CDFW may authorize the taking of those species for necessary scientific research, including efforts to recover fully protected, threatened, or endangered species, and may authorize the live capture and relocation of those species pursuant to a permit for the protection of livestock. Fully protected species include the California condor (*Gymnogyps californianus*), Peninsular bighorn sheep (*Ovis canadensis nelsoni*), and golden eagle.

Resident and Migratory Birds

The California Fish and Game Code provides protection for wildlife species. It states that no mammals, birds, reptiles, amphibians, or fish species listed as fully protected can be "taken or possessed at any time." In addition, CDFW affords protection over the destruction of nests or eggs of native bird species (Section 3503), and it states that no birds in the orders of *Falconiformes* or *Strigiformes* (birds of prey) can be taken, possessed, or destroyed (Section 3503.5). CDFW cannot issue permits or licenses that authorize the take of any fully protected species, except under certain circumstances such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock (Section 3511). Separate from federal and state designations of species, CDFW designates certain vertebrate species as Species of Special Concern based on declining population levels, limited ranges, and/or continuing threats that have made them vulnerable to extinction.

California Native Plant Protection Act

The California Native Plant Protection Act of 1977 (California Fish and Game Code, Sections 1900–1913) directed the CDFW to carry out the legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The act gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare" and protect endangered and rare plants from take. When CESA was passed in 1984, it expanded on the original California Native Plant Protection Act, enhanced legal protection for plants, and created the categories of "threatened" and "endangered" species to parallel FESA. CESA converted all rare animals into the act as threatened species but did not do so for rare plants, which resulted in three listing categories for plants in California: rare, threatened, and endangered. The California Native Plant Protection Act remains part of the California Fish and

Game Code, and mitigation measures for impacts to rare plants are specified in a formal agreement between CDFW and the project proponent.

California Desert Native Plants Act

California Food and Agriculture Code, Division 23, Chapter 3, Sections 80071–80075, affords protection to desert native plants under the California Desert Native Plants Act passed in 1981. Sections 1925–1926 of the California Fish and Game Code agree to enforce the provisions of the act. The California Desert Native Plants Act prohibits the harvesting, transport, sale, or possession of designated native desert plants except for scientific or educational purposes (under a permit), or if the person has a valid permit, or wood receipt, and the required tags and seals. The commissioner or the sheriff of a county shall issue permits in accordance with this act. The provisions are applicable within the boundaries of Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego counties. Therefore, the County of San Diego is responsible for the enforcement and administrative responsibilities to enforce this act as it applies to SDG&E's proposed project.

California Natural Community Conservation Planning Act

The California Natural Community Conservation Planning (NCCP) Act provides for regional planning to conserve listed and candidate species, their habitats, and natural communities through habitat-based conservation measures while allowing economic growth and development (California Fish and Game Code, Section 2800-2835). The initial application of the NCCP Act was in coastal sage scrub habitat in Southern California, home to the California gnatcatcher; it has subsequently been applied to the CALFED Bay-Delta Program and others in Northern California.

The Southern California coastal sage scrub NCCP region consists of 11 subregions, which may be further divided into subareas corresponding to the boundaries of participating jurisdictions or landowners. In each subregion and subarea, landowners, environmental organizations, and local agencies participate in a collaborative planning to develop a conservation plan acceptable to USFWS and CDFW. The NCCP Act requires threat impacts be mitigated to a level that contributes to the recovery of listed species, rather than just avoiding jeopardy.

California Wilderness Act

The California Wilderness Act (Public Law 98-425), enacted in 1984, designated certain lands in the CNF as wilderness and, therefore, as components of the National Wilderness Preservation System. These wilderness areas are managed with the goal of preserving their primitive

wilderness characteristics. Wilderness lands that cross SDG&E's proposed project include Hauser Wilderness (Section 101(a)11) and Pine Creek Wilderness (Section 101(a)20).

C157 crosses two wilderness areas including the Pine Creek and Hauser wilderness areas. Approximately 0.08 mile and 0.53 mile of C157 are located within Pine Creek and Hauser Creek wilderness areas, respectively. C157 was originally constructed between 1920 and 1960, prior to the implementation of the California Wilderness Act. This line is a valid and existing right and use under Forest Service Manual Section 2320.5. Wood-to-steel replacement of the existing wood utility poles along C157 is proposed as a fire safety measure, consistent with authorizing statutory authority contained in both the Wilderness Act and the California Wilderness Act of 1984.

These provisions state that the Secretary concerned may take "such measures as are necessary in the control of fire, insects and diseases, subject to such conditions as he deems desirable" (Public Law Section 103(b)(2). Any associated impacts from SDG&E's proposed project would be expected to occur during construction activities, be short-term and temporary, and would improve the existing condition from a fire safety perspective, which is consistent with the CNF Plan.

Porter-Cologne Water Quality Control Act

The intent of the Porter-Cologne Water Quality Control Act (California Water Code, Section 13000 et seq.) is to protect water quality and the beneficial uses of water, and it applies to both surface water and groundwater. Under this law, the State Water Resources Control Board develops statewide water quality plans, and the Regional Water Quality Control Board (RWQCB) develops basin plans that identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of both statewide and basin plans. Waters regulated under the Porter-Cologne Water Quality Control Act include isolated waters that are no longer regulated by the ACOE. Developments with impact to jurisdictional waters must demonstrate compliance with the goals of the act by developing stormwater pollution prevention plans, standard urban stormwater mitigation plans, and other measures in order to obtain a CWA Section 401 certification.

Streambed Alteration Agreement

CDFW must be notified prior to beginning any activity that would obstruct or divert the natural flow of, use material from, or deposit or dispose of material into a river, stream, or lake, whether permanent, intermittent, or ephemeral water bodies under Section 1602 of the California Fish and Game Code. CDFW has 30 days to review the proposed actions and propose measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by

CDFW and the applicant is the Streambed Alteration Agreement (SAA). The conditions of an SAA and a CWA Section 404 permit often overlap.

D.4.2.3 Regional Policies, Plans, and Regulations

County of San Diego Multiple Species Conservation Program

The San Diego MSCP for the southwestern portion of the County was approved in 1997 and adopted by the Board of Supervisors in March 1998. The MSCP covers 85 species. The San Diego MSCP Plan area consists of the City of San Diego, portions of the unincorporated County, and ten other city jurisdictions. The MSCP Plan area consists of 582,243 acres, of which 43% (252,132 acres) is in unincorporated areas under the jurisdiction of San Diego County.

County of San Diego Multiple Species Conservation Program East County Plan

The County of San Diego is in the process of developing a Habitat Conservation Plan (HCP) under the San Diego MSCP for the East County. The East County Plan covers approximately 1.6 million acres and is bounded on the west generally by the western boundary of the CNF, on the north by the Riverside County, the east predominantly by Imperial County, and the south by Mexico. The County only has land use authority over private parcels, which account for approximately 27% (418,930 acres) of the study area. These parcels include areas of the backcountry communities of Central Mountain, Cuyamaca, Descanso, Pine Valley, Desert/Borrego Springs, Julian, Mountain Empire, Boulevard, Jacumba, Lake Morena/Campo, Potrero, Tecate, portions of Dulzura, and Palomar/North Mountain. The East County Plan will create a large, connected preserve that addresses the regional habitat needs for multiple species; implementation of this plan will also result in the issuance of a permit to the County for incidental take of Covered Species under the NCCP Act (California Fish and Game Code, Section 2835).

County of San Diego Multiple Species Conservation Program North County Plan

The County of San Diego is in the process of developing an HCP under the San Diego MSCP for the North County. The North County Plan encompasses 294,849 acres in and around the unincorporated communities of Bonsall, De Luz, Fallbrook, Harmony Grove, Rancho Santa Fe, Lilac, Pala, Pauma Valley, Rainbow, Ramona, Rincon Springs, Twin Oaks Valley, and Valley Center. Of the 294,849 acres of the North County Plan area, approximately 17% is urbanized and approximately 27% is in agriculture (excluding grazing lands). The remaining approximately 56% of the Plan area consists of natural lands. The North County Plan focuses on unincorporated areas within the County's land use jurisdiction and excludes tribal lands, Forest Service lands, and most water district lands.

Most of the inland areas consist of chaparral or oak woodland vegetation. Coastal areas contain more sensitive habitats such as coastal sage scrub and southern maritime chaparral. There are several larger river systems running east–west that contain extensive riparian woodlands and forests, such as the San Luis Rey River, Santa Margarita River, and Escondido Creek.

County of San Diego Resource Protection Ordinance

The County Resource Protection Ordinance (RPO) requires that sensitive biological resources be evaluated as part of the County's discretionary environmental review process. The RPO specifically addresses the protection of wetlands and other sensitive habitat lands. The RPO provides definitions for these resources and guidelines for the avoidance and mitigation of these resources.

SDG&E Subregional Natural Community Conservation Plan

The SDG&E NCCP was approved by the wildlife agencies in December 1995. The NCCP was developed to establish and implement a long-term agreement among CDFW, USFWS, and SDG&E. The NCCP authorized take of 110 species (covered species) as a result of SDG&E's development, installation, operation, and maintenance of its facilities, while providing for the conservation and preservation of sensitive species. All SDG&E facilities that will be covered under the MSUP (including the proposed replacement of circuit/TLs) are currently being operated and maintained by SD&E in accordance with their NCCP. After the project components are installed, the facilities will continue to be operated and maintained to be consistent with the SDG&E NCCP.

Any effect of habitat loss, habitat alteration, mortality or injury on sensitive species will be reduced through the implementation of mitigation measures incorporated into the MSUP, including use of the SDG&E NCCP, raptor protection measures, and invasive plant control measures. The NCCP and other measures will be incorporated into the Operating Plan as enforceable conditions of the permit, and actions identified in the NCCP will be extended to species on the Regional Forester's Sensitive Species list.

BLM Eastern San Diego County Resources Management Plan and Final Environmental Impact Statement

The BLM Eastern San Diego County RMP and Record of Decision guide the development and management of the Eastern San Diego County Planning Area, an area spanning an eastern escarpment of Southern California's Peninsular Ranges and including more than 100,000 acres of public land managed by the BLM (BLM 2008b). The intent of the RMP and Record of Decision is to direct future development and manage land so that natural resources

are not impacted. The RMP also addresses conflicts among various recreational users accessing BLM lands, provides direction for future site-specific development, and provides for plan monitoring to determine the effectiveness of BLM land management strategies (BLM 2008b). The RMP stresses that future policy decisions and land management strategies shall be compatible with the multiple use mission of the BLM (the multiple use mission includes recreational use and responsible development within BLM-managed lands while maintaining environmental quality of the land).

BLM South Coast Draft Resource Management Plan and Environmental Impact Statement

The BLM South Coast Resource Management Plan (BLM 2011) provides guidance for the management of approximately 300,000 acres of BLM-administered public lands in portions of five Southern California counties: San Diego, Riverside, San Bernardino, Orange, and Los Angeles.

Development of the RMP offers both the BLM and the public a unique opportunity to produce a comprehensive long-range vision for management of the area. The existing RMP was completed in 1994, and the revised RMP will provide guidance for the management of BLM-administered public lands in the counties listed above. Actions required under BLM policy and planning requirements include land use allocations and designations of areas requiring special management such as Areas of Critical Environmental Concern (ACEC), wildlife management areas, Recreation Management Areas, off highway vehicle (OHV) management areas, utility corridors, grazing allotments, and land disposal categories.

The Draft RMP and Draft EIS were released on September 23, 2011. The BLM expects the proposed RMP/Final EIS to be released in 2014 (BLM 2013).

D.4.3 Environmental Effects

D.4.3.1 Definition and Use of CEQA Significance Criteria/Indicators under NEPA

The CEQA criteria and guidelines described as follows are also used as indicators of adverse effect under NEPA. In accordance with Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.), biological resource impacts would be considered significant under CEQA if SDG&E's proposed project would result in any of the following conditions:

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 CDFW or USFWS.

b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS.

c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act due to pole replacement activities and maintenance of the existing access road system. ~~(including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.~~

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.

D.4.3.2 Applicant Proposed Measures

SDG&E has proposed Applicant Proposed Measures (APMs) BIO-01 through BIO-10 which includes measures such as the implementation of protocols identified in the SDG&E NCCP to reduce impacts to biological resources. These APMs are part of SDG&E's proposed project, and the impact analysis assumes that all APMs will be implemented as defined in Section B.7 of this EIR/EIS.

D.4.3.3 Direct and Indirect Effects

- **Impact BIO-1:** Result in temporary and permanent loss of native vegetation

Construction

Construction activities associated with SDG&E's proposed project could temporarily, permanently, and indirectly impact sensitive vegetation communities listed above and result in potentially significant and adverse impacts to these communities.

Table D.4-4 lists the BIO-1 impacts and classification of the impacts under CEQA identified for each of the proposed power line replacement projects.

Table D.4-4
Power Line Replacement Projects - BIO-1 Impacts

Project Components (listed from North –South)	Sensitive Vegetation Communities Present	Description of Impact	Significance Determination
TL682	Mixed oak woodland, southern riparian forest, oak savanna, southern mixed chaparral, Diegan coastal sage scrub, non-native grassland	Construction activities would temporarily impact ~~11.09~~14.61 acres and permanently impact ~~0.04~~0.06 acre of these vegetation communities.	Class II under CEQA and adverse under NEPA
TL626	Mixed oak woodland, southern riparian forest, oak savanna, southern mixed chaparral, freshwater seep/open water, non-native grassland	Construction activities would temporarily impact ~~16.74~~9.55 acres and permanently impact 0.0~~6~~7 acre of these vegetation communities.	Class II under CEQA and adverse under NEPA
TL625	Mixed oak woodland, oak savanna, southern mixed chaparral, chamise chaparral, Diegan coastal sage scrub, native grassland, non-native grassland	Construction activities would temporarily impact ~~25.55~~15.24 acres and permanently impact 0.08 acre of these vegetation communities.	Class II under CEQA and adverse under NEPA
TL629	Mixed oak woodland, southern riparian forest, oak savanna, southern mixed chaparral, chamise chaparral, Diegan coastal sage scrub, semi-desert chaparral, native grassland, non-native grassland	Construction activities would temporarily impact ~~22.93~~15.03 acres and permanently impact 0.~~10~~ 11 acre of these vegetation communities.	Class II under CEQA and adverse under NEPA
TL6923	Mixed oak woodland, oak savanna, southern mixed chaparral, chamise chaparral, Diegan coastal sage scrub, freshwater seep/open water, native grassland, non-native grassland	Construction activities would temporarily impact ~~8.45~~3.65 acres and permanently impact 0.05 acre of these vegetation communities.	Class II under CEQA and adverse under NEPA
C79	Montane forest, southern mixed chaparral	Construction activities would temporarily impact 0.~~88~~ 85 acre of these vegetation communities. No permanent impacts will occur to these vegetation communities.	Class II under CEQA and adverse under NEPA
C78	Southern mixed chaparral, Diegan coastal sage scrub, native grassland	Construction activities would temporarily impact 0.23 acre and permanently impact < 0.~~0~~01 acre of these vegetation communities.	Class II under CEQA and adverse under NEPA
C157	Mixed oak woodland, southern riparian forest,	Construction activities would temporarily impact 0.86~~67~~ acre	Class II under CEQA and adverse under NEPA

Table D.4-4
Power Line Replacement Projects - BIO-1 Impacts

Project Components (listed from North –South)	Sensitive Vegetation Communities Present	Description of Impact	Significance Determination
	southern mixed chaparral, semi-desert chaparral, native grassland, non-native grassland	and permanently impact < 0.01 acre of these vegetation communities.	
C442	Mixed oak woodland, montane forest, southern mixed chaparral, Diegan coastal sage scrub, freshwater seep/open water	Construction activities would temporarily impact 1.05 acre and permanently impact ~~<~~ 0.01 acre of these vegetation communities.	Class II under CEQA and adverse under NEPA
C440	Mixed oak woodland, montane forest, southern riparian forest, oak savanna, southern mixed chaparral, chamise chaparral, Diegan coastal sage scrub, wet montane meadow, native grassland, non-native grassland	Construction activities would temporarily impact 4.~~88~~ 74 acres and permanently impact 0.03 acre of these vegetation communities.	Class II under CEQA and adverse under NEPA
C449	Mixed oak woodland-, southern riparian forest, oak savanna, southern mixed chaparral, semi-desert chaparral, non-native grassland	Construction activities would temporarily impact 1.~~09~~ 10 acres and permanently impact < 0.01 acre of these vegetation communities.	Class II under CEQA and adverse under NEPA

Sources: SDG&E 2012, 2013b, 2015.

A total of 16 vegetation communities and land covers were mapped within the ROW of the proposed power line replacement projects (five existing 69 kV power lines and six 12 kV distribution circuits)[17]. Of these 16 vegetation communities and land covers, 12 are considered sensitive and include mixed oak woodland, montane forest, southern riparian forest, oak savanna, southern mixed chaparral, chamise chaparral, Diegan coastal sage scrub, semi-desert chaparral, wet montane meadow, freshwater seep/open water, native grassland, and scrub oak chaparral. Four additional non-native vegetation and land covers were found in the study area: non-native grasslands, pastureland/cultivated agriculture, urban and developed/ornamental landscaping, and disturbed (ruderal/barren) land. As described below, impacts to the 12 sensitive vegetation communities and the non-native grassland (i.e., "natural" areas) would be counted against the

[17] Forest Service (2006b) also includes the detection of Great Basin sage scrub (Oberbauer et al. 2008) along C440, C449, and TL629; however, acreages are not provided.

"impact" allowance under the NCCP, whereas the remaining 3 land cover types would not be counted as an "impact" under the NCCP.

As listed in Table D.4-4, power lines proposed to be replaced traverse terrain supporting native vegetation communities. More specifically, these power lines are located within the following sensitive and non-native vegetation communities: mixed oak woodland, montane forest, southern riparian forest, oak savanna, southern mixed chaparral, chamise chaparral, Diegan coastal sage scrub, semi-desert chaparral, wet montane meadow, freshwater seep/open water, native grassland, and ~~scrub oak chaparral~~non-native grassland. Potential impacts during construction of the power line replacement projects could include temporary and permanent loss of native vegetation (as described below).

Temporary Impacts

Construction activities that may temporarily impact these vegetation communities include vegetation removal/clearing or grading associated with direct-bury steel pole work areas, self-supported steel pole work areas, staging areas, stringing sites, fly yards, guard structures, wood pole removal areas, guard structures, or trench work areas for underground duct banks. SDG&E anticipates using disturbed areas for all access, fly yard, and staging areas. Additionally, SDG&E does not plan extensive vegetation clearing or any tree removal. However, trees may require trimming and some mature bushes and other scrub vegetation may be cleared to reduce or eliminate potential safety hazards.

Temporary impacts are summarized in Tables D.4-5 and D.4-6. SDG&E's proposed project would temporarily impact ~~157.6~~66.9 acres of ~~11~~ 13 "natural" areas (i.e, native and non-native ~~sensitive~~ vegetation communities), including mixed oak woodland, montane forest, southern riparian forest, oak savanna, southern mixed chaparral, chamise chaparral, Diegan coastal sage scrub, semi-desert chaparral, ~~wet~~ montane wet meadow, freshwater seep/open water, ~~and~~ native grassland, and non-native grassland.[18] SDG&E's proposed project would temporarily impact 85.7 acres of 3 land cover types including disturbed (ruderal/barren), pastureland/cultivated agriculture, and urban and developed/ornamental landscaping. SDG&E's NCCP anticipates grading impacts in "natural" areas as a result of typical expansion and maintenance activities ("natural" areas are not paved and do not include ornamental landscaping or urbanized uses). Therefore, impacts to the listed 13 "natural" areas would be counted against the "impact"

[18] Non-native grassland includes 11.2 acres of Pastureland/Cultivated Agriculture that are currently functioning as non-native grassland.

allowance under the NCCP, whereas the remaining 3 land cover types would not be counted as an "impact" under the NCCP (SDG&E 2015, GIS data).

Absent mitigation, temporary impacts to sensitive vegetation communities are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-03, (including SDG&E NCCP 7.1 Operational Protocols, 7.2 Habitat Enhancement Measures, and 7.4 Mitigation Credits), APM BIO-05, APM BIO-10, and Mitigation Measures (MM) MM BIO-1 through MM BIO-7 and MM-FF-3 temporary impacts at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

Table D.4-5
Power Line Replacement Projects ~~Existing,~~ Temporary~~,~~ and Permanent Impacts to Vegetation Communities and Land Cover Types~~Impacts~~

~~Native~~ Vegetation Community/Land Cover Types	Existing Vegetation Community[4] (square feet/acres)	Temporary Impact[1,4] (square feet/acres)	Permanent Impact[2,4] (square feet/acres)	Total Impact[3,4] (square feet/acres)
Vegetation Communities				
Chamise Chaparral	17,681,335 SF / 405.91 ac	232,681~~476,776~~ SF / ~~10.95~~5.34 ac	1,620~~1,687~~ SF / 0.04 ac	~~478,463~~234,301 SF / ~~10.98~~5.38 ac
Diegan Coastal Sage Scrub	18,247,430 SF / 418.90 ac	157,666~~313,614~~ SF / 3.62~~7.20~~ ac	2,034~~1,968~~ SF / 0.05 ac	159,700~~315,582~~ SF / 3.67~~7.24~~ ac
~~Disturbed (Ruderal/Barren)~~	~~3,381,501 SF / 77.63 ac~~	~~382,940 SF / 8.79 ac~~	~~429 SF / 0.01 ac~~	~~383,529 SF / 8.80 ac~~
Freshwater Seep/Open Water	638,486 SF / 14.66 ac	3,272~~22,772~~ SF / 0.08~~52~~ ac	9 SF / < 0.01 ac	3,281~~22,782~~ SF / 0.08~~52~~ ac
Mixed Oak Woodland	23,944,877 SF / 549.70 ac	238,907~~419,225~~ SF / ~~9.62~~5.48 ac	2,224~~129~~ SF / 0.05 ac	241,131~~421,474~~ SF / 5.54~~9.68~~ ac
Montane Forest	26,453,218 SF / 607.28 ac	146,366~~157,856~~ SF / 3.36~~62~~ ac	984~~1~~ SF / 0.02 ac	~~158,908~~147,350 SF / 3.38~~3.65~~ ac
Montane Wet Meadow	4,221,945 SF / 96.92 ac	38,207~~7,778~~ SF / 0.~~87~~ 88 ac	204~~1~~ SF / < 0.01 ac	38,412~~099~~ SF / 0.88~~7~~ ac
Native Grassland	5,385,386 SF / 123.63 ac	23,567~~82,090~~ SF / ~~1.88~~0.54 ac	358~~35~~ SF / 0.01 ac	23,925~~82,425~~ SF / 0.55~~1.89~~ ac
Non-native Grassland[4]	16,454,376 SF / 377.74 ac	965,463~~553,921~~ SF / 22.16~~12.72~~ ac	1,260~~09~~ SF / 0.03 ac	966,722~~555,131~~ SF / 22.19~~12.74~~ ac
Oak Savanna	11,842,107 SF / 271.86 ac	146,774~~307,214~~ SF / 3.37~~7.05~~ ac	910~~898~~ SF / 0.02 ac	147,684~~308,150~~ SF / 3.39~~7.07~~ ac
~~Pastureland/Cultivated Agriculture~~	~~11,240,905 SF / 258.06 ac~~	~~907,644 SF / 20.84 ac~~	~~516 SF / 0.01 ac~~	~~908,184 SF / 20.85 ac~~
Scrub Oak Scrub	6,301 SF / 0.14 ac	0 SF / 0 ac	0 SF / 0 ac	0 SF / 0 ac
Semi-desert Chaparral	11,047,093 SF / 253.61 ac	100,608~~262,121~~ SF / 2.31~~6.02~~ ac	1,277~~19~~ SF / 0.03 ac	101,885~~263,541~~ SF / 2.34~~6.05~~ ac
Southern Mixed Chaparral	101,951,081 SF / 2,340.47 ac	795,034~~1,860,457~~ SF / 18.25~~42.71~~ ac	6,249~~67~~ SF / 0.14 ac	801,283~~1,867,124~~ SF / 18.39~~42.86~~ ac

Table D.4-5
Power Line Replacement Projects ~~Existing,~~ Temporary~~,~~ and Permanent Impacts to Vegetation Communities and Land Cover Types~~Impacts~~

~~Native~~ Vegetation Community/Land Cover Types	Existing Vegetation Community[4] (square feet/acres)	Temporary Impact[1,~~4~~] (square feet/acres)	Permanent Impact[2,~~4~~] (square feet/acres)	Total Impact[3,~~4~~] (square feet/acres)
Vegetation Communities				
Southern Riparian Forest	9,092,223 SF / 208.73 ac	65,970~~136,121~~ SF / 1.51~~3.12~~ ac	671 SF / 0.02 ac	66,640~~136,792~~ SF / 1.53~~3.14~~ ac
~~Urban and Developed/Ornamental Landscaping~~	~~15,927,426 SF / 365.64 ac~~	~~942,845 SF / 21.64 ac~~	~~2,485 SF / 0.06 ac~~	~~945,419 SF / 21.70 ac~~
~~Grand~~ Subt~~T~~otal	~~278~~246,9665,858~~,671,863~~ SF / ~~6,397.43~~5,669.58 ac	~~7,171,344~~2,914,515 SF / ~~164.63~~66.91 ac	~~21,049~~17,800 -SF / 0.4~~08~~ 1 ac	2,932,314 ~~7,193,617~~ SF / ~~165.14~~67.32 ac
Land Cover Types				
Disturbed (Ruderal/Barren)	3,381,501 SF / 77.63 ac	702,762 SF / 16.13 ac	1,174 SF / 0.03 ac	703,937 SF / 16.16 ac
Pastureland/Cultivated Agriculture	11,240,905 SF / 258.06 ac	1,587,740 SF / 36.45 ac	529 SF / 0.01 ac	1,588,268 SF / 36.46 ac
Urban and Developed/Ornamental Landscaping	15,927,426 SF / 365.64 ac	1,440,926 SF / 33.08 ac	3,502 SF / 0.08 ac	1,44,429 SF / 33.16 ac
Subtotal	*30,549,832SF / 701.33 ac*	*3,731,428 SF / 85.66 ac*	*5,205 SF / 0.12 ac*	*3,736,634 SF / 85.78 ac*
Grand Total	**277,515,690 SF / 6,212.86 ac**	**6,645,943 SF / 152.57 ac**	**23~~4~~,0054 SF / 0.53 ac**	**6,668,948 SF / 153.10 ac**

Sources: SDG&E 2012, 2013b, 2015.

Notes:

1 Temporary construction impacts involve the following: direct bury, fly yard and staging areas, micropile, removal, and stringing sites (for a detailed description see Section B, Project Description). Temporary impacts do not include impacts associated with undergrounding assumed to occur within roadways.

2 Permanent construction impacts involve the following: direct bury and micropile (for a detailed description see Section B, Project Description).

3 Totals may not add due to rounding.

4 Non-native grassland includes 11.2 acres of Pastureland/Cultivated Agriculture that are currently functioning as non-native grassland (SDG&E 2015, GIS data).

Table D.4-6
Power Line Replacement Projects
~~Existing,~~ Temporary~~,~~ and Permanent Vegetation Impacts by TL/Circuit[1]

Vegetation Community by TL/Circuit[5]	Permanent Impact[2] (Acres)			Temporary Impact[3] (Acres)					Total Impact[4] (Acres)
	New Steel	*Wood-to-Steel Replacement*	*Wood-to-Steel Replacement/ Relocation*	*New Steel*	*Removal*	*Wood-to-Steel Replacement*	*Wood-to-Steel Replacement/ Relocation*	*Work Area*	
TL682									
Diegan Coastal Sage Scrub	-	0.01	-	-	-	0.54~~5~~	-	0.54~~1.16~~	1.08~~72~~
Disturbed (Ruderal/Barren)	-	-	-	-	-	-	-	1.86~~0.98~~	1.86~~0.98~~
Mixed Oak Woodland	-	0.02	-	-	~~-~~0.06	1.~~57~~54	-	0.62~~2.55~~	2.24~~4.14~~
Non-native Grassland	-	0.02	-	-	~~-~~0.03	2.48~~7~~	-	6.95~~58~~	9.48~~07~~
Oak Savanna	-	< 0.0~~0~~1	-	-	-	0.03	-	-	0.03
Pastureland/Cultivated Agriculture	-	0.01	-	-	-	0.65~~4~~	-	2.03~~26~~	2.69~~91~~
Southern Mixed Chaparral	-	0.01	-	-	-	1.42~~52~~	-	0.37~~2.99~~	1.80~~4.52~~
Southern Riparian Forest	-	< 0.0~~0~~1	-	-	-	0.05~~6~~	-	~~-~~ 0.67	0.05~~73~~
Urban and Developed/Ornamental Landscaping	-	< 0.01	-	-	-	0.52~~44~~	-	2.07~~0.77~~	2.59~~1.21~~
TL682 Total	-	*0.07*	-	-	*~~-~~0.09*	*7.~~28~~23*	-	*14.43~~7.95~~*	*21.81~~2.30~~*
TL626									
Disturbed (Ruderal/Barren)	-	< 0.01	-	-	-	0.08	-	4.52	4.61
Freshwater Seep/Open Water	-	-	-	-	0.03	< 0.01	-	~~-0.45~~	0.03~~48~~
Mixed Oak Woodland	-	0.01	-	-	-	0.91~~0~~	-	0.27~~1.34~~	1.19~~2.25~~
Non-native Grassland	-	0.01	-	-	-	0.55~~0~~	-	1.76~~0.74~~	2.31~~1.25~~
Oak Savanna	-	0.01	-	-	-	0.99~~5~~	-	0.29~~1.04~~	1.28~~2.00~~
Pastureland/Cultivated Agriculture	-	-	-	-	-	< 0.01	-	0.14	0.14
Southern Mixed Chaparral	-	0.04	-	-	-	4.03~~7~~	-	< 0.01~~6.22~~	4.08~~10.33~~
Southern Riparian Forest	-	0.01	-	-	-	0.71	-	~~-1.01~~	0.72~~1.73~~
Urban and Developed/Ornamental Landscaping	-	0.01	-	-	-	0.67~~48~~	-	~~0.97~~1.87	2.56~~1.46~~

Table D.4-6
Power Line Replacement Projects
~~Existing,~~ Temporary~~,~~ and Permanent Vegetation Impacts by TL/Circuit[1]

Vegetation Community by TL/Circuit[5]	Permanent Impact[2] (Acres)			Temporary Impact[3] (Acres)					Total Impact[4] (Acres)
	New Steel	*Wood-to-Steel Replacement*	*Wood-to-Steel Replacement/ Relocation*	*New Steel*	*Removal*	*Wood-to-Steel Replacement*	*Wood-to-Steel Replacement/ Relocation*	*Work Area*	
TL626 Total	-	*0.08~~7~~*	-	-	*0.03*	*7.96~~63~~*	-	*8.85~~11.78~~*	*16.92~~19.51~~*
TL625									
Chamise Chaparral	-	0.01	-	-	0.07	0.82~~78~~	-	~~5.04~~2.22	3.12~~5.90~~
Diegan Coastal Sage Scrub	< 0.01	0.02	-	0.06	0.05~~3~~	0.76~~5~~	-	0.06~~1.63~~	0.94~~2.49~~
Disturbed (Ruderal/Barren)	-	< 0.01	-	-	0.02	0.15	-	4.94~~5.37~~	5.11~~54~~
Mixed Oak Woodland	< 0.~~0~~01	0.02~~1~~	-	0.03	0.24~~1 8~~	0.66~~7~~	-	0.17~~1.14~~	1.12~~2.03~~
Native Grassland	-	< 0.01	-	-	0.03	0.05~~6~~	-	~~-0.49~~	0.08~~58~~
Non-native Grassland	-	-	-	-	-	-	-	5.38~~< 0.01~~	5.38~~< 0.01~~
Oak Savanna	-	< 0.01	-	-	-	0.02	-	~~-0.39~~	0.03~~41~~
Pastureland/Cultivated Agriculture	-	< 0.01	-	-	-	0.29~~1~~	-	4.89~~9.27~~	5.18~~9.48~~
Southern Mixed Chaparral	-	0.03	-	-	0.04	3.61~~55~~	-	0.97~~10.60~~	4.65~~14.22~~
Urban and Developed/Ornamental Landscaping	< 0.0~~0~~1	0.01	-	0.03	0.01~~-~~	1.43~~13~~	-	5.83~~4.85~~	7.31~~6.01~~
TL625 Total	*< 0.01*	*0.10~~09~~*	-	*0.11*	*0.46~~3 7~~*	*7.77~~31~~*	-	*24.46~~38.78~~*	*32.92~~4 6.67~~*
TL629									
Chamise Chaparral	-	0.02	-	-	-	1.33	-	~~2.98~~0.15	~~4.32~~1.50
Diegan Coastal Sage Scrub	~~-~~< 0.01	< 0.01	-	0.08~~-~~	-	0.14~~1~~	-	-	0.23~~11~~
Disturbed (Ruderal/Barren)	-	0.02~~1~~	-	-	0.01~~-~~	1.33~~0.22~~	-	0.30~~1.03~~	1.65~~25~~
Mixed Oak Woodland	< 0.01~~-~~	0.01	-	0.03~~-~~	-	0.45~~6~~	-	~~-0.29~~	0.48~~75~~
Native Grassland	-	< 0.01	-	-	-	0.09~~8~~	-	-	0.09~~8~~
Non-native Grassland	< 0.01~~-~~	< 0.01	-	0.06~~-~~	-	0.22~~5~~	-	4.30~~1.73~~	4.59~~1.99~~
Oak Savanna	-	0.01	-	-	0.03~~-~~	1.01~~0.98~~	-	0.72~~3.34~~	1.76~~4.34~~

Table D.4-6
Power Line Replacement Projects
~~Existing,~~ Temporary~~,~~ and Permanent Vegetation Impacts by TL/Circuit[1]

Vegetation Community by TL/Circuit[5]	Permanent Impact[2] (Acres)			Temporary Impact[3] (Acres)					Total Impact[4] (Acres)
	New Steel	*Wood-to-Steel Replacement*	*Wood-to-Steel Replacement/ Relocation*	*New Steel*	*Removal*	*Wood-to-Steel Replacement*	*Wood-to-Steel Replacement/ Relocation*	*Work Area*	
Pastureland/Cultivated Agriculture	-	< 0.01	-	-	-	0.39~~7~~	-	5.46~~7.7~~ ~~9~~	5.85~~8.~~ ~~16~~
Semi-Desert Chaparral	< 0.01~~-~~	0.03	-	0.05~~-~~	0.26~~-~~	1.56	-	0.32~~4.3~~ ~~4~~	2.22~~5.~~ ~~92~~
Southern Mixed Chaparral	< 0.0~~0~~1	0.02	-	0.17~~03~~	0.20~~0~~ ~~3~~	2.89~~4~~	-	0.30~~4.0~~ ~~0~~	3.59~~6.~~ ~~92~~
Southern Riparian Forest	-	0.01	-	-	0.06~~-~~	0.60~~57~~	-	-	0.67~~58~~
Urban and Developed/Ornamental Landscaping	< 0.01~~-~~	0.04~~3~~	-	0.03~~-~~	0.05~~3~~	2.49~~1.63~~	-	14.40~~9.~~ ~~91~~	17.02~~1~~ ~~.60~~
TL629 Total	~~<~~ *0.0~~0~~1*	*0.17~~4~~*	-	*0.43~~03~~*	*0.61~~0~~* ~~6~~	*12.50~~10.~~* ~~41~~	-	*25.96~~35.~~* ~~40~~	*39.66~~4~~* ~~6.03~~
TL6923									
Chamise Chaparral	-	< 0.01	-	-	-	0.55	-	-	0.56
Diegan Coastal Sage Scrub	-	0.02	-	-	0.12~~-~~	0.98~~1.12~~	-	0.08~~1.5~~ ~~6~~	1.19~~2.~~ ~~70~~
Disturbed (Ruderal/Barren)	-	-	-	-	-	-	-	0.27	0.27
Freshwater Seep/Open Water	-	< 0.0~~0~~1	-	-	-	0.03	-	-	0.03
Mixed Oak Woodland	-	< 0.0~~0~~1	-	-	-	0.03	-	-	0.03
Native Grassland	-	< 0.01	-	-	-	0.18	-	~~-0.86~~	0.18~~1.~~ ~~04~~
Non-native Grassland	-	< 0.01	-	-	-	0.15	-	-	0.15
Oak Savanna	-	< 0.0~~0~~1	-	-	-	0.05	-	-	0.05
Pastureland/Cultivated Agriculture	-	-	-	-	-	-	-	22.27	22.27
Southern Mixed Chaparral	-	0.02	-	-	-	1.49~~57~~	-	< 0.01~~2.5~~ ~~0~~	1.51~~4.~~ ~~10~~
Urban and Developed/Ornamental Landscaping	-	< 0.01	-	-	~~-~~< 0.01	0.19~~8~~	-	2.50~~0.7~~ ~~7~~	2.69~~0.~~ ~~95~~
TL6923 Total	-	*0.05*	-	-	*0.12~~-~~*	*3.64~~85~~*	-	*25.13~~5.~~* ~~69~~	*28.94~~9~~* ~~.60~~
C79									
Disturbed (Ruderal/Barren)	-	-	-	-	< 0.01	-	-	0.35	0.35
Montane Forest	-	-	-	-	0.02	-	-	0.04~~7~~	0.06~~9~~
Southern Mixed Chaparral	-	-	-	-	0.44	-	-	0.36~~5~~	0.80~~79~~

Table D.4-6
Power Line Replacement Projects
~~Existing,~~ Temporary~~,~~ and Permanent Vegetation Impacts by TL/Circuit[1]

Vegetation Community by TL/Circuit[5]	Permanent Impact[2] (Acres)			Temporary Impact[3] (Acres)					Total Impact[4]~~1~~ (Acres)
	New Steel	*Wood-to-Steel Replacement*	*Wood-to-Steel Replacement/ Relocation*	*New Steel*	*Removal*	*Wood-to-Steel Replacement*	*Wood-to-Steel Replacement/ Relocation*	*Work Area*	
Urban and Developed/Ornamental Landscaping	-	-	-	-	< 0.01	-	-	0.10	0.10
C79 Total	-	-	-	-	*0.46*	-	-	*0.8442*	*1.310.88*
C78									
Diegan Coastal Sage Scrub	< 0.001	< 0.001	< 0.001	0.02	0.08	0.04	0.01	0.01	0.15
Disturbed (Ruderal/Barren)	< 0.01	< 0.01	< 0.01	0.07	0.03	0.01	0.14	0.04	0.29
Native Grassland	-	-	-	-	0.01	-	-	-	0.01
Southern Mixed Chaparral	< 0.001	< 0.001	-	0.02	0.03	0.01	0.01	-	0.07
Urban and Developed/Ornamental Landscaping	-	-	-	< 0.01-	< 0.01-	< 0.01-	< 0.01-	<-0.01	<-0.01
C78 Total	*< 0.001*	*< 0.001*	*< 0.001*	*0.040.11*	*0.1315*	*0.054*	*0.1501*	*0.051*	*0.2453*
C157									
Mixed Oak Woodland	-	< 0.001	-	-	-	0.02	-	-	0.02
Native Grassland	< 0.001	< 0.001	-	0.01	-	0.09	-	0.06	0.16
Non-native Grassland	< 0.001	< 0.001	-	0.01	-	0.01	-	0.18	0.19
Semi-Desert Chaparral	< 0.001	< 0.001	-	0.02	-	0.06	-	-	0.09
Southern Mixed Chaparral	< 0.001	< 0.01	-	0.01	-	0.16	-	0.22	0.39
Southern Riparian Forest	-	< 0.001	-	-	-	0.02	-	-	0.02
C157 Total	*< 0.001*	*< 0.01*	-	*0.05*	-	*0.36*	-	*0.45*	*0.87*
C442									
Diegan Coastal Sage Scrub	-	< 0.001	-	-	-	0.03	-	0.03	0.06
Disturbed (Ruderal/Barren)	-	-	-	-	-	-	-	0.4027	0.4027
Freshwater Seep/Open Water	-	< 0.001	-	-	-	0.01	-	-< 0.001	0.01
Mixed Oak Woodland	< 0.001	< 0.01	-	0.01	-	0.16	-	0.05	0.212
Montane Forest	-	< 0.01	-	-	-	0.15	-	0.065	0.21
Southern Mixed Chaparral	< 0.001	< 0.01	-	0.06	-	0.43	-	0.07	0.56
Urban and Developed/Ornamental Landscaping	-	< 0.001	-	-	-	0.0407	-	0.01-	0.081
C442 Total	*0.00< 0.01*	*0.01*	-	*0.06*	-	*0.8679*	-	*0.6147*	*1.5434*

Table D.4-6
Power Line Replacement Projects
~~Existing,~~ Temporary~~,~~ and Permanent Vegetation Impacts by TL/Circuit[1]

Vegetation Community by TL/Circuit[5]	Permanent Impact[2] (Acres)			Temporary Impact[3] (Acres)					Total Impact[4] (Acres)
	New Steel	*Wood-to-Steel Replacement*	*Wood-to-Steel Replacement/ Relocation*	*New Steel*	*Removal*	*Wood-to-Steel Replacement*	*Wood-to-Steel Replacement/ Relocation*	*Work Area*	
C440									
Chamise Chaparral	-	< 0.~~0~~01	-	-	0.10	0.05~~6~~	-	0.04	0.20
Diegan Coastal Sage Scrub	-	< 0.0~~0~~1	-	-	-	0.01	-	-	0.01
Disturbed (Ruderal/Barren)	< 0.0~~0~~1	< 0.0~~0~~1	-	0.01	0.05 ~~-~~	0.03~~1~~	-	1.18~~0.4~~ ~~7~~	1.26~~0.~~ ~~50~~
Mixed Oak Woodland	-	-	-	-	0.01	-	-	-	0.01
Montane Forest	< 0.01	0.02	-	0.15	0.19	1.92~~1~~	-	0.83~~1.0~~ ~~7~~	3.11~~34~~
Montane Wet Meadow	< 0.~~0~~01	< 0.01	-	0.09	0.04	0.38~~7~~	-	0.37	0.88~~7~~
Native Grassland	-	< 0.0~~0~~1	-	-	-	0.01	-	-	0.01
Non-native Grassland	< 0.~~0~~01	< 0.0~~0~~1	-	0.01	-	0.06	-	0.01	0.08
Oak Savanna	-	< 0.0~~0~~1	-	-	-	0.01	-	-	0.01
Pastureland/Cultivated Agriculture	~~-~~< 0.01	< 0.01~~0.00~~	-	0.03~~-~~	0.04	0.11	-	0.15	0.33~~1~~
Southern Mixed Chaparral	-	< 0.0~~0~~1	-	-	0.27	0.04	-	0.12	0.43
Southern Riparian Forest	-	-	-	-	0.01	-	-	-	0.01
Urban and Developed/Ornamental Landscaping	-	< 0.01	-	< 0.01~~-~~	< 0.01~~-~~	0.22~~0~~	-	0.17~~4~~	0.39~~4~~
C440 Total	*< 0.01*	*0.03*	-	*0.29~~6~~*	*0.71~~6~~ ~~6~~*	*2.85~~1~~*	-	*2.83~~7~~*	*6.75~~12~~*
C449									
Disturbed (Ruderal/Barren)	-	~~-~~< 0.01	~~-~~< 0.01	-	~~-~~0.02	~~-~~0.01	< 0.~~0~~03~~1~~	0.29~~5~~	0.35~~25~~
Mixed Oak Woodland	-	< 0.~~0~~01	< 0.~~0~~01	-	0.12~~0~~	0.01	0.01	0.10	0.24~~3~~
Non-native Grassland	-	-	-	-	0.01	-	-	-	0.01
Oak Savanna	-	-	-	-	0.16	-	-	0.07	0.23
Semi-Desert Chaparral	-	-	-	-	0.01~~-~~	-	-	0.02~~4~~	0.03~~4~~
Southern Mixed Chaparral	< 0.~~0~~01	< 0.0~~0~~1	< 0.~~0~~01	0.02	0.33	0.05~~6~~	0.08~~7~~	0.04~~5~~	0.52~~4~~
Southern Riparian Forest	< 0.~~0~~01	< 0.0~~0~~1	-	0.01	-	0.03	-	0.03	0.07
Urban and Developed/Ornamental Landscaping	~~-~~< 0.01	< 0.01~~-~~	< 0.01~~-~~	~~-~~0.01	0.05~~3~~	< 0.01~~-~~	0.04~~-~~	0.31~~09~~	0.41~~12~~
C449 Total	*< 0.~~0~~01*	*< 0.01*	*< 0.01*	*0.04~~3~~*	*0.69~~4~~*	*0.11~~0~~*	*0.15~~09~~*	*0.87~~63~~*	*1.86~~49~~*
Grand Total	**0.01**	**0.51~~47~~**	**< 0.01**	**~~0.58~~1.0 9**	**~~2.34~~3. 32**	**~~40.58~~3.3 2**	**0.1~~1~~30**	**~~113.96~~10 4.54**	**15~~8.04~~ 3.10**

Sources: SDG&E 2012, 2013b, 2015.
Notes:
1 Impacts < 0.001 or < 0.01 acres signify a minute impact to a given vegetation community.
2 Permanent construction impacts involve the following: direct bury and micropile (for a detailed description see Section B, Project Description).
3. Temporary construction impacts involve the following: direct bury, fly yard, and staging areas, micropile, removal, and stringing sites (for a detailed description see Section B, Project Description).~~Permanent~~ Temporary~~1~~ impacts do not include impacts associated with undergrounding assumed to occur within roadways.
4 Totals may not add due to rounding.
5 Non-native grassland includes 11.2 acres of Pastureland/Cultivated Agriculture that are currently functioning as non-native grassland.Temporary impacts to 7.83 acres of these 11.2 acres, including 4 acres along TL625 (Work Area) and 3.83 acres along TL629 (Work Area) (SDG&E 2015, GIS data).

Permanent Impacts

Permanent impacts to ~~sensitive~~ vegetation communities and land covers may result from the following project components: permanent underground concrete splice vaults (to provide access to underground cables), rock splitting/blasting, drill locations for new poles, and/or installation of other facilities. These permanent impacts to these sensitive vegetation communities listed above are summarized in Tables D.4-5 and D.4-6. SDG&E's proposed project would permanently impact ~~0.6~~0.41 acre of ~~9~~ 12 "natural" areas (i.e, native and non-native vegetation communities) ~~sensitive vegetation communities~~ including chamise chaparral, Diegan coastal sage scrub, freshwater seep/open water, mixed oak woodland, montane forest, montane wet meadow, native grassland, non-native grassland, oak savanna, semi-desert chaparral, southern mixed chaparral, and southern riparian forest. SDG&E's proposed project would permanently impact 0.12 acre of 3 land cover types including disturbed (ruderal/barren), pastureland/cultivated agriculture, and urban and developed/ornamental landscaping.

Absent mitigation, permanent impacts to sensitive vegetation communities are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-03 (including SDG&E NCCP 7.1 Operational Protocols, 7.2 Habitat Enhancement Measures, and 7.4 Mitigation Credits), APM BIO-05, APM BIO-10, and MM BIO-1 through MM BIO-7, permanent impacts at or near project components would be mitigated under NEPA. Under CEQA, impacts would be less than significant with implementation of APM BIO-03 (including SDG&E NCCP 7.1 Operational Protocols, 7.2 Habitat Enhancement Measures, and 7.4 Mitigation Credits), APM BIO-05, APM BIO-10, MM BIO-1 through MM BIO-7, and MM FF-3 (Class II).

Indirect Impacts

No live trees are proposed for removal during construction activities of SDG&E's proposed project. Dead trees adjacent to facilities or underneath conductor may be removed for fire control purposes. SDG&E's standard operating protocol is to have a certified arborist on site to direct any trimming of native trees with the intention of limiting trimming to no more than 30% of the canopy of any individual tree. Prior to any trimming taking place, the SDG&E environmental

team will work with project contractors to avoid any impacts to native trees. If impacts cannot be avoided, the certified arborist is called to determine the most appropriate way to trim the tree that will result in the least impact to the tree.

The power line replacement projects and ongoing operation and maintenance of existing lines also have the potential to result in indirect impacts to surrounding native vegetation communities from erosion, sedimentation, fire risk (further described in D.8, Fire and Fuels Management) and/or introduction of non-native seeds (further addressed in Impact BIO-5) to native communities resulting from ground disturbance and construction personnel and equipment. These indirect effects have the potential to result in vegetation degradation and type conversion.

Absent mitigation, indirect impacts to sensitive vegetation communities are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-03 (including SDG&E NCCP 7.1 Operational Protocols, 7.2 Habitat Enhancement Measures, and 7.4 Mitigation Credits), APM BIO-05, APM BIO-10, MM BIO-1 through MM BIO-7, and MM FF-3, indirect impacts at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with implementation of mitigation (Class II).

MM BIO-1 **Confine all construction and construction-related activities to the minimum necessary area.** All construction areas, access to construction areas, and construction-related activities shall be strictly limited to the areas identified in Section B, Project Description, Table B-~~5~~7. The limits of approved work spaces (not including existing access roads) shall be delineated with stakes and/or flagging prior to beginning work in any area. In areas where SDG&E will not work within exclusive-use easements, SDG&E will post temporary signage along approved work limits, indicating that the area is an active construction/work zone and access is temporarily restricted. An environmental monitor shall complete weekly observations to ensure that all work is completed within the approved work limits, and in the event any work occurs beyond the approved limits, it shall be reported by SDG&E's compliance team in accordance with the Mitigation Monitoring, Compliance, and Reporting program (see Section H).

MM BIO-2 **Conduct contractor training for all construction staff.** Prior to construction, all developer, contractor, and subcontractor personnel shall receive training regarding the appropriate work practices necessary to implement the mitigation measures and comply with environmental regulations, including plant and wildlife species avoidance, impact minimization, and best management

practices. Sign-in sheets and hard hat decals shall be provided that document contractor training has been completed for construction personnel.

MM BIO-3 **Conduct biological construction monitoring.** An authorized biological[19] monitor must be present at the construction sites during all initial ground-disturbing and vegetation-removal activities in undeveloped areas (i.e., not roads or existing developed areas). The monitor shall survey the construction ~~sites~~ project footprint and surrounding areas for compliance with all environmental specifications. Weekly biological construction monitoring reports shall be prepared and submitted to the appropriate permitting and responsible agencies through the duration of the ground-disturbing and vegetation-removal construction phase. Monthly biological construction monitoring reports shall be prepared and submitted through the duration of project construction to document compliance with environmental requirements.

MM BIO-4 **Restore all temporary construction areas pursuant to a Habitat Restoration Plan (HRP).** All previously undisturbed temporary work areas not subject to long-term use or ongoing vegetation maintenance shall be revegetated with native species characteristic of the adjacent native vegetation communities in accordance with a Habitat Restoration Plan as described in SDG&E NCCP 7.2 Habitat Enhancement Measures. ~~The HRP will be prepared by a habitat restoration specialist (approved by the CPUC and Forest Service) who will oversee implementation of the HRP. The HRP will be reviewed and approved by the CPUC and Forest Service prior to implementation.~~ Restoration techniques may include the following: hydroseeding, hand-seeding, imprinting, and soil and plant salvage. Any salvage and relocation of species considered desert native plants shall be conducted in compliance with the California Desert Native Plant Act. The HRP shall include success criteria and monitoring specifications and shall be approved by the permitting agencies prior to construction of the project. At the completion of project construction, all construction materials shall be completely removed from the site. Topsoil located in areas to be restored will be conserved and stockpiled during the excavation process for use in the restoration of sites requiring restoration. Wherever possible, vegetation ~~would~~ will be left in place or mowed, and not grubbed, per the NCCP, to avoid excessive root damage ~~to~~ and allow for

[19] Authorized biologist is defined as a biologist whose resume is reviewed and approved by the Forest Service and CPUC for the authorization to conduct specified activities.

natural ~~recruitment~~ regrowth following construction. Temporary impacts shall be restored sufficient to compensate for the impact to the satisfaction of the permitting agencies (depending on the location of the impact). If restoration of temporary impact areas does not meet success criteria per the HRP, ~~is not possible to the satisfaction of the permitting agencies,~~ the temporary impact shall be considered a permanent impact and compensated accordingly (see MM BIO-5).

Specifically, the HRP will include the following sections:

- Introduction
- Mitigation Measure Summary
- Plan Objectives
- Plan Implementation
  - Pre-Construction Documentation
  - Clearing and Grading
  - Cleanup
  - Seeding
  - Other Planting Methods
- Schedule
  - Restoration
  - Seeding and Planting
- Restoration Monitoring
  - Monitoring Success Criteria and Remedial Measures
  - Reporting
  - Completion of Restoration Program
- References

The HRP will be prepared by a habitat restoration specialist (approved by the CPUC and Forest Service) who will oversee implementation of the HRP. The HRP shall be submitted to the CPUC and the Forest Service for review and approval prior to implementation.

MM BIO-5 **Provide habitat compensation or restoration for permanent impacts to native vegetation communities**. Permanent impacts to all native vegetation communities shall be mitigated by either on- or off-site restoration of suitable but degraded habitat, or by the procurement and protection of off-site habitat as compensation for permanent impacts. Permanent impacts shall be compensated ~~through a combination habitat compensation and habitat restoration~~ at a minimum of a 1:1 ratio and in accordance with SDG&E NCCP 7.4 Mitigation Credits or as required by the permitting agencies. Where discrepancies occur, the higher of the two ratios will be applied, but these ratios are not additive (i.e., ratios of 1:1 and 2:1 do not equal 3:1. Mitigation would be applied at the 2:1 ratio only). Impacts to vegetation communities on Forest Service land will be mitigated as follows: 2:1 for habitats that are sensitive or support listed species; 2:1 for coastal sage scrub, chaparral, grassland, or oak/conifer forest; and 3:1 for riparian oak woodland. "Disturbed" habitat is to be mitigated per ratio for the surrounding vegetation. Forest Service requirements related to MM BIO-5 will only apply to National Forest System lands.

Habitat compensation shall be accomplished through agency-approved land preservation or mitigation fee payment for the purpose of habitat compensation of lands supporting comparable habitats to those lands impacted by the proposed power line replacement projects. Land preservation or mitigation fee payment for habitat compensation must be completed within 36~~18~~ months of permit issuance. Habitat restoration may be appropriate as compensation for permanent impacts provided that restoration is demonstrated to be feasible and the restoration effort is implemented pursuant to a Habitat Restoration Plan, which includes success criteria and monitoring specifications as described for MM BIO-4. All habitat compensation and restoration used as mitigation for the proposed power line replacement projects on public lands shall be located in areas designated for resource protection and management. All habitat compensation and restoration used as mitigation for the proposed power line replacement projects on private lands shall include long-term management and legal protection assurances.

MM BIO-6 **Implement fire prevention best management practices during construction and operation activities.** Fire prevention best management practices shall be implemented during construction and operation of the project as specified by the Construction Fire Prevention/Protection Plan (to be

developed as required under MM FF-1 and MM FF-2). The PALS system will be followed for any work on National Forest System lands.

MM BIO-7 **Prepare and implement a Stormwater Pollution Prevention Plan.** Prepare a Stormwater Pollution Prevention Plan pursuant to the specifications described in APM HYD-05 and MM HYD-1.

Operations and Maintenance

Operation and maintenance of the proposed power line replacement projects along with other SDG&E facilities proposed to be covered under the MSUP would require routine and periodic pole inspections and equipment testing, pole brushing, herbicide application, noise monitoring (see Section D.11, Noise), erosion control (see Section D.9, Hydrology and Water Quality), road maintenance, washing, and other related ongoing maintenance tasks, including pole replacements, similar to those currently conducted by SDG&E and would be done in accordance with the O&M plan for activities on National Forest System lands. Although these activities would not increase in duration or intensity with implementation of SDG&E's proposed project, ongoing operations and maintenance of SDG&E's electric facilities has the potential to result in direct and indirect impacts to surrounding native vegetation communities from erosion, sedimentation, fire risk, use of herbicides and/or introduction of non-native seeds (further addressed in Impact BIO-5) to native communities resulting from ground disturbance and operations and maintenance personnel and equipment. These indirect effects have the potential to result in vegetation degradation and type conversion. In addition to vegetation communities listed above that may occur along the power line replacement projects, Forest Service (2006b) documents redshank chaparral (Oberbauer et al. 2008; 37300) and Great Basin sage scrub (Oberbauer et al. 2008; 35200) as occurring along power and distribution lines within CNF where no improvements are planned. If impacted, redshank chaparral will be mitigated at a ratio of 1:1 and Great Basin sage scrub will be mitigated at a ratio of 2:1 (County of San Diego 2010). Impacts to vegetation communities on Forest Service land will be mitigated as follows: 2:1 for habitats that are sensitive or support listed species; 2:1 for coastal sage scrub, chaparral, grassland, or oak/conifer forest; and 3:1 for riparian oak woodland. "Disturbed" habitat is to be mitigated per ratio for surrounding vegetation (Hawkins, pers. comm. 2014; Forest Service 2009e). Where discrepancies occur, the higher of the two ratios will be applied, but these ratios are not additive (i.e., ratios of 1:1 and 2:1 do not equal 3:1. Mitigation would be applied at the 2:1 ratio only).

Absent mitigation, impacts to sensitive vegetation communities due to operations and maintenance are considered potentially adverse under NEPA. However, with implementation of APM BIO-03 (including SDG&E NCCP Sections 7.1 and 7.2, Operational Protocols), APM

BIO-05, APM BIO-10, MM BIO-1 through MM BIO-8~~(b)~~, and MM HYD-5 impacts to sensitive vegetation communities at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

MM BIO-8~~(a)~~ **Procedural requirements for herbicide applications.** Herbicide applications shall follow measures as described in MM HYD-5 and MM- BIO-23. In addition, herbicides shall only be applied to the minimum area necessary to achieve fire safety objectives and not used in excess or inadvertently be applied to special-status plant species in the vicinity. Special-status plant species of concern are listed below under Impact BIO-6 (a total of 48 species, of which 46 are further described in Table D.4-11). If the professional is unfamiliar with the identification of special-status plant species, an SDG&E biologist shall provide additional supplemental training prior to the application of herbicides along the project as described in MM- BIO-23. This training will be administered by an SDG&E biologist and shall include an overview of special-status species along the ROW, identification features, and avoidance measures.

~~**MM BIO-8(b)**~~ ~~**Biological evaluation/biological assessment.** Operation and maintenance activities involving pole replacement (primary and secondary poles), re-stringing lines, facility replacement or major remodel construction, atypical brush management or tree clearing (i.e., brush and trees that have not been managed before), road maintenance beyond the existing limits, maintenance that may affect wetlands or waters of the U.S., and maintenance that may occur within the Limited Operating Period (LOP) for Forest Service species (e.g., golden eagle, spotted owl, bald eagle, arroyo toad) will require the submittal of a Biological Evaluation/Biological Assessment (BE/BA) to the Forest Service for approval (see Appendix BIO-7 for an example). The BE/BA shall include the following:~~

- ~~Description of Project~~
- ~~Habitats/Acres Affected~~
- ~~Account Summaries for Species with Potential Occupancy~~
- ~~Potential for Effects~~
- ~~Avoidance and Minimization Measures (see Appendix BIO-7 for general avoidance and minimization measures)~~
- ~~Determination of Effects:~~

- ~~State and Federally Listed Species~~
- ~~Forest Service Sensitive Species~~
- ~~Other Species of Management Concern.~~

Impact BIO-2: Result in temporary and permanent loss to preserve areas

Construction

Construction activities associated with SDG&E's proposed power line replacement projects could temporarily and permanently impact preserve areas listed below and result in potentially significant and adverse impacts. Total anticipated temporary and permanent impacts to preserve areas are summarized in Table D.4-7, Anticipated Impacts Summary Table for Preserve Areas.

Table D.4-7
Anticipated Temporary and Permanent Impacts for Preserve Areas

Preserve Areas by Line	Permanent Impacts (Acres)	Temporary Impacts (Acres)	Grand Total (Acres)[1]
MSCP East County			
TL682			
Riparian/Wetland Habitat and Transition Zone within FCA	< 0.01	0.02	0.02
RMS 3 - Land managed as Open Space	0.02	~~15.34~~10.65	~~15.36~~10.67
TL682 Total	*0.0~~3~~2*	*~~18.28~~10.67*	*10.69~~18.31~~*
TL626			
Riparian/Wetland Habitat and Transition Zone within FCA	< 0.01	0.~~71~~29	0.29~~71~~
RMS 2 - Land managed with Ecological Protection	-	0.11~~26~~	0.11~~26~~
RMS 3 - Land managed as Open Space	0.03	3.55~~35.97~~	3.57~~66.00~~
TL626 Total	*0.0~~3~~8*	*~~21.23~~3.94*	*~~21.31~~3.97*
TL625			
Riparian/Wetland Habitat and Transition Zone outside of FCA	< 0.01	0.29	0.29
Riparian/Wetland Habitat and Transition Zone within FCA	< 0.01	0.04~~5~~	0.04~~5~~
RMS 1 - Highest Level of Ecological Protection	0.01	0.~~77~~35	0.36~~77~~
RMS 2 - Land managed with Ecological Protection	< 0.01	0.17~~82~~	0.17~~82~~
RMS 3 - Land managed as Open Space	0.01	1.34~~6.45~~	1.35~~6.46~~
TL625 Total	*0.02~~9~~*	*~~49.84~~2.19*	*~~49.93~~2.21*
TL629			
Riparian/Wetland Habitat and Transition Zone outside of FCA	< 0.01	0.~~72~~38	0.~~72~~38
Riparian/Wetland Habitat and Transition Zone within FCA	0.01	0.89~~1.46~~	0.90~~1.47~~
RMS 3 - Land managed as Open Space	0.03	5.13~~6.62~~	5.16~~6.65~~
TL629 Total	*0.05~~17~~*	*6.40~~50.54~~*	*~~50.71~~6.45*
TL6923			
Riparian/Wetland Habitat and Transition Zone within FCA	< 0.01	0.05	0.05
RMS 1 - Highest Level of Ecological Protection	-	~~< 0.01~~	~~< 0.01~~

Table D.4-7
Anticipated Temporary and Permanent Impacts for Preserve Areas

Preserve Areas by Line	Permanent Impacts (Acres)	Temporary Impacts (Acres)	Grand Total (Acres)[1]
RMS 2 - Land managed with Ecological Protection	< 0.01	~~0.64~~0.28	0.~~64~~28
RMS 3 - Land managed as Open Space	0.03	3.11~~4.75~~	3.14~~4.78~~
TL6923 Total	*0.03~~6~~*	*~~9.60~~3.44*	*~~9.65~~3.47*
C79			
RMS 1 - Highest Level of Ecological Protection	-	0.4~~6~~51	0.4~~6~~51
RMS 2 - Land managed with Ecological Protection	-	0.19	0.19
RMS 3 - Land managed as Open Space	-	0.49	0.49
C79 Total	-	*1.~~15~~20*	*1.~~15~~20*
C78			
RMS 3 - Land managed as Open Space	< 0.01	0.3~~4~~	0.35~~4~~
C78 Total	*< 0.01*	*0.~~52~~34*	*0.~~52~~35*
C157			
Riparian/Wetland Habitat and Transition Zone within FCA	< 0.01	0.01	0.01
RMS 1 - Highest Level of Ecological Protection	< 0.01	0.11	0.11
RMS 3 - Land managed as Open Space	< 0.01	0.17	0.17
C157 Total	*< 0.01*	*0.~~86~~28*	*0.~~86~~28*
C442			
Riparian/Wetland Habitat and Transition Zone within FCA	-	0.06	0.06
RMS 3 - Land managed as Open Space	< 0.0~~0~~1	0.~~24~~37	0.37~~25~~
C442 Total	*< 0.01*	*~~1.41~~0.42*	*~~1.42~~0.43*
C440			
RMS 3 - Land managed as Open Space	< 0.01	0.60~~58~~	0.60~~58~~
C440 Total	*~~0.03~~< 0.01*	*~~6.67~~0.60*	*~~6.70~~0.60*
C449			
Riparian/Wetland Habitat and Transition Zone within FCA	< 0.01	0.04	0.04

Table D.4-7
Anticipated Temporary and Permanent Impacts for Preserve Areas

Preserve Areas by Line	Permanent Impacts (Acres)	Temporary Impacts (Acres)	Grand Total (Acres)[1]
RMS 3 - Land managed as Open Space	< 0.01	0.~~85~~76	0.~~85~~76
C449 Total	*~~0.00~~< 0.01*	*~~1.71~~0.80*	*~~1.71~~0.80*
MSCP East County Total	*0.~~60~~15*	*~~210.25~~30.28*	*~~210.85~~30.44*
MSCP North County-			
TL682			
Preserve Areas	< 0.01	0.09	0.09
TL682/MSCP North County Total	*< 0.01~~0.05~~*	*~~13.39~~0.09*	*~~13.44~~0.09*
Grand Total	**0.~~6~~15**	**~~223.64~~30.37**	**~~224.29~~30.52**

Sources: County of San Diego Planning & Development Services 2014; SDG&E 2013b, 2015.
Note:
[1] Totals may not add due to rounding.

Preserve Areas

The term "Preserve" means the area encompassed by the MSCP's Multi-Habitat Planning Area (MHPA) map (as currently defined or ultimately adopted), the equivalent maps for the MSCP programs in San Diego County, the South Orange County NCCP Subregional Plan reserve area, and the Riverside County Conservation Agency Core reserve areas. If no preserve areas are formally delineated, those areas which are designated moderate, high, and very high-quality habitat are considered a "Preserve." Habitat quality is based on species composition and connectivity with the surrounding natural vegetation communities. SDG&E proposes to withdraw credit from the SDG&E mitigation bank (mitigation ratios described in SDG&E NCCP Section 7.4) for impacts to sensitive vegetation communities located within Preserve areas at a ratio of 2:1 ~~for a total of 1.30 acres, and for a total of 447.28 acres of~~ and ~~temporary impacts to sensitive vegetation communities located within Preserve areas~~ at a ratio of 1:1 for temporary impacts to sensitive vegetation communities located within Preserve areas as a result of project-related activities. Impacts to vegetation communities on Forest Service land will be mitigated as follows: 2:1 for habitats that are sensitive or support listed species; 2:1 for coastal sage scrub, chaparral, grassland, or oak/conifer forest; and 3:1 for riparian oak woodland. "Disturbed" habitat is to be mitigated per ratio for surrounding vegetation (Hawkins, pers. comm. 2014; Forest Service 2009e). Where discrepancies occur, the higher of the two ratios will be applied, but these ratios are not additive (i.e., ratios of 1:1 and 2:1 do not equal 3:1. Mitigation would be applied at the 2:1 ratio only). All compensatory mitigation required outside of Forest Service jurisdiction will be based on actual impacts and exclude work areas in existing access roads, disturbed areas, paved areas, and agricultural fields. Therefore, SDG&E proposes to draw down ~~a minimum of 448.58 acres~~[20] ~~of~~ credit[21] from the SDG&E mitigation bank for impacts to sensitive habitat types located within Preserve areas in the SDG&E Enhancement and Monitoring Program. The Enhancement and Monitoring Program consists of two components: the active enhancement of areas containing sensitive vegetation located within Preserve areas that are temporarily impacted by project-related activities, and the monitoring of areas containing sensitive vegetation located within Preserve areas that are temporarily impacted by project-related activities which are expected to recover on their own. Habitat that is expected to recover on its own consists of grassland, in which the majority of species are non-native in origin. Because SDG&E does not actively enhance non-native vegetation, and because this habitat type is generally considered resilient enough to completely regenerate to pre-activity levels without active enhancement measures, these areas

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[20] ~~448.58 acres is based on SDG&E NCCP ratios; however, acreage could increase with application of Forest Service ratios.~~

[21] Acreage credit to draw down could increase with application of Forest Service ratios.

will be monitored in order to determine whether or not they meet success criteria. Success criteria as defined by Section 7.2 of the SDG&E Subregional NCCP:

> Monitoring, involving visual inspection shall be conducted on restoration sites after one year. Coverage standards will be based on established stands of the target vegetation or another reference area. The means of determining success criteria should be based on estimates of cover by native species. The cover of the native species should increase and the cover of weed species should decrease, eventually approximating the reference area. The reference areas should be a nearby stand of vegetation that the restoration is attempting to emulate. It should have a similar aspect, slope, and soil type. Cover for the restoration and reference areas should be estimated using repeatable cover classes.

If success criteria for both enhancement and monitoring areas are not met after 3 years, SDG&E proposes to withdraw the appropriate amount of credit for these areas from the SDG&E mitigation bank at a 1:1 ratio.

Work crews must follow all SDG&E Subregional NCCP Operational Protocols to avoid and minimize impacts to resources as a result of project-related activities within SDG&E's proposed project area. Impacts associated with the operations and maintenance of existing facilities are addressed for the term of the NCCP by SDG&E's agreement to restrict development other than SDG&E's activities on fee-owned ROWs which contain habitat, connect fragmented habitat areas, or contribute to the carrying capacities of the Preserve areas in the region. SDG&E agrees to limit its use of such ROWs to utility activities. Therefore, mitigation for operations and maintenance of existing facilities located outside the Preserve is not required.

It should be noted that while portions of SDG&E's proposed project are located within the boundary of these Preserve areas, SDG&E's proposed project is anticipated to occur within SDG&E's ROW; therefore, no conflicts should occur with any other conservation plans or mitigation/preservation areas. In addition, SDG&E's NCCP supersedes San Diego County's MSCP and, as a result, any potential impacts within the MSCP area will be avoided or mitigated pursuant to the practices, procedures, and measures defined in the NCCP. Similarly, ~~T~~the SDG&E Subregional NCCP is independent of other NCCP/HCPs, and therefore is not dependent upon the implementation of such plans and is not superseded by the plans. The ROW is an existing power line with existing facilities (i.e., poles), and all old facilities will be completely removed where feasible when they are replaced with new facilities as a part of SDG&E's proposed project. The permanent impacts calculated for the installation of new facilities for SDG&E's proposed project do not take into account the removal of the old facilities and the permanent impacts associated with the original installation of those facilities; therefore, the

impacts presented in this report are conservative. It is expected that the majority of habitat impacted previously by the original facilities will return to its natural state on its own, or will be restored to its natural state through the site enhancement required for new impacts from SDG&E's proposed project. As a result, impacts to preserve areas under NEPA would be mitigated ~~not be adverse~~ and under CEQA would be ~~considered~~ less than significant with mitigation (Class ~~I~~II).

Forest Service Riparian Conservation Areas

Forest Service RCAs were identified and included for consideration during project design to avoid the construction of replacement steel poles within these areas, where possible. These ecosystems contain aquatic and terrestrial features and lands adjacent to perennial, intermittent, and ephemeral streams, as well as in and around meadows, lakes, reservoirs, ponds, wetlands, vernal pools, seeps, springs, and other bodies of water. These areas are identified by the Forest Service in order to protect riparian and aquatic ecosystems and dependent resources during site-specific project planning and implementation. In accordance with the Forest Service' CNF Land Management Plan Goal 5.2, SDG&E included these areas for consideration during project design and avoided, where possible, the placement of steel poles and temporary work areas within RCAs to the extent possible.

Table D.4-8 describes the potential temporary and permanent impacts to RCAs. Approximately 89 existing poles have been identified for replacement from RCAs as part of SDG&E's proposed project. As shown in Table D.4-8, SDG&E's proposed project will temporarily impact approximately ~~8.76~~7.2 acres and permanently impact ~~0.05~~< 0.1 acre of the 2,962[22] currently identified acres of RCAs from construction of the replacement steel poles.

In addition to RCAs, approximately 200 water crossings are within SDG&E's proposed project study area.[23] Temporary water crossing impacts ~~(approximately 3.7 acres)~~ would occur due to work areas, including stringing sites along TL625 (~~3~~ 1 sites), TL626 (~~3~~ 2 sites), TL629 (2 sites), and TL6923 (1 site), and at a micropile site along TL626, being sited by water crossings. In addition, up to 66 water crossings (based on a conservative 20-foot access road ROW, 10 water crossings within a 10-foot ROW, and 54 water crossings within a 15-foot ROW) throughout SDG&E's proposed project area would intersect with project access roads.

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22 Acreage within SDG&E's project survey area (SDG&E 2013a).

23 Number of water crossings is based on 150-foot buffer around project alignments and a 200-foot buffer around pole locations.

Table D.4-8
Power Line Replacement Projects
Potential Temporary and Permanent Impacts to Riparian Conservation Areas

Line	Temporary Impact[1] (Acres)	Permanent Impact[2](Acres)	Total Impacts (Acres)[3,4]
TL682	0.4~~5~~	< 0.1	0.4~~5~~
TL626	0.4~~7~~	0	0.4~~7~~
TL625	0.1~~5~~	0	0.1~~5~~
TL629	2.8~~3.7~~	0~~< 0.1~~	2.8~~3.7~~
TL6923	0.2	0	0.2
C79	0	0	0
C78	< 0.1	0	< 0.1
C157	~~<~~ 0.1	0	~~<~~ 0.1
C442	0.4	0	0.4
C440	1.8	< 0.1	1.8
C449	1.0~~0.9~~	0	1.0~~0.9~~
Total	**7.2~~8.8~~**	**< 0.1**	**7.3~~8.8~~**

Source: SDG&E 2013a, 2015~~3~~.
Notes:
1 Temporary construction impacts involve the following: direct bury, fly yard and staging areas, micropile, removal, and stringing sites (for a detailed description see Section B, Project Description).
2 Permanent construction impacts involve the following: direct bury and micropile (for a detailed description see Section B, Project Description).
3 Impacts to jurisdictional resources are estimates based on current SDG&E proposed project design and information collected to date.
4 Both temporary and permanent impacts to RCAs may be further reduced during project design revisions.

Absent mitigation, temporary and permanent impacts to riparian conservation areas, including the water crossings, are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-03 (including SDG&E NCCP 7.1 Operational Protocols, 7.2 Habitat Enhancement Measures, and 7.4 Mitigation Credits), APM BIO-05, APM BIO-10, MM BIO-1 through MM BIO-7, and MM BIO-9 through MM BIO-12, temporary and permanent impacts at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II). Although RCA mapping for SDG&E's proposed project is used to describe potential impacts, MM BIO-10 requires jurisdictional mapping prior to construction and provides measures to mitigate effects to RCAs and water crossings.

MM BIO-9 SDG&E shall identify all proposed replacement pole locations within the vicinity of RCAs to identify those poles and associated access roads that can be reasonably relocated outside these areas and consult with the Forest Service for authorization of their relocation and proposed placement. These Forest Service requirements will only apply to National Forest System lands.

Operations and Maintenance

Operation and maintenance of SDG&E's proposed power line replacement projects along with other SDG&E facilities proposed to be covered under the MSUP would require routine and periodic pole inspections and equipment testing, pole brushing, herbicide application, noise monitoring (see Section D.11, Noise), erosion control (see Section D.9, Hydrology and Water Quality), road maintenance, washing, and other related ongoing maintenance tasks, including pole replacements, similar to those currently conducted by SDG&E and would be done in accordance with the O&M plan for activities on National Forest System lands. Although these activities would not increase in duration or intensity with implementation of SDG&E's proposed project, ongoing operations and maintenance of SDG&E's electric facilities has the potential to result in temporary and permanent impacts to habitat within preserve areas communities from erosion, sedimentation, fire risk, use of herbicides and/or introduction of non-native seeds (further addressed in Impact BIO-5) to native communities resulting from ground disturbance and operations and maintenance personnel and equipment. These effects have the potential to result in vegetation degradation and type conversion. Absent mitigation, impacts to sensitive vegetation communities due to operations and maintenance are considered potentially adverse under NEPA. However, with implementation of APM BIO-03 (including SDG&E NCCP section 7.1 and 7.2 Operational Protocols), APM BIO-05, APM BIO-10, MM BIO-1 through MM BIO-8~~(b)~~, and MM HYD-5 impacts to sensitive vegetation communities at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

Impact BIO-3: Result in temporary and permanent loss of native wildlife and/or their habitats

Construction activities associated with the proposed power line replacement projects could result in temporary and/or permanent loss of native wildlife and/or their habitats.

All construction components associated with all areas of SDG&E's proposed project (i.e., TL682, TL626, TL625, TL629, TL6923, C79, C78, C157, C442, C440, and C449) have the potential to disturb wildlife in and adjacent to the construction areas, including direct mortality. These construction components include vegetation removal/clearing or grading associated with direct-bury steel pole work areas, self-supported steel pole work areas, staging areas, stringing sites, fly yards, guard structures, wood pole removal areas, guard structures, or trench work areas for underground duct banks, permanent underground concrete splice vaults, rock splitting/blasting, drill locations for new poles, and/or installation of other facilities.

Temporary/Permanent Impacts

Wildlife would be temporarily displaced within the construction areas and may avoid the area immediately surrounding the construction areas due to human presence and noise. Construction noise may affect essential behavioral activities of wildlife in several ways. Excessive noise may affect birds, for example, in at least four ways: (1) noise may be annoying and cause birds to abandon nests that are otherwise perfectly suitable; (2) noise can be stressful and may raise the level of stress hormones, interfering with sleep and other activities; (3) intense noise can cause permanent injury to the auditory system; and (4) noise can interfere with acoustic communication by masking important sounds or sound components (Dooling 2006). Similar effects may occur in other taxa. Noise may interfere with communication in toads and frogs that use calls to advertise their location and attract mates (e.g., Barrass and Cohn 1984). Loud noise, such as off-road vehicles, may damage the hearing of some terrestrial species (Berry 1980; Brattstrom and Bondello 1983).

Noise from increased human activity, heavy equipment operations, vehicle traffic, and helicopter operations may temporarily displace wildlife during construction resulting in a temporary reduction in habitat quality for wildlife adjacent to construction areas. See Section D.11, Noise, for a detailed analysis of noise impacts (helicopter use and noise levels are described in Section D.11.3.3). In habitat adjacent to construction activities, noise impacts may cause wildlife to temporarily avoid habitat, thereby temporarily displacing wildlife and disrupting breeding, territorial, shelter, and foraging behaviors. A reduction in fitness or survivorship may occur if wildlife are displaced into lower-quality habitats or change their behavior in a way that reduces their survival or the survival of their offspring. During noise activities wildlife may temporarily leave their territories, flush from nests (birds), or experience a reduction in predator detection that may subsequently result in mortality. Most construction is scheduled to occur during daylight hours. Occasionally, construction may occur during the night. Therefore, nocturnal wildlife are expected to be affected less by noise than diurnal wildlife. However, wildlife may be similarly disturbed by noise as described above if they are present in construction areas during dusk, dawn, or during nighttime construction. Since the area of disturbance is expected to be a narrow area (i.e., along ROW corridor) and the short duration of disturbance at any given pole, most of the common wildlife species occurring along the project study area are expected to recolonize after construction activities are completed. Therefore, except in wildlife habitats where special-status species are known to occur, direct or indirect loss of the species from noise, ground vibration, and increased human presence or removal of suitable habitat would not be adverse under NEPA and less than significant under CEQA (Class III). Impacts on special-status species are discussed under Impact BIO-6.

The use of access roads around the construction area for proposed projects also ~~have~~ has the potential to result in the direct mortality of less-mobile wildlife. Except where such construction-related disturbance or direct mortality affects special-status wildlife (further discussed under Impact BIO-5) the construction-related impact of SDG&E's proposed project on wildlife disturbance and direct mortality would not be adverse under NEPA under CEQA would be considered less than significant (Class III). Potential disturbance and mortality of common wildlife does not rise to a level of significance, and mitigation measures implemented to avoid, minimize, and mitigate construction-related impacts to special-status wildlife species (see MM BIO-13 through MM BIO-32 under Impact BIO-6) would also be protective of common wildlife species.

Additionally, construction personnel and vehicles would be traversing the access roads along the transmission line during the construction phase. Construction-related disturbance to and/or mortality of general wildlife species may occur at low levels but is not expected to trigger specific mitigation requirements. ~~, except where such disturbance or mortality affects special-status species, would not be adverse under NEPA.~~ Under CEQA, impacts would be considered less than significant (Class III).

Operation and Maintenance

Operation and maintenance of the proposed power line replacement projects along with other SDG&E facilities proposed to be covered under the MSUP would require routine and periodic pole inspections and equipment testing, pole brushing, herbicide application, noise monitoring (see Section D.11, Noise), erosion control (see Section D.9, Hydrology and Water Quality), road maintenance, washing, and other related ongoing maintenance tasks, including pole replacements, similar to those currently conducted by SDG&E and would be done in accordance with the O&M plan for activities on National Forest System lands. These activities would not increase in duration or intensity with implementation of SDG&E's proposed project in such a way as to adversely disturb and/or increase mortality of wildlife, except where such disturbance or mortality affects special-status species (see Impact BIO-5) and therefore such impacts would not be adverse under NEPA, and under CEQA, impacts would be considered less than significant (Class III).

Impact BIO-4: Result in effects to jurisdictional waters, including federally protected wetlands as defined by Section 404 of the Clean Water Act ~~(including but not limited to marsh, vernal pool, coastal, etc.) through vegetation removal, placement of fill, erosion, sedimentation, hydrological interruption, degradation of water quality, or other means~~due to pole replacement activities and maintenance of the existing access road system.

Table D.4-9 lists the BIO-4 impacts and classification of the impacts under CEQA identified for each of the applicant proposed power line replacement projects.

Table D.4-9
Power Line Replacement Projects BIO-4 Impacts

Project Components (listed from North –South)	Sensitive Biological Resource[1]	Description of Impact[2]	Significance Determination
TL682	Intermittent drainage, ephemeral drainage, ~~meadows~~wetland resources	Construction activities would temporarily impact 0.26~~0.08~~ acre and permanently impact < 0.01 acre of ACOE and wetland resources. ~~No permanent impacts to ACOE resources.~~ Temporary and/or permanent impacts would occur to CDFW/RWQCB resources (data not available).	Class II under CEQA and adverse under NEPA
TL626	Ephemeral drainages, ~~swales, meadows, artificial ponds,~~wetland resources	Construction activities would temporarily impact 0.~~01~~ 04 acre and permanently impact < 0.~~0~~01 acre ~~to~~ of ACOE and wetland resources. Temporary and/or permanent impacts would occur to CDFW/RWQCB resources (data not available).	Class II under CEQA and adverse under NEPA
TL625	Ephemeral drainages, meadow, wetland resources	Construction activities would temporarily impact ~~0.07~~1.46 acre and permanently impact < 0.01 acre ~~to~~ of ACOE and wetland resources. ~~No permanent impacts to ACOE resources would occur.~~ Temporary and/or permanent impacts would occur to CDFW/RWQCB resources (data not available).	Class II under CEQA and adverse under NEPA
TL629	Ephemeral drainages, intermittent drainages, ~~lower perennial drainages, seeps.~~wetland resources	Construction activities would temporarily impact 0.~~03~~ 04 acre and permanently impact < 0.~~0~~01 acre of ACOE and wetland resources. Temporary and/or permanent impacts would occur to CDFW/RWQCB resources (data not available).	Class II under CEQA and adverse under NEPA
TL6923	Ephemeral and perennial drainages	Construction activities would temporarily impact 0.01 acre ~~and permanently impact < 0.001 acre~~ of ACOE resources. No permanent impacts would occur to ACOE resources. Temporary and/or permanent impacts would occur to CDFW/RWQCB resources (data not available).	Class II under CEQA and adverse under NEPA
C79	Not Available	Construction activities would not impact ACOE jurisdictional resources. Temporary and/or permanent impacts would occur to CDFW/RWQCB resources (data not available).	Class II under CEQA and adverse under NEPA
C78	Ephemeral drainages~~, perennial drainages~~	Construction activities would temporarily impact < 0.~~0~~01 acre of ACOE resources. No permanent impacts would occur to ACOE resources. Temporary and/or permanent impacts	Class II under CEQA and adverse under NEPA

Table D.4-9
Power Line Replacement Projects BIO-4 Impacts

Project Components (listed from North –South)	Sensitive Biological Resource[1]	Description of Impact[2]	Significance Determination
		would occur to CDFW/RWQCB resources (data not available).	
C157	Not Available	Construction activities would not impact ACOE jurisdictional resources. Temporary and/or permanent impacts would occur to CDFW/RWQCB resources (data not available).	Class II under CEQA and adverse under NEPA
C442	~~Perennial drainages, o~~Ephemeral drainages	Construction activities would temporarily impact < 0.~~0~~01 acre ~~to~~ of ACOE resources. No permanent impacts to ACOE resources would occur. Temporary and/or permanent impacts would occur to CDFW/RWQCB resources (data not available).	Class II under CEQA and adverse under NEPA
C440	Ephemeral drainages~~, intermittent drainage, wetlands~~	Construction activities would temporarily impact < 0.01 ~~0.002~~ acre and permanently impact < 0.~~0~~01 acre of ACOE resources. Temporary and/or permanent impacts would occur to CDFW/RWQCB resources (data not available).	Class II under CEQA and adverse under NEPA
C449	Ephemeral drainages	Construction activities would temporarily impact < 0.~~0~~01 acre ~~to~~ of ACOE resources. No permanent impacts to ACOE resources would occur. Temporary and/or permanent impacts would occur to CDFW/RWQCB resources (data not available).	Class II under CEQA and adverse under NEPA

Sources: SDG&E 2013b, 2015.
Notes:
1 Jurisdictional resources further described in SDG&E (2013a.~~:~~ Table 27, 28, and 31). ~~Formal jurisdictional delineations were not conducted. Informal surveys for jurisdictional resources were only conducted in some areas due to access issues (SDG&E 2013).~~Jurisdictional impact values are estimates based on current project designs and jurisdictional delineations completed as of the issuance of the Draft EIR/EIS.
2 Impacts to jurisdictional resources are estimates based on current SDG&E proposed project design and information collected to date.

As listed in Table D.4-9, power lines proposed to be replaced traverse jurisdictional resources. Jurisdictional habitat impact values presented in this table are estimates based on current SDG&E proposed project design and information collected as of the issuance of the Draft EIR/EIS. Jurisdictional delineations for federal and state waters and wetlands have been completed for the majority of SDG&E's proposed project work areas. SDG&E's proposed project's preliminary jurisdictional delineation is anticipated to be finalized by the end of 2015, and all required permits pertaining to waters and wetlands will be obtained before construction commences on construction segments requiring such permits. ~~During biological surveys, assessment of potential jurisdictional wetlands and waters of the United States for all project areas was not conducted. However, assessments for potentially jurisdictional wetlands or~~

~~waters of the United States (based on the presence of hydrophytic vegetation, ordinary high water mark (OHWM), connectivity to blue-line drainages, and hydrology) was assessed during hydrological studies for some project areas. Assessments were not made for all project areas due to access issues. However, a wetland delineation (in accordance with the 1987 ACOE Wetland Delineation Manual) was not performed during these assessments.~~ A further description of this effort is provided in the SDG&E Revised Plan of Development (SDG&E 2013a, see Section 10.4 Hydrology). ~~A formal jurisdictional delineation would be required prior to project implementation by the various regulatory agencies to determine if permitting would be necessary.~~

Temporary/Permanent Impacts

All construction components of SDG&E's proposed project have the potential to impact jurisdictional resources. These construction components include vegetation removal/clearing or grading associated with direct-bury steel pole work areas, self-supported steel pole work areas, staging areas, stringing sites, fly yards, guard structures, wood pole removal areas, or trench work areas for underground duct banks, permanent underground concrete splice vaults, rock splitting/blasting, drill locations for new poles, and/or installation of other facilities. As further described in Section D.9, Hydrology and Water Quality, of this EIR/EIS, stormwater runoff and non-stormwater discharges (e.g., water for dust control, groundwater dewatering discharges, and/or drilling muds) during construction could result in increased levels of turbidity (i.e., sediment) and other common construction-related contaminants to local rivers, creeks, or other water bodies under federal and/or state jurisdiction. SDG&E construction practices within and outside the CNF will be consistent with the State General Stormwater Construction Permit and an approved Stormwater Pollution Prevention Plan (SWPPP). Construction and post-construction best management practices (BMPs) will be installed and maintained within the CNF consistent with the SWPPP and Forest Service requirements. Overall, development of SDG&E's proposed project would have temporary and permanent impacts to these resources. To further minimize impacts to aquatic resources, SDG&E's proposed project has been designed to relocate poles outside of jurisdictional areas whenever possible. However, being part of an existing TL limits placement of the new poles due to consistency in alignment.

Numerous drainages or features, potentially subject to ACOE, CDFW, and RWQCB jurisdiction, are located within SDG&E's proposed project area. Table D.4-10 ~~describes~~ provides estimates for temporary and permanent impacts to ACOE jurisdictional resources (by feature type) and Wetland Resources~~, and Table D.4-11 describes temporary and permanent impacts to wetland resources~~. Data for CDFW and RWQCB was not available. As described in Section D.4.1.3, several proposed work areas were not assessed for jurisdictional resources due to limited access. Approximately 118 poles and 2 stringing sites outside of the CNF were not surveyed for

potentially jurisdictional wetlands or waters of the United States (SDG&E 2013a, see Tables 19 and 33). However, data for known impacts are described below. In addition, impacts to jurisdictional resources are estimates based on current SDG&E's proposed project design and information collected to date.

Table D.4-10
Temporary and Permanent Impacts to ACOE
Jurisdictional Waters[1] ~~Resources~~and Wetland Resources

Project Components (listed from North–South) Feature Type	Temporary Impact[2,3] (Acres)	Permanent Impact[2,3] (Acres)	Total Impact[2,3] (Acres)
TL682			
Ephemeral	< 0.01 ac	-	< 0.01 ac
Intermittent	< 0.01 ac	-	< 0.01 ac
Wetland Resources	0.26 ac	< 0.01 ac	0.26 ac
TL682 Total	*0.26 ac*	*< 0.01 ac*	*0.26 ac*
TL626			
Ephemeral	< 0.01 ac	< 0.01 ac	< 0.01 ac
Wetland Resources	0.04 ac	< 0.01 ac	0.04 ac
TL626 Total	*0.04 ac*	*< 0.01 ac*	*0.04 ac*
TL625			
Ephemeral	0.03 ac	-	0.03 ac
Meadow	0.02 ac	-	0.02 ac
Wetland Resources	1.41 ac	< 0.01 ac	1.42 ac
TL625 Total	*1.46 ac*	*< 0.01 ac*	*1.46 ac*
TL629			
Ephemeral	0.02 ac	< 0.01 ac	0.02 ac
Intermittent	< 0.01 ac	-	< 0.01 ac
Wetland Resources	0.02 ac	< 0.01 ac	0.02 ac
TL629 Total	*0.04 ac*	*< 0.01 ac*	*0.04 ac*
TL6923			
Ephemeral	< 0.01 ac	-	< 0.01 ac
Perennial	0.01 ac	-	0.01 ac
TL6923 Total	*0.01 ac*	-	*0.01 ac*
C79			
C79 Total	-	-	-
C78			
Ephemeral	< 0.01 ac	-	< 0.01 ac
C78 Total	*< 0.01 ac*	-	*< 0.01 ac*
C157			
C157 Total	-	-	-

Table D.4-10
Temporary and Permanent Impacts to ACOE Jurisdictional Waters[1] ~~Resources~~and Wetland Resources

Project Components (listed from North–South) Feature Type	Temporary Impact[2,3] (Acres)	Permanent Impact[2,3] (Acres)	Total Impact[2,3] (Acres)
C442			
Ephemeral	< 0.01 ac	-	< 0.01 ac
C442 Total	*< 0.01 ac*	-	*< 0.01 ac*
C440			
Ephemeral	< 0.01 ac	< 0.01 ac	< 0.01 ac
C440 Total	*< 0.01 ac*	*< 0.01 ac*	*< 0.01 ac*
C449			
Ephemeral	< 0.01 ac	-	< 0.01 ac
C449 Total	*< 0.01 ac*	-	*< 0.01 ac*
Waters[1] Subtotal	***0.09 ac***	***< 0.01 ac***	***0.09 ac***
Wetlands Subtotal	***1.72 ac***	***< 0.01 ac***	***1.72 ac***
Total	**1.81 ac**	**< 0.01 ac**	**1.81 ac**

Sources: SDG&E 2013b, 2015.
Notes:
1 Jurisdictional waters include ephemeral, intermittent, meadow, and perennial resources.
2 Estimates of potential project impacts to waters of the United States (including wetlands) is based on preliminary jurisdictional delineation data, current SDG&E proposed project design, and information collected to date (SDG&E 2013b, 2015).
3 Totals may not add due to rounding.

~~Table D.4-11~~
~~Temporary and Permanent Impacts to Wetland Resources~~

~~Project Components (listed from North –South)~~	~~Temporary Impact (Square feet / Acre)~~	~~Permanent Impact (Square feet / Acre)~~	~~Total Impact (Square feet / Acre)~~
~~TL682~~	~~10894 SF / 0.25 ac~~	~~3 SF / < 0.001 ac~~	~~10897 SF / 0.25 ac~~
~~TL626~~	~~1562 SF / 0.036 ac~~	~~3 SF / < 0.001 ac~~	~~1565 SF / 0.036 ac~~
~~TL625~~	~~61400 SF / 1.41 ac~~	~~38 SF / 0.001 ac~~	~~61439 SF / 1.41 ac~~
~~TL629~~	~~2515 SF / 0.058 ac~~	~~38 SF / 0.001 ac~~	~~2553 SF / 0.059 ac~~
~~TL6923~~	~~—~~	~~—~~	~~—~~
~~C79~~	~~—~~	~~—~~	~~—~~
~~C78~~	~~—~~	~~—~~	~~—~~
~~C157~~	~~—~~	~~—~~	~~—~~
~~C442~~	~~—~~	~~—~~	~~—~~
~~C440~~	~~—~~	~~—~~	~~—~~
~~C449~~	~~—~~	~~—~~	~~—~~
~~**Total**~~	~~**76370 SF / 1.75 ac**~~	~~**83 SF / 0.002 ac**~~	~~**76454 SF / 1.76 ac**~~

Temporary Impacts

Temporary impacts associated with the pole removal and replacement activities include access to the poles and workspace around the poles. Additional temporary impacts occurring during construction may include impacting water quality by land disturbances, spills, leaks, releasing pollutants into jurisdictional waters, or stormwater discharges. Temporary impacts may also occur as a result of stormwater runoff or non-stormwater discharges into local rivers, creeks, or other water bodies. Additional potential temporary impacts may occur if construction is conducted during the rainy season, within erosion-prone soils, and/or within sediment-sensitive watersheds or 303(d)-listed water bodies which may adversely affect downstream beneficial uses and violate RWQCB water quality objectives. Water for the purposes of dust-control and minimal earthwork activities (e.g., concrete mixing for installation of micro-pile foundations) and potentially impact groundwater supply if long term water demands are only obtained from on-site sources. All water quality concerns are described in more detail in Section D.9, Hydrology and Water Quality.

The replacement of poles and removal of pole butts will occur within the same workspace. Steel plates and a temporary bridge are anticipated to be used to span jurisdictional areas to provide temporary access during construction.

An estimated ~~total of 0.21~~0.09 acres of temporary impacts to ACOE-~~-~~jurisdictional ~~resources~~ waters of the United States are anticipated to occur as a result of work ~~i~~on~~n~~ all lines except C79 and C157 (Table D.4-~~-~~10). A total of 1.72 acres of temporary impacts to ACOE-jurisdictional wetlands are anticipated to occur as a result of the current proposed project design for TL625, TL626, TL629, and TL682. Temporary impacts to CDFW and/or RWQCB resources may also occur as a result of construction components described above and will be quantified at a later date~~.(Table D.4-11). A total of 1.75 acres of temporary impacts to wetland resources would occur as a result of work in TL682, TL626, TL625, and TL629 (Table D.4-11).~~ Impacts to jurisdictional resources are estimates based on current SDG&E's proposed project design and information collected to date.

Absent mitigation, temporary impacts to jurisdictional resources are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-03 (including SDG&E NCCP 7.1 Operational Protocols, 7.2 Habitat Enhancement Measures, and 7.4 Mitigation Credits), APM BIO-05, APM BIO-10, APM HYD-01 through APM HYD-11, MM HYD-2a, MM HYD-2b, MM BIO-1 through MM BIO-7, and MM BIO-10 through MM BIO-12, temporary impacts ~~at or near project components~~within jurisdictional waters and wetlands would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

Permanent Impacts

~~Replacement of existing poles numbers P40452 (C440), Z371562 (TL626), Z41023 and Z344173 (TL629), Z41023, Z571488, and Z571489 (TL6923) with new steel poles would~~Pole replacements are anticipated to occur within ACOE~~-~~-jurisdictional ~~resources~~waters and/or wetlands~~, including wetland and riparian resources (Table D.4-10 and Table D.4-11)~~. Access to these poles would occur off adjacent dirt roads. A total of approximately ~~26.8 square feet (~~< 0.0~~0~~1 acre~~)~~ of potentially ACOE-jurisdictional waters of the United States would be permanently impacted during construction. In addition, an estimated < 0.01 acre of permanent impacts to ACOE-jurisdictional wetlands is expected to occur as a result of work on TL625, TL626, TL629, and TL682. Permanent impacts to CDFW and RWQCB-jurisdictional waters and wetlands will also occur as a result of construction components described above and will be quantified at a later date. ~~Permanent impacts to CDFW and/or RWQCB resources may also occur as a result of construction components described above (Table D.4-11). A total of 0.002 acre of permanent impacts to wetland resources would occur as a result of work in TL682, TL626, TL625, and TL629 (Table D.4-11). Water quality temporary impacts described above also have the potential to result in long-term permanent impacts to jurisdictional waters. Additionally, erosion over time as a result of unused access roads may potentially impact water sources.~~

Absent mitigation, permanent impacts to jurisdictional resources are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-03 (including SDG&E NCCP 7.1 Operational Protocols, 7.2 Habitat Enhancement Measures, and 7.4 Mitigation Credits), APM BIO-05, APM BIO-10, APM HYD-01 through APM HYD-11, MM HYD-2a, MM HYD-2b, MM HYD-3, MM BIO-1 through MM BIO-7, and MM BIO-10 through MM BIO-12 permanent impacts at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

Permitting

~~ACOE and RWQCB —~~Regulatory permitting for both temporary and permanent impacts resulting from proposed project construction is anticipated to be required for the ACOE, RWQCB, and CDFW. Based on the final proposed project designs and the completed preliminary jurisdictional delineation, final proposed project impacts to waters and wetlands under the jurisdiction of each of these agencies will be determined. Temporary and permanent impacts to ACOE-jurisdictional waters and wetlands are anticipated to be permitted via Nationwide Permits 3 and 12. Temporary and permanent impacts to RWQCB jurisdictional waters and wetlands are anticipated to be permitted via a 401 Water Quality Certification. Temporary and permanent impacts to CDFW jurisdictional waters, wetlands, and riparian habitats will be permitted via a 1602 Streambed Alteration Agreement. Any required

compensatory mitigation for temporary and permanent impacts will be outlined within an approved Habitat Mitigation and Monitoring Plan. The Habitat Mitigation and Monitoring Plan will also specify on-site restoration of temporarily impacted waters and wetlands areas.~~Project activities in drainage and wetland feature areas will be carried out under non-notifying Nationwide Permit No. 12 issued by ACOE, and a 401 Certification from RWQCB (Certification 11C-114; Categorical Exemption). Permanent impacts to ACOE wetlands associated with pole removal and replacement are approximately 26.8 square feet (< 0.001 acre).~~

~~Temporary impacts to ACOE jurisdictional wetlands and streambeds affect 0.21 acre. Compensatory mitigation was not required. The San Diego RWQCB determined that SDG&E's proposed project is categorically exempt from CEQA pursuant to CEQA Guidelines Section 15301(b). The exemption applies to repair and maintenance of existing utility structures. Specifically the replacement of the existing wood poles constitutes maintenance of existing facilities to provide electric power as identified in Section 15301(b).~~

~~CDFW – The temporary impacts associated with the removal of poles within CDFW jurisdiction will not substantially adversely affect an existing fish or wildlife resource; therefore, an SAA notification was not submitted.~~

Consistent with the SDG&E Subregional NCCP, SDG&E's proposed project has been designed to avoid sensitive habitat areas when possible, including not placing poles in drainage areas, using existing access roads, and placing any new facilities, staging areas, stringing sites, guard structures, and helicopter landing zones outside sensitive habitats when feasible.

Absent mitigation, temporary and permanent impacts to jurisdictional resources are considered potentially significant under CEQA and adverse under NEPA. However, through compliance with avoidance and minimization measures included in the ~~RWQCB 401 certification application~~regulatory agency permits, compliance with the SDG&E Subregional NCCP, and implementation of APM BIO-03 (including SDG&E NCCP 7.1 Operational Protocols, 7.2 Habitat Enhancement Measures, and 7.4 Mitigation Credits), APM BIO-05, APM BIO-10, MM BIO-1 through MM BIO-7, and MM BIO-10 through MM BIO-12, temporary and permanent impacts at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

MM BIO-10 **Limit temporary and permanent impacts to jurisdictional features to the minimum necessary.** Formal ~~J~~jurisdictional ~~mapping~~ delineation and permits are~~is~~ required prior to construction for all work areas located within or adjacent to jurisdictional wetlands and waters. The applicant shall ~~O~~obtain and implement the terms and conditions of agency permit(s) for unavoidable impacts to jurisdictional wetlands and waters. All construction areas, access to

construction areas, and construction-related activities shall be strictly limited to the areas within the approved work limits and delineated with stakes and/or flagging that shall be maintained throughout the construction period. The project applicant shall obtain applicable permits and provide evidence of permit approval, which may include but not be limited to a Clean Water Act Section 404 Permit from the ACOE, a Clean Water Act Section 401 water quality certification from the RWQCB, and a Section 1602 Streambed Alteration Agreement with the ~~U.S. Army Corps of Engineers, Regional Water Quality Control Board, and~~ California Department of Fish and Wildlife for impacts to jurisdictional features prior to project construction. These permits are anticipated to be approved under the MSUP. The terms and conditions of these authorizations shall be implemented.

In addition, prior to conducting work or establishing the final design of a selected transmission line alignment, a planning-level assessment of aquatic resources will be conducted to identify the environmentally preferred alternative. The assessment will include review of the National Hydrography Dataset, National Wetland Inventory, U.S. Geological Survey topographic maps, high-resolution digital photography, and necessary field checking. Once the environmentally preferred alternative is identified, a jurisdictional delineation will be conducted of the selected transmission line to ensure the final design is the Least Environmentally Damaging Practicable Alternative (LEDPA) and is in compliance with the Clean Water Act (CWA) Section 404(b)(1) Guidelines. The CWA Section 404 permit authorization will be obtained for any discharges into waters of the United States and the widths of access roads and construction of bridges over waters of the United States will be minimized to the extent feasible.

MM BIO-11 **Implement habitat creation, enhancement, preservation, and/or restoration pursuant to a wetland mitigation plan to ensure no net loss of jurisdictional waters and wetlands.** Temporary and permanent impacts to all jurisdictional resources shall be compensated through a combination of habitat creation (i.e., establishment), enhancement, preservation, and/or and restoration at a minimum of a 1:1 ratio or as required by the permitting agencies. Any creation, enhancement, preservation, and/or restoration effort shall be implemented pursuant to a Habitat Restoration Plan, which shall include success criteria and monitoring specifications, and shall be approved by the permitting agencies prior to construction of the project. A habitat restoration specialist will be designated and approved by the permitting

agencies and will determine the most appropriate method of restoration. Restoration techniques may include hydroseeding, hand-seeding, imprinting, and soil and plant salvage (as discussed in SDG&E NCCP 7.2 Habitat Enhancement Measures). Temporary impacts shall be restored sufficient to compensate for the impact to the satisfaction of the permitting agencies (depending on the location of the impact). If restoration of temporary impact areas is not possible to the satisfaction of the appropriate agency (see Table D.4-16~~7~~, Mitigation Monitoring, Compliance, and Reporting – Biological Resources), the temporary impact shall be considered a permanent impact and compensated accordingly. All habitat creation and restoration used as mitigation for the proposed project on public lands shall be located in areas designated for resource protection and management. All habitat creation and restoration used as mitigation for the proposed project on private lands shall include long-term management and legal protection assurances.

MM BIO-12 **Where drainage crossings are unavoidable, construct access roads at right angles to drainages.** Unless not possible due to existing landforms or site constraints, access roads shall be built perpendicular to drainages to minimize the impacts to these resources and prevent impacts along the length of jurisdictional features.

Operation and Maintenance

Operation and maintenance of the proposed power line replacement projects along with other SDG&E facilities proposed to be covered under the MSUP would require routine and periodic pole inspections and equipment testing, pole brushing, herbicide application, noise monitoring (see Section D.11, Noise), erosion control (see Section D.9, Hydrology and Water Quality), road maintenance, washing, and other related ongoing maintenance tasks, including pole replacements, similar to those currently conducted by SDG&E and would be done in accordance with the O&M plan for activities on National Forest System lands.

As described in Section D.9, Hydrology and Water Quality, typical maintenance activities such as vegetation management, pesticide and herbicide application, and other as-needed repairs would involve materials, debris, or earthwork that could adversely affect water quality and impact jurisdictional resources. Regrading and repair of access roads during construction, if not conducted in a manner that permanently addresses chronic erosion issues, would continue to expose road beds to accelerated erosion and rills, thereby increasing turbidity levels in downstream water bodies.

~~Pesticide application along Forest Service RCAs for Cottonwood Creek, currently impaired with pesticides under Section 303(d) of the CWA, would have a great potential to impact jurisdictional resources and violate water quality objectives (described in Section D.9, Hydrology and Water Quality). In addition, w~~Water requirements for the operations and maintenance of SDG&E's proposed project would include dust control required during periodic access road maintenance and for insulator washing. SDG&E has estimated long-term water usage to be 130,000 gallons per year to be purchased from local sources. Long-term impacts to jurisdictional resources may occur if water used for operations and maintenance are obtained from inappropriate sources. The impacts to jurisdictional resources as a result of SDG&E's proposed project would be adverse under NEPA and significant under CEQA. The exact acreage of impacts to jurisdictional waters as a result of operations and maintenance is not known.

Absent mitigation, impacts to jurisdictional resources due to operations and maintenance are considered potentially adverse under NEPA. However, with implementation of APM BIO-03 (including SDG&E NCCP 7.1 Operational Protocols, 7.2 Habitat Enhancement Measures, and 7.4 Mitigation Credits), APM BIO-05, APM-BIO-10, MM BIO-1 through MM BIO-7, MM BIO-10 through MM BIO-12, ~~MM BIO-8(b),~~ APM HYD-01 through APM-HYD-11, MM HYD-2a, MM HYD-2b, and MM HYD-4 ~~through~~ and MM HYD-5~~6~~ impacts to jurisdictional resources at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

Impact BIO-5: Result in the introduction of invasive, non-native, or noxious plant species

The majority of SDG&E's proposed project area is characterized by undisturbed native vegetation communities with low levels of invasive or noxious plant species. All areas of SDG&E's proposed project (i.e., TL682, TL626, TL625, TL629, TL6923, C79, C78, C157, C442, C440, and C449) pass through undisturbed native vegetation communities. Although SDG&E anticipates using disturbed areas for all access, fly yard, and staging areas, there is a potential for the introduction of invasive, non-native, or noxious plant species. Areas within SDG&E's proposed project study area where ground disturbance is occurring or has occurred support a higher level of and potential for invasive, non-native, and noxious plant species. Specifically, the yellow star thistle (*Centaurea solstitialis*) is an invasive and non-native species known to occur along roadsides and disturbed grassland or woodlands. This species has been documented directly south of Lake Henshaw, between Julian and TL626, and in the vicinity of TL625 (near Descanso and northwest of Barrett Lake) (University and Jepson Herbaria 2014). As described below, ~~Therefore,~~ construction activities would temporarily and/or permanently impact these native vegetation communities by introducing invasive, non-native, and noxious plant species.

Temporary/Permanent Impacts

All components of SDG&E's proposed project would result in temporary ground-disturbance activities that would result in the disturbance to or removal of existing vegetation. These components include vegetation removal/clearing or grading associated with direct-bury steel pole work areas, self-supported steel pole work areas, staging areas, stringing sites, fly yards, guard structures, wood pole removal areas, guard structures, or trench work areas for underground duct banks. SDG&E anticipates using disturbed areas for all access, fly yard, staging areas, permanent underground concrete splice vaults (to provide access to underground cables), rock splitting/blasting, drill locations for new poles, and/or installation of other facilities.

Ground-disturbing activities expose soils and allow invasive and non-native plant species to become established. These temporary impacts may result in long-term permanent impact if non-native, invasive species ~~become~~ are introduced and spread throughout the habitat. Similarly, long-term permanent impacts may occur if ground-distrubing activities facilitate the spread of currently established non-native, invasive species populations, such as the yellow star thistle.

Increased human and vehicle activity in the project area during construction would have the potential to introduce or spread seeds of invasive and non-native species into the area. The introduction and spread of invasive, non-native, or noxious plant species have the potential to degrade plant and species habitat through changes in species composition and habitat type conversion, including areas known to support special-status species and sensitive natural communities. These impacts may be temporary or result in a permanent impact if mitigation measures are not implemented.

Absent mitigation, temporary and permanent impacts to undisturbed native vegetation communities are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-03, APM BIO-05, APM BIO-10, and MM BIO-1 through MM BIO-7, temporary and permanent impacts at or near project components would be mitigated under NEPA and under CEQA, impacts would be less than significant with mitigation (Class II).

Operations and Maintenance

Operation and maintenance of SDG&E's proposed project, along with other SDG&E facilities proposed to be covered under the MSUP, would require routine and periodic pole inspections and equipment testing, pole brushing, herbicide application, noise monitoring (see Section D.11, Noise), erosion control (see Section D.9, Hydrology and Water Quality), road maintenance, washing, and other related ongoing maintenance tasks, including pole replacements, similar to those currently conducted by SDG&E and would be done in accordance with the O&M plan for activities on National Forest System lands.

During operations and maintenance of all components of SDG&E's proposed project, the human and vehicle activities would have the potential to spread invasive and non-native species throughout the area. The introduction and spread of invasive, non-native, or noxious plant species have the potential to degrade plant and species habitat through changes in species composition and habitat type conversion, including areas known to support special-status species and sensitive natural communities. The introduction of invasive, non-native, or noxious plant species resulting from SDG&E's proposed project would be adverse under NEPA and significant under CEQA.

Absent mitigation, temporary and permanent impacts to undisturbed native vegetation communities are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-03, APM BIO-05, APM BIO-10, and MM BIO-1 through MM BIO-7, ~~and MM BIO-8(b),~~ temporary and permanent impacts at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

Impact BIO-6: Result in effects, either directly or through habitat modifications, to species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS

Table D.4-11~~2~~ lists the BIO-6 impacts and classification of the impact under CEQA identified for each of the applicant proposed power line replacement projects. In addition to species listed below for the power line replacement projects, Tables D.4-14~~5~~a through D.4-14~~5~~c provide occurrence data for species detected along all lines to be covered under the MSUP (Forest Service 2006b), which could be impacted during operations and maintenance. These tables include the same species as described for the power line replacement projects except for Vail Lake ceanothus, slender horned spineflower, San Diego button-celery, San Bernardino bluegrass, and Parry's tetracoccus, which also could be impacted. All species and their status and habitat associations can be found in Appendix BIO-2.

Table D.4-112
Power Line Replacement Projects – BIO-6 Impacts

Project Components (listed from North–South)	Sensitive Biological Resource	Description of Impact	Significance Determination
TL682, TL626, TL625, TL629, TL6923, C79, C78, C157, C442, C440, C449 (all)	Bell's sparrow, loggerhead shrike, red-shouldered hawk, song sparrow, turkey vulture, hoary bat, long-legged myotis, Mexican long-tongued bat, mountain lion*, mule deer*, pallid bat, Townsend's big-eared bat, western red bat, Jacumba pocket mouse*, coast (San Diego) horned lizard*, coastal rosy boa*, San Diego ring-necked snake*, northern red-diamond rattlesnake*	Construction activities would temporarily and/or permanently impact these special-status species.	Class II under CEQA and adverse under NEPA
TL682, TL626, TL625, TL629, C79, C78, C157, C442, C440, C449 (all except TL6923)	Western small-footed myotis, long-eared myotis	Construction activities would temporarily and/or permanently impact these special-status species.	Class II under CEQA and adverse under NEPA
TL682, TL626, TL625, TL629, TL6923, C79, C78, C442, C440, C449 (all except C157)	Big free-tailed bat	Construction activities would temporarily and/or permanently impact big free-tailed bat.	Class II under CEQA and adverse under NEPA
TL682, TL626, TL625, TL629, TL6923, C78, C157, C442, C440, C449 (all except C79)	Southern California rufous-crowned sparrow, Belding's orange-throated whiptail	Construction activities would temporarily and/or permanently impact these special-status species.	Class II under CEQA and adverse under NEPA
TL682, TL626, TL625, TL629, TL6923, C79, C78, C157, C442, C440, C449 (all except C78)	San Diego sunflower, Cooper's hawk*, olive-sided flycatcher	Construction activities would temporarily and/or permanently impact these special-status species.	Class II under CEQA and adverse under NEPA
TL682, TL626, TL625, TL629, TL6923, C157, C442, C440, C449 (all except C79, C78)	Two-striped garter snake*, western pond turtle*	Construction activities would temporarily and/or permanently impact these special-status species.	Class II under CEQA and adverse under NEPA
TL682, TL626, TL625, TL629, TL6923, C79, C78, C157, C442, C440, C449 (all except TL629, TL6923)	Fringed myotis, Yuma myotis	Construction activities would temporarily and/or permanently impact these special-status species.	Class II under CEQA and adverse under NEPA
TL682, TL626, TL625, TL629, TL6923, C78, C157, C440, C449 (all except C79, C442)	California horned lark	Construction activities would temporarily and/or permanently impact California horned lark.	Class II under CEQA and adverse under NEPA
TL682, TL626, TL625, TL6923, C79, C78, C157, C442, C440, C449 (all except TL629)	Delicate clarkia	Construction activities would temporarily and/or permanently impact delicate clarkia.	Class II under CEQA and adverse under NEPA

Table D.4-11~~2~~
Power Line Replacement Projects – BIO-6 Impacts

Project Components (listed from North–South)	Sensitive Biological Resource	Description of Impact	Significance Determination
TL682, TL626, TL625, TL629, TL6923, C78, C157, C442, C440, C449 (all except C79)	Arroyo toad*	Construction activities would temporarily and/or permanently impact arroyo toad.	Class II under CEQA and adverse under NEPA
TL682, TL626, TL625, TL629, TL6923, C157, C440, C449 (all except C79, C78, C442)	Yellow-breasted chat	Construction activities would temporarily and/or permanently impact yellow-breasted chat.	Class II under CEQA and adverse under NEPA
TL682, TL626, TL625, TL629, C157, C79, C78, C442, C440 (all except TL6923, C449)	Orcutt's brodiaea*	Construction activities would temporarily and/or permanently impact Orcutt's brodiaea.	Class II under CEQA and adverse under NEPA
TL682, TL626, TL625, TL629, TL6923, C78, C442, C440 (all except C79, C157, C449)	San Diego gumplant	Construction activities would temporarily and/or permanently impact San Diego gumplant.	Class II under CEQA and adverse under NEPA
TL682, TL629, TL6923, C79, C157, C442, C440, C449 (all except TL626, TL625, C78)	California legless lizard	Construction activities would temporarily and/or permanently impact California legless lizard.	Class II under CEQA and adverse under NEPA
TL682, TL626, TL625, TL629, C157, C442, C440, C449 (all except TL6923, C79, C78)	Large-blotched salamander	Construction activities would temporarily and/or permanently impact large-blotched salamander.	Class II under CEQA and adverse under NEPA
TL626, TL625, TL629, TL6923, C442, C440, C449 (all except TL682, C79, C78, C157)	Western mastiff bat	Construction activities would temporarily and/or permanently impact these special-status species.	Class II under CEQA and adverse under NEPA
TL682, TL626, TL625, TL629, TL6923, C440, C449 (all except C157, C442, C78, C79)	Pocketed free-tailed bat	Construction activities would temporarily and/or permanently impact pocketed free-tailed bat.	Class II under CEQA and adverse under NEPA
TL625, TL629, TL6923, C157, C440, C449 (all except TL682, TL626, C442, C78, C79)	Sticky geraea	Construction activities would temporarily and/or permanently impact sticky geraea.	Class II under CEQA and adverse under NEPA
TL682, TL626, TL629, C79, C442, C440 (all except C157, C449, C78, TL625, TL6923)	San Diego mountain kingsnake	Construction activities would temporarily and/or permanently impact San Diego mountain kingsnake.	Class II under CEQA and adverse under NEPA
TL682, TL626, TL629, TL6923, C79, C449 (all except TL625, C78, C157, C442, C440)	Prairie falcon	Construction activities would temporarily and/or permanently impact prairie falcon.	Class II under CEQA and adverse under NEPA

Table D.4-11~~2~~
Power Line Replacement Projects – BIO-6 Impacts

Project Components (listed from North–South)	Sensitive Biological Resource	Description of Impact	Significance Determination
TL625, TL629, TL6923, C78, C157, C440 (all except C442, C449, C79, TL626, TL682)	Grasshopper sparrow	Construction activities would temporarily and/or permanently impact grasshopper sparrow.	Class II under CEQA and adverse under NEPA
TL682, TL626, TL625, TL629, TL6923, C157, C442, C449 (all except C440, C78, C79)	Least Bell's vireo* (nesting)	Construction activities would temporarily and/or permanently impact least Bell's vireo.	Class II under CEQA and adverse under NEPA
TL626, TL625, TL629, TL6923, C440, C449 (all except C157, C442, C78, C79, TL682)	Dulzura pocket mouse	Construction activities would temporarily and/or permanently impact Dulzura pocket mouse.	Class II under CEQA and adverse under NEPA
TL626, TL625, TL629, TL6923, C79, C78, C157, C442, C449 (all except TL682, C440)	Hermes copper butterfly	Construction activities would temporarily and/or permanently impact Hermes copper butterfly	Class II under CEQA and adverse under NEPA
TL682, TL626, TL629, C79, C442, C440	Purple martin	Construction activities would temporarily and/or permanently impact purple martin.	Class II under CEQA and adverse under NEPA
TL682, TL626, TL625, TL629, C79, C78, C442, C449	Long-spined spineflower	Construction activities would temporarily and/or permanently impact long-spined spineflower.	Class II under CEQA and adverse under NEPA
TL682, TL626, TL629, TL6923, C442, C440	Southwestern willow flycatcher*	Construction activities would temporarily and/or permanently impact southwestern willow flycatcher.	Class II under CEQA and adverse under NEPA
TL682, TL625, TL629, C157, C442, C449	Yellow warbler	Construction activities would temporarily and/or permanently impact yellow warbler.	Class II under CEQA and adverse under NEPA
TL626, TL625, TL629, C79, C78, C442	Ramona horkelia	Construction activities would temporarily and/or permanently impact Ramona horkelia.	Class II under CEQA and adverse under NEPA
TL626, TL629, TL6923, C79, C442, C440	Southern jewelflower	Construction activities would temporarily and/or permanently impact southern jewelflower.	Class II under CEQA and adverse under NEPA
C157, C442, C440, C449, TL682	Bald eagle*	Construction activities would temporarily and/or permanently impact bald eagle.	Class II under CEQA and adverse under NEPA

Table D.4-11~~2~~
Power Line Replacement Projects – BIO-6 Impacts

Project Components (listed from North–South)	Sensitive Biological Resource	Description of Impact	Significance Determination
TL682, TL626, TL625, TL629, C157	Stephens' kangaroo rat	Construction activities would temporarily and/or permanently impact Stephens' kangaroo rat.	Class II under CEQA and adverse under NEPA
TL682, TL625, TL6923, C157, C449	Western spadefoot	Construction activities would temporarily and/or permanently impact western spadefoot.	Class II under CEQA and adverse under NEPA
TL682, TL626, TL625, TL629, C79, C442, C440	California spotted owl	Construction activities would temporarily and/or permanently impact California spotted owl.	Class II under CEQA and adverse under NEPA
TL682, TL625, C440, C449	Western grebe, redhead, osprey, double-crested cormorant	Construction activities would temporarily and/or permanently impact these special-status species.	Class II under CEQA and adverse under NEPA
TL625, TL629, TL6923, C157, C442, C449	Jacumba milk-vetch	Construction activities would temporarily and/or permanently impact Jacumba milk-vetch.	Class II under CEQA and adverse under NEPA
TL682, TL626, TL629, TL6923, C157, C442, C440	San Diego milk-vetch	Construction activities would temporarily and/or permanently impact San Diego milk-vetch.	Class II under CEQA and adverse under NEPA
TL626, TL625, TL629, TL6923, C440, C449	Tecate tarplant	Construction activities would temporarily and/or permanently impact tecate tarplant.	Class II under CEQA and adverse under NEPA
TL682, TL626, TL625, TL629, TL6923, C440	Golden eagle* (nesting and wintering)	Construction activities would temporarily and/or permanently impact golden eagle.	Class II under CEQA and adverse under NEPA
TL626, TL625, TL629, TL6923, C157	Quino checkerspot butterfly	Construction activities would temporarily and/or permanently impact Quino checkerspot butterfly	Class II under CEQA and adverse under NEPA
TL629, TL6923, C440, C449	California leaf-nosed bat	Construction activities would temporarily and/or permanently impact California leaf-nosed bat	Class II under CEQA and adverse under NEPA
TL625, TL6923, C157, C449	Dean's milk-vetch	Construction activities would temporarily and/or permanently impact Dean's milk-vetch	Class II under CEQA and adverse under NEPA

Table D.4-112
Power Line Replacement Projects – BIO-6 Impacts

Project Components (listed from North–South)	Sensitive Biological Resource	Description of Impact	Significance Determination
TL682, TL626, TL6923, C79	San Diego County alumnroot	Construction activities would temporarily and/or permanently impact San Diego County alumnroot	Class II under CEQA and adverse under NEPA
TL625, TL6923, C78, C157	San Diego banded gecko	Construction activities would temporarily and/or permanently impact San Diego banded gecko	Class II under CEQA and adverse under NEPA
TL626, TL625, TL629, C442, C440, C449	Gray vireo	Construction activities would temporarily and/or permanently impact gray vireo	Class II under CEQA and adverse under NEPA
TL626, TL629, C449	White-tailed kite	Construction activities would temporarily and/or permanently impact white-tailed kite	Class II under CEQA and adverse under NEPA
TL682, TL626, TL625	American badger*	Construction activities would temporarily and/or permanently impact American badger	Class II under CEQA and adverse under NEPA
TL629, C79, C440	Cuyamaca cypress	Construction activities would temporarily and/or permanently impact Cuyamaca cypress	Class II under CEQA and adverse under NEPA
TL625, TL629, C79	Lakeside ceanothus*	Construction activities would temporarily and/or permanently impact Lakeside ceanothus	Class II under CEQA and adverse under NEPA
TL625, TL6923, C442	Moreno currant	Construction activities would temporarily and/or permanently impact Moreno currant	Class II under CEQA and adverse under NEPA
TL682, C442, C440	Orcutt's linanthus	Construction activities would temporarily and/or permanently impact Orcutt's linanthus	Class II under CEQA and adverse under NEPA
TL626, C442, C440	San Bernardino aster	Construction activities would temporarily and/or permanently impact San Bernardino aster	Class II under CEQA and adverse under NEPA
TL626, TL6923, C440	San Jacinto Mountains bedstraw	Construction activities would temporarily and/or permanently impact San Jacinto Mountains bedstraw.	Class II under CEQA and adverse under NEPA

Table D.4-112
Power Line Replacement Projects – BIO-6 Impacts

Project Components (listed from North–South)	Sensitive Biological Resource	Description of Impact	Significance Determination
TL626, TL629, C442, C440	Vanishing wild buckwheat	Construction activities would temporarily and/or permanently impact vanishing wild buckwheat	Class II under CEQA and adverse under NEPA
TL625, TL629, C79	Southern skullcap	Construction activities would temporarily and/or permanently impact southern skullcap	Class II under CEQA and adverse under NEPA
TL625, TL6923, C449	Coast patch-nosed snake*	Construction activities would temporarily and/or permanently impact coast patch-nosed snake	Class II under CEQA and adverse under NEPA
TL629, C440	California red-legged frog*	Construction activities would temporarily and/or permanently impact California red-legged frog	Class II under CEQA and adverse under NEPA
TL626, TL625	San Diego goldenstar*, coastal California gnatcatcher*	Construction activities would temporarily and/or permanently impact these special-status species	Class II under CEQA and adverse under NEPA
TL625, TL6923	Robinson's pepper-grass	Construction activities would temporarily and/or permanently impact Robinson's pepper-grass	Class II under CEQA and adverse under NEPA
TL79, C440	Laguna Mountains alumroot, Parish's chaenactis	Construction activities would temporarily and/or permanently impact these special-status species	Class II under CEQA and adverse under NEPA
TL625, C78	Chaparral nolina, San Diego thornmint*	Construction activities would temporarily and/or permanently impact these special-status species	Class II under CEQA and adverse under NEPA
TL626, C442	American peregrine falcon	Construction activities would temporarily and/or permanently impact American peregrine falcon	Class II under CEQA and adverse under NEPA
TL625, C440	Mormon metalmark	Construction activities would temporarily and/or permanently impact Mormon metalmark	Class II under CEQA and adverse under NEPA
TL626, C440	Cuyamaca larkspur	Construction activities would temporarily and/or permanently impact Cuyamaca larkspur	Class II under CEQA and adverse under NEPA

Table D.4-112
Power Line Replacement Projects – BIO-6 Impacts

Project Components (listed from North–South)	Sensitive Biological Resource	Description of Impact	Significance Determination
TL629, C440	Desert beauty	Construction activities would temporarily and/or permanently impact desert beauty	Class II under CEQA and adverse under NEPA
TL625, C157, C442	Gander's butterweed*	Construction activities would temporarily and/or permanently impact Gander's butterweed	Class II under CEQA and adverse under NEPA
TL626, C78	Short-sepaled lewisia	Construction activities would temporarily and/or permanently impact short-sepaled lewisia	Class II under CEQA and adverse under NEPA
TL626, C440	Tecate cypress*	Construction activities would temporarily and/or permanently impact Tecate cypress	Class II under CEQA and adverse under NEPA
TL625, TL6923	Coronado skink*	Construction activities would temporarily and/or permanently impact Coronado skink	Class II under CEQA and adverse under NEPA
TL626, C79	Prairie wedge grass	Construction activities would temporarily and/or permanently impact prairie wedge grass	Class II under CEQA and adverse under NEPA
TL682, C440	Hall's monardella	Construction activities would temporarily and/or permanently impact Hall's monardella	Class II under CEQA and adverse under NEPA
TL682, TL626, C440	San Felipe monardella	Construction activities would temporarily and/or permanently impact San Felipe monardella	Class II under CEQA and adverse under NEPA
TL625, TL629, C79, C79, C442, C157	Dunn's mariposa lily*	Construction activities would temporarily and/or permanently impact Dunn's mariposa lily.	Class II under CEQA and adverse under NEPA
TL625, TL629, C79, C78, C442	Felt-leaved monardella*	Construction activities would temporarily and/or permanently impact felt-leaved monardella.	Class II under CEQA and adverse under NEPA
TL626, TL629, C440	Velvety false-lupine	Construction activities would temporarily and/or permanently impact velvety false-lupine.	Class II under CEQA and adverse under NEPA

Table D.4-112
Power Line Replacement Projects – BIO-6 Impacts

Project Components (listed from North–South)	Sensitive Biological Resource	Description of Impact	Significance Determination
TL682	California Orcutt grass*, chaparral sand-verbena, mud nama, Parry's spineflower, Warner Springs lessingia, South Coast garter snake, Arroyo chub	Construction activities would temporarily and/or permanently impact these special-status species.	Class II under CEQA and adverse under NEPA
TL625	Cove's cassia, variegated dudleya*	Construction activities would temporarily and/or permanently impact these special-status species.	Class II under CEQA and adverse under NEPA
TL626	Coast range newt	Construction activities would temporarily and/or permanently impact Coast range newt.	Class II under CEQA and adverse under NEPA
TL629	Otay manzanita*	Construction activities would temporarily and/or permanently impact Otay manzanita.	Class II under CEQA and adverse under NEPA
TL6923	Cedros Island oak, Mexican flannelbush, tricolored blackbird*, northwestern San Diego pocket mouse*	Construction activities would temporarily and/or permanently impact these special-status species.	Class II under CEQA and adverse under NEPA
C79	Baja navarretia, Johnston's rock cress, lemon lily, salt spring checkerbloom, Santa Lucia dwarf rush	Construction activities would temporarily and/or permanently impact these special-status species.	Class II under CEQA and adverse under NEPA
C78	Hammitt's claycress	Construction activities would temporarily and/or permanently impact Hammitt's claycress .	Class II under CEQA and adverse under NEPA
C157	Burrowing owl*	Construction activities would temporarily and/or permanently impact burrowing owl.	Class II under CEQA and adverse under NEPA
C440	Laguna Mountains goldenbush, Mount Laguna aster, Mountain Springs bush lupine, Parish's slender meadowfoam, rigid fringepod, pallid San Diego pocket mouse, Laguna Mountains skipper	Construction activities would temporarily and/or permanently impact these special-status species.	Class II under CEQA and adverse under NEPA

Sources: Chambers Group Inc. 2012a, 2012b; CDFW 2013a, 2014; CNPS 2013; Forest Service 2012, 2013f; SDG&E 2012, 2013b; USFWS 2014.

Special-Status Plants

As described in Section D.4.1.4, a total of 59 "High Ranked Special-Status Plant Species" were observed or have a moderate to high potential to occur within SDG&E's proposed project area.

SDG&E's proposed project could result in impacts to these species listed as one or more of the following: CRPR 1 or 2, County List A or B, federally listed, or state listed. An asterisk (*) indicates an SDG&E NCCP covered species:

Baja navarretia, California Orcutt grass*, Cedros Island oak, chaparral sand-verbena, chaparral nolina, Cove's cassia, Cuyamaca cypress, Cuyamaca larkspur, Dean's milk-vetch, delicate clarkia, desert beauty, Dunn's mariposa lily*, felt-leaved monardella*, Gander's butterweed*, Hall's monardella, Hammitt's claycress, Jacumba milk-vetch, Johnston's rock cress, Laguna Mountains alumroot, Laguna Mountains goldenbush, Lakeside ceanothus*, lemon lily, long-spined spineflower, Mexican flannelbush, Moreno currant, Mount Laguna aster, Mountain Springs bush lupine, mud nama, Orcutt's brodiaea*, Orcutt's linanthus, Otay manzanita*, Parish's chaenactis, Parish's slender meadowfoam, Parry's spineflower, prairie wedge grass, Ramona horkelia, Rigid fringepod, Robinson's pepper-grass, salt spring checkerbloom, San Bernardino aster, San Diego County alumroot, San Diego goldenstar*, San Diego gumplant, San Diego milk-vetch, San Diego sunflower, San Diego thornmint*, San Felipe monardella, San Jacinto Mountains bedstraw, Santa Lucia dwarf rush, short-sepaled lewisia, southern jewelflower, southern skullcap, sticky geraea, tecate cypress*, tecate tarplant, vanishing wild buckwheat, variegated dudleya*, velvety false-lupine, and Warner Springs lessingia.

During rare plant surveys, access to the ROWs of TLs and circuits was limited due to dense vegetation, land management issues, locked gates, private property, sensitive utility customers, unimproved access roads, and routine Forest Service maintenance work. Portions of the TLs and circuits were not surveyed for the presence or absence of sensitive plant species due to this limitation (Chambers Group Inc. 2012b~~,~~; Table 2). Survey limits occurred on TL 682, TL 637, TL 626, TL 629, TL 625, TL 6923, C 78 (Viejas Grade Area), C79 (Cuyamaca Area), C157 (Barrett Lake Area), C440 (Laguna Mountains Area), C442 (Corte Madera Area), and C449 (Morena Reservoir Area). Please refer to Table 2 (Chambers Group Inc. 2012b) for additional survey limitation details.

Since some areas have not been surveyed for special-status plants[24], it is assumed that there is some potential for these species to occur and they may be impacted during construction if appropriate protective measures are not implemented. Mitigation Measure MM BIO-13 requires preconstruction surveys to be conducted for species that have a CRPR 1B or 2B status. Of the 48 special-status species described, all were previously identified in the Biological Technical Report (Chambers Group Inc. 2012a, see Section D.4.1, Methodology and Assumptions). Although

[24] Although surveys were conducted by the Forest Service (see references), this is in reference to Chambers Group rare plant surveys (see Chambers Group Inc. 2012a) and newly added work areas (SDG&E 2015).

additional plant species not previously examined by Chambers Group were examined, none were of "High Rank" that would be included in these mitigation measures or on their target list.

Temporary/Permanent Impacts

All construction components of SDG&E's proposed project have the potential to cause temporary and permanent impacts to special-status plant species. These construction components include vegetation removal/clearing or grading associated with direct-bury steel pole work areas, self-supported steel pole work areas, staging areas, stringing sites, fly yards, guard structures, wood pole removal areas, guard structures, or trench work areas for underground duct banks, permanent underground concrete splice vaults, rock splitting/blasting, drill locations for new poles, and/or installation of other facilities.

Absent mitigation, temporary and permanent impacts to special-status plant species are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-01, APM BIO-02, APM BIO-03, APM BIO-05, APM BIO-10, MM BIO-1 through MM BIO-7, MM BIO-10 through MM BIO-12, MM-BIO-4a, and MM-BIO-13 through MM BIO-15, temporary and permanent impacts at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

As incorporated into APM BIO-03, SDG&E would implement operational protocols 11 (personnel training) and 13 (pre-activity studies), which would inform workers of sensitive biological resources occurring within the biological survey area and would require preconstruction surveys to identify on-site resources. SDG&E would also implement protocol 39 to control for dust by requiring regular watering and limiting vehicle speeds. Per the SDG&E Subregional NCCP, verification surveys are required if surface disturbance has not commenced within 30 days of the submittal of the Preactivity Study Report (PSR) to the USFWS and the CDFW.

Operation and Maintenance

Operation and maintenance of the proposed power line replacement projects along with other SDG&E facilities proposed to be covered under the MSUP would require routine and periodic pole inspections and equipment testing, pole brushing, herbicide application, noise monitoring (see Section D.11 Noise), erosion control (see Section D.9 Hydrology and Water Quality), road maintenance, washing, and other related ongoing maintenance tasks, including pole replacements, similar to those currently conducted by SDG&E and would be done in accordance with the O&M plan for activities on National Forest System lands. The ongoing application of herbicides has the potential to impact special-status plant species if not applied

appropriately. These impacts may include the excessive use of herbicides or directly applying herbicides to special-status plant species. In addition, the use and maintenance of access roads may impact several plant species (as described in Forest Service 2009b and also listed in Appendix BIO-6 or below).

Appendix BIO-6 describes special-status plant and wildlife species that have been documented along the lines not part of the power line replacement projects to be included in the MSUP as occurring, having modeled habitat, suitable habitat, or proposed critical habitat (Forest Service 2006b, 2009b, 2012, 2013f; CDFW 2014; USFWS 2014). Unless provided, plant status is located in Appendix BIO-2. In addition to species listed below for the power line replacement projects, Tables D.4-14~~5~~a through D.4-14~~5~~c provide occurrence data for species detected along all lines to be covered under the MSUP (Forest Service 2006b). These tables include the same species as described for the power line replacement projects except for Vail Lake ceanothus, slender horned spineflower, San Diego button-celery, San Bernardino bluegrass, and Parry's tetracoccus, which also may occur. All species and their status and habitat associations can be found in Appendix BIO-2. Additional plant species[25] that occur or have a potential to occur along lines not part of the power line replacement projects to be covered under the MSUP (where no improvements are planned) and may be impacted by O&M activities include (Forest Service 2007a): Chaparral sand-verbena (Warner Springs area), Parry's spineflower (Warner Springs Area), Plummer's mariposa lily (*Calochortus plummerae;* San Juan Creek area), vanishing buckwheat (Pine Valley), Mesa horkelia (*Horkelia cuneata* ssp. *puberula*; San Juan Creek area), southern jewelflower (Mount Laguna), and San Bernardino aster (Mount Laguna).

Absent mitigation, impacts to special-status plant species due to operations and maintenance are considered potentially adverse under NEPA. However, with implementation of APM BIO-01, APM BIO-02, APM BIO-03, APM BIO-05, APM BIO-10, MM BIO-1 through MM BIO-7, MM BIO-10 through MM BIO-12, MM BIO-4a, MM BIO-13 through MM BIO-15, ~~MM BIO-8(b),~~ and MM HYD-5, impacts to special-status plants at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

MM BIO-13 **Conduct preconstruction surveys for special status plants in areas not accessible during previous rare plant surveys**. Prior to construction, San Diego Gas & Electric (SDG&E) shall retain a qualified biologist[26] approved

[25] Some species described in Appendix BIO-6 are also described here to depict additional potential habitat locations.
[26] Qualified biologist is defined as a biologist whose resume is reviewed and approved by the Forest Service and CPUC for the authorization to conduct specified activities.

by the California Public Utilities Commission (CPUC) and Forest Service to conduct a focused rare plant survey on site during the time period when the previously described special-status plant species are detectable.

Table D.4-12~~3~~ describes the 40~~36~~ blooming plant species that shall be surveyed, months they shall be surveyed (i.e., blooming periods), and the TL/circuits on which they occur. Cuyamaca cypress and tecate cypress* (not included in this table) can be surveyed anytime of the year. Surveys shall be conducted in areas not included during rare plant surveys (see Chambers Group Inc. 2012b, Table 2).

Of the ~~37~~ 40 species described, there is some potential for 8 of these species to occur in vernal pools, including California Orcutt grass*, Cuyamaca larkspur, long-spined spineflower, Orcutt's brodiaea*, San Diego goldenstar*, San Diego thornmint*, Santa Lucia dwarf rush, and variegated dudleya*. These 8 species are also included in Table D.4-12~~3~~. These species will also be protected through implementation of, the SDG&E Natural Community Conservation Plan (NCCP), and through avoidance of impacts to wetlands (MM BIO-10 through MM BIO-12).

Locations of special-status plants shall be identified and inventoried. The qualified biologist shall supervise construction activities within the vicinity of areas identified as having special-status plant species. Impacts to special-status plant species shall be avoided to the maximum extent possible by installing fencing or flagging, marking areas to be avoided in construction areas, and limiting work in areas identified as having special-status plant species to periods of time when the plants have set seed and are no longer growing.

Where impacts to special-status plant species are unavoidable, the impact shall be quantified and compensated through off-site land preservation and/or plant salvage and relocation as determined by the qualified biologist and approved by the CPUC. Alternatively, if the special-status plant species in question is a Covered Species within the SDG&E NCCP, mitigation consistent with measures established in the NCCP shall be provided.

The results of the focused plant surveys and measures outlined above that will be implemented by SDG&E in the event special-status plant species are identified within the biological survey area shall be provided to CPUC and Forest Service. CPUC and Forest Service will review and approve the rare plant survey report and recommended avoidance or mitigation approaches prior to issuance of a notice to proceed.

Table D.4-12~~3~~
Special-Status Plant Survey Periods and Locations

Month (Blooming Periods)	Plants to Include in Survey	Locations[1]
January	Chaparral sand-verbena, Robinson's pepper-grass	TL682, TL6923
February	Chaparral sand-verbena, Dean's milk-vetch, Johnston's rock cress, Moreno currant, Robinson's pepper-grass, short-sepaled lewisia	TL682, TL626, TL625, TL6923, C79, C78, C449
March	Chaparral sand-verbena, Dean's milk-vetch, Johnston's rock cress, Moreno currant, Robinson's pepper-grass, salt spring checkerbloom, short-sepaled lewisia,	TL682, TL626, TL625, TL6923, C79, C78, C449
April	California Orcutt grass, chaparral sand-verbena, Cedros Island oak, Dean's milk-vetch, delicate clarkia, Dunn's mariposa lily, Gander's butterweed, Jacumba milk-vetch, Johnston's rock cress, Laguna Mountains alumroot, long-spined spineflower, Moreno currant, Parry's spineflower, Robinson's pepper-grass, salt spring checkerbloom, San Diego goldenstar, San Diego sunflower, San Diego thornmint, Santa Lucia dwarf rush, short-sepaled lewisia, variegated dudleya	TL682, TL626, TL625, TL6923, C79, C78, C442, C440, C449
May	California Orcutt grass, chaparral sand-verbena, Cedros Island oak, Chaparral nolina, Cuyamaca larkspur, delicate clarkia, desert beauty, Dunn's mariposa lily, Gander's butterweed, Jacumba milk-vetch, Johnston's rock cress, Laguna Mountains alumroot, long-spined spineflower, Moreno currant, Orcutt's brodiaea, Orcutt's linanthus, Parish's chaenactis, Parry's spineflower, Ramona horkelia, Robinson's pepper-grass, salt spring checkerbloom, San Diego County alumroot, San Diego goldenstar, San Diego milk-vetch, San Diego sunflower, San Diego thornmint, Santa Lucia dwarf rush, short-sepaled lewisia, variegated dudleya	TL682, TL626, TL625, TL629, TL6923, C79, C78, C442, C440, C449
June	Cedros Island oak, chaparral sand-verbena, Chaparral nolina, Cuyamaca larkspur, delicate clarkia, Dunn's mariposa lily, felt-leaved monardella, Gander's butterweed, Hall's monardella, Jacumba milk-vetch, Laguna Mountains alumroot, long-spined spineflower, Moreno currant, Orcutt's brodiaea, Orcutt's linanthus, Parish's chaenactis, Parry's spineflower, Ramona horkelia, Robinson's pepper-grass, salt spring checkerbloom, San Diego County alumroot, San Diego goldenstar, San Diego milk-vetch, San Diego thornmint, San Felipe monardella, San Jacinto Mountains bedstraw, Santa Lucia dwarf rush, short-sepaled lewisia, variegated dudleya	TL682, TL626, TL625, TL629, TL6923, C79, C78, C442, C440, C449
July	Chaparral sand-verbena, chaparral nolina, Cuyamaca larkspur, delicate clarkia, felt-leaved monardella, Gander's butterweed, Hall's monardella, Jacumba milk-vetch, Orcutt's brodiaea, Parish's chaenactis, salt-spring checkerbloom, San Diego goldenstar, San Diego gumplant, San Diego milk-vetch, San Felipe monardella, San Jacinto Mountains bedstraw, short-sepaled lewisia, vanishing wild buckwheat	TL682, TL626, TL625, TL629, TL6923, C79, C78, C442, C449
August	Chaparral sand-verbena, felt-leaved monardella, Hall's monardella, Jacumba milk-vetch, San Diego gumplant, San Diego milk-vetch, San Jacinto Mountains bedstraw, tecate tarplant, vanishing wild buckwheat, Warner Springs lessinga	TL682, TL626, TL625, TL629, TL6923, C79, C442, C440, C449

Table D.4-12~~3~~
Special-Status Plant Survey Periods and Locations

Month (Blooming Periods)	Plants to Include in Survey	Locations[1]
September	Chaparral sand-verbena, Hall's monardella, San Diego gumplant, tecate tarplant, vanishing wild buckwheat, Warner Springs lessinga	TL682, TL629, TL6923, C79, C440, C449
October	Hall's monardella, Laguna Mountains goldenbush, San Bernardino aster, San Diego gumplant, tecate tarplant, vanishing wild buckwheat, Warner Springs lessinga	TL682, TL626, TL625, TL629, TL6923, C79, C442, C440
November	None	None
December	None	None

Sources: Chambers Group Inc. 2012a, 2012b; CDFW 2013a, 2014; CNPS 2013; Forest Serivce 2013f; SDG&E 2012; USFWS 2014.

Note:

[1] Locations include those designated as moderate or high potential for one or more plant species listed in a given month (Chambers Group Inc. 2012a; Forest Service data files [as described in species accounts]; CDFW 2014; USFWS 2014). Specific locations to survey within each line are identified in the Rare Plant Survey Report (Chambers Group Inc. 2012b, see Table 2).

MM BIO-14 **Install fencing or flagging around identified special-status plant species populations in the construction areas.** Prior to the start of construction, a qualified biologist shall conduct focused surveys during the appropriate blooming period for special-status plant species for all construction areas. All of the special-status plant locations shall be recorded using a Global Positioning System (GPS), which will be used to site the avoidance fencing/flagging. Special-status plant species shall be avoided to the maximum extent possible by all construction activities. The boundaries of all special-status plant species to be avoided shall be delineated in the field with clearly visible fencing or flagging. The fencing/flagging shall be maintained for the duration of project construction activities.

Cutting down or damaging coniferous trees that occur along C79 within California Department of Parks and Recreation lands is prohibited. Equipment within staging areas will be situated to avoid damage to coniferous tress. If avoidance to coniferous trees along C79 within California Department of Parks and Recreation lands is not feasible, the applicant will work closely with the California Department of Parks and Recreation to determine alternative staging location(s). In addition, all areas along C79 associated with the Cuyamaca Rancho State Park Reforestation Project will be avoided, including disturbance to these areas and the temporary establishment of staging and stringing sites. This reforestation project is registered with the Climate Action Reserve (www.climateactionreserve.org), where more details can be found.

MM BIO-15 **Implement special-status plant species compensation.** Impacts to special-status plant species shall be maximally avoided. Where impacts to special-status plant species are unavoidable, the impact shall be quantified and compensated through off-site land preservation and/or plant salvage and relocation. Where off-site land preservation is biologically preferred, the land shall contain comparable special-status plant resources as the impacted lands and shall include long-term management and legal protection assurances to the satisfaction of the Forest Service. Land preservation must be completed within ~~18~~ 36 months of ~~permit issuance~~initiation of construction. Where salvage and relocation is demonstrated to be feasible and biologically preferred, it shall be conducted pursuant to an agency-approved plan that details the methods for salvage, stockpiling, and replanting, as well as the characteristics of the receiver sites. Any salvage and relocation plans shall be approved by the permitting agencies prior to project construction. Any salvage and relocation of species considered desert native plants shall be conducted in

compliance with the California Desert Native Plant Act. Success criteria and monitoring shall also be included in the plan. If salvage and relocation is not possible to the satisfaction of the Forest Service, off-site land preservation shall be required. Forest Service requirements will only apply to National Forest System lands.

Invertebrates

As discussed in Section D.4.1.4, Appendix BIO-3, and Appendix BIO-4, three special-status invertebrates species were observed or have a moderate to high potential to occur in SDG&E's proposed project area. These species include Hermes copper butterfly, Laguna Mountains skipper, and Quino checkerspot butterfly. Quino checkerspot butterfly is covered under SDG&E's Low-Effect Habitat Conservation Plan for Quino (SDG&E 2007). No other invertebrates listed here are covered under the SDG&E NCCP. Special-status invertebrate species with no or low potential to occur are not discussed below. The proposed project could result in direct loss or impacts through loss of host plants to these species.

Temporary/Permanent Impacts

All construction components of SDG&E's proposed project have the potential to have a temporary or permanent impact on invertebrates, including direct mortality. These construction components include vegetation removal/clearing or grading associated with direct-bury steel pole work areas, self-supported steel pole work areas, staging areas, stringing sites, fly yards, guard structures, wood pole removal areas, guard structures, or trench work areas for underground duct banks, permanent underground concrete splice vaults, rock splitting/blasting, drill locations for new poles, and/or installation of other facilities.

Laguna Mountains skipper

Direct loss of occupied Laguna Mountains skipper (LMS) habitat would be considered an adverse impact. Acreage determined to be occupied habitat includes areas of known LMS populations and sightings and a buffer as determined through consultation with the USFWS, which typically encompasses all host plants as well as topographic features (ridgelines and hilltops) in the vicinity.

Direct loss will include the temporary loss of approximately 2.~~07~~ 09 acres of final USFWS critical habitat for direct bury (1.01 acres), removal (0.04 acre), staging area (0.23 acre), stringing sites (0.79 acre), and hand hole (0.01). All temporary losses of final USFWS critical habitat will occur within C440. This may include the temporary loss of vegetation (larval host plants and adult nectaring plants) that supports the species. Direct loss will also include the permanent loss of approximately 0.01 acre of final USFWS critical habitat for direct bury

impacts. All permanent losses of final USFWS critical habitat will occur within C440. This may include the permanent loss of vegetation (larval host plants and adult nectaring plants) that supports the species.

Measures to be implemented on Forest Service lands for both the Laguna Mountains skipper and Quino checkerspot butterfly were developed in coordination with USFWS (SDG&E 2007), Forest Service, and SDG&E to avoid and minimize impacts to both these species (Forest Service 2006c, 2007b). With implementation of these measures, the USFWS concurs with the determination that issuance of permits for SDG&E facilities may affect, but is not likely to adversely affect Laguna Mountains skipper and Quino checkerspot butterfly, or their critical habitat (USFWS 2006). USFWS further stated that if the measures are implemented within designated critical habitat for the Laguna Mountains skipper, the USFWS concurs that issuance of permits for the SDG&E facilities and maintenance would not likely adversely modify designated critical habitat for this species.

Quino checkerspot butterfly

Suitable habitat is located throughout sections of SDG&E's proposed project ROW. Direct loss of occupied Quino checkerspot butterfly would be considered an adverse impact. Acreage determined to be occupied habitat includes areas of known Quino checkerspot butterfly populations and sightings and a buffer as determined through consultation with the USFWS, which typically encompasses all host plants as well as topographic features (ridgelines and hilltops) in the vicinity.

Direct loss will include the temporary loss of approximately 2.44~~5.81~~ acres of habitat for the construction of direct bury, micropiles, staging areas, and string sites. This may include the temporary loss of vegetation (larval host plants and adult nectaring plants) that supports the species; and the permanent loss of approximately 0.01 acre of habitat for the construction of direct bury and micropiles. This may include the permanent loss of vegetation (larval host plants and adult nectaring plants) that supports the species. A total of ~~5.82~~2.44 acres of this habitat is designated as critical.

Measures to be implemented on Forest Service lands for both the Laguna Mountains skipper and Quino checkerspot butterfly were developed in coordination with USFWS (SDG&E 2007), Forest Service, and SDG&E to avoid and minimize impacts to both these species (Forest Service 2006c, 2007b). With implementation of these measures, the USFWS concurs with the determination that issuance of permits for SDG&E facilities may affect, but is not likely to adversely affect Laguna Mountains skipper and Quino checkerspot butterfly, or their critical habitat (USFWS 2006).

Hermes copper butterfly

Direct loss of occupied Hermes copper butterfly habitat or its host plant would be considered an adverse impact. Acreage determined to be occupied habitat includes areas of known Hermes Copper butterfly populations and sightings and a buffer as determined through consultation with the USFWS, which typically encompasses all host plants as well as topographic features (ridgelines and hilltops) in the vicinity. Impacts to occupied habitat requires mitigation by preservation of occupied habitat at a ratio of 2:1 or 3:1 (as described in MM BIO-18), which depends on the quality of the habitat at the impact site and the mitigation site along with the importance of the habitat. Impacts to potential habitat requires mitigation at a ratio of 1:1 or higher, which depends on the quality of the impacted habitat, if the habitat was formerly occupied, or has continuity with occupied habitat (County of San Diego 2010).

Absent mitigation, direct or indirect loss of these species from construction-related dust or vehicle collisions are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-01, APM BIO-02, APM BIO-03, APM BIO-04, APM BIO-05, APM BIO-06, APM BIO-10, MM BIO-1 through MM BIO-7, MM BIO-4a, MM BIO-16 through MM BIO-20, temporary and permanent impacts at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

MM BIO-16 **Install fencing or flagging around identified special-status butterfly host species populations in the construction areas and road maintenance.** Prior to the start of construction, a qualified biologist shall conduct focused surveys during the appropriate blooming period for larvae or adult (nectar sources or egg laying sources) plant for the following species: Hermes copper butterfly, Laguna Mountains skipper, or Quino checkerspot butterfly. These host plants include Cleveland's horkelia, western plantain, bird's beak, owl's clover, California buckwheat, and spiny redberry. Similar protective measures for special-status plants (identified in MM BIO-13 and MM BIO-14) shall be implemented. Occupied or suitable habitat for these species shall be avoided to the greatest extent feasible. In addition to the implementation of SDG&E NCCP Operational Protocols, site visits will be conducted prior to construction and road maintenance. Prior to site visits, a digital database of known host plant populations will be reviewed. Site visits will verify the known locations of host plant populations in the area and, if present, avoid those locations.

MM BIO-17 **Conduct protocol surveys for Quino checkerspot, Hermes ~~Copper~~copper, and Laguna Mountains skipper butterflies within 1 year prior to project construction activities in occupied habitat.** The project proponent shall

conduct preconstruction protocol surveys for Quino checkerspot butterfly ~~(QCB)~~, Laguna Mountains skipper, and Hermes copper butterfly within 1 year prior to construction activities (or unless coordination with the U.S. Fish and Wildlife Service determines that SDG&E's Low-Effect Habitat Conservation Plan (HCP) for Quino (SDG&E 2007) adequately protects the species, historical surveys are adequate, or as superseded by consultation with the USFWS and Forest Service) in any project construction area known to support the species ~~within National Forest System lands~~.

Surveys shall be conducted by a qualified~~, permitted~~ biologist[27] in accordance with the most currently accepted protocol survey methods for Quino checkerspot and Laguna Mountains skipper. This includes current habitat assessment and reporting requirements. Results shall be reported to USFWS and the CDFW South Coast Regional Office within 45 days of the completion of the survey. Surveys for Hermes copper butterfly shall follow County of San Diego Guidelines.[28] A qualified biologist shall survey all potential habitat for Hermes copper which includes any woody (mature) spiny redberry shrub with California buckwheat within 15 feet. California buckwheat without spiny redberry nearby is not considered suitable habitat. If California buckwheat is within 15 feet of a mature spiny redberry shrub, ~~A~~additional vegetation within 15 feet should also be considered potential habitat for Hermes copper ~~if California buckwheat is within 15 feet of a mature spiny redberry shrub~~. All butterfly protocol survey data shall be provided to the CDFW South Coast Regional Office.

MM BIO-18 **Provide compensation for temporary and permanent impacts to Occupied or Critical Habitat for Quino checkerspot, Hermes copper, and Laguna Mountains skipper butterfly habitat through conservation and/or restoration.** Temporary and permanent impacts to Quino checkerspot butterfly and Laguna Mountain skipper shall be compensated through a combination of habitat compensation and habitat restoration at a minimum of a 2:1 mitigation ratio for occupied non-critical habitat and a minimum of a 3:1 mitigation ratio for critical habitat, or as required by the permitting agencies. Forest-related impacts will be mitigated at the ratios provided above on Forest Service lands and in coordination with the Forest Service. Habitat

[27] A qualified biologist is defined as a biologist (permitted or not) who has a demonstrated background in butterfly survey techniques and identification.

[28] County of San Diego (2010) Attachment C of the Report Format and Content Requirements – Biological Resources.

compensation shall be accomplished through U.S. Fish and Wildlife Service-approved land preservation or mitigation fee payment for the purpose of habitat compensation of lands supporting Quino checkerspot butterfly or Laguna Mountains skipper as appropriate. Mitigation for Hermes copper butterfly shall consist of 1:1 replacement of temporary impacts to occupied habitat, where host plants are impacted, and at a 2:1 ratio where permanent impacts occur. Land preservation or mitigation fee payment for habitat compensation must be completed within 18 months of permit issuance. Habitat restoration may be appropriate as habitat compensation provided that the restoration effort is demonstrated to be feasible and implemented pursuant to a Habitat Restoration Plan, which shall include success criteria and monitoring specifications and shall be approved by the permitting agencies prior to project construction. All habitat compensation and restoration used as mitigation for the proposed project on public lands shall be located in areas designated for resource protection and management. All habitat compensation and restoration used as mitigation for the proposed project on private lands shall include long-term management and legal protection assurances.

MM BIO-19 **Final design of power and distribution line and access roads through Quino checkerspot, ~~Hermes copper,~~ and Laguna Mountains skipper critical habitat and Hermes copper occupied habitat shall maximally avoid host plants for these species.** The final design of the proposed project through Quino checkerspot, Hermes copper, and Laguna Mountains skipper butterfly habitat shall maximally avoid and minimize habitat resources used by these species based on safety and other superseding regulatory requirements. The applicant shall explore alternate tower locations, reduced road widths, reduced vegetation maintenance, and other design modifications, to minimize impacts to host plants in critical habitat for these species, and it shall obtain agency approval of the final design through this area. If impacts are not avoided, compensatory mitigation, as described per MM BIO-18, will be required. This measure shall apply to all locations that have been designated as critical or occupied habitat for these species.

MM BIO-20 **Obtain and implement the terms of agency permit(s) with jurisdiction federal or state-listed species.** In addition to the obligation of the Forest Service consulting with the USFWS on the project, i~~I~~f federally listed wildlife species not already covered by SDG&E's NCCP (including any species that may be listed prior to issuance of the PTC and MSUP) may be impacted by the project, the Forest Service will initiate a Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS). If state-

listed wildlife species not already covered by SDG&E's NCCP may be impacted by the project, SDG&E will seek a Section 2081 permit (or consistency determination) from the California Department of Fish and Wildlife (CDFW). In addition, take authorization for golden eagles will require coordination with the USFWS and CDFW. SDG&E shall implement and/or adhere to all USFWS recommendations stipulated by the Forest Service in the Special Use Permit; SDG&E shall implement and/or adhere to all requirements in CDFW permit. SDG&E will not need a Section 2081 permit if the potentially impacted species or action is covered by SDG&E's NCCP. The Forest Service is required to consult with the USFWS for their federal action (approving the MSUP) as identified in Section A, Table A-3.

When conducting work within designated critical habitat for the Quino checkerspot butterfly, SDG&E shall implement all applicable ~~measures for~~protocols to avoid and minimize impacts to this species defined in the SDG&E ~~regional NCCP~~ Low-Effect Habitat Conservation Plan for Quino. Additionally, when working within designated critical habitat for Laguna Mountains skipper, SDG&E shall implement all impact minimization measures for Laguna Mountains skipper (USFS 2006c), consistent with USFWS direction (USFWS 2006, 2007), which includes:

1. Prior to project work, ~~Unless previously identified and mapped,~~ a qualified biologist shall identify ~~and map~~ all LMS habitat (to include host plant and nectar sources) within 10 meters of the proposed project(s) ROW. SDG&E facilities that are within designated critical~~known or potential LMS~~ habitat for Laguna Mountains skipper are shown on USFWS Critical Habitat maps (71 FR 74592–74615)~~identified in the Biological Assessment~~. During any maintenance activities, a qualified biologist will be present to monitor work and ensure that Laguna Mountains skipper habitat is not affected.

~~2. Once mapped, LMS habitat shall be delineated with obvious markings (fencing or flagging) and a 10 meter buffer shall be created around each area mapped as LMS habitat. Ideally, the fencing or flagging would be placed at the edge of the buffer area.~~

~~3.~~2. Chipping of vegetation shall not be allowed in known or potential Laguna Mountains skipper~~LMS~~ habitat. This includes ~~access roads and/or~~ the ROW within or adjacent to (within 10 meters) known or potential Laguna Mountains skipper ~~LMS~~ habitat. Potential habitat shall be identified by the

qualified biologist either during the host plant/nectar source survey or some time previous to the onset of ROW work.

3. Vehicles or tracked equipment shall only be allowed on existing roads or trails when operating within or adjacent to Laguna Mountains skipper ~~LMS~~ habitat. Prior to operation of vehicles on existing roads or trails, a qualified biologist will ensure that the road or trail itself does not contain host plants or nectar sources.

4. Any project that may adversely affect the Laguna Mountains skipper shall require consultation with the U.S. Fish and Wildlife Service.

If the NCCP is not used, then formal consultation with the USFWS and CDFW must occur to determine the need for take permits. ~~This condition assumes that some roads/trails enter LMS habitat, but the road itself has been surveyed and does not contain host plants or nectar sources.~~

MM BIO-21 **If construction occurs in occupied and/or suitable habitat for sensitive butterfly species, SDG&E will implement the following:**

Quino checkerspot: ~~,~~ SDG&E will comply with the avoidance and minimization measures outlined in the existing Low-Effect Habitat Conservation Plan for Quino checkerspot butterfly.

Hermes copper: Because this species is not state- or federally listed, the following will only be required for activities: While performing construction activities within the flight season, a qualified biological monitor will be on-site for all project activities to assure that both impacts to host plants and direct take of Hermes copper butterflies are avoided to the greatest extent feasible. The biological monitor may temporarily stop work in the event a Hermes copper butterfly is observed within the immediate construction area (i.e., the flagged work areas currently being used for construction activities).

~~, and~~ **Laguna Mountains skipper butterfly:** ~~c~~Construction ~~shall~~ will occur outside of the flight season OR at least 10 meters (33 feet) away from all host plant locations. If there is a known or newly discovered occurrence during the flight season, construction shall be prohibited within 1 kilometer (0.6 mile) of the occurrence or unless coordination with the U.S. Fish and Wildlife Service determines construction activities may commence. The Laguna Mountains skipper flight season occurs from April to July.

~~Flight seasons occur during the following dates for the following species: June 1 – October 15 for QCB; mid-May to early July (few days later at high elevations) for Hermes copper butterfly; and April – July for LMS.~~

Reptiles and Amphibians

The following wildlife species are listed as one or more of the following: County Group 1, federally listed, state listed, BLM sensitive species, or Forest Service sensitive species. An asterisk (*) indicates an SDG&E NCCP covered species. As described in Section D.4.1.4, Appendix BIO-3, and Appendix BIO-4, eight special-status reptiles and amphibians detected within SDG&E's proposed project area includes arroyo toad*, California red-legged frog*, California legless lizard, coast horned lizard*, coast patch-nosed snake*, San Diego mountain kingsnake, southwestern pond turtle*, and two-striped garter snake*. An additional 10 species have a moderate to high potential to occur within the project area including coastal rosy boa*, large-blotched salamander (*Ensatina klauberi*), San Diego banded gecko*, San Diego ring-necked snake* (*Diadophis punctatus similis*), south coast garter snake, western spadefoot toad*, Belding's orange-throated whiptail*, coast range newt, Coronado Island skink*, and northern red-diamond rattlesnake*. Special-status species with no or low potential to occur are not discussed below. SDG&E's proposed project could result in direct loss or impacts through loss of habitat for these species.

Temporary/Permanent Impacts

All construction components of SDG&E's proposed project have the potential to have a temporary or permanent impact on reptile and/or amphibians, including direct mortality. These construction components include vegetation removal/clearing or grading associated with direct-bury steel pole work areas, self-supported steel pole work areas, staging areas, stringing sites, fly yards, guard structures, wood pole removal areas, guard structures, or trench work areas for underground duct banks, permanent underground concrete splice vaults, rock splitting/blasting, drill locations for new poles, and/or installation of other facilities. Direct loss of these species, indirect loss of these species from vehicle collisions, ground vibration, and construction-related causes, or removal of suitable habitat may also occur.

Absent mitigation, temporary and permanent impacts to special-status reptile and amphibian species are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-01, APM BIO-02, APM BIO-03, APM- IO-05, APM BIO-10, MM BIO-1 through MM BIO-4, MM BIO-10 through MM BIO-12, MM BIO-13, and MM BIO-22 through MM BIO-26, temporary and permanent impacts at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

As shown above, the NCCP also covers the following special-status reptile and amphibian species: arroyo toad, California red-legged frog, coast horned lizard, southwestern pond turtle, coast patch-nosed snake, coastal rosy boa, San Diego banded gecko, San Diego ring-necked snake, two-striped garter snake, western spadefoot toad, Belding's orange-throated whiptail, Coronado Island skink, and northern red-diamond rattlesnake. Additionally, SDG&E will implement all relevant Operational Protocols from the SDG&E Subregional NCCP. The Operational Protocols are designed to avoid and minimize impacts to all sensitive resources. These protocols include, but are not limited to, restricting vehicles to existing roads when feasible, avoiding wildlife to the extent practicable, conducting preconstruction surveys, and handling of wildlife only by biologists or experts in handling wildlife. These protocols also include a biological monitor on site to avoid and minimize impacts to biological resources. Implementation of SDG&E's Operational Protocols and SDG&E Subregional NCCP guidelines would ensure potential impacts to special-status reptile and amphibian species remain less than significant.

MM BIO-22 **Biologists will monitor construction activities.** San Diego Gas & Electric (SDG&E) shall retain qualified biologists and other qualified resource specialists, as necessary, to monitor all project construction activities that could reasonably result in impacts to biological resources. All monitor qualifications shall be reviewed and approved by the California Public Utilities Commission (CPUC) prior to conducting monitoring activities along the right-of-way. Monitors shall be responsible for preconstruction surveys, work area delineations (i.e., staking, flagging, etc.) to comply with SDG&E's Natural Community Conservation Plan, on-site monitoring, and documentation of violations and compliance. Monitors shall also delineate pre-determined access routes using markers or signs and ensure the maintenance of markers or signs on a regular basis.

SDG&E shall submit a weekly report to CPUC that summarizes the biological monitoring activities that were completed during construction. The weekly report shall, at a minimum, include environmental training sign-in sheets, biological monitors assigned to project components, compliance issues/concerns, and general wildlife observations.

MM BIO-23 **Biologists will inspect open holes at the end of each workday.** At the end of each workday, any open holes (including large/steep excavations) shall be inspected by the on-site biologist and subsequently fully covered with steel plates, plywood, or other effective coverings to prevent entrapment of wildlife species. If fully covering the excavations is impractical, ramps will be used to provide a means of escape for wildlife that enter the excavations, or open holes will be securely fenced with exclusion fencing. If common wildlife

species are found in a hole, the designated biological monitor shall immediately be informed and the animal(s) shall be removed. If the animal(s) is/are a sensitive species that require(s) special handling authorization, a qualified biologist (agency-permitted or approved to handle a specific species) shall remove the animal before resumption of work in that immediate area. San Diego Gas & Electric shall specify the requirement to cover all open holes, create ramps, or install exclusion fencing around open holes in its agreements with all construction contractors.

MM BIO-24 **Enforce speed limits in and around all construction areas.** Vehicles shall not exceed 15 miles per hour on unpaved roads (as stated in SDG&E NCCP 7.1 Operational Protocols) and the right-of-way accessing the construction site or 10 miles per hour during the night.

MM BIO-25 **Minimize night construction lighting adjacent to native habitats.** Lighting of construction areas at night shall be the minimum necessary for personnel safety and shall be low illumination, selectively placed, shielded, and directed away from adjacent native habitats.

MM BIO-26 **Prohibit littering and remove trash from construction areas daily.** Littering shall not be allowed by the project personnel. All food-related trash and garbage shall be removed from the construction sites on a daily basis.

MM BIO-27 **Prohibit the harm, harassment, collection of, or feeding of wildlife.** Project personnel shall not harm, harass, collect, or feed wildlife. No pets shall be allowed in the construction areas.

In addition, per the SDG&E Subregional NCCP, verification surveys are required if surface disturbance has not commenced within 30 days of the submittal of the PSR to the USFWS and the CDFW. If any additional sensitive reptile species are found, compliance with the SDG&E Subregional NCCP would occur.

Birds

The following bird species are listed as one or more of the following: County Group 1, federally listed, state listed, BLM sensitive species, or FSS species. An asterisk (*) indicates SDG&E NCCP Covered Species. Twelve special-status birds observed within the project area included bald eagle*, California spotted owl, coastal California gnatcatcher*, Cooper's hawk*, golden

eagle*[29], least Bell's vireo*, prairie falcon, red-shouldered hawk, Southern California rufous-crowned sparrow*, southwestern willow flycatcher*, turkey vulture, and yellow warbler. Seventeen additional species have a moderate to high potential to occur within the project area including American peregrine falcon*, Bell's sparrow, burrowing owl*, California horned lark, double-crested cormorant, grasshopper sparrow*, gray vireo, loggerhead shrike, olive-sided flycatcher, osprey, purple martin, redhead, song sparrow, tricolored blackbird*, western grebe, white-tailed kite, and yellow-breasted chat.

As shown in Tables D.4-5 and D.4-6, construction of the project would impact ~~93.9~~67.32 acres (~~93.6~~66.91 acres temporary, 0.41 acre permanent) to sensitive vegetation communities that may support foraging and/or nesting habitat for 10 sensitive avian species that have either been observed within SDG&E's proposed project survey area or have a moderate or high potential to occur (SDG&E 2015, GIS data).

Proposed project activities that could result in the temporary or permanent impacts due to loss of nesting and foraging habitat include the removal of wood poles (which support cavity nesters and raptors depending on the design of cross-arms), the removal of vegetation associated with staging areas, stringing sites, fly yards, guard structures, wood pole removal areas, guard structures, or trench work areas for underground duct banks, rock splitting/blasting, and installation of other facilities. In addition, temporary impacts to avian nesting and foraging may include a temporary increase in noise from construction equipment, vehicles, or helicopters.

Helicopters

The use of helicopters may disrupt all nesting or wintering avian special-status species (including the California spotted owl) if they occur in close proximity to these individuals or their nests, or cause a permanent disruption to the foraging behaviors of the species or habitat resulting in reduced foraging. Disruption from helicopters may also come from noise disturbances or windwash if operating close to nesting individuals, thereby impacting nesting materials, eggs, and/or nestlings. Typically, the USFS requires a limited operating period (LOP) prohibiting activities within approximately 0.25 mile of the nest site, or activity center where nest site is unknown, during the breeding season (February 1 through August 15) unless surveys confirm that California spotted owls are not nesting (Forest Service 2004). The USFS also requires an LOP for golden eagle (prohibiting activities [work and aerial/fly] within approximately 4,000

[29] Although golden eagle (*Aquila chrysaetos*) is covered by the SDG&E NCCP, take authorization for individual golden eagles will need approval from the CDFW.

feet of the nest site during the breeding season [December 1 through July 1]) and for arroyo toad breeding season (prohibiting activities up to 500 feet between December 1 through July 31[30]).

As described in Section B, Project Description, a total of ~~three~~ 6 fly yards within the CNF and ~~nine~~ 10 fly yards outside the CNF would be utilized for helicopter take-off and landing, pole and equipment temporary storage, and pole assembly. Helicopters would also utilize existing access roads and staging areas for landings. Fly yards would vary in size depending on site conditions, but would result in an average temporary disturbance of approximately 1.~~1~~ 2 acres per fly yard—approximately 4.9~~0.5~~ acres of total temporary disturbance within Forest Service-administered lands, and 14.7~~13.0~~ acres of total temporary disturbance outside of Forest Service-administered lands.

Consistent with the SDG&E Subregional NCCP, SDG&E's proposed project has been designed to avoid sensitive habitat areas when possible, including placing any helicopter landing zones outside sensitive habitats when feasible. Table B-8 provides estimates of the duration of construction activities that would occur for various project components, including helicopters, which shows the greatest estimated duration of helicopter use is approximately 2 hours a day between 6:30 am and 4:00 pm. Their flight path would follow the ROW to the extent possible. Typical pole replacement activities would range in duration from a couple days to a week at any one pole work area depending on installation methods and local conditions. Where helicopters traverse over ROWs, the impacts from helicopters would be geographically dispersed in scattered locations along the linear ROW. These impacts are expected to be temporary, brief, and intermittent along the line.

Electrocution

Concerns regarding potential electrocution or bird strike from power lines are primarily focused on avian species. Because SDG&E's proposed project will replace existing electric facilities, this electrocution and bird strike risk is part of the existing baseline. These risks are expected to be reduced as a result of SDG&E's proposed project as the number of guy-wires, poles, and redundant lines will be reduced. Electrocution of avian species can occur from wing contact with two conductors, as avian species perching, landing, or taking off from a utility pole can complete the electrical circuit. Avian electrocutions can also occur through simultaneous contact with energized phase conductors and other equipment or simultaneous contact with an energized wire and a grounded wire. Electrocution of avian species poses a greater potential hazard to larger birds, such as raptors, because their body sizes and wing spans are large enough to bridge the

[30] At higher elevations, breeding season dates may be February 1 through July 31, and may vary. These dates and distances set per a project-specific consultation with the Forest Service.

distance between the conductor wires and, thus, complete the electrical circuit. The new power line structures would be constructed in compliance with the Avian Power Line Interaction Committee's Suggested Practices for Avian Protection on Power Lines, in addition to SDG&E's current construction standards, which include increased phase spacing and cover-ups to reduce avian mortality from electrocution. Therefore, the potential for wildlife electrocution would be reduced as a result of SDG&E's proposed project.

In order to avoid and minimize impacts to sensitive and native avian species, SDG&E will implement all relevant Operational Protocols from the SDG&E Subregional NCCP. The Operational Protocols are designed to avoid and minimize impacts to all sensitive resources. These protocols include, but are not limited to, restricting vehicles to existing roads when feasible, avoiding wildlife to the extent practicable, conducting preconstruction surveys, and handling of wildlife only by a qualified[31] biologist in handling wildlife. These protocols also include a biological monitor on site to avoid and minimize impacts to biological resources. Implementation of SDG&E's Operational Protocols and SDG&E Subregional NCCP guidelines would ensure potential impacts to special-status avian species remain less than significant.

As created, the SDG&E NCCP allows for "incidental take" of species covered under the plan, under Section 10(a) of FESA, and under Sections 2081 and 2800 et seq. of CESA. According to the SDG&E Subregional NCCP, "incidental take" of covered species is allowed for utility actions relating to maintenance and construction of new facilities. SDG&E NCCP Operational Protocols include, but are not limited to, restricting vehicles to existing roads when feasible, avoiding wildlife to the extent practicable, and conducting pre-activity surveys. SDG&E would also comply with the MBTA. In order to avoid and minimize impacts to nesting raptors, large, existing stick nests that could support nesting raptors near pole numbers P90, P95, R107, P129, P156, and P158 would be monitored for nesting raptors during the raptor breeding season (January 1 through July 31). Impacts to nesting avian species would be less than significant with implementation of the SDG&E Subregional NCCP and Operational Protocols and compliance with the MBTA. Under the terms of the plan, SDG&E will notify the resource agencies of the project and its potential impacts. Reporting will be in the form of an Environmental Field Survey that describes the project, location, existing habitat, impacts, recommendations to minimize impacts, and form of mitigation. More specifically for temporary impacts, SDG&E will reseed impacted areas and implement a 3-year monitoring program to determine success. For permanent impacts located within Preserve areas, SDG&E will deduct from SDG&E's Conservation Bank at a 2:1 ratio. Additionally, SDG&E will implement the protective measures described in the SDG&E NCCP. Operational Protocols (Chapter 7.1) of the SDG&E

[31] Qualified biologist defined as a biologist whose resume has been reviewed and approved by the CPUC and Forest Service.

NCCP would be implemented and are incorporated into this document by reference. SDG&E would implement APM BIO-03 to avoid, minimize, or mitigate for impacts to biological resources. APM BIO-03 states that SDG&E will implement the protocol identified in Appendix A: SDG&E NCCP Protocols. In addition, per the SDG&E Subregional NCCP, verification surveys are required if surface disturbance has not commenced within 30 days of the submittal of the PSR to the USFWS and the CDFW. If any additional sensitive avian species are found, compliance with the SDG&E Subregional NCCP would occur.

Absent mitigation, temporary and permanent impacts to an active nest of any bird species addressed under the MBTA or take of any MBTA-listed species or state- and federally listed species during construction activities are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-01, APM BIO-02, APM BIO-03, APM BIO-05, APM BIO-07, APM BIO-08, APM BIO-10, APM NOI-06, APM NOI-09, MM BIO-1 through MM BIO-3, MM BIO-20 through MM BIO-22, MM BIO-23 through MM BIO-27, and MM BIO-28 through MM BIO-29, temporary and permanent impacts at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

Golden Eagle

Project construction, including the use of helicopters, could potentially impact eagles on federal and non-federal lands, as described above. Table D.4-134 describes the currently (and publicly) known locations for golden eagle nests within 5 miles of the proposed replacement projects. Databases searched for this information include CDFW CNDDB and Forest Service data files (2013c, 2013f, 2006b).

Table D.4-134
Known Golden Eagle Nesting Locations by Line

Project Components	Golden Eagle Nesting Location Description (along with CNDDB occurrence number, if applicable)
Power Line Replacement Projects	
TL682	Along the western section 1. Approx. 1.5 miles from line: In 1991 one adult female incubating eggs; additional three inactive nests seen within 1 mile from this location (No. 107). 2. Approx. 1.7 miles from line, known nesting location (Forest Service 2013f) Along the central section 3. Approx. 5.25 miles from line: Between 1900–1936, one nesting pair detected (No. 32). 4. Approx. 2.3 miles from line, known nesting location (Forest Service 2013f) 5. Within 1 mile of the line, known nesting location (Forest Service 2013f) 6. Approx. 5.9 miles from line, known nesting location (Forest Service 2013f) Along the eastern section 7. Approx. 1.7 miles from the line, known nesting location (Forest Service 2013f)
TL626	Along the northern section 1. Within 1 mile of the line, known nesting location (Forest Service 2013f) Along the central section 2. Approx. 3.0 miles from line, known nesting location (Forest Service 2013f). Forest Service designates closure of this area due to nesting activities: nests initiated and unsuccessful in 2010–2012; no activity in 2013 (Forest Service 2013e). 3. Approx. 1.5 miles from line, known nesting location (Forest Service 2013f). 4. Approx. 1.5 miles from line, known nesting location (Forest Service 2013f). Two nests were documented to be near TL626, but specific locations are not provided (Forest Service 2006b, Table 1. *Raptors observed during field surveys*).
TL625	Along the western section 1. Within 1 mile of the line, known nesting location (Forest Service 2013f) 2. Approx. 1.3 miles from line, known nesting location (Forest Service 2013f) Along the southern section 3. Within 1 mile of line, known nesting location (Forest Service 2013f) 4. Approx. 2.0 miles from line, known nesting location (Forest Service 2013f)
TL629	Along the central section 1. Within 1 mile of line, known nesting location (No. 217; Forest Service): One adult observed "incubating" in March 2010 – survey conducted by helicopter (No. 217); Forest Service designates closure of this area due to nesting activities: nests were initiated in 2008, 2009, and 2010; nests failed all 3 years; nest fledged one eglet in 2011; nest failed in 2012 and 2013 (Forest Service 2013e). 2. Approx. 4.25 to 5 miles from line, known nesting location (No. 218; Forest Service 2013f: one individual "trying to build new nest" in March 2010; nest site "active" in March 2010; two "fledged" young observed in 1977 (No. 218).
TL6923	Along the western section 1. Within 1 mile of line: one incubating female observed in 1991 (No. 100). 2. Approx. 0.15 mile north of line, one adult observed "incubating on nest" in February 2011; one adult and two chicks observed in April 2011 (No. 216). 3. Within 1 mile of line, known nesting location (Forest Service 2013f)

Table D.4-134
Known Golden Eagle Nesting Locations by Line

Project Components	Golden Eagle Nesting Location Description (along with CNDDB occurrence number, if applicable)
	4. Approx. 1.7 miles from the lne, a nest with nesting observed in 1991 (No. 102). 5. Along western section, approximately 4.5 miles from line: one incubating female observed in 1991 (No. 99). 6. Approximately 6 miles from line, one adult female observed incubating egg in 1991 (No. 109). Along the central-eastern section 7. Approx. 1.4 miles from line: one adult observed "incubating" in March 2010; one individual observed flying in area in 1992; nest with nesting observed in 1991; "one young fledged" in 1977 (No. 101). 8. Within 1 mile of line, two known nesting locations (Forest Service 2013f)
C79	No additional nesting locations recorded.
C78	No additional nesting locations recorded.
C157	No additional nesting locations recorded.
C442	Along the southern section **1.** Within 1 mile of the line, one known nesting location (Forest Service 2013f)
C440	Along the eastern section 1. Approx. 2.6 miles from line, two nests (one "active," one "inactive") reported in March 2010 (No. 219). 2. Within 1 mile of line, one known nesting location (Forest Service 2013f). Possibly same as No. 219. Approx. 1.7 miles from line, nest site determined to be "active" in March 2010 – no additional information provided (No. 220). 3. Within 1 mile of line, nest determined to be "active" in March 2010 – no additional data about nest provided (No. 221). 4. Approx. 2.8 miles from line, two nests determined to be "active" by BLM on March 2010 – no additional information provided (No. 215). 5. Approx. 3.7 miles from line, one adult female observed "incubating" and one adult male "perched nearby" in March 2010 (No. 214). 6. Within 1 mile of line, two known nesting locations (Forest Service 2013f)
C449	No additional nesting locations recorded.

Sources: CDFW 2013a, 2014; Forest Service 2013c, 2013f, 2006b.

Absent mitigation, direct and indirect impacts to golden eagles are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-01, APM BIO-02, APM BIO-03, APM BIO-05, APM BIO-07, APM BIO-08, APM BIO-10, APM NOI-06, APM NOI-09, MM BIO-1 through MM BIO-3, MM BIO-20 through MM BIO-22, MM BIO-23 through MM BIO-27, and MM BIO-28 through MM BIO-29, direct and indirect impacts at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

California Spotted Owl

Project construction, including the use of helicopters, could potentially impact spotted owls on federal and non-federal lands, as described above. Absent mitigation, direct and indirect impacts

to California spotted owls are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-01, APM BIO-02, APM BIO-03, APM BIO-05, APM BIO-07, APM BIO-08, APM BIO-10, APM NOI-06, APM NOI-09, MM BIO-1 through MM BIO-3, MM BIO-20 through MBIO-22, MM BIO-23 through MM BIO-27, and MM BIO-28 through MM BIO-29 direct and indirect impacts at or near project components would be mitigated under NEPA and under CEQA, impacts would be less than significant with mitigation (Class II).

Cooper's Hawk

Project construction, including the use of helicopters, could potentially impact Cooper's hawk on federal and non-federal lands, as described above. Absent mitigation, direct and indirect impacts to Cooper's hawks are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-01, APM BIO-02, APM BIO-03, APM BIO-05, APM BIO-07, APM BIO-08, APM BIO-10, APM NOI-6, APM NOI-09, MM BIO-1 through MM BIO-3, MM BIO-20 through MM BIO-22, MM BIO-23 through MM BIO-27, and MM BIO-28 through MM BIO-29, direct and indirect impacts at or near project components would be mitigated under NEPA and under CEQA, impacts would be less than significant with mitigation (Class II).

Least Bell's Vireo

Project construction, including the use of helicopters, could potentially impact least Bell's vireo on federal and non-federal lands, as described above. Absent mitigation, direct and indirect impacts to least Bell's vireos are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-01, APM BIO-02, APM BIO-03, APM BIO-05, APM BIO-07, APM BIO-08, APM BIO-10, APM NOI-06, APM NOI-09, MM BIO-1 through MM BIO-3, MM BIO-20 through MM BIO-22, MM BIO-23 through MM BIO-27, and MM BIO-28 through MM BIO-29, direct and indirect impacts at or near project components would be mitigated under NEPA and under CEQA, impacts would be less than significant with mitigation (Class II).

Southwestern Willow Flycatcher

Project construction, including the use of helicopters, could potentially impact southwestern willow flycatcher on federal and non-federal lands, as described above. Absent mitigation, direct and indirect impacts to southwestern willow flycatchers are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-01, APM BIO-02, APM BIO-03, APM BIO-05, APM BIO-07, APM BIO-08, APM BIO-10, APM NOI-06, APM NOI-09, MM BIO-1 through MM BIO-3, MM BIO-20 through MM BIO-22, MM BIO-23 through MM BIO-27, and MM BIO-28 through MM BIO-29, direct and indirect impacts

at or near project components would be mitigated under NEPA and under CEQA, impacts would be less than significant with mitigation (Class II).

Coastal California Gnatcatcher

Project construction, including the use of helicopters, could potentially impact coastal California gnatcatcher on federal and non-federal lands, as described above. Absent mitigation, direct and indirect impacts to coastal California gnatcatchers are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-01, APM BIO-02, APM BIO-03, APM BIO-05, APM BIO-07, APM BIO-08, APM BIO-10, APM NOI-06, APM NOI-09, MM BIO-1 through MM BIO-3, MM BIO-20 through MM BIO-22, MM BIO-23 through MM BIO-27, and MM BIO-28 through MM BIO-29, direct and indirect impacts at or near project components would be mitigated under NEPA and under CEQA, impacts would be less than significant with mitigation (Class II).

Burrowing Owl

Project construction, including the use of helicopters, could potentially impact burrowing owl on federal and non-federal lands, as described above. Absent mitigation, direct and indirect impacts to burrowing owls are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-01, APM BIO-02, APM BIO-03, APM BIO-05, APM BIO-07, APM BIO-08, APM BIO-10, MM BIO-1 through MM BIO-3, MM BIO-20 through MM BIO-22, MM BIO-23 through MM BIO-27, and MM BIO-28 through MM BIO-29, direct and indirect impacts at or near project components would be mitigated under NEPA and under CEQA, impacts would be less than significant with mitigation (Class II).

Other Special-Status Bird Species

Bald eagle*, prairie falcon, red-shouldered hawk, Southern California rufous-crowned sparrow*, turkey vulture, and yellow warbler have been directly observed within the project survey area. American peregrine falcon*, Bell's sparrow, burrowing owl*, California horned lark, double-crested cormorant, grasshopper sparrow*, gray vireo, loggerhead shrike, olive-sided flycatcher, osprey, purple martin, redhead, song sparrow, tricolored blackbird*, western grebe, white-tailed kite, and yellow-breasted chat have a moderate to high potential to occur within the project survey area within a variety of habitat types. Project construction, including the use of helicopters, could potentially impact special-status bird species on federal and non-federal lands, as described above.

Absent mitigation, direct and indirect impacts to these special-status bird species are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-01, APM BIO-02, APM BIO-03, APM BIO-05, APM BIO-07, APM BIO-08, APM

BIO-10, APM NOI-06, APM NOI-09, MM BIO-1 through MM BIO-3, MM BIO-20 through MM BIO-22, MM BIO-23 through MM BIO-27, and MM BIO-28 through MM BIO-29, direct and indirect impacts at or near project components would be mitigated under NEPA and under CEQA, impacts would be less than significant with mitigation (Class II).

MM BIO-28 ~~**Conduct pre-construction nesting bird surveys**~~**Implement Bird Protection Measures.**

A. ~~If construction~~ Construction activities, including but not limited to tree trimming, road maintenance (i.e., re-establishing of existing access roads), grading, or site disturbance, ~~are~~ may~~to~~ occur during the avian bird breeding season that runs between March 1 and September 1, for non-listed birds, and other seasons as defined below for ~~other~~ special-status species, in compliance with the procedures and provisions of this mitigation measure. To avoid avian disturbance by construction activities, an Avian Protection Plan, including a Nesting Bird Management Plan, shall be developed in coordination with the Wildlife Agencies prior to project onset to develop measures based on site specific conditions to protect birds. This Avian Protection Plan shall be implemented by SDG&E and their biological monitors with oversight by the CPUC and the Forest Service. The Plan shall include procedures to allow the Wildlife Agencies open communication with the biological monitor(s) and access to scientific data collected that will be electronically stored in a database approved by the CPUC, the Forest Service, and the Wildlife Agencies. Between February and September during project construction, SDG&E shall provide a monthly summary of nesting bird monitoring activities and at the completion of each nesting season shall provide an evaluation of the data collected to date as specified in the Nesting Bird Management Plan.

B. The Project's transmission pole and line design may have an impact on certain raptor species. Consequently, in addition to the construction activities, the Plan shall address avian mortality related to line strikes through the use of adaptive management (i.e., measures to make the lines more visible to the suite of species affected), in response to reported mortalities.

C. The Avian Protection Plan shall include the following measures:

a. Compliance with the Migratory Bird Treaty Act

b. Compliance with Fish and Game Code Sections 3503, 3503.5, and 3511

c. Activities shall be prohibited within:

i. Approximately 0.25 mile of California spotted owl active nest sites (or activity centers) during the breeding season (February 1 through August 15) unless surveys confirm that California spotted owls are not nesting within the 0.25-mile radius;

ii. 500 feet of raptor and owl active nests;

iii. 500 feet of federally and/or state-listed birds active nests;

iv. 250 feet of occupied burrowing owl burrows from February 1 to August 31 or within 160 feet from September 1 through January 31; and

v. 150 feet of non-listed birds and as specified in the avian protection plan for other bird species of concern.

If year-round burrowing owls are identified and there would only be temporary indirect impacts, then work may continue through coordination with the CDFW and monitoring. If it appears that the burrowing owls may be directly impacted, then a relocation plan will be developed for the specific burrowing owl(s). This plan would include the methods to relocate, location of the relocation, and post-relocation monitoring. Active relocation and banding of birds is not required. Similar buffers will be utilized for non-Forest Service lands as specified in the Avian Protection Plan and Nesting Bird Management Plan. "Nest" is defined as a structure or site under construction or preparation, constructed or prepared, or being used by a bird for the purpose of incubating eggs or rearing young. Perching sites and screening vegetation are not part of the nest. "Active nest" is defined as once birds begin constructing, preparing, or using a nest for egg-laying. A nest is no longer an "active nest" if abandoned by the adult birds or once nestlings or fledglings are no longer dependent on the nest.

d. Apply APLIC Measures. Specific APLIC measures to be applied must, at a miniumum, allow the circuits to meet National Electric Safety Code (NESC) requirements and should provide general information on specialized construction designs to meet APLIC standards. In particular, conductor separation between the energized and grounded hardware should meet the current state of the art requirements to protect species up to California condor. If appropriate separation is

not feasible, then the energized parts and hardware should be covered. As appropriate, bird diverters should be deployed as well.

D. The database shall include special features to accommodate additional variables (covariate) information requested by the Wildlife Agencies designed for this Project that will provide data which will contribute to the scientific standards of effective avian avoidance measures. In order to help evaluate buffer effectiveness, nests shall be monitored on a daily basis by a qualified biologist during disturbance and related activities (i.e., brushing, tree trimming, ground-disturbing activities, mechanized or manual construction/removal/installation, and restoration activities) and every 4 days following disturbance until nest fates have been determined for entry into the database. Daily nest monitoring will be conducted by a qualified biologist, from as far away as possible while still being able to observe activity. The biologist need not observe the actual contents of the nest, but may extrapolate status based on adult behaviors. Actual surveys of the nest contents must not occur more than weekly (i.e., allow at least 7 days between nest visits) and visits should be very brief, paths should go by the nest without stopping if possible, the biologist should not touch leaves or branches, and should take a new route each time they pass by the nest. If brown-headed cowbirds or potential nest predators (e.g., scrub jays, crows, ravens) are in the area, then the visit should be postponed until they are gone.

At a minimum, the plan(s) shall include the following sections:

- Plan Objectives
- Applicable Mitigation Measures
- Environmental Awareness Program
- Existing Avian Resources
- Construction Process and Timing (related to avian resource protection)
- Specific APLIC Measures to be Applied
- Nest Survey and Monitoring Methods
    - Surveyor Experience and Training
    - Nesting Bird Survey Protocol
    - Standard Buffer Distances as determined in consultation with Wildlife Agencies

- Protections of Listed Species, Raptors, and Eagles
- Nest Monitoring
- Data Collection

- Avian Reporting System
  - Nest Monitoring Log to include fates of all nests monitored
  - Reporting including update of database accessible to Wildlife Agencies
- Nest Management
  - Nesting Habitat Reduction
  - Nesting Deterrents
  - Nest Removal
- Risk Assessment and Mortality Reduction
- Quality Control and Effectiveness
- Avian Enhancement
- Key Resources
- Prior to the start of construction and implementation, SDG&E shall submit the plan to the U.S. Fish and Wildlife Service, CDFW, CPUC, and Forest Service for review and approval.

~~, a nesting bird survey shall be conducted by a qualified biologist to determine the presence of nests or nesting birds within 100 feet (300 feet for raptors) of the construction activities. The nesting bird surveys shall be completed no more than 72 hours prior to any construction activities. The survey will focus on special-status species known to use the area, as well as other nesting birds that are protected under the Migratory Bird Treaty Act. If an active nest (defined below) is identified adjacent to grading or site disturbance within the requisite nest buffer, the nest shall be monitored on a daily basis by a qualified biologist until project activities are no longer occurring within the nest buffer or until fledglings become independent of the nest. "Nest" is defined as: a structure or site under construction or preparation, constructed or prepared, or being used by a bird for the purpose of incubating eggs or rearing young. Perching sites and screening vegetation are not part of the nest. "Active nest" is defined as: once birds begin constructing, preparing, or using a nest for egg-laying. A nest is no longer an "active nest" if abandoned by the adult birds or once nestlings or fledglings are no longer dependent on the nest.~~ In order to identify locations of current bald eagle (Haliaeetus leucocephalus), golden

eagle (Aquila chrysaetos), California spotted owl (Strix occidentalis), American peregrine falcon (Falco peregrinus anatum), or federally and/or state-listed or fully protected bird nests, the monitoring biologists will coordinate with the U.S. Forest Service (Forest Service), U.S. Fish and Wildlife Service, and California Department of Fish and Wildlife (CDFW) to ensure that the most up to date information is made available to monitoring biologists. If work will be conducted within a 1 mile buffer of historic and currently known nests during the bald or golden eagle breeding season (December 15 through July 31), SDG&E will survey the historic and currently known nests sites to determine if they are active. If nests are determined to be active, then work within 1 mile of active nests shall be rescheduled until after the completion of nesting activity at those nests. Alternatively, SDG&E may plan work activities to occur outside of the 1 mile buffers during the breeding season.

~~**A.** The monitoring biologist may increase the buffer radius if construction activities could disturb nesting activities. The monitoring biologist may decrease the buffer radius upon receiving approval from California Public Utilities Commission (CPUC) and Forest Service, if the biologist determines that the construction activities are not disturbing the nesting activities and a smaller buffer is more appropriate. The monitoring biologist shall halt construction activities if he or she determines that the construction activities are disturbing the nesting activities. The monitor shall make practicable recommendations to reduce the noise or disturbance in the vicinity of the nest. This may include (1) turning off vehicle engines and other equipment whenever possible to reduce noise, (2) working in other areas until the young have fledged, or (3) placing noise barriers to maintain the noise at the nest to 60 dBA L_{eq} hourly or less or to the preconstruction ambient noise level if that exceeds 60 dBA L_{eq} hourly. The on-site biologist will review and verify compliance with these nesting boundaries and will verify that the nesting efforts have finished. Unrestricted construction activities can resume when no other active nests are found. Upon completion of the survey and any follow-up construction avoidance management, a report shall be prepared and submitted to the CPUC with the weekly report as identified in MM BIO-3.~~

~~**B.** On Forest Service lands, activities will be prohibited within approximately 0.25 mile of California spotted owl nest sites (or activity centers) during the breeding season (February 1 through August 15) unless surveys confirm that California spotted owls are not nesting; within 4,000 feet (no work or fly zone) of bald and golden eagle nests; within 500 feet of raptor and owl nests; within 500 feet of federally and/or state-listed birds; within 250 feet of occupied burrowing owl burrows from February 1 to August 31 or within 160 feet from September 1 through January 31; and within 100 feet of non-listed birds.~~

~~C.~~**A.** ~~A nesting bird report, at a minimum, shall include the date, starting and ending time, general weather conditions (cloud cover, temperature, wind), name of biologist with affiliation, area surveyed including map, survey results (species, nest Global Positioning System (GPS) location, nest stage [number of eggs, number of nestlings]), recommended compliance (e.g., 100-foot buffer recommended, buffer increased with explanation, recommended noise reduction, noise dBA L_{eq} levels at nest), and compliance issues/concerns. The report shall also include the date and nesting outcome (e.g., depredated, nestling fledged, nest abandoned).~~

MM BIO-29 **Rock blasting.** In the unlikely event that rock blasting is used during construction, a noise and vibration calculation will be prepared and submitted to the California Public Utilities Commission (CPUC) and the County of San Diego for review before blasting at each site. The construction contractor will ensure compliance with all relevant local, state, and federal regulations relating to blasting activities. This Blasting Plan would include a site-specific nesting bird survey to be conducted by a CPUC-approved biologist. The results of this survey would be communicated to the CPUC.

If the CPUC-approved biologist observes an active nest (as defined in MM BIO-28) ~~(see definition below)~~ for any special-status species (including federal, state, and county candidate, sensitive, fully protected, or special-status species) or species covered by the Migratory Bird Treaty Act that may be impacted by blasting activities, San Diego Gas & Electric ~~would~~ shall postpone any activity that may impact the success of the nest until the nest no longer meets the given definition~~s~~. ~~"Nest" is defined as: a structure or site under construction or preparation, constructed or prepared, or being used by a bird for the purpose of incubating eggs or rearing young. Perching sites and screening vegetation are not part of the nest. "Active nest" is defined as: once birds begin constructing, preparing or using a nest for egg-laying. A nest is no longer an "active nest" if abandoned by the adult birds or once nestlings or fledglings are no longer dependent on the nest.~~

Mammals

The following wildlife species are listed as one or more of the following: County Group 1, federally listed, state listed, BLM sensitive species, or FSS species. An asterisk (*) indicates an SDG&E NCCP covered species. Eleven special-status mammals observed within the project survey area included American badger*, big free-tailed bat, fringed myotis, hoary bat, long-eared myotis, long-legged myotis, pallid bat, pocketed free-tailed bat, Townsend's big-eared bat, western mastiff bat, and western small-footed myotis. Six additional species have a moderate to

high potential to occur within the project area including California leaf-nosed bat, Mexican long-tongued bat, mountain lion*, southern mule deer*, western red bat, and Yuma myotis.

Proposed construction activities may cause both permanent and temporary impacts to these special-status mammal species and/or their habitats. Proposed project activities that could result in the temporary or permanent impacts due to loss habitat, temporary displacement, or direct mortality include the removal of wood poles (which support cavity nesters and raptors depending on the design of cross-arms), the removal of vegetation associated with staging areas, stringing sites, fly yards, guard structures, wood pole removal areas, guard structures, or trench work areas for underground duct banks, rock splitting/blasting, and installation of other facilities. In addition, temporary impacts to avian nesting and foraging may include a temporary increase in noise from construction equipment and vehicles. Temporary impacts may also result from construction noise and ground vibration, as mammals may be deterred from inhabiting or foraging in areas near such activities.

As shown above, the SDG&E NCCP covers the following special-status mammal species: American badger, mountain lion, and southern mule deer. Additionally, SDG&E will implement all relevant Operational Protocols from the SDG&E Subregional NCCP. The Operational Protocols are designed to avoid and minimize impacts to all sensitive resources. These protocols include, but are not limited to, restricting vehicles to existing roads when feasible, avoiding wildlife to the extent practicable, conducting preconstruction surveys, and handling of wildlife only by biologists or experts in handling wildlife. These protocols also include a biological monitor on site to avoid and minimize impacts to biological resources. Implementation of SDG&E's Operational Protocols and SDG&E Subregional NCCP guidelines would ensure potential impacts to special-status mammal species remain less than significant.

In addition, per the SDG&E Subregional NCCP, verification surveys are required if surface disturbance has not commenced within 30 days of the submittal of the PSR to the USFWS and the CDFW. If any additional sensitive mammal species are found, compliance with the SDG&E Subregional NCCP would ensure that impacts remain less than significant.

Absent mitigation, direct and indirect impacts to special-status mammal species are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-01, APM BIO-02, APM BIO-03, APM BIO-05, APM BIO-07, APM BIO-08, APM BIO-10, MM BIO-1 through MM BIO-3, MM BIO-20 through MM BIO-22, MM BIO-24 through MM BIO-26, and MM BIO-27 through MM BIO-28, direct and indirect impacts at or near project components would be mitigated under NEPA and under CEQA, impacts would be less than significant with mitigation (Class II).

Mountain Lion

The mountain lion is found in variety of habitats where its preferred prey, mule deer, is found. Based on the guidelines from the County of San Diego (2009), direct and indirect impacts to Group 2 species are considered significant if they impact the long-term survival of the species. This species was not observed during the surveys, but it has the potential to occur in the project area. Based on the high mobility of the mountain lion, the potential for direct loss of these species is low and would not be adverse. In addition, indirect effects of noise and increased human presence on this species would not be considered adverse. Under CEQA, impacts to the potential loss of these species and indirect effects of noise and increased human presence would be considered less than significant (Class III).

Absent mitigation, direct and indirect impacts (via removal of habitat) to mountain lions are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-01, APM BIO-02, APM BIO-03, APM BIO-05, APM BIO-07, APM BIO-08, APM BIO-10, MM BIO-1 through MM BIO-03, MM BIO-20 through MM BIO-22, MM BIO-24 through MM BIO-26, and MM BIO-27 through MM BIO-28, direct and indirect impacts at or near project components would be mitigated under NEPA and under CEQA, impacts would be less than significant with mitigation (Class II).

Southern Mule Deer

Absent mitigation, direct and indirect impacts (via removal of habitat) to southern mule deer are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-01, APM BIO-02, APM BIO-03, APM BIO-05, APM BIO-07, APM BIO-08, APM BIO-10, MM BIO-1 through MM BIO-3, MM BIO-20 through MM BIO-22, MM BIO-24 through MM BIO-26, and MM BIO-27 through MM BIO-28, direct and indirect impacts at or near project components would be mitigated under NEPA and under CEQA, impacts would be less than significant with mitigation (Class II).

American Badger

The American badger was observed during the surveys and has a high potential to occur in additional project areas in a variety of habitats, as described in Section D.4.1.4. Direct or indirect loss of the species from noise, ground vibration, and increased human presence or removal of suitable habitat would be adverse under NEPA and significant under CEQA. Absent mitigation, direct and indirect impacts (via removal of habitat) to American badgers are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-01, APM BIO-02, APM BIO-03, APM BIO-05, APM BIO-07, APM BIO-08, APM BIO-10, MM BIO-1 through MM BIO-3, MM BIO-20 through MM BIO-22, MM BIO-24 through MM BIO-26, and MM BIO-27 through MM BIO-28, direct and indirect impacts at or

near project components would be mitigated under NEPA and under CEQA, impacts would be less than significant with mitigation (Class II).

Special-Status Bats

As discussed in Section D.4.1.4, 10 bat species were directly observed (big free-tailed bat, fringed myotis, hoary bat, long-eared myotis, long-legged myotis, pallid bat, pocketed free-tailed bat, Townsend's big-eared bat[32], western mastiff bat, and western small-footed myotis) and 4 additional species have a moderate to high potential to occur in SDG&E's proposed project area, including California leaf-nosed bat, Mexican long-tongued bat, western red bat, and Yuma myotis. Potential direct loss of this species or removal of suitable habitat would be adverse under NEPA and significant under CEQA.

Absent mitigation, direct and indirect impacts to special-status bat species are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-01, APM BIO-02, APM BIO-03, APM BIO-05, APM BIO-09, APM BIO-10, MM BIO-1 through MM BIO-03, MM BIO-20 through MM BIO-22, MM BIO-24 through MM BIO-26, and MM BIO-27 through MM BIO-28, and MM BIO-30 direct and indirect impacts at or near project components would be mitigated under NEPA and under CEQA, impacts would be less than significant with mitigation (Class II).

MM BIO-30 Prior to work being conducted, ~~qualified biologists will conduct a literature search for potential roost sites and follow-up surveys for Townsend's big-eared bat maternity roosts within 500 feet of project lines during the breeding/pupping season (April–mid-September)~~measures will be employed to protect (a) Townsend's bat and (b) bats in general.

A. Townsend's bat protection measures

Prior to work being conducted, qualified biologists will conduct a literature search for potential roost sites and follow-up surveys for Townsend's big-eared bat maternity roosts within 500 feet of project lines during the breeding/pupping season (April–mid-September). Typical Townsend's big-eared bat roosts occur in mines, caves, buildings, long and dark culverts, and older bridges (pre-1960) (Pierson and Rainey 1994). If any potential structures or features for Townsend's big-eared bat are present within the project area they shall be surveyed.

[32] Townsend's big-eared bat is a State Candidate species (i.e., proposed for listing under the California Endangered Species Act).

Inspections of potential roosts shall be conducted using an appropriate combination of visual and acoustic survey techniques (including structure inspection, sampling, and/or exit counts) for areas that may be directly or indirectly impacted by the project. Where active roosts are located, reporting shall include: 1) the exact location of all roosting sites (location shall be adequately described and drawn on a map); 2) the number present at the time of visit (count or estimate); 3) the location, amount, distribution, and age of all droppings shall be described and pinpointed on a map; and 4) the type of roost (i.e., night roost – rest at night while out feeding vs. day roost – maternity colony) must also be clearly stated. All survey results, including field data sheets, shall be provided to the CDFW South Coast Regional Office. Locations of all roosts shall be kept confidential to protect them from disturbance.

If non-maternity roosts are identified, the CDFW will be notified and consulted. If maternity roosts are present, the CDFW and CPUC will be notified and no work will occur within 500 feet of the roost location until the end of the pupping season or until the roost is determined to be unoccupied by Townsend's big-eared bat. For the protection of young (i.e., unable to fly) and hibernating adults all project-related activities shall be avoided where roosts are present during the winter and spring. No restrictions apply to project vehicle traffic on existing access roads, or to construction activity that occurs outside of the pupping season.

B. General bat protection measures for other bat species

Prior to work being conducted, qualified biologists will conduct a literature search for known general bat roost sites and follow-up surveys within 100 feet of project lines during the breeding/pupping season (April–mid-September). In general, bat species may roost in rock outcrop, dense tree canopies, flaking tree bark, snags, bridges, mine, caves, flumes, and buildings. If any known sites for bats in general are present within the project area they shall be surveyed.

Inspections of known roosts shall be conducted using an appropriate combination of visual and acoustic survey techniques (including structure inspection, sampling, and/or exit counts) for areas that may be directly or indirectly impacted by the project. Bats shall be identified to the most specific taxonomic level possible. Where active bat roosts are located, reporting shall include: 1) the exact location of all roosting sites (location shall be adequately described and drawn on a map); 2) the number of bats

present at the time of visit (count or estimate); 3) each species of bat present shall be named (include how the specific was identified); 4) the location, amount, distribution, and age of all bat droppings shall be described and pinpointed on a map; and 5) the type of roost (i.e., night roost – rest at night while out feeding vs. day roost – maternity colony) must also be clearly stated. All survey results, including field data sheets, shall be provided to the CDFW South Coast Regional Office. Locations of all roosts shall be kept confidential to protect them from disturbance.

~~Typical roosts occur in mines, caves, buildings, long and dark culverts, and older bridges (pre-1960) (Pierson and Rainey 1994).~~ If potential roosts are determined to be present then the roosts must be analyzed further to determine if Townsend's big-eared bats are present and if maternity roosts are present. If maternity roosts are present, the CDFW and CPUC will be notified and no work will occur within ~~500~~ 100 feet of the roost location until the end of the pupping ~~season or until the roost is determined to be unoccupied by Townsend's big-eared bat~~. For the protection of young (i.e., unable to fly) and hibernating adults, all project-related activities shall be avoided where roosts are present during the winter and spring. No restrictions apply to project vehicle traffic on existing access roads, or to construction activity that occurs outside of the pupping season.

Special-Status Small Mammals

As discussed in Section D.4.1.4, Stephens' kangaroo rat*, Pallid San Diego pocket mouse*, and Dulzura (California) pocket mouse* were directly observed and the following species have a moderate to high potential to occur within SDG&E's proposed project area: northwestern San Diego pocket mouse* and Jacumba pocket mouse*. Potential direct loss of this species or removal of suitable habitat would be adverse under NEPA and significant under CEQA.

Absent mitigation, direct and indirect impacts to special-status small mammal species are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of APM BIO-01, APM BIO-02, APM BIO-03, APM BIO-05, APM BIO-07, APM BIO-08, APM BIO-10, MM BIO-1 through MM BIO-3, MM BIO-20 through MM BIO-26, MM BIO-27 through MM BIO-28, and MM BIO-32, direct and indirect impacts at or near project components would be mitigated under NEPA and under CEQA, impacts would be less than significant with mitigation (Class II).

MM BIO-31 **Biologists will conduct surveys for Stephens' kangaroo rat.** In locations where Stephens' kangaroo rat habitat assessments were not accessible during the 2010 surveys (including the extensive parcels of land westward of Santa

Ysabel owned by a single landowner – Map Pages MS-016-025 [Chambers Group Inc. and SJM Biological Consultants 2012; Appendix A] and the large parcel immediately south of Old Highway 80 and southward of southern end of Kitchen Creek Road [Map Page MS-069 [Chambers Group Inc. and SJM Biological Consultants 2012]; Appendix A]), a pedestrian preconstruction survey for potentially occupied suitable habitat (open habitat with suitable soils, slope, and kangaroo rat burrows) and follow-up trapping to confirm species, will be conducted by a California Public Utilities Commission (CPUC)-approved biologist to assess the potential areas for Stephens' kangaroo rat to occur within SDG&E's proposed project area.

Any burrows, utilized habitat, or signs of Stephens' kangaroo rat utilizing a habitat (e.g., track prints) will be flagged for avoidance during construction activities. The monitoring biologist shall halt construction activities if he or she determines that the construction activities are disturbing Stephens' kangaroo rat occupied habitat. If Stephens' kangaroo rat occupied habitat cannot be avoided during construction, the monitoring biologist shall make recommendations to ensure minimal impacts to the existing Stephens' kangaroo rat habitat and burrows during construction. Recommendations may include, but are not limited to: (1) re-routing access to the project work area for complete avoidance of Stephens' kangaroo rat occupied habitat; or (2) placement of dirt piles or sediment to avoid occupied burrows. Upon completion of the survey and any follow-up construction avoidance management, a report shall be prepared and submitted to the CPUC.

Operation and Maintenance

Operation and maintenance of the proposed power line replacement projects along with other SDG&E facilities proposed to be covered under the MSUP would require routine and periodic pole inspections and equipment testing, pole brushing, herbicide application, noise monitoring (see Section D.11 Noise), erosion control (see Section D.9 Hydrology and Water Quality), road maintenance, washing, and other related ongoing maintenance tasks, including pole replacements, similar to those currently conducted by SDG&E and would be done in accordance with the O&M plan for activities on National Forest System lands. The ongoing application of pesticides has the potential to impact special-status wildlife species if not applied appropriately[33]. Pesticides would be used during operations and maintenance to control undesirable insects,

[33] The use of pesticides or herbicides are not proposed for facilities on the CNF. If the use of herbicides is determined to be necessary within the CNF in the future, SDG&E would work with the Forest Service to obtain authorization for the specific uses for which herbicides are required. Please see Section B for additional details.

rodents, and other pests. Impacts to special-status wildlife may include illness or direct mortality. Special-status wildlife impacts may include invertebrates, small mammals, reptiles/amphibians, and birds that have ingested infected individuals. Secondary poisoning may also extend to predators that ingest any of these species. In addition, the use and maintenance of access roads may impact several wildlife species (as described in Forest Service 2009b and also listed in Appendix BIO-6).

Appendix BIO-6 describes special-status plant and wildlife species that have been documented along lines not part of the power line replacement projects to be covered under the MSUP (where no improvements are planned) as occurring, having modeled habitat, suitable habitat, or proposed critical habitat (Forest Service 2006b, 2012, 2013f; CDFW 2014; USFWS 2014). Unless provided, wildlife status is located in Appendix BIO-4. Additional wildlife species that occur or have a potential to occur along lines not part of the power line replacement projects to be covered under the MSUP and may be impacted by O&M activities include peregrine falcon (2009d). In addition to species listed below for the power line replacement projects, Tables D.4-14~~5~~a through D.4-14~~5~~c provide occurrence data for species detected along all lines to be covered under the MSUP (Forest Service 2006b). These tables include the same species as described for the power line replacement projects. All species and their status and habitat associations can be found in Appendix BIO-2.

Each electric transmission line is inspected several times a year via helicopter. Helicopters may also be used to deliver equipment, position poles and structures, string lines, and position aerial markers, as required by Federal Aviation Administration regulations. SDG&E's Transmission and Distribution Departments use helicopters for patrolling transmission and distribution lines during trouble jobs that are in areas of rough terrain or where vehicle access is limited. During trouble job patrolling, the helicopter either picks up the patrolman at the district yard or in the field. If the pickup occurs in the field, a pad or flat field to land on would be required. The area required for small helicopter staging is generally 100 feet by 100 feet, and the size of the crew varies from four to ten crewmembers, two helicopter staff, and a water truck driver to apply water for dust control at the staging area. Most helicopter operations typically take 1 day.

Absent mitigation, impacts to special-status wildlife species due to operations and maintenance are considered potentially adverse under NEPA. However, with implementation of APM BIO-01, APM BIO-03, MM HYD-5, ~~MM BIO-8(b),~~ and MM BIO-32, impacts to special-status wildlife species at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

MM BIO-32 **Procedural requirements for pesticide applications.** Herbicide application shall occur under the direction of a professional applicator with an Agricultural Pest Control Adviser License. If the professional has only obtained a Qualified Applicator License, an SDG&E biologist shall provide

additional supplemental training prior to the application of pesticides along the project right-of-way. This training will be administered by an SDG&E biologist and shall include topics, such as pertinent laws and regulations (California Department of Fish and Game Code, Migratory Bird Treaty Act, and Endangered Species Act), that may impact special-status wildlife species.

In addition to the special-status species information provided in Table D.4-11~~2~~ for the powerline replacement projects, special-status plants, wildlife, and vegetation communities have been documented by the Forest Service in the Biological Evaluation/Assessment (BE/BA) for the existing SDG&E permits (Forest Service 2006b), as well as BE/BA updates (Forest Service 2007a, 2009c, 2009d) and are depicted in Tables D.4-14~~5~~a through D.4-14~~5~~d. Further, updates were made to the resources based on the Region 5 Regional Forester's 2013 Sensitive Species List (Forest Service 2013a, 2013b), as summarized in Forest Service (2013g) and via personal communication with Kirsten Winter (Forest Service, August 14, 2014).

These resource documentations shown in Tables D.4-14~~5~~a through D.4-14~~5~~d are along lines to be covered under the MSUP (on National Forest System lands only). These include facilities that are part of the power line replacement projects, as well as lines not part of the power line replacement projects (see Figure B-2a).

Additional species not described in the tables include golden eagle, turkey vulture, and red-shouldered hawk. In addition to golden eagle nesting locations identified in Table D.4-134, golden eagle nests occur within 5 miles of all 67 Forest Service Permit Holder number facilities listed in Table D.4-14~~5~~c.[34] Turkey vulture and red-shouldered hawk were included in the original BE/BA (Forest Service 2006b). Turkey vulture was detected along 11 Forest Service Permit Holder number facilities shown in Table D.4-14~~5~~c, including 4186-03, -18, -19, -21, -34, -35, -37, -43, -47, -53, and -82; red-shouldered hawk was detected along 4186-18, -19, -20, -35, -43, and -82.

Operation and Maintenance

Operation and maintenance of all facilities proposed to be covered under the MSUP would require routine and periodic pole inspections and equipment testing, pole brushing, herbicide application, noise monitoring (see Section D.11, Noise), erosion control (see Section D.9, Hydrology and Water Quality), road maintenance, washing, and other related ongoing maintenance tasks, including pole replacements, similar to those currently conducted by SDG&E and would be done in accordance with the O&M plan for activities on National Forest System lands. The ongoing application of pesticides has the potential to impact special-status wildlife

[34] Databases searched for golden eagle information include CDFW CNDDB and Forest Service data files (2013c, 2013f, 2006b).

species if not applied appropriately.[35] Pesticides would be used during operations and maintenance to control undesirable insects, rodents, and other pests. Impacts to special-status wildlife may include illness or direct mortality. Special-status wildlife impacts may include invertebrates, small mammals, reptiles/amphibians, and birds that have ingested infected individuals. Secondary poisoning may also extend to predators that ingest any of these species. In addition, the use and maintenance of access roads may impact several wildlife species (as described in Forest Service [2009b] and also listed in Appendix BIO-6). These impacts associated with operation and maintenance apply to all species described below.

Absent mitigation, impacts to special-status plant species due to operations and maintenance are considered potentially adverse under NEPA. However, with implementation of APM BIO-01, APM BIO-02, APM BIO-03, APM BIO-05, APM BIO-10, MM BIO-1 through MM BIO-7, MM BIO-10 through MM BIO-12, MM BIO-4a, MM BIO-13 through MM BIO-15, ~~MM BIO-8(b),~~ and MM HYD-5, impacts to special-status plants at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

Absent mitigation, impacts to special-status wildlife species due to operations and maintenance are considered potentially adverse under NEPA. However, with implementation of APM BIO-01, APM BIO-03, MM HYD-5, ~~MM BIO-8(b),~~ and MM BIO-32, impacts to special-status wildlife species at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

The following symbols and abbreviations are used in the following tables and provided here for reference.

N	no suitable habitat in permit area
S	suitable habitat is present; S? - possibly suitable
O	occupied habitat is present
X	proposed critical habitat is present
NL	nesting location known within 5 miles of line (for golden eagle only)

[35] The use of pesticides or herbicides are not proposed for facilities on the CNF. If the use of herbicides is determined to be necessary within the CNF in the future, SDG&E would work with the Forest Service to obtain authorization for the specific uses for which herbicides are required. Please see Section B for additional details.

Threatened and Endangered Species

ARTO	Arroyo Toad
CAGN	California Gnatcatcher
LBVI	Least Bell's Vireo
SWWF	Southwestern Willow Flycatcher
BAEA	Bald Eagle
SKR	Stephen's Kangaroo Rat
LMSK	Laguna Mountains Skipper
QUCH	Quino Checkerspot
ACIL	San Diego Thornmint
CEOP	Vail Lake Ceanothus
DOLE	Slender-horned Spineflower
ERARP	San Diego Button-Celery
POAT	San Bernardino Bluegrass

Regional Forester's List Sensitive Species

Wildlife

LBSA	Large-blotched Salamander
ARCH	Arroyo Chub
CSOW	California Spotted Owl
GRVI	Gray Vireo
SDHL	San Diego (Coast) Horned Lizard
PABA	Pallid Bat
FRMY	Fringed Myotis
TBBA	Townsend's Big-eared Bat
SWPT	Southwestern Pond Turtle
SDHL	San Diego (Coast) Horned Lizard
CALL	California Legless Lizard
BOWH	Orange-throated Whiptail
SDRN	San Diego Ring-necked Snake
RDRA	Red Diamondback Rattlesnake
ROBO	Coastal Rosy Boa
SDMK	San Diego Mountain Kingsnake
TSGA	Two-striped Garter Snake
HECO	Hermes Copper Butterfly

Plants

ABVIA	Chaparral Sand Verbena
ASDE	Dean's Milkvetch
ASDO	Jacumba Milkvetch
ASOO	Descanso Milkvetch
BROR	Orcutt's Brodiaea
CADU	Dunn's Mariposa Lily
CECY	Lakeside Ceanothus
CHPAP2	San Bernardino spineflower (Parry's spineflower)
DEHEC	Cuyamaca Larkspur
ERFO[36]	Vanishing Wild Buckwheat
GAANJ	San Jacinto Mountains Bedstraw
HEFL	Tecate Tarplant
HEMO	Mohave Tarplant
HOCUP	Mesa horkelia
HOTR	Ramona Horkelia
LIGRP	Parish's Slender Meadowfoam
LIOR	Laguna (Orcutt's) Linanthus
LEGL	Warner Springs Lessingia
MAASL	Mount Laguna Aster
MOHYL	Felt-leaved Monardella
MOMAH	Hall's Monardella
MONAL	San Felipe Monardella
PAGA	Gander's Butterwort
RICA	Moreno Currant
SIHA	Hammitt's Claycress
STCA4	Southern jewelflower
SYDE	San Bernardino Aster
TEDI	Parry's Tetracoccus
THCAS	Velvety False Lupine
THLAR2	Rigid Fringepod

[36] No USDA Plant Symbol.

Table D.4-14~~5~~a
Threatened and Endangered Species

Forest Service Permit Holder Facility	Forest Service Facility Name	PLRP / Other Lines	ARTO	CAGN[1]	LBVI[1]	SWWF[1]	BAEA[1]	SKR[1]	LMSK	PCH/ LMSK	QUCH	ACIL	CEOP	DOLE	ERARP	POAT
4186-01	Monument Peak SDG&E Communications	C440	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-02	Anderson Valley Road Line	C358	N	N	N	N	N	N	N	N	N	O	N	N	N	N
4186-03	Barrett Dam Line	C157	N	N	N	N	O	N	N	N	O**	N	N	N	N	N
4186-05	Boucher Hill Line	C214	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-06	Boulder Creek Line	TL626	S	N	S	S	N	S	N	N	S	N	N	N	N	N
4186-07	Cameron Guard Station Line	C441	O**	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-08	Cameron Substation Line	TL629	O**	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-09	Descanso Station Site Line	C73	N	N	O**	N	N	N	N	N	N	N	N	N	N	N
4186-10	Corbett, Hoffman, Chamberlin Line	C212	O**	N	N	N	N	O	N	N	S	N	N	N	N	N
4186-11	Corte Madera Line	C442	S	N	N	N	O	N	N	N	N	N	N	N	N	N
4186-12	Cuyamaca Line	C79	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-13	Descanso Ranger Station Line	C73	N	N	O**	N	N	N	N	N	N	N	N	N	N	N
4186-14	El Cajon-Descanso Line	TL625	O**	N	O**	N	N	N	N	N	S	N	N	N	N	N
4186-15	El Capitan Dam Site Line	C240	O**	N	O**	N	O	N	N	N	N	N	N	N	N	N
4186-16	Ellis Ranch Line	C73*	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-18	Foster-Pamo Line	C237	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-19	Glencliff-Boulevard/Substation	TL629	O	N	O**	S	N	N	N	N	N	N	N	N	N	N

Table D.4-14~~5~~a
Threatened and Endangered Species

Forest Service Permit Holder Facility	Forest Service Facility Name	PLRP / Other Lines	ARTO	CAGN[1]	LBVI[1]	SWWF[1]	BAEA[1]	SKR[1]	LMSK	PCH/ LMSK	QUCH	ACIL	CEOP	DOLE	ERARP	POAT
4186-20	Guatay-Pine Valley Line	TL629	O**	N	N	N	N	N	N	N	O**	N	N	N	N	N
4186-21	Japatul-Barrett Line (and access road)	TL625	N	N	N	N	N	N	N	N	O**	S	N	N	N	N
4186-22	Joseph D. Kline Line	C73*	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-23	La Posta Valley Line	C441	O**	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-24	Laguna Line	C440	N	N	N	N	S	N	O**	X	N	N	N	N	N	O**
4186-25	Laguna Underground Line	C440	N	N	N	N	S	N	S	X	N	N	N	N	N	N
4186-26	Los Coches-Santa Ysabel Line	TL637	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-27	Lyons Peak Line	C157	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-28	Lois McIntyre Line	C73*	N	N	O**	N	N	N	N	N	N	N	N	N	N	N
4186-30	Microwave Station Line	C440	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-31	Mistre Site Line	C441	O**	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-32	Monument Peak Electronics Site Line	C440	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-33	Monument Peak Relay UG Line	C440	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-34	Moreno CDF Camp Line	C449	O	N	O**	S	S	N	N	N	N	N	N	N	N	N
4186-35	Moreno Village Line	C449	O	N	O**	S	S	N	N	N	N	N	N	N	N	N
4186-36	Mt. Laguna Improvement Association Line	C440*	N	N	N	N	S	N	O**	X	N	N	N	N	N	N
4186-37	Myers Extension Line	C440*	N	N	N	N	N	N	N	X	N	N	N	N	N	N

Table D.4-145a
Threatened and Endangered Species

Forest Service Permit Holder Facility	Forest Service Facility Name	PLRP / Other Lines	ARTO	CAGN[1]	LBVI[1]	SWWF[1]	BAEA[1]	SKR[1]	LMSK	PCH/ LMSK	QUCH	ACIL	CEOP	DOLE	ERARP	POAT
4186-38	Oak Grove-Henshaw Line	C212*	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-39	Observatory Line	C214	N	N	N	N	N	N	N	X	N	N	N	N	N	N
4186-40	O'Meara-Warners Line	C212	O**	N	N	N	N	O**	N	N	N	N	N	N	N	N
4186-42	Pine Valley Glencliff Line	TL629	O**	N	O**	N	N	N	N	N	N	N	N	N	N	N
4186-43	Pine Valley Tract Line	C442	O	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-44	Rincon Borrego (Easement) Line	TL682	O	N	O**	O**	O	N	N	N	N	N	N	N	N	N
4186-45	San Juan Line, Trabuco Ranger District	C1243	O	S	N	N	N	N	N	N	N	N	N	N	N	N
4186-46	Sherilton Valley Ranch Line	C79	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-47	Skye Valley Line	C157	O**	N	N	N	S	N	N	N	N	N	N	N	N	N
4186-48	South Boundary Line	C449	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-49	State Camp #40 Line	C73	O**	N	O**	N	N	N	N	N	N	N	N	N	N	N
4186-50	State College Observatory Line	C440	N	N	N	N	S	N	N	N	N	N	N	N	N	N
4186-51	Stefflre Line	C237	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-52	Sunrise Line	C440	S	N	N	S	S	N	S	X	N	N	N	N	N	N
4186-53	Sutherland Dam Line	C237	N	N	N	N	S	N	N	N	N	N	N	N	N	N
4186-57	Viejas Valley Line	C78	O**	N	N	N	N	N	N	N	N	O	N	N	N	N
4186-59	Power Plant Substation (Glencliff Substation)	TL629	O	N	N	N	N	N	N	N	N	N	N	N	N	N

Table D.4-145a
Threatened and Endangered Species

Forest Service Permit Holder Facility	Forest Service Facility Name	PLRP / Other Lines	ARTO	CAGN[1]	LBVI[1]	SWWF[1]	BAEA[1]	SKR[1]	LMSK	PCH/ LMSK	QUCH	ACIL	CEOP	DOLE	ERARP	POAT
4186-60	Scove Canyon Road Line	C440	S	N	N	S	S	N	N	N	N	N	N	N	N	N
4186-62	Camp Ole Line	C440	N	N	N	N	S	N	N	N	N	N	N	N	N	N
4186-63	Cuyapaipe Line	C440	N	N	N	N	S	N	N	N	N	N	N	N	N	N
4186-64	Descanso Barracks Line	C73	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-65	El Prado Line	C440*	N	N	N	N	S	N	O**	X	N	N	N	N	N	O**
4186-66	Stephenson Peak Communication Site Line	C440	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-67	Glencliff Station Line	C440	O	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-68	Glencliff Trailer Pads Line	C441*	O	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-70	Japatul Station Line	C73	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-71	Japatul Station Underground Line	C73*	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-73	Los Huecos Line	C440	N	N	N	N	S	N	O**	X	N	N	N	N	N	N
4186-74	Los Pinos Line	C442	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-75	N.A.S.A. Mobile Laser Site Line	C440	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-76	Oak Grove Ranger Station Line	C212	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-79	U.S. Navy Survival, Camp Holcomb Line	C212	N	N	N	N	N	N	N	N	S	N	N	N	N	N
4186-82	Boulder Oaks Campground Underground Line	C441*	O**	N	N	N	N	N	N	N	N	N	N	N	N	N

Notes:

[1] In some cases, suitability and/or occupied habitat status in this table may conflict with the potential to occur tables (Appendix BIO-2 and Appendix BIO-4) for these species; this table was largely provided by the Forest Service (2006b) and highlights the suitability potential along lines that occur on Forest Service lands but may or may not entirely co-occur with the lines or circuits evaluated in Appendix BIO-2 and BIO-4.

* Best possible crosswalk between Forest Service data and SDG&E GIS data related to lines and holder names.

** Occupied habitat not originally reported in Forest Service (2006b); GIS data files within a 150-foot buffer of Forest Service facilities were used to acquire this data and include CNDDB (2014), Forest Service (2012, 2013f, 2013h), SDG&E (2012), and USFWS (2014).

Table D.4-145b
Sensitive Plant Species – Regional Forester's List

Forest Service Permit Holder Facility	Forest Service Facility Name	PLRP / Other Line	ABVIA[2]	ASDE	ASDO	ASOO	BROR	CADU[1]	CECY[1]	CHPAP2[3]	DEHEC	ERFO[1,2,3]	GAANJ[1,2]	HEFL[3]	HEMO	HOCUP[2]	HOTR	LIGRP	LIOR	LEGL[1]	MAASL	MOHYL[1]	MOMAH[1]	MONAL[1]	PAGA	RICA	SIHA	STCA4[2,3]	SYDE[1,2]	TEDI	THCAS[3]	THLAR2[2]
4186-01	Monument Peak SDG&E Communications	C440	N	N	N	N	N	N	N	N	N	S	S?	N	N	N	N	N	S	N	N	N	N	N	N	N	N	S	S	N	N	S
4186-02	Anderson Valley Road Line	C358	N	N	N	N	S	S	N	N	N	N	N	N	N	N	S	N	N	N	N	O**	N	N	N	N	O**	N	N	N	N	N
4186-03	Barrett Dam Line	C157	N	S	N	N	O**	S	N	N	N	N	N	N	N	N	S	N	N	N	N	S	N	N	S	N	N	N	N	N	N	N
4186-05	Boucher Hill Line	C214	N	N	N	S	N	N	N	N	N	N	N	N	N	N	N	N	S	N	N	N	N	S	N	N	N	N	S	N	N	N
4186-06	Boulder Creek Line	TL626	N	O**	N	O**	O**	O**~~N~~	N	N	S	N	N	N	N	N	O**	N	N	N	N	S	N	N	N	N	N	N	N	N	O**~~N~~	N
4186-07	Cameron Guard Station Line	C441	N	N	O**	N	N	N	N	N	N	N	N	S	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-08	Cameron Substation Line	TL629	N	N	S	N	N	N	N	N	N	N	N	S	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-09	Descanso Station Site Line	C73	N	N	N	N	N	N	O**	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-10	Corbett, Hoffman, Chamberlin Line	C212	S	N	N	N	S	N	N	S	N	N	N	N	N	N	N	N	S	S	N	N	N	N	N	N	N	N	N	N	N	N
4186-11	Corte Madera Line	C442	N	N	O**	O**	O**	O**	N	N	N	S	N	N	N	N	S	N	N	N	N	S	N	N	S	S	N	O**	N	N	N	N
4186-12	Cuyamaca Line	C79	N	N	N	N	S	O**	N	N	N	N	N	N	N	N	S	N	N	N	N	S	N	N	N	N	N	N	N	N	N	N
4186-13	Descanso Ranger Station Line	C73	N	N	N	N	N	N	O**	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-14	El Cajon-Descanso Line	TL625	N	S	O**	N	O	N	O**	N	N	N	N	N	N	N	O	N	N	N	N	S	N	N	S	O**	N	N	N	N	N	N
4186-15	El Capitan Dam Site Line	C240	N	S	N	N	N	N	S	N	N	N	N	N	N	N	S	N	N	N	N	N	N	N	N	N	N	N	N	S	N	N
4186-16	Ellis Ranch Line	C73*	N	N	O**	N	S	N	N	N	N	N	N	N	N	N	S	N	N	N	N	S	N	N	N	N	N	N	N	N	N	N
4186-18	Foster-Pamo Line	C237	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-19	Glencliff-Boulevard/Substation	TL629	N	N	O**	O**	N	N	N	N	N	N	N	S	N	N	N	N	N	N	N	N	N	N	N	N	N	O**	N	N	O**	N
4186-20	Guatay-Pine Valley Line	TL629	N	N	O**	O**	S	N	N	N	N	N	N	N	N	N	S	N	N	N	N	S	N	N	N	N	N	O**	N	N	N	N
4186-21	Japatul-Barrett Line (and access road)	TL625	N	S	N	N	S	O	N	N	N	N	N	N	N	N	S	N	N	N	N	O	N	N	O	N	N	N	N	N	N	N
4186-22	Joseph D. Kline Line	C73*	N	S	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-23	La Posta Valley Line	C441	N	N	S	N	N	N	N	N	N	N	N	S	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-24	Laguna Line	C440	N	N	N	N	N	N	N	N	S	O**	S?	N	N	N	N	O**	O**	N	N	N	N	N	N	N	N	S	O**	N	O**	O**
4186-25	Laguna Underground Line	C440	N	N	N	N	N	N	N	N	S	S	S?	N	N	N	N	O**	S	N	N	N	N	N	N	N	N	S	O**	N	S	S
4186-26	Los Coches-Santa Ysabel Line	TL637	N	S	N	S	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-27	Lyons Peak Line	C157	N	S	N	N	S	S	N	N	N	N	N	N	N	N	S	N	N	N	N	O	N	N	N	O	N	N	N	N	N	N
4186-28	Lois McIntyre Line	C73*	N	N	N	N	N	N	O**	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-30	Microwave Station Line	C440	N	N	N	N	N	N	N	N	N	S	S?	N	N	N	N	O**	O**	N	N	N	N	N	N	N	N	S	S	N	N	S
4186-31	Mistre Site Line	C441	N	N	S	N	N	N	N	N	N	N	N	S	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-32	Monument Peak Electronics Site Line	C440	N	N	N	N	N	N	N	N	N	S	S?	N	N	N	N	O**	O**	N	N	N	N	N	N	N	N	S	S	N	N	S
4186-33	Monument Peak Relay UG Line	C440	N	N	N	N	N	N	N	N	N	S	S?	N	N	N	N	O**	O**	N	N	N	N	N	N	N	N	S	S	N	N	S
4186-34	Moreno CDF Camp Line	C449	N	N	S	N	N	N	N	N	N	N	N	S	N	N	N	N	N	N	N	N	N	N	N	S	N	N	N	N	N	N
4186-35	Moreno Village Line	C449	N	N	O**	N	N	N	N	N	N	N	N	S	N	N	N	N	N	N	N	N	N	N	N	S	N	N	N	N	N	N
4186-36	Mt. Laguna Improvement Association Line	C440*	N	N	N	N	N	N	N	N	S	S	S?	N	N	N	N	S	S	N	S	N	N	N	N	N	N	S	S	N	S	O**
4186-37	Myers Extension Line	C440*	N	N	N	N	S	N	N	N	N	S	S?	N	N	N	N	N	O**	N	N	N	S	S	N	N	N	S	S	N	N	S
4186-38	Oak Grove-Henshaw Line	C212*	S	N	N	N	N	N	N	S	N	N	N	N	N	N	N	N	S	S	N	N	N	N	N	N	N	N	N	N	N	N
4186-39	Observatory Line	C214	N	N	N	N	S	N	N	N	N	N	N	N	N	N	N	N	S	N	N	N	S	S	N	N	N	N	O**	N	N	N
4186-40	O'Meara-Warners Line	C212	S	N	N	N	N	N	N	S	N	N	N	N	N	N	N	N	S	S	N	N	N	N	N	N	N	N	N	N	N	N

Table D.4-1~~4~~5b
Sensitive Plant Species – Regional Forester's List

Forest Service Permit Holder Facility	Forest Service Facility Name	PLRP / Other Line	ABVIA[2]	ASDE	ASDO	ASOO	BROR	CADU[1]	CECY[1]	CHPAP2[3]	DEHEC	ERFO[1,2,3]	GAANJ[1,2]	HEFL[3]	HEMO	HOCUP[2]	HOTR	LIGRP	LIOR	LEGL[1]	MAASL	MOHYL[1]	MOMAH[1]	MONAL[1]	PAGA	RICA	SIHA	STCA4[2,3]	SYDE[1,2]	TEDI	THCAS[3]	THLAR2[2]
4186-42	Pine Valley Glencliff Line	TL629	N	N	O**	O**	N	N	N	N	N	N	N	S	N	N	N	N	N	N	N	N	N	N	N	N	N	O**	N	N	O**	N
4186-43	Pine Valley Tract Line	C442	N	N	N	N	N	N	N	N	N	S	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	O**	N	N	N
4186-44	Rincon Borrego (Easement) Line	TL682	S	N	N	S	O**	N	N	S	N	N	N	N	N	N	N	N	S	N	N	O**	N	N	N	N	N	N	N	N	N	N
4186-45	San Juan Line, Trabuco Ranger District	C1243	N	N	N	N	N	N	N	N	N	N	N	N	N	S	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-46	Sherilton Valley Ranch Line	C79	N	N	N	N	N	N	N	N	N	N	N	N	N	N	S	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-47	Skye Valley Line	C157	N	O	O**	O**	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-48	South Boundary Line	C449	N	N	S	N	N	N	N	N	N	N	N	S	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-49	State Camp #40 Line	C73	N	S	O**	N	N	S	N	N	N	N	N	N	N	N	S	N	N	N	N	S	N	N	N	N	N	N	N	N	N	N
4186-50	State College Observatory Line	C440	N	N	N	N	N	N	N	N	S	S	S?	N	N	N	N	N	S	N	O**	N	N	N	N	N	N	S	S	N	S	S
4186-51	Stefflre Line	C237	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-52	Sunrise Line	C440	N	N	N	O**	O**	N	N	N	S	S	S?	N	N	N	N	O**	S	N	O**	N	N	N	N	N	N	O**	O**	N	S	S
4186-53	Sutherland Dam Line	C237	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-57	Viejas Valley Line	C78	N	N	N	N	S	S	N	N	N	N	N	N	N	N	S	N	N	N	N	O**	N	N	N	N	O**	N	N	N	N	N
4186-59	Power Plant Substation (Glencliff Substation)	TL629	N	N	S	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-60	Scove Canyon Road Line	C440	N	N	N	N	N	N	N	N	S	S	S?	N	N	N	N	S	S	N	S	N	N	N	N	N	N	S	S	N	S	S
4186-62	Camp Ole Line	C440	N	N	N	N	N	N	N	N	N	S	S?	N	N	N	N	O**	O**	N	N	N	N	N	N	N	N	S	S	N	N	S
4186-63	Cuyapaipe Line	C440	N	N	N	N	N	N	N	N	N	S	S?	N	N	N	N	O**	S	N	S	N	N	N	N	N	N	S	S	N	S	S
4186-64	Descanso Barracks Line	C73	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-65	El Prado Line	C440*	N	N	N	N	N	N	N	N	S	S	S?	N	N	N	N	O**	S	N	N	N	N	N	N	N	N	S	S	N	O**	O**
4186-66	Stephenson Peak Communication Site Line	C440	N	N	N	N	N	N	N	N	N	S	S?	N	N	N	N	O**	S	N	N	N	N	N	N	N	N	S	S	N	N	S
4186-67	Glencliff Station Line	C440	N	N	S	N	N	N	N	N	N	S	S?	S	N	N	N	N	N	N	N	N	N	N	N	N	N	S	S	N	N	S
4186-68	Glencliff Trailer Pads Line	C441*	N	N	S	N	N	N	N	N	N	N	N	S	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-70	Japatul Station Line	C73	N	S	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-71	Japatul Station Underground Line	C73*	N	S	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-73	Los Huecos Line	C440	N	N	N	N	N	N	N	N	S	S	S?	N	N	N	N	S	S	N	N	N	N	N	N	N	N	S	S	N	S	O**
4186-74	Los Pinos Line	C442	N	N	N	N	O**	O**	N	N	N	S	N	N	N	N	S	N	O**	N	N	S	N	N	S	O**	N	N	N	N	N	N
4186-75	N.A.S.A. Mobile Laser Site Line	C440	N	N	N	N	N	N	N	N	N	S	S?	N	N	N	N	O**	O**	N	N	N	N	N	N	N	N	S	S	N	N	S
4186-76	Oak Grove Ranger Station Line	C212	S	N	N	N	N	N	N	S	N	N	N	N	N	N	N	N	S	S	N	N	N	N	N	N	N	N	N	N	N	N
4186-79	U.S. Navy Survival, Camp Holcomb Line	C212	S	N	N	N	N	N	N	S	N	N	N	N	S	N	N	N	S	S	N	N	N	N	N	N	N	N	N	N	N	N
4186-82	Boulder Oaks Campground Underground Line	C441*	N	N	S	N	N	N	N	N	N	N	N	S	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Notes:

1 In some cases, suitability and/or occupied habitat status in this table may conflict with the potential to occur tables (Appendix BIO-2) for these species; this table was largely provided by the Forest Service (2006b) and highlights the suitability potential along lines that occur on Forest Service lands but may or may not entirely co-occur with the lines or circuits evaluated in Appendix BIO-2.

2 Habitat suitability for these species provided by K. Winter (pers. comm. 8/14/2014).

3 According to Chambers Group (2012a), species was found along given line number; however, specific data (including maps) on ex act species locations were not provided.

* Best possible crosswalk between Forest Service data and SDG&E GIS data related to lines and holder names.

** Occupied habitat not originally reported in Forest Service (2006b); GIS data files within a 150-foot buffer of Forest Service facilities were used to acquire this data and include CNDDB (2014), Forest Service (2012, 2013f, 2013h), SDG&E (2012), ~~and~~ USFWS (2014); and Winter, pers. comm. 2015.

Table D.4-145c
Sensitive Wildlife Species – Regional Forester's List

Forest Service Permit Holder Facility	Forest Service Facility Name	PLRP / Other Line	LBSA	ARCH	CSOW[1]	GRVI[2]	PABA	FRMY[1,3]	TBBA	SWPT[4]	SDHL[1]	CALL[5]	BOWH[3]	SDRN	RDRA[3]	ROBO	SDMK[1]	TSGA	HECO[2]
4186-01	Monument Peak SDG&E Communications	C440	N	N	S	N	S	S	S	N	S	S	S	S	S	S	S	N	N
4186-02	Anderson Valley Road Line	C358	N	N	N	N	S	S	S	N	O**	S	S	S	S	S	N	N	O
4186-03	Barrett Dam Line	C157	S	N	N	N	S	S	S	O	S	S	S	S	S	S	N	S	S?
4186-05	Boucher Hill Line	C214	S	N	S	N	S	S	S	N	S	S	S	S	S	S	S	N	N
4186-06	Boulder Creek Line	TL626	S	N	N	S	S	S	O**	S	O**	S	S	S	S	S	N	S	O
4186-07	Cameron Guard Station Line	C441	N	N	N	N	S	S	S	N	O**	S	S	S	S	S	N	N	N
4186-08	Cameron Substation Line	TL629	S	N	N	N	S	S	S	S	S	S	S	S	S	S	N	S	N
4186-09	Descanso Station Site Line	C73	S	N	N	N	S	S	S	N	S	S	S	S	S	S	N	N	N
4186-10	Corbett, Hoffman, Chamberlin Line	C212	N	N	N	N	S	S	S	N	S	S	S	S	S	S	N	N	N
4186-11	Corte Madera Line	C442	N	N	N	N	S	S	S	O	S	S	S	S	S	S	S	S	S?
4186-12	Cuyamaca Line	C79	N	N	N	N	S	S	S	N	O	S	N	S	S	S	S	N	O
4186-13	Descanso Ranger Station Line	C73	S	N	N	N	S	S	S	N	O**	S	S	S	S	S	N	N	N
4186-14	El Cajon-Descanso Line	TL625	S	N	N	S?	O**	S	S	O	S	S	S	S	S	S	N	S	O

Table D.4-145c
Sensitive Wildlife Species – Regional Forester's List

Forest Service Permit Holder Facility	Forest Service Facility Name	PLRP / Other Line	LBSA	ARCH	CSOW[1]	GRVI[2]	PABA	FRMY[1,3]	TBBA	SWPT[4]	SDHL[1]	CALL[5]	BOWH[3]	SDRN	RDRA[3]	ROBO	SDMK[1]	TSGA	HECO[2]
4186-15	El Capitan Dam Site Line	C240	N	N	N	O	S	S	O**	S	S	S	S	S	S	S	N	S	N
4186-16	Ellis Ranch Line	C73*	N	N	N	N	S	S	S	N	S	S	S	S	S	S	N	N	S
4186-18	Foster-Pamo Line	C237	N	N	N	N	S	S	S	N	S	S	S	S	S	S	N	N	N
4186-19	Glencliff-Boulevard/Substation	TL629	S	N	S	S	S	S	S	S	O**	S	S	S	S	S	S	S	N
4186-20	Guatay-Pine Valley Line	TL629	N	N	N	O	S	S	O**	O**	O**	S	S	S	S	S	N	N	O
4186-21	Japatul-Barrett Line (and access road)	TL625	N	N	N	S?	S	S	S	O	S	S	S	S	S	S	N	S	O
4186-22	Joseph D. Kline Line	C73*	N	N	N	N	S	S	S	N	S	S	S	S	S	S	N	N	N
4186-23	La Posta Valley Line	C441	N	N	N	N	S	S	S	N	S	S	S	S	S	S	N	N	N
4186-24	Laguna Line	C440	S	N	S	N	S	S	O**	N	O**	S	S	S	S	N	O**	S	N
4186-25	Laguna Underground Line	C440	S	N	S	N	S	S	S	N	O**	S	S	S	S	N	S	S	N
4186-26	Los Coches-Santa Ysabel Line	TL637	S	N	N	N	S	S	S	N	S	S	S	S	S	S	N	S	N
4186-27	Lyons Peak Line	C157	N	N	N	N	O**	S	O**	N	S	S	S	S	S	S	N	N	S
4186-28	Lois McIntyre Line	C73*	S	N	N	N	S	S	S	N	S	S	S	S	S	S	N	N	N

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Sensitive Wildlife Species – Regional Forester's List

Forest Service Permit Holder Facility	Forest Service Facility Name	PLRP / Other Line	LBSA	ARCH	CSOW[1]	GRVI[2]	PABA	FRMY[1,3]	TBBA	SWPT[4]	SDHL[1]	CALL[5]	BOWH[3]	SDRN	RDRA[3]	ROBO	SDMK[1]	TSGA	HECO[2]
4186-30	Microwave Station Line	C440	N	N	S	N	S	S	S	N	O**	S	S	S	S	S	S	N	N
4186-31	Mistre Site Line	C441	N	N	N	N	S	S	S	N	S	S	S	S	S	S	N	N	N
4186-32	Monument Peak Electronics Site Line	C440	N	N	S	N	S	S	S	N	O**	S	S	S	S	S	S	N	N
4186-33	Monument Peak Relay UG Line	C440	N	N	S	N	S	S	S	N	O**	S	S	S	S	S	S	N	N
4186-34	Moreno CDF Camp Line	C449	S	N	N	N	S	S	S	S	S	S	S	S	S	S	N	O**	N
4186-35	Moreno Village Line	C449	S	N	N	S	S	S	O**	S	O**	S	S	S	S	S	N	O**	N
4186-36	Mt. Laguna Improvement Association Line	C440*	S	N	S	N	S	S	S	N	N	S	S	S	S	N	S	S	N
4186-37	Myers Extension Line	C440*	S	N	S	N	S	S	S	N	N	N	S	S	S	N	S	S	N
4186-38	Oak Grove-Henshaw Line	C212*	N	N	N	O	S	S	O**	N	O**	S	S	S	S	S	N	S	N
4186-39	Observatory Line	C214	S	N	S	N	S	S	S	N	N	N	S	S	S	N	S	S	N
4186-40	O'Meara-Warners Line	C212	N	N	N	S?	S	S	S	N	S	S	S	S	S	S	S	N	N
4186-42	Pine Valley Glencliff Line	TL629	S	N	N	O	S	S	O**	O**	S	S	S	S	S	S	N	S	N
4186-43	Pine Valley Tract Line	C442	S	N	N	O	S	S	S	S	S	S	S	S	S	S	S	O	N

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Sensitive Wildlife Species – Regional Forester's List

Forest Service Permit Holder Facility	Forest Service Facility Name	PLRP / Other Line	LBSA	ARCH	CSOW[1]	GRVI[2]	PABA	FRMY[1,3]	TBBA	SWPT[4]	SDHL[1]	CALL[5]	BOWH[3]	SDRN	RDRA[3]	ROBO	SDMK[1]	TSGA	HECO[2]
4186-44	Rincon Borrego (Easement) Line	TL682	S	S	O**	N	S	S	S	S	S	S	S	S	S	S	S	S	N
4186-45	San Juan Line, Trabuco Ranger District	C1243	N	O	S	N	S	S	S	S	S	S	S	S	S	S	S	S	N
4186-46	Sherilton Valley Ranch Line	C79	N	N	N	N	S	S	S	N	O	S	N	S	S	S	N	N	O
4186-47	Skye Valley Line	C157	S	N	N	N	S	S	S	O	S	S	S	S	S	S	N	S	N
4186-48	South Boundary Line	C449	N	N	N	N	S	S	S	N	S	S	S	S	S	S	N	N	S
4186-49	State Camp #40 Line	C73	N	N	N	N	S	S	S	O	S	S	S	S	S	S	N	S	N
4186-50	State College Observatory Line	C440	S	N	O**	N	S	S	S	N	N	S	S	S	S	N	S	N	N
4186-51	Stefflre Line	C237	S	N	N	N	S	S	S	N	S	S	S	S	S	S	N	N	N
4186-52	Sunrise Line	C440	S	N	O**	N	S	S	S	S	S	S	S	S	S	S	O**	S	N
4186-53	Sutherland Dam Line	C237	S	N	N	N	S	S	S	S	O**	S	S	S	S	S	N	S	N
4186-57	Viejas Valley Line	C78	N	N	N	N	S	S	S	N	S	N	S	S	S	S	N	N	S
4186-59	Power Plant Substation (Glencliff Substation)	TL629	S	N	N	S	S	S	S	S	S	S	S	S	S	S	N	S	N
4186-60	Scove Canyon Road Line	C440	S	N	S	S	S	S	S	S	S	S	S	S	S	S	S	S	N
4186-62	Camp Ole Line	C440	S	N	N	N	S	S	S	N	O**	N	S	S	S	N	O**	N	N

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Sensitive Wildlife Species – Regional Forester's List

Forest Service Permit Holder Facility	Forest Service Facility Name	PLRP / Other Line	LBSA	ARCH	CSOW[1]	GRVI[2]	PABA	FRMY[1,3]	TBBA	SWPT[4]	SDHL[1]	CALL[5]	BOWH[3]	SDRN	RDRA[3]	ROBO	SDMK[1]	TSGA	HECO[2]
4186-63	Cuyapaipe Line	C440	S	N	O**	N	S	S	S	N	O**	S	S	S	S	S	S	S	N
4186-64	Descanso Barracks Line	C73	S	N	N	N	S	S	S	N	S	S	S	S	S	S	N	N	N
4186-65	El Prado Line	C440*	S	N	S	N	S	S	S	N	N	N	S	S	S	N	S	S	N
4186-66	Stephenson Peak Communication Site Line	C440	N	N	S	N	S	S	S	N	O**	S	S	S	S	S	S	N	N
4186-67	Glencliff Station Line	C440	S	N	N	N	S	S	S	S	S	S	S	S	S	S	N	S	N
4186-68	Glencliff Trailer Pads Line	C441*	S	N	N	N	S	S	S	S	S	S	S	S	S	S	N	S	N
4186-70	Japatul Station Line	C73	N	N	N	S?	S	S	S	N	S	S	S	S	S	S	N	N	S
4186-71	Japatul Station Underground Line	C73*	N	N	N	S?	S	S	S	N	S	S	S	S	S	S	N	N	S
4186-73	Los Huecos Line	C440	S	N	S	N	S	S	S	N	N	S	S	S	S	N	S	S	N
4186-74	Los Pinos Line	C442	N	N	N	N	S	S	S	N	S	S	S	S	S	S	S	N	N
4186-75	N.A.S.A. Mobile Laser Site Line	C440	N	N	S	N	S	S	S	N	O**	S	S	S	S	S	S	N	N
4186-76	Oak Grove Ranger Station Line	C212	N	N	N	N	S	S	S	N	S	S	S	S	S	S	N	N	N
4186-79	U.S. Navy Survival, Camp Holcomb Line	C212	S	N	N	S?	S	S	S	N	S	S	S	S	S	S	N	N	N

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Sensitive Wildlife Species – Regional Forester's List

Forest Service Permit Holder Facility	Forest Service Facility Name	PLRP / Other Line	LBSA	ARCH	CSOW[1]	GRVI[2]	PABA	FRMY[1,3]	TBBA	SWPT[4]	SDHL[1]	CALL[5]	BOWH[3]	SDRN	RDRA[3]	ROBO	SDMK[1]	TSGA	HECO[2]
4186-82	Boulder Oaks Campground Underground Line	C441*	S	N	N	S?	S	S	S	N	S	S	S	S	S	S	S	N	N

Notes:

1 In some cases, suitability and/or occupied habitat status in this table may conflict with the potential to occur tables (Appendix BIO-4) for these species; this table was largely provided by the Forest Service (2006b) and highlights the suitability potential along lines that occur on Forest Service lands but may or may not entirely co-occur with the lines or circuits evaluated in Appendix BIO- 4.

2 Habitat suitability/occurrences for GRVI and HECO species provided by K. Winter (pers. comm. 8/14/2014) and Forest Service records provided 8/14/2014. Buffer distances applied to all lines to determine occupancy status (buffer included 150 feet from lines and 250 feet from poles, equivalent to survey area; see Chambers Group (2012a)). Additional occurrences for HECO exist along C73 and C1166 but not directly occurring along Forest Service Holder numbers.

3 Habitat suitability for these species generally described using range maps provided by Zeiner et al. 1990c (FRMY) and Californiaherps.com (BOWH, RDRA). C79 above suitable elevational range for BOWH (Zeiner et al. 1990a).

4 Full species (*Emys marmorata*) observed along 4186-20 and 4186-42 (CDFW 2014).

5 According to Chambers Group (2012a), California legless lizard was found along C440 (Chambers Group, 2012a); however, specific data (including maps) on exact species locations were not provided.

* Best possible crosswalk between Forest Service data and SDG&E GIS data related to lines and holder names.

** Occupied habitat not originally reported in Forest Service (2006b); GIS data files within a 150-foot buffer of Forest Service facilities were used to acquire this data and include CNDDB (2014), Forest Service (2012, 2013f, 2013h), SDG&E (2012), and USFWS (2014).

Table D.4-145d
Vegetation Communities

Forest Service Holder Facility	Forest Service Facility Name	PLRP / Other Lines	Chamise or mixed chaparral	Redshank chaparral	Coastal sage scrub	Great Basin Sage scrub	Oak woodland	Conifer/oak woodland	Grassland	Developed
4186-01	Monument Peak SDG&E Communications	C440	X							
4186-02	Anderson Valley Road Line	C358	X							
4186-03	Barrett Dam Line	C157	X							
4186-05	Boucher Hill Line	C214	X					X		
4186-06	Boulder Creek Line	TL626	X				X		X	
4186-07	Cameron Guard Station Line	C441								X
4186-08	Cameron Substation Line	TL629				X				
4186-09	Descanso Station Site Line	C73					X			
4186-10	Corbett, Hoffman, Chamberlin Line	C212							X	
4186-11	Corte Madera Line	C442	X							
4186-12	Cuyamaca Line	C79	X							
4186-13	Descanso Ranger Station Line	C73					X			
4186-14	El Cajon-Descanso Line	TL625	X							
4186-15	El Capitan Dam Site Line	C240	X							
4186-16	Ellis Ranch Line	C73*	X							
4186-18	Foster-Pamo Line	C237	X							
4186-19	Glencliff-Boulevard/Substation	TL629	X			X	X			
4186-20	Guatay-Pine Valley Line	TL629	X							

Table D.4-145d
Vegetation Communities

Forest Service Holder Facility	Forest Service Facility Name	PLRP / Other Lines	Chamise or mixed chaparral	Redshank chaparral	Coastal sage scrub	Great Basin Sage scrub	Oak woodland	Conifer/oak woodland	Grassland	Developed
4186-21	Japatul-Barrett Line (and access road)	TL625	X							
4186-22	Joseph D. Kline Line	C73*	X							
4186-23	La Posta Valley Line	C441				X				
4186-24	Laguna Line	C440						X		
4186-25	Laguna Underground Line	C440						X		
4186-26	Los Coches-Santa Ysabel Line	TL637	X						X	
4186-27	Lyons Peak Line	C157	X							
4186-28	Lois McIntyre Line	C73*					X			
4186-30	Microwave Station Line	C440	X							
4186-31	Mistre Site Line	C441		X		X				
4186-32	Monument Peak Electronics Site Line	C440	X							
4186-33	Monument Peak Relay UG Line	C440	X							
4186-34	Moreno CDF Camp Line	C449				X				
4186-35	Moreno Village Line	C449	X			X	X			
4186-36	Mt. Laguna Improvement Association Line	C440*						X		
4186-37	Myers Extension Line	C440*						X		
4186-38	Oak Grove-Henshaw Line	C212*	X							
4186-39	Observatory Line	C214						X		
4186-40	O'Meara-Warners Line	C212		X						
4186-42	Pine Valley Glencliff Line	TL629	X							

Table D.4-145d
Vegetation Communities

Forest Service Holder Facility	Forest Service Facility Name	PLRP / Other Lines	Chamise or mixed chaparral	Redshank chaparral	Coastal sage scrub	Great Basin Sage scrub	Oak woodland	Conifer/oak woodland	Grassland	Developed
4186-43	Pine Valley Tract Line	C442	X				X			
4186-44	Rincon Borrego (Easement) Line	TL682	X				X			
4186-45	San Juan Line, Trabuco Ranger District	C1243			X	X				
4186-46	Sherilton Valley Ranch Line	C79	X							
4186-47	Skye Valley Line	C157	X							
4186-48	South Boundary Line	C449				X				
4186-49	State Camp #40 Line	C73	X							
4186-50	State College Observatory Line	C440						X		
4186-51	Stefflre Line	C237	X							
4186-52	Sunrise Line	C440	X					X		
4186-53	Sutherland Dam Line	C237	X				X			
4186-57	Viejas Valley Line	C78	X							
4186-59	Power Plant Substation (Glencliff Substation)	TL629				X	X			
4186-60	Scove Canyon Road Line	C440	X							
4186-62	Camp Ole Line	C440						X		
4186-63	Cuyapaipe Line	C440						X		
4186-64	Descanso Barracks Line	C73	X							
4186-65	El Prado Line	C440*						X		
4186-66	Stephenson Peak Communication Site Line	C440	X							

Table D.4-145d
Vegetation Communities

Forest Service Holder Facility	Forest Service Facility Name	PLRP / Other Lines	Chamise or mixed chaparral	Redshank chaparral	Coastal sage scrub	Great Basin Sage scrub	Oak woodland	Conifer/oak woodland	Grassland	Developed
4186-67	Glencliff Station Line	C440				X	X			
4186-68	Glencliff Trailer Pads Line	C441*				X	X			
4186-70	Japatul Station Line	C73	X							
4186-71	Japatul Station Underground Line	C73*	X							
4186-73	Los Huecos Line	C440						X		
4186-74	Los Pinos Line	C442	X							
4186-75	N.A.S.A. Mobile Laser Site Line	C440	X							
4186-76	Oak Grove Ranger Station Line	C212					X			
4186-79	U.S. Navy Survival, Camp Holcomb Line	C212		X		X				
4186-82	Boulder Oaks Campground Underground Line	C441*					X			

Source: Forest Service 2006b.
Note:
* Best possible crosswalk between Forest Service data and SDG&E GIS data related to lines and holder names.

Impact BIO-7: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan

Approval of the power line replacement projects would authorize the continued operations and maintenance of SDG&E electric facilities within the CNF and authorize the power line replacement projects. The proposed power line replacement projects would replace existing wood pole structures with new steel pole structures, in addition to minor relocation, removal and undergrounding, generally within the same ROW alignment as the existing power lines. The continued operations and maintenance of existing electric facilities within the CNF, along with approval of the proposed power line replacement projects, would comply with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan.

As described in Section D.4.2, the proposed power line replacement projects would comply with several federal and state regulations. Specifically, the proposed power line replacement projects would be consistent with the following regulations as described below. Please see Section D.4.2 for a description of each specified regulation.

- **Federal Land Policy and Management Act**
  - The Forest Service has identified all public lands that will be occupied by facilities associated with the construction, operation, and maintenance of the project. SDG&E will comply with (a) all terms and conditions identified in the FLPMA including (i) carrying out the purposes, rules, and regulations issued under the FLPMA; (ii) minimize damage to scenic/aesthetic values and fish and wildlife habitat and otherwise protect the environment; (iii) comply with applicable air and water quality standards established by or pursuant to applicable federal/state law; and (iv) comply with state standards for public health and safety, environmental protection, and siting, construction, operation, and maintenance of or for rights-of-way for similar purposes if those standards are more stringent than applicable federal standards; and (b) such terms and conditions as the Secretary concerned deems necessary as further described in Section 505 (also see DOI et al. 2001).
- **National Forest Management Act**
  - SDG&E MSUP will be consistent with the Forest Service Land Management Plan within the CNF (as described below).
- **Forest Service Land Management Plan**
  - SDG&E's proposed project includes several mechanisms to promote the efficient administration of the SUAs consistent with this LMP policy. Approval of the MSUP advances this LMP goal by providing efficient administration of multiple prior SUAs

and improved administration of National Forest System land, reducing administrative costs. In addition, SDG&E's proposed project would require SDG&E to continue to implement the NCCP and ensure consistency with applicable laws and regulations to minimize and avoid potential impacts to special-status species and their habitats. The NCCP includes suitable measures to protect species within the SUA areas. In addition to the NCCP, implementation of the Operation and Maintenance Plan and Fire Plan will also include consistent requirements that will improve efficiency and reduce administrative costs.

- **S42:** All 69 kV power lines and 12 kV distribution lines would be constructed in compliance with APLIC's Suggested Practices for Avian Protection on Power Lines. In addition, SDG&E would implement its internal avian protection guidelines to reduce potential impacts to avian species from line strikes and electrocutions in these areas. Many of the poles within the CNF that were determined to require avian protection have been retrofitted to include the necessary avian protection measures, and SDG&E's proposed project replacement poles would include the same or similar protections as the retrofitted poles and would fully comply with APLIC guidelines. SDG&E would coordinate with the Forest Service, CDFW, and USFWS to identify high-use flyways and implement appropriate measures.
- **S5:** SDG&E would treat all freshly cut live or recently dead coniferous stumps with a registered fungicide.
- **S11:** SDG&E's proposed project includes implementation of the SDG&E NCCP, which includes conservation measures that are applied during site-specific planning to avoid, minimize, or mitigate negative long-term effects on species and habitat. In addition, the "Pre-activity Survey Report process set forth in the SDG&E NCCP ensures coordination with the USFWS and CDFW resource specialists in the identification of relevant design criteria. Because SDG&E's proposed project involves the wood-to-steel replacement of existing 69 kV power lines and 12 kV distribution lines within existing ROWs, and with the implementation of the SDG&E NCCP protocols, SDG&E does not anticipate negative long-term effects on special-status species. SDG&E would include a review of species guidance documents in fire suppression or other emergency actions when and to the extent practical.
- **S12:** SDG&E would continue to implement the approved NCCP to ensure impacts to special-status species would be minimized during construction as well as operations and maintenance activities.
- **S18:** SDG&E would adhere to NCCP Protocols 2, 3, 4, 5, 7, 8, 10, 11, 13, 14, 17, 20, 24, 25, 27, 29, 34, 35, 41, 44, 48, 50, 54, 55, and 57 to avoid impacts to special-status avian species and nesting avian species. These protocols include, but are not limited to,

restricting vehicles to existing roads when feasible, conducting pre-activity nest surveys, utilizing biological resource monitors, and avoiding nesting season to the extent practicable.

- **S22:** SDG&E's proposed project includes adoption of a MSUP and wood-to-steel replacement of existing 69 kV power lines and 12 kV distribution lines within existing alignments. These activities would not affect fish and wildlife movement. Additionally, undergrounding C79 and portions of C440 and C449 would be beneficial to wildlife movement as the overhead segments in these areas would be placed underground and out of potential flyways.
- **S24:** SDG&E will continue to implement the NCCP, which mitigates impacts of ongoing uses and management activities on species.
- **S30:** In order to avoid and minimize potential impacts to Quino checkerspot butterfly (QCB), SDG&E would utilize NCCP protocols 1, 2, 3, 5, 7, 8, 10, 11, 13, 14, 17, 24, 25, 29, 34, 35, 41, 44, 48, 54, 55, and 57. SDG&E's proposed project and all associated activities are also covered by the QCB Habitat Conservation Plan (QCBHCP); as a result, SDG&E would also mitigate any potential proposed project effects to QCB by implementing this QCBHCP. Specifically, SDG&E would implement the protocols identified in QCBHCP Section 3.2, Actions to Minimize Impacts, and Section 3.3, Actions to Mitigate Impacts, which include conducting pre-activity surveys, conducting protocol-level adult QCB flight season surveys within suitable QCB habitat within the HCP's designated Mapped Area prior to construction and submitting the 45-day QCB Survey Results Report to the USFWS, and mitigating for impacted habitat. In the alternative, SDG&E has the option to not complete surveys but assume presence of the species and mitigate according to established ratios established in the QCBHCP. With implementation of the QCBHCP and SDG&E NCCP, any potential impacts to QCB from SDG&E's proposed project would be minimized.
- **S47**: As described in Section 10.4, Hydrology, of the Preliminary POD, Forest Service-identified RCAs were identified and included for consideration during project design to avoid the construction of replacement steel poles within these areas, where possible. Additionally, SDG&E is working with the Forest Service to identify existing poles within RCAs that may have access roads that can be relocated or eliminated from these areas. In accordance with the Forest Service' CNF LMP Part 1 Goal 5.2, SDG&E included these areas for consideration during project design and avoided, where possible, the placement of steel poles and temporary work areas within RCAs to the extent feasible. Where resource flagging and avoidance would not completely eliminate the potential for impacts to these resources, or where construction activities would be required to some extent within the mapped boundaries of a riparian area,

SDG&E would implement project-specific ordinary operating restrictions. SDG&E's proposed project would temporarily impact approximately 7.2~~8.76~~ acres of RCAs during construction, and would permanently impact approximately ~~0.05~~< 0.1 acre of these areas from the construction of the replacement steel poles. These temporary and permanent impacts would be minor in the context of approximately 2,962 acres of identified RCAs within SDG&E's project survey area.

- **CNF S9:** As described in Section 10.1 Biological Resources of the POD, SDG&E would replace several poles within occupied habitat for the Laguna Mountains skipper along C440. USFWS-designated critical habitat is also within the vicinity of C440. SDG&E has conducted extensive surveys within these areas and designed SDG&E's proposed project to minimize the number of replacement poles to be constructed within these areas; SDG&E's survey data reveal that, in the currently planned pole construction locations, the likelihood of presence of the Laguna Mountains skipper is low. Although this species is not covered under the SDG&E NCCP, SDG&E would utilize NCCP protocols 1, 2, 3, 5, 7, 8, 10, 11, 13, 14, 17, 24, 25, 29, 34, 35, 41, 44, 48, 54, 55, and 57. SDG&E's protocols are expected to result in the avoidance of effects to Laguna Mountains skipper. If pre-activity surveys determine that potential effects could occur, then SDG&E would work directly with the appropriate resource agencies.
- **CNF S13:** SDG&E's proposed project area is located within USFWS-designated critical habitat for San Diego thornmint. San Diego thornmint is considered a Covered Species by the SDG&E NCCP. Therefore, with the implementation of the appropriate NCCP protocols, as described in Section 10.1, Biological Resources, of the POD, impacts to San Diego thornmint would be minimized.

- **Clean Water Act**
  - SDG&E's proposed project will comply with regulations under the Clean Water Act (as further described in Section D.9, Hydrology and Water Quality, of this EIR/EIS). SDG&E's proposed project is anticipating CWA Section 401 Water Quality Certification approval for activities authorized by federal agencies that may affect state water quality and CWA Section 404 Nationwide or Individual Permit approvals for the fill of waters of the United States (SDG&E 2013a, see Table 16). SDG&E's proposed project would require SDG&E to continue to implement the SDG&E Subregional NCCP and ensure consistency with applicable laws and regulations to minimize and avoid potential impacts to special-status species and their habitats. SDG&E would utilize NCCP protocols in addition to applicable mitigation measures for the protection and avoidance of jurisdictional resources. Please see Section D.9, Hydrology and Water Quality, of this EIR/EIS for a detailed description regarding CWA Sections 208, 303, 304, 401, 402, and 404.

- **Federal Endangered Species Act**
  - SDG&E's proposed project adheres to provisions of FESA and has implemented measures and coordination with the USFWS and CDFW for the protection of special-status species and their habitats. In addition, SDG&E's proposed project would require SDG&E to continue to implement the SDG&E Subregional NCCP and ensure consistency with applicable laws and regulations to minimize and avoid potential impacts to special-status species and their habitats. SDG&E has successfully implemented the NCCP in close coordination with the USFWS and the CDFW for construction and operations and maintenance activities within sensitive habitats for nearly two decades. The NCCP includes suitable measures to protect species within the special use authorization areas. In addition to the NCCP, implementation of the Operation and Maintenance Plan and Fire Plan will also include consistent requirements that will improve efficiency and reduce administrative costs.
- **Executive Order 11990 Protection of Wetlands**
  - SDG&E's proposed project has incorporated measures to avoid, to the extent possible, the impacts associated with the destruction or modification of floodplains and wetlands. Specifically, SDG&E would utilize NCCP protocols 13, 14, 16, 17, 19–26, 29–31, 35, 51–53, 55, 57–59, and 61 associated with sensitive habitats, wetlands, rivers, and streams.
- **Fish and Wildlife Coordination Act**
  - SDG&E's proposed project may result in the modification of a natural stream or body of water. As such, SDG&E's proposed project will comply with the Fish and Wildlife Coordination Act and coordinate with the USFWS in evaluating impacts to fish and wildlife from SDG&E's proposed project. Indeed, SDG&E has already successfully implemented the NCCP in close coordination with the USFWS and CDFW for construction and operations and maintenance activities within sensitive habitats for nearly two decades.
- **Migratory Bird Treaty Act**
  - SDG&E's proposed project will comply with regulations designated under the MBTA. SDG&E has successfully implemented the NCCP in close coordination with the USFWS and the CDFW for construction and operations and maintenance activities within sensitive habitats for nearly two decades. SDG&E's proposed project would require SDG&E to continue to implement the NCCP and ensure consistency with applicable laws and regulations to minimize and avoid potential impacts to special-status species and their habitats. SDG&E would utilize NCCP protocols 2, 3, 5, 7, 10,

11, 13, 40, and 54–57, in addition to applicable mitigation measures for the protection of migratory birds, their nests, and eggs.

- **Bald and Golden Eagle Protection Act**
  - SDG&E's proposed project has incorporated actions and measures to comply with the Bald Eagle Protection Act. In order to avoid and minimize potential impacts to the bald eagle and golden eagle, SDG&E would utilize NCCP protocols 2, 3, 5, 7, 10, 11, 13, 40, 54–57. The bald eagle and golden eagle are covered under the SDG&E NCCP. SDG&E's proposed project would require SDG&E to continue to implement the NCCP and ensure consistency with applicable laws and regulations to minimize and avoid potential impacts to these special-status eagles and their habitats. Additionally, SDG&E has successfully implemented the NCCP in close coordination with the USFWS and the CDFW for construction and operations and maintenance activities within sensitive habitats for nearly two decades.
- **California Endangered Species Act**
  - SDG&E's proposed project is in compliance with CESA. SDG&E has successfully implemented the NCCP in close coordination with the USFWS and the CDFW for construction and operations and maintenance activities within sensitive habitats for nearly two decades. SDG&E's proposed project would require SDG&E to continue to implement the NCCP and ensure consistency with applicable laws and regulations to minimize and avoid potential impacts to these special-status eagles and their habitats.
- **California Environmental Quality Act**
  - SDG&E's proposed project is in compliance with CEQA. Pursuant to CEQA, special-status plants and wildlife that receive consideration under CEQA have been incorporated and evaluated and/or mitigated as part of this environmental document.
- **California Fish and Game Code**
  - SDG&E's proposed project is in compliance with the California Fish and Game Code. SDG&E has successfully implemented the NCCP in close coordination with the USFWS and the CDFW for construction and operations and maintenance activities within sensitive habitats for nearly two decades. SDG&E's proposed project would require SDG&E to continue to implement the NCCP and ensure consistency with applicable laws and regulations to minimize and avoid potential impacts to these special-status wildlife and their habitats.
- **California Native Plant Protection Act**
  - SDG&E's proposed project is in compliance with the California Native Plant Protection Act, as it applies to SDG&E's proposed project. Specifically, only one

species with a moderate potential to occur along SDG&E's proposed project sites would be protected under the act (little elephant tree [*Dudlea saxosa* ssp. *aloides*]). SDG&E's proposed project would require SDG&E to continue to implement the NCCP and ensure consistency with applicable laws and regulations to minimize and avoid potential impacts to special-status species and their habitats. SDG&E would utilize NCCP protocols in addition to applicable mitigation measures for the protection of this species.

- **California Natural Community Conservation Planning Act**
  - SDG&E's proposed project would require SDG&E to continue to implement the SDG&E Subregional NCCP and ensure consistency with applicable laws and regulations to minimize and avoid potential impacts to special-status species and their habitats. SDG&E has successfully implemented the NCCP in close coordination with the USFWS and the CDFW for construction and operations and maintenance activities within sensitive habitats for nearly two decades. The NCCP includes suitable measures to protect species within the SUA areas.
- **California Wilderness Act of 1984**
  - Although the SDG&E NCCP will cover the majority of the project area, C157 crosses two wilderness areas: the Pine Creek and Hauser wilderness areas. Approximately 0.08 mile and 0.53 mile of C157 are located within Pine Creek and Hauser Creek wilderness areas, respectively. These wilderness areas are managed with the goal of preserving their primitive wilderness characteristics and were designated as wilderness in 1984 pursuant to the California Wilderness Act of 1984. C157 was originally constructed between 1920 and 1960, prior to the implementation of the California Wilderness Act. This line is a valid and existing right and use under Forest Service Manual Section 2320.5. Wood-to-steel replacement of the existing wood utility poles along C157 is proposed as a fire safety measure, consistent with authorizing statutory authority contained in both the Wilderness Act and the California Wilderness Act of 1984. These provisions state that the Secretary concerned may take "such measures as are necessary in the control of fire, insects and diseases, subject to such conditions as he deems desirable" (Public Law Section 103(b)(2)). Any associated impacts from SDG&E's proposed project would be expected to occur during construction activities, be short-term and temporary, and would improve the existing condition from a fire safety perspective, which is consistent with the CNF Plan. As such no conflict with the California Wilderness Act would occur.

- **Porter-Cologne Water Quality Control Act**
  - SDG&E's proposed project will comply with regulations under the Porter-Cologne Water Quality Control Act (as further described in Section D.9, Hydrology and Water Quality, of this EIR/EIS). SDG&E's proposed project anticipates approval for a CWA Section 401 Water Quality Certification for activities authorized by federal agencies that may affect state water quality (SDG&E 2013a, see Table 16). Additionally, if there is evidence that other pollutants are present in the groundwater, the applicant would be required to obtain a separate permit from the RWQCB or local jurisdiction (see Section D.9). SDG&E's proposed project would require SDG&E to continue to implement the SDG&E Subregional NCCP and ensure consistency with applicable laws and regulations to minimize and avoid potential impacts to special-status species and their habitats. SDG&E would utilize NCCP protocols in addition to applicable mitigation measures for the protection and avoidance of jurisdictional resources.
- **CDFW Streambed Alteration Agreement**
  - SDG&E's proposed project will comply with regulations under the CDFW SAA. SDG&E's proposed project activities have a potential to disturb the bed or bank of a jurisdictional water body. As such, SDG&E's proposed project anticipates approval for a Section 1600 SAA permit (SDG&E 2013a, see Table 16). SDG&E's proposed project would require SDG&E to continue to implement the SDG&E Subregional NCCP and ensure consistency with applicable laws and regulations to minimize and avoid potential impacts to special-status species and their habitats. SDG&E would utilize NCCP protocols in addition to applicable mitigation measures for the protection and avoidance of jurisdictional resources.
- **County of San Diego MSCP**
  - SDG&E's proposed project traverses through the San Diego Draft East County Plan and a portion of the San Diego Draft North County Plan areas. Neither of these MSCPs have been adopted; therefore, there is no conflict. Nonetheless, SDG&E's proposed project would occur within and follow the requirements of the SDG&E Subregional NCCP, established according to FESA, CESA, and the California NCCP Act. In the event of a conflict, the SDG&E Subregional NCCP would supersede other applicable plans, including the Draft North County Plan and Draft East County Plan. In addition, temporary and permanent impacts to biological resources resulting from SDG&E's proposed project would be restored and/or mitigated in accordance with the mitigation requirements established by SDG&E in its NCCP. Where appropriate, habitat credits would be deducted from NCCP credits. In addition, during construction, SDG&E would ensure that construction activities are conducted in accordance with NCCP operational protocols to avoid, minimize, or mitigate impacts to biological resources.

- **County of San Diego Resource Protection Ordinance**
  - It has been determined that SDG&E's proposed project is exempted under the County RPO (Sec. 86.605(c)1) since the project is consistent with an adopted subregional plan (SDG&E Subregional NCCP). Additionally, SDG&E's proposed project would require SDG&E to continue to implement the SDG&E Subregional NCCP and ensure consistency with applicable laws and regulations to minimize and avoid potential impacts to special-status species and their habitats, including wetlands. SDG&E would utilize NCCP protocols in addition to applicable mitigation measures for the protection and avoidance of biological resources.
- **SDG&E Subregional NCCP**
  - SDG&E's proposed project would require SDG&E to continue to implement the NCCP and ensure consistency with applicable laws and regulations to minimize and avoid potential impacts to special-status species and their habitats. The NCCP includes suitable measures to protect species within the SUA areas. In addition to the NCCP, implementation of the Operation and Maintenance Plan and Fire Plan will also include consistent requirements that will improve efficiency and reduce administrative costs. Any effect of habitat loss, habitat alteration, mortality, or injury on sensitive species will be reduced through the implementation of mitigation measures incorporated into the MSUP, including use of the SDG&E NCCP, raptor protection measures, and invasive plant control measures. The NCCP and other measures will be incorporated into the Operating Plan as enforceable conditions of the permit, and actions identified in the NCCP will be extended to species on the Regional Forester's Sensitive Species list.
- **BLM East San Diego County RMP and Final EIS**
  - SDG&E's proposed project does not occur within any special designated management areas pertinent to the biological resources. However, SDG&E's proposed project is in accordance with the broad general objectives established by the RMP for Vegetation Resource Management (RMP Section 2.5), Wildlife Resource Management (RMP Section 2.6), and Special-Status Species Management (RMP Section 2.7). The broad management goals and objectives of these three sections of the RMP are achieved through the suite of APMs, MMs, and compliance with federal and state laws and regulations documented throughout this EIR/EIS. Additionally, SDG&E's proposed project would require SDG&E to continue to implement the SDG&E Subregional NCCP and ensure consistency with applicable laws and regulations to minimize and avoid potential impacts to special-status species and their habitats. SDG&E has successfully implemented the NCCP in close coordination with the USFWS and the CDFW for construction and operations and

maintenance activities within sensitive habitats for nearly two decades. The NCCP includes suitable measures to protect species within the SUA areas.

- **BLM South Coast Draft RMP and EIS**
  - SDG&E's proposed project traverses through the BLM South Coast Draft RMP and EIS. This RMP has not yet been adopted; therefore, there is no conflict. Nonetheless, SDG&E's proposed project would occur within and follow the requirements of the SDG&E Subregional NCCP, established according to FESA, CESA, and the California NCCP Act. Temporary and permanent impacts to biological resources resulting from SDG&E's proposed project would be restored and/or mitigated in accordance with the mitigation requirements established by SDG&E in its NCCP. Where appropriate, habitat credits would be deducted from NCCP credits. In addition, during construction, SDG&E would ensure that construction activities are conducted in accordance with NCCP operational protocols to avoid, minimize, or mitigate impacts to biological resources.

As described above, SDG&E operates under its own NCCP, established according to FESA. CESA, and the California NCCP Act. As a result, the majority of the project would be covered under the SDG&E NCCP, and the proposed pole replacement would not conflict with any provisions of an adopted HCP, NCCP, or other approved conservation plan as a result of project or operations and maintenance activities. Therefore, under NEPA impacts are not adverse, and under CEQA are less than significant (Class III).

Impact BIO-8: Interfere 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

Approval of the power line replacement projects would authorize the continued operations and maintenance of SDG&E electric facilities within the CNF and authorize the power line replacement projects. The proposed power line replacement projects would replace existing wood pole structures with new steel pole structures, in addition to minor relocation, removal and undergrounding, generally within the same ROW alignment as the existing power lines. The continued operations and maintenance of existing electric facilities within the CNF, along with approval of the proposed power line replacement projects, would not interfere with the movement of any native resident or migratory fish or wildlife species or with established wildlife corridors or impede the use of native wildlife nursery sites.

As stated in Section D.4.1, Environmental Setting/Affected Environment, a number of drainage features may occur within SDG&E's proposed project area that could potentially be used as a movement corridor for wildlife species; therefore, the quality of the adjacent drainages as a

wildlife movement corridor for terrestrial species is diminished on a temporary basis during construction for these areas. However, the proposed construction activities would not significantly impact or restrict general wildlife movement due to the temporary and intermittent locations of construction activities outside the drainage, ridge, and other features. Although some wildlife may be temporarily displaced during construction, wildlife would not be physically prevented from moving around project equipment in SDG&E's proposed project corridor, particularly since most wildlife will move through the landscape during the evening hours when construction is not occurring.

In general, power lines may interfere with flight movement by causing collisions, electrocutions, or posing visual barriers to species in flight. Particularly, large avian species may be at greater risk of being electrocuted by power lines and it is possible that redundant lines could interfere with night migrations of avian species and bat foraging tactics by reducing echolocation efficiency in or around power lines. As discussed above, the risk of electrocution is expected to be reduced as a result of SDG&E's proposed project. SDG&E's proposed project is also not expected to restrict flight movement or significantly affect aerial corridors for bird and bat species from baseline conditions. As discussed above, the number of guy-wires, poles, and redundant lines will be reduced as a result of SDG&E's proposed project. Specifically, removal and undergrounding will reduce aboveground components that may affect aerial corridors. Therefore, the number of lines crossing through aerial corridors is expected to be less than baseline. In addition, SDG&E's proposed project site is located within an existing ROW where power lines are currently present, and pole replacements are primarily adjacent to existing pole site locations. SDG&E's proposed project does not propose to grade any new access roads or construct new permanent fences. Smoothing of the access roads and/or vegetation clearing will be necessary to improve some existing access roads and to re-establish unmaintained access roads pursuant to SDG&E Subregional NCCP. Since no extension of these TL/circuits are proposed, the quality of the adjacent wildlife movement corridors for terrestrial species is diminished on a temporary basis only during construction. The protective measures outlined in the SDG&E Subregional NCCP and the measures presented for Impact BIO-6 would avoid and minimize any impacts associated with construction. Therefore, it is anticipated that direct and indirect effects of SDG&E's proposed project to native wildlife movement would not be adverse. Therefore, under NEPA impacts are not adverse, and under CEQA are less than significant (Class III).

Because the number and footprint of replacement facilities will be less than the baseline, and resulting operations and maintenance will be reduced, impacts to wildlife movement corridors are anticipated to be less than significant under CEQA and not adverse under NEPA during operations and maintenance activities.

D.4.4 Forest Service Proposed Actions

D.4.4.1 TL 626 Alternative Routes

Environmental Setting/Affected Environment

Each of the five Forest Service proposed action options would relocate a segment of the TL626. The farthest relocation would be approximately 2 miles east of the existing alignment. While intensive field surveys have not been completed for Options 1 through 4, general field reconnaissance data on vegetation communities and habitat types were collected during pedestrian surveys from public roadways and aerial surveys in September and October 2013 (SDG&E 2014a). Based on the results of these surveys which show similarity of habitat and proximity of known species occurrences, it is assumed that the biological resources environmental setting, except where noted otherwise, is similar to that identified in Sections D.4.1 and D.4.2.

Options 1 and 2: SDG&E Proposed Overhead Alignments Through/Around Inaja and Cosmit Reservation Lands

Environmental Effects

Impact BIO-1: This alternative would reroute a segment of TL626 to the east along a new undisturbed ROW approximately 5.5 miles (Option 1) or 5.6 miles (Option 2) (Figure B-4a). All other project components would remain the same. Access roads that will no longer be used along TL626 would be removed and revegetated/restored. For Options 1 and 2, a total of approximately 20.10 acres[37] of access roads would be removed and restored, including 3.03 acres of mixed oak woodland, 9.47 acres of southern mixed chaparral, and 4.01 acres of southern riparian forest. There is a greater potential that biological resources could be significantly impacted by Options 1 and 2 within the new undisturbed ROW where the disturbance area would be greater compared to the reconstruction of TL626 in place as proposed. The greater impacts would primarily result from the increased temporary and permanent impacts to vegetation, the additional impacts from the construction of new access roads, and impacts from tree removal than those assessed in Section D.4.3.3 for SDG&E's proposed project.

The temporary and permanent impacts to vegetation communities are summarized in Table D.4-15~~6~~. A total of approximately 9 acres (Options 1 and 2) of ~~temporary~~ permanent impacts and

[37] Access roads assumed to be 15 feet wide. Not all access roads were included during vegetation mapping efforts. Therefore, restoration acres do not add up to total acres of access roads.

approximately 23 acres (Option 1) and 28 acres (Option 2) of ~~permanent~~ temporary impacts to vegetation communities would result. The additional permanent impacts would primarily result from the construction of new access roads and helicopter landing areas that would continue to be maintained following construction. In addition, Option 2 is partially located in Forest Service-suitable modeled habitat for Laguna Mountains skipper (*Pyrgus ruralis lagunae*) and San Bernardino bluegrass (*Poa atropurpurea*). As a result, Option 2 would potentially have greater impacts to these species due to temporary and permanent impacts to this habitat from construction activities, including the construction of new access roads and helicopter landing areas where none currently exist. Further, impacts due to maintenance and repair of new and existing access roads and helicopter landing areas, pole brushing, tree trimming, and the use of pesticides and herbicides for maintenance activities would be greater because these facilities are being constructed in a new ROW. Although impacts to vegetation communities would be greater compared to the reconstruction of TL626 in place as proposed, similar to SDG&E's proposed project, temporary and permanent impacts would be mitigated through implementation of APM BIO-03 (including SDG&E NCCP 7.1 Operational Protocols, 7.2 Habitat Enhancement Measures, and 7.4 Mitigation Credits), APM BIO-05, APM BIO-07, APM BIO-10, and MM BIO-1 through MM BIO-8~~(b)~~, MM FF-3, and MM HYD-5, as described in Section D.4.3.3. Temporary and permanent adverse and significant impacts at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

Table D.4-15~~6~~
Vegetation Communities Impact Acreage for ~~the~~ Options 1 and 2

Habitat Type	Option 1		Option 2	
	Temporary Impact Acreage	*Permanent Impact Acreage*	*Temporary Impact Acreage*	*Permanent Impact Acreage*
Freshwater Seep/Open Water	0.19	0.40	0.19	0
Mixed Oak Woodland	6.96	2.08	8.28	1.90
Non-Native Grassland	7.54	2.50	7.47	1.50
Southern Mixed Chaparral	8.25	4.11	12.04	5.04
Southern Riparian Forest	0.23	0	0.23	0
Urban and Developed/Ornamental	0.11	0	0.11	0
Total	**23.28**	**9.1**	**28.29**	**8.44**

Source: SDG&E 2014a.

Impact BIO-2: Rerouting a segment of TL626 to the east as proposed under Options 1 and 2 would reduce impacts to Forest Service RCAs and riparian areas. However, as facilities would be located in a new undisturbed ROW, greater temporary and permanent impacts to habitat within preserve area communities from erosion, sedimentation, fire risk, use of herbicides and/or introduction of non-native seeds to native communities would result from ground disturbance

and operations and maintenance personnel and equipment. Although SDG&E's NCCP may not cover new activities outside of their ROWs; the requirements of the existing NCCP would apply along with applicable mitigation measures as outlined below. Therefore, as with SDG&E's proposed project, implementation of APM BIO-03 (including SDG&E NCCP Section 7.1 and 7.2 Operational Protocols), APM BIO-05, APM BIO-10, MM BIO-1 through MM BIO-12, and MM HYD-5, temporary and permanent adverse and significant impacts to sensitive vegetation communities at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

Impact BIO-3: The impact of Options 1 and 2 construction and operations disturbances to wildlife and wildlife mortality would be greater than that assessed in Section D.4.3.3 for SDG&E's proposed project. Impacts would be greater due to increased disturbance along existing and new access roads and the new electric line ROW as well as new operations and maintenance activities in an area that previously had none. However, as described in Section D.4.3.3, potential disturbance and mortality of common wildlife does not rise to a level of significance, and mitigation measures implemented to avoid, minimize, and mitigate construction-related impacts to special-status wildlife species (see MM BIO-13 through MM BIO-32 under Impact BIO-6) would also be protective of common wildlife species. Similar to SDG&E's proposed project, the construction-related impact of these options on wildlife disturbance and direct mortality would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

Impact BIO-4: Temporary and permanent impacts to jurisdictional resources under Options 1 and 2 would potentially be greater than that assessed in Section D.4.3.3 for SDG&E's proposed project due to relocation of Options 1 and 2 in an undisturbed ROW. Overall, temporary and permanent impacts to jurisdictional waters and wetlands resulting from this alternative would be significant and adverse. Therefore, as with SDG&E's proposed project, with implementation of APM BIO-03 (including SDG&E NCCP 7.1 Operational Protocols, 7.2 Habitat Enhancement Measures, and 7.4 Mitigation Credits), APM BIO-05, APM BIO-10, APM HYD-01 through APM HYD-11, MM HYD-2a, MM HYD-2b, MM HYD-3, MM BIO-1 through MM BIO-7, and MM BIO-10 through MM BIO-12, temporary and permanent adverse and significant impacts at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

Impact BIO-5: The impact of Options 1 and 2 on the introduction of invasive, non-native, or noxious plant species would be greater than that assessed in Section D.4.3.3 for proposed project due to construction, operations, and maintenance activities occurring in an undisturbed ROW. However, similar to SDG&E's proposed project, the impact on the introduction of invasive, non-native, or noxious plant species would be adverse under NEPA and therefore, APM BIO-03,

APM BIO-05, APM BIO-10, and MM BIO-1 through MM BIO-7~~, and MM BIO-8(b)~~ have been provided to mitigate this impact. Under CEQA, impacts would be significant but can be mitigated to a level that is considered less than significant (Class II).

Impact BIO-6: The impact of Options 1 and 2 on species identified as a candidate, sensitive, or special-status species would be greater than that assessed in Section D.4.3.3 for SDG&E's proposed project due to construction, operations, and maintenance activities occurring in an undisturbed ROW. However, similar to SDG&E's proposed project, the temporary and permanent impacts of Options 1 and 2 on candidate, sensitive, or special-status species would be significant and adverse under NEPA. As with SDG&E's proposed project, APM BIO-03 through APM BIO-10, APM NOI-06 and APM NOI-09, and MM BIO-1 through MM BIO-8~~(b)~~, MM BIO-10 through MM BIO-15, MM BIO-20 through MM BIO-32, and MM HYD-5, as applicable, would be implemented to reduce significant and adverse impacts. Therefore, temporary and permanent impacts at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

Impact BIO-7: Potential conflicts with local, regional, or state HCPs would reflect similar impact findings previously discussed in Section D.4.3.3 for SDG&E's proposed project. Options 1 and 2 would not conflict with an adopted HCP, NCCP, or other approved conservation plan as a result of the project or operations and maintenance activities. Therefore, under NEPA impacts are not adverse, and under CEQA impacts are considered less than significant (Class III).

Impact BIO-8: The impact of Options 1 and 2 on linkages or wildlife movement corridors and/or native wildlife nursery sites would potentially be greater than SDG&E's proposed project due to new facilities located in an undisturbed ROW. During construction, wildlife movement would be reduced due to the presence of vehicles and equipment in the area; however, during operations the nature of the electric facilities would not create barriers to wildlife movement. Since construction is short-term and will not occur in a single location for prolonged periods of time, identified impacts on linkages or wildlife movement corridors would be similar to SDG&E's proposed project, as described in Section D.4.3.3. Therefore, impacts would not be adverse under NEPA, and under CEQA, impacts would be considered less than significant (Class III).

Option 3 Partial Underground Relocation in Boulder Creek Road

Environmental Effects

Impacts BIO-1 through BIO-6: Options 3a and 3b would consist of placing a segment of TL626 underground in Boulder Creek Road. As shown in Figure B-4b, the rerouted underground segment of Option 3a is approximately 11.4 miles long, and Option 3b is 6.3 miles long (each option includes an approximately 1-mile overland segment to interconnect back into the existing

TL626 alignment (see Figure B-4b). All other project components would remain the same. Access roads that will no longer be used along TL626 would be removed and revegetated/restored. For Option 3a, a total of approximately 23.21 acres[38] of access roads would be removed and restored, including 3.03 acres of mixed oak woodland, 12.44 acres of southern mixed chaparral, and 4.01 acres of southern riparian forest. For Option 3b, a total of approximately 18.58 acres[39] of access roads would be removed and restored, including 3.03 acres of mixed oak woodland, 8.17 acres of southern mixed chaparral, and 4.01 acres of southern riparian forest.

Options 3a and 3b would place a segment of TL626 into Boulder Creek Road, which is disturbed, thereby reducing direct impacts to biological resources than those described for TL626. By undergrounding a portion of TL626, Options 3a and 3b would reduce direct impacts to vegetation communities, suitable habitat for plant and wildlife species (including special-status species), and habitat linkages/movement corridors that would have otherwise been impacted. There would also be a reduction of direct collision-related impacts to avian and bat species through the elimination of approximately 4.9 miles (Option 3a) and 3.2 miles (Option 3b) of transmission towers and associated lines.

Although direct impacts would be reduced based on these options, trenching activities within the roadway could have the same potential to indirectly impact biological resources as reconstruction of TL626 in place as proposed. In addition, temporary impacts to jurisdictional resources (Impact BIO-4) under this alternative would be greater than that assessed in Section D.4.3.3 for SDG&E's proposed project due to an increased potential to impact hydrological features (undergrounding alignment crosses between 5 and 10 hydrological features). Permanent adverse impacts that are anticipated to occur as a result of this alternative includes pole construction along a 1-mile undisturbed ROW where the alternatives would reconnect with the TL626 alignment. As with SDG&E's proposed project, Impacts BIO-1 through BIO-6 are anticipated to be mitigated through implementation of APMs (including SDG&E NCCP 7.1 Operational Protocols, 7.2 Habitat Enhancement Measures, and 7.4 Mitigation Credits), and mitigation measures as described under TL626 relocation Options 1 and 2. Therefore, temporary and permanent adverse and significant impacts to biological resources described here would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

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[38] Access roads assumed to be 15 feet wide. Not all access roads were included during vegetation mapping efforts. Therefore, restoration acres do not add up to total acres of access roads.

[39] Access roads assumed to be 15 feet wide. Not all access roads were included during vegetation mapping efforts. Therefore, restoration acres do not add up to total acres of access roads.

Impacts BIO-7 and BIO-8: Impacts would reflect similar impact findings previously discussed in Section D.4.3.3 for SDG&E's proposed project. Similar to SDG&E's proposed project, the undergrounding along Boulder Creek Road would not conflict with any provisions of an adopted HCP, NCCP, or other approved conservation plan (Impact BIO-7) and would not create new barriers that would impede the local or regional movement of wildlife in the area (Impact BIO-8). Therefore, under NEPA impacts are not adverse, and under CEQA are less than significant (Class III).

Option 4: Overhead Relocation along Boulder Creek Road

Environmental Effects

Impacts BIO-1 through BIO-6: Option 4 would consist of relocating a segment of TL626 overhead along Boulder Creek Road to the Pine Hills Fire Station (approximately 7.5 miles) and then merging with proposed Options 1 or 2 overland alignments for approximately 2.1 miles to interconnect with pole Z213680 (see Figure B-4a). All other project components would remain the same. Access roads that will no longer be used along TL626 would be removed and revegetated/restored. For Option 4, a total of approximately 23.21 acres[40] of access roads would be removed and restored, including 3.03 acres of mixed oak woodland, 12.44 acres of southern mixed chaparral, and 4.01 acres of southern riparian forest.

While this option would place a segment of TL626 along the Boulder Creek Road alignment, which is generally disturbed, the temporary and permanent impacts due to vegetation loss (Impact BIO-1) would be greater than that assessed in Section D.4.3.3 for SDG&E's proposed project due to the longer 8.3-mile overhead ROW and associated disturbance area required compared to the reconstruction of TL626 in place as proposed. Although the disturbance area would be greater under this alternative, due to the disturbed nature of the ROW, Impacts BIO-2 through BIO-6 are anticipated to be similar to those described for SDG&E's proposed project. As with SDG&E's proposed project, Impacts BIO-1 through BIO-6 are anticipated to be mitigated through implementation of APMs (including SDG&E NCCP 7.1 Operational Protocols, 7.2 Habitat Enhancement Measures, and 7.4 Mitigation Credits), and mitigation measures as described under TL626 relocation Options 1 and 2. Therefore, temporary and permanent adverse and significant impacts to biological resources would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

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[40] Access roads assumed to be 15 feet wide. Not all access roads were included during vegetation mapping efforts. Therefore, restoration acres do not add up to total acres of access roads.

Impacts BIO-7 and BIO-8: Impacts would reflect similar impact findings previously discussed in Section D.4.3.3 for SDG&E's proposed project. Similar to SDG&E's proposed project, development of the 5.5-mile overhead portion of TL626 along Boulder Creek Road would not conflict with any provisions of an adopted HCP, NCCP, or other approved conservation plan (Impact BIO-7) and would not create new barriers that would impede the local or regional movement of wildlife in the area (Impact BIO-8). Therefore, under NEPA impacts are not adverse, and under CEQA are less than significant (Class III).

Option 5: Reroute and Undergrounding around Inaja Picnic Area

Environmental Effects

Impacts BIO-1 through BIO-6: Option 5 would consist of relocating a portion of TL626 around the Inaja Picnic Area and as shown in Figure B-4c, would consist of approximately 2,100 feet of relocated overhead alignment along with a 400-foot underground segment located within an existing parking lot. All other project components would remain the same. Construction and operational impacts related to biological resources would be similar under Option 5 to those described in Section D.4.3.3 for SDG&E's proposed project. The exception is a potential reduction in long-term direct collision-related impacts to golden eagles as the existing line crosses over the San Diego River gorge at higher elevations and is located within 1 mile of a historical golden eagle nest. Option 5 would continue down the ridge line and cross near the tree canopy line, further from the historical eagle nest and adding topographic and visual buffers. As undergrounding activities would occur in an existing parking lot, no biological resources impacts would occur for this project component. As the Inaja Picnic Area is located in the same area of SDG&E's proposed project, just south of SR-78 immediately east of the existing alignment for TL626, there would not be a substantial change to the baseline condition regarding the biological resources that would be impacted during construction or operations or maintenance. Therefore, as with SDG&E's proposed project, with implementation of APM BIO-01 through APM BIO-10, APM HYD-01 through APM HYD-11, as well as implementation of MM BIO-1 through MM BIO-32, MM FF-3, MM HYD-2a, MM HYD-2b, MM HYD-3 through MM HYD-5~~6~~, and MM NOI-6 and MM NOI-9, as applicable, adverse and significant Impacts BIO-1 through BIO-6 would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

Impacts BIO-7 and BIO-8: Impacts would reflect similar impact findings previously discussed in Section D.4.3.3 for SDG&E's proposed project. Similar to SDG&E's proposed project, the reroute and undergrounding around the Inaja Picnic Area would not conflict with any provisions of an adopted HCP, NCCP, or other approved conservation plan (Impact BIO-7) and would not create new barriers that would impede the local or regional movement of wildlife in the area

(Impact BIO-8). Therefore, under NEPA impacts are not adverse, and under CEQA impacts are less than significant (Class III).

D.4.4.2 C157 Partial Relocation to Avoid Designated Wilderness

Option 1 SDG&E Proposed Alignment Between Two Wilderness Areas
Option 2 City of San Diego Modified Alignment

Environmental Setting/Affected Environment

While intensive field surveys have not been completed for Options 1 and 2, general field reconnaissance data on vegetation communities and habitat types were collected during pedestrian surveys in January 2014 (SDG&E 2014b). Therefore, based on the results of these surveys and the proximity of known species occurrences, for purposes of the analysis conducted in this document, the environmental setting is assumed to be similar to that identified in Sections D.4.1 and D.4.2.

Environmental Effects

Impacts BIO-1 through BIO-6: Options 1 and 2 would reroute an approximately 2-mile segment of C157 to the south of the existing alignment approximately 0.25 mile along new undisturbed ROW (Figure B-5a). All other project components would remain the same. The temporary and permanent impacts to biological resources under this alternative would be similar to those assessed in Section D.4.3.3 for SDG&E's proposed project. A total of 1.07 acres of temporary impact to vegetation communities would result from this alternative, including approximately 0.02 acre of mixed oak woodland, 0.17 acre of native grassland, 0.25 acre of non-native grassland, 0.09 acre of semi-desert chaparral, 0.52 acre of southern mixed chaparral, and 0.02 acre of southern riparian forest (SDG&E 2014b). Temporary impacts would increase by 0.2 acre compared to the proposed alignment. Permanent impacts to vegetation communities would be essentially the same (0.01 acre). Option 2 would result in slightly less direct and indirect permanent and temporary impacts than Option 1 through a reduced aerial and ground footprint. In addition, Options 1 and 2 have two poles located within USFWS-designated arroyo toad critical habitat. Therefore, construction would result in a temporary impact area of approximately 0.14 acre and a permanent impact area of less than 0.01 acre to arroyo toad critical habitat. However, with implementation of MM BIO-33, adverse and significant impacts to arroyo toad critical habitat would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

As with SDG&E's proposed project, temporary and permanent biological resources impacts (Impacts BIO-1 through BIO-6) would be mitigated through implementation of APM BIO-01

through APM BIO-10 (including SDG&E NCCP 7.1 Operational Protocols, 7.2 Habitat Enhancement Measures, and 7.4 Mitigation Credits), and MM BIO-1 through MM BIO-33, MM FF-3, MM HYD-2a, MM HYD-2b, MM HYD-3 through MM HYD-5~~6~~, and MM NOI-06 and MM NOI-9. Therefore, adverse and significant Impacts BIO-1 through BIO-6 would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

MM BIO-33 **Focused surveys for arroyo toad shall be conducted.** Prior to initiating construction, all riverbed areas within 1,000 feet of construction sites and access roads shall be surveyed during the appropriate season (December 1 through July 31)[41] for arroyo toad. The applicant shall contract with a qualified biologist to conduct focused surveys for arroyo toad. If arroyo toads are detected in or adjacent to the project site, no work will be authorized within 500 feet of occupied habitat until the project applicant receives concurrence from the U.S. Fish and Wildlife Service (USFWS) that work may proceed. If arroyo toads are detected in or adjacent to the project site, the project applicant shall develop and implement a monitoring plan that includes the following measures, in consultation with the USFWS:

1. The applicant shall retain a qualified biologist with demonstrated expertise with arroyo toads to monitor all construction activities in potential arroyo toad habitat and assist the project applicant in the implementation of the monitoring program. This person will be approved by the CPUC and Forest Service prior to the onset of ground-disturbing activities. This biologist will be referred to as the "authorized biologist" hereafter. The authorized biologist will be present during all activities immediately adjacent to or within habitat that supports populations of arroyo toad.
2. Prior to the onset of construction activities, the authorized biologist shall provide all personnel who will be present on work areas within or adjacent to the project site with the following information:
    a. A detailed description of the arroyo toad, including color photographs;
    b. A description of the protection the arroyo toad receives under the Endangered Species Act (ESA) and possible legal action that may be incurred for violation of the act;

[41] Since at higher elevations breeding season may occur between February 1 and July 31, on Forest Service land breeding season limited operating period will be set with a project-specific consultation with the Forest Service.

c. The protective measures being implemented to conserve the arroyo toad and other species during construction activities associated with the proposed project; and

d. A point of contact if arroyo toads are observed.

3. All trash that may attract predators of the arroyo toad will be removed from work sites or completely secured at the end of each workday.

4. Prior to the onset of any construction activities, the project applicant shall meet on site with staff from the USFWS and the authorized biologist. The applicant shall provide information on the general location of construction activities within habitat of the arroyo toad and the actions taken to reduce impacts to this species. Because arroyo toads may occur in various locations during different seasons of the year, the project applicant, USFWS, and authorized biologists will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on arroyo toads. The goal of this effort is to avoid mortality of arroyo toads during construction.

5. Where construction can occur in habitat where arroyo toads are widely distributed, work areas will be fenced in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat. The authorized biologist[42] will assist in determining the boundaries of the area to be fenced in consultation with the USFWS. All workers will be advised that equipment and vehicles must remain within the fenced work areas.

6. The authorized biologist will direct the installation of the fence and conduct a minimum of three nocturnal surveys to move any arroyo toads from within the fenced area to suitable habitat outside of the fence. If arroyo toads are observed on the final survey or during subsequent checks, the authorized biologist will conduct additional nocturnal surveys if he or she determines that they are necessary in concurrence with the USFWS.

7. Fencing to exclude arroyo toads will be at least 24 inches in height.

8. The type of fencing must be approved by the authorized biologist and the USFWS.

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[42] "Authorized biologist" is a biologist whose resume has been reviewed and approved by the Forest Service and CPUC.

9. Construction activities that may occur immediately adjacent to breeding pools or other areas where large numbers of arroyo toads may congregate will be conducted during times of the year (fall/winter) when individuals have dispersed from these areas. The authorized biologist will assist the project applicant in scheduling its work activities accordingly.
10. If arroyo toads are found within an area that has been fenced to exclude arroyo toads, activities will cease until the authorized biologist moves the arroyo toads.
11. If arroyo toads are found in a construction area where fencing was deemed unnecessary, work will cease until the authorized biologist moves the arroyo toads. The authorized biologist, in consultation with USFWS, will then determine whether additional surveys or fencing are needed. Work may resume while this determination is being made, if deemed appropriate by the authorized biologist and USFWS.
12. Any arroyo toads found during clearance surveys or otherwise removed from work areas will be placed in nearby suitable, undisturbed habitat. The authorized biologist will determine the best location for their release, based on the condition of the vegetation, soil, and other habitat features and the proximity to human activities. Clearance surveys shall occur on a daily basis in the work area.
13. The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed.
14. Staging areas for all construction activities will be located on previously disturbed upland areas designated for this purpose. All staging areas will be fenced within potential toad habitat.
15. To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force (DAPTF 2009) will be followed at all times.
16. Drift fence/pitfall trap surveys will be implemented in toad sensitive areas prior to construction in an effort to reduce potential mortality to this species. Prior to any construction activities in the project site, silt fence shall be installed completely around the proposed work area and a qualified biologist should conduct a preconstruction/clearance survey of the work area for arroyo toads. Any toads found in the work area should

be relocated to suitable habitat. The silt fence shall be maintained for the duration of the work activity.

On Forest Service lands, occupied arroyo toad breeding habitat will be mitigated at a 3:1 ratio; occupied arroyo toad upland burrowing habitat will be mitigated at 2:1; and unoccupied arroyo toad habitat (or designated critical habitat) will be mitigated at 2:1[43]. In addition, a Forest Service consultation will be conducted to verify limited operating periods for arroyo toad are defined.

The applicant shall restrict work to daylight hours, except during an emergency[44], in order to avoid nighttime activities when arroyo toads may be present on the access road. Traffic speed should be maintained at 15 mph or less in the work area.

Impact BIO-7: Option 1 would be relocated within an area that the City of San Diego has ranked as highest priority for conservation in the draft City Public Utilities Department's Land Management Plan, and therefore, would conflict with the suitability of uses within a designated conservation area. A conflict with the City's conservation area (Impact BIO-7) is considered an adverse impact under NEPA and potentially significant impact under CEQA. Selection of Option 2 would mitigate this impact under NEPA, and under CEQA the impact would be mitigated to less than significant (Class II).

Impact BIO-8: Impacts would reflect similar impact findings previously discussed in Section D.4.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, Options 1 and 2 would not create new barriers that would impede the local or regional movement of wildlife in the area. Therefore, under NEPA, impacts are not adverse, and under CEQA, impacts are less than significant (Class III).

D.4.4.3 C440 Mount Laguna Underground Alternative

Environmental Setting/Affected Environment

Sections D.4.1 and D.4.2 describe the existing biological resources setting associated with C440. This alternative would consist of undergrounding approximately 14.3 miles of C440 proposed for replacement within existing roadways in the Laguna Mountain Recreation Area. As this area is in the same geographic region as SDG&E's proposed project and would consist of

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43 Per Robert Hawkins (pers. comm. 2014)
44 Emergencies are described in SDG&E 1995 (Section 2.2) and SDG&E 2013a (Attachment C).

undergrounding within existing paved road ROWs, the biological resources environmental setting is assumed to be similar to that identified in Sections D.4.1 and D.4.2.

Environmental Effects

Impacts BIO-1 through BIO-6: This alternative would underground C440 within the designated Laguna Mountain Recreation Area primarily along existing roads (see Figure B-6a). All other project components would remain the same. During installation of the underground portion of this alternative, trenching and grading activities would be greater than SDG&E's proposed project, due to removal of vegetative cover. ~~Impacts are greater as open trenching would be more invasive than excavation for power line poles. All other project components would remain the same.~~ As described in Section B.3.2.3, undergrounding 14.3 miles of C440 would result in an increase of approximately 16 acres of temporary impacts to ground disturbance over the proposed project (22 acres to underground additional 14.3 miles – 6 acres not required to fire harden as proposed by SDG&E) and an increase of 4.4 acres of permanent impacts. For purposes of the analysis, anticipated impacts conservatively assume that not all temporary and permanent impacts resulting from the additional C440 undergrounding under this alternative would occur within existing roads but rather approximately 80% or 11 miles would occur within roadways and developed areas. The remaining 3.3 miles are anticipated to occur outside roadways resulting in temporary impacts to vegetation of approximately 5 acres,[45] most of which is assumed to occur in habitat groups (montane forest, montane wet meadow, non-native grassland, and oak savanna) and permanent impacts of approximately 0.2 acre.

Although temporary impacts to biological resources would be greater due to undergrounding activities, overall temporary and permanent impacts to loss of vegetation (Impact BIO-1); temporary and permanent loss of preserve areas (Impact BIO-2); the impact resulting from the introduction of invasive, non-native, or noxious plant species (Impact BIO-4); introduction of invasive, non-native, or noxious plant species (Impact BIO-5); and substantial adverse direct or indirect effects on special-status species (Impact BIO-6), would be substantially the same as SDG&E's proposed project as described in Section D.4.3.3. Therefore, with implementation of APM BIO-01 through APM BIO-10, APM HYD-01 through APM HYD-11, as well as implementation of MM BIO-1 through MM BIO-32, MM FF-3, MM HYD-2a, MM HYD-2b, MM HYD-3 through MM HYD-5~~6~~, MM NOI-6 and MM NOI-9, as applicable, adverse and

[45] Analyzed with GIS layers "Vegetation" (SDG&E 2015) and based on SDG&E's proposed C440 undergrounding alternative assessment (which assumes a 12-foot width for undergrounding in road; undergrounding in road would occur where possible).

significant Impacts BIO-1, BIO-2, and BIO-4 through BIO-6 would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

Impact BIO-3 would be the same as described in Section D.4.3.3 for SDG&E's proposed project; therefore, the construction-related impact of this alternative on wildlife disturbance and direct mortality would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

Impacts BIO-7 and BIO-8: Impacts would reflect similar impact findings previously discussed in Section D.4.3.3 for SDG&E's proposed project. Similar to SDG&E's proposed project, the undergrounding of C440 within existing roads would not conflict with any provisions of an adopted HCP, NCCP, or other approved conservation plan (Impact BIO-7) and would not create new barriers that would impede the local or regional movement of wildlife in the area (Impact BIO-8). Therefore, under NEPA, impacts are not adverse, and under CEQA, impacts are less than significant (Class III).

D.4.5 BIA Proposed Action

Environmental Setting/Affected Environment

Sections D.4.1 and D.4.2 describe the existing biological resources setting associated with TL682. This alternative would relocate a section of TL682 underground through the economic development zone located on the La Jolla Reservation. As this area is within the same ROW corridor identified for SDG&E's proposed project, the environmental setting would be identical to that identified in Sections D.4.1 and D.4.2.

Environmental Effects

Impacts BIO-1 through BIO-6: This alternative would consist of undergrounding a segment of TL682 through the economic development zone located on the La Jolla Reservation. All other project components would remain the same. Construction and operational impacts related to biological resources would essentially be the same as those described in Section D.4.3.3 for SDG&E's proposed project. As the segment to be undergrounded is located in the same area of SDG&E's proposed project, there would not be a substantial change to the baseline condition regarding the biological resources that would be impacted during construction and operations.

<u>As described in Section B.3.2.3, undergrounding TL682 through the economic development zone located on the La Jolla Reservation would result in an increase of approximately 0.45 acre</u>

of temporary impacts to ground disturbance over the proposed project and an increase of 0.08 acre of permanent impacts.[46] Of an additional 0.45 acre of temporary impacts, approximately 0.23 acre would occur within habitat groups (mixed oak woodland) with the remaining 0.22 acres in other land cover types including urban and developed/ornamental landscaping.

Temporary and permanent impacts to loss of vegetation (Impact BIO-1); temporary and permanent loss of preserve areas (Impact BIO-2); the impact resulting from the introduction of invasive, non-native, or noxious plant species (Impact BIO-4); introduction of invasive, non-native, or noxious plant species (Impact BIO-5); and substantial adverse direct or indirect effects on special-status species (Impact BIO-6), would be similar to SDG&E's proposed project. Therefore, as with SDG&E's proposed project, with implementation of APM BIO-01 through APM BIO-10, APM HYD-01 through APM HYD-11, as well as implementation of MM BIO-1 through MM BIO-32, MM FF-3, MM HYD-2a, MM HYD-2b, MM HYD-3 through MM HYD-5~~6~~, MM NOI 6, and MM NOI-9, as applicable, adverse and significant Impacts BIO-1, BIO-2, and BIO-4 through BIO-6 would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II). Although impacts to native wildlife and/or their habitats would potentially be greater along the underground segment of TL682 (Impact BIO-3), impacts would not be adverse under NEPA, and under CEQA, impacts would be considered less than significant (Class III).

Impacts BIO-7 and BIO-8: Impacts would reflect similar impact findings previously discussed in Section D.4.3.3 for SDG&E's proposed project. The undergrounding of a segment of TL682 would not conflict with any provisions of an adopted HCP, NCCP, or other approved conservation plan (Impact BIO-7) and would not create new barriers that would impede the local or regional movement of wildlife in the area (Impact BIO-8). Therefore, under NEPA, impacts are not adverse, and under CEQA impacts are less than significant (Class III).

D.4.6 Additional Alternatives

D.4.6.1 Partial Removal of Overland Access Roads

Environmental Setting/Affected Environment

This alternative would be in the same study area as SDG&E's proposed project; therefore, the environmental setting would be the same as that identified in Sections D.4.1 and D.4.2.

[46] Analyzed with GIS layers "Vegetation" (SDG&E 2015) and La Jolla Band of Luiseño Indians (2014).

Environmental Effects

Impacts BIO-1 through BIO-8: Under this alternative, overland access in rugged terrain and that exceeding grades of 25% for appreciable distances in proximity to creeks (as outlined in Section C.4.2) would be removed and the areas restored (up to 10.5 miles). All other project components would remain the same. This alternative would remove approximately 2 miles of problematic road segments within the Pine Creek Watershed (i.e., TL629 and C442), due to the watershed's impairment for sediment, as well as certain segments along lines C79, TL625, and TL626, due to extended segments of very steep terrain (e.g., greater than 25% slope). This alternative would require use of helicopters for siting and operations and maintenance, but they would be required for siting under SDG&E's proposed project. The increase in occasional helicopter use for operations and maintenance is offset by the reduction in continued and regular maintenance of these problematic roads and associated construction equipment. This alternative would reduce biological resource impacts associated with erosion and sedimentation (Impacts BIO-2 and BIO-4) without creating additional impacts to biological resources; therefore, Impacts BIO-1, BIO-3, and BIO-5 through BIO-8 would reflect similar impact findings and mitigation previously discussed in Section D.4.3.3 for SDG&E's proposed project.

D.4.6.2 Removal of TL626 from Service

Environmental Setting/Affected Environment

This alternative would remove TL626 from service and replace it with system upgrades; either with TL6931 upgrades or a TL625 loop-in as described below. In order to serve existing customers, segments of TL626 would also be converted from 69 kV to 12 kV. The setting associated with these upgrades is described as follows:

a. Upgrade to the existing 69 kV TL6931 from the Crestwood Substation to the Boulevard Substation (see Figure C-1): The setting associated with this component is described by SDG&E as follows. The existing ROW supports a 69 kV line. The elevation in the TL6931 area ranges from approximately 4,200 to 3,400 feet amsl. A total of nine special-status plant species have a moderate to high potential to occur within the TL6931 area, including two special-status plant species with a high potential to occur and seven special-status plant species with a moderate potential to occur.

   Four special-status wildlife species were determined to be present within the TL6931 area, including quino checkerspot butterfly (QCB), coast horned lizard, Cooper's hawk, and San Diego black-tailed jackrabbit. In addition, four special-status wildlife species were determined to have a high potential to occur, and nine special-status species were

determined to have a moderate potential to occur. Seven special-status species have been determined to have a low potential to occur.

The TL6931 alignment does not cross into any designated critical habitats for federally listed species; however, designated critical habitat for three species occurs in the project vicinity, including habitat for QCB (approximately 3.5 miles to the west of the alignment and approximately 5 miles east of the Boulevard Substation), peninsular bighorn sheep (approximately 8 miles to the northeast in the mountains), and arroyo toad (approximately 5 miles to the west). In addition, no major terrestrial migration corridors are known to cross through the TL6931 alignment. TL6931 does cross riparian plant communities, most notably southern willow scrub in the vicinity of Campo Creek; however, no construction activities would occur near the creek.

b. Loop-in TL625 into the Suncrest Substation (see Figure C-2): The setting associated with the new 3-mile TL625 loop-in is largely located within the CNF approximately 100 feet from the Sunrise Powerlink ROW between Japatul Road and Suncrest Substation. This area has been described in the Sunrise Powerlink Project Final EIR/EIS. Based on the proximity of known species occurrences, 30 special-status plant species and 25 special-status wildlife species have a moderate to high potential to occur within the vicinity of the loop-in. The loop-in would not traverse any designated critical habitat for federally listed species. However, the loop-in would be located within 5 miles of critical habitat designated by the USFWS for arroyo toad and San Diego thornmint (*Acanthomintha ilicifolia*).

c. Convert a 6.5-mile portion of TL626 between Santa Ysabel and Boulder Creek substations from 69 kV to 12 kV, along with a 6.8-mile section that is co-located with C79 within the same study area as SDG&E's proposed project; therefore, the environmental setting would be the same as that identified in Sections D.4.1 and D.4.2 for this component.

Environmental Effects

Under this alternative, a 6-mile portion of TL6931 would be reconstructed, or a new 3-mile 69 kV loop-in would be developed along the Sunrise Powerlink, and portions of the TL626 would be converted from 69 kV to 12 kV, between Santa Ysabel Substation and Boulder Creek Substation, as well as C79 where it is co-located with TL626. <u>The TL626 Removal Alternative would require the rebuild/fire hardening of up to 19.3 miles of electric lines, similar to the proposed TL626 replacement project which would fire harden 18.8 miles. Therefore, it is anticipated that construction of this alternative would result in temporary and permanent ground disturbance similar to those described for the proposed project.</u>

Reconstruction of TL6931

Impacts BIO-1 through BIO-6: Reconstruction of a 6-mile portion of TL6931 would consist of construction as well as operations and maintenance activities similar to that described for the project. Due to the nature of the existing TL6931 alignment, there would not be a substantial change to the baseline condition with regard to plant or wildlife species and habitats, with the exception of one special-status plant species, Colorado Desert larkspur (*Delphinium parishii* ssp. *subglobosum)* a List 4 species. Therefore, Impact BIO-6 would have similar impact findings to those described for SDG&E's proposed project in Section D.4.3.3. Further, temporary and permanent impacts to loss of vegetation (Impact BIO-1); temporary and permanent loss of preserve areas (Impact BIO-2); loss of native wildlife and/or their habitats (Impact BIO-3); the impact resulting from the introduction of invasive, non-native, or noxious plant species (Impact BIO-4); and introduction of invasive, non-native, or noxious plant species (Impact BIO-5) would be similar to SDG&E's proposed project.

As with SDG&E's proposed project, temporary and permanent biological resource impacts (Impacts BIO-1, BIO-2, and BIO-4 through BIO-6) would be mitigated through implementation of APM BIO-01 through APM BIO-10, APM HYD-01 through APM HYD-11, as well as implementation of MM BIO-1 through MM BIO-32, MM FF-3, MM HYD-2a, MM HYD-2b, MM HYD-3 through MM HYD-5~~6~~, MM NOI-6, and MM NOI-9, as applicable. Therefore, temporary and permanent adverse and significant impacts at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

Impact BIO-3 would be the same as described in Section D.4.3.3 for SDG&E's proposed project; therefore, the construction-related impact of this alternative on wildlife disturbance and direct mortality would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

Impact BIO-7: Potential conflicts with local, regional, or state HCPs would reflect similar impact findings previously discussed in Section D.4.3.3 for SDG&E's proposed project. TL6931 would not conflict with an adopted HCP, NCCP, or other approved conservation plan as a result of project or operations and maintenance activities. Therefore, under NEPA, impacts are not adverse, and under CEQA are less than significant (Class III).

Impact BIO-8: Impacts would reflect similar impact findings previously discussed in Section D.4.3.3 for SDG&E's proposed project. As TL6931 is an existing alignment, it would not create new barriers that would impede the local or regional movement of wildlife in the area. In addition, TL6931 is not located within a known wildlife movement corridor and wildlife will be able to pass through the site during the operational phase. During the construction phase, the

quality of the wildlife movement is diminished on a temporary basis. However, the protective measures outlined in the SDG&E Subregional NCCP and the measures presented for Impact BIO-6 would avoid and minimize any impacts associated with construction. Therefore, under NEPA, impacts are not adverse, and under CEQA impacts are less than significant (Class III).

Development of the New 3-Mile Loop-in of TL625

Impacts BIO-1 through BIO-6: Development of the new TL625 loop-in would consist of construction as well as operations and maintenance activities similar to those described for the project in areas of rugged terrain. Due to the location of the loop-in with the same study area as SDG&E's proposed project, there would not be a substantial change to the baseline condition including plant and wildlife species. Biological resources impacts during construction would occur primarily due to grading of pad and helicopter landing sites and reflect similar findings as described in Impacts BIO-1 through BIO-6 discussed in Section D.4.3.3 for SDG&E's proposed project.

As with SDG&E's proposed project, temporary and permanent biological resource impacts (Impacts BIO-1, BIO-2, and BIO-4 through BIO-6) would be mitigated through implementation of APM BIO-01 through APM BIO-10, APM HYD-01 through APM HYD-11, as well as implementation of MM BIO-1 through MM BIO-32, MM FF-3, MM HYD-2a, MM HYD-2b, MM HYD-3 through MM HYD-5~~6~~, and MM NOI-6 and MM NOI-9, as applicable. Therefore, temporary and permanent adverse and significant impacts at or near project components would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

Impact BIO-3 would be the same as described in Section D.4.3.3 for SDG&E's proposed project; therefore, the construction-related impact of this alternative on wildlife disturbance and direct mortality would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

Impacts BIO-7 and BIO-8: Impacts would reflect similar impact findings previously discussed in Section D.4.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, the 3-mile loop-in area would not conflict with any provisions of an adopted HCP, NCCP, or other approved conservation plan (Impact BIO-7) and would not create new barriers that would impede the local or regional movement of wildlife in the area (Impact BIO-8). Therefore, under NEPA impacts are not adverse, and under CEQA are less than significant (Class III).

Convert Segments of TL626 from 69 kV to 12 kV

Impacts BIO-1 through BIO-8: The conversion of segments of TL626 between the Santa Ysabel Substation and the Boulder Creek Substation, as well as the portion shared with C79 to 12 kV would consist of construction as well as operations and maintenance activities similar to those described for the project. Since these activities would occur in the same area, Impacts BIO-1 through BIO-8 would reflect similar impact findings and mitigation previously discussed in Section D.4.3.3 for SDG&E's proposed project.

D.4.7 No Action Alternative

Environmental Effects

Impacts BIO-1 through BIO-8: Under the No Action Alternative, the MSUP would not be issued and SDG&E would be required to remove the existing electric lines and facilities on CNF-managed lands as well as develop additional transmission upgrades elsewhere as described in Section C.1.4 of this EIR/EIS. While none of the facilities associated with SDG&E's proposed project would be constructed, removal of the electric lines and restoration activities within the CNF along with the development of in-kind replacement facilities in conformance with California Independent System Operator (CAISO) requirements and/or alternative means of delivering electrical service elsewhere would result in an increase in the overall disturbance area and therefore an increase in impacts compared to reconstruction of lines in place as proposed.

D.4.8 No Project Alternative

Environmental Effects

Impacts BIO-1 through BIO-8: Under the No Project Alternative, the proposed power line replacement projects would not be built, and the existing SDG&E electric facilities would remain; therefore, none of the temporary and permanent construction impacts to vegetation communities and wildlife habitat described in Section D.4.3 would occur. Operation and maintenance of SDG&E electrical facilities would continue and include routine and periodic pole inspections and equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks and would be based on the requirements of the existing permits. While ongoing operation and maintenance activities would not increase in duration, intensity, or frequency over existing conditions and therefore no impacts over existing conditions to biological resources would occur; the ongoing fire risk, use of herbicides/pesticides, and other as-needed repair involving materials, debris, or earthwork along with the use of access roads would continue to impact special-status plants and wildlife and sensitive habitat, including wetlands and riparian conservation areas.

D.4.9 Mitigation Monitoring, Compliance, and Reporting

Table D.4-16~~7~~ presents the mitigation monitoring, compliance, and reporting program for biological resources for the power line replacement projects and alternatives.

Table D.4-16~~7~~
Mitigation Monitoring, Compliance, and Reporting – Biological Resources

Mitigation Measure	**MM BIO-1** **Confine all construction and construction-related activities to the minimum necessary area.** All construction areas, access to construction areas, and construction-related activities shall be strictly limited to the areas identified in Section B, Project Description, Table B-7~~5~~. The limits of approved work spaces (not including existing access roads) shall be delineated with stakes and/or flagging prior to beginning work in any area. In areas where SDG&E will not work within exclusive-use easements, SDG&E will post temporary signage along approved work limits, indicating that the area is an active construction/work zone and access is temporarily restricted. An environmental monitor shall complete weekly observations to ensure that all work is completed within the approved work limits, and in the event any work occurs beyond the approved limits, it shall be reported by SDG&E's compliance team in accordance with the Mitigation Monitoring, Compliance, and Reporting program (see Section H).
Location	All areas disturbed by construction activities for SDG&E's proposed project and all alternatives.
Compliance Documentation[a] and Consultation	a. Delineate approved work limits on final engineering plans b. Provide maps showing phased work areas and proposed locations for temporary restricted access signs c. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. Prior to construction of segments as phased in final project schedule and maps b. At least one week prior to construction activities as phased in final project schedule and maps c. Prior to and during construction
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-2** **Conduct contractor training for all construction staff.** Prior to construction, all developer, contractor, and subcontractor personnel shall receive training regarding the appropriate work practices necessary to implement the mitigation measures and comply with environmental regulations, including plant and wildlife species avoidance, impact minimization, and best management practices. Sign-in sheets and hard hat decals shall be provided that document contractor training has been completed for construction personnel.
Location	All areas disturbed by construction activities for *SDG&E's* proposed project and all alternatives.
Compliance Documentation[a] and Consultation	a. Conduct contractor training program including content in mitigation measure b. Provide documentation (attendee sign-in sheets and hard hat decals) of project personnel training c. CPUC/Forest Service monitor: Line item in compliance monitoring reports

Table D.4-16~~7~~
Mitigation Monitoring, Compliance, and Reporting – Biological Resources

Timing	a. b. and c. Prior to and during construction
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-3** **Conduct biological construction monitoring.** An authorized biological monitor must be present at the construction sites during all initial ground-disturbing and vegetation-removal activities in undeveloped areas (i.e., not roads or existing developed areas). The monitor shall survey the construction ~~sites~~ project footprint and surrounding areas for compliance with all environmental specifications. Weekly biological construction monitoring reports shall be prepared and submitted to the appropriate permitting and responsible agencies through the duration of the ground-disturbing and vegetation-removal construction phase. Monthly biological construction monitoring reports shall be prepared and submitted through the duration of project construction to document compliance with environmental requirements.
Location	All areas disturbed by construction activities for *SDG&E's* proposed project and all alternatives.
Compliance Documentation[(a)] and Consultation	a. Biologist qualifications (resumes; approved by CPUC and Forest Service) b. Brief report weekly/monthly (identify issues/solutions through regular monitoring and reporting) c. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. Prior to the authorized biological monitor performing work associated with ground-disturbing and vegetation removal activities. b. Weekly during ground disturbance and vegetation removal activities/monthly for remaining construction duration c. During construction
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-4** **Restore all temporary construction areas pursuant to a Habitat Restoration Plan (HRP).** All previously undisturbed temporary work areas not subject to long-term use or ongoing vegetation maintenance shall be revegetated with native species characteristic of the adjacent native vegetation communities in accordance with a Habitat Restoration Plan as described in SDG&E NCCP 7.2 Habitat Enhancement Measures. ~~The HRP will be prepared by a habitat restoration specialist (approved by the CPUC and Forest Service) who will oversee implementation of the HRP. The HRP will be reviewed and approved by the CPUC and Forest Service prior to implementation.~~ Restoration techniques may include the following: hydroseeding, hand-seeding, imprinting, and soil and plant salvage. Any salvage and relocation of species considered desert native plants shall be conducted in compliance with the California Desert Native Plant

Table D.4-16~~7~~
Mitigation Monitoring, Compliance, and Reporting – Biological Resources

	Act. The HRP shall include success criteria and monitoring specifications and shall be approved by the permitting agencies prior to construction of the project. At the completion of project construction, all construction materials shall be completely removed from the site. Topsoil located in areas to be restored will be conserved and stockpiled during the excavation process for use in the restoration of sites requiring restoration. Wherever possible, vegetation ~~would~~ will be left in place or mowed, and not grubbed, per the NCCP, to avoid excessive root damage ~~to~~ and allow for natural ~~recruitment~~ regrowth following construction. Temporary impacts shall be restored sufficient to compensate for the impact to the satisfaction of the permitting agencies (depending on the location of the impact). If restoration of temporary impact areas ~~is not possible to the satisfaction of the permitting agencies,~~does not meet success criteria per the HRP, the temporary impact shall be considered a permanent impact and compensated accordingly (see MM BIO-5). Specifically, the HRP will include the following sections: ● Introduction ● Mitigation Measure Summary ● Plan Objectives ● Plan Implementation ○ Pre-Construction Documentation ○ Clearing and Grading ○ Cleanup ○ Seeding ○ Other Planting Methods ● Schedule ○ Restoration ○ Seeding and Planting ● Restoration Monitoring ○ Monitoring Success Criteria, and Remedial Measures ○ Reporting ○ Completion of Restoration Program ● References The HRP will be prepared by a habitat restoration specialist (approved by the CPUC and Forest Service) who will oversee implementation of the HRP. The HRP shall be submitted to the CPUC and the Forest Service for review and approval prior to implementation.
Location	All areas disturbed by construction activities for *SDG&E's* proposed project and all alternatives.
Compliance Documentation[a] and Consultation	a. Habitat restoration specialist qualifications (resumes; approved by CPUC and Forest Service) b. Prepare habitat restoration plan c. Final review and approval of plan d. Implementation of plan e. CPUC/Forest Service monitor: Line item in compliance monitoring reports

Table D.4-16~~7~~
Mitigation Monitoring, Compliance, and Reporting – Biological Resources

Timing	a. Permitting agency approval of the habitat restoration specialist prior to development of the HRP. b. At least 90 days prior to ground disturbance activities c. Prior to notice to proceed d. Restoration initiated in accordance with schedule provided in the HRP. e. Prior to and during construction
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-5** **Provide habitat compensation or restoration for permanent impacts to native vegetation communities.** Permanent impacts to all native vegetation communities shall be mitigated by either on- or off-site restoration of suitable but degraded habitat, or by the procurement and protection of off-site habitat as compensation for permanent impacts. Permanent impacts shall be compensated ~~through a combination habitat compensation and habitat restoration~~ at a minimum of a 1:1 ratio and in accordance with SDG&E NCCP 7.4 Mitigation Credits or as required by the permitting agencies. Where discrepancies occur, the higher of the two ratios will be applied, but these ratios are not additive (i.e., ratios of 1:1 and 2:1 do not equal 3:1. Mitigation would be applied at the 2:1 ratio only). Impacts to vegetation communities on Forest Service land will be mitigated as follows: 2:1 for habitats that are sensitive or support listed species; 2:1 for coastal sage scrub, chaparral, grassland, or oak/conifer forest; and 3:1 for riparian oak woodland. "Disturbed" habitat is to be mitigated per ratio for the surrounding vegetation. Forest Service requirements related to MM BIO-5 will only apply to National Forest System lands. Habitat compensation shall be accomplished through agency-approved land preservation or mitigation fee payment for the purpose of habitat compensation of lands supporting comparable habitats to those lands impacted by the proposed power line replacement projects. Land preservation or mitigation fee payment for habitat compensation must be completed within 36~~18~~ months of permit issuance. Habitat restoration may be appropriate as compensation for permanent impacts provided that restoration is demonstrated to be feasible and the restoration effort is implemented pursuant to a Habitat Restoration Plan, which includes success criteria and monitoring specifications as described for MM BIO-4. All habitat compensation and restoration used as mitigation for the proposed power line replacement projects on public lands shall be located in areas designated for resource protection and management. All habitat compensation and restoration used as mitigation for the proposed power line replacement projects on private lands shall include long-term management and legal protection assurances.
Location	On the project/alternative site or to-be-identified mitigation parcels

Table D.4-16~~7~~
Mitigation Monitoring, Compliance, and Reporting – Biological Resources

Compliance Documentation[a] and Consultation	a. Documentation that habitat compensation and/or habitat restoration has been identified b. Documentation of long-term management of restored habitat, if applicable c. Documentation of consultation with permitting agencies d. ~~CPUC/Forest Service monitor: Line item in compliance monitoring reports~~Compliance will be documented internally with the applicable responsible agency.
Timing	a. Habitat Compensation: Within 1 year of the initiation of project construction (habitat mitigation lands shall be identified and approved); Habitat Restoration: in accordance with timing identified in MM-BIO-4. b. No later than 36~~18~~ months after the initiation of project construction (long-term management and legal protection for mitigation lands shall be in place) c. Within 2 weeks of completion of coordination with permitting agencies d. ~~During~~ Post-construction
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-6 Implement fire prevention best management practices during construction and operation activities.** Fire prevention best management practices shall be implemented during construction and operation of the project as specified by the Construction Fire Prevention/Protection Plan (to be developed as required under MM FF-1 and MM FF-2). The PALS system will be followed for any work on National Forest System lands.
Location	All areas disturbed by construction activities for *SDG&E's* proposed project and all alternatives.
Compliance Documentation[a] and Consultation	See fire plan requirements under MM FF-1 and MM FF-2 a. Implement fire prevention best management practices b. Provide evidence of coordination with applicable fire authorities c. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. b. and c. Prior to and during project construction
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-7 Prepare and implement a Stormwater Pollution Prevention Plan.** Prepare a Stormwater Pollution Prevention Plan pursuant to the specifications described in APM HYD-05 and MM HYD-1.
Location	All areas disturbed by construction activities for *SDG&E's* proposed project and all alternatives.
Compliance Documentation[a] and Consultation	See SWPPP requirements under APM HYD-05 and MM HYD-1 a. Implement SWPPP as outlined b. CPUC/Forest Service monitor: Line item in compliance monitoring reports

Table D.4-16~~7~~
Mitigation Monitoring, Compliance, and Reporting – Biological Resources

Timing	a. and b. Prior to and during project construction
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-8~~(a)~~ Procedural requirements for herbicide applications.** Herbicide applications shall follow measures as described in MM HYD-5 and MM- BIO-23. In addition, herbicides shall only be applied to the minimum area necessary to achieve fire safety objectives and not used in excess or inadvertently be applied to special-status plant species in the vicinity. Special-status plant species of concern are listed below under Impact BIO-6 (a total of 48 species, of which 46 are further described in Table D.4-11~~2~~). If the professional is unfamiliar with the identification of special-status plant species, an SDG&E biologist shall provide additional supplemental training prior to the application of herbicides along the project as described in MM_-BIO-23. This training will be administered by an SDG&E biologist and shall include an overview of special-status species along the ROW, identification features, and avoidance measures.
Location	All areas disturbed by construction activities for *SDG&E's* proposed project and all alternatives.
Compliance Documentation[(a)] and Consultation	a. Verification that professional is familiar with special-status plant species b. Documentation of herbicide application approach c. Map of special-status plant species and locations of herbicide applications d. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. b. and c. At least 2 weeks prior to application d. Prior to and during construction
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
~~**Mitigation Measure**~~	~~**MM BIO-8(b) Biological evaluation/biological assessment .** Operation and maintenance activities involving pole replacement (primary and secondary poles), re-stringing lines, facility replacement or major remodel construction, atypical brush management or tree clearing (i.e., brush and trees that have not been managed before), road maintenance beyond the existing limits, maintenance that may affect wetlands or waters of the U.S., and maintenance that may occur within the Limited Operating Period (LOP) for Forest Service species (e.g., golden eagle, spotted owl, bald eagle, arroyo toad) will require the submittal of a Short-Form Biological Evaluation/Biological Assessment (BE/BA) to the Forest Service for approval (see Appendix BIO-7 for an example). The BE/BA shall include the following:~~ ~~• Description of Project~~

Table D.4-16~~7~~
Mitigation Monitoring, Compliance, and Reporting – Biological Resources

	~~▪ Habitats/Acres Affected~~ ~~▪ Account Summaries for Species with Potential Occupancy~~ ~~▪ Potential for Effects~~ ~~▪ Avoidance and Minimization Measures (see Appendix BIO-7 for general avoidance and minimization measures)~~ ~~▪ Determination of Effects:~~ ~~• State and Federally Listed Species~~ ~~• Forest Service Sensitive Species~~ ~~• Other Species of Management Concern.~~
~~**Location**~~	~~In and around locations where indicated activities will occur.~~
~~**Compliance Documentation[(a)] and Consultation**~~	~~a. Prepare BE/BA~~ ~~b. Forest Service approval~~ ~~Forest Service/SDG&E responsible for additional compliance related to actual individual BE/BAs~~.
~~**Timing**~~	~~a. Prior to operation and maintenance activities as described~~ ~~b. Forest Service Reviews, comments, coordinates with SDG&E~~ ~~Prior to construction~~
~~**Responsible Agency**~~	~~*SDG&E's Proposed Project:* Forest Service~~ ~~*Forest Service Proposed Actions*: Forest Service~~ ~~*BIA Proposed Action:* Forest Service~~ ~~*Partial Removal of Overland Access Roads*: Forest Service~~ ~~*Removal of TL626 from Service*: Forest Service~~ ~~*Applicable MSUP Lines:* Forest Service~~
Mitigation Measure	**MM BIO-9** **SDG&E shall identify all proposed replacement pole locations within the vicinity of RCAs** to identify those poles and associated access roads that can be reasonably relocated outside these areas and consult with the Forest Service for authorization of their relocation and proposed placement. These Forest Service requirements will only apply to National Forest System lands.
Location	All areas disturbed by construction activities for SDG&E's proposed project and all alternatives.
Compliance Documentation[(a)] and Consultation	a. Implement measure as defined b. Map of pole and access road locations in the vicinity of RCAs c. Final approval by Forest Service of relocation outside of RCAs d. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. b. and c. Prior to notice to proceed d. Prior to and during construction
Responsible Agency	*SDG&E's Proposed Project and all Alternatives*: Forest Service
Mitigation Measure	**MM BIO-10** **Limit temporary and permanent impacts to jurisdictional features to the minimum necessary.** Formal ~~J~~jurisdictional ~~mapping~~ delineation and permits are~~is~~ required prior to construction for all work areas located within or adjacent to jurisdictional wetlands and waters. ~~Obtain~~ The applicant shall obtain and implement the terms and conditions of agency permit(s) for unavoidable impacts to jurisdictional wetlands and waters. All construction areas, access to construction areas, and construction-related activities shall be strictly limited to the areas within the approved work limits and delineated with stakes and/or flagging that shall be maintained throughout the construction period. The project applicant shall obtain applicable permits and provide evidence of permit approval,

Table D.4-16~~7~~
Mitigation Monitoring, Compliance, and Reporting – Biological Resources

	which may include but not be limited to a Clean Water Act Section 404 Permit from the ACOE, a Clean Water Act Section 401 water quality certification from the RWQCB, and a Section 1602 Streambed Alteration Agreement with the ~~U.S. Army Corps of Engineers, Regional Water Quality Control Board, and~~ California Department of Fish and Wildlife for impacts to jurisdictional features prior to project construction. These permits are anticipated to be approved under the MSUP. The terms and conditions of these authorizations shall be implemented. In addition, prior to conducting work or establishing the final design of a selected transmission line alignment, a planning-level assessment of aquatic resources will be conducted to identify the environmentally preferred alternative. The assessment will include review of the National Hydrography Dataset, National Wetland Inventory, U.S. Geological Survey topographic maps, high-resolution digital photography, and necessary field checking. Once the environmentally preferred alternative is identified, a jurisdictional delineation will be conducted of the selected transmission line to ensure the final design is the Least Environmentally Damaging Practicable Alternative (LEDPA) and is in compliance with the Clean Water Act (CWA) Section 404(b)(1) Guidelines. The CWA Section 404 permit authorization will be obtained for any discharges into waters of the ~~U.S.~~United States and the widths of access roads and construction of bridges over waters of the United States will be minimized to the extent feasible.
Location	All areas disturbed by construction activities for SDG&E's proposed project and all alternatives.
Compliance Documentation[(a)] and Consultation	a. Documentation of all permits obtained b. Maps showing delineated work areas and proposed flagging or fencing areas c. Documentation of implementation of permit terms and conditions d. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. b. and c. Prior to notice to proceed d. Prior to and during construction
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-11** **Implement habitat creation, enhancement, preservation, and/or restoration pursuant to a wetland mitigation plan to ensure no net loss of jurisdictional waters and wetlands.** Temporary and permanent impacts to all jurisdictional resources shall be compensated through a combination of habitat creation (i.e., establishment), enhancement, preservation, and/or and restoration at a minimum of a 1:1 ratio or as required by the permitting agencies. Any creation, enhancement, preservation, and/or restoration effort shall be implemented pursuant to a Habitat Restoration Plan, which shall include success criteria and monitoring specifications, and shall be approved by the permitting agencies prior to construction of the project. A habitat restoration specialist will be designated and approved by the permitting agencies and will determine the most appropriate method of restoration. Restoration techniques may include hydroseeding, hand-seeding, imprinting, and soil and plant salvage (as discussed in SDG&E NCCP 7.2 Habitat Enhancement Measures).

Table D.4-16~~7~~
Mitigation Monitoring, Compliance, and Reporting – Biological Resources

	Temporary impacts shall be restored sufficient to compensate for the impact to the satisfaction of the permitting agencies (depending on the location of the impact). If restoration of temporary impact areas is not possible to the satisfaction of the appropriate agency, the temporary impact shall be considered a permanent impact and compensated accordingly. All habitat creation and restoration used as mitigation for the proposed project on public lands shall be located in areas designated for resource protection and management. All habitat creation and restoration used as mitigation for the proposed project on private lands shall include long-term management and legal protection assurances.
Location	Identified habitat creation and/or restoration areas in the project/alternative site or at off-site mitigation parcel(s)
Compliance Documentation[(a)] and Consultation	a. Implement measure as defined b. Documentation of no net loss of jurisdictional waters and wetlands (Habitat Restoration Plan) c. Documentation of consultation with permitting agencies d. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. Prior to and during construction b.~~ and c.~~ Prior to notice to proceed c. Within 2 weeks of completion of coordination with permitting agencies d. Prior to and during construction
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-12 Where drainage crossings are unavoidable, construct access roads at right angles to drainages.** Unless not possible due to existing landforms or site constraints, access roads shall be built perpendicular to drainages to minimize the impacts to these resources and prevent impacts along the length of jurisdictional features.
Location	All drainage crossing in the project area or alternative site areas.
Compliance Documentation[(a)] and Consultation	a. Incorporate measure in final engineering design b. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. Prior to issuance of notice to proceed b. Prior to and during construction
Responsible Agency	*SDG&E's Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629) *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)

Table D.4-16~~7~~
Mitigation Monitoring, Compliance, and Reporting – Biological Resources

Mitigation Measure	**MM BIO-13**	**Conduct preconstruction surveys for special status plants in areas not accessible during previous rare plant surveys.** Prior to construction, San Diego Gas & Electric (SDG&E) shall retain a qualified biologist approved by the California Public Utilities Commission (CPUC) and Forest Service to conduct a focused rare plant survey on site during the time period when the previously described special-status plant species are detectable. Table D.4-12~~3~~ in EIR/EIS describes the 40~~35~~ blooming plant species that shall be surveyed, months they shall be surveyed (i.e., blooming periods), and the TL/circuits on which they occur. Cuyamaca cypress and tecate cypress can be surveyed anytime of the year. Surveys shall be conducted in areas not included during rare plant surveys (see Chambers Group Inc. 2012b, Table 2). Of the ~~35~~ 40 species described, there is some potential for 8 of these species to occur in vernal pools, including California Orcutt grass*, Cuyamaca larkspur, long-spined spineflower, Orcutt's brodiaea*, San Diego goldenstar*, San Diego thornmint*, Santa Lucia dwarf rush, and variegated dudleya*. These 8 species are also included in Table D.4-12~~3~~. These species will also be protected through implementation of, the SDG&E Natural Community Conservation Plan (NCCP), and through avoidance of impacts to wetlands (MM BIO-10 through MM BIO-12). Locations of special-status plants shall be identified and inventoried. The qualified biologist shall supervise construction activities within the vicinity of areas identified as having special-status plant species. Impacts to special-status plant species shall be avoided to the maximum extent possible by installing fencing or flagging, marking areas to be avoided in construction areas, and limiting work in areas identified as having special-status plant species to periods of time when the plants have set seed and are no longer growing. Where impacts to special-status plant species are unavoidable, the impact shall be quantified and compensated through off-site land preservation and/or plant salvage and relocation as determined by the qualified biologist and approved by the CPUC. Alternatively, if the special-status plant species in question is a Covered Species within the SDG&E NCCP, mitigation consistent with measures established in the NCCP shall be provided. The results of the focused plant surveys and measures outlined above that will be implemented by SDG&E in the event special-status plant species are identified within the biological survey area shall be provided to CPUC and Forest Service. CPUC and Forest Service will review and approve the rare plant survey report and recommended avoidance or mitigation approaches prior to issuance of a notice to proceed.
Location	All areas not previously surveyed for special status plants for *SDG&E's* proposed project (Chambers Group 2012b see Table 2) and all alternatives. SDG&E will coordinate with Forest Service to refine prospective survey locations before implementing this measure.	
Compliance Documentation[a] and Consultation	a. Biologist qualifications (resumes; approved by CPUC and Forest Service) b. Survey report c. CPUC/Forest Service monitor: Line item in compliance monitoring reports	
Timing	a. At least 2 weeks prior to surveys b. Prior to issuance of a notice to proceed c. Prior to and during construction	

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Mitigation Monitoring, Compliance, and Reporting – Biological Resources

Responsible Agency	*SDG&E's Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629) *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-14** **Install fencing or flagging around identified special-status plant species populations in the construction areas.** Prior to the start of construction, a qualified biologist shall conduct focused surveys during the appropriate blooming period for special-status plant species for all construction areas. All of the special-status plant locations shall be recorded using a Global Positioning System (GPS), which will be used to site the avoidance fencing/flagging. Special-status plant species shall be avoided to the maximum extent possible by all construction activities. The boundaries of all special-status plant species to be avoided shall be delineated in the field with clearly visible fencing or flagging. The fencing/flagging shall be maintained for the duration of project construction activities. Cutting down or damaging coniferous trees that occur along C79 within California Department of Parks and Recreation lands is prohibited. Equipment within staging areas will be situated to avoid damage to coniferous tress. If avoidance to coniferous trees along C79 within California Department of Parks and Recreation lands is not feasible, the applicant will work closely with the California Department of Parks and Recreation to determine alternative staging location(s). In addition, all areas along C79 associated with the Cuyamaca Rancho State Park Reforestation Project will be avoided, including disturbance to these areas and the temporary establishment of staging and stringing sites. This reforestation project is registered with the Climate Action Reserve (www.climateactionreserve.org), where more details can be found.
Location	All areas disturbed by construction activities for SDG&E's proposed project and all alternatives.
Compliance Documentation[(a)] and Consultation	a. Biologist qualifications (resumes; approved by CPUC and Forest Service) b. Notification of planned special-status plant species surveys c. Results of survey d. Map of special-status plant species (GPSed) and location of construction flagging/fencing e. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. At least 2 weeks prior to conducting surveys b. At least 1 week prior to surveys and per survey windows timing c. Within 2 ~~days~~weeks after surveys are completed and at least two weeks prior to construction d. At least 3 days prior to construction activities that would take place near the fenced area e. Prior to and during construction
Responsible Agency	*SDG&E's Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629) *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682)

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Mitigation Monitoring, Compliance, and Reporting – Biological Resources

	Partial Removal of Overland Access Roads: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-15** **Implement special-status plant species compensation.** Impacts to special-status plant species shall be maximally avoided. Where impacts to special-status plant species are unavoidable, the impact shall be quantified and compensated through off-site land preservation and/or plant salvage and relocation. Where off-site land preservation is biologically preferred, the land shall contain comparable special-status plant resources as the impacted lands and shall include long-term management and legal protection assurances to the satisfaction of the Forest Service. Land preservation must be completed within 36~~18~~ months of ~~permit issuance~~initiation of construction. Where salvage and relocation is demonstrated to be feasible and biologically preferred, it shall be conducted pursuant to an agency-approved plan that details the methods for salvage, stockpiling, and replanting, as well as the characteristics of the receiver sites. Any salvage and relocation plans shall be approved by the permitting agencies prior to project construction. Any salvage and relocation of species considered desert native plants shall be conducted in compliance with the California Desert Native Plant Act. Success criteria and monitoring shall also be included in the plan. If salvage and relocation is not possible to the satisfaction of the Forest Service, off-site land preservation shall be required. Forest Service requirements will only apply to National Forest System lands.
Location	All areas disturbed by construction activities for SDG&E's proposed project and all alternatives.
Compliance Documentation[a] and Consultation	a. Documentation of off-site land preservation and/or plant salvage and relocation b. Documentation of agency consultation and plan approval c. Documentation of long-term management of restored habitat, if applicable d. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. and b. Prior to construction c. No later than ~~18~~ 36 months after the initiation of project construction (long-term management and legal protection for mitigation lands shall be in place) d. Prior to and during construction
Responsible Agency	*SDG&E's Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629) *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-16** **Install fencing or flagging around identified special-status butterfly host species populations in the construction areas and road maintenance.** Prior to the start of construction, a qualified biologist shall conduct focused surveys during the appropriate blooming period for larvae or adult (nectar sources or egg laying sources) plant for the following species: Hermes copper butterfly, Laguna Mountains skipper, or Quino checkerspot butterfly. These host plants include Cleveland's horkelia, western plantain, bird's beak, owl's clover, California buckwheat, and spiny redberry. Similar protective measures for special-status plants (identified in MM BIO-13 and MM BIO-14) shall be implemented. Occupied or suitable habitat for these species shall be avoided to

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Mitigation Monitoring, Compliance, and Reporting – Biological Resources

	the greatest extent feasible. In addition to the implementation of SDG&E NCCP Operational Protocols, site visits will be conducted prior to construction and road maintenance. Prior to site visits, a digital database of known host plant populations will be reviewed. Site visits will verify the known locations of host plant populations in the area and, if present, avoid those locations.
Location	All areas disturbed by construction activities for SDG&E's proposed project and all alternatives.
Compliance Documentation[a] and Consultation	a. Botanist qualifications (resumes; approved by CPUC and Forest Service) b. Notification of planned special-status plant species surveys c. Results of survey d. Maps showing the proposed flagging or fencing areas e. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. At least 2 weeks prior to conducting surveys b. At least 1 week prior to surveys and per survey windows timing c. Within 2 ~~days~~ weeks after surveys are completed and at least two weeks prior to construction d. At least 3 days prior to construction activities that would take place near the fenced area e. Prior to and during construction
Responsible Agency	SDG&E's *Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-17** **Conduct protocol surveys for Quino checkerspot, Hermes ~~Copper~~copper, and Laguna Mountains skipper butterflies within 1 year prior to project construction activities in occupied habitat.** The project proponent shall conduct preconstruction protocol surveys for Quino checkerspot butterfly ~~(QCB)~~, Laguna Mountains skipper, and Hermes copper butterfly within 1 year prior to construction activities (or unless coordination with the U.S. Fish and Wildlife Service determines that SDG&E's low-effect habitat conservation plan (HCP) for Quino (SDG&E 2007) adequately protects the species, historical surveys are adequate, or as superseded by consultation with the USFWS and Forest Service) in any project construction area known to support the species. Surveys shall be conducted by a qualified~~, permitted~~ biologist[47] in accordance with the most currently accepted protocol survey methods for Quino checkerspot and Laguna Mountains skipper. This includes current habitat assessment and reporting requirements. Results shall be reported to USFWS and the CDFW South Coast Regional Office within 45 days of the completion of the survey. Surveys for Hermes copper butterfly shall follow County of San Diego Guidelines.[48] A qualified biologist shall survey all potential habitat for Hermes

[47] A qualified biologist is defined as a biologist (permitted or not) who has a demonstrated background in butterfly survey techniques and identification.

[48] County of San Diego (2010) Attachment C of the Report Format and Content Requirements – Biological Resources.

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Mitigation Monitoring, Compliance, and Reporting – Biological Resources

	copper which includes any woody (mature) spiny redberry shrub with California buckwheat within 15 feet. California buckwheat without spiny redberry nearby is not considered suitable habitat. If California buckwheat is within 15 feet of a mature spiny redberry shrub, ~~A~~additional vegetation within 15 feet should also be considered potential habitat for Hermes copper~~ if California buckwheat is within 15 feet of a mature spiny redberry shrub~~. All butterfly protocol survey data shall be provided to the CDFW South Coast Regional Office.
Location	Suitable habitat for Quino checkerspot butterfly, Laguna Mountains skipper, and Hermes copper butterfly of project/alternatives area
Compliance Documentation[(a)] and Consultation	a. Biologist qualifications (resumes; approved by CPUC and Forest Service) b. Notification of planned surveys c. Survey Report d. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. At least 2 weeks prior to surveys b. Within 1 year of ~~the initiation of~~planned project construction in occupied habitat. c. Within 45 ~~-~~days ~~weeks~~ after surveys are completed and at least 2 weeks prior to construction d. Prior to and during construction
Responsible Agency	SDG&E's *Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-18** **Provide compensation for temporary and permanent impacts to Occupied or Critical Habitat for Quino checkerspot, Hermes copper, and Laguna Mountains skipper butterfly habitat through conservation and/or restoration.** Temporary and permanent impacts to Quino checkerspot butterfly and Laguna Mountains skipper shall be compensated through a combination of habitat compensation and habitat restoration at a minimum of a 2:1 mitigation ratio for occupied non-critical habitat and a minimum of a 3:1 mitigation ratio for critical habitat, or as required by the permitting agencies. Forest-related impacts will be mitigated at the ratios provided above on Forest Service lands and in coordination with the Forest Service. Habitat compensation shall be accomplished through U.S. Fish and Wildlife Service-approved land preservation or mitigation fee payment for the purpose of habitat compensation of lands supporting Quino checkerspot butterfly or Laguna Mountains skipper as appropriate. Mitigation for Hermes copper butterfly shall consist of 1:1 replacement of temporary impacts to occupied habitat, where host plants are impacted, and at a 2:1 ratio where permanent impacts occur. Land preservation or mitigation fee payment for habitat compensation must be completed within 18 months of permit issuance. Habitat restoration may be appropriate as habitat compensation provided that the restoration effort is demonstrated to be feasible and implemented pursuant to a Habitat Restoration Plan, which shall include success criteria and monitoring specifications and shall be approved by the permitting agencies prior to project construction. All habitat compensation and restoration used as mitigation for the proposed project on public lands shall be located in areas designated for resource protection and management. All habitat compensation and restoration used as mitigation for the proposed project on private lands shall include long-term management and legal protection assurances.

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Mitigation Monitoring, Compliance, and Reporting – Biological Resources

Location	On the project/alternative site or on to-be-identified mitigation parcels
Compliance Documentation[a] and Consultation	a. Documentation that habitat preservation and/or habitat restoration has been identified and implemented (Habitat Restoration Plan). b. Documentation of long-term management of restored habitat, if applicable c. Documentation of consultation with USFWS d. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. Within 1 year of the initiation of project construction (habitat mitigation lands shall be identified and approved) b. No later than 18 months after the initiation of project construction (long-term management and legal protection for mitigation lands shall be in place) c. Within 2 weeks of coordination with USFWS d. During construction
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-19 Final design of power and distribution line and access roads through Quino checkerspot , ~~Hermes copper,~~ and Laguna Mountains skipper critical habitat and Hermes copper occupied habitat shall maximally avoid host plants for these species.** The final design of the proposed project through Quino checkerspot, Hermes copper, and Laguna Mountains skipper butterfly habitat shall maximally avoid and minimize habitat resources used by these species based on safety and other superseding regulatory requirements. The applicant shall explore alternate tower locations, reduced road widths, reduced vegetation maintenance, and other design modifications to minimize impacts to host plants in critical habitat for these species, and it shall obtain agency approval of the final design through this area. If impacts are not avoided, compensatory mitigation, as described per MM BIO-18, will be required. This measure shall apply to all locations that have been designated as critical or occupied habitat for these species.
Location	Occupied Quino checkerspot, Laguna Mountains skipper, or Hermes copper butterfly habitat along the project/alternatives area
Compliance Documentation[a] and Consultation	a. Final design review and approval (design maximizes avoidance of critical habitat) b. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. and b. Prior to notice to proceed
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)

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Mitigation Measure	**MM BIO-20**	**Obtain and implement the terms of agency permit(s) with jurisdiction federal or state-listed species.** In addition to the obligation of the ~~USFS~~Forest Service consulting with the USFWS on the project, i~~I~~f federally listed wildlife species not already covered by SDG&E's NCCP (including any species that may be listed prior to issuance of the PTC and MSUP) may be impacted by the project, the Forest Service will initiate a Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS). If state-listed wildlife species not already covered by SDG&E's NCCP may be impacted by the project, SDG&E will seek a Section 2081 permit (or consistency determination) from the California Department of Fish and Wildlife (CDFW). In addition, take authorization for golden eagles will require coordination with the USFWS and CDFW. SDG&E shall implement and/or adhere to all USFWS recommendations stipulated by the Forest Service in the Special Use Permit; SDG&E shall implement and/or adhere to all requirements in CDFW permit. SDG&E will not need a Section 2081 permit if the potentially impacted species or action is covered by SDG&E's NCCP. The Forest Service is required to consult with the USFWS for their federal action (approving the MSUP) as identified in Section A, Table A-3. When conducting work within designated critical habitat for the Quino checkerspot butterfly, SDG&E shall implement all applicable ~~measures for~~protocols to avoid and minimize impacts to this species defined in the SDG&E ~~regional NCCP~~ Low-Effect Habitat Conservation Plan for Quino. Additionally, when working within designated critical habitat for Laguna Mountains skipper, SDG&E shall implement all impact minimization measures for Laguna Mountains skipper (USFS 2006c), consistent with USFWS direction (USFWS 2006, 2007), which includes: 1. Prior to project work, ~~Unless previously identified and mapped,~~ a qualified biologist shall identify ~~and map~~ all LMS habitat (to include host plant and nectar sources) within 10 meters of the proposed project(s) ROW. SDG&E facilities that are within designated critical~~known or potential LMS~~ habitat for Laguna Mountains skipper are shown on USFWS Critical Habitat maps (71 FR 74592–74615)~~identified in the Biological Assessment~~. During any maintenance activities, a qualified biologist will be present to monitor work and ensure that Laguna Mountains skipper habitat is not affected. ~~Once mapped, LMS habitat shall be delineated with obvious markings (fencing or flagging) and a 10 meter buffer shall be created around each area mapped as LMS habitat. Ideally, the fencing or flagging would be placed at the edge of the buffer area.~~ 2. Chipping of vegetation shall not be allowed in known or potential Laguna Mountains skipper~~LMS~~ habitat. This includes ~~access roads and/or~~ the ROW within or adjacent to (within 10 meters) known or potential Laguna Mountains skipper ~~LMS~~ habitat. Potential habitat shall be identified by the qualified biologist either during the host plant/nectar source survey or some time previous to the onset of ROW work.

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Mitigation Monitoring, Compliance, and Reporting – Biological Resources

	3. Vehicles or tracked equipment shall only be allowed on existing roads or trails when operating within or adjacent to Laguna Mountains skipper ~~LMS~~ habitat. Prior to operation of vehicles on existing roads or trails, a qualified biologist will ensure that the road or trail itself does not contain host plants or nectar sources. 4. Any project that may adversely affect the Laguna Mountains skipper shall require consultation with the U.S. Fish and Wildlife Service. If the NCCP is not used, then formal consultation with the USFWS and CDFW will need to occur to determine the need for take permits.~~This condition assumes that some roads/trails enter LMS habitat, but the road itself has been surveyed and does not contain host plants or nectar sources.~~
Location	Terms and conditions of permits may apply anywhere within the project/alternative site or on off-site mitigation parcels, but would mostly relate to the occupied Quino checkerspot, Laguna Mountains skipper, or Hermes copper butterfly habitat areas and the designated critical habitat for Quino checkerspot butterfly and Laguna Mountains skipper.
Compliance Documentation[(a)] and Consultation	a. Documentation of permit compliance b. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. Prior to notice to proceed b. Prior to and during construction
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-21** **If construction occurs in occupied and/or suitable habitat for sensitive butterfly species, SDG&E will implement the following:** **Quino checkerspot:** SDG&E will comply with the avoidance and minimization measures outlined in the existing Low-Effect Habitat Conservation Plan for Quino checkerspot butterfly. **~~,~~ Hermes copper:** Because this species is not state- or federally listed, the following will only be required for activities: While performing construction activities within the flight season, a qualified biological monitor will be on-site for all project activities to assure that both impacts to host plants and direct take of Hermes copper butterflies are avoided to the greatest extent feasible. The biological monitor may temporarily stop work in the event a Hermes copper butterfly is observed within the immediate construction area (i.e., the flagged work areas currently being used for construction activities.) **~~, and~~ Laguna Mountains skipper butterfly:** ~~c~~Construction ~~shall~~ will occur outside of the flight season OR at least 10 meters (33 feet) away from all host plant locations. If there is a known or newly discovered occurrence during the flight season, construction shall be prohibited within 1 kilometer (0.6 mile) of the occurrence or unless coordination with the U.S. Fish and Wildlife Service determines construction activities may commence~~.~~. The Laguna Mountains skipper flight season occurs from April to July. ~~Flight seasons occur during the~~

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	~~following dates for the following species: June 1 – October 15 for QCB; mid-May to early-July (few days later at high elevations) for Hermes copper butterfly; and April – July for LMS.~~
Location	Occupied and/or suitable Quino checkerspot or Laguna Mountains skipper habitat along the project/alternatives area. Also in immediate construction areas where Hermes copper butterfly are observed.~~All operations and maintenance areas of the project/alternative site~~
Compliance Documentation[a] and Consultation	a. Biologist qualifications (resumes; approved by CPUC and Forest Service) b. Maps showing occupied/suitable habitat c. Provide construction schedule in occupied/suitable habitat areas d. Documentation of coordination with USFWS or field verification (construction occurs outside of 1 kilometer (0.6 miles of known or newly discovered occurrences)) e. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. b. and c. At least 2 weeks prior to construction and per survey windows timing d. Prior to and during construction e. Prior to and during construction
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-22** **Biologists will monitor construction activities.** San Diego Gas & Electric (SDG&E) shall retain qualified biologists and other qualified resource specialists, as necessary, to monitor all project construction activities that could reasonably result in impacts to biological resources. All monitor qualifications shall be reviewed and approved by the California Public Utilities Commission (CPUC) prior to conducting monitoring activities along the right-of-way. Monitors shall be responsible for preconstruction surveys, work area delineations (i.e., staking, flagging, etc.) to comply with SDG&E's Natural Community Conservation Plan, on-site monitoring, and documentation of violations and compliance. Monitors shall also delineate pre-determined access routes using markers or signs and ensure the maintenance of markers or signs on a regular basis. SDG&E shall submit a weekly report to CPUC that summarizes the biological monitoring activities that were completed during construction. The weekly report shall, at a minimum, include environmental training sign-in sheets, biological monitors assigned to project components, compliance issues/concerns, and general wildlife observations.
Location	All areas disturbed by construction activities for SDG&E's proposed project and all alternatives.
Compliance Documentation[a] and Consultation	a. Biologist qualifications (resumes; approved by CPUC and Forest Service) b. Conduct field monitoring c. Weekly summary report of monitoring activities as defined in measure d and e. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. At least 2 weeks prior to construction b. and c. During construction

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Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-23 Biologists will inspect open holes at the end of each workday.** At the end of each workday, any open holes (including large/steep excavations) shall be inspected by the on-site biologist and subsequently fully covered with steel plates, plywood, or other effective coverings to prevent entrapment of wildlife species. If fully covering the excavations is impractical, ramps will be used to provide a means of escape for wildlife that enter the excavations, or open holes will be securely fenced with exclusion fencing. If common wildlife species are found in a hole, the designated biological monitor shall immediately be informed and the animal(s) shall be removed. If the animal(s) is/are a sensitive species that require(s) special handling authorization, a qualified biologist (agency-permitted or approved to handle a specific species) shall remove the animal before resumption of work in that immediate area. San Diego Gas & Electric shall specify the requirement to cover all open holes, create ramps, or install exclusion fencing around open holes in its agreements with all construction contractors.
Location	All construction areas for SDG&E's proposed project and all alternatives.
Compliance Documentation[(a)] and Consultation	a. Implement open hole covering procedures b. Documentation that covering requirements in BIO-23 have been incorporated into construction contracts c. Documentation that notification and handling procedures are utilized for wildlife found in open holes d. CPUC monitor: Line item in monitoring report.
Timing	a - d. During construction
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-24 Enforce speed limits in and around all construction areas.** Vehicles shall not exceed 15 miles per hour on unpaved roads (as stated in SDG&E NCCP 7.1 Operational Protocols) and the right-of-way accessing the construction site or 10 miles per hour during the night.
Location	All construction areas for SDG&E's proposed project and all alternatives.
Compliance Documentation[(a)] and Consultation	a. Documentation and verification of enforcement mechanisms b. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. Prior to and during construction b. During construction

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Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-25 Minimize night construction lighting adjacent to native habitats.** Lighting of construction areas at night shall be the minimum necessary for personnel safety and shall be low illumination, selectively placed, shielded and directed away from adjacent native habitats.
Location	All construction areas adjacent to native vegetation for SDG&E's proposed project and all alternatives.
Compliance Documentation[a] and Consultation	a. Documentation of night lighting specifications b. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. Prior to night time construction activities b. During construction
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-26 Prohibit littering and remove trash from construction areas daily.** Littering shall not be allowed by the project personnel. All food-related trash and garbage shall be removed from the construction sites on a daily basis.
Location	All construction areas for SDG&E's proposed project and all alternatives.
Compliance Documentation[a] and Consultation	a. Documentation that measures included in the contractor specifications and in environmental training. b. Documentation of compliance throughout construction c. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. Prior to construction b. and c. During construction
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)

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Mitigation Measure	**MM BIO-27 Prohibit the harm, harassment, collection of, or feeding of wildlife.** Project personnel shall not harm, harass, collect, or feed wildlife. No pets shall be allowed in the construction areas.
Location	All construction areas for SDG&E's proposed project and all alternatives.
Compliance Documentation[a] and Consultation	a. Documentation that measures included in the contractor specifications and in environmental training. b. Documentation of compliance throughout construction c. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. Prior to construction b. and c. During construction
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-28 Implement Bird Protection Measures.** A. ~~**Conduct pre-construction nesting bird surveys. If construction**~~ Construction activities, including but not limited to tree trimming, road maintenance (i.e., re-establishing of existing access roads), grading, or site disturbance, ~~are~~ may~~to~~ occur during the avian bird breeding season that runs between March 1 and September 1, for non-listed birds, and other seasons as defined below for ~~other~~ special-status species, in compliance with the procedures and provisions of this mitigation measure. To avoid avian disturbance by construction activities, an ~~a~~Avian ~~p~~Protection ~~p~~Plan, including a Nesting Bird Management Plan, shall be developed in coordination with the Wildlife Agencies prior to project onset to develop measures based on site specific conditions to protect birds. This Avian Protection Plan shall be implemented by SDG&E and their biological monitors with oversight by the CPUC and the Forest Service. The Plan shall include procedures to allow~~ing~~ the Wildlife Agencies open communication with the biological monitor(s) and access to scientific data collected that will be electronically stored in a database approved by the CPUC, the Forest Service, and the Wildlife Agencies. Between February and September d~~D~~uring project construction, SDG&E shall provide a monthly summary of nesting bird monitoring activities and at the completion of each nesting season shall provide an evaluation of the data collected to date as specified in the Nesting Bird Management Plan. B. The Project's transmission pole and line design may have an impact on certain raptor species. Consequently, in addition to the construction activities, the Plan shall address avian mortality related to line strikes through the use of adaptive management (i.e., measures to make the lines more visible to the suite of species affected), in response to reported mortalities. C. The Avian Protection Plan shall include the following measures: a. Compliance with the Migratory Bird Treaty Act b. Compliance with Fish and Game Code Sections 3503, 3503.5, and 3511 ~~a.~~c. Activities shall be prohibited within: i. Approximately 0.25 mile of California spotted owl active nest sites (or activity centers) during the breeding season (February 1

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	through August 15) unless surveys confirm that California spotted owls are not nesting within the 0.25-mile radius; ii. 500 feet of raptor and owl active nests; iii. 500 feet of federally and/or state-listed birds active nests; iv. 250 feet of occupied burrowing owl burrows from February 1 to August 31 or within 160 feet from September 1 through January 31; and v. 150 feet of non-listed birds and as specified in the avian protection plan for other bird species of concern. If year-round burrowing owls are identified and there would only be temporary indirect impacts, then work may continue through coordination with the CDFW and monitoring. If it appears that the burrowing owls may be directly impacted, then a relocation plan will be developed for the specific burrowing owl(s). This plan would include the methods to relocate, location of the relocation, and post-relocation monitoring. Active relocation and banding of birds is not required. Similar buffers will be utilized for non-Forest Service lands as specified in the Avian Protection Plan and Nesting Bird Management Plan. "Nest" is defined as a structure or site under construction or preparation, constructed or prepared, or being used by a bird for the purpose of incubating eggs or rearing young. Perching sites and screening vegetation are not part of the nest. "Active nest" is defined as once birds begin constructing, preparing, or using a nest for egg-laying. A nest is no longer an "active nest" if abandoned by the adult birds or once nestlings or fledglings are no longer dependent on the nest. d. Apply APLIC Measures. Specific APLIC measures to be applied must, at a minimum, must allow the circuits to meet National Electric Safety Code (NESC) requirements and should provide general information on specialized construction designs to meet APLIC standards. In particular, conductor separation between the energized and grounded hardware should meet the current state of the art requirements to protect species up to California condor. If appropriate separation is not feasible, then the energized parts and hardware should be covered. As appropriate, bird diverters should be deployed as well. D. The database shall include special features to accommodate additional- variables (covariate) information requested by the Wildlife Agencies designed for this Project that will provide data which will contribute to the scientific standards of effective avian avoidance measures. In order to help evaluate buffer effectiveness, nests shall be monitored on a daily basis by a qualified biologist during disturbance and-related activities (i.e., brushing, tree trimming, ground-disturbing activities, mechanized or manual construction/removal/installation, and restoration activities) and every 4 days following disturbance until nest fates have been determined for entry into the database. Daily nest monitoring will be conducted by a qualified biologist, from as far away as possible while still being able to observe activity. The biologist need not observe the actual contents of the nest, but may extrapolate status based on adult behaviors. Actual surveys of the nest contents must not occur more than weekly (i.e., allow at least 7 days between nest visits) and visits should be very brief, paths should go by the nest without stopping if possible, the biologist should not touch leaves or branches, and should take a new route each time they pass by the nest. If brown-headed cowbirds or potential nest predators (e.g., scrub jays, crows, ravens) are in the

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	area, then the visit should be postponed until they are gone. At a minimum, the plan(s) shall include the following sections: • Plan Objectives • Applicable Mitigation Measures • Environmental Awareness Program • Existing Avian Resources • Construction Process and Timing (related to avian resource protection) • Specific APLIC measures to be Applied • Nest Survey and Monitoring Methods o Surveyor Experience and Training o Nesting Bird Survey Protocol o Standard Buffer Distances as determined in consultation with Wildlife Agencies o Protections of Listed Species, Raptors, and Eagles o Nest Monitoring o Data Collection • Avian Reporting System o Nest Monitoring Log to include fates of all nests monitored o Reporting including update of database accessible to Wildlife Agencies • Nest Management o Nesting Habitat Reduction o Nesting Deterrents o Nest Removal • Risk Assessment and Mortality Reduction • Quality Control and Effectiveness • Avian Enhancement • Key Resources • Prior to the start of construction and implementation, SDG&E shall submit the plan to the U.S. Fish and Wildlife Service, CDFW, CPUC, and Forest Service for review and approval. E. In order to identify locations of current bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), California spotted owl (*Strix occidentalis*), American peregrine falcon (*Falco peregrinus anatum),* or federally and/or state-listed or fully protected bird nests, the monitoring biologists will coordinate with the U.S. Forest Service (Forest Service), U.S. Fish and Wildlife Service, and California Department of Fish and Wildlife (CDFW) to ensure that the most up to date information is made available to monitoring biologists. If work will be conducted within a 1 mile buffer of historic and currently known nests during the bald or golden eagle breeding season (December 15 through July 31), SDG&E will survey the historic and currently known nests sites to determine if they are active. If nests are determined to be active, then work within 1 mile of active nests shall be rescheduled until after the completion of nesting activity at those nests. Alternatively, SDG&E may plan work activities to occur outside of the 1 mile buffers during the breeding season. ~~, a nesting bird survey shall be conducted by a qualified biologist to determine the presence of nests or nesting birds within 100 feet (300 feet for raptors) of the construction activities. The~~

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	~~nesting bird surveys shall be completed no more than 72 hours prior to any construction activities. The survey will focus on special-status species known to use the area, as well as other nesting birds that are protected under the Migratory Bird Treaty Act. If an active nest (defined below) is identified adjacent to grading or site disturbance within the requisite nest buffer, the nest shall be monitored on a daily basis by a qualified biologist until project activities are no longer occurring within the nest buffer or until fledglings become independent of the nest. "Nest" is defined as: a structure or site under construction or preparation, constructed or prepared, or being used by a bird for the purpose of incubating eggs or rearing young. Perching sites and screening vegetation are not part of the nest. "Active nest" is defined as: once birds begin constructing, preparing, or using a nest for egg-laying. A nest is no longer an "active nest" if abandoned by the adult birds or once nestlings or fledglings are no longer dependent on the nest.~~ ~~The monitoring biologist may increase the buffer radius if construction activities could disturb nesting activities. The monitoring biologist may decrease the buffer radius upon receiving approval from California Public Utilities Commission (CPUC) and Forest Service, if the biologist determines that the construction activities are not disturbing the nesting activities and a smaller buffer is more appropriate. The monitoring biologist shall halt construction activities if he or she determines that the construction activities are disturbing the nesting activities. The monitor shall make practicable recommendations to reduce the noise or disturbance in the vicinity of the nest. This may include (1) turning off vehicle engines and other equipment whenever possible to reduce noise, (2) working in other areas until the young have fledged, or (3) placing noise barriers to maintain the noise at the nest to 60 dBA L_{eq} hourly or less or to the preconstruction ambient noise level if that exceeds 60 dBA L_{eq} hourly. The on-site biologist will review and verify compliance with these nesting boundaries and will verify that the nesting efforts have finished. Unrestricted construction activities can resume when no other active nests are found. Upon completion of the survey and any follow-up construction avoidance management, a report shall be prepared and submitted to the CPUC with the weekly report as identified in MM BIO-3.~~ ~~On Forest Service lands, activities will be prohibited within approximately 0.25 mile of California spotted owl nest sites (or activity centers) during the breeding season (February 1 through August 15) unless surveys confirm that California spotted owls are not nesting; within 4,000 feet (no work or fly zone) of bald and golden eagle nests; within 500 feet of raptor and owl nests; within 500 feet of federally and/or state-listed birds; within 250 feet of occupied burrowing owl burrows from February 1 to August 31 or within 160 feet from September 1 through January 31; and within 100 feet of non-listed birds.~~ ~~A nesting bird report, at a minimum, shall include the date, starting and ending time, general weather conditions (cloud cover, temperature, wind), name of biologist with affiliation, area surveyed including map, survey results (species, nest Global Positioning System (GPS) location, nest stage [number of eggs, number of nestlings]), recommended compliance (e.g., 100-foot buffer recommended, buffer increased with explanation, recommended noise reduction, noise dBA Leq levels at nest), and compliance issues/concerns. The report shall also include the date and nesting outcome (e.g., depredated, nestling fledged, nest abandoned)~~
Location	In and around any construction activity in the project/alternative area ~~(100 feet for passer, ine birds and 300 feet for raptors),~~ with the exception of existing access roads. Standard buffer distances will be determined in consultation with Wildlife Agencies.
Compliance Documentation[(a)] and Consultation	a. Biologist qualifications (resumes; approved by CPUC and Forest Service) b. Prepare an Avian Protection Plan, including a Nesting Bird Management Plan c. Final review and approval of plan d. Implementation of plan

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	~~b. Conduct nesting bird survey~~ ~~Document survey efforts in daily log and report to CPUC/Forest Service at the end of each week.~~ ~~Documentation of monitoring active nests on daily basis within buffer areas (within 100 feet of construction activities or as increased by the biologist (300 feet for nesting raptors))~~ ~~c.~~e. CPUC/Forest Service monitor: Line item in compliance monitoring reports ~~to review and approve/deny decreases in buffer space~~
Timing	a. Prior to construction b. ~~Survey no more than 72 hours prior to construction~~At least 90 days prior to ground disturbance activities c. Prior to ~~construction~~notice to proceed d. ~~During construction~~Avian protection implemented in accordance with approved plan e. Prior to or during construction
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-29** **Rock blasting.** In the unlikely event that rock blasting is used during construction, a noise and vibration calculation will be prepared and submitted to the California Public Utilities Commission (CPUC) and the County of San Diego for review before blasting at each site. The construction contractor will ensure compliance with all relevant local, state, and federal regulations relating to blasting activities. This Blasting Plan would include a site-specific nesting bird survey to be conducted by a CPUC-approved biologist. The results of this survey would be communicated to the CPUC. If the CPUC-approved biologist observes an active nest (as defined in MM BIO-28) ~~(see definition below)~~ for any special-status species (including federal, state, and county candidate, sensitive, fully protected, or special-status species) or species covered by the Migratory Bird Treaty Act that may be impacted by blasting activities, San Diego Gas & Electric shall postpone any activity that may impact the success of the nest until the nest no longer meets the given definitions. ~~"Nest" is defined as: a structure or site under construction or preparation, constructed or prepared, or being used by a bird for the purpose of incubating eggs or rearing young. Perching sites and screening vegetation are not part of the nest. "Active nest" is defined as: once birds begin constructing, preparing or using a nest for egg-laying. A nest is no longer an "active nest" if abandoned by the adult birds or once nestlings or fledglings are no longer dependent on the nest.~~
Location	In project/alternative areas considered for blasting
Compliance Documentation[(a)] and Consultation	See blasting requirements under MM PSU-3. e. Site-specific nesting bird survey (as part of Plan) and communicate results to CPUC/Forest Service f. Biologist qualifications (resumes; approved by CPUC and Forest Service) g. Documentation of postponing construction activities with respect to active nests (if applicable)

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	h. CPUC monitor: Line item in compliance monitoring report
Timing	i. Prior to blasting activities j. Prior to blasting activities/Prior to construction k. Prior to construction l. During construction
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-30 Prior to work being conducted, ~~qualified biologists will conduct a literature search for potential roost sites and follow-up surveys for Townsend's big-eared bat maternity roosts within 500 feet of project lines during the breeding/pupping season (April–mid-September)~~measures will be employed to protect (a) Townsend's bat and (b) bats in general.** (A) **Townsend's bat protection measures** Prior to work being conducted, qualified biologists will conduct a literature search for potential roost sites and follow-up surveys for Townsend's big-eared bat maternity roosts within 500 feet of project lines during the breeding/pupping season (April–mid-September). Typical Townsend's big-eared bat roosts occur in mines, caves, buildings, long and dark culverts, and older bridges (pre-1960) (Pierson and Rainey 1994). If any potential structures or features for Townsend's big-eared bat are present within the project area they shall be surveyed. Inspections of potential roosts shall be conducted using an appropriate combination of visual and acoustic survey techniques (including structure inspection, sampling, and/or exit counts) for areas that may be directly or indirectly impacted by the project. Where active roosts are located, reporting shall include: 1) the exact location of all roosting sites (location shall be adequately described and drawn on a map); 2) the number present at the time of visit (count or estimate); 3) the location, amount, distribution, and age of all droppings shall be described and pinpointed on a map; and 4) the type of roost (i.e., night roost – rest at night while out feeding vs. day roost – maternity colony) must also be clearly stated. All survey results, including field data sheets, shall be provided to the CDFW South Coast Regional Office. Locations of all roosts shall be kept confidential to protect them from disturbance. If non-maternity roosts are identified, the CDFW will be notified and consulted. If maternity roosts are present, the CDFW and CPUC will be notified and no work will occur within 500 feet of the roost location until the end of the pupping season or until the roost is determined to be unoccupied by Townsend's big-eared bat. For the protection of young (i.e., unable to fly) and hibernating adults all project-related activities shall be avoided where roosts are present during the winter and spring. No restrictions apply to project vehicle traffic on existing access roads, or to construction activity that occurs outside of the pupping season.

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	(B) **General bat protection measures for other bat species** Prior to work being conducted, qualified biologists will conduct a literature search for known general bat roost sites and follow-up surveys within 100 feet of project lines during the breeding/pupping season (April–mid-September). In general, bat species may roost in rock outcrop, dense tree canopies, flaking tree bark, snags, bridges, mine, caves, flumes, and buildings. If any known sites for bats in general are present within the project area they shall be surveyed. Inspections of known roosts shall be conducted using an appropriate combination of visual and acoustic survey techniques (including structure inspection, sampling, and/or exit counts) for areas that may be directly or indirectly impacted by the project. Bats shall be identified to the most specific taxonomic level possible. Where active bat roosts are located, reporting shall include: 1) the exact location of all roosting sites (location shall be adequately described and drawn on a map); 2) the number of bats present at the time of visit (count or estimate); 3) each species of bat present shall be named (include how the specific was identified); 4) the location, amount, distribution, and age of all bat droppings shall be described and pinpointed on a map; and 5) the type of roost (i.e., night roost – rest at night while out feeding vs. day roost – maternity colony) must also be clearly stated. All survey results, including field data sheets, shall be provided to the CDFW South Coast Regional Office. Locations of all roosts shall be kept confidential to protect them from disturbance. ~~Typical roosts occur in mines, caves, buildings, long and dark culverts, and older bridges (pre-1960) (Pierson and Rainey 1994).~~ If potential roosts are determined to be present then the roosts must be analyzed further to determine if Townsend's big-eared bats are present and if maternity roosts are present. If maternity roosts are present, the CDFW and CPUC will be notified and no work will occur within ~~500~~ 100 feet of the roost location until the end of the pupping ~~season or until the roost is determined to be unoccupied by Townsend's big-eared bat~~. For the protection of young (i.e., unable to fly) and hibernating adults, all project-related activities shall be avoided where roosts are present during the winter and spring. No restrictions apply to project vehicle traffic on existing access roads, or to construction activity that occurs outside of the pupping season.
Location	In historically occupied sites and current suitable habitat within 500 feet of all project lines, not including access roads.
Compliance Documentation[(a)] and Consultation	a. Biologist qualifications (resumes; approved by CPUC and Forest Service) ~~a.~~b. Conduct surveys c. Provide CDFW South Coast Regional Office survey results d. CDFW notification if species maternity roosts present e. Apply Townsend's big-eared bat avoidance measures to known bat roost locations within a 100-foot buffer. ~~b.~~f. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. Prior to construction b. Prior to ground disturbance activities c. Minimum 7 days prior to ground disturbance activities

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	d. Minimum 7 days prior to ground disturbance activities e. During construction ~~a.~~f. Prior to and during construction
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-31** **Biologists will conduct surveys for Stephens' kangaroo rat.** In locations where Stephens' kangaroo rat habitat assessments were not accessible during the 2010 surveys (including the extensive parcels of land westward of Santa Ysabel owned by a single landowner – Map Pages MS-016-025 [Chambers Group Inc. and SJM Biological Consultants 2012; Appendix A] and the large parcel immediately south of Old Highway 80 and southward of southern end of Kitchen Creek Road [Map Page MS-069 [Chambers Group Inc. and SJM Biological Consultants 2012]; Appendix A]), a pedestrian preconstruction survey for potentially occupied suitable habitat (open habitat with suitable soils, slope, and kangaroo rat burrows) and follow-up trapping to confirm species, will be conducted by a California Public Utilities Commission (CPUC)-approved biologist to assess the potential areas for Stephens' kangaroo rat to occur within SDG&E's proposed project area. Any burrows, utilized habitat, or signs of Stephens' kangaroo rat utilizing a habitat (e.g., track prints) will be flagged for avoidance during construction activities. The monitoring biologist shall halt construction activities if he or she determines that the construction activities are disturbing Stephens' kangaroo rat occupied habitat. If Stephens' kangaroo rat occupied habitat cannot be avoided during construction, the monitoring biologist shall make recommendations to ensure minimal impacts to the existing Stephens' kangaroo rat habitat and burrows during construction. Recommendations may include, but are not limited to: (1) re-routing access to the project work area for complete avoidance of Stephens' kangaroo rat occupied habitat; or (2) placement of dirt piles or sediment to avoid occupied burrows. Upon completion of the survey and any follow-up construction avoidance management, a report shall be prepared and submitted to the CPUC.
Location	In areas previously not accessible to SKR surveys for proposed project and all alternatives.
Compliance Documentation[(a)] and Consultation	a. Biologist qualifications (resumes; approved by CPUC and Forest Service) b. Pedestrian preconstruction survey for potentially occupied suitable habitat (and follow-up trapping) in areas where survey was not conducted in 2010 c. Documentation that burrows, utilized habitat, and sign have been flagged for avoidance/provide map d. Biologist recommendations to minimize areas that cannot be avoided submitted to CPUC e. Prepare report and submit to CPUC f. CPUC monitor: Line item in compliance monitoring report
Timing	a. At least 2 weeks prior to construction b. At least 2 weeks prior to construction

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	c. Prior to construction d. Prior to construction e. Prior to construction f. During construction
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-32** **Procedural requirements for pesticide applications.** Herbicide application shall occur under the direction of a professional applicator with an Agricultural Pest Control Adviser License. If the professional has only obtained a Qualified Applicator License, an SDG&E biologist shall provide additional supplemental training prior to the application of pesticides along the project right-of-way. This training will be administered by an SDG&E biologist and shall include topics, such as pertinent laws and regulations (California Department of Fish and Game Code, Migratory Bird Treaty Act, and Endangered Species Act), that may impact special-status wildlife species.
Location	All operation and maintenance areas for SDG&E's proposed project, alternatives, and lines not part of the power line replacement projects to be covered under the MSUP.~~All construction work areas for SDG&E's proposed project and all alternatives.~~
Compliance Documentation[(a)] and Consultation	Also see procedural requirements for pesticide and herbicide applications under MM HYD-5 a. Documentation of professional applicator training of special-status wildlife species
Timing	a. Prior to pesticide application
Responsible Agency	*SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)* *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM BIO-33** **Focused surveys for arroyo toad shall be conducted.** Prior to initiating construction, all riverbed areas within 1,000 feet of construction sites and access roads shall be surveyed during the appropriate season (December 1 through July 31)[49] for arroyo toad. The applicant shall contract with a qualified biologist to conduct focused surveys for arroyo toad. If arroyo toads are detected in or adjacent to the project site, no work will be authorized within 500 feet of occupied habitat until the project applicant receives concurrence from the U.S. Fish and Wildlife Service

[49] Since at higher elevations breeding season may occur between February 1 and July 31, on Forest Service land breeding season limited operating period will be set with a project-specific consultation with the Forest Service.

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	(USFWS) that work may proceed. If arroyo toads are detected in or adjacent to the project site, the project applicant shall develop and implement a monitoring plan that includes the following measures, in consultation with the USFWS: 1. The applicant shall retain a qualified biologist with demonstrated expertise with arroyo toads to monitor all construction activities in potential arroyo toad habitat and assist the project applicant in the implementation of the monitoring program. This person will be approved by the CPUC and Forest Service prior to the onset of ground-disturbing activities. This biologist will be referred to as the "authorized biologist" hereafter. The authorized biologist will be present during all activities immediately adjacent to or within habitat that supports populations of arroyo toad. 2. Prior to the onset of construction activities, the authorized biologist shall provide all personnel who will be present on work areas within or adjacent to the project site with the following information: a. A detailed description of the arroyo toad, including color photographs; b. A description of the protection the arroyo toad receives under the Endangered Species Act (ESA) and possible legal action that may be incurred for violation of the act; c. The protective measures being implemented to conserve the arroyo toad and other species during construction activities associated with the proposed project; and d. A point of contact if arroyo toads are observed. 3. All trash that may attract predators of the arroyo toad will be removed from work sites or completely secured at the end of each workday. 4. Prior to the onset of any construction activities, the project applicant shall meet on site with staff from the USFWS and the authorized biologist. The applicant shall provide information on the general location of construction activities within habitat of the arroyo toad and the actions taken to reduce impacts to this species. Because arroyo toads may occur in various locations during different seasons of the year, the project applicant, USFWS, and authorized biologists will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on arroyo toads. The goal of this effort is to avoid mortality of arroyo toads during construction. 5. Where construction can occur in habitat where arroyo toads are widely distributed, work areas will be fenced in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat. The authorized biologist[50] will assist in determining the boundaries of the area to be fenced in consultation with the USFWS. All workers will be advised that equipment and vehicles must remain within the fenced work areas.

[50] Authorized biologist is a biologist whose resume has been reviewed and approved by the Forest Service and CPUC.

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	6. The authorized biologist will direct the installation of the fence and conduct a minimum of three nocturnal surveys to move any arroyo toads from within the fenced area to suitable habitat outside of the fence. If arroyo toads are observed on the final survey or during subsequent checks, the authorized biologist will conduct additional nocturnal surveys if he or she determines that they are necessary in concurrence with the USFWS. 7. Fencing to exclude arroyo toads will be at least 24 inches in height. 8. The type of fencing must be approved by the authorized biologist and the USFWS. 9. Construction activities that may occur immediately adjacent to breeding pools or other areas where large numbers of arroyo toads may congregate will be conducted during times of the year (fall/winter) when individuals have dispersed from these areas. The authorized biologist will assist the project applicant in scheduling its work activities accordingly. 10. If arroyo toads are found within an area that has been fenced to exclude arroyo toads, activities will cease until the authorized biologist moves the arroyo toads. 11. If arroyo toads are found in a construction area where fencing was deemed unnecessary, work will cease until the authorized biologist moves the arroyo toads. The authorized biologist, in consultation with USFWS, will then determine whether additional surveys or fencing are needed. Work may resume while this determination is being made, if deemed appropriate by the authorized biologist and USFWS. 12. Any arroyo toads found during clearance surveys or otherwise removed from work areas will be placed in nearby suitable, undisturbed habitat. The authorized biologist will determine the best location for their release, based on the condition of the vegetation, soil, and other habitat features and the proximity to human activities. Clearance surveys shall occur on a daily basis in the work area. 13. The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed. 14. Staging areas for all construction activities will be located on previously disturbed upland areas designated for this purpose. All staging areas will be fenced within potential toad habitat. 15. To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force (DAPTF 2009) will be followed at all times. 16. Drift fence/pitfall trap surveys will be implemented in toad sensitive areas prior to construction in an effort to reduce potential mortality to this species. Prior to any construction activities in the project site, silt fence shall be installed completely around the proposed work area and a qualified biologist should conduct a preconstruction/clearance survey of the work area for arroyo toads. Any toads found in the work area should be relocated to suitable habitat. The silt fence shall be maintained for the duration of the work activity. On Forest Service lands, occupied arroyo toad breeding habitat will be mitigated at a 3:1 ratio;

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Mitigation Monitoring, Compliance, and Reporting – Biological Resources

	occupied arroyo toad upland burrowing habitat will be mitigated at 2:1; and unoccupied arroyo toad habitat (or designated critical habitat) will be mitigated at 2:1[51]. In addition, a Forest Service consultation will be conducted to verify limited operating periods for arroyo toad are defined. The applicant shall restrict work to daylight hours, except during an emergency[52], in order to avoid nighttime activities when arroyo toads may be present on the access road. Traffic speed should be maintained at 15 mph or less in the work area.
Location	Arroyo toad designated critical habitat area along Forest Service Proposed Action C157 Options 1 and 2.
Compliance Documentation[(a)] and Consultation	a. Implement measure as defined b. Biologist qualifications (resumes; approved by CPUC and Forest Service) c. Survey summary report d. Documentation of monitoring plan and consultation with the USFWS, if required e. Maps showing the proposed flagging or fencing areas f. Brief report of monitoring activities g. CPUC monitor: Line item in compliance monitoring report
Timing	a. Prior to and during construction b. At least 2 weeks prior to construction c. d. and e. Prior to construction f. and g. During construction
Responsible Agency	*Forest Service Proposed Action C157 Options 1 and 2*: CPUC and Forest Service, City of San Diego

[a] All compliance documentation and consultation records to be available for CPUC and Forest Service staff review upon request.

D.4.10 Residual Unavoidable Effects

Under NEPA, SDG&E's proposed project and alternatives would result in adverse but mitigated impacts. Mitigation measures presented in Section D.4.9, along with APMs provided in Section D.4.3.2, would mitigate all impacts. Under CEQA, implementation of mitigation measures presented in Section D.4.9 would mitigate all biological resource impacts to less than significant. Therefore, no residual effects would occur for SDG&E's proposed project or alternatives.

[51] Per Robert Hawkins (pers. comm. 2014)
[52] Emergencies are described in SDG&E 1995 (Section 2.2) and SDG&E 2013a (Attachment C).

D.4.11 References

14 CCR 783–786.6. Regulations for Implementation of the California Endangered Species Act.

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16 U.S.C. 703–712. Migratory Bird Treaty Act, as amended.

16 U.S.C. 1531–1544. Federal Endangered Species Act of 1973, as amended.

16 U.S.C. 1604(i). National Forest System Land and Resource Management Plans.

33 U.S.C. 1251–1387. Federal Water Pollution Control Act (commonly referred to as the Clean Water Act).

36 CFR 219–219.62. Parks, Forests, and Public Property.

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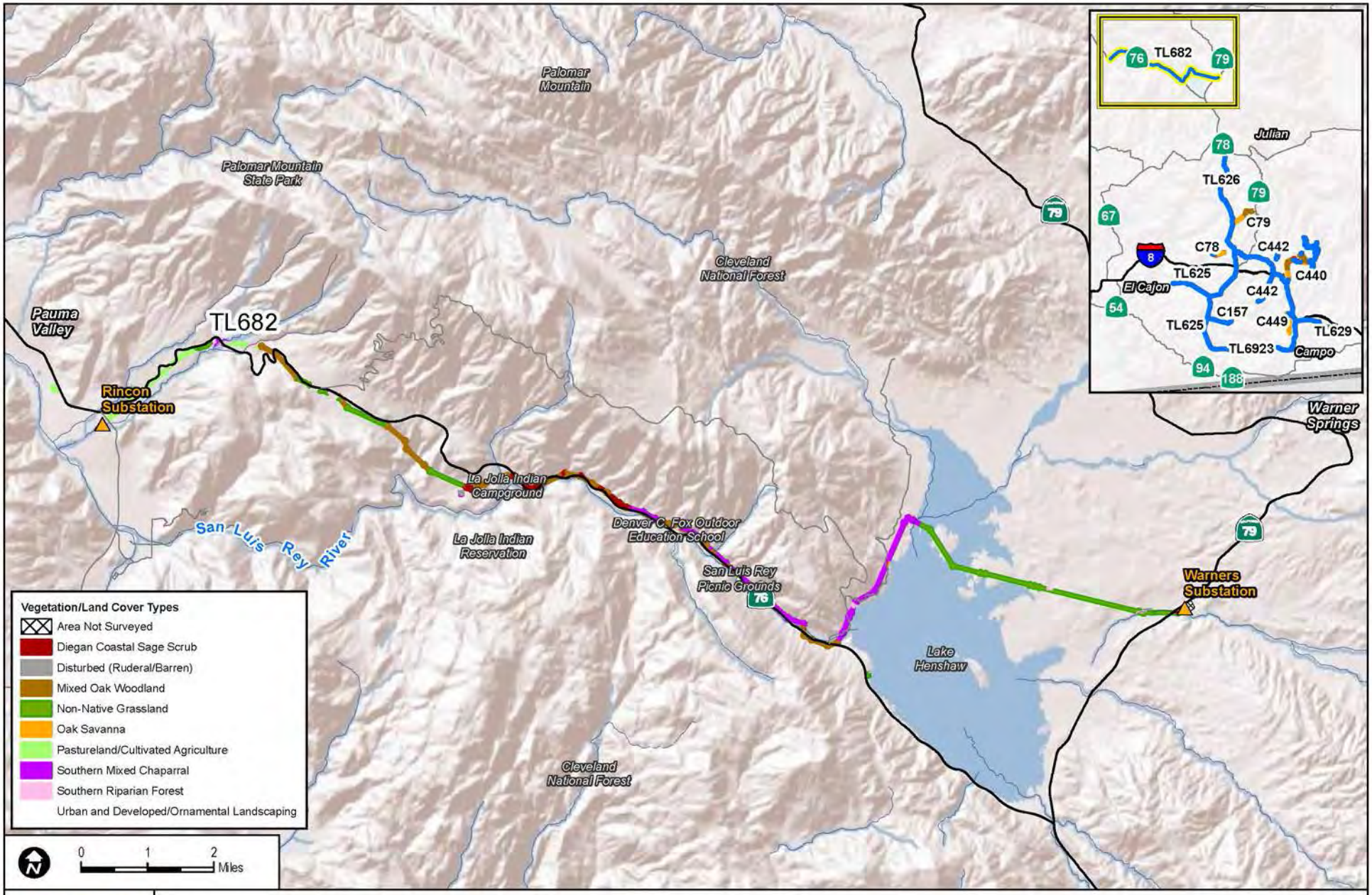

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SOURCE: SDG&E 2011, 2012; USGS; SanGIS 2012; Bing Maps

FIGURE D.4-1a

TL682 Vegetation Overview Map

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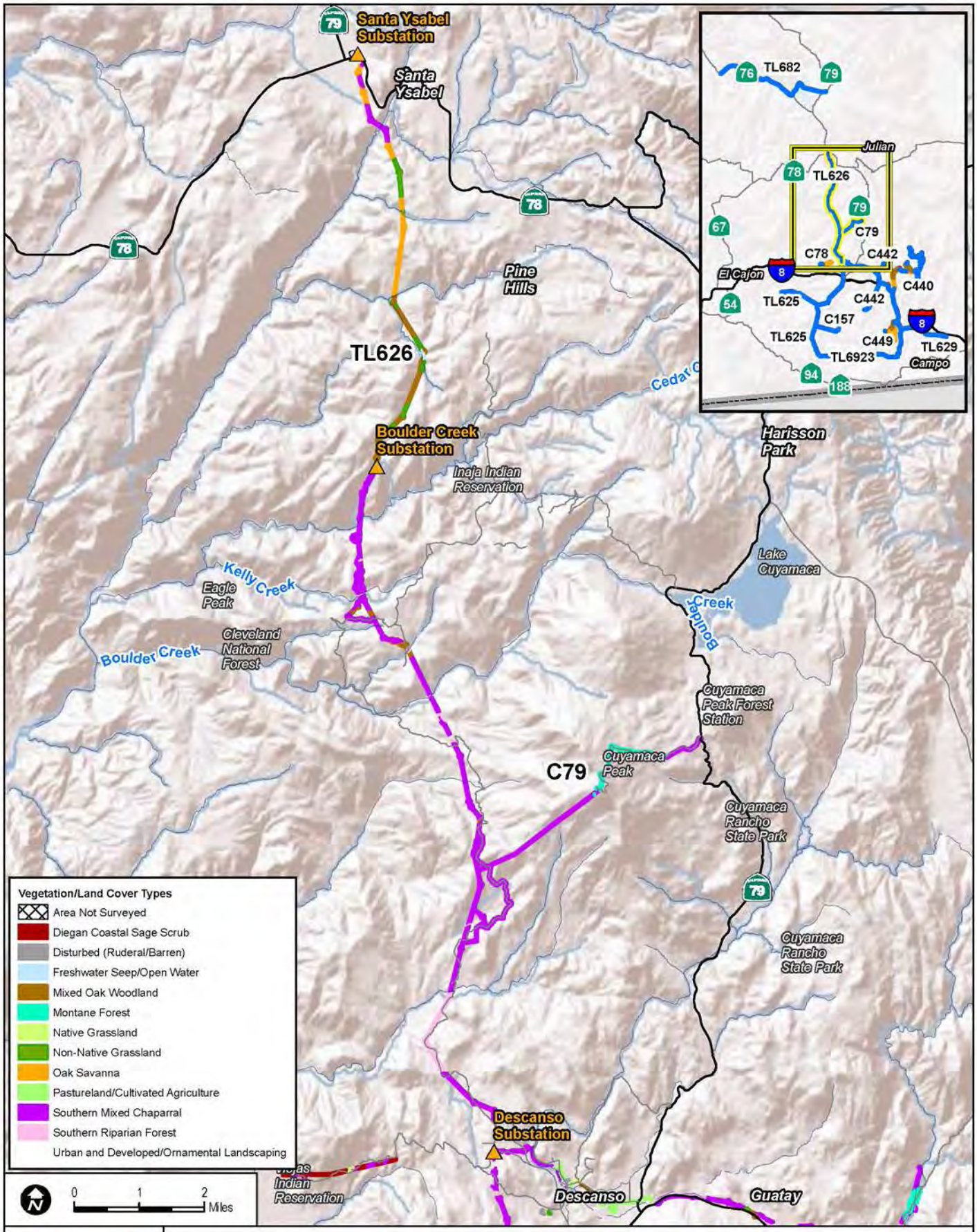

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SOURCE: SDG&E 2011, 2012; USGS; SanGIS 2012; Bing Maps

FIGURE D.4-1b

TL626, C79 Vegetation Overview Map

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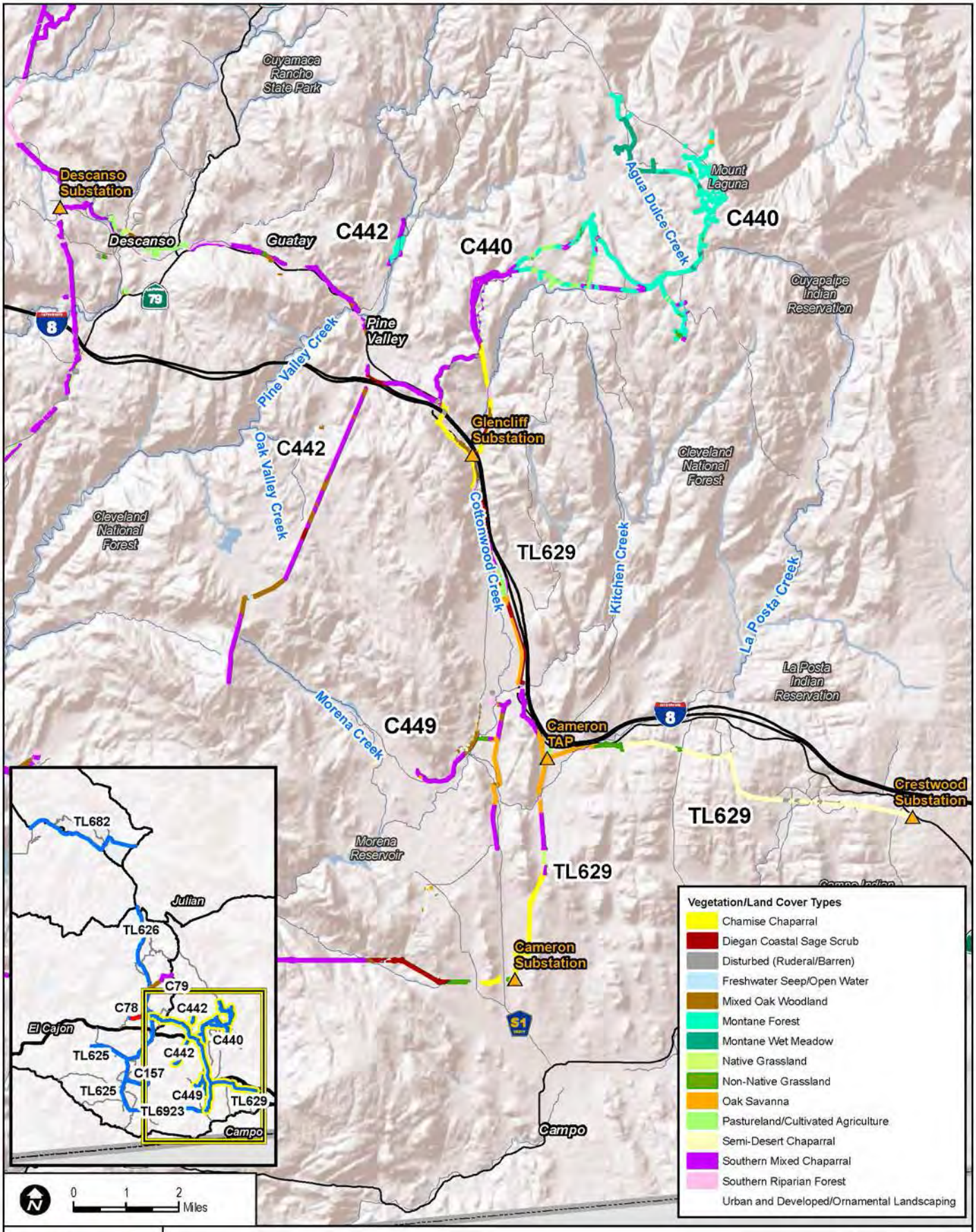

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SOURCE: SDG&E 2011, 2012; USGS; SanGIS 2012; Bing Maps

FIGURE D.4-1c

TL629, C440, C442, C449 Vegetation Overview Map

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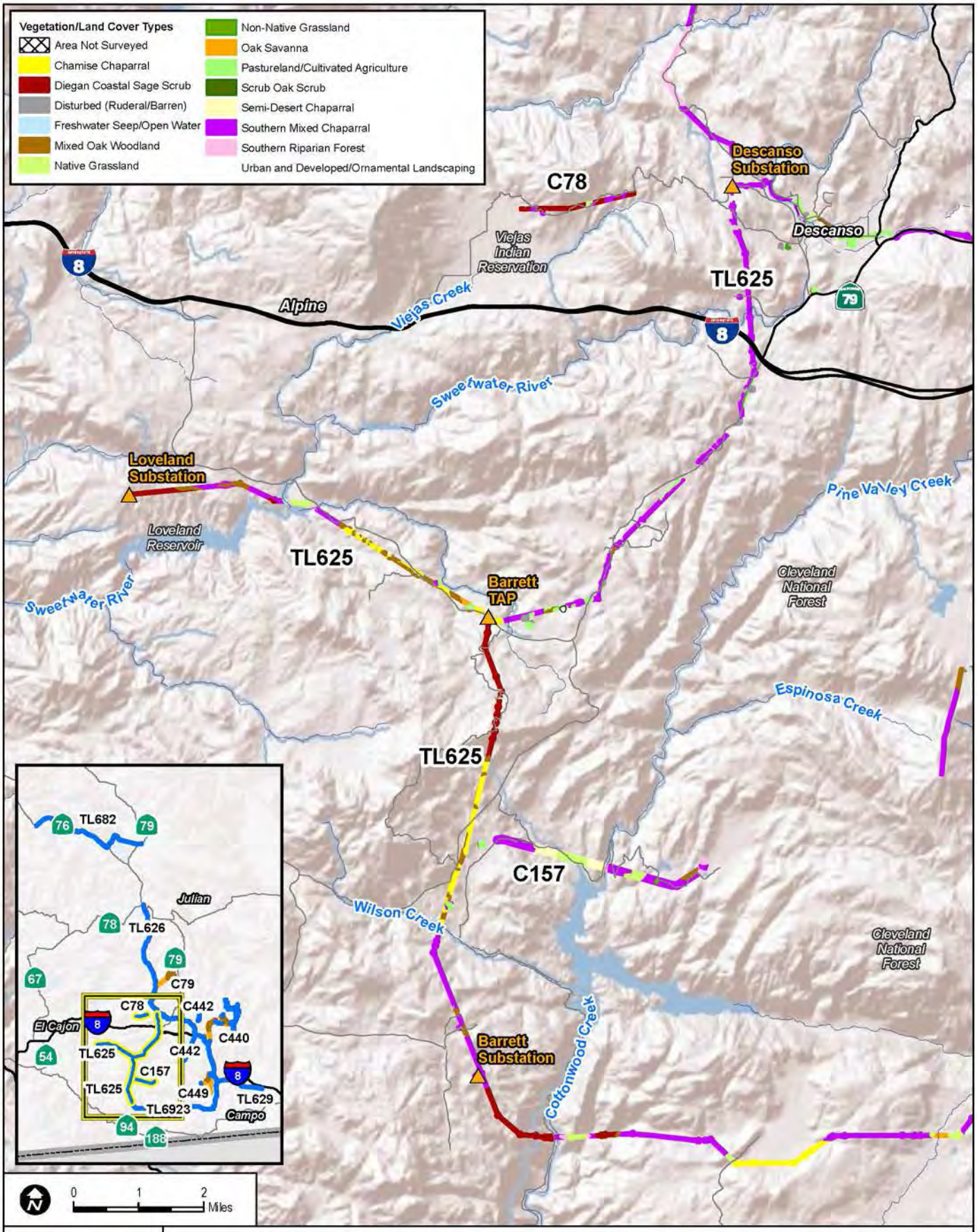

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SOURCE: SDG&E 2011, 2012; USGS; SanGIS 2012; Bing Maps

FIGURE D.4-1d

TL625, C78, C157 Vegetation Overview Map

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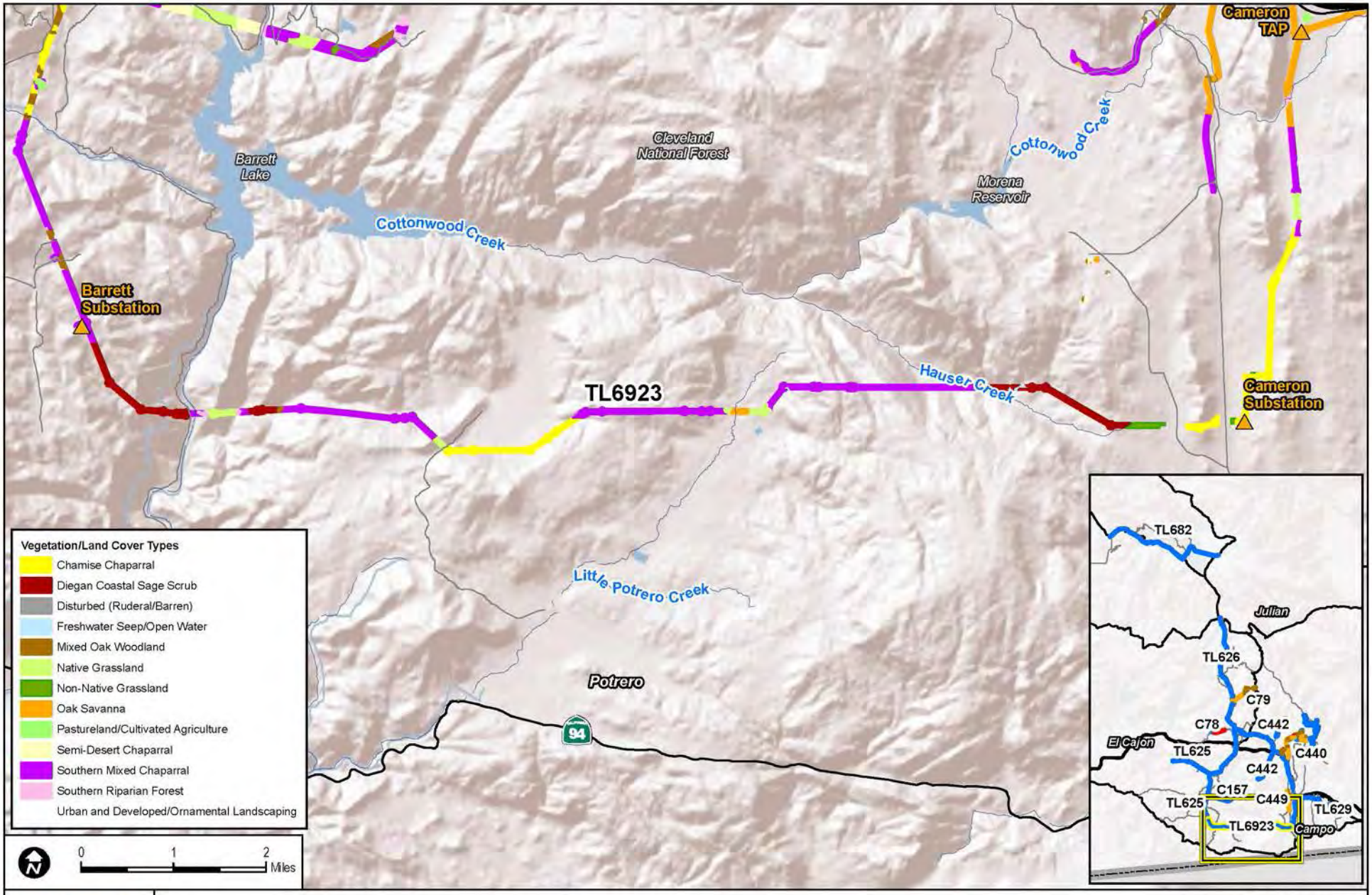

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SOURCE: SDG&E 2011, 2012; USGS; SanGIS 2012; Bing Maps

FIGURE D.4-1e

TL6923 Vegetation Overview Map

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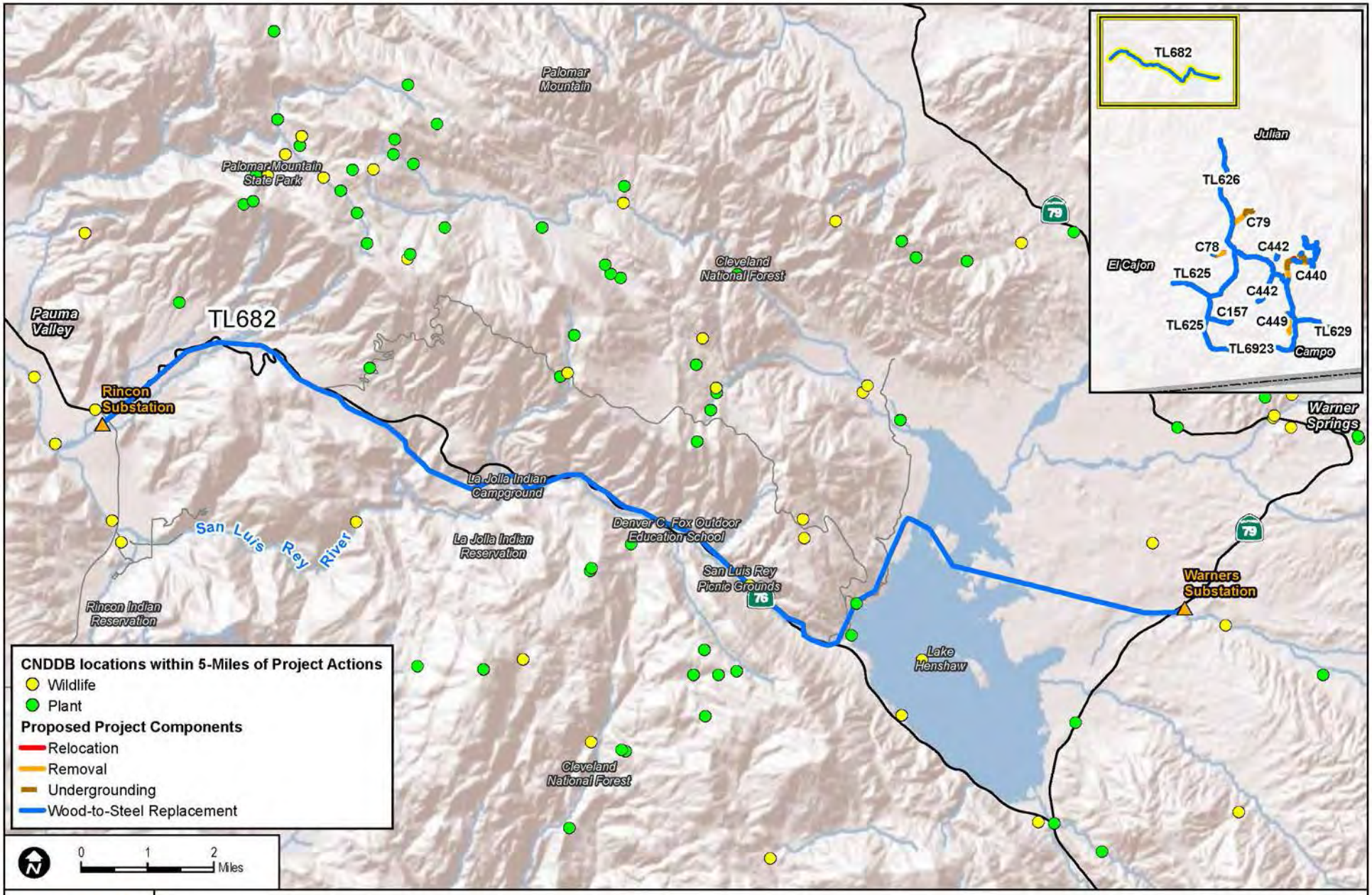

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SOURCE: SDG&E 2011, 2012; USGS; SanGIS 2012; Bing Maps

FIGURE D.4-2a

TL682 CNDDB Overview Map

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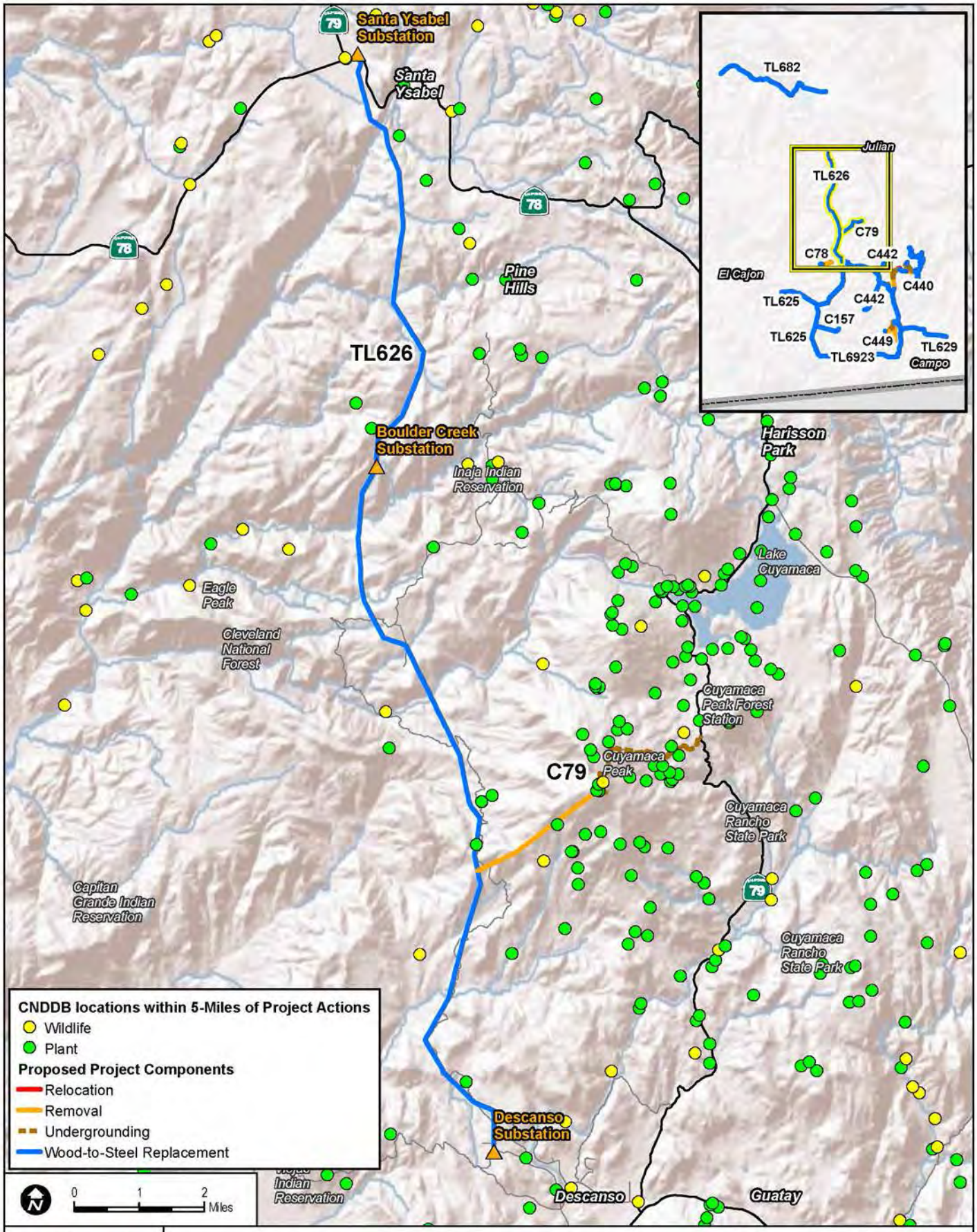

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SOURCE: SDG&E 2011, 2012; USGS; SanGIS 2012; Bing Maps

FIGURE D.4-2b

TL626, C79 CNDDB Overview Map

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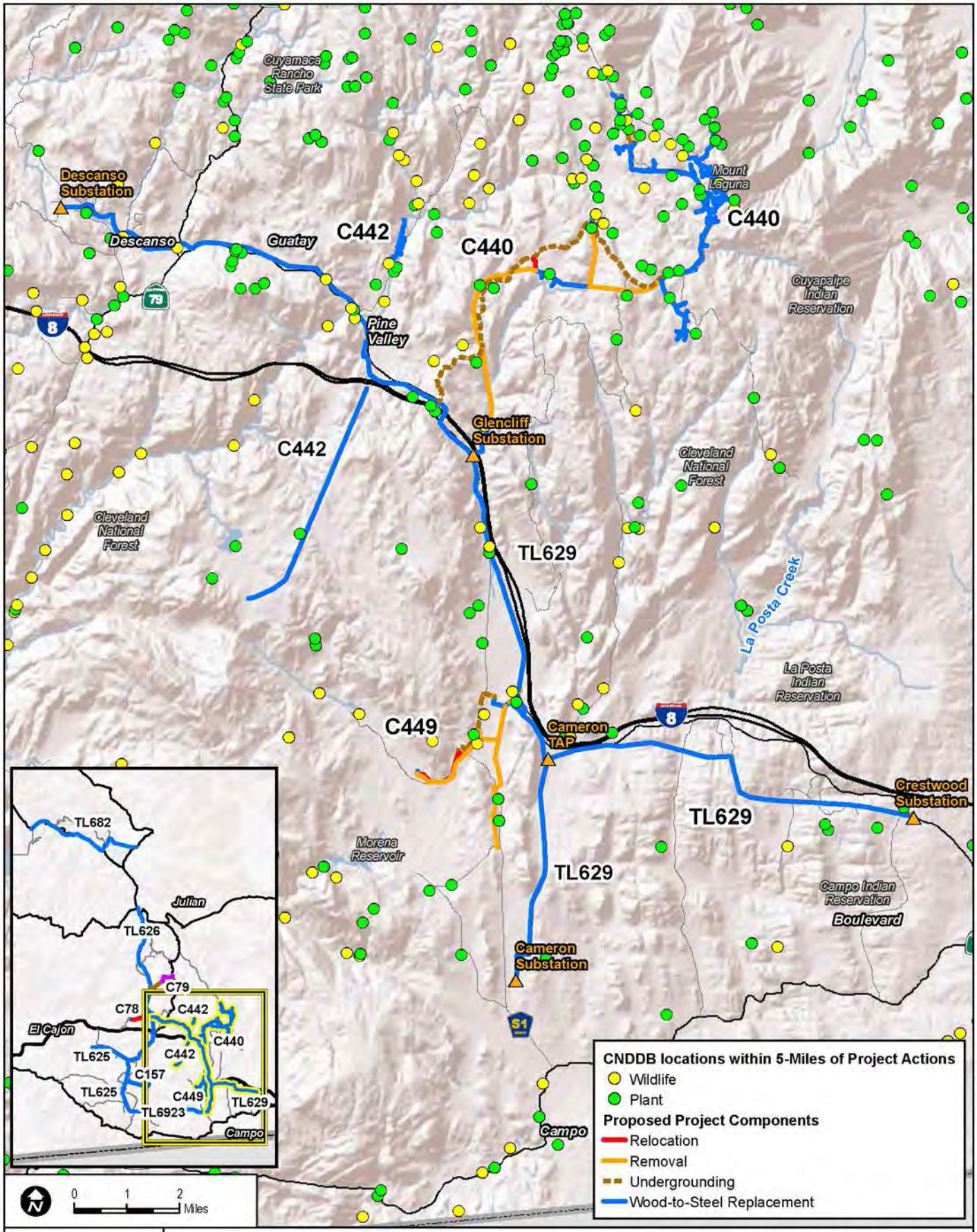

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SOURCE: SDG&E 2011, 2012; USGS; SanGIS 2012; Bing Maps

FIGURE D.4-2c

TL629, C440, C442, C449 CNDDB Overview Map

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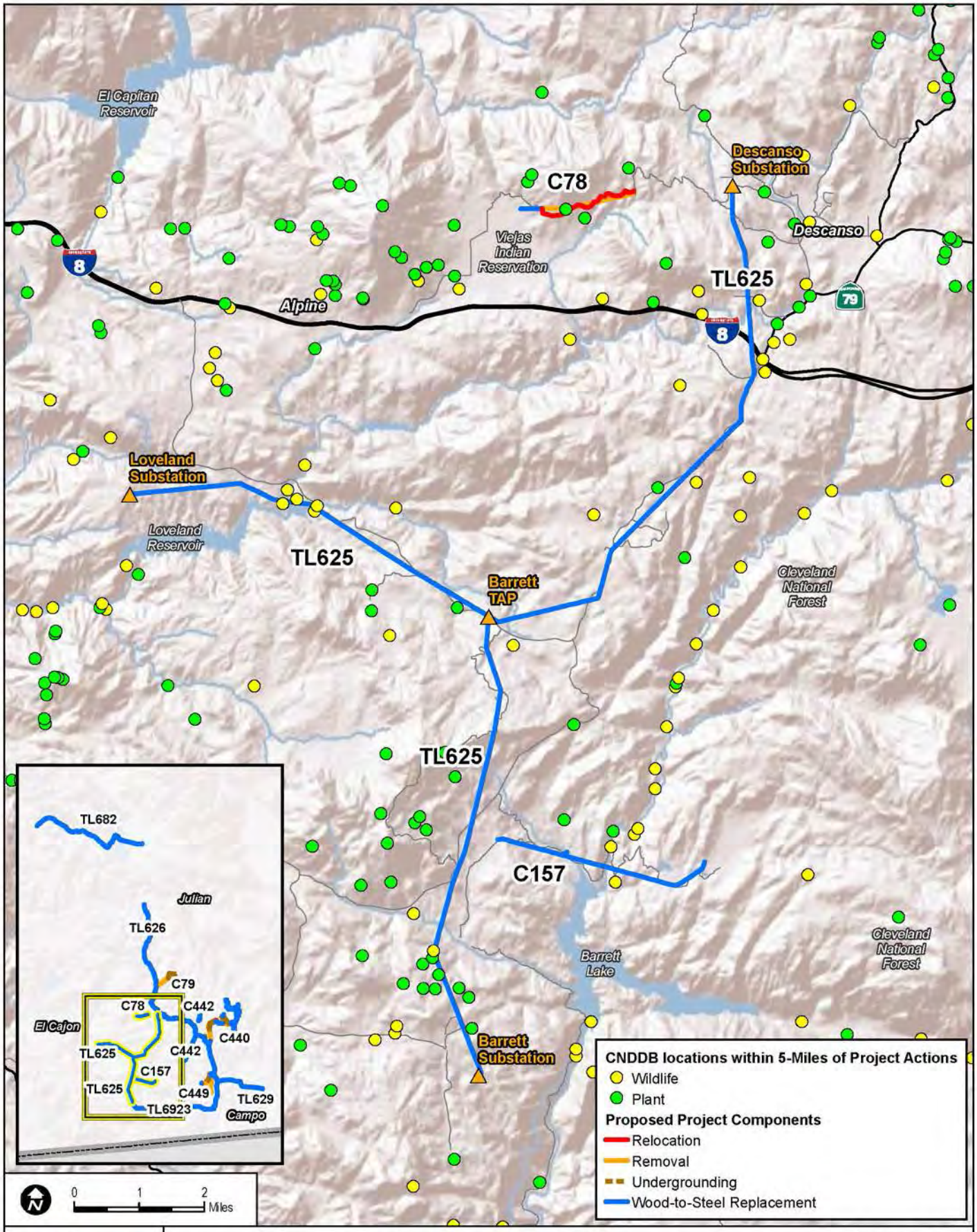

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SOURCE: SDG&E 2011, 2012; USGS; SanGIS 2012; Bing Maps

FIGURE D.4-2d

TL625, C78, C157 CNDDB Overview Map

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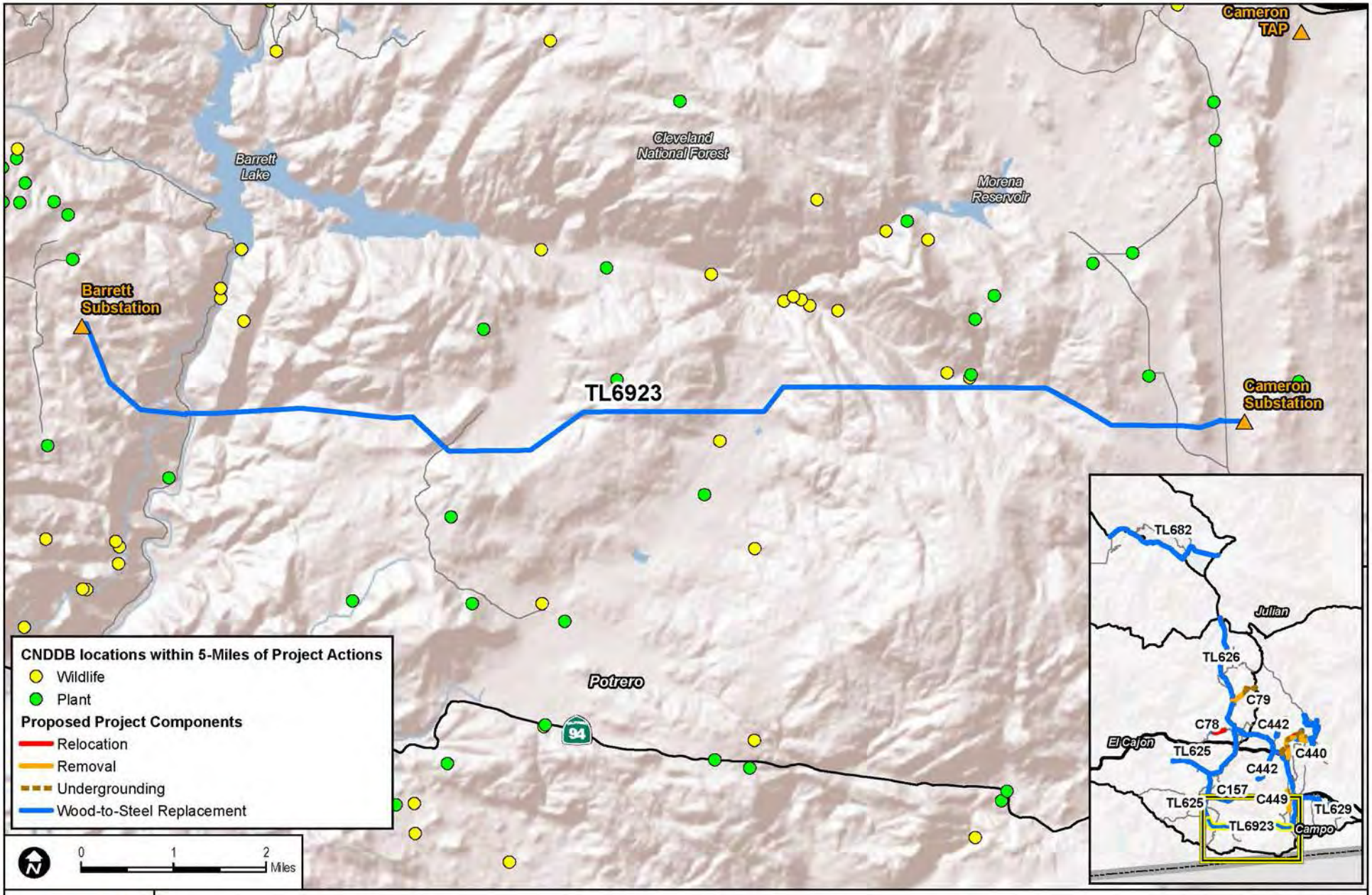

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SOURCE: SDG&E 2011, 2012; USGS; SanGIS 2012; Bing Maps

FIGURE D.4-2e

TL6923 CNDDB Overview Map

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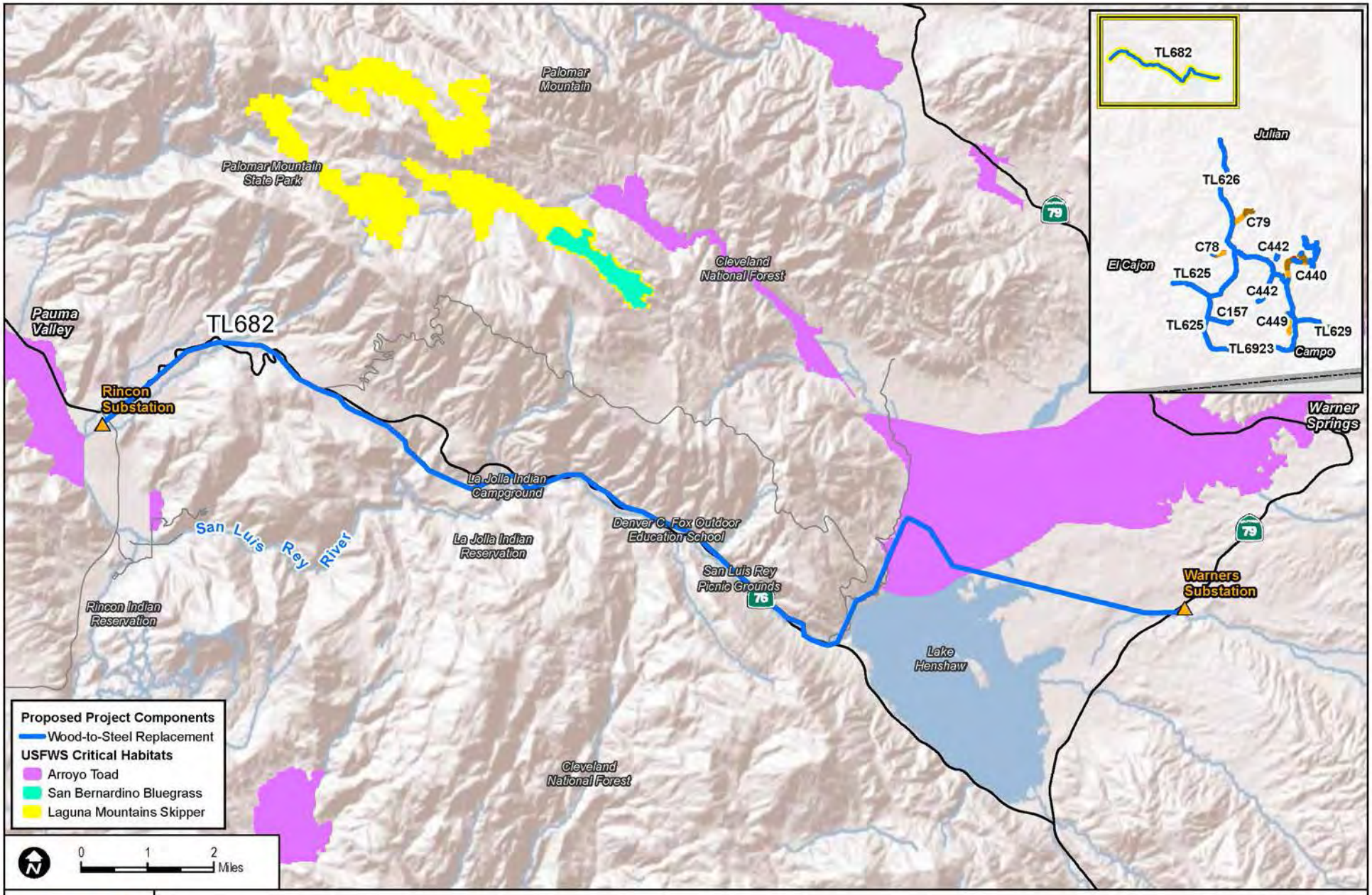

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SOURCE: SDG&E 2011, 2012; USGS; SanGIS 2012; USFWS

FIGURE D.4-3a

TL682 USFS/USFWS Critical Habitat Overview Map

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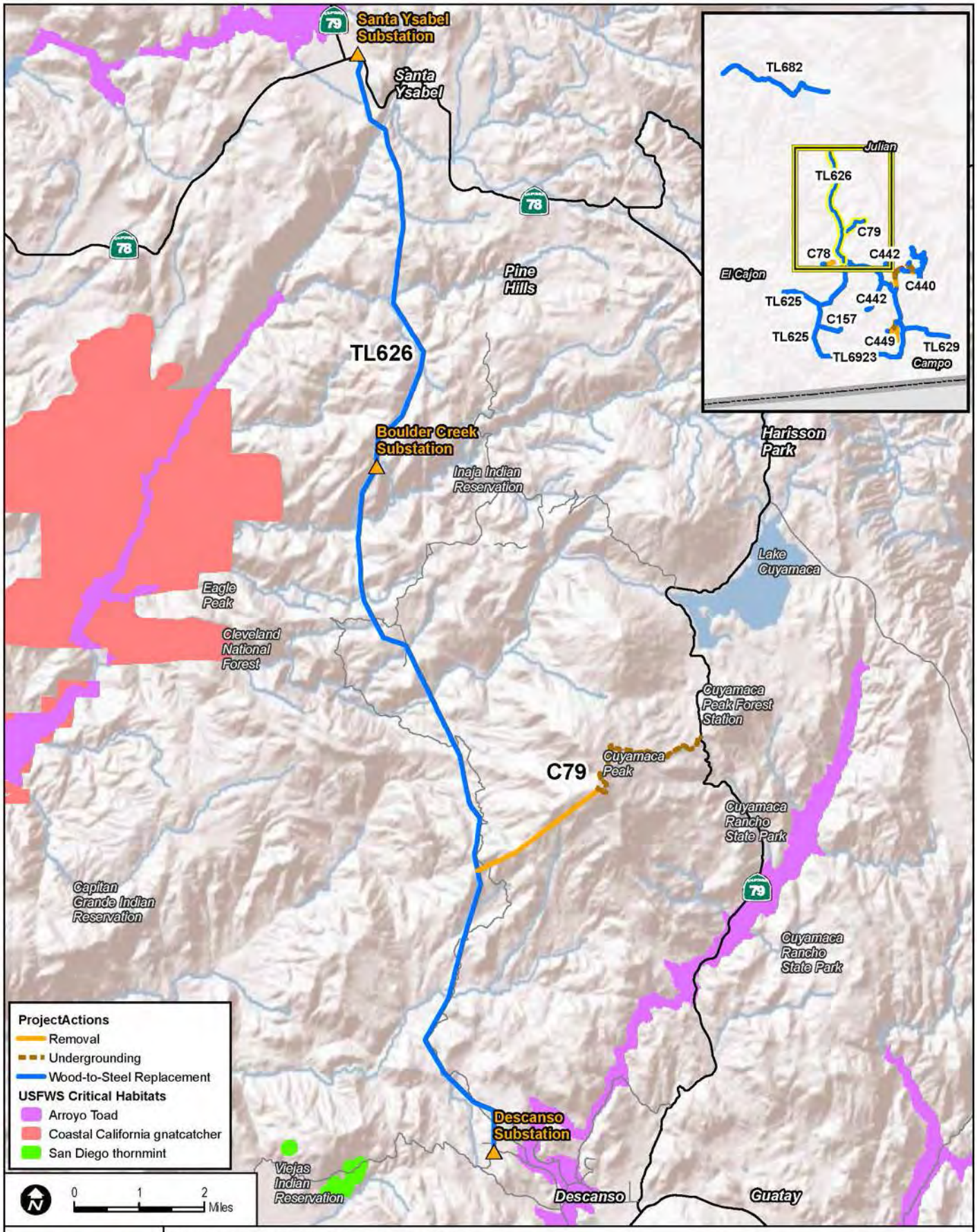

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SOURCE: SDG&E 2011, 2012; USGS; SanGIS 2012; USFWS

FIGURE D.4-3b

TL626, C79 USFS/USFWS Critical Habitat Overview Map

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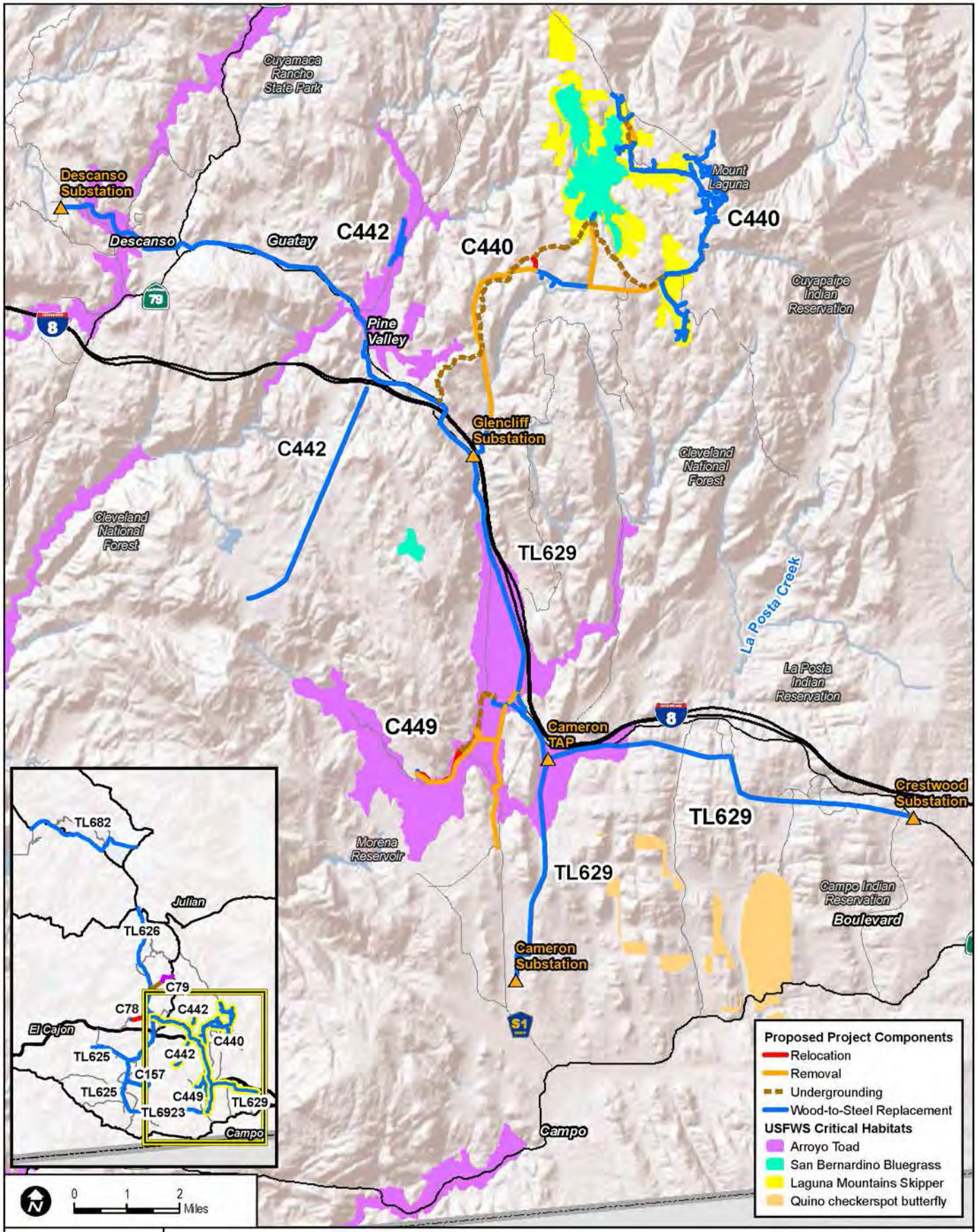

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SOURCE: SDG&E 2011, 2012; USGS; SanGIS 2012; USFWS

FIGURE D.4-3c

TL629, C440, C442, C449 USFS/USFWS Critical Habitat Overview Map

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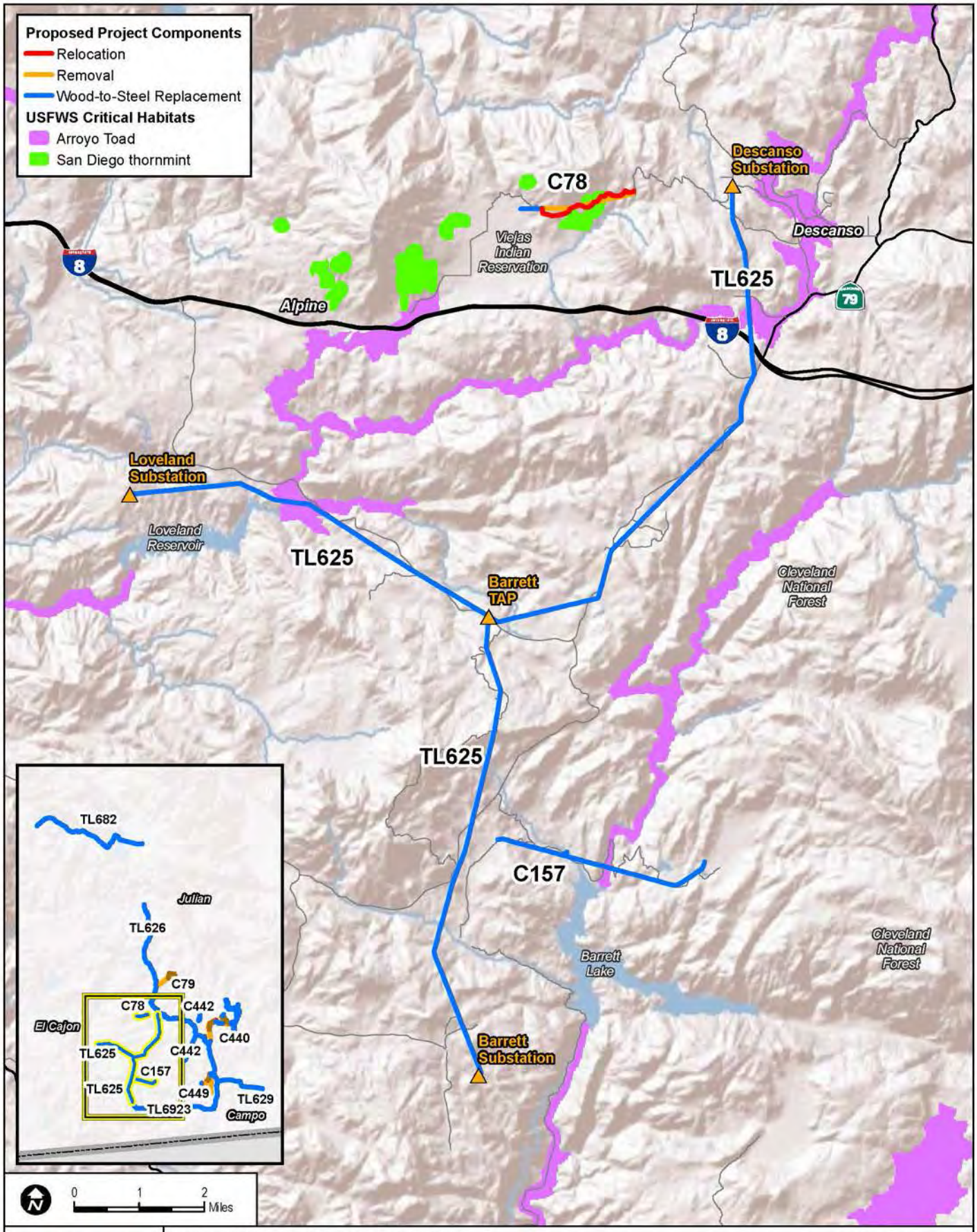

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SOURCE: SDG&E 2011, 2012; USGS; SanGIS 2012; USFWS

FIGURE D.4-3d

TL625, C78, C157 USFS/USFWS Critical Habitat Overview Map

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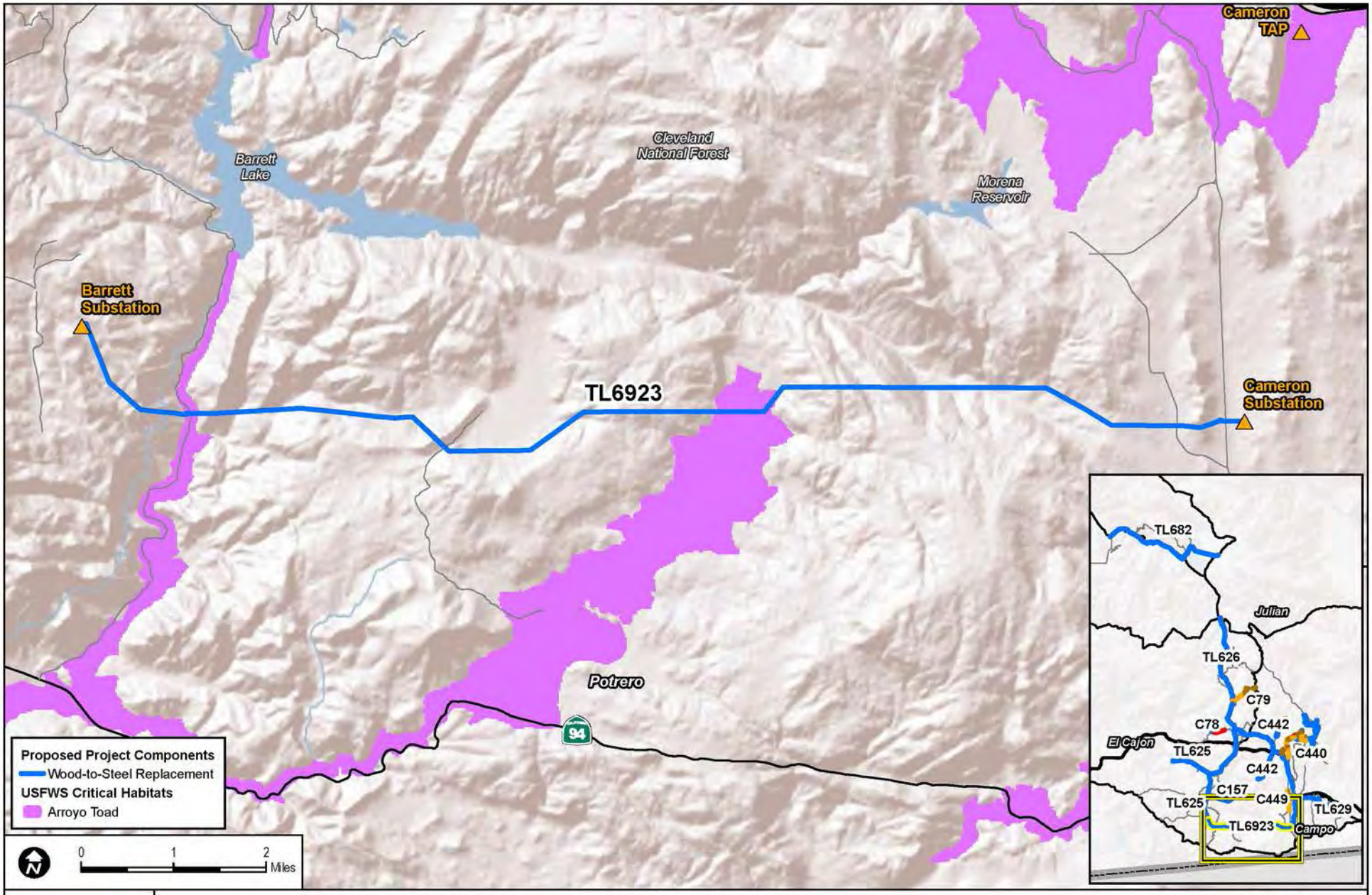

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SOURCE: SDG&E 2011, 2012; USGS; SanGIS 2012; USFWS

FIGURE D.4-3e

TL6923 USFS/USFWS Critical Habitat Overview Map

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D.5 Cultural and Paleontological Resources

This section addresses potential impacts to cultural and paleontological resources resulting from construction and operation of the proposed power line replacement projects along with the operations and maintenance activities proposed for authorization under the MSUP. Section D.5.1 provides a description of the existing environmental setting/affected environment for cultural and paleontological resources in the project study area. Applicable regulations, plans, and standards are listed in Section D.5.2. An analysis of potential impacts/environmental effects of SDG&E's proposed project and discussion of mitigation measures to lessen/reduce project effects are provided in Section D.5.3. The U.S. Forest Service (Forest Service) proposed action is described in Section D.5.4, and Section D.5.5 discusses the Bureau of Indian Affairs (BIA) proposed action. Additional alternatives are discussed in Section D.5.6. Section D.5.7 discusses the No Action Alternative and Section D.5.8 describes the No Project Alternative. Section D.5.9 provides mitigation monitoring, compliance, and reporting information. Section D.5.10 addresses residual effects of the project, and Section D.5.11 lists the references cited in this section.

D.5.1 Environmental Setting/Affected Environment

Cultural resources are the tangible or intangible remains or traces left by prehistoric or historical peoples who inhabited the San Diego region. Cultural resources can also include traditional cultural places, such as gathering areas, landmarks, and ethnographic locations (County of San Diego 2007a).

Building and structural sites can vary from historic buildings to canals, historic roads and trails, bridges, ditches, dams, and cemeteries. These resources are generally called historical resources or "built" environment resources.

Examples of Native American traditional cultural resources or traditional cultural properties (TCPs) include sacred sites, as well as traditional resources of any community that are important for maintaining the cultural traditions of any group (National Register of Historic Places 1990; National Register Bulletin 38). Examples of Native American TCPs include places such as traditional landscapes, sacred mountains, and buildings; or areas where plants are collected for food, medicine, basket weaving, and ceremonial uses. Other examples of TCPs include buildings, parks, neighborhoods, or other places required to maintain contemporary cultural traditions.

Paleontological resources are the remains and/or traces of prehistoric life, exclusive of human remains, and including the localities where fossils were collected and the sedimentary rock formations from which they were obtained. They can include bones, teeth, soft tissue, shells, wood, leaf impressions, footprints, burrows, and microscopic remains. The defining character of

fossils is their geologic age. Fossils or fossil deposits are generally regarded as older than 10,000 years, the generally accepted temporal boundary marking the end of the last Late Pleistocene glacial event and the beginning of the current period of climatic amelioration of the Holocene (County of San Diego 2007b).

In the San Diego region, paleontological resources occur in subsurface sedimentary rock layers, although they sometimes may be found in surface outcrops. These resources are limited and nonrenewable because the organisms from which they derive are extinct. Fossils are important scientific and educational resources because they are used to:

- Study the phylogenetic relationships between extinct organisms, as well as their relationships to modern groups
- Elucidate the taphonomic, behavioral, temporal, and diagenetic pathways responsible for fossil preservation, including biases in the fossil record
- Reconstruct ancient environments, climate change, and paleoecological relationships
- Provide a measure of relative geologic dating that forms the basis for biochronology and biostratigraphy, and that is an independent and supporting line of evidence for isotopic dating
- Study the geographic distribution of organisms and tectonic movements of land masses and ocean basins through time
- Study patterns and processes of evolution, extinction, and speciation.

Methodology and Assumptions

Information for SDG&E's proposed project was gathered from a review of the Forest Service Environmental Assessment for the San Diego Gas & Electric (SDG&E) Master Special Use Permit (Forest Service 2009); the SDG&E Master Special Use Permit Cleveland National Forest Orange and San Diego Counties, California Revised Plan Of Development (SDG&E 2013); and the Final Inventory, Evaluation and Treatment of Cultural Resources in the Cleveland and National Forest Transmission and Distribution Line Increase Fire Safety Project in support of the Proponent's Environmental Assessment (ASM 2011; SDG&E 2012).

The Area of Potential Effect (APE) identified by SDG&E included approximately 90 feet on either side of the power lines and circuits proposed for replacement and approximately 30 feet on either side of exclusive use access road centerlines and the actual footprint of all stringing sites, staging areas, guard structures, and fly yards. The APE did not include all the areas identified in the Forest Service proposed action nor did it include areas identified in the alternatives.

Data collection included the following methods:

- An archaeological site record and archival search was conducted at the South Coastal Information Center, San Diego State University. The site record and archival search consisted of reviews of archaeological site records and associated cultural resources management reports (technical reports) prepared for projects that overlap portions of the project area.
- Project information in the California Historical Resources Information System Geographical Information System (GIS) inventory was examined for known and recorded sites.
- Various maps, including project maps, in addition to U.S. Geological Survey (USGS) quadrangle maps, and if applicable, prior reports were consulted and used to identify cultural resources that have been previously recorded in the vicinity of project area.
- Information gathered from archival research, including historic maps, was also used to assess the potential for encountering previously unrecorded resources within the project area.
- An intensive pedestrian field survey was conducted within the APE. Areas that were inaccessible because of dense brush or ground cover were subjected to limited, focused survey, whenever possible.
- Lands on the La Jolla Indian Reservation could not be surveyed, and the tribe did not grant permission to conduct a records search. All work was completed in accordance with the California Office of Historic Preservation guidelines for archaeological documentation, and in compliance with the National Environmental Policy Act (NEPA) of 1969, as amended (16 U.S.C. 4321 and 4331–4335); the National Historic Preservation Act (NHPA) of 1966, as amended (16 USC 470 et seq.); and the requirements set forth in Protection of Historic Properties (36 CFR 800), the implementing regulations of the NHPA.
- A request for a Sacred Lands File search was sent to the Native American Heritage Commission (NAHC) for their consideration and input. The NAHC provided lists of tribes and interested Native American consulting parties provided in Appendix C, NAHC Correspondence, of Appendix CUL-1 (confidential) of this EIR/EIS. The interested Native American parties were added to the project mailing list and were notified during the environmental review process.

All prehistoric and historic sites, both new and previously recorded (if relocated), were recorded. Sites were defined as any concentration of three or more artifacts in a 25-square-meter (m^2) area and isolated artifacts were defined as fewer than three artifacts in a 25-m^2 area. Separate sites were recorded when artifact concentrations were separated by more than 50 m.

The isolated finds are, by definition, not sites and are not eligible for inclusion in the National Register of Historic Places (NRHP). Because isolates are not NRHP-eligible, they are not historic properties under Section 106 of the NHPA, and no further work is necessary. The isolated finds also are not eligible for inclusion in the California Register of Historical Resources (CRHR) as "historic resources," because they do not address any of the listing criteria (A, B, C, or D). Additionally, the isolated finds are not "unique" archaeological resources as defined by CEQA Section 21083.2(g), because they do not contain information needed to answer important scientific questions; there is no demonstrable public interest in that information; they have no special and particular quality, such as being the oldest of its type or the best available example of its type; and they are not directly associated with a scientifically recognized, important prehistoric or historic event or person.

D.5.1.1 General Overview

Cultural and historical resources within the project area represent nearly 9,000 years of human occupation and use. Cultural development within the national forests may have evolved along different lines reflecting adaptation by different cultural groups from different environments. By the time of European contact, several distinct groups were recorded as exploiting the mountainous environment. Use of the national forests by the European population first centered on travel, mission-related activities (including post-secularization communities and other early California settlements), homesteading, mining, and ranching, before culminating in a recreation focus of the activities within the national forests. The "Archaeological Overview for the Cleveland National Forest" prepared by Mooney and Associates in 2003 is available in the project files and provides a detailed overview of the cultural resources on the Cleveland National Forest (CNF) (Forest Service 2009).

The existing power lines, access roads, and other facilities proposed for authorization under the MSUP are known to be located on or across 25 cultural resources as documented by surveys conducted by ASM Affiliates. These resources include 19 prehistoric archaeological sites, 5 historical archaeological sites (including two with historic built features—one water retention basin and one road), and one archaeological site with both prehistoric and historic components. In addition, heritage sites important to native peoples have also been identified through consultation as being located within the APE. Impacts to the sites occurred through the construction of project facilities, including road construction, clearing for pole installation, and clearing for fire prevention. Impacts to known sites have occurred in the past. These past actions are part of the baseline for the analysis of SDG&E's proposed project and alternatives (Forest Service 2009).

A portion of the utilities infrastructure proposed for permitting and replacement as part of the proposed project is over 50 years old and requires documentation and evaluation for its potential

eligibility for listing on the National Register of Historic Places (NRHP). SDG&E has not completed this evaluation, and the status and eligibility of the existing infrastructure is unknown.

Archaeological Setting

The prehistory of San Diego County is generally divided into three temporal periods: Paleoindian, Archaic, and Late Prehistoric. The following contextual information is summarized from ASM's *Inventory, Evaluation and Treatment of Cultural Resources in the Cleveland National Forest Transmission and Distribution Line Increased Fire Safety Project* (ASM 2011) that was prepared for SDG&E's proposed project.

Paleoindian Period

The Paleoindian period in San Diego County is believed to have occurred during the Pleistocene through the early Holocene, beginning approximately 10,000 B.P. and ending sometime between 8,500 and 7,500 B.P.

Archaeologists have used a variety of terms over the years for Paleoindian assemblages in the Southern California region, including the terms Scraper-Maker, Malpais, and Playa to label lithic industries of the region (terms introduced then discarded by Malcolm Rogers), and San Dieguito to refer to the earliest artifact assemblages in San Diego County (another term introduced by Rogers). Key attributes of the San Dieguito sites included distinct scrapers and scraper planes, bifacial knives, rare crescentics, and occasional hand stones and milling stones that were determined to be used mainly for hunting.

The discovery of the C.W. Harris site with flaked lithic tools such as scrapers, scraper planes, large bifaces, and projectile points, along the San Dieguito River provided the first stratigraphic evidence of the San Dieguito. Trenching excavations at the C.W. Harris site revealed San Dieguito and Late Prehistoric occupation. Rogers considered the C.W. Harris site as a late Paleoindian campsite.

Archaic Period

In the San Diego region, the Archaic period extends from approximately 7,500 BP to sometime between 1,300 and 800 BP. Archaic assemblages along the coast consist of archaeological resources including groundstone items, flaked cobble tools and cores, and marine shell. A major distinction has been made between shell midden Archaic sites near the coast and nonshell midden Archaic sites further inland. Coastal Archaic sites (known as La Jolla complex) have been characterized by shell middens, flaked cobble tools, basin milling stones, hand stones, and flexed burials, while inland areas in northern San Diego County (known as Pauma complex) lack

the shell middens and burials. The Archaic period focused on gathering activities that emphasized plant resources, marine mollusks, and catching fish.

Major changes in human adaptations were considered to have occurred between 4,000 and 3,000 BP, with the decline in associated shellfish populations, resulting in a depopulation of the coastal zone. Populations shifted inland to a river valley orientation and focused on terrestrial small game and plant resources (e.g., acorns).

Pauma complex sites were set on hills overlooking drainages, and associated with Holocene sediments. These sites were considered distinct from coastal Archaic sites, given their surficial nature, lack of shellfish, and perceived differences in the lithic assemblage. Given the predominance of grinding stones in the tool assemblages, the economy at these sites was thought to be oriented toward seed-gathering.

Late Prehistoric Period

The period of time following the Archaic and prior to Ethnohistoric times (AD 1750) is commonly referred to as the Late Prehistoric period. However, several other subdivisions continue to be used to describe various shifts in assemblage composition, including the addition of ceramics and cremation practices. In northern San Diego County, the post-AD 1450 period is called the San Luis Rey Complex (True 1966, as cited in ASM 2011), while the same period in southern San Diego County is called the Cuyamaca Complex and is thought to extend from AD 500 until Ethnohistoric times (~~Meighan 1959~~ASM 2011). The San Luis Rey Complex has been attributed to the ethnohistoric Luiseno Native Americans, and the Cuyamaca Complex has been attributed to the ethnohistoric Kumeyaay Native Americans. Rogers (1929, as cited in ASM 2011) also subdivided the last 1,000 years into the Yuman II and III cultures, based on the distribution of ceramics. Despite these regional complexes, each is defined by the addition of arrow points and ceramics, and the widespread use of bedrock mortars. Vagaries in the appearance of the bow and arrow and ceramics make the temporal resolution of the San Luis Rey and Cuyamaca complexes difficult. For this reason, the term Late Prehistoric is well-suited to describe the last 1,500 years of prehistory in the San Diego region.

Temporal trends in socioeconomic adaptations during the Late Prehistoric period are poorly understood. This is partly due to the fact that the fundamental Late Prehistoric assemblage is very similar to the Archaic pattern, but includes arrow points and large quantities of fine debitage from producing arrow points, ceramics, and cremations. The appearance of mortars and pestles is difficult to place in time because most mortars are on bedrock surfaces; bowl mortars are actually rare in the San Diego region. Some argue that the Ethnohistoric intensive acorn economy extends as far back as AD 500 (Bean and Shipek 1978). However, there is no substantial evidence that reliance on acorns, and the accompanying use of mortars and pestles,

occurred prior to AD 1400. True (1980, as cited in Hale 2009) argued that acorn processing and ceramic use in the northern San Diego region did not occur until the San Luis Rey pattern emerged after approximately AD 1450. For southern San Diego County, the picture is less clear. The Cuyamaca Complex is the southern counterpart to the San Luis Rey pattern, however, and is most recognizable after AD 1450 (~~Hector 1984~~ASM 2011). Similar to True (1980, as cited in Hale 2009), Hale (2009) argued that an acorn economy did not appear in the southern San Diego region until just prior to Ethnohistoric times, and that when it did occur, a major shift in social organization followed.

Regardless of the problems differentiating archaeology within traditional ethnohistoric Native American groups, the fully developed Late Prehistoric period across San Diego and Imperial Counties (1,000–300 BP) is characterized by sites with small pressure-flaked projectile points, cremation burials, ceramics, and plant food collection, processing, and storage, especially of acorns and other nuts. Inland semi-sedentary villages were established along major waterways, and montane areas were seasonally occupied to gather acorns and pinyon nuts, resulting in permanent milling stations on bedrock outcrops.

Ethnohistoric Setting

The APE for all alternatives spans territory occupied by Takic-speaking Native American groups of the larger Uto-Aztecan language family in northern San Diego County, including the Luiseno, and Yuman-speaking Diegueño or Kumeyaay (Ipai-Tipai) territory to the south, including the Kumeyaay, the Kamia, and groups living in northern Baja California. The Luiseno occupied the Peninsular Ranges to the Coast, generally north of the San Elijo watershed. The Kumeyaay also occupied the coast through the Peninsular Ranges but south of the San Elijo watershed, and the Kamia occupied Imperial Valley and on the Colorado River.

Archaeological deposits associated with Luiseno and Kumeyaay are very similar with differences primarily being recognized in relative proportions of certain artifact classes and their chronology (i.e., the timing and intensity of ceramic use and the bow and arrow) (Hale 2009). Despite the similarity in archaeological deposits, Luiseno and Kumeyaay social organization, as reported during early ethnographic studies was noticeably different: the Luiseno are reported to have had more structured settlement and were more aggressive than their southerly Kumeyaay neighbors (Bean and Shipek 1978; Shipek 1985, as cited in ASM 2011; Luomala 1978). To be sure, separate prehistoric archaeological traditions have been assigned to each ethnohistoric group: the San Luis Rey complex has been attributed to the Luiseno and the Cuyamaca complex has been attributed to the Kumeyaay (see previous discussion of the Late Prehistoric Period).

Similar to archaeological deposits, ethnohistoric accounts of subsistence for the Luiseno and Kumeyaay are nearly identical, probably due to the overlap of resources between the territories

of both groups. Overall, animal resources consisted mostly of small game such as rabbits (*Sylvilagus* spp.), hares (*Lepus californicus*), woodrats (*Neotoma* spp.), lizards, snakes, and grasshoppers and larger game, mostly mule deer (*Odocoileus hemionus*) and possibly pronghorn (*Antilocapra americana*, now locally extinct).

Luiseno and Kumeyaay culture and society began to change dramatically with the introduction of missionization and displacement by Hispanic populations during the late eighteenth and early nineteenth centuries. The effects of missionization, along with the introduction of Old World diseases, greatly reduced the native population of Southern California and by the early 1820s, California was under Mexican rule. The establishment of ranchos under the Mexican land grant program further disrupted the way of life of the native inhabitants.

During the 1830s, Indians were given half the mission lands and were made to be Mexican farmers and colonists, working on community projects. The majority of Indians quickly lost their mission lands as secular administrators functioned like feudal lords and ignored their responsibilities to the Indians. As a result, Native Americans became serfs, trespassers on ancestral lands, rebels, or mountain fugitives.

Initially, the U.S. Senate rejected treaties negotiated in 1851–1852 with California Indian groups. Later, legal reservations began to set aside portions of San Diego County for native groups. The newly established reservations were inadequate to sustain the economy. By the 1880s, Native Americans were living in dire conditions, and by the 1890s, many returned to the reservations for fiestas and family events.

Native American Resources

ASM researched traditional cultural locations in the APE using available published information and archival materials. Traditional cultural locations are named landmarks that collectively constitute maps of indigenous groups' territories and use areas. None of the traditional cultural locations discussed below have been evaluated as TCPs.

Many villages occupied by the Kumeyaay (Ipai-Tipai-Diegueño-Kamia) were only temporary campsites used for access to water, drainage, boulder outcrops, natural protection from weather and ambush, as well as abundant flora and fauna of that ecological niche.

Specific Kumeyaay traditional cultural locations or places include the following 27 locations (ASM 2011):

- Along the San Dieguito River: Kuiaumai, Hapai, Sinyau-pichkara, Ahmukatlkatl, Pauha, Tukumak (near Mesa Grande), Setmunumin, and Atikwanon
- Between the San Dieguito and San Diego Rivers: Pauwai and Pamo

- Along the San Diego River: Kosoi, Nipawai, Sinyeweche, Witlimak, Anyaha, Kosmit, and Sinyau-tehwir
- Between the San Diego and Sweetwater Rivers: Amotaretuwe
- San Diego Bay and Sweetwater River: Totakamalare, Pauipa, Hamacha (Jamacha), Sekwan (Sycuan), Ekwianiak, and Tlokwih
- Along the Otay River: Hamul (Jamul)
- Between the Otay River and Cottonwood Creek: Otai (Otay Mountain)
- Along Cottonwood Creek: Kwatai (Guatay). See also Carrico (1983) for an excerpt of an interview with Tom Lucas, Kwaaymii, of Laguna Ranch regarding this village.

The Kumeyaay band territory included trails that were used by all members, general hunting territories, religious and ceremonial areas, band gathering areas, and locations with family or individual tenures. Each band also had specific and individual sacred sites and had a cemetery or cremation area that was used for sacred disposal of the dead. All bands had some central brush- or pole-enclosed structure used as an altar or worship area that only the shamans and leaders might enter.

Sacred places within greater Kumeyaay territory include the following (ASM 2011):

- Corte Madera Mountain (*Hilsh Ki'e* or "Pine Tree"): The Battle of the Peaks
- West side of the south peak of the Cuyamacas (*Hutstah' Tah-mil'tah*): Hanging Head
- The cold spring on the high peak of the Cuyamacas (*Ahaawiiahaa*): Water Colder Water
- A huge white boulder with spots of red on west side of Cuyamaca Peak (*Aakwerap*): Disease Cure
- Another large boulder on west side of Cuyamaca Peak (*Huulyaw Nimuuluukaa*): Phantom Basket
- Mount Guatay near Descanso (*Awaataay*): Big House
- A spring at the edge of the river flat at Descanso (*In-yar'en Ah-ha'*): No Eyes in Water
- The Laguna Mountains (*Siinyahaw Haawak*): Old Woman's Twins
- The Laguna Mountains (*Siinyahaw Hampuu*): Old Woman's Whip
- The summit of Viejas Mountain (*Kwut'ah Lu'e-ah*): Kwut'ah Lu'e-ah-Song Dance
- Iron oxide deposit at the foot of the Coyote Mountains (*Aakwer*): Red Paint.

In addition to the above-mentioned unevaluated traditional cultural locations, there are several archaeological districts that have also not been evaluated as TCPs. Table Mountain was

nominated for listing in the NRHP by the Bureau of Land Management (BLM) as an archaeological district in 1982 because of its use by tribes such as the Kumeyaay. Archaeological evidence within this area include trade, rites, and rituals.

The Jacumba area was proposed as a discontiguous NRHP archaeological district by Wirth Associates Inc. in 1981 and encompasses the town of Jacumba and its surrounding valley and hills. The district was recommended as eligible for listing because of its use by the Kumeyaay as a prehistoric gathering and trade area. Archaeological evidence of prehistoric practices includes trade and settlement sites.

In summary, although 95 traditional cultural locations and two archaeological districts have been documented in greater Kumeyaay territory, none have been evaluated as TCPs and, moreover, none are located within the project APE. While there is a potential for Luiseno TCPs in the project area, the potential for TCPs in the existing TL 682 alignment and proposed power line project is considered to be low.

D.5.1.2 Record Search and Survey Results

Based on a literature review, approximately 228 cultural resources are located either partially or completely within the APE of SDG&E's proposed project. Approximately 51 of these resources have existing wood poles located within their survey boundaries. Two historic resources, Old Highway 80 and Lilac Village, pass through the project study area. Old Highway 80 is a historic resource that is bordered by portions of TL629 from approximately Pine Valley in the west to the Campo Indian Reservation in the east. Old Highway 80 was recorded and assessed as eligible for the NRHP in 2000. Approximately 39 existing TL629 wood poles are located along Old Highway 80, but are outside the historic resource itself. Lilac Village is also a historic resource that is located along Sunrise Highway, north of Mount Laguna Drive and south of Los Huecos Road. Lilac Village was recorded and assessed as eligible for the NRHP in 1980. Approximately 11 wood poles are located in the historic resource itself.

Based on a literature review, there are approximately 122 cultural resources located either partially or completely within the CNF APE. Approximately 15 of these sites have existing wood poles located within their survey boundaries. The Old Highway 80 and Lilac Village historic resources pass through the CNF. Approximately 7 existing TL629 wood poles within the CNF are located along Old Highway 80, but are outside the historic resource itself, and approximately 10 existing C449 wood poles within the CNF are located within the Lilac Village historic resource.

The following previously recorded cultural resources for the five transmission lines and six distribution lines are described below. Only lands on the La Jolla Indian Reservation could not be surveyed, nor was permission granted by the tribe to conduct a records search.

TL682

As listed in Table D.5-1, there are 24 previously recorded cultural resources within the TL682 APE.

Table D.5-1
Previously Recorded Cultural Resources within the TL682 APE

Site Designation	USGS Quad	Description	NRHP/CRHR Status	Identified by ASM During Survey Effort
SDI-25	Boucher Hill	prehistoric bedrock milling	not evaluated	No
SDI-503	Boucher Hill	prehistoric bedrock milling	not evaluated	No
SDI-615	Boucher Hill	prehistoric bedrock milling; prehistoric pictographs	not evaluated	Yes
SDI-770	Palomar Observatory	prehistoric bedrock milling	not evaluated	Yes
SDI-789	Palomar Observatory	prehistoric bedrock milling	not evaluated	Yes
SDI-791	Palomar Observatory	prehistoric bedrock milling	not evaluated	Yes
SDI-9580 (BW-103)	Mesa Grande	historic water basins	not evaluated	Yes
SDI-9694	Warners Ranch	prehistoric artifact scatter	not evaluated	Yes
SDI-10449	Palomar Observatory	prehistoric bedrock milling	not evaluated	Yes
SDI-10663	Palomar Observatory	prehistoric bedrock milling	not evaluated	No
SDI-17883	Mesa Grande	prehistoric bedrock milling	not evaluated	Yes
SDI-19737 (BW-96)	Mesa Grande	historic trash scatter; historic road	not evaluated	Yes
SDI-19739 (BW-98)	Palomar Observatory	prehistoric bedrock milling	not evaluated	Yes
SDI-19740 (BW-99)	Warner Springs	historic bottle scatter	not evaluated	No
SDI-19741 (BW-100)	Warner Springs	historic bottle scatter	not evaluated	Yes
SDI-19738 (BW-101)	Palomar Observatory	prehistoric bedrock milling	not evaluated	Yes
SDI-19742 (BW-102)	Palomar Observatory	prehistoric bedrock milling	not evaluated	Yes
SDI-19743 (BW-104)	Boucher Hill	prehistoric bedrock milling	not evaluated	Yes
SDI-19744 (BW-105)	Boucher Hill	historic trash scatter	not evaluated	Yes
SDI-19745 (BW-106)	Boucher Hill	prehistoric bedrock milling	not evaluated	Yes
SDI-19746 (BW-107)	Boucher Hill	prehistoric lithic scatter	not evaluated	Yes
SDI-19747 (BW-108)	Boucher Hill	prehistoric bedrock milling; prehistoric pictographs	not evaluated	Yes
SDI-19748 (BW-109)	Boucher Hill	prehistoric bedrock milling	not evaluated	Yes
SDI-19749 (BW-97)	Mesa Grande	prehistoric bedrock milling	not evaluated	Yes

Source: ASM 2011
Note: Isolates are not included in table as they are not considered cultural resources. Isolates are not NRHP-eligible, are not historic properties under Section 106 of the NHPA, are not eligible for inclusion in the CRHR as "historic resources," and are not "unique" archaeological resources as defined by CEQA Section 21083.2(g).

In response to the Sacred Lands File search, the NAHC indicated that there are no documented sacred sites within TL682.

TL626

As listed in Table D.5-2, there are 22 previously recorded cultural resources within the TL626 APE.

Table D.5-2
Previously Recorded Cultural Resources within the TL626 APE

Site Designation	USGS Quad	Description	NRHP/CRHR Status	Identified by ASM During Survey Effort
SDI-4592	Tule Springs	prehistoric bedrock milling	not evaluated	Yes
SDI-5556	Tule Springs	prehistoric bedrock milling	not evaluated	Yes
SDI-5557	Tule Springs	prehistoric artifact scatter	not evaluated	Yes
SDI-5724	Tule Springs	prehistoric bedrock milling	not evaluated	Yes
SDI-7102	Tule Springs	prehistoric bedrock milling	not evaluated	Yes
SDI-12950	Tule Springs	prehistoric habitation	not evaluated	Yes
SDI-12951	Tule Springs	prehistoric bedrock milling	not evaluated	No
SDI-12957	Tule Springs	historical campground	not evaluated	Yes
SDI-15659	Tule Springs	prehistoric artifact scatter	not evaluated	Yes
SDI-16878	Santa Ysabel	prehistoric artifact scatter	not evaluated	Yes
SDI-16880	Santa Ysabel	prehistoric bedrock milling	not evaluated	Yes
SDI-17877	Santa Ysabel	prehistoric bedrock milling	not evaluated	Yes
SDI-17884	Santa Ysabel	prehistoric bedrock milling	not evaluated	No
SDI-17887	Tule Springs	prehistoric bedrock milling	not evaluated	Yes
SDI-19025	Santa Ysabel	prehistoric bedrock milling	not evaluated	Yes
SDI-19031	Santa Ysabel	historical lumber mill	not evaluated	Yes
SDI-19169	Tule Springs	prehistoric bedrock milling	not evaluated	Yes
SDI-19358 (ASM-626-1)	Santa Ysabel	prehistoric bedrock milling	not evaluated	N/A
SDI-19359 (ASM-626-3)	Santa Ysabel	prehistoric bedrock milling	not evaluated	N/A
SDI-19360 (BW-06)	Tule Springs	prehistoric bedrock milling	not evaluated	N/A
SDI-19371	Santa Ysabel	historical refuse scatter	not evaluated	N/A
SDI-19372 (BW-02)	Tule Springs	prehistoric bedrock milling	not evaluated	N/A

Source: ASM 2011
Note: Isolates are not included in table as they are not considered cultural resources. Isolates are not NRHP-eligible, are not historic properties under Section 106 of the NHPA, are not eligible for inclusion in the CRHR as "historic resources," and are not "unique" archaeological resources as defined by CEQA Section 21083.2(g).

In response to the Sacred Lands File search, the NAHC indicated that there are no documented sacred sites within TL626.

TL625

As listed in Table D.5-3, there are 19 previously recorded cultural resources within the TL625 APE.

Table D.5-3
Previously Recorded Cultural Resources within the TL625 APE

Site Designation	USGS Quad	Description	NRHP/CRHR Status	Identified by ASM During Survey Effort
P-37-030457	Viejas Mountains	historical adobe wall	not evaluated	Yes
SDI-4276	Viejas Mountains	prehistoric habitation	not evaluated	Yes
SDI-4278	Viejas Mountains	prehistoric rock alignment and artifact scatter	not evaluated	No
SDI-4280	Viejas Mountains	prehistoric bedrock milling	not evaluated	No
SDI-5442	Viejas Mountains	prehistoric habitation and historical machinery	not evaluated	No
SDI-5920	Viejas Mountains	prehistoric artifact scatter	not evaluated	No
SDI-6650	Viejas Mountains	prehistoric habitation and historical foundation	not evaluated	Yes
SDI-7929/10950	Viejas Mountains	prehistoric bedrock milling	not evaluated	Yes
SDI-19026	Barrett Lake	prehistoric bedrock milling	not evaluated	Yes
SDI-19353	Descanso	historical wall	not evaluated	Yes
SDI-19354	Viejas Mountains	prehistoric bedrock milling	not evaluated	Yes
SDI-19355	Viejas Mountains	prehistoric bedrock milling	not evaluated	Yes
SDI-19356	Viejas Mountains	prehistoric bedrock milling	not evaluated	Yes
SDI-19362	Viejas Mountains	prehistoric habitation	not evaluated	Yes
SDI-19367	Viejas Mountains	prehistoric bedrock milling	not evaluated	Yes
SDI-12106/12107	Viejas Mountains	multiple component site	not evaluated	Yes
SDI-12108	Viejas Mountains	prehistoric artifact scatter	not evaluated	Yes
SDI-12109	Viejas Mountains	prehistoric artifact scatter	not evaluated	Yes
SDI-121110	Viejas Mountains	prehistoric rock alignment and artifact scatter	not evaluated	Yes

Source: ASM 2011
Note: Isolates are not included in table as they are not considered cultural resources. Isolates are not NRHP-eligible, are not historic properties under Section 106 of the NHPA, are not eligible for inclusion in the CRHR as "historic resources," and are not "unique" archaeological resources as defined by CEQA Section 21083.2(g).

In response to the Sacred Lands File search, the NAHC indicated that there are no documented sacred sites within TL625.

TL629

As listed in Table D.5-4, there are 30 previously recorded cultural resources within the TL629 APE.

Table D.5-4
Previously Recorded Cultural Resources within the TL629 APE

Site Designation	USGS Quad	Description	NRHP/CRHR Status	Identified by ASM During Survey Effort
SDI-80	Cameron Corners	prehistoric habitation	not evaluated	Yes
SDI-4787	Cameron Corners	prehistoric bedrock milling	not evaluated	Yes
SDI-5500	Cameron Corners	historical cairn	not evaluated	Yes
SDI-8239	Mount Laguna	multiple component site	not evaluated	Yes
SDI-8301	Descanso	prehistoric bedrock milling	not evaluated	Yes
SDI-8302	Descanso	prehistoric bedrock milling	not evaluated	Yes
SDI-8855	Descanso	multiple component site	not evaluated	Yes
SDI-9193	Descanso	prehistoric artifact scatter	not evaluated	Yes
SDI-9392	Mount Laguna	prehistoric bedrock milling	not evaluated	Yes
SDI-11796/15120	Descanso	prehistoric bedrock milling	not evaluated	Yes
SDI-18119	Descanso	historical refuse scatter	not evaluated	Yes
SDI-16503	Descanso	prehistoric artifact scatter	not evaluated	Yes
SDI-19022	Descanso	prehistoric bedrock milling	not evaluated	Yes
SDI-19349 (ASM-2)	Mount Laguna	prehistoric lithic scatter	not evaluated	Yes
SDI-19350 (KM-14)	Descanso	prehistoric bedrock milling	not evaluated	Yes
SDI-19351 (KM-15)	Descanso	prehistoric habitation	not evaluated	Yes
SDI-19352 (ASM-5)	Descanso	prehistoric bedrock milling	not evaluated	Yes
SDI-19366 (ASM-6)	Descanso	prehistoric bedrock milling	not evaluated	Yes
P-37-024023	Cameron Corners	historical road	not evaluated	Yes
P-37-030455 (EP-3)	Descanso	historical foundations	not evaluated	Yes
P-37-030461 (KM-13)	Descanso	historical water tank	not evaluated	Yes
P-37-030472 (KM-21)	Mount Laguna	historical telegraph pole	not evaluated	Yes
P-37-030473 (KM-22)	Descanso	historical foundations	not evaluated	Yes
P-37-030474 (EP-8)	Mount Laguna	historical telegraph pole	not evaluated	Yes
P-37-030475 (BW-01)	Mount Laguna	historical foundations	not evaluated	Yes
SDI-8951	Live Oak Springs	prehistoric bedrock milling	not evaluated	Yes
SDI-17281	Cameron Corners	prehistoric bedrock milling	not evaluated	Yes
SDI-17282	Cameron Corners	multiple component site	not evaluated	Yes
SDI-21046 (JH-01)	Live Oak Springs	prehistoric artifact scatter	not evaluated	Yes
SDI-20147 (JH-02)	Live Oak Springs	prehistoric bedrock milling	not evaluated	Yes

Source: ASM 2011
Note: Isolates are not included in table as they are not considered cultural resources. Isolates are not NRHP-eligible, are not historic properties under Section 106 of the NHPA, are not eligible for inclusion in the CRHR as "historic resources," and are not "unique" archaeological resources as defined by CEQA Section 21083.2(g).

In response to the Sacred Lands File search, the NAHC indicated that there are no documented sacred sites within TL629.

TL6923

As listed in Table D.5-5, there are 25 previously recorded cultural resources within the TL6923 APE.

Table D.5-5
Previously Recorded Cultural Resources within the TL6923 APE

Site Designation	USGS Quad	Description	NRHP/CRHR Status	Identified by ASM During Survey Effort
SDI-4724	Morena Reservoir	prehistoric bedrock milling	not evaluated	Yes
SDI-8439	Morena Reservoir	prehistoric lithic scatter	recommended eligible	Yes
SDI-8440	Morena Reservoir	prehistoric bedrock milling	not evaluated	Yes
SDI-8443	Barrett Lake	historical rock wall	not evaluated	Yes
SDI-8444	Barrett Lake	prehistoric bedrock milling	not evaluated	Yes
SDI-8445	Barrett Lake	prehistoric bedrock milling	not evaluated	No
SDI-10040	Morena Reservoir	prehistoric bedrock milling	not evaluated	Yes
SDI-11605	Barrett lake	historical flume	not evaluated	Yes
SDI-16773	Morena Reservoir	prehistoric bedrock milling	not evaluated	Yes
SDI-17093/17096	Cameron Corners	prehistoric bedrock milling	not evaluated	Yes
SDI-17095	Cameron Corners	prehistoric bedrock milling	not evaluated	Yes
SDI-17989	Morena Reservoir	prehistoric bedrock milling	not evaluated	Yes
SDI-17998	Morena Reservoir	prehistoric bedrock milling	not evaluated	Yes
SDI-19039	Morena Reservoir	prehistoric artifact scatter	not evaluated	Yes
SDI-19040	Morena Reservoir	prehistoric ceramic scatter	not evaluated	Yes
SDI-19279	Morena Reservoir	prehistoric bedrock milling	not evaluated	Yes
SDI-19280	Morena Reservoir	prehistoric lithic scatter	not evaluated	No
SDI-19795	Morena Reservoir	prehistoric bedrock milling	not evaluated	Yes
SDI-19805	Morena Reservoir	prehistoric bedrock milling	not evaluated	Yes
SDI-19810	Morena Reservoir	prehistoric bedrock milling	not evaluated	Yes
SDI-19811	Morena Reservoir	prehistoric bedrock milling	not evaluated	Yes
SDI-19813	Morena Reservoir	prehistoric bedrock milling	not evaluated	Yes
SDI-20224 (SPAP-S-4)	Barrett Lake	prehistoric bedrock milling	not evaluated	Yes
SDI-20148 (BW-174)	Morena Reservoir	prehistoric bedrock milling	not evaluated	Yes
SDI-20223 (Potrero 2)	Barrett Lake	prehistoric bedrock milling	not evaluated	Yes

Source: ASM 2011
Note: Isolates are not included in table as they are not considered cultural resources. Isolates are not NRHP-eligible, are not historic properties under Section 106 of the NHPA, are not eligible for inclusion in the CRHR as "historic resources," and are not "unique" archaeological resources as defined by CEQA Section 21083.2(g).

In response to the Sacred Lands File search, the NAHC indicated that there are no documented sacred sites within TL6923.

C79

As listed in Table D.5-6, there are eight previously recorded cultural resources, including two with historical structures, five prehistoric archaeological sites, and one archaeological site with both prehistoric and historic components, within the C79 APE.

Table D.5-6
Previously Recorded Cultural Resources within the C79 APE

Site/Isolate Designation	USGS Quad	Description	NRHP/CRHR Status	Identified by ASM During Survey Effort
P-37-015813	Cuyamaca Peak	historical structure	not evaluated	Yes
SDI-9075	Cuyamaca Peak	prehistoric bedrock milling	not evaluated	Yes
SDI-9081	Cuyamaca Peak	prehistoric bedrock milling	not evaluated	No
SDI-9082	Cuyamaca Peak	prehistoric bedrock milling	not evaluated	Yes
SDI-9086	Cuyamaca Peak	historical structures	not evaluated	Yes
SDI-17032	Cuyamaca Peak	prehistoric bedrock milling and historical refuse scatter	not evaluated	Yes
SDI-17041	Cuyamaca Peak	prehistoric bedrock milling	not evaluated	Yes
SDI-20133 (TQ-S-1)	Cuyamaca Peak	prehistoric bedrock milling	not evaluated	N/A

Source: ASM 2011
Note: Isolates are not included in table as they are not considered cultural resources. Isolates are not NRHP-eligible, are not historic properties under Section 106 of the NHPA, are not eligible for inclusion in the CRHR as "historic resources," and are not "unique" archaeological resources as defined by CEQA Section 21083.2(g).

In response to the Sacred Lands File search, the NAHC indicated that there are no documented sacred sites within C79.

C78

As listed in Table D.5-7, there are 3 cultural resources within the APE.

Table D.5-7
Previously Recorded Cultural Resources within the C78 APE

Site/Isolate Designation	USGS Quad	Description	NRHP/CRHR Status	Identified by ASM During Survey Effort
SDI-9143	Viejas Mountain	viejas grade – historical stagecoach route	eligible for NRHP as part of historic district	Yes
SDI-20131 (BW-177)	Viejas Mountain	multiple component site	not evaluated	Yes
SDI-20132 (BW-178)	Viejas Mountain	prehistoric artifact scatter	not evaluated	Yes

Source: ASM 2011
Note: Isolates are not included in table as they are not considered cultural resources. Isolates are not NRHP-eligible, are not historic properties under Section 106 of the NHPA, are not eligible for inclusion in the CRHR as "historic resources," and are not "unique" archaeological resources as defined by CEQA Section 21083.2(g).

In response to the Sacred Lands File search, the NAHC indicated that there are no documented sacred sites within C78.

C157

As listed in Table D.5-8, there are two prehistoric cultural resources within the APE.

Table D.5-8
Previously Recorded Cultural Resources within the C157 APE

Site/Isolate Designation	USGS Quad	Description	NRHP/CRHR Status	Identified by ASM During Survey Effort
SDI-10615	Barrett Lake	prehistoric habitation	not evaluated	Yes
—	—	prehistoric bedrock milling[a]	not evaluated	No

Source: ASM 2011
Notes: Isolates are not included in table as they are not considered cultural resources. Isolates are not NRHP-eligible, are not historic properties under Section 106 of the NHPA, are not eligible for inclusion in the CRHR as "historic resources," and are not "unique" archaeological resources as defined by CEQA Section 21083.2(g).
[a] The prehistoric bedrock milling was identified during pole fielding activities at the eastern extent of the circuit in Skye Valley; however, the property owner restricted access to this property afterward, and a proper documentation of the site could not be conducted.

In response to the Sacred Lands File search, the NAHC indicated that there are no documented sacred sites within C157.

C442

As listed in Table D.5-9, there are 15 cultural resources within the APE, including 10 historic cabins and 5 prehistoric archaeological sites.

Table D.5-9
Previously Recorded Cultural Resources within the C442 APE

Site/Isolate Designation	USGS Quad	Description	NRHP/CRHR Status	Identified by ASM During Survey Effort
P-37-014417	Descanso	historical cabin	recommended eligible	Yes
P-37-014418	Descanso	historical cabin	recommended eligible	Yes
P-37-014419	Descanso	historical cabin	recommended eligible	Yes
P-37-014420	Descanso	historical cabin	recommended eligible	Yes
P-37-014422	Descanso	historical cabin	recommended eligible	Yes
P-37-014423	Descanso	historical cabin	recommended eligible	Yes
P-37-014424	Descanso	historical cabin	recommended eligible	Yes
P-37-014425	Descanso	historical cabin	recommended eligible	Yes
P-37-014426	Descanso	historical cabin	recommended eligible	Yes
P-37-014427	Descanso	historical cabin	recommended eligible	Yes
SDI-9207	Descanso	prehistoric bedrock milling	not evaluated	Yes

Table D.5-9
Previously Recorded Cultural Resources within the C442 APE

Site/Isolate Designation	USGS Quad	Description	NRHP/CRHR Status	Identified by ASM During Survey Effort
SDI-9713/P-37-014421	Descanso	prehistoric bedrock milling; historical cabin	prehistoric site not evaluated; P-37-014421 recommended eligible	Yes
SDI-12731	Descanso	prehistoric bedrock milling	not evaluated	Yes
SDI-20140 (ARG-01)	Descanso	prehistoric bedrock milling	not evaluated	N/A
SDI-20149 (C442-1)	Descanso	prehistoric bedrock milling	not evaluated	N/A

Source: ASM 2011
Note: Isolates are not included in table as they are not considered cultural resources. Isolates are not NRHP-eligible, are not historic properties under Section 106 of the NHPA, are not eligible for inclusion in the CRHR as "historic resources," and are not "unique" archaeological resources as defined by CEQA Section 21083.2(g).

In response to the Sacred Lands File search, the NAHC indicated the presence of sacred sites within 0.5 mile of the C442 APE.

C440

As listed in Table D.5-10, there are 94 cultural resources within the APE, including 54 historic cabins, 36 prehistoric archaeological sites, and 4 archaeological sites with both prehistoric and historic components.

Table D.5-10
Previously Recorded Cultural Resources within the C440 APE

Site/Isolate Designation	USGS Quad	Description	NRHP/CRHR Status	Identified by ASM During Survey Effort
P-37-014396	Mount Laguna	historical cabin	recommended eligible	Yes
P-37-014398	Mount Laguna	historical cabin	recommended eligible	Yes
P-37-014402	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014407	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014408	Mount Laguna	historical cabin	recommended eligible	Yes
P-37-014409	Mount Laguna	historical cabin	recommended eligible	Yes
P-37-014410	Mount Laguna	historical cabin	recommended eligible	Yes
P-37-014411	Mount Laguna	historical cabin	recommended eligible	Yes
P-37-014412	Mount Laguna	historical cabin	recommended eligible	Yes
P-37-014413	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014433	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014434	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014435	Monument Peak	historical cabin	recommended eligible	NR*
P-37-014436	Monument Peak	historical cabin	recommended eligible	NR*
P-37-014437	Monument Peak	historical cabin	recommended eligible	NR*
P-37-014441	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014444	Mount Laguna	historical cabin	recommended eligible	NR*

Table D.5-10
Previously Recorded Cultural Resources within the C440 APE

Site/Isolate Designation	USGS Quad	Description	NRHP/CRHR Status	Identified by ASM During Survey Effort
P-37-014448	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014451	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014452	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014453	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014454	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014455	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014456	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014457	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014458	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014459	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014460	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014461	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014462	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014463	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014464	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014465	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014467	Monument Peak	historical cabin	recommended eligible	NR*
P-37-014468	Monument Peak	historical cabin	recommended eligible	NR*
P-37-014470	Monument Peak	historical cabin	recommended eligible	NR*
P-37-014472	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014473	Monument Peak	historical cabin	recommended eligible	NR*
P-37-014474	Monument Peak	historical cabin	recommended eligible	NR*
P-37-014475	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014476	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014477	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014478	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014479	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014480	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014481	Mount Laguna	historical cabin	recommended eligible	Yes
P-37-014482	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014483	Mount Laguna	historical cabin	recommended eligible	Yes
P-37-014485	Mount Laguna	historical cabin	recommended eligible	Yes
P-37-014487	Mount Laguna	historical cabin	recommended eligible	Yes
P-37-014488	Mount Laguna	historical cabin	recommended eligible	Yes
P-37-014489	Mount Laguna	historical cabin	recommended eligible	NR*
P-37-014490	Mount Laguna	historical cabin	recommended eligible	Yes
P-37-014491	Mount Laguna	historical cabin	recommended eligible	Yes
SDI-116	Mount Laguna	prehistoric habitation	recommended eligible	NR*
SDI-777/-4804	Mount Laguna	prehistoric habitation	recommended eligible	NR*
SDI-5852	Mount Laguna	prehistoric bedrock milling	not evaluated	Yes
SDI-5865	Mount Laguna	prehistoric bedrock milling	not evaluated	Yes

Table D.5-10
Previously Recorded Cultural Resources within the C440 APE

Site/Isolate Designation	USGS Quad	Description	NRHP/CRHR Status	Identified by ASM During Survey Effort
SDI-8479	Monument Peak	prehistoric bedrock milling	not evaluated	Yes
SDI-8483	Monument Peak	prehistoric bedrock milling	not evaluated	Yes
SDI-8492/-15156	Monument Peak	prehistoric habitation	recommended eligible	NR*
SDI-8493	Monument Laguna	prehistoric bedrock milling	not evaluated	Yes
SDI-8495	Monument Peak	prehistoric artifact scatter	not evaluated	Yes
SDI-8496	Monument Peak	prehistoric bedrock milling	not evaluated	NR*
SDI-8504	Mount Laguna	prehistoric bedrock milling	not evaluated	Yes
SDI-8506	Mount Laguna	prehistoric bedrock milling	not evaluated	Yes
SDI-8507	Mount Laguna	prehistoric bedrock milling	not evaluated	NR*
SDI-8512	Mount Laguna	prehistoric bedrock milling	not evaluated	Yes
SDI-8528	Mount Laguna	prehistoric bedrock milling	not evaluated	Yes
SDI-8529	Mount Laguna	prehistoric bedrock milling	not evaluated	Yes
SDI-8533	Mount Laguna	prehistoric bedrock milling	not evaluated	Yes
SDI-8534	Mount Laguna	prehistoric habitation	listed on NRHP	NR*
SDI-8543	Mount Laguna	prehistoric bedrock milling	not evaluated	Yes
SDI-8550	Monument Peak	prehistoric bedrock milling	not evaluated	NR*
SDI-9150	Mount Laguna	prehistoric habitation	recommended eligible	NR*
SDI-9395	Mount Laguna	multiple component	not evaluated	Yes
SDI-9396	Mount Laguna	multiple component	not evaluated	Yes
SDI-9399	Mount Laguna	multiple component	not evaluated	Yes
SDI-9402	Mount Laguna	prehistoric artifact scatter	not evaluated	No
SDI-10108a	Mount Laguna	prehistoric bedrock milling	not evaluated	Yes
SDI-10113	Mount Laguna	prehistoric bedrock milling	not evaluated	Yes
SDI-10114	Mount Laguna	prehistoric bedrock milling	not evaluated	Yes
SDI-10115	Mount Laguna	prehistoric bedrock milling	not evaluated	Yes
SDI-10291	Mount Laguna	prehistoric bedrock milling	not evaluated	Yes
SDI-11232	Mount Laguna	prehistoric bedrock milling	not evaluated	NR*
SDI-11233	Mount Laguna	prehistoric bedrock milling and rock feature	not evaluated	Yes
SDI-17878	Monument Peak	prehistoric artifact scatter	not evaluated	NR*
SDI-20134 (TQ-01)	Mount Laguna	prehistoric bedrock milling	not evaluated	N/A
SDI-20135 (TQ-02)	Mount Laguna	prehistoric bedrock milling	not evaluated	N/A
SDI-20136 (TQ-03)	Mount Laguna	prehistoric bedrock milling	not evaluated	N/A
SDI-20137 (TQ-04)	Mount Laguna	prehistoric bedrock milling	not evaluated	N/A
SDI-20138 (TQ-05)	Monument Peak	prehistoric bedrock milling and rock feature	not evaluated	N/A
SDI-20139 (TQ-06)	Monument Peak	multiple component	not evaluated	N/A
SDI-20158 (ARG-20)	Mount Laguna	prehistoric bedrock milling	not evaluated	N/A

Source: ASM 2011
Note: Isolates are not included in table as they are not considered cultural resources. Isolates are not NRHP-eligible, are not historic properties under Section 106 of the NHPA, are not eligible for inclusion in the CRHR as "historic resources," and are not "unique" archaeological resources as defined by CEQA Section 21083.2(g).
* NR = Not Revisited

According to the literature review, ~~consultation with the Xakwa', Wiiapaayp, Wiikilyutciis, PiLyakay', Xakwiitceploy'iik, Xarpsii'tl, Wii'Kana'rLaxa, Kwatatl, and Xarpuuwii,~~ nine Native American sites, primarily made up of smaller group camps, or production-specific satellites to the larger permanent villages at Kwatatl and Wiiapaayp, are within the APE: Xakwa', Wiiapaayp, Wiikilyutciis, PiLyakay', Xakwiitceploy'iik, Xarpsii'tl, Wii'Kana'rLaxa, Kwatatl, and Xarpuuwii.

In response to the Sacred Lands File search, the NAHC indicated that there are no documented sacred sites within C440.

C449

As listed in Table D.5-11, there are 13 prehistoric cultural resources within the APE.

Table D.5-11
Previously Recorded Cultural Resources within the C449 APE

Site/Isolate Designation	USGS Quad	Description	NRHP/CRHR Status	Identified by ASM During Survey Effort
SDI-80	Cameron Corners	multiple component	recommended eligible	Yes
SDI-7885	Cameron Corners	prehistoric bedrock milling	not evaluated	Yes
SDI-7886	Cameron Corners	prehistoric bedrock milling	not evaluated	Yes
SDI-16227/16229	Cameron Corners	multiple component	not evaluated	Yes
SDI-16231	Cameron Corners	prehistoric bedrock milling	not evaluated	Yes
SDI-16232	Cameron Corners	prehistoric bedrock milling	not evaluated	Yes
SDI-20141 (ARG-5)	Cameron Corners	prehistoric bedrock milling	not evaluated	N/A
P-27-031709 (ARG-6)	Cameron Corners	historical refuse scatter	not evaluated	N/A
SDI-20142 (ARG-7)	Cameron Corners	prehistoric bedrock milling	not evaluated	N/A
SDI-20143 (ARG-8)	Cameron Corners	prehistoric bedrock milling	not evaluated	N/A
SDI-20144 (BW-179)	Cameron Corners	prehistoric bedrock milling	not evaluated	N/A
SDI-20145 (BW-180)	Cameron Corners	prehistoric bedrock milling	not evaluated	N/A
SDI-20150 (C449-1)	Cameron Corners	prehistoric bedrock milling	not evaluated	N/A

Source: ASM 2011
Note: Isolates are not included in table as they are not considered cultural resources. Isolates are not NRHP-eligible, are not historic properties under Section 106 of the NHPA, are not eligible for inclusion in the CRHR as "historic resources," and are not "unique" archaeological resources as defined by CEQA Section 21083.2(g).

In response to the Sacred Lands File search, the NAHC indicated the presence of sacred sites within 0.5 mile of the C449 APE.

D.5.1.3 Identified Paleontological Resources

A Paleontological Resource Report for the entire APE was prepared by the Department of PaleoServices at the San Diego Natural History Museum (SDNHM 2012). According to the technical report, no known fossils have been recorded within 0.5 mile of the APE.

The resource potential of the geologic formations in SDG&E's proposed project area has been evaluated in accordance with the Potential Fossil Yield Classification (PFYC) guidelines set forth by the BLM. The following levels of sensitivity are identified in the PFYC System that recognize the important relationship between fossils and the geologic formations within which they are preserved (BLM 2007):

- **Very High – Class 5.** Very high sensitivity is assigned to geologic units that consistently and predictably produce vertebrate fossils, or are scientifically significant invertebrate or plant fossils. Vertebrate fossils or scientifically significant invertebrate fossils are known or can reasonably be expected to occur in the impacted area, such that the probability for impacting significant fossils is high.
- **High Sensitivity – Class 4.** High sensitivity is assigned to geologic units containing a high occurrence of significant fossils. Vertebrate fossils or scientifically significant invertebrate or plant fossils are known to occur and have been documented, but may vary in occurrence and predictability. It is assigned to geologic formations known to contain paleontological localities with rare, well-preserved, and/or critical fossil materials for stratigraphic or paleo-environmental interpretation and to fossils providing important information about the paleobiology and evolutionary history (phylogeny) of animal and plant groups. Generally speaking, high sensitivity formations are known to produce or have the potential to produce vertebrate fossil remains.
- **Moderate or Unknown Sensitivity – Class 3.** Moderate or unknown sensitivity is assigned to sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence, or where sedimentary units have unknown fossil potential. These geologic units include those within former marine environments in which only sporadic occurrences of vertebrate fossils are known; where vertebrate fossils and scientifically significant invertebrate or plant fossils known to occur intermittently, and predictability is known to be low; or where they are poorly studied and/or poorly documented, such that their potential cannot be assigned without ground reconnaissance.
- **Low Sensitivity – Class 2.** Low sensitivity is assigned to sedimentary geologic units that are not likely to contain vertebrate fossils or scientifically significant non-vertebrate fossils, where vertebrate or significant invertebrate or plant fossils are not present or are very rare. These include units that are generally younger than 10,000 years BP, such as

recent aeolian deposits. Low sensitivity also includes sediments that exhibit significant physical and chemical changes (i.e., diagenetic alteration).

- **Very Low Sensitivity – Class 1**. Very low sensitivity is assigned to geologic units that are not likely to contain recognizable fossil remains. These include units that are igneous or metamorphic, excluding reworked volcanic ash units, or units that are Precambrian in age or older. The occurrence of significant fossils is non-existent or extremely rare, such that the probability for impacting any fossils in these units is negligible.

The majority of poles within SDG&E's proposed project right-of-way (ROW) (approximately 1,742 poles) are located on PFYC Class 1 geologic units, very low potential, with approximately 228 poles located in areas of PFYC Class 2 units, low potential, and approximately 132 located in areas classified as PFYC Class 3, moderate or unknown potential. There are no PFYC Class 4 or 5 geologic units located within the study area ROW.

D.5.2 Applicable Regulations, Plans, and Standards

Federal, state, and local laws, ordinances, regulations, and standards applicable to cultural and paleontological resources within SDG&E's proposed project area are summarized in this section.

D.5.2.1 Federal Regulations

Federal Regulations Applicable to Cultural Resources

National Historic Preservation Act

Federal regulations for cultural resources are primarily governed by Section 106 of the NHPA of 1966 (16 U.S.C. 470 et seq.). Section 106 describes the procedures for identifying and evaluating eligible properties, for assessing the effects of federal actions on eligible properties, and for consulting to avoid, reduce, or minimize adverse effects. It requires federal agencies to take into account the effects of their undertakings on historic properties and affords the Advisory Council on Historic Preservation and the State Historic Preservation Officer (SHPO) a reasonable opportunity to comment on such undertakings. The council's implementing regulations, "Protection of Historic Properties," are found in 36 CFR 800. The goal of the Section 106 review process is to offer a measure of management consideration to sites determined eligible for listing on the NRHP based on the criteria found in 36 CFR 60, which state that eligible resources include:

> …[D]istricts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that (a) are associated with events that have made a significant contribution to the broad patterns of our history; or (b) that are associated with the lives of persons significant in our past; or (c) that embody the distinctive characteristics of a type, period, or method of construction, or that possess high artistic values, or that

represent a significant distinguishable entity whose components may lack individual distinction; or (d) that have yielded, or may be likely to yield, information important to history or prehistory.

Section 106 does not require the preservation of historic properties, but it ensures that the decisions of federal agencies concerning the treatment of these places result from meaningful considerations of cultural and historic values and of the options available to protect the properties. SDG&E's proposed project is an undertaking, as defined by 36 CFR 800.3, and is subject to Section 106 and consideration under other federal requirements.

Archaeological site evaluation assesses the potential of each site to meet one or more of the criteria for NRHP eligibility based upon visual surface and subsurface evidence (if available) at each site location, information gathered during the literature and record searches, and the researcher's knowledge of and familiarity with the historic or prehistoric context associated with each site.

The NRHP was established to recognize resources associated with the country's history and heritage. Guidelines for nomination are based on significance in American history, architecture, archaeology, engineering, and culture. Resources must also possess integrity of location, design, setting, materials, workmanship, feeling, and association.

The National Register Bulletin 38: Guidelines for Evaluating and Documenting Traditional Cultural Properties (Parker and King 1998) defines a TCP generally as one that is eligible for inclusion in the NRHP because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history and (b) are important in maintaining the continuing cultural identity of the community. The significance criteria used for TCPs are the same as the four criteria used for determining the significance of historic properties.

Examples of properties possessing such significance include the following:

- A location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world
- A rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents
- An urban neighborhood that is the traditional home of a particular cultural group and that reflects its beliefs and practices
- A location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice

- A location where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historic identity.

The NHPA addresses and identifies the responsibilities of SHPO in regard to the State Historic Preservation Program. One of the primary responsibilities of the SHPO is to "direct and conduct a comprehensive statewide survey of historic properties and nominate eligible properties to the NRHP" (16 U.S.C. 470 et seq.).

National Environmental Policy Act of 1969

NEPA (42 U.S.C. 4321 et seq.) establishes national policies and goals for the protection, maintenance, and enhancement of the environment and provides a framework for implementing these goals within the federal agencies. Section 102 of NEPA requires federal agencies to address environmental effects in their planning and decision-making documents. Specifically, all agencies are required to prepare detailed statements or reports that analyze and assess the environmental impacts of and alternatives to major federal action which could potentially affect the environment. Coordination efforts between NEPA and NHPA (Section 106) are established in 36 CFR 800.8(c). This section also established the process through which a federal agency can use the NEPA process and documentation to comply with Section 106. These are being coordinated for this project. NEPA establishes the federal government's responsibility to preserve and protect significant historic, cultural, and natural resources of the United States, including paleontological resources.

Archaeological and Historic Preservation Act of 1974

The Archaeological and Historic Preservation Act (AHPA) (16 U.S.C. 469 et seq.) requires federal agencies to provide for the "preservation of historical and archaeological data which might otherwise be irreparably lost or destroyed as the result of … any alteration of the terrain caused as a result of any federal construction project or federal licensed activity or program." The APHA expanded the federal Historic Sites Act of 1935 by focusing on significant resources, but it does not require significant resources to be of "national" significance. The AHPA establishes historical and archaeological preservation requirements that are applicable to any project expected to result in the loss or destruction of significant scientific, historical, and archaeological data. The requirements are designed to avoid unnecessary damage to significant archaeological resources by modification of project design or recovery of threatened resources.

Archaeological Resources Protection Act of 1979

The Archaeological Resources Protection Act (ARPA) (16 U.S.C. 470aa et seq.) was primarily established to provide more effective law enforcement to protect public archaeological sites. The ARPA provided a detailed description of prohibited activities and civil and criminal penalties

associated with looting, vandalizing, or inadvertently damaging an archaeological site on federal lands. Another focus of the ARPA is the regulation of legitimate archaeological investigation on public lands and the enforcement of penalties against those who loot, vandalize, or inadvertently damage archaeological resources in the course of archaeological investigation.

Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act (25 U.S.C. 3001 et seq.) established the rights of Native American lineal descendants, Indian tribes, and Native Hawaiian organizations regarding the treatment, repatriation, and disposition of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony (items all collectively referred to as cultural items) with which they can show a relationship of lineal descent or cultural affiliation. One of the purposes of the plan is to require federal agencies to consult with applicable tribes regarding the disposition of Native American cultural items whenever cultural items are expected to be encountered on federal lands.

Executive Order 11593, Protection and Enhancement of the Cultural Environment

Executive Order 11593 (36 FR 8921) (1) orders the protection and enhancement of the cultural environment through requiring federal agencies to administer the cultural properties under their control in a spirit of stewardship and trusteeship for future generations; (2) initiates measures necessary to direct their policies, plans, and programs in such a way that federally owned sites, structures, and objects of historical, architectural, or archaeological significance are preserved, restored, and maintained for the inspiration and benefit of the people; and (3) in consultation with the ACHP (16 U.S.C. 4701), institute procedures to assure that federal plans and programs contribute to the preservation and enhancement of non-federally owned sites, structures, and objects of historical, architectural, or archaeological significance.

Executive Order 13007, Protection and Preservation of Native American Sacred Sites

Executive Order 13007 was established to better protect important Indian sites and protect and preserve Indian religious practices. Section 1 of the executive order states that:

> (a) In managing Federal lands, each executive branch agency with statutory or administrative responsibility for the management of Federal lands shall, to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, (1) accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and (2) avoid adversely affecting the physical integrity of such sacred sites. Where appropriate, agencies shall maintain the confidentiality of sacred sites.

American Indian Religious Freedom Act

The American Indian Religious Freedom Act (42 U.S.C. 1996) establishes a national policy to protect the right of Native Americans and other indigenous groups to exercise their traditional religions. As with Executive Order 13007, federal agencies issuing permits for SDG&E's proposed project would be required to comply with this act if Native Americans identified issues regarding their right to exercise traditional religious practices.

Federal Land Policy and Management Act of 1976

The Federal Land Policy and Management Act (FLPMA) directs the way in which public lands administered by the BLM are managed. The FLPMA also defines areas of critical environmental concern as "an area within the public lands where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazards" (43 U.S.C. 1701 et seq.). Lastly, the FLPMA establishes policy for a variety of BLM activities including acquisition or disposition of land, range management, ROW management, and designated management areas.

The FLPMA recognizes significant fossils as unique, rare, or particularly well-preserved; an unusual assemblage of common fossils; being of high scientific interest; or providing important new data concerning (1) evolutionary trends, (2) development of biological communities, (3) interaction between or among organisms, (4) unusual or spectacular circumstances in the history of life, or (5) anatomical structure (43 U.S.C. 1701 et seq.).

American Antiquities Act of 1906

The American Antiquities Act of 1906 (16 U.S.C. 431 et seq.) was the first U.S. law to provide for the protection of historical or cultural resources. Section 2 of the statute gives the president the authority to protect and conserve "historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States." Section 3 of the act required that unearthed historical and cultural resources be placed in public museums for preservation and public benefit. The act also provides penalties for the damage or destruction of antiquities. The act includes both heritage resources and paleontological resources.

Historic Sites, Buildings, Objects and Antiquities Act of 1935, as amended

This act declared it national policy to preserve historic sites, buildings, and objects of national significance. It provides procedures for designation, acquisition, administration, and protection

of such sites. Among other things, National Historic and Natural Landmarks are designated under authority of this Act.

Programmatic Agreement Among the BLM, Advisory Council on Historic Preservation, and the National Conference State Historic Preservation Officers Regarding the Manner in Which BLM Will Meet its Responsibilities Under the National Historic Preservation Act

This document (BLM 1997) establishes the policies and procedures that the BLM follows in implementing NHPA Section 106 Guidelines, to help guide the BLM's planning and decision making as it affects historic properties and other cultural properties (BLM 1997). This includes policies regarding Native American consultation with Indian tribes and other Native American groups in lands and resources potentially affected by BLM decisions.

Programmatic Agreement Among the U.S.D.A. Forest Service, Pacific Southwest Region (Region 5), California State Historic Preservation Officer, Nevada State Historic Preservation Officer, and The Advisory Council on Historic Preservation Regarding the Processes for Compliance with Section 106 of the National Historic Preservation Act for Management Of Historic Properties by the National Forests of the Pacific Southwest Region (2013)

This Regional Programmatic Agreement (RPA) establishes the policies and procedures that the FS follows in implementing NHPA Section 106 Guidelines, to help guide the FS planning and decision making as it affects historic properties and other cultural properties. This includes policies regarding Native American consultation with Indian tribes and other Native American groups in lands and resources potentially affected by FS decisions. The RPA requires that the FS consult with the SHPO about the applicability of the RPA when one of more federal agencies are involved in an undertaking. The FS initiated this consultation by letter in July 2014, and proposed to the SHPO that a project specific PA be developed. A draft project PA, which includes a requirement for the development of a Historic Properties ~~Treatment~~ Management Plan (HPM~~T~~P) was included in the consultation letter.

BLM Eastern San Diego County Resource Management Plan and Record of Decision

The goals and objectives of the plan are to:

- Identify, preserve, and protect significant cultural resources, districts, and landscapes and ensure that they are available for appropriate uses by present and future generations
- Identify priority geographic areas for new field inventory, based upon a probability for unrecorded significant resources
- Enhance public understanding of and appreciation for cultural resources through educational outreach and heritage tourism opportunities

- Maintain viewsheds of important cultural resources whose settings contribute significantly to their scientific, public, traditional, or conservation values
- Provide and encourage research opportunities on cultural resources that would contribute to the understanding of the ways humans have used and influenced natural systems and processes
- Seek to reduce imminent threats and resolve potential conflicts from natural or human-caused deterioration, or potential conflict with other resource uses
- Reduce or eliminate indirect impacts from land uses on cultural resources.

Southern California National Forest Land Management Plan

The Southern California National Forest Land Management Plan (LMP) describes the strategic direction at a broad program-level for managing the Angeles, Los Padres, San Bernardino, and Cleveland national forests (collectively referred to as the Southern California National Forests). The LMP consists of three interrelated parts (Parts 1, 2, and 3) that work together to "facilitate the use of adaptive management and the development of the management activities" in order to move the national forest towards their desired outcome (USDA 2005a). Part 1 of the LMP is a vision document that identifies existing management challenges, strategic goals, and desired conditions. Part 2 consists of the CNF LMP and discusses the resource management function and how the cultural heritage that resides on the land should be managed. Part 3 provides design criteria/forest plan standards and guidelines applicable to the Southern California National Forests including CNF. The key items relevant to cultural and paleontological resources contained within Parts 1 through 3 of the Southern California National Forests LMP are discussed below to emphasize their relevancy to SDG&E's proposed project.

<u>Part 1</u>

- Goal 3.1. Provide for Public Use and Natural Resource Protection.

Goal 3.1 relates to reconciling the need to manage areas at risk where significant heritage resources are located, as well as areas of concern for tribes and Native American communities. The LMP indicates that an emphasis on natural resource protection improves resource conditions through increased regulation of recreation use. The goal is to promote conservation education as well as provide heritage site protection. In addition, the goal is to maintain the national forest in a condition so that tribes and other Native American groups and individuals can exercise and retain traditional connections to the land and to foster both traditional and contemporary cultural uses of the national forests (USDA 2005a).

In addition, Appendix A, Government Performance and Results Act Priority National Goals, discusses the goals identified in the Forest Service Strategic Plan and identifies applicable objectives that support the goals (USDA 2005a).

- Goal 6. Mission-related work in addition to that which supports the agency goals.
  - Objective 1: Provide current resource data, monitoring, and research information in a timely manner.
  - Objective 2: Meet Federal financial management standards and integrate budget and performance.
  - Objective 3: Maintain the environmental, social, and economic benefits of forests and grasslands by reducing their conversion to other uses.

<u>Part 2 Cleveland National Forest Strategy (CNF LMP)</u>

Appendix B, Program Strategies and Tactics, describes the detailed program strategies that the CNF may choose to make progress toward achieving the desired conditions and goals discussed in Part 1. The national forest will prioritize which strategies will be brought forward in any given year using the program emphasis objectives, national and regional direction, and available funding (USDA 2005b). The following lists relevant strategies and tactics for reaching Goal 3.1 identified in Part 1, Southern California National Forest Vision.

- Tribal 1 – Traditional and Contemporary Uses – allow traditional use, access to traditionally used areas, as well as contemporary use and needs by tribal and other Native American interests
- Tribal 2 – Government to Government Relations – establish effective relationships with federally recognized tribes
- Her 1 – Heritage Resource Protection – protect heritage resources for cultural and scientific value and public benefit
- Her 2 – Public Involvement Program – provide public involvement programs with opportunities for people to partner in the stewardship of heritage resource sites
- Her 3 – Forest-wide Heritage Inventory – increase knowledge of the occurrence, distribution, and diversity of site types for heritage resources on the national forest
- Her 4 – Heritage Research – document and strengthen the linkages between heritage research and ecosystem management and research, and integrate knowledge and appreciation of past cultures into today's diversity.

Part 3 Design Standards for the Southern California National Forests

The following are the cultural and historic standards relevant to SDG&E's proposed project (USDA 2007c):

- S60: Until proper evaluation occurs, known heritage resource sites shall be afforded the same consideration and protection as those properties evaluated as eligible to the National Register of Historic Places.
- S61: Leave human remains which are not under the jurisdiction of the County Coroner undisturbed unless there is an urgent reason for their disinterment. In case of accidental disturbance of human remains, excavation of human remains, or subsequent re-internment of human remains, follow national forest, federal and tribal policies.
- S62: Protect the access to and the use of sensitive traditional tribal use areas.

Paleontological Resources Preservation Act

The Paleontological Resources Preservation Act requires the secretaries of the Interior and Agriculture to manage and protect paleontological resources on federal land using scientific principles and expertise. The Omnibus Public Lands Act–Paleontological Resources Preservation (OPLA–PRP) includes specific provisions addressing management of these resources by the BLM, the National Park Service, the Bureau of Reclamation, the U.S. Fish and Wildlife Service, all of the Department of the Interior, and the Forest Service of the Department of Agriculture.

The OPLA–PRP affirms the authority for many of the policies that the federal land-managing agencies already have in place for the management of paleontological resources such as issuing permits for collecting paleontological resources, curation of paleontological resources, and confidentiality of locality data. The OPLA–PRP only applies to federal lands and does not affect private lands. It provides authority for the protection of paleontological resources on federal lands, including criminal and civil penalties for fossil theft and vandalism. As directed by the act, the federal agencies are in the process of developing regulations, establishing public awareness and education programs, and inventorying and monitoring federal lands.

Geological Resources and Hazards

36 CFR 251, Subpart B, Special-Uses, provides direction for managing special-uses including paleontological resources.

36 CFR 219 Planning

Part 219.24 states that forest planning shall provide for the identification, protection, interpretation, and management of significant cultural resources on National Forest System lands.

D.5.2.2 State Laws and Regulations

California Environmental Quality Act

State historic preservation regulations affecting this project include the statutes and guidelines contained in CEQA (California Public Resources Code, Sections 21083.2 and 21084.1, and Section 15064.5 of the CEQA Guidelines). CEQA requires lead agencies to carefully consider the potential effects of a project on historical resources. A "historical resource" includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript, which is historically or archaeologically significant (California Public Resources Code, Section 5020.1 (j)).

Section 15064.5 of the CEQA Guidelines specifies criteria for determining the significance of impacts to archaeological and historical resources. Section 15064.5 defines a "historical resource" as:

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 (Public Resources Code 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 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, 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 an 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 California Register of Historical Resources (14 CCR 4852) including the following:
    a. Is associated with events that have made a contribution to the broad patterns of California history

b. Is associated with the lives of important persons from our past

c. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important individual or possesses high artistic values

d. Has yielded, or may be likely to yield, important information in prehistory or history.

The fact that a resource is not listed in, or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be a historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1. If a cultural resource does not meet the definition of a "historic resource" under CEQA Guidelines Section 15164.5, it must be reviewed under CEQA Section 21083.2(g) that defines the significance of an archaeological site in terms of whether it is "unique." A unique archaeological resource implies 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 one of the following criteria:

- The archaeological artifact, object, or site contains information needed to answer important scientific questions and there is a demonstrable public interest in that information.
- The archaeological artifact, object, or site has a special and particular quality, such as being the oldest of its type or the best available example of its type.
- The archaeological artifact, object, or site is directly associated with a scientifically recognized important prehistoric or historic event or person.

A non-unique archaeological resource indicates an archaeological artifact, object, or site that does not meet the previously listed criteria. Impacts to non-unique archaeological resources receive no further consideration under CEQA, other than the recording of its existence by the lead agency if it so elects.

CEQA Section 21083.2 indicates that a lead agency may make efforts to preserve unique archaeological resources by implementing avoidance strategies including redesign, dedication of permanent conservation easements, capping of archaeological sites, or incorporating archaeological sites in parks or other open spaces. If avoidance is not possible, project impacts to those portions of the unique archaeological resources shall be mitigated. Provisions for the accidental discovery of archaeological sites during construction are recommended, including its immediate evaluation and, if considered to be unique, mitigation through implementing avoidance measures or archaeological data recovery excavations.

Advice on procedures to identify such resources, evaluate their importance, and estimate potential effects is given in several agency publications such as the series produced by the Governor's Office of Planning and Research (OPR). The technical advice series produced by OPR strongly recommends that Native American concerns and the concerns of other interested persons and corporate entities, including, but not limited to, museums, historical commissions, associations, and societies, be solicited as part of the process of cultural resources inventory.

CEQA Guidelines Section 15064.5(b) defines when a project would potentially have significant impacts on cultural resources. A "substantial adverse change in the significance of an historical resource" means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (14 CCR 15000 et seq.). The significance of a historical resource is materially impaired when a project:

- 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;
- 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
- 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 CRHR as determined by a lead agency for purposes of CEQA.

CEQA Guidelines, Section 15064.5(b)(4), states that the lead agency shall identify potentially feasible measures to mitigate significant adverse changes in the significance of a historical resource. Section 15064.5(b)(3) of the CEQA Guidelines also states that impacts on a historic resource may be reduced to a less-than-significant level if project design follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (Weeks and Grimmer 1995).

CEQA Guidelines Section 15126.4(b) defines mitigation measures related to impacts on historical resources. In addition to following the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and

Reconstructing Historic Buildings, the section states that documentation of a historical resource with a historic narrative, photographs or architectural drawings, as mitigation for the effects of demolition of the resource will not necessarily mitigate the effects to less-than-significant levels. Avoidance of impacts on any historical resource of an archaeological nature is encouraged. Preservation in place is the preferred manner of mitigating impacts to archaeological sites, by methods including: (1) avoiding construction on archaeological sites; (2) incorporation of sites within parks, greenspace, or other open space; (3) covering the archaeological sites with a layer of chemically stable soil before building on the site; and/or (4) deeding the site into a permanent conservation easement. When site avoidance is not possible, data recovery through excavation should recover scientifically consequential information from and about the historical resource, prior to any excavation being undertaken. Archeological sites known to contain human remains shall be treated in accordance with the provisions of Section 7050.5 Health and Safety Code. If an artifact must be removed during project excavation or testing, curation may be an appropriate mitigation. Data recovery is not required for a historical resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historical resource.

CEQA Guidelines, Section 15064.5(d), assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed under California Public Resources Code Section 5097.98. Under CEQA, lead agencies are required to consider impacts to unique paleontological resources. CEQA is concerned with assessing impacts associated with the direct or indirect destruction of unique paleontological resources or sites, as defined in Section D.7.1.3, which are of value to the region or state.

California Public Resources Code

California Public Resources Code Section 5024.1 (a) establishes the CRHR. Section 5024.1(c–f) provides criteria for CRHR eligibility listing. In addition, the CRHR also automatically includes the following: California properties listed on the NRHP, State Historic Landmark No. 770 and all consecutively numbered state landmarks following No. 770 (landmarks preceding No. 770 shall be reviewed for eligibility by the SHPO), and points of historical interest that have been reviewed by the SHPO and recommended for inclusion in the CRHR in accordance with criteria adopted by the State Historic Resources Commission.

California Public Resources Code Section 5097–5097.6 outlines the requirements for cultural resource analysis prior to the commencement of any construction project on state lands. The state agency proposing the project may conduct the cultural resource analysis or may contract with the State Department of Parks and Recreation. In addition, this section identifies that the unauthorized disturbance or removal of archaeological, historical, or paleontological resources located on public

lands is a misdemeanor. It prohibits the knowing destruction of objects of antiquity without a permit (expressed permission) on public lands, and it provides for criminal sanctions. This section was amended in 1987 to require consultation with the NAHC whenever Native American graves are found. Violations for taking or possessing remains or artifacts are felonies.

California Public Resources Code Section 5097.5 states that "no person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historic feature situated on public lands, except with the express permission of the public agency having jurisdiction over the lands."

California Public Resources Code, Section 5097.9 (interference with Native American religion or damage to cemeteries or places of worship, etc.) states that no public agency or private party shall cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property, except on a clear and convincing showing that the public interest and necessity so require.

California Public Resources Code, Section 5097.98, states that whenever the NAHC receives notification of Native American human remains from a county coroner, the NAHC shall immediately notify the most likely descendent. The most likely descendent may, with permission from the owner of the land in which the human remains were found, inspect the site and recommend to the owner or the responsible party conducting the excavation work a means for treating and/or disposing of the human remains and any associated grave goods. The most likely descendent is required to complete their site inspection and make their recommendation within 48 hours of their notification from the NAHC.

California Health and Safety Code

In addition, California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains.

Section 7050.5(b) of the California Health and Safety Code specifies protocol when human remains are discovered. The code states:

> In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with

Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.

Health and Safety Code 8010–8011

Sections 8010–8011of the Health and Safety Code provides consistent state policy to ensure that all California Indian human remains and cultural materials are treated with dignity and respect. The code extends policy coverage to non-federally recognized tribes, as well as federally recognized groups.

D.5.2.3 Regional Policies, Plans, and Regulations

The following San Diego County policies and plans are applicable to the proposed project.

San Diego County Administrative Code Section 396.7

San Diego County Administrative Code Section 396.7 establishes the San Diego County Local Register of Historical Resources. Approved by the County Board of Supervisors in 2002, Section 396.7 contains criteria for automatic listing on the local register, identifies types of resources eligible for nomination for listing, identifies special consideration, and details the application process for listing on the register.

County of San Diego General Plan – Conservation Element

Chapter 5 of the Conservation and Open Space Element of the County of San Diego General Plan contains policies regarding the conservation and protection of significant cultural resources. The following goals and policies would be applicable to SDG&E's proposed project.

Goal COS-7 **Protection and Preservation of Archaeological Resources**. Protection and preservation of the County's important archaeological resources for their cultural importance to local communities, as well as their research and educational potential.

COS-7.1 **Archaeological Protection**. Preserve important archaeological resources from loss of destruction and require development to include appropriate mitigation to protect the quality and integrity of these resources.

COS-7.2 **Open Space Easements**. Require development to avoid archaeological resources wherever possible. If complete avoidance is not possible, require development to fully mitigate impacts to archaeological resources.

COS-7.3 **Archaeological Collections**. Require the appropriate treatment and preservation of archaeological collections in a culturally appropriate manner.

COS-7.4 **Consultation with Affected Communities**. Require consultation with affected communities, including local tribes to determine the appropriate treatment of cultural resources.

COS-7.5 **Treatment of Human Remains**. Require human remains be treated with the utmost dignity and respect and that the disposition and handling of human remains will be done in consultation with the Most Likely Descendant (MLD) and under the requirements of Federal, State, and County regulations.

COS-7.6 **Cultural Resource Data Management**. Coordinate with public agencies, tribes, and institutions in order to build and maintain a central database that includes a notation whether collections from each site are being curated, and if so, where, along with the nature and location of cultural resources throughout the County of San Diego.

Goal COS-8 **Protection and Conservation of the Historical Built Environment**. Protection, conservation, use, and enjoyment of the County's important historic resources.

COS-8.1 **Preservation and Adaptive Reuse**. Encourage the preservation and/or adaptive reuse of historic sites, structures, and landscapes as a means of protecting important historic resources as part of the discretionary application process, and encourage the preservation of historic structures identified during the ministerial application process.

COS-9.1 **Preservation**. Require the salvage and preservation of unique paleontological resources when exposed to the elements during excavation or grading activities or other development processes.

COS-9-2 **Impacts of Development**. Require development to minimize impacts to unique geologic features from human related destruction, damage, or loss.

Resource Protection Ordinance

The Resource Protection Ordinance (RPO) requires that cultural resources be evaluated as part of the County's discretionary environmental review process. If cultural resources are found to be significant through the RPO process, then they must be preserved (County of San Diego 2007c). The RPO prohibits development, trenching, grading, clearing, and grubbing, or any other activities that could potentially impact cultural resources (except during scientific investigations with an approved research design prepared by archaeologists certified by the Society of Professional Archaeologists (now the Register of Professional Archaeologists)).

County of San Diego Zoning Ordinance (1978)

Sections 5700 through 5749, Historical/Archaeological Landmark and District Area Regulations, provides provisions to "identify, preserve, and protect the historic, cultural, archaeological, and/or architectural resource values of designated landmarks and districts and encourage compatible uses and architectural design" (Section 5700). The zoning ordinance (Section 5703) designates historic/archaeological areas with a Historic/Archaeological Landmark or District (H) designation. Lands associated with the H designation contain limitation on use and construction and other regulations intended to conserve and protect on-site resources.

County of San Diego Guidelines for Determining Significance – Paleontological Resources

Sections 1 and 2 of these guidelines define paleontological resources and lists state and local regulations and standards. Sections 3 and 4 discuss ratings and sensitivity and typical adverse effects. Sections 5 and 6 provide criteria for determining significance and the mitigation requirements for specific levels of impact and significance.

County of San Diego Grading Ordinance

Section 87.430 of the Grading Ordinance provides for the requirement of a paleontological monitor at the discretion of the County. In addition, the suspension of grading operation is required upon the discovery of fossils greater than 12 inches in any dimension. The ordinance also requires notification of the County official (e.g., Permit Compliance Coordinator). The ordinance gives the County official the authority to determine the appropriate resource recovery operation, which the permittee shall carry out prior to the County official's authorization to resume normal grading operation.

Mills Act

The Mills Act is a program that provides property tax relief to owners of qualified historic properties that enter into contracts with local governments to restore and maintain their

properties. Qualified historic places are those that are listed on any federal, state, county, or city register, including the NRHP and/or CRHR, California Historical Landmarks, State Points of Historical Interest, and locally designated landmarks. The Mills Act contract is 10 years and is automatically extended each year. The contract stays with the property when the property is transferred. The Mill Act program is administered and implemented by local governments. The County of San Diego is a participant in the Mills Act program.

D.5.3 Environmental Effects

D.5.3.1 Definition and use of CEQA Significance Criteria/Indicators under NEPA

Cultural Resources

Cultural resources are places or objects that are important for historical, scientific, and religious reasons and are of concern to cultures, communities, groups, or individuals. These resources may include buildings and architectural remains, archaeological sites and other artifacts that provide evidence of past human activity, human remains, or TCPs. In the context of a federally permitted undertaking, the "significance" of cultural resources must be determined by the Federal Lead Agency under a NEPA official in consultation with the SHPO and other interested parties. Any action, as part of an undertaking, that could affect a "significant" cultural resource is subject to review and comment under Section 106 of the NHPA of 1966. Cultural resources that retain integrity and meet one or more of the criteria of significance (36 CFR 60.6) qualify as significant and are eligible for listing on the NRHP; such resources must be managed in compliance with the Advisory Council's regulations (36 CFR 800). Within the State of California there are also provisions in CEQA, its Guidelines, and other provisions of the California PRC for the protection and preservation of significant cultural resources (i.e., "historical resources" and "unique archaeological resources"). In addition, local regulations (County of San Diego) provide for the protection of cultural resources.

The following significance criteria apply to cultural resources:

- The project would cause a substantial adverse change in the significance of a historical resource as defined in 14 CCR 15064.5 and California Public Resources Code, Section 21083.2. This shall include the destruction, disturbance, or any alteration of characteristics or elements of a resource that cause it to be significant in a manner not consistent with the Secretary of Interior Standards.
- The project would cause a substantial adverse change in the significance of a unique archaeological resource as defined in 14 CCR 15064.5 and California Public Resources Code, Section 21083.2. This shall include the destruction or disturbance of an important

archaeological site or any portion of an important archaeological site that contains or has the potential to contain information important to history or prehistory.

- The project could disturb, uncover, expose, and/or damage any human remains including those interred outside of formal cemeteries and associated artifacts.
- The project would cause an adverse effect (substantial adverse change) to the characteristics or significance of a historic property or Traditional Cultural Property as defined by federal guidelines. Historic properties include any prehistoric or historic district, site, building, structure, or object, and its associated artifacts, remains, features, settings, and records, that is either listed in or determined eligible for inclusion in the NRHP; or any property not yet evaluated to determine whether it is eligible for the NRHP.

Cultural resources that do not satisfy any of these criteria do not merit consideration under NEPA, CEQA, or NHPA. CEQA discusses impacts to "cultural and historical resources" and "unique archaeological sites," and the terms "significant cultural resource" and "historic property" also apply in the context of the NHPA and federal activities that may impact cultural resources.

Paleontological Resources

An affirmative response to or confirmation of the following guideline from the County of San Diego Guidelines for Determining Significance – Paleontological Resources will generally be considered a significant impact related to paleontological resources under CEQA Appendix G, as a result of project implementation, in the absence of scientific evidence to the contrary:

> The project proposes activities directly or indirectly damaging to a unique paleontological resource or site. A significant impact to paleontological resources may occur as a result of the project if project-related grading or excavation will disturb the substratum or parent material below the major soil horizons in any paleontologically sensitive area of the County, as shown on the San Diego County Paleontological Resources Potential and Sensitivity Map.

D.5.3.2 Applicant Proposed Measures

SDG&E has proposed Applicant Proposed Measures (APMs) GEN-04 along with CULT-01 through CULT-09 that would be implemented as part of SDG&E's proposed project to reduce impacts to historical resources, archaeological resources, paleontological resources, and human remains (see Section B.7 of this EIR/EIS).

D.5.3.3 Direct and Indirect Effects

Approval of the Permit to Construct and the Master Special Use Permit would authorize the continued operations and maintenance of SDG&E electric facilities within the CNF and authorize the power line replacement projects. Construction activities, access roads, stringing sites, laydown yards, and operations and maintenance activities associated with SDG&E's proposed project could potentially impact historical resources, archaeological resources, and paleontological resources, and potentially disturb human remains. For purposes of this analysis, the APE included approximately 90 feet on either side of the power lines and circuits proposed for replacement and approximately 30 feet on either side of exclusive use access road centerlines and the actual footprint of all stringing sites, staging areas, guard structures, and fly yards.

Impact CUL-1:Result in a change in the significance of a historical resource as defined in Section 15064.5, or result in an effect to a historic property, as defined in Section 106 of NHPA and 36 CFR 800.

Construction

Table D.5-12 lists the CUL-1 impacts and classification of the impacts associated with the construction of each of the proposed power line replacement projects.

Table D.5-12
Power Line Replacement Projects – CUL-1 Impacts

Project Components	Historic Built Resource (building, structure, object)	Description of Impact	Significance Determination
TL682	SDI-9580 (BW-103), historic water basins	One replacement pole is located within this resource site; however, SDG&E's proposed project does not anticipate impacting this resource.	Class II under CEQA and not adverse under NEPA and NHPA.
TL626	SDI-19031, historical lumber mill	One replacement pole and access road are located within this resource site and could have a direct impact on this resource.	Class II under CEQA and not adverse under NEPA and NHPA.
TL625	None	None	No impact under CEQA and not adverse under NEPA and NHPA.
TL629	None	None	No impact under CEQA and not adverse under NEPA and NHPA.
TL6923	None	None	No impact under CEQA and not adverse under NEPA and NHPA.

Table D.5-12
Power Line Replacement Projects – CUL-1 Impacts

Project Components	Historic Built Resource (building, structure, object)	Description of Impact	Significance Determination
C79	P-37-015813, historical structure	Proposed underground conduit is located near this resource site and could have an indirect impact on this resource.	Class II under CEQA and not adverse under NEPA and NHPA.
C78	None	None	No impact under CEQA and not adverse under NEPA and NHPA.
C157	None	None	No impact under CEQA and not adverse under NEPA and NHPA.
C442	P-37-014420, P-37-014419, P-37-014427, P-37-014424, P-37-014425, P-37-014417, P-37-014418, P-37-014423, P-37-014422, P-37-014421 (historical cabins)	Overhead lines at ~~nine~~ 10 replacement poles are attached to historic resources and could have a direct impact to these resources.	Class II under CEQA and not adverse under NEPA and NHPA.
C440	P-37-014455, P-37-014457, P-37-014460, P-37-014407, P-37-014402, P-37-014475, P-37-014470, P-37-014482, P-37-014458, P-37-014451, P-37-014463, P-37-014461, P-37-014464, ~~P-37-014458,~~ P-37-014435, P-37-014444, P-37-014436 (historical cabins)	16 new poles are located near these resource sites and could have an indirect impact on these resources.	Class II under CEQA and not adverse under NEPA and NHPA.
	P-37-014454, P-37-014448, P-37-014413, P-37-014483, P-37-014465, P-37-014470, P-37-014467, P-37-014490, P-37-014491, P-37-014410, P-37-014485, P-37-014487, P-37-14488, P-37-14411, P-37-014489, P-37-014480, P-37-014479, P-37-014478, P-37-014476, P-37-014481, P-37-014408, P-37-014409, P-37-014468, P-37-014456, P-37-014462, P-37-014452, P-37-014472, P-37-014450, P-37-014453, P-37-014459, P-37-014474, P-37-014473, P-37-014396, P-37-014433, P-37-014441, P-37-014437, P-37-014436, P-37-014435, P-37-014434 (historical cabins)	Overhead lines at 39 replacement poles are attached to these historical resources and could have a direct impact on these resources.	

Table D.5-12
Power Line Replacement Projects – CUL-1 Impacts

Project Components	Historic Built Resource (building, structure, object)	Description of Impact	Significance Determination
C449	None	None	No impact under CEQA and not adverse under NEPA

Source: ASM 2011; SDG&E 2015.

As listed in Table D.5-12, power lines proposed to be replaced and/or access roads are located within the historical resource site or attached to the historical resource. More specifically, 1 historical resource was identified along TL682, 1 historical resource was identified along TL626, 1 historical resource was identified along C79, 9 historical resources were identified along C442, and 56 historical resources were identified along C440. Impacts to these historical resources due to construction activities associated with the proposed power line replacement projects would be potentially adverse and significant as described in Table D.5-12. Mitigation Measures (MM) MM CUL-1 and MM CUL-2 and APM CUL-01, APM CUL-04, and APM CUL-05 have been provided to reduce potential impacts to historical resources. Accordingly, with implementation of MM CUL-1 and MM CUL-2 and APM CUL-01, APM CUL-04, and APM CUL-05, potential adverse and significant impacts to historical resources would be mitigated under NEPA and would be less than significant with mitigation under CEQA (Class II). With implementation of MM CUL-1 there will be no adverse effect to historic properties associated with the implementation of the proposed project, in accordance with NHPA Section 106.

~~**MM CUL-1** In order to reduce adverse effects and significant impacts to resources identified in Table D.5-12, new poles near identified cultural sites along TL626 and TL682 shall be set within 4 feet of the existing pole. Additionally, construction vehicles and personnel shall stay within the access road, and no blading of the access road shall occur. If the new pole needs to be placed more than 4 feet from the existing pole or if pole replacement consists of a foundation pole or undergrounding, a cultural monitor shall be required.~~

MM CUL-1 In order to avoid adverse effects to historic properties, SDG&E will implement a comprehensive approach to cultural resource management consistent with any project specific Programmatic Agreement developed between the federal agencies and the SHPO. The comprehensive approach will include, at a minimum, the following elements:

1a. Inventory and evaluate cultural resources in the Final Area of Potential Effect (APE). Prior to any ground disturbing activities, SDG&E will complete inventories within the APE and submit the results of those

inventories for approval by the CPUC and federal agencies. These surveys shall supplement surveys done for the EIR/EIS and will satisfy Section 106 requirements.

1b. **Avoid and protect potentially significant resources.** Where feasible, complete avoidance of impacts shall be the preferred strategy. Where the federal agencies and CPUC decide that cultural resources cannot be avoided, they will be incorporated into a Historic Properties ~~Treatment~~ Management Plan (HPMP), as described below.

1c. **Develop and Implement Historic Properties ~~Treatment~~ Management Plan**. After completing the inventory and avoidance phase of site design, SDG&E will prepare and submit for approval a ~~Historic Properties Treatment Plan (~~HPM~~T~~P~~)~~ to avoid or mitigate identified potential impacts.

1d. **Conduct data recovery to reduce adverse effects.** If eligible resources, as determined by the federal agencies and the SHPO, cannot be protected from direct impacts of the project or alternatives, data-recovery investigations shall be conducted by SDG&E to reduce adverse effects to the characteristics of each property that contribute to its eligibility, using procedures described in the HPM~~T~~P.

1e. **Monitor construction activities**. Incorporate monitoring as described in ~~AMP~~ APM CUL-04. If any cultural resources are unexpectedly encountered, the monitor will stop work and notify the Principal Investigator, who will notify the appropriate federal Heritage Program Manager or CPUC representative, depending on the location of the discovery.

MM CUL-2 In order to reduce adverse effects and significant impacts to historic resources along C79, C440, and C442 as identified in Table D.5-12, the original exterior materials on the cabins shall not be removed, modified, or covered. If equipment attached to the cabins must be replaced, the equipment shall retain its original appearance in terms of materials and size. If this cannot be met, then a cultural monitor is required to be present during the replacement of the lines to minimize modifications to the cabin exteriors.

Operations and Maintenance

Operations and maintenance of the proposed power line replacement projects along with other SDG&E electric facilities proposed to be covered under the MSUP would require routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks, similar to those currently conducted by SDG&E. These activities would not

increase in duration or intensity with implementation of SDG&E's proposed project in such a way as to alter or adversely affect known historic resources and therefore would not exceed the significance threshold. As such, impacts to historical resources due to operations and maintenance would not be adverse under NEPA and under CEQA would be less than significant (Class III).

Impact CUL-2: Result in a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5, or result in an effect to a historic property, as defined in Section 106 of NHPA and 36 CFR 800.

Construction

Table D.5-13 lists the CUL-2 impacts, archaeological resources, impact description from the power line replacement projects, and significance determination identified for each of the applicant proposed power line replacement projects.

Table D.5-13
Power Line Replacement Projects – CUL-2 Impacts

Project Components	Archaeological Resource	Description of Impact[1]	Significance Determination
TL682	~~SDI-19748 (BW-109),~~ SDI-5987, SDI-19747 (BW-108), ~~SDI-615, P-37-032756 (BW-I-147),~~ SDI-19746 (BW-107), SDI-19744 (BW-105), SDI-19745 (BW-106), SDI-19743 (BW-104), ~~P-37-032754 (BW-I-145), P-37-032755 (BW-I-146),~~ SDI-19739 (BW-98), SDI-789, SDI-791, SDI-10449, SDI-9694, SDI-770, ~~SDI-10663,~~ SDI-19749 (BW-97), SDI-19737 (BW-96), ~~SDI-17883,~~ SDI-19738 (BW-101), SDI-19742 (BW-102), ~~P-37-032751 (BW-I-142), P-37-032752 (BW-I-143), P-37-032753 (BW-I-144), P-37-032750 (BW-I-141), P-37-032749 (BW-I-140), P-37-032748 (BW-I-139),~~ SDI-19741 (BW-100), SDI-19740 (BW-99), ~~P-37-032747 (BW-I-138)~~, SDI-19713, SDI-21058	Thirty ~~five~~ two (32~~5~~) replacement pole locations were identified in or near an archaeological site. Additionally, 10 facilities and 123 poles were identified in areas of high potential for buried cultural deposits (see Appendix CUL-1 (confidential) of this EIR/EIS for further detail).	Class II under CEQA and not adverse under NEPA and NHPA.

Table D.5-13
Power Line Replacement Projects – CUL-2 Impacts

Project Components	Archaeological Resource	Description of Impact[1]	Significance Determination
TL626	SDI-17884, SDI-19359 (ASM-626-3), SDI-4592, SDI-5724/W-493, SDI-7102, ~~BW-I-06, SDI-19360,~~ SDI-16880, SDI-7110, SDI-16878, SDI-19358 (ASM-626-2), SDI-19371, SDI-19025, SDI-19353, SDI-19372 (BW-02), SDI-12950, ~~SDI-7929/SDI-10950, SDI-19354,~~ SDI-5556, ~~SDI-5442, SDI-19362,~~ SDI-19355, SDI-4280, SDI-17877, SDI-19169, ~~SDI-4278,~~ P-037-030457, SDI-17887, SDI-15659, ~~SDI-6650/W-904, SDI-5920, BW-I-01,~~ SDI-12951, SDI-12957, SDI-5557, ~~SDI-19026, SDI-5721~~ SDI-13060, SDI-20243, SDI-20241, P-37-018658, P-37-029760	~~Six~~ Twenty-nine (29) replacement pole locations ~~and three new pole locations~~ were identified in or near an archaeological site. Additionally, there are 457 poles in areas of high sensitivity for buried cultural deposits.	Class II under CEQA and not adverse under NEPA and NHPA.
TL625	~~SDI-19353,~~ SDI-7929/SDI-10950, SDI-19354, ~~SDI-19354,~~ SDI-5442, SDI-19362, ~~KM-7iso,~~ SDI-19355, ~~SDI-4280,~~ SDI-4276, SDI-4278, ~~SDI-4278, P-037-030457,~~ SDI-6650/W-904, SDI-5920, ~~SDI-19367,~~ SDI-19026, SDI-12106/12107, SDI-12108, SDI-12110, SDI-12109, SDI-19356, SDI-19782	~~Six~~ Thirty-one (31) replacement pole locations were identified in or near an archaeological site. Additionally, there are 244 poles in areas of high potential for buried cultural deposits.	Class II under CEQA and not adverse under NEPA and NHPA.
TL629	~~P-37-032757 (EP-4 iso)late, P-37-032758 (EP-5 iso)late, P-37-032759 (EP-6 iso)late,~~ SDI-16503, SDI-18119, SDI-8855, SDI-8302, SDI-8301, SDI-19351 (KM-15), ~~P-37-024023,~~ SDI-19366 (ASM-6), SDI-19352 (ASM-5), ~~P-37-015165,~~ SDI-17212, SDI-11976, SDI-19365 (KM-16), SDI-9392, ~~P-37-032760 (EP-7 iso)late,~~ P-37-030474 (EP-8), ~~P-37-032761 (EP-9 iso)late,~~ P-37-030472 (KM-21), P-37-030473 (KM-22), P-37-030475 (BW-01), SDI-8239, SDI-4787, SDI-80, ~~SDI-19026, P-37-032762 (EP-10 iso)late, P-37-032746 (BW-I-04),~~ SDI-5500, SDI-17281, SDI-17282, ~~BW-I-250,~~ SDI-240146 (JH-01), SDI-~~21047~~ 20147 (JH-02), SDI-8951, SDI-19350, SDI-19306, SDI-20238, SDI-19966, SDI-19022, SDI-6777, P-37-029776, SDI-21262, SDI-21388, SDI-21389	Seventy (70) replacement pole locations were identified in or near an archaeological site. However, existing access roads that pass through two pole locations would be eliminated and these poles are proposed to be helicopter set. Additionally, there are 327 poles in areas of high sensitivity for buried cultural deposits.	Class II under CEQA and not adverse under NEPA and NHPA.

Table D.5-13
Power Line Replacement Projects – CUL-2 Impacts

Project Components	Archaeological Resource	Description of Impact[1]	Significance Determination
TL6923	SDI-11605, SDI-8443, ~~SDI-8444,~~ SDI-8445, SDI-20224 (SPAP-S-4), SDI-20223 (Potrero 2), SDI-20148 (BW-174), SDI-17999, SDI-17998, SDI-17989, SDI-19280, SDI-8439, SDI-19805, SDI-19795, SDI-19279, SDI-10040, SDI-19040, SDI-19039, SDI-4724, SDI-19811, SDI-19813, SDI-16773, SDI-17095, SDI-17093/17096, SDI-19810,	Twenty-three (23) replacement pole locations were identified near an archaeological site. Additionally, there are 13 poles in areas of high sensitivity for buried cultural deposits.	Class II under CEQA and not adverse under NEPA and NHPA.
C79	SDI-9075, SDI-9081, SDI-9082, SDI-9086, SDI-17032, SDI-17041, SDI-20133 (TQ-S-1)	No ~~replacement~~ pole removal locations were identified near an archaeological site. However, the proposed underground conduit bisects two cultural resources and runs adjacent to six identified cultural resources. Additionally, there is one pole in an area of high sensitivity for buried cultural deposits.	Class II under CEQA and not adverse under NEPA and NHPA.
C78	SDI-20131, SDI-20132	Installation of ~~two~~ three new steel poles are located near two cultural resources. Additionally, there are three poles in areas of high sensitivity for buried cultural deposits.	Class II under CEQA and not adverse under NEPA NHPA.
C157	SDI-10615	~~Three~~ Four replacement pole locations were identified near the prehistoric habitation. Additionally, 54 replacement poles are located in areas of high sensitivity for buried cultural deposits.	Class II under CEQA and not adverse under NEPA and NHPA.
C442	~~SDI-9207, SDI-20149, SDI-9207,~~ SDI-12731, SDI-9713, SDI-20140 (ARG-01)	~~Five~~ Four (~~5~~4) replacement pole locations were identified in or near archaeological sites, 10 replacement pole locations have overhead facilities attached to historical structures, and two~~3~~ poles would occur within bedrock ~~outcrops~~milling sites. Additionally, there are 93 poles in areas of high sensitivity for buried cultural deposits.	Class II under CEQA and not adverse under NEPA and NHPA.

Table D.5-13
Power Line Replacement Projects – CUL-2 Impacts

Project Components	Archaeological Resource	Description of Impact[1]	Significance Determination
C440	SDI-116~~, SDI-~~/9150, SDI-5852, SDI-5865, SDI-8504, SDI-8528, SDI-8529, SDI-8533, SDI-20134 (TQ-01), ~~SDI-11232,~~ SDI-11233, SDI-9402, SDI-9396, ~~SDI-9399,~~ SDI-9395, SDI-20158 (ARG-20), SDI-20135 (TQ-02), ~~SDI-20136 (TQ-3),~~ SDI-8506, SDI-8507, SDI-20137 (TQ-04), SDI-10113, SDI-10114, SDI-10108, SDI-8534, SDI-8512, ~~SDI-8495,~~ SDI-8496, SDI-20139 (TQ-06), SDI-8479, SDI-20138 (TQ-05), SDI-8493, SDI-8492/-15156, SDI-8550, SDI-17878, SDI-8483, SDI-9136, SDI-777/4804	~~One hundred and two (102)~~Sixty-nine (69) replacement and new pole locations and the proposed underground conduit were identified in or near ~~one of the~~ archaeological sites. ~~Of the 102 replacement pole locations, 32 of the pole replacement locations, and 3 new poles are in, or immediately adjacent to cultural resource sites. Thirty-two (32) poles have overhead lines that are attached to historical residences.~~ Additionally, there are 333 poles in areas of high sensitivity for buried cultural deposits.	Class II under CEQA and not adverse under NEPA and NHPA.
C449	SDI-80, SDI-16227/16229, SDI-20144 (BW-179), SDI-20145 (BW-180), SDI-16232, SDI-7885, ~~SDI-20150 (C449-1)~~, SDI-16231, SDI-20143 (ARG-8), SDI-20141 (ARG-5), SDI-7886, P-37-031709 (ARG-6), SDI-20142 (ARG-7), SDI-19022	~~Twenty-five~~Thirty-seven (37~~25~~) replacement pole locations were identified in or near one of the archaeological sites. Additionally, there are 13 poles in areas of high sensitivity for buried cultural deposits.	Class II under CEQA and not adverse under NEPA and NHPA.

Source: ASM 2011; SDG&E 2015.
Note: 1. "Near" is defined as 50 meters from the proposed work space.

The proposed power line replacement projects would replace existing wood pole structures with new steel pole structures, in addition to minor relocation, removal and undergrounding, generally within the same ROW alignment as the existing power lines. As described in Table D.5-13 and Appendix CUL-1, all construction components associated with all areas of SDG&E's proposed project (i.e., TL682, TL626, TL625, TL629, TL6923, C79, C78, C157, C442, C440, and C449) have the potential to directly and/or indirectly impact archaeological resources. These construction components include grading associated with direct-bury steel pole work areas, self-supported steel pole work areas, staging areas, stringing sites, fly yards, guard structures, wood pole removal areas, guard structures, or trench work areas for underground duct banks, permanent underground concrete splice vaults, rock splitting/blasting, drill locations for new poles, and/or installation of other facilities.

In summary, 10 facilities and 123 poles along TL682, 244 poles along TL625, 457 poles along TL626, 327 poles at TL629, 13 poles along TL6923, 1 pole along C79, 5 poles along C157, 333 poles along C440, 93 poles along C442, and 13 poles along C449 are located in areas of high sensitivity for buried cultural deposits. Absent mitigation, impacts to archaeological resource sites

located within the APE are considered potentially significant under CEQA and adverse under NEPA. MM CUL-1, MM CUL-3, APM CUL-01, APM CUL-02, APM CUL-04, APM CUL-05, APM CUL-06, and APM CUL-07 have been provided to reduce potential impacts to archaeological resources. Accordingly, with implementation of MM CUL-3, APM-CUL-01, APM CUL-02, APM CUL-04, APM CUL-05, APM CUL-06, and APM CUL-07, potential direct and indirect adverse and significant impacts to archaeological resources would be mitigated under NEPA and under CEQA, impacts would be less than significant with mitigation (Class II). With implementation of MM CUL-1 there will be no adverse effect to historic properties associated with the implementation of the proposed project, in accordance with NHPA Section 106.

MM CUL-3 During construction of the proposed power line replacement projects, all measures as identified in Tables 3 and 6 for TL625, Tables 9 and 11 for TL626, Tables 14 and 17 for TL629, Table 20 for TL682, Table 23 for TL6923, Table 26 for C78, Table 29 for C79, Table 31 for C157, Table 34 for C440, Table 37 for C442, and Table 40 for C449 of the Cultural Resources Technical Report prepared by ASM (ASM 2011) shall be implemented. All measures shall be implemented by a qualified archaeologist who is approved by the California Public Utilities Commission and Forest Service. Further, when work occurs on City-owned land (portions of C157, T625, and C449), the City's Land Development Manual – Historical Resource Guidelines per the San Diego Municipal Code, Chapter 14, Article 3, Division 2, Section 14.0201, shall be followed (http://docs.sandiego.gov/municode/MuniCodeChapter14/Ch14Art03Division02.pdf).

Operations and Maintenance

Approval of the power line replacement projects would authorize the continued operations and maintenance of SDG&E electric facilities within the CNF and authorize the power line replacement projects. No impacts to archaeological resources are anticipated during operations and maintenance activities for the proposed power line replacement projects since vehicles and crew would stay within the access roads, approved footpaths, and previously disturbed areas.

Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries

Human burials have occurred outside of formal cemeteries, usually associated with archaeological resource sites and prehistoric peoples; therefore, areas with known archaeological resources sites may have a higher risk for containing human remains (County of San Diego 2011). Since the power line replacement projects are located within or near archaeological resources sites, the potential exists for unintended discovery of unknown human remains during subsurface construction activities. Per the California Health and Safety Code 7050.5, if human

remains are encountered during construction, no further disturbance shall occur until the County of San Diego coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. If the County coroner determines that the remains are not historic, but prehistoric, the NAHC must be contacted to determine the most likely descendent for this area. Once the most likely descendent is determined, treatment of the Native American human remains will proceed pursuant to Public Resources Code 5097.98. The NAHC may become involved with decisions concerning the disposition of the remains. The County coroner must be notified within 24 hours. Also, Part 3 Design Standards for the Southern California National Forest S61 mentions compliance with national forest, federal, and tribal policies in the event human remains are discovered. Additionally, APM CUL-07, requiring adherence to a specific protocol in the event human remains are discovered would be implemented. Therefore, with adherence to state and federal laws, forest and tribal policies, and implementation of APM CUL-07, potential impacts to human remains would not be adverse under NEPA and would be less than significant under CEQA (Class III).

Operations and Maintenance

Operations and maintenance of the proposed power line replacement projects along with other SDG&E electric facilities proposed to be covered under the MSUP would require routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks, similar to those currently conducted by SDG&E. These activities would not increase in duration or intensity with implementation of SDG&E's proposed project in such a way as to alter or adversely affect human remains and therefore would not exceed the significance threshold. As such, impacts to human remains due to operations and maintenance would not be adverse under NEPA and under CEQA would be less than significant (Class III).

Impact CUL-4: Cause an adverse change to Traditional Cultural Properties

No Traditional Cultural Properties (TCPs) have been identified within TL682, TL626, TL625,TL629, TL6923, C79, C78, C157, C440, C442, or C449. Therefore, construction of the project would not cause an adverse change to a TCP.

In response to the Sacred Lands File search, the NAHC indicated that there are no documented sacred sites within TL682, TL 626, TL625, TL629, TL6923, C79, C78, C157, or C440. The NAHC indicated the presence of sacred sites within 0.5 mile of the C442 and C449 APE. Therefore, while it is assumed that the proposed replacement of C442 and C449 would not cause an adverse change to sacred sites recorded with the NAHC, proposed replacement of C442 and C449 may result in inadvertent adverse changes to a sacred site. APM CUL-01 and APM CUL-04, requiring training and archaeological monitoring during excavation activities, would be implemented. Accordingly, with implementation of these APMs, potential impacts to sacred sites

at C442 and C449 would be mitigated and would not be adverse under NEPA. Under CEQA, impacts would be less than significant (Class III).

Impact PALEO-1: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

Table D.5-14 lists the PALEO-1 impacts and classification of the impacts associated with the construction of each of the proposed power line replacement projects.

As outlined in Table D.5-14, some of the proposed direct bury pole replacement sites occur in areas underlain by sedimentary rock units with a PFYC Class 3 ranking. It is possible that proposed excavation activities at these pole locations may result in disturbance or destruction of undiscovered paleontological resources in these areas along TL682, C442, and C440. APM CUL-01 and APM CUL-08, requiring training and paleontological monitoring during excavation activities, would be implemented. Accordingly, with implementation of APM CUL-01 and APM CUL-08, potential impacts to paleontological resources at TL682, C442, and C440 would not be adverse under NEPA and under CEQA, impacts would be less than significant (Class III).

Operations and Maintenance

Operations and maintenance of the proposed power line replacement projects along with other SDG&E electric facilities proposed to be covered under the MSUP would require routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks, similar to those currently conducted by SDG&E. These activities would not increase in duration or intensity with implementation of SDG&E's proposed project in such a way as to alter or adversely affect paleontological resources and therefore would not exceed the significance threshold. As such, impacts to paleontological resources due to operations and maintenance would not be adverse under NEPA and under CEQA would be less than significant (Class III).

Table D.5-14
Power Line Replacement Projects – PALEO-1 Impacts

Project Components (listed from North –South)	Geology	Potential Fossil Yield Classification	Description of Impact	Significance Determination
TL682	Pleistocene non-marine deposits attributable to the Pauba Formation (Qco) and Quaternary river terrace deposits (Qt), metasedimentary rocks of the Julian Schist, Holocene young alluvial deposits (Qya), Holocene fan (Qf), Holocene and late Pleistocene young alluvial fan deposits (Qyf), late to middle Pleistocene old alluvial fan deposits (Qof), and plutonic rock units of the Peninsular Ranches Batholith.	Class 1 (very low), Class 2 (low), Class 3 (undetermined)	The following poles that are located within Pleistocene non-marine deposits are proposed for direct bury: Z118191 to Z118224, and Z210985.	Class II under CEQA and not adverse under NEPA
TL626	Fanglomerates of Pleistocene and possibly Tertiary age (QTf), metasedimentary rocks of the Julian Schist, and plutonic igneous rock units of the Peninsular Ranches Batholith.	Class 1 (very low), Class 3 (Undetermined)	The following poles that are located within fanglomerate (QTfg) are proposed for direct bury: Z371557, Z371560, and Z371561. The following poles that are located within metasedimentary rocks, including Julian Schist are proposed for direct bury: P778979, Z371501, and Z371502.	Class II under CEQA and not adverse under NEPA
TL625	Metasedimentary rocks of the Julian Schist, Holocene young alluvium (Qya) and Holocene and Pleistocene colluvium (Qc), and igneous and metamorphic rocks.	Class 1 (very low), Class 2 (low), Class 3 (undetermined)	The following poles that are located within metasedimentary rocks, including Julian Schist, are proposed for direct bury locations: Z273024 through Z273029, and Z273034 through Z273036.	Class II under CEQA and adverse not under NEPA
TL629	Metasedimentary rocks of the Julian Schist, and Holocene young alluvium (Qya) and Holocene and Pleistocene colluvium (Qc).	Class 2 (low), Class 3 (undetermined)	The following poles that are located within metasedimentary rocks, including the Julian Schist are proposed for direct bury: Z173066, Z173067, Z273043, and Z172740.	Class II under CEQA and not adverse under NEPA
TL6923	Holocene young alluvium (Qya) and Holocene and Pleistocene colluvium (Qc), and plutonic rock units of the Peninsular Ranches Batholith.	Class 1 (very low), Class 2 (low)	None of the poles proposed for direct bury will be located within areas underlain by PFYC Class 3 or higher geologic rock units.	Class III under CEQA and not adverse under NEPA

Table D.5-14
Power Line Replacement Projects – PALEO-1 Impacts

Project Components (listed from North –South)	Geology	Potential Fossil Yield Classification	Description of Impact	Significance Determination
C79	Fanglomerates of Pleistocene and possibly Tertiary age (QTf), metasedimentary rocks of the Julian Schist, and plutonic igneous rock units of the Peninsular Ranches Batholith	Class 1 (very low), Class 3 (undetermined)	No impacts to paleontological resources are anticipated along this project component.	Class II under CEQA and not adverse under NEPA
C78	Holocene and Pleistocene colluvium (Qc), and plutonic rock units of the Peninsular Ranches Batholith.	Class 1 (very low), Class 2 (low)	None of the poles proposed for direct bury will be located within areas underlain by PFYC Class 3 or higher geologic rock units.	Class III under CEQA and not adverse under NEPA
C157	Plutonic igneous rock units of the Peninsular Ranches Batholith.	Class 1 (very low)	None of the poles proposed for direct bury will be located within areas underlain by PFYC Class 3 or higher geologic rock units.	Class III Under CEQA and not adverse under NEPA
C442	Metasedimentary rocks of the Julian Schist, Holocene young alluvium (Qya), and plutonic igneous rock units of the Peninsular Ranches Batholith.	Class 1 (very low), Class 2 (low), Class 3 (undetermined)	The following poles that are located within metasedimentary rocks, including Julian Schist, are proposed for direct bury locations: P176978, P176979, P17982, P176983, P176984, P176991 through P176994, P176996 through P177001, P-29, and P-31.	Class II under CEQA and not adverse under NEPA
C440	Metasedimentary rocks of the Julian Schist, Holocene young alluvium (Qya) and Holocene and Pleistocene colluvium (Qc), and plutonic igneous rock units of the Peninsular Ranges Batholith.	Class 1 (very low), Class 2 (low), Class 3 (undetermined)	The following poles that are located within metasedimentary rocks, including Julian Schist, are proposed for direct bury locations: P40034, P40035, P40045, P40046, P40047, P40050, P40052 through P40058, P40061. P-001, P-002, P40226, P40228 through P40232, P40262 through P40278, P45410, P46564, P40239, P40279, P40282, P40283, P40293 through P40296, P45860, P-003, P-305, P-306, and P40316.	Class II under CEQA and not adverse under NEPA
C449	Holocene young alluvium (Qya), and plutonic igneous rock nits of the Peninsular Ranges Batholith.	Class 1 (very low), Class 2 (low)	None of the poles proposed for direct bury will be located within areas underlain by PFYC Class 3 or higher geologic rock units.	Class III under CEQA and not adverse under NEPA

D.5.4 Forest Service Proposed Actions

D.5.4.1 TL626 Alternative Routes

Environmental Setting/Affected Environment

Each of the five options for the Forest Service Proposed Actions for TL626 would relocate a segment of TL626. The farthest relocation would be approximately 2 miles to the east of the existing alignment. While intensive field surveys have not been completed, the records search completed for SDG&E's proposed project encompasses all five options; therefore, for purposes of the analysis conducted in this document, the environmental setting is assumed to be similar to that identified in Sections D.5.1 and D.5.2.

Options 1 and 2 SDG&E Proposed Overhead Alignments Through/Around Inaja and Cosmit Reservation Lands

Environmental Effects

Impacts CUL-1 through CUL-3: This alternative would reroute a segment of TL626 to the east along a new, undisturbed ROW approximately 5.5 miles (Option 1) or 5.6 miles (Option 2) (Figure B-4a). All other project components would remain the same. There is a greater potential that cultural resources could be significantly impacted by options 1 and 2 within the new undisturbed ROW where the disturbance area would be greater due to longer distance and need for new access roads compared to the reconstruction of TL626 in place as proposed. Similar to SDG&E's proposed project, these impacts are anticipated to be mitigated through the avoidance of the resources in project siting or through implementation of APMs and mitigation measures as described below:

- Identified CUL-1 impacts (historic properties): It is anticipated that adverse effects and significant CUL-1 impacts can be mitigated under NEPA and avoided under the NHPA by implementing MM CUL-1, MM CUL-3, as well as APM CUL-01 through APM CUL-07 and APM CUL-09. Under CEQA, impacts would be considered significant, or adverse under NEPA, but can be mitigated to a level that is considered less than significant (Class II).
- Identified CUL-2 impacts (archaeological resources): It is anticipated that adverse effects and significant CUL-2 impacts can be mitigated under NEPA and avoided under the NHPA by implementing MM CUL-1, MM CUL-3, as well as APM CUL-01 through CUL-07 and APM CUL-09. Under CEQA, impacts would be considered significant, or adverse under NEPA, but can be mitigated to a level that is considered less than significant (Class II).

- Identified CUL-3 impacts (disturbance of human remains): It is anticipated that CUL-3 impacts would not be adverse under NEPA. With adherence to state and federal laws, forest and tribal policies, and implementation of APM CUL-07, potential impacts to human remains would not be adverse under NEPA and would be less than significant under CEQA (Class III).
- Identified CUL-4 impacts (traditional cultural properties): In response to the Sacred Lands File search, the NAHC indicated that there are no documented sacred sites within the vicinity of TL626, and no traditional cultural properties have been identified. However, the Forest Service has not initiated or completed consultation and there remains the possibility that Native American sacred sites or traditional cultural properties would be identified as a result of the federal tribal consultation process. Therefore, while it is assumed that the relocation of TL626, as proposed under options 1 and 2, would not cause an adverse change to sacred sites recorded with the NAHC or traditional cultural properties, proposed relocation of TL626 may result in inadvertent adverse changes to a sacred site or traditional cultural property. Similar to SDG&E's proposed project, APM CUL-01 and APM CUL-04, requiring training and archaeological monitoring during excavation activities, would be implemented. Accordingly, with implementation of these APMs, potential adverse effects to sacred sites are anticipated to be mitigated under NEPA, and under CEQA, significant impacts would be less than significant (Class II).
- Identified PALEO-1 impacts (paleontological resources): Excavation activities may result in disturbance or destruction of undiscovered paleontological resources along the new ROWS proposed. Similar to SDG&E's proposed project, APM CUL-1 and APM CUL-08, requiring training and paleontological monitoring during excavation activities, would be implemented. Accordingly, with implementation of APM CUL-01 and APM CUL-08, potential impacts to paleontological resources would be mitigated under NEPA, and under CEQA, would be less than significant (Class III).

Option 3 Partial Underground Relocation in Boulder Creek Road

Environmental Effects

Impacts CUL-1 through CUL-4 and PALEO-1: Options 3a and 3b would consist of placing a segment of TL626 underground in Boulder Creek Road. As shown in Figure B-4b, the rerouted underground segment of Option 3a is approximately 11.4 miles long, and the rerouted segment of Option 3b is approximately 6.3 miles long (each option includes an approximately 1-mile overland segment to interconnect back into the existing TL626 alignment). All other project components would remain the same. While these options would place TL626 in the existing Boulder Creek ROW, which is disturbed, there would be a higher risk that unknown cultural

resources could be significantly impacted where the disturbance area would be greater compared to the reconstruction of TL626 in place as proposed. Similar to SDG&E's proposed project, these adverse effects and significant impacts are anticipated to be mitigated through the avoidance of the resources in project siting or through implementation of APMs and mitigation measures as described under TL626 relocation options 1 and 2.

Option 4 Overhead Relocation along Boulder Creek Road

Environmental Effects

Impacts CUL-1 through CUL-4 and PALEO-1: Option 4 would consist of relocating a segment of TL626 overhead along Boulder Creek Road to the Pine Hills Fire Station (approximately 7.5 miles) and then merging with proposed Options 1 or 2 overland alignments for approximately 2.1 miles to interconnect with pole Z213680 (see Figure B-4a). All other project components would remain the same. While this option would place TL626 in the existing Boulder Creek ROW, which is disturbed, there would be a slightly higher risk that unknown cultural resources could be significantly impacted due to the longer ROW and associated disturbance area required compared to the reconstruction of TL626 in place as proposed. Similar to SDG&E's proposed project, these adverse effects and significant impacts (CUL-1 through CUL-4) to archaeological resources are anticipated to be mitigated through the avoidance of the resources in project siting or through implementation of APMs and mitigation measures as described under TL626 relocation options 1 and 2.

While Option 4 would result in construction of poles and overhead lines near to a National Register eligible building (Building #1310—barracks—of the Pine Hills Fire Station), the building is considered eligible based on locally significant events (Criterion A) and design (Criterion C), with no contributing visual element (Newland 1995, as cited in ASM 2011). Regardless, implementation of MM VIS-1 in Section D.2, Visual Resources, of this EIR/EIS will further minimize the visual prominence and contrast of constructed poles. Therefore, construction of Option 4 would not have an adverse effect or significant impact on historical resources.

Option 5 Reroute and Undergrounding around Inaja Picnic Area

Environmental Effects

Impacts CUL-1 through CUL-4 and PALEO-1: Option 5 would consist of relocating a portion of TL626 around the Inaja Picnic Area, and as shown in Figure B-4c, would consist of approximately 2,100 feet of relocated overhead alignment along with a 400-foot underground segment located within an existing parking lot. All other project components would remain the same. There would be a slightly higher risk that unknown cultural resources could be

significantly impacted due to the slightly longer ROW and associated disturbance area required compared to the reconstruction of TL626 in place as proposed. Similar to SDG&E's proposed project, these adverse effects and significant impacts are anticipated to be mitigated through the avoidance of the resources in project siting or through implementation of APMs and mitigation measures as described under TL626 relocation options 1 and 2.

D.5.4.2 C157 Partial Relocation to Avoid Designated Wilderness

Option 1 SDG&E Proposed Alignment between Two Wilderness Areas

Option 2 City of San Diego Modified Alignment

Environmental Setting/Affected Environment

Sections D.5.1 and D.5.2 describe the existing cultural and paleontological resources setting associated with SDG&E's proposed project. The Forest Service Proposed Action for C157 is within the APE identified for SDG&E's proposed project; therefore, for purposes of the analysis conducted in this document, the environmental setting is assumed to be the same as that identified in Sections D.5.1 and D.5.2.

Environmental Effects

Impacts CUL-1 through CUL-4 and PALEO-1: Options 1 and 2 would reroute an approximately 2-mile segment of C157 to the south of the existing alignment approximately 0.25 mile along new undisturbed ROW (Figure B-5a). All other project components would remain the same. While no cultural resources were identified within the vicinity of replacement poles identified under options 1 and 2, there is a potential that cultural resources or paleontological resources could be significantly impacted by options 1 and 2 (Impacts CUL-1 through CUL-4 and Impact PALEO-1) in the new undisturbed ROW. These adverse effects and significant impacts are anticipated to be similar to SDG&E's proposed project due to similar disturbance areas and absence of known resources and can be mitigated through the avoidance of the resources in project siting or through implementation of APMs and mitigation measures as described in Section D.5.4.1, TL626 Alternative Routes.

D.5.4.3 C440 Mount Laguna Underground Alternative

Environmental Setting/Affected Environment

As this area is in the same geographic region as SDG&E's proposed project and would consist of undergrounding within existing paved road ROWs, the environmental setting is assumed to be similar to that identified in Sections D.5.1 and D.5.2.

Environmental Effects

Impacts CUL-1 through CUL-4 and PALEO-1: Besides undergrounding C440 as proposed by the project, this alternative would consist of undergrounding an additional 14.3 miles of C440 within existing paved roadways in the Laguna Mountain Recreation Area. All other project components would remain the same. During construction, soil disturbance would be greater under this alternative as open trenching would be more invasive than excavation for power line poles. Although the ROWs would be within existing roadways, there is a potential that unknown cultural resources could be significantly impacted by this alternative (Impacts CUL-1 through CUL-4 and PALEO-1). Similar to SDG&E's proposed project, these adverse effects and significant impacts are anticipated to be mitigated through the avoidance of the resources in project siting or through implementation of APMs and mitigation measures as described in Section D.5.4.1, TL626 Alternative Routes.

D.5.5 BIA Proposed Action

Environmental Setting/Affected Environment

Sections D.5.1 and D.5.2 describe the existing cultural and paleontological resources setting associated with TL682. The BIA Proposed Action for TL682 would relocate a portion of the line and underground approximately 1,500 feet on tribal lands. As this area is in the same APE identified for SDG&E's proposed project, the environmental setting would be identical to that identified in Sections D.5.1 and D.5.2.

Environmental Effects

Impacts CUL-1 through CUL-4 and PALEO-1: This alternative would consist of placing a portion of the TL682 underground and relocating certain poles on tribal lands. All other project components would remain the same. During construction, soil disturbance would be greater under this alternative as open trenching for undergrounding activities would be more invasive than excavation for power line poles. In addition, the pole relocation would be located in a new undisturbed ROW on tribal lands. While no cultural resources were identified in the vicinity of the undergrounding and realignment poles, there is a potential, due to the greater disturbance area required, that cultural resources or paleontological resources could be adversely affected or significantly impacted (Impacts CUL-1 through CUL-4 and Impact PALEO-1). These adverse effects and significant impacts are anticipated to be similar to SDG&E's proposed project due to the absence of known resources and can be mitigated through the avoidance of the resources in project siting or through implementation of APMs and mitigation measures as described in Section D.5.4.1, TL626 Alternative Routes.

D.5.6 Additional Alternatives

D.5.6.1 Partial Removal of Overland Access Roads

Environmental Setting/Affected Environment

This alternative would be in the same study area as SDG&E's proposed project; therefore, the environmental setting would be the same as that identified in Sections D.5.1 and D.5.2.

Environmental Effects

Impacts CUL-1 through CUL-4 and PALEO-1: Under this alternative, overland access in rugged terrain that exceeds grades of 25% for appreciable distances in proximity to creeks (as outlined in Section C.4.2) would be removed and the areas restored. This alternative removes up to 11~~0~~.5 miles of certain segments of existing exclusive use access roads that are too steep to effectively control road drainage, particularly along TL626 (Boulder Creek) and TL625 (Barber Mountain/Carveacre). All other project components would remain the same. Because a portion of existing access roads would be removed and the areas restored, Impacts CUL-1 through CUL-4 and PALEO-1 would reflect similar impact findings previously discussed in Section D.5.3.3.

D.5.6.2 Removal of TL626 from Service

Environmental Setting/Affected Environment

This alternative would remove TL626 from service and replace it with system upgrades, either with TL6931 upgrades or a TL625 loop-in as described below. In order to serve existing customers, segments of TL626 would also be converted from 69 kV to 12 kV. The setting associated with these upgrades is described as follows:

a. Upgrade the existing 69 kV TL6931 from Crestwood to the Boulevard Substation (See Figure C-1). The setting associated with the 6-mile existing TL6931 has largely been described in SDG&E's PEA TL6931 (SDG&E 2012). As described in the PEA, 14 archaeological sites have been identified within or adjacent to TL 6931, and the site has no paleontological potential.

b. Loop-in TL625 into the Suncrest Substation (see Figure C-2). The setting associated with the new 3-mile TL625 loop-in is largely located within the CNF approximately 100 feet from the Sunrise Powerlink ROW between Japatul Road and Suncrest Substation.

   This area was systematically surveyed by ASM Affiliates Inc. in 2009 and 2010 as part of the Sunrise Powerlink Project's decision-making for the selected route and a parallel proposed alternative route. During the survey and literature review, three resources were

identified in the vicinity including SDI-19793, an identified prehistoric bedrock milling site. The other two resources—SDI-19847 (SPAP-S-8) and SPAP-S-9—were both determined to not be cultural. All three resources occur south of Suncrest Substation. The majority of the terrain over which the loop-in of TL625 would occur is located on high mountain ridges with steep drainages that have a low potential for buried cultural deposits. Five other resources are within 0.5-mile of the proposed alignment, with two being evaluated and removed by construction of Suncrest Substation and the remaining three recorded northwest of the existing substation.

c. Convert a 6.5-mile portion of TL626 from the Santa Ysabel and Boulder Creek Substations from 69 kV to 12 kV, along with a 6.8-mile section that is co-located with C79 within the same study area as SDG&E's proposed project. Therefore, the environmental setting would be the same as that identified in Sections D.5.1 and D.5.2.

Environmental Effects

Reconstruction of TL6931

I**mpacts CUL-1 through CUL-4 and PALEO-1**: Upgrading the existing 69 kV TL6931 from the Crestwood Substation to the Boulevard Substation involves replacing wood poles with steel poles. Construction activities, access roads, stringing sites, laydown yards, and operations and maintenance activities associated with pole replacement along the existing 69 kV TL6931 from the Crestwood Substation to the Boulevard Substation, could potentially impact historical and archaeological resources and potentially disturb human remains (Impacts CUL-1 through CUL-4). While it is anticipated that previously recorded archaeological resource sites could be avoided through implementation of proposed APMs, there is still the potential for inadvertent impacts to resources discovered during implementation. As with SDG&E's proposed project, with implementation of mitigation measures as described in Section D.5.4.1, TL626 Alternative Routes, adverse effects and significant Impacts CUL-1 through CUL-4 and PALEO-1 would be mitigated under NEPA. Under CEQA, impacts would be less than significant with mitigation (Class II).

Development of the New 3-Mile Loop-in of TL625

Impacts CUL-1 through CUL-4 and PALEO-1: New construction to loop in TL629 between Loveland-Barrett and the Suncrest Substation would occur within 100 feet of the Sunrise Powerlink transmission line. Extensive cultural resources work completed for the Sunrise Powerlink transmission line provides a knowledge base that reduces the risk of impacting cultural or paleontological resources during implementation of the TL629 loop-in component. While it is anticipated that previously recorded archaeological resource sites could be avoided through

implementation of proposed APMs, there is still the potential for inadvertent impacts to resources discovered during implementation. As with SDG&E's proposed project, with implementation of mitigation measures as described in Section D.5.4.1, TL626 Alternative Routes, adverse effects and significant Impacts CUL-1 through CUL-4 and PALEO-1 would be mitigated under NEPA, and under CEQA, would be less than significant with mitigation (Class II).

Convert Segments of TL626 from 69 kV to 12 kV

Impacts CUL-1 through CUL-4 and PALEO-1: Conversion of segments of TL626 to 12 kV would consist of construction as well as operations and maintenance activities similar to those described for the project; therefore, Impacts CUL-1 through CUL-4 would reflect similar impact findings previously discussed in Section D.5.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, implementation of mitigation measures as described in Section D.5.4.1, TL626 Alternative Routes, adverse effects and significant Impacts CUL-1 through CUL-4 and PALEO-1 would be mitigated under NEPA, and under CEQA, would be less than significant with mitigation (Class II).

D.5.7 No Action Alternative

Environmental Effects

Impacts CUL-1 through CUL-4 and PALEO-1: Under the No Action Alternative, the MSUP would not be issued, and SDG&E would be required to remove the existing electric lines and facilities on CNF-managed lands as well as develop additional transmission upgrades elsewhere as described in Section C.1.4 of this EIR/EIS. While none of the facilities associated with SDG&E's proposed project would be constructed, removal of the electric lines and restoration activities within the CNF along with the development of in-kind replacement facilities in conformance with California Independent System Operator (CAISO) requirements and/or alternatives means of delivering electrical service elsewhere would result in an increase in the overall disturbance area, and therefore, an increase in impacts compared to reconstruction of lines in place as proposed.

D.5.8 No Project Alternative

Environmental Effects

Impacts CUL-1 through CUL-4 and PALEO-1: Under the No Project Alternative, the proposed power line replacement projects would not be built, and the existing SDG&E electrical facilities would remain; therefore, none of the construction impacts to cultural or historical resources described in Section D.5.3 would occur. Operations and maintenance of

SDG&E electrical facilities would continue and include routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks and would be based on the requirements of the existing permits. While these activities represent a potential impact to cultural resources, they would not increase in duration, intensity, or frequency over existing conditions; therefore, no impacts over existing conditions to cultural resources would occur.

D.5.9 Mitigation Monitoring, Compliance, and Reporting

Table D.5-15 presents the mitigation monitoring, compliance, and reporting program for cultural and paleontological resources for the power line replacement projects and alternatives.

Table D.5-15
Mitigation Monitoring, Compliance, and Reporting –Cultural and Paleontological Resources

Mitigation Measure	**MM CUL-1**: In order to avoid adverse effects to historic properties, SDG&E will implement a comprehensive approach to cultural resource management consistent with any project specific Programmatic Agreement developed between the federal agencies and the SHPO. The comprehensive approach will include, at a minimum, the following elements: **1a. – Inventory and evaluate cultural resources in the Final Area of Potential Effect (APE)**. Prior to any ground disturbing activities, SDG&E will complete inventories within the APE and submit the results of those inventories for approval by the CPUC and federal agencies. These surveys shall supplement surveys done for the EIR/EIS and will satisfy Section 106 requirements. **1b. – Avoid and protect potentially significant resources.** Where feasible, complete avoidance of impacts shall be the preferred strategy. Where the federal agencies and CPUC decide that cultural resources cannot be avoided, they will be incorporated into a Historic Properties ~~Treatment~~ Management Plan (HPMP), as described below. **1c. – Develop and Implement Historic Properties Treatment Plan**. After completing the inventory and avoidance phase of site design, SDG&E will prepare and submit for approval an ~~Historic Properties Treatment Plan (~~HPM~~T~~P~~)~~ to avoid or mitigate identified potential impacts. **1d. – Conduct data recovery to reduce adverse effects.** If eligible resources, as determined by the federal agencies and the SHPO, cannot be protected from direct impacts of the project or alternatives, data-recovery investigations shall be conducted by SDG&E to reduce adverse effects to the characteristics of each property that contribute to its eligibility, using procedures described in the HPM~~T~~P. **1e. – Monitor construction activities**. Incorporate monitoring as described in ~~AMP~~ APM CUL-04. If any cultural resources are unexpectedly encountered, the monitor will stop work and notify the Principal Investigator, who will notify the appropriate federal Heritage Program Manager or CPUC representative, depending on the location of the discovery.
Location	SDG&E's proposed project and all alternatives
Compliance Documentation[(a)] and Consultation	a. Approval of Final APE surveys b. Approval of final designs documenting avoidance. c. Approval of HPM~~T~~P

Table D.5-15
Mitigation Monitoring, Compliance, and Reporting –Cultural and Paleontological Resources

	d. Approval of recovery plans e. Monitor construction activities and data recovery
Timing	a. Prior to construction b. and c. Prior to issuance of notice to proceed e. During construction
Responsible Agency	*SDG&E's Proposed Project*: CPUC ,Forest Service, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629), BLM, California State Parks (C79) *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM CUL-2**: In order to reduce adverse effects and significant impacts to historic resources along C79, C440, and C442 as identified in Table D.5-12 of the EIR/EIS, the original exterior materials on the cabins shall not be removed, modified, or covered. If equipment attached to the cabins must be replaced, the equipment shall retain its original appearance in terms of materials and size. If this cannot be met, then a cultural monitor is required to be present during the replacement of the lines to minimize modifications to the cabin exteriors.
Location	C79, C440, and C442 for SDG&E's proposed project and all alternatives with identified historic resources
Compliance Documentation[(a)] and Consultation	a. Letter of conformance b. Map of locations of cabins where requirement cannot be met c. CPUC/Forest Service monitor: Conduct in-field inspections of historic structures d. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. and b. Prior to issuance of notice to proceed c. During construction d. Prior to and during construction
Responsible Agency	*SDG&E's Proposed Project*: CPUC, Forest Service, and California State Parks *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM CUL-3**: During construction of the proposed power line replacement projects, all measures as identified in Tables 3 and 6 for TL625, Tables 9 and 11 for TL626, Tables 14 and 17 for TL629, Table 20 for TL682, Table 23 for TL6923, Table 26 for C78, Table 29 for C79, Table 31 for C157, Table 34 for C440, Table 37 for C442, and Table 40 for C449 of the Cultural Resources Technical Report prepared by ASM (ASM 2011) shall be implemented. All measures shall be implemented by a qualified archaeologist who is approved by the California Public Utilities Commission and Forest Service. Further, when on City-owned land (portions of C157, T625, and C449), the City's Land Development Manual – Historical Resource Guidelines per the San Diego Municipal Code, Chapter 14, Article 3, Division 2, Section 14.0201, shall be followed (http://docs.sandiego.gov/municode/MuniCodeChapter14/Ch14Art03Division02.pdf).

Table D.5-15
Mitigation Monitoring, Compliance, and Reporting –Cultural and Paleontological Resources

Location	TL625, TL626, TL629, TL682, TL6923, C78, C79, C157, C440, C442, C449
Compliance Documentation[a] and Consultation	a. Documentation indicating completion of all measures provided in the cultural resources report prepared by ASM for each power and distribution line. b. Map identifying all environmentally sensitive areas to be flagged and avoided during construction c. Archaeologist qualifications d. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. Prior to and during construction b. Prior to issuance of notice to proceed c. At least 1 week prior to construction d. Prior to and during construction
Responsible Agency	*SDG&E's Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629), BLM (TL629, TL625, and TL6923), CSP (C79) *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)

[a] All compliance documentation and consultation records to be available for CPUC and Forest Service staff review upon request.

D.5.10 Residual Unavoidable Effects

Under NEPA, SDG&E's proposed project and alternatives would result in adverse but mitigated effects through implementation of mitigation measures presented in Section D.5.9, along with APMs provided in Section D.5.3.2. Similarly, Under CEQA, implementation of mitigation measures presented in Section D.5.9 would mitigate all cultural and paleontological resource impacts to less than significant. Therefore, no residual unavoidable effects would occur for SDG&E's proposed project or alternatives.

D.5.11 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

16 U.S.C. 431–433. American Antiquities Act of 1906, as amended.

16 U.S.C. 469–469c. Archaeological and Historic Preservation Act of 1974, as amended.

16 U.S.C. 470–470kk. National Historic Preservation Act of 1966 (NHPA), as amended.

16 U.S.C. 470aa–470mm. Archaeological Resources Protection Act of 1979, as amended.

25 U.S.C. 3001–3013. Native American Graves Protection and Repatriation Act (NAGPRA), as amended.

42 U.S.C. 4321–4370f. National Environmental Policy Act (NEPA) of 1969, as amended.

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D.6 GREENHOUSE GASES

This section addresses potential climate change impacts resulting from construction and operation of the proposed Power Line Replacement Projects along with the operation and maintenance activities proposed for authorization under the MSUP. Section D.6.1 provides a description of the existing setting/affected environment, and the applicable regulations are introduced in Section D.6.2. An analysis of the environmental effects of SDG&E's proposed project and impacts and discussion of mitigation are provided in Section D.6.3. The U.S. Forest Service (Forest Service) proposed action is described in Section D.6.4, and Section D.6.5 discusses the Bureau of Indian Affairs (BIA) proposed action. Additional alternatives are discussed in Section D.6.6. Section D.6.7 discusses the No Action Alternative and Section D.6.8 describes the No Project Alternative. Section D.6.9 provides mitigation monitoring, compliance, and reporting information; Section D.6.10 addresses residual effects of the project; and Section D.6.11 list the references cited in this section.

D.6.1 Environmental Setting/Affected Environment

This section provides a description of existing conditions, including a description of the greenhouse effect, effects of climate change globally and in California, and a summary of greenhouse gas (GHG) emissions in the United States and California.

Methodology and Assumptions

Baseline information reviewed for this section includes SDG&E's Plan of Development (POD) for the Cleveland National Forest (CNF) Power Line Replacement Projects (SDG&E 2013), . It should be noted that the existing electric facilities (power lines, access roads, and other facilities) to be covered under the proposed MSUP are routinely maintained and repaired. The GHG emissions associated with these past actions are part of the baseline for the analysis of SDG&E's proposed project and alternatives.

D.6.1.1 General Overview

The Greenhouse Gas Effect and Greenhouse Gases

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind, lasting for an extended period (decades or longer).

Gases that trap heat in the atmosphere are often called "greenhouse gases" (GHGs). The greenhouse effect traps heat in the troposphere through a threefold process as follows: Short-wave radiation emitted by the Sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of long-wave radiation; and GHGs in the upper atmosphere absorb this

long-wave radiation and emit it into space and toward the Earth. This "trapping" of the long-wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect. Principal GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), ozone (O_3), and water vapor (H_2O). Some GHGs, such as CO_2, CH_4, and N_2O, occur naturally and are emitted to the atmosphere through natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely byproducts of fossil fuel combustion, whereas CH_4 results mostly from off-gassing associated with agricultural practices and landfills. Man-made GHGs, which have a much greater heat-absorption potential than CO_2, include fluorinated gases, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3), which are associated with certain industrial products and processes (CAT 2006).

The greenhouse effect is a natural process that contributes to regulating the earth's temperature. Without it, the temperature of the Earth would be about 0°Fahrenheit (°F) (-18°Celsius (°C)) instead of its present 57°F (14°C). Global climate change concerns are focused on whether human activities are leading to an enhancement of the greenhouse effect (National Climatic Data Center 2009).

The effect each GHG has on climate change is measured as a combination of the mass of its emissions and the potential of a gas or aerosol to trap heat in the atmosphere, known as its "global warming potential" (GWP). GWP varies between GHGs; for example, the GWP of CH_4 is 21, and the GWP of N_2O is 310. Total GHG emissions are expressed as a function of how much warming would be caused by the same mass of CO_2. Thus, GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalent" (CO_2E).[1]

Contributions to Greenhouse Gas Emissions

In 2011, the United States produced 6,702 million metric tons (MMT) of CO_2E (EPA 2013a). The primary GHG emitted by human activities in the United States was CO_2, representing approximately 84% of total GHG emissions. The largest source of CO_2, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 94% of the CO_2 emissions.

[1] The CO_2 equivalent for a gas is derived by multiplying the mass of the gas by the associated GWP, such that $MTCO_2E$ = (metric tons of a GHG) x (GWP of the GHG). For example, the GWP for CH_4 is 21. This means that emissions of 1 metric ton of methane are equivalent to emissions of 21 metric tons of CO_2.

According to the 2010 GHG inventory data compiled by the California Air Resources Board (CARB) for the California Greenhouse Gas Inventory for 2000–2010, California emitted 452 MMT CO_2E of GHGs, including emissions resulting from out-of-state electrical generation (CARB 2013). The primary contributors to GHG emissions in California are transportation, electric power production from both in-state and out-of-state sources, industry, agriculture and forestry, and other sources, which include commercial and residential activities. These primary contributors to California's GHG emissions and their relative contributions in 2010 are presented in Table D.6-1, GHG Sources in California.

Table D.6-1
GHG Sources in California

Source Category	Annual GHG Emissions (MMT CO_2E)	% of Total
Agriculture	32.45	7.19%
Commercial and residential	43.89	9.72%
Electricity generation[a]	93.30	20.66%
Forestry (excluding sinks)	0.19	0.04%
Industrial uses	85.96	19.03%
Recycling and waste	6.98	1.55%
Transportation	173.18	38.35%
High-GWP substances	15.66	3.47%
Totals	**451.60**	**100.00%**

Source: CARB 2013.
Note:
[a] Includes emissions associated with imported electricity, which account for 43.59 MMT CO_2E annually.

The GHG inventory for San Diego County is discussed in Section D.6.2.3, County of San Diego Climate Action Plan.

Potential Effects of Human Activity on Climate Change

According to CARB, some of the potential impacts in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high O_3 days, more large forest fires, and more drought years (CARB 2006). Several recent studies have attempted to explore the possible negative consequences that climate change, left unchecked, could have in California. These reports acknowledge that climate scientists' understanding of the complex global climate system, and the interplay of the various internal and external factors that affect climate change, remains too limited to yield scientifically valid conclusions on such a localized scale. Substantial work has been done at the international and national level to evaluate climatic impacts, but far less information is available on regional and local impacts.

The primary effect of global climate change has been a rise in average global tropospheric temperature of 0.2°C per decade, determined from meteorological measurements worldwide between 1990 and 2005. Climate change modeling using 2000 emission rates shows that further warming would occur, which would induce further changes in the global climate system during the current century. Changes to the global climate system and ecosystems and to California would include, but would not be limited to:

- The loss of sea ice and mountain snowpack resulting in higher sea levels and higher sea surface evaporation rates with a corresponding increase in tropospheric water vapor due to the atmosphere's ability to hold more water vapor at higher temperatures (IPCC 2007)
- A rise in global average sea level primarily due to thermal expansion and melting of glaciers and ice caps and the Greenland and Antarctic ice sheets (IPCC 2007)
- Changes in weather that includes widespread changes in precipitation, ocean salinity, and wind patterns, and more energetic aspects of extreme weather including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones (IPCC 2007)
- A decline of Sierra snowpack, which accounts for approximately half of the surface water storage in California, by 70% to as much as 90% over the next 100 years (CAT 2006)
- An increase in the number of days conducive to O3 formation by 25% to 85% (depending on the future temperature scenario) in high O3 areas of Los Angeles and the San Joaquin Valley by the end of the 21st century (CAT 2006)
- High potential for erosion of California's coastlines and sea water intrusion into the Delta and levee systems due to the rise in sea level (CAT 2006).

D.6.2 Applicable Regulations, Plans, and Standards

D.6.2.1 Federal Regulations

Massachusetts v. EPA. On April 2, 2007, in *Massachusetts v. EPA*, the Supreme Court directed the U.S. Environmental Protection Agency (EPA) Administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the EPA Administrator is required to follow the language of Section 202(a) of the federal Clean Air Act. On December 7, 2009, the Administrator signed a final rule with two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- The Administrator found that elevated concentrations of GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the "endangerment finding."

- The Administrator further found the combined emissions of GHGs—CO_2, CH_4, N_2O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is referred to as the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

Energy Independence and Security Act. On December 19, 2007, President Bush signed the Energy Independence and Security Act of 2007. Among other key measures, the act would do the following, which would aid in the reduction of national GHG emissions:

1. Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) requiring fuel producers to use at least 36 billion gallons of biofuel in 2022
2. Set a target of 35 miles per gallon (mpg) for the combined fleet of cars and light trucks by model year 2020 and directs National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks
3. Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

EPA and NHTSA Joint Final Rule for Vehicle Standards. On April 1, 2010, the EPA and NHTSA announced a joint final rule to establish a national program consisting of new standards for light-duty vehicles model years 2012 through 2016. The joint rule is intended to reduce GHG emissions and improve fuel economy. The EPA is finalizing the first-ever national GHG emissions standards under the Clean Air Act, and NHTSA is finalizing Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act (EPA 2010). This final rule follows the EPA and Department of Transportation's joint proposal on September 15, 2009, and is the result of President Obama's May 2009 announcement of a national program to reduce GHGs and improve fuel economy (EPA 2013b). The final rule became effective on July 6, 2010 (EPA and NHTSA 2010).

The EPA GHG standards require new passenger cars, light-duty trucks, and medium-duty passenger vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile in model year 2016, equivalent to 35.5 mpg if the automotive industry were to meet this CO_2 level through fuel economy improvements alone. The CAFE standards for passenger cars and light trucks will be phased in between 2012 and 2016, with the final standards equivalent to

37.8 mpg for passenger cars and 28.8 mpg for light trucks, resulting in an estimated combined average of 34.1 mpg. Together, these standards will cut GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program. The rules will simultaneously reduce GHG emissions, improve energy security, increase fuel savings, and provide clarity and predictability for manufacturers (EPA 2011).

In 2011, the EPA and NHTSA approved the first-ever program to reduce GHG emissions and increase fuel efficiency for medium- and heavy-duty vehicles (EPA and NHTSA 2011). Effective November 14, 2011, the CO_2 emissions and fuel efficiency standards of this regulation apply to model year 2014 to 2018 combination tractors (i.e., semi-trucks), heavy-duty pickup trucks and vans, and vocational vehicles including transit and school buses. This regulation covers vehicles with a gross vehicle weight rating of 8,500 pounds or greater; medium-duty passenger vehicles are covered by the previous regulation for passenger cars and light-duty trucks. In addition, the EPA has adopted standards to control HFC leakage from air conditioning systems in combination tractors and heavy-duty pickup trucks and vans as well as CH_4 and N_2O standards for heavy-duty engines, pickup trucks, and vans. Phased in through model year 2017, the CO_2 and fuel consumption standards for combination trailers depend on the weight class, cab type, and roof length. The CO_2 standards are expressed in grams CO_2 per ton-mile, while the fuel consumption standards are expressed in gallons per 1,000 ton-miles, each accounting for the carrying capacity of the tractor and trailer. These standards represent an overall fuel consumption and CO_2 emissions reduction of up to 23% when compared to a baseline 2010 model year. The CO_2 and fuel consumption standards for heavy-duty pickup trucks and vans are applied as corporate average values and are phased in with increasing stringency from model year 2014 to 2018. The final EPA standards for heavy-duty pickup trucks and vans for 2018 (including a separate standard to control air conditioning system leakage) represent a GHG reduction of 17% for diesel vehicles and 12% for gasoline vehicles compared to a 2010 baseline. Due to the variety of vocational vehicles, many of which involve a body installed on a chassis, the CO_2 and fuel consumption standards are applied to the chassis manufacturers. Like the CO_2 and fuel consumption standards for combination tractors, the standards for vocational vehicles are expressed in grams CO_2 per ton-mile and gallons per 1,000 ton-miles, respectively. Upon final implementation, the EPA standards for vocational vehicles, which apply initially to model years from 2014 through 2016 and then to model year 2017 vehicles, are expected to reduce GHG emissions by 6% to 9% compared to a 2010 baseline.

In August 2012, the EPA and NHTSA approved a second round of GHG and CAFE standards for model years 2017 and beyond (EPA and NHTSA 2012). These standards will reduce motor vehicle GHG emissions to 163 grams of CO_2 per mile, which is equivalent to 54.5 mpg if this level were achieved solely through improvements in fuel efficiency, for cars and light-duty trucks by model year 2025. A portion of these improvements, however, will likely be made through improvements in air conditioning leakage and through use of alternative refrigerants,

which would not contribute to fuel economy. The first phase of the CAFE standards, for model year 2017 to 2021, are projected to require, on an average industry fleet-wide basis, a range from 40.3 to 41.0 mpg in model year 2021. The second phase of the CAFE program, for model years 2022 to 2025, are projected to require, on an average industry fleet-wide basis, a range from 48.7 to 49.7 mpg in model year 2025. The second phase of standards have not been finalized due to the statutory requirement that NHTSA set average fuel economy standards not more than five model years at a time. The regulations also include targeted incentives to encourage early adoption and introduction into the marketplace of advanced technologies to dramatically improve vehicle performance, including:

- Incentives for electric vehicles, plug-in hybrid electric vehicles, and fuel cells vehicles
- Incentives for hybrid technologies for large pickups and for other technologies that achieve high fuel economy levels on large pickups
- Incentives for natural gas vehicles.

Credits for technologies with potential to achieve real-world GHG reductions and fuel economy improvements that are not captured by the standards test procedures.

D.6.2.2 State Laws and Regulations

Assembly Bill (AB) 1493. In a response to the transportation sector accounting for more than half of California's CO_2 emissions, AB 1493 (Pavley) was enacted on July 22, 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles whose primary use is noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. When fully phased in, the near-term (2009–2012) standards will result in a reduction of about 22% in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term (2013–2016) standards will result in a reduction of about 30%.

Before these regulations could go into effect, the EPA had to grant California a waiver under the federal Clean Air Act, which ordinarily preempts state regulation of motor vehicle emission standards. The waiver was granted by Lisa Jackson, the EPA Administrator, on June 30, 2009. On March 29, 2010, the CARB Executive Officer approved revisions to the motor vehicle GHG standards to harmonize the state program with the national program for 2012–2016 model years (see "EPA and NHTSA Joint Final Rule for Vehicle Standards" above). The revised regulations became effective on April 1, 2010.

Executive Order S-3-05. In June 2005, Governor Schwarzenegger established California's GHG emissions reduction targets in Executive Order S-3-05. The Executive Order established the following goals: GHG emissions should be reduced to 2000 levels by 2010; GHG emissions should be reduced to 1990 levels by 2020; and GHG emissions should be reduced to 80% below 1990 levels by 2050. The California Environmental Protection Agency (CalEPA) Secretary is required to coordinate efforts of various agencies to collectively and efficiently reduce GHGs. The Climate Action Team is responsible for implementing global warming emissions reduction programs. Representatives from several state agencies comprise the Climate Action Team. The Climate Action Team fulfilled its report requirements through the March 2006 Climate Action Team Report to the governor and the legislature (CAT 2006). The 2009 *Climate Action Team Biennial Report* (CAT 2010a), published in April 2010, expands on the policy outlined in the 2006 assessment. The 2009 report provides new information and scientific findings regarding the development of new climate and sea level projections using new information and tools that have recently become available and evaluates climate change within the context of broader social changes, such as land use changes and demographics. The 2009 report also identifies the need for additional research in several different aspects that affect climate change in order to support effective climate change strategies. The aspects of climate change determined to require future research include vehicle and fuel technologies, land use and smart growth, electricity and natural gas, energy efficiency, renewable energy and reduced carbon energy sources, low GHG technologies for other sectors, carbon sequestration, terrestrial sequestration, geologic sequestration, economic impacts and considerations, social science, and environmental justice.

Subsequently, the 2010 *Climate Action Team Report to Governor Schwarzenegger and the California Legislature* (CAT 2010b) reviews past Climate Action Milestones, including voluntary reporting programs, GHG standards for passenger vehicles, the Low Carbon Fuel Standard (LCFS), a statewide renewable energy standard, and the cap-and-trade program. Additionally, the 2010 report includes a cataloguing of recent research and ongoing projects; mitigation and adaptation strategies identified by sector (e.g., agriculture, biodiversity, electricity and natural gas); actions that can be taken at the regional, national, and international levels to mitigate the adverse effects of climate change; and today's outlook on future conditions. The 2010 report also focuses on case studies involving collaborative efforts among multiple agencies on research projects related to climate change and policy development.

AB 32. In furtherance of the goals established in Executive Order S-3-05, the legislature enacted AB 32 (Núñez and Pavley), the California Global Warming Solutions Act of 2006, which Governor Schwarzenegger signed on September 27, 2006. The GHG emissions limit is equivalent to the 1990 levels, which are to be achieved by 2020.

CARB has been assigned to carry out and develop the programs and requirements necessary to achieve the goals of AB 32. Under AB 32, CARB must adopt regulations requiring the reporting and verification of statewide GHG emissions. This program will be used to monitor and enforce compliance with the established standards. CARB is also required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 allows CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted.

The first action under AB 32 resulted in the adoption of a report listing early-action GHG emissions reduction measures on June 21, 2007. The early actions include three specific GHG control rules. On October 25, 2007, CARB approved an additional six early-action GHG reduction measures under AB 32. The three original early-action regulations meeting the narrow legal definition of "discrete early action GHG reduction measures" include:

1. A low carbon fuel standard to reduce the "carbon intensity" of California fuels
2. Reduction of refrigerant losses from motor vehicle air conditioning system maintenance to restrict the sale of "do-it-yourself" automotive refrigerants
3. Increased methane capture from landfills to require broader use of state-of-the-art methane capture technologies.

The additional six early-action regulations, which were also considered "discrete early-action GHG reduction measures," consist of:

1. Reduction of aerodynamic drag, and thereby fuel consumption, from existing trucks and trailers through retrofit technology
2. Reduction of auxiliary engine emissions of docked ships by requiring port electrification
3. Reduction of PFCs from the semiconductor industry
4. Reduction of propellants in consumer products (e.g., aerosols, tire inflators, and dust removal products)
5. Requirements that all tune-up, smog check, and oil change mechanics ensure proper tire inflation as part of overall service in order to maintain fuel efficiency
6. Restriction on the use of SF_6 from non-electricity sectors if viable alternatives are available.

As required under AB 32, on December 6, 2007, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was set at

427 MMT CO_2E. In addition to the 1990 emissions inventory, CARB also adopted regulations requiring mandatory reporting of GHGs for large facilities that account for 94% of GHG emissions from industrial and commercial stationary sources in California. About 800 separate sources fall under the new reporting rules and include electricity generating facilities, electricity retail providers and power marketers, oil refineries, hydrogen plants, cement plants, cogeneration facilities, and other industrial sources that emit CO_2 in excess of specified thresholds.

On December 11, 2008, CARB approved the Climate Change Proposed Scoping Plan: A Framework for Change (Scoping Plan; CARB 2008) to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction measures by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program.

The key elements of the Scoping Plan include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards
- Achieving a statewide renewables energy mix of 33%
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California's GHG emissions
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets
- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

SB 1368. In September 2006, Governor Schwarzenegger signed SB 1368, which requires the California Energy Commission (CEC) to develop and adopt regulations for GHG emissions performance standards for the long-term procurement of electricity by local publicly owned utilities. These standards must be consistent with the standards adopted by the CPUC. This effort will help protect energy customers from financial risks associated with investments in carbon-intensive generation by allowing new capital investments in power plants whose GHG emissions

are as low or lower than new combined-cycle natural gas plants, by requiring imported electricity to meet GHG performance standards in California, and by requiring that the standards be developed and adopted in a public process.

SB X1 2. On April 12, 2011, Governor Jerry Brown signed SB X1 2 in the First Extraordinary Session, which would expand the Renewable Portfolio Standard (RPS) by establishing a goal of 20% of the total electricity sold to retail customers in California per year, by December 31, 2013, and 33% by December 31, 2020, and in subsequent years. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current and that meets other specified requirements with respect to its location. In addition to the retail sellers covered by SB 107, SB X1 2 adds local publicly owned electric utilities to the RPS. By January 1, 2012, the CPUC is required to establish the quantity of electricity products from eligible renewable energy resources to be procured by retail sellers in order to achieve targets of 20% by December 31, 2013; 25% by December 31, 2016; and 33% by December 31, 2020. The statute also requires that the governing boards for local publicly owned electric utilities establish the same targets, and the governing boards would be responsible for ensuring compliance with these targets. The CPUC will be responsible for enforcement of the RPS for retail sellers, while the CEC and CARB will enforce the requirements for local publicly owned electric utilities.

D.6.2.3 Regional Policies, Plans, and Regulations

County of San Diego Climate Action Plan

The County of San Diego Climate Action Plan (CAP), adopted June 2012, documents the County's long-term strategy for addressing the adverse effects of climate change (County of San Diego 2012). The CAP outlines various mechanisms and measures for reducing GHG emissions at the County level, including those specific to water conservation, waste reduction, land use, and adaptation strategies to fulfill the obligations delineated in AB 32. The CAP includes County goals previously established under the County General Plan and County Strategic Energy Plan, and establishes reduction targets at 15% below 2005 levels by 2020 and 49% below 2005 levels by 2035. The CAP builds on long-standing efforts, including state initiatives, County staff recommendations, and regional planning strategies to enhance environmental sustainability and carbon neutrality, particularly unincorporated segments of the County. As shown in Table D.6-2, GHG Sources in San Diego County, sources in unincorporated San Diego County emitted an estimated 4.51 MMT CO_2E of GHGs in 2005. Similar to the statewide emissions inventory, the transportation sector was the largest contributor to GHG emissions in 2005 accounting for approximately 59% of total GHG emissions (more than 2.6 MMT CO_2E). Emission sources and emission estimates by sector are shown in Table D.6-2.

Table D.6-2
GHG Sources in San Diego County

Source Category	Annual GHG Emissions (MMT CO_2E)	% of Total
Transportation	2.64	59%
Agriculture	0.19	4%
Solid Waste	0.14	3%
Wastewater	0.05	1%
Potable Water	0.24	5%
Other	0.13	3%
Energy	1.12	25%
Totals	**4.51**	**100.00%**

Source: County of San Diego 2012.

D.6.3 Environmental Effects

D.6.3.1 Definition and Use of CEQA Significance Criteria/Indicators under NEPA

There are no adopted guidelines for determining the significance of GHG emissions under NEPA. Further, neither the State of California nor the San Diego Air Pollution Control District (SDAPCD) has established CEQA significance thresholds for GHG emissions. The following significance thresholds are based on the CEQA Checklist included in Appendix G of the CEQA Guidelines. The CEQA criteria and guidelines are used as indicators of adverse effect under NEPA. Under CEQA, GHG impacts would be considered significant if the project would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

The Governor's Office of Planning and Research (OPR) advises, "Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact" (OPR 2008). Furthermore, the OPR advisory indicates, "In the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice" (OPR 2008).

The South Coast Air Quality Management District (SCAQMD) adopted an interim significance threshold of 10,000 metric tons (MT) CO_2E per year for industrial projects in December 2008.

The SCAQMD threshold was adopted after rigorous public vetting. The same threshold value as that adopted by the SCAQMD is also reflected as the "stationary source" threshold in the County of San Diego CAP adopted June 2012 (County of San Diego 2012).[2] Subsequently, the County of San Diego, Land Use & Environment Group finalized California Environmental Quality Act (CEQA) Guidelines for Determining Significance (Guidelines) and Report Format and Content Requirements (Report Formats) for Climate Change, effective November 9, 2013. These guidelines include a threshold of 10,000 MT CO2E per year for stationary sources (e.g., industrial facilities); however, it is intended to apply primarily to the operational GHG emissions from industrial facilities that include stationary sources, such as boilers, stationary engines, and power generation facilities. Accordingly, this threshold would not be appropriate for evaluating the project's GHG emissions, which are primarily associated with construction. In the absence of a specific GHG threshold that would apply to SDG&E's proposed project the CPUC will apply the significance threshold of 10,000 MT CO_2E/year, including all construction and operational emissions, to assess the impacts of the significance of the proposed project's GHG emissions with respect to CEQA. In the absence of a rulemaking to establish a GHG emission threshold of significance to be applied uniformly throughout the state, the CPUC is assessing the impacts of GHG emissions on a case-by-case basis. In areas of the state in which the local air pollution control district (APCD) or air quality management district (AQMD) has not adopted a threshold of significance, the CPUC will apply a threshold that has been adopted by CARB or another APCD or AQMD. In this instance, the CPUC is using the SCAQMD threshold because neither CARB nor the SDAPCD has yet to adopt a threshold.

D.6.3.2 Applicant Proposed Measures

No applicant proposed measures (APMs) have been identified for SDG&E's proposed project related to GHGs.

D.6.3.3 Direct and Indirect Effects

Impact GHG-1: Result in a net increase of construction greenhouse gas emissions

[2] The County of San Diego CAP was approved and adopted on June 20, 2012; however, on April 29, 2013, the Superior Court deemed the CAP inadequate and ruled the document was improperly adopted. The updated *County of San Diego Guidelines for Determining Significance – Climate Change*, which serves as the supporting documentation for the implementation of the CAP, have been approved, effective November 7, 2013. As such, thresholds and measures described in the CAP as applicable to the project analysis are provided for informational purposes only.

GHG emissions associated with the construction phase of SDG&E's proposed project would occur as a result of burning the fuel required to operate the on-site construction equipment, mobilize work crews to and from the alignment sites, and deliver steel poles and other materials. The years 2013, 2014, 2015, 2016, and 2017 were analyzed for the purpose of construction emissions (SDG&E 2012a).

APM-AIR-01, reduced idling time for construction equipment, would reduce construction-related GHG emissions. This reduction has been accounted for in Table D.6-3.

Table D.6-3 shows the estimated construction-related GHG emissions associated with SDG&E's proposed project.

Table D.6-3
Total Estimated Construction Greenhouse Gas Emissions of SDG&E's Proposed Project

Pollutant	Annual Emissions					Total
	2013	*2014*	*2015*	*2016*	*2017*	
Unmitigated CO_2 Equivalent (CO_2E)	4,924	9,017	8,116	4,604	1,322	**27,984**
Reduction from APM-AIR-01	492	902	812	460	132	**2,798**
Mitigated CO_2E	4,432	8,116	7,305	4,143	1,189	**25,186**

Source: SDG&E 2012a.

As discussed previously, the threshold of 10,000 MT CO_2E/year is being used to assess the impact of the project's GHG emissions. The highest total proposed action's construction emissions in any one year would equal approximately 9,017 MT CO_2E/year (unmitigated) or 8,116 MT CO_2E/year following implementation of APM-AIR-01. The maximum annual construction-related GHG emissions would be below the GHG threshold of 10,000 MT CO_2/year. Therefore, the impact of the project's GHG emissions during construction would not be considered adverse under NEPA and would be less than significant (Class III) under CEQA.

Impact GHG-2: Result in a net increase of operational greenhouse gas emissions

Operations and maintenance of SDG&E's proposed project including all SDG&E facilities proposed to be covered under the MSUP would require routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks, similar to those currently administered by SDG&E. These activities would not increase in duration, intensity, or frequency with implementation of SDG&E's proposed project compared to existing conditions due to fewer poles required for the proposed alignments and increased reliability in the transmission facilities, which would necessitate fewer maintenance hours by SDG&E staff. GHG emissions resulting from operation and maintenance would not exceed the

significance thresholds; therefore, they would not be considered adverse under NEPA, and would be less than significant under CEQA (Class III).

Impact GHG-3: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases

As discussed in Section D.6.2, the Scoping Plan approved by CARB on December 12, 2008, provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. As such, the Scoping Plan is not directly applicable to specific projects. Moreover, the Final Statement of Reasons for the amendments to the CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that "[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009). Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., LCFS), among others. While state regulatory measures will ultimately reduce GHG emissions associated with the project through their effect on these sources, no statewide plan, policy, or regulation would be specifically applicable to reductions in GHG emissions from the project.

As discussed in Section D.6.2, the County has adopted a CAP (County of San Diego 2012). As part of the CAP, the County developed construction screening criteria for projects that involve GHG emissions produced only as a result of construction. Construction-only projects that meet the construction screening criteria do not need to implement a CAP measure (County of San Diego 2012). As indicated in Impacts GHG-2 and GHG-3, the project would not increase operational GHG emissions relative to existing conditions, but it would result in construction-related GHG emissions. The construction screening criteria applicable to the project include the following:

- Grading and clearing of land involving no more than 1,285 acres of land per year with no soil hauling and no other aspect of construction or site preparation.
- Grading and clearing of land involving no more than 100 acres per year, assuming up to 3,100 cubic yards per day of soil hauling.
- Based on an average truck size of 20 cubic yards and an average hauling distance of 30 miles round trip, a project that would haul less than 3,300 cubic yards per day, not including emissions from any other activities, including off-road construction equipment.

- Construction project that would use a total horsepower in all equipment of no more than 1,984 per day, not including any soil hauling; or a construction project that includes up to 3,100 cubic yards of soil hauling per day and has a total equipment horsepower of no more than 742 per day. These daily horsepower limits are based on a project that would take approximately one year and would involve 262 working days in this year. Projects with a shorter duration may increase these horsepower limits proportionally (County of San Diego 2013).

SDG&E's proposed project would not involve construction activities that would meet any four of the screening criteria described in the CAP. Because the project would not involve construction activities that would meet or exceed the CAP screening criteria, impacts would not be considered adverse under NEPA, and would be less than significant under CEQA (Class III).

D.6.4 Forest Service Proposed Actions

Environmental Setting/Affected Environment

Sections D.6.1 and D.6.2 describe the existing climate change setting associated with SDG&E's proposed project which applies to each of the Forest Service proposed action alternatives.

D.6.4.1 TL626 Alternative Routes

Options 1 and 2 SDG&E Proposed Overhead Alignments Through/Around Inaja and Cosmit Reservation Lands

Option 4 Overhead Relocation along Boulder Creek Road

Option 5 Reroute and Undergrounding around Inaja Picnic Area

Environmental Effects

Impacts GHG-1 and GHG-2: Construction activities would temporarily increase GHG emissions due to the increased heavy equipment and helicopter use and greater disturbance area required to relocate TL626 compared to reconstruction in place as proposed**.** Operational emissions would be the same as those discussed for the project in Section D.6.3.3. Similar to SDG&E's proposed project, GHG emissions from construction (amortized over 30 years), plus those from operations and maintenance activities, would not be adverse under NEPA and under CEQA are expected to result in a less-than-significant impact (Class III).

Impact GHG-3: Impact GHG-3 would reflect impact findings previously discussed in Section D.6.3.3 for SDG&E's proposed project. This alternative would not involve construction

activities that would meet any of the four screening criteria described in the CAP (see Section D.6.3.3). Because the project would not involve construction activities that would meet or exceed the CAP screening criteria, impacts would not be considered adverse under NEPA, and would be less than significant under CEQA (Class III).

Option 3 Partial Underground Relocation in Boulder Creek Road

Environmental Effects

Impacts GHG-1 and GHG-2: Impacts GHG-1 and GHG-2 would reflect impact findings previously discussed in Section D.6.3.3 for SDG&E's proposed project. Construction activities would differ from SDG&E's proposed project, as open trenching operations would be required to underground a portion of TL626 in Boulder Creek Road, as opposed to reconstruction of the line overhead in place as proposed. This additional trenching activity would increase construction-generated GHG emissions when compared to SDG&E's proposed project. Operational emissions would be the same as those discussed for the project in Section D.6.3.3. **S**imilar to SDG&E's proposed project, GHG emissions from construction (amortized over 30 years), plus those from operations and maintenance activities, would not be adverse under NEPA and under CEQA are expected to result in a less-than-significant impact (Class III).

Impact GHG-3: Although additional trenching activity and soil disturbance under this alternative would slightly increase construction-generated GHG emissions when compared to SDG&E's proposed project, this alternative would not involve construction activities that would meet any of the four screening criteria described in the CAP (see Section D.6.3.3). Because the project would not involve construction activities that would meet or exceed the CAP screening criteria, impacts would not be considered adverse under NEPA, and would be less than significant under CEQA (Class III).

D.6.4.2 C157 Partial Relocation to Avoid Designated Wilderness

Environmental Effects

Option 1 SDG&E Proposed Alignment between Two Wilderness Areas

Option 2 City of San Diego Modified Alignment

Impacts GHG-1 and GHG-2: Impacts would reflect impact findings previously discussed in Section D.6.3.3 for SDG&E's proposed project. As such, construction activities, worker crews, construction schedule, and operational activities would essentially be the same as the proposed replacement of C157 as well as the project as a whole. Identified impacts would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

Impact GHG-3: Impact GHG-3 would reflect impact findings previously discussed in Section D.6.3.3 for SDG&E's proposed project. This alternative would not involve construction activities that would meet any of the four screening criteria described in the CAP (see Section D.6.3.3). Because the project would not involve construction activities that would meet or exceed the CAP screening criteria, impacts would not be considered adverse, and would be less than significant under CEQA (Class III).

D.6.4.3 C440 Mount Laguna Underground Alternative

Environmental Effects

Impacts GHG-1 and GHG-2: Impacts GHG-1 and GHG-2 would reflect impact findings previously discussed in Section D.6.3.3 for SDG&E's proposed project. Construction activities would differ from SDG&E's proposed project, as open trenching operations would be required to underground C440 in paved roadways, as opposed to reconstruction of C440 in place as proposed. This additional trenching activity and associated emissions would increase construction-generated GHG emissions when compared to SDG&E's proposed project. Operational emissions would be the same as those discussed for the project in Section D.6.3.3. Similar to SDG&E's proposed project, GHG emissions from construction (amortized over 30 years), plus those from operations and maintenance activities, would not be adverse under NEPA and under CEQA are expected to result in a less-than-significant impact (Class III).

Impact GHG-3: Although additional trenching activity under this alternative would slightly increase construction-generated GHG emissions when compared to SDG&E's proposed project, this alternative would not involve construction activities that would meet any four of the screening criteria described in the CAP (see Section D.6.3.3). Because the project would not involve construction activities that would meet or exceed the CAP screening criteria, impacts would not be considered adverse under NEPA and would be less than significant under CEQA (Class III).

D.6.5 BIA Proposed Action

Environmental Effects

Impacts GHG-1 and GHG-2: Impacts GHG-1 and GHG-2 would reflect impact findings previously discussed in Section D.6.3.3 for SDG&E's proposed project. Construction activities would differ marginally from SDG&E's proposed project, as open trenching operations would be required to underground a portion of TL682 on Tribal lands, as opposed to constructing the line overhead on transmission line poles. This additional trenching activity would increase construction-generated GHG emissions when compared to SDG&E's proposed project, resulting

primarily from trenching equipment emissions. Operational emissions would be the same as those discussed for the project in Section D.6.3.3. Similar to SDG&E's proposed project, GHG emissions from construction (amortized over 30 years), plus those from operations and maintenance activities, would not be adverse under NEPA and under CEQA are expected to result in a less-than-significant impact (Class III).

Impact GHG-3: Although additional trenching activity and soil disturbance under this alternative would slightly increase construction-generated GHG emissions when compared to SDG&E's proposed project, this alternative would not involve construction activities that would meet any of the four screening criteria described in the CAP (see Section D.6.3.3). Because the project would not involve construction activities that would meet or exceed the CAP screening criteria, impacts would not be considered adverse under NEPA, and would be less than significant under CEQA (Class III).

D.6.6 Additional Alternatives

Environmental Setting/Affected Environment

Sections D.6.1 and D.6.2 describe the existing setting for climate change associated with SDG&E's proposed project which applies to the following additional alternatives.

D.6.6.1 Partial Removal of Overland Access Roads

Environmental Effects

Impacts GHG-1 and GHG-2: Impacts would reflect similar impact findings previously discussed in Section D.6.3.3 for SDG&E's proposed project. Although removal of segments of access roads as proposed under this alternative could marginally increase the use of helicopters for overhead power line installation and maintenance, this alternative would be similar in construction activities, worker crews, construction schedule, and operational activities as SDG&E's proposed project and the project as a whole. Similar to SDG&E's proposed project, GHG emissions from construction (amortized over 30 years), plus those from operations and maintenance activities, would not be adverse under NEPA and under CEQA are expected to result in a less-than-significant impact (Class III).

Impact GHG-3: Impact GHG-3 would reflect impact findings previously discussed in Section D.6.3.3 for SDG&E's proposed project. This alternative would not involve construction activities that would meet any of the four screening criteria described in the CAP (see Section D.6.3.3). Because the project would not involve construction activities that would meet or exceed the CAP screening criteria, impacts would not be considered adverse under NEPA and would be less than significant under CEQA (Class III).

D.6.6.2 Removal of TL626 from Service

Environmental Effects

Impacts GHG-1 and GHG-2: Impacts would reflect similar impact findings previously discussed in Section D.6.3.3 for SDG&E's proposed project as removed facilities would be replaced with facilities requiring a similar disturbance footprint within existing electric utility ROWs. Therefore, this alternative would be similar in construction activities, worker crews, construction schedule, and operational activities as SDG&E's proposed project (SDG&E 2012b, 2014). Similar to SDG&E's proposed project, GHG emissions from construction (amortized over 30 years), plus those from operations and maintenance activities, would not be adverse under NEPA and under CEQA are expected to result in a less-than-significant impact (Class III).

Impact GHG-3: Impact GHG-3 would reflect impact findings previously discussed in Section D.6.3.3 for SDG&E's proposed project. This alternative would not involve construction activities that would meet any four of the screening criteria described in the CAP (see Section D.6.3.3). Because the project would not involve construction activities that would meet or exceed the CAP screening criteria, impacts would not be considered adverse under NEPA and would be less than significant under CEQA (Class III).

D.6.7 No Action Alternative

Environmental Effects

Impact GHG-1 through GHG-3: Under the No Action Alternative, the MSUP would not be issued, and SDG&E would be required to remove the existing electric lines and facilities on CNF-managed lands as well as develop additional transmission upgrades elsewhere as described in Section C.1.3 of this EIR/EIS. While none of the facilities associated with SDG&E's proposed project would be constructed, removal of the electric lines and restoration activities within the CNF along with the development of additional transmission lines in conformance with the California ISO requirements and/or alternatives means of delivering electrical service elsewhere would result in similar construction GHG emissions as described in Section D.6.3.3, and therefore, overall impacts to climate change would not be reduced.

D.6.8 No Project Alternative

Environmental Effects

Impacts GHG-1 through GHG-3: Under the No Project Alternative, SDG&E's proposed power line replacement projects would not be built, and the existing SDG&E electric facilities would remain; therefore, none of the climate change impacts described in Section D.6.3 would

occur. Operations and maintenance of SDG&E electrical facilities would continue and include routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks and would be based on the requirements of the existing permits. These activities would not increase in duration, intensity, or frequency over existing conditions, and therefore no climate change impacts over existing conditions would occur.

D.6.9 Mitigation Monitoring, Compliance, and Reporting

As described in Sections D.6.3 and D.6.4, no significant climate change impacts were identified; therefore, mitigation measures are not necessary. Accordingly, no mitigation monitoring, compliance, or reporting is necessary for impacts to climate change.

D.6.10 Residual Unavoidable Effects

Since no adverse or significant impacts were identified in Section D.6.3.3 related to climate change, no residual impacts would occur for SDG&E's proposed project or alternatives.

D.6.11 References

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D.7 Public Health and Safety

This section addresses potential public health and safety impacts resulting from construction and operation of the proposed power line replacement projects along with the operations and maintenance activities proposed for authorization under the MSUP. Section D.7.1 provides a description of the existing public health setting/affected environment, and the applicable public health laws and regulations are introduced in Section D.7.2. An analysis of impacts/ environmental effects SDG&E's proposed project and discussion of mitigation are provided in Section D.7.3. The U.S. Forest Service (Forest Service) proposed action is described in Section D.7.4, and Section D.7.5 describes the Bureau of Indian Affairs (BIA) proposed action. Additional alternatives are discussed in Section D.7.6. Section D.~~5~~7.7 discusses the No Action Alternative and Section D.7.8 describes the No Project Alternative. Section D.7.9 provides mitigation monitoring, compliance, and reporting information. Section D.7.10 addresses residual effects of the project, and Section D.7.11 lists the references cited in this section. See Section D.8, Fire and Fuels Management, for a discussion of safety issues related to fire hazards and Section D.15 for a discussion on electromagnetic fields (EMFs).

D.7.1 Environmental Setting/Affected Environment

Methodology and Assumptions

This section identifies known hazardous waste contamination sites within the project alignment as well as other public health and safety-related concerns associated with power lines. Potentially hazardous sites are identified in order to protect worker health and safety and to eliminate or minimize public exposure to hazardous materials during construction and waste-handling activities. Contaminated soil may qualify as hazardous waste, and thus requires handling and disposal according to local, state, and federal regulations.

Information about known hazardous material sites was collected from a review of the *Report on ASTM Phase I Environmental Site Assessment Cleveland National Forest Electric Safety and Reliability Project San Diego County, California* prepared by Haley & Aldrich Inc., San Diego, California, for Insignia Environmental, Palo Alto, California, July 25, 2012 (included in SDG&E Response to Data Request 1, SDG&E 2012a). The Phase I Environmental Site Assessment (ESA) was completed in substantial conformance with the ASTM E 1527-05 Standard. Access to a portion of C442 south of Interstate 8 (I-8) was not provided. However, information was obtained from SDG&E that indicates that this portion of the project alignment has remained as undeveloped ranch land and that no hazardous material releases have occurred along this portion of the alignment.

D.7.1.1 General Overview

Hazardous Materials

Research conducted per the Phase I ESA indicates that one known recognized environmental condition exists along the project alignment as described below. The ASTM E 1527-05 Standard defines a recognized environmental condition 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."

Impacted Groundwater from the Adjacent Pine Valley Trailer Park

A release of gasoline to soil and groundwater from two underground storage tanks occurred at the Pine Valley Trailer Park, located at 27521 and 27541 Old Highway 80, Guatay, CA. Groundwater was reportedly encountered between 15 and 20 feet below ground surface at this site. Maximum concentrations in groundwater beneath this site during March 2010 are as follows: total petroleum hydrocarbons (TPH) gasoline = 9,500 micrograms per liter (ug/L), TPH diesel = 19,000 ug/L, benzene = 390 ug/L, toluene = 410 ug/L, ethylbenzene = 460 ug/L, xylenes = 1,790 ug/L. High-vacuum dual-phase extraction remediation was conducted at the site between 2004 and 2007, which removed over 10,000 pounds of petroleum hydrocarbons from the site. Based on the existing groundwater data, it appears the concentrations of TPH, benzene, ethylbenzene, toluene, and xylenes are present beneath Old Highway 80 and therefore beneath the proposed project area (between poles Z173105 and Z173109). Records reviewed at DEH indicated that approximately 36 cubic yards of petroleum impacted soil remains south of the former fuel dispenser (Haley & Aldrich 2012, included in SDG&E 2012a).

The location of the Pine Valley Trailer Park is shown on Figure D.7-1 just north of TL629.

Evidence of polychlorinated biphenyls (PCBs) associated with electrical or hydraulic equipment was not observed along the project alignment during the Phase I site reconnaissance. Additionally, SDG&E staff indicated that existing transformers along the distribution lines do not contain PCBs (Haley & Aldrich 2012, as cited in SDG&E 2012a).

Schools

A release of a hazardous material may be considered significant under CEQA if it occurs within a quarter mile of a school. There are six schools located within a quarter mile of the project alignment, as shown on Figure D.7-1:

1. Descanso Elementary, located at 24842 Viejas Boulevard, Descanso, California
2. Pine Valley Elementary, located at 7454 Pine Boulevard, Pine Valley, California
3. Mountain Empire High School, located at 3305 Buckman Springs Road, Pine Valley, California
4. Cottonwood Community Day School, located at 3291 Buckman Springs Road, Pine Valley, California
5. Denver C. Fox Outdoor Education School, 24102 Highway 76, Santa Ysabel, California
6. Camp Barrett, located up Sky Valley Road, with a mailing address of 21077 Lyons Valley Road, Alpine, California.

Airports and Airstrips

Hazards associated with airports can have serious human safety and quality of life impacts. Aviation facilities provide a variety of aviation services to local residents, including civil aviation, government use, business flights, charter flights, flight schools, and helicopter operations. Airport Land Use Compatibility Plans (ALUCPs) are plans that guide property owners and local jurisdictions in determining what types of proposed new land uses are appropriate around airports. Airport safety zones are established for all public airports as part of ALUCPs, and land-use restrictions within safety zones are established to protect people and property on the ground and in the air. Main areas of concern related to airport hazards include over-flight safety, airspace protection, flight patterns, and land-use compatibility.

There are four private airports and four public airports or airstrips within a 15-mile radius of project alignment, as shown on Figure D.7-1.

Reider Ranch Airport, located approximately 0.75 mile south of TL6923 in Potrero, is the closest airport to SDG&E's proposed project. Reider Ranch Airport is privately owned, houses two single engine airplanes, and contains one runway approximately 2,000 feet long (FAA 2014a). The second nearest airport is the On the Rocks Airport, located approximately 1 mile from TL625 in Alpine. This airport is privately owned and houses one single-engine aircraft. The runway is approximately 2,340 feet long and is composed of gravel (FAA 2014b). The Flying T Ranch Airport is a privately owned airport located approximately 5.25 miles west of TL262. The airport is unattended, and no airplanes are currently based there (FAA 2014c). The Rancho

Vallecito Airport is a privately owned airport located on County Highway S2 in Julian, approximately 5.5 miles north of C440. There is one single-engine plane based at this airport (FAA 2014d).

The Agua Caliente Airport is a public airstrip located within Aqua Caliente Springs County Park, north of I-8, on County highway S2, approximately 8.7 miles northeast of C440, the nearest section of the project alignment. In 2012, 4,400 operations occurred at the Agua Caliente Airport. No aircraft are based at the Agua Caliente Airport (County of San Diego 2013a).

Gillespie Field is a public airport located just southwest of the intersection of highways 52 and 67 in El Cajon, approximately 10.6 miles from the nearest section of the project alignment. In 2012, there were 184,512 operations and 689 aircraft based at Gillespie Field (County of San Diego 2013b).

The Jacumba Airport is a public airport located approximately 1 mile east of Jacumba, approximately 12.44 miles from the nearest section of the project alignment. The airport is unattended and unlighted and is mainly used as a glider facility by single-engine aircraft and sailplanes, with activity predominately occurring during weekends in non-summer months. In 2012, 1,826 operations occurred at the Jacumba Airport. Nine aircraft are based at the Jacumba Airport (County of San Diego 2013c).

The Ramona Airport is a public airport that is located approximately 2 miles west of Ramona on Montecito Road, and approximately 14.35 miles from the nearest section of the project alignment. In 2012, there were 114,582 operations and 173 aircraft based at the Ramona Airport (County of San Diego 2013d).

SDG&E Electrical Facilities

Beside fire hazards which are addressed in Section D.8 of this EIR/EIS, other safety hazards associated with SDG&E's existing electric facilities within the study area include possible electrocution and direct physical harm resulting from failure of facilities in the event of an accident, high winds, a ground-shaking event, lightning strike, or other human interaction. While failures of transmission line support structures are extremely rare and are typically the result of anomalous loading conditions, such as tornadoes or ice storms, the existing wood poles are susceptible to fire damage, woodpecker damage, termite damage, and deterioration due to weather conditions. Existing wood poles are natural products with inherent variability in the material strength properties, and are intended to handle winds up to 56 mph (SDG&E 2014). As discussed in Section D.8.1.1, during Santa Ana conditions winds in the project area can be sustained at 40 miles per hour (mph) for hours, with gusts from 70 to 115 mph (Schroeder et al. 1964).

D.7.2 Applicable Regulations, Plans, and Standards

The regulations below are relevant to the topics of hazardous substances, site contamination, and potential emergencies on the site.

D.7.2.1 Federal Regulations

Hazardous Materials

Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984

The Resource Conservation and Recovery Act (RCRA), or Solid Waste Disposal Act (42 U.S.C. 6901 et seq.), established a framework for the proper management of hazardous and non-hazardous solid waste. This act, along with the Toxic Substances Control Act, enacted a program administered by the U.S. Environmental Protection Agency (EPA) for regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the "cradle-to-grave" system of regulating hazardous wastes from their creation to disposal. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by the Hazardous and Solid Waste Act. RCRA focuses on active and future facilities; it does not address abandoned or historical sites, which are managed under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 U.S.C. 9601 et seq.).

Comprehensive Environmental Response, Compensation, and Liability Act and the Superfund Amendments and Reauthorization Act of 1986

CERCLA (42 U.S.C. 9601 et seq.), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for the release of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. The law authorizes two types of responses: (1) short-term removals requiring prompt response and (2) long-term remedial response actions that permanently and significantly reduce serious on-site dangers. CERCLA also enabled revision of the National Contingency Plan (42 U.S.C. 9605). The National Contingency Plan provided guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The National Contingency Plan also established the National Priorities List of contaminated sites warranting further investigation by the EPA. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

Clean Air Act

Under the authority of Section 112(r) of the Clean Air Act, the Chemical Accident Prevention Provisions require facilities that produce, handle, process, distribute, or store more than a "threshold quantity" of any extremely hazardous toxic and flammable substance listed at 40 CFR, Part 68.130, to develop and implement a risk management program, prepare a risk management plan, and submit the risk management plan to the EPA. Although a federal program, the Risk Management Program is intended to reduce hazards at the local level. The program is applicable to companies of all sizes that use certain flammable and toxic substances. The Risk Management Program is intended to help local fire, police, and emergency response personnel (first responders) in the event of an accidental spill or exposure event. The Risk Management Program is contained in the Clean Air Act (42 U.S.C. 7401 et seq.).

Hazardous Materials Transportation Act

The U.S. Department of Transportation regulates hazardous materials transportation under Title 49 of the CFR. State agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and the California Department of Transportation (Caltrans). These agencies also govern permitting for hazardous materials transportation.

EPA Region 9, Preliminary Remediation Goals

Region 9 is the Pacific Southwest Division of the EPA, which includes Arizona, California, Hawaii, Nevada, Pacific Islands, and over 140 Tribal Nations. Preliminary Remediation Goals (PRGs) are tools for evaluating and cleaning up contaminated sites. PRGs for the Superfund/RCRA programs are risk-based concentrations, derived from standardized equations combining exposure information assumptions with EPA toxicity data. They are considered to be protective for humans (including sensitive groups) over a lifetime. However, PRGs are not always applicable to a particular site and do not address non-human health issues such as ecological impacts. Region 9's PRGs are viewed as agency guidelines, not legally enforceable standards.

Air Traffic Safety

Federal Aviation Administration

The Federal Aviation Administration (FAA) has primary responsibility for the safety of civil aviation. The FAA's major functions regarding hazards include the following: (1) developing and operating a common system of air traffic control and navigation for both civil and military aircraft, (2) developing and implementing programs to control aircraft noise and other environmental

effects of civil aviation, (3) regulating U.S. commercial space transportation, and (4) conducting reviews to determine that the safety of persons and property on the ground are protected.

The Code of Federal Regulations (CFR) (14 CFR 77) establishes the standards and notification requirements set forth by the FAA for construction activities that would result in obstructions to FAA-regulated airspace. The CFR defines an "aviation impact" as construction or alteration that installs any equipment or structures measuring more than 200 feet above the ground or construction or alteration that is located within an instrument approach area (14 CFR 77.13(a)(4)). As the project would not alter structures within a runway protection zone, this regulation would not apply to SDG&E's proposed project.

Although the project would not involve steel pole structures greater than 200 feet, in some areas the power lines would exceed 200 feet where the power lines traverse canyons and drainages. In the areas where marker balls are required by the FAA on catenary wires, they would comply with Advisory Circular AC 70/7460-1K, Obstruction Marking and Lighting.

U.S. Department of Defense Air Installations Compatible Use Zone Program

Safety compatibility criteria for military air bases are set forth through the Air Installations Compatible Use Zone (AICUZ) Program administered by the U.S. Department of Defense (DOD). This program applies to military air installations located within the United States, its territories, trusts, and possessions. The AICUZ Program has the following four purposes: (1) to set forth DOD policy on achieving compatible use of public and private lands in the vicinity of military airfields, (2) to define height and land use compatibility restrictions, (3) to define procedures by which AICUZ may be defined, and (4) to provide policy on the extent of government interest in real property within these zones that may be retained or acquired to protect the operational capability of active military airfields.

Emergency Response

Federal Response Plan

The Federal Response Plan of 1999 is a signed agreement among 27 federal departments and agencies, including the American Red Cross, that: (1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of state and local governments overwhelmed by a major disaster or emergency; (2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act, as well as individual agency statutory authorities; and (3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a presidential declaration of a major disaster or emergency.

D.7.2.2 State Laws and Regulations

Hazardous Materials

Hazardous Waste Control Law

The California Hazardous Waste Control Law is administered by the California Environmental Protection Agency to regulate hazardous wastes. While the Hazardous Waste Control Law is generally more stringent than RCRA, until the EPA approves the California hazardous waste control program (which is charged with regulating the generation, treatment, storage, and disposal of hazardous waste), both state and federal laws apply in California. The Hazardous Waste Control Law lists 791 chemicals and approximately 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal, and transportation; and identifies some wastes that cannot be disposed of in landfills.

The California Code of Regulations (CCR) provides the following definition for hazardous waste (22 CCR 66261.10 (a) (1)):

> A waste that exhibits the characteristic may: (A) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when it is improperly treated, stored, transported, disposed of or otherwise managed.

According to 22 CCR, substances having a characteristic of toxicity, ignitability, corrosivity, or reactivity are considered hazardous. Hazardous wastes are hazardous substances that no longer have a practical use, such as material that has been abandoned, discarded, spilled, or contaminated or is being stored prior to proper disposal.

Toxic substances may cause short- or long-term health effects, ranging from temporary effects to permanent disability or death. For example, toxic substances can cause eye or skin irritation, disorientation, headache, nausea, allergic reactions, acute poisoning, chronic illness, or other adverse health effects if human exposure exceeds certain levels (the level depends on the substance involved). Carcinogens (substances known to cause cancer) are a special class of toxic substances. Examples of toxic substances include most heavy metals, pesticides, and benzene (a carcinogenic component of gasoline). Ignitable substances (e.g., gasoline, hexane, and natural gas) are hazardous because of their flammable properties. Corrosive substances (e.g., strong acids and bases such as sulfuric (battery) acid or lye) are chemically active and can damage other materials or cause severe burns upon contact. Reactive substances (e.g., explosives, pressurized

canisters, and pure sodium metal) may cause explosions or generate gases or fumes as a result of contamination or exposure to heat, pressure, air, or water.

Other types of hazardous materials include radioactive and biohazardous materials. Radioactive materials and wastes contain radioisotopes, which are atoms with unstable nuclei that emit ionizing radiation to increase their stability. Radioactive waste mixed with chemical hazardous waste is referred to as "mixed wastes." Biohazardous materials and wastes include anything derived from living organisms. They may be contaminated with disease-causing agents such as bacteria or viruses.

Department of Toxic Substances Control

The Hazardous Waste Control Law states that any person who stores, treats, or disposes of hazardous wastes must obtain a Hazardous Waste Facility Permit or a grant of authorization from the Department of Toxic Substances Control.

California Accidental Release Prevention Program

Similar to the federal Risk Management Program, the California Accidental Release Prevention Program (CalARP) includes additional state requirements and an additional list of regulated substances and thresholds. The regulations of the program are contained in 19 CCR 2735.1 et seq. The intent of CalARP is to provide first responders with basic information necessary to prevent or mitigate damage to public health, safety, and the environment from the release or threatened release of hazardous materials.

California Department of Transportation and California Highway Patrol

Caltrans regulates the transportation of hazardous materials throughout the state. Caltrans requires that drivers transporting hazardous wastes obtain a certificate of driver training that shows the driver has met the minimum requirements concerning the transport of hazardous materials, including proper labeling and marking procedures, loading/handling processes, incident reporting and emergency procedures, and appropriate driving and parking rules. The California Highway Patrol also requires shippers and carriers to complete hazardous materials employee training before transporting hazardous materials.

Health and Safety

California Health and Safety Code

In California, the handling and storage of hazardous materials is regulated by Chapter 6.95 of the California Health and Safety Code. Under Sections 25500–25543.3, facilities handling hazardous materials are required to prepare a hazardous materials business plan. The business plan provides

information to local emergency response agencies regarding the types and quantities of hazardous materials stored at a facility, and detailed emergency planning and response procedures in the event of a hazardous materials release. In the event that a facility stores quantities of specific acutely hazardous materials above the thresholds set forth by California code, facilities are also required to prepare a risk management plan and California accidental release plan. The risk management plan and accidental release plan provide information about the potential impact zone of a worst-case release and require plans and programs designed to minimize the probability of a release and mitigate potential impacts.

Underground or aboveground storage tanks (USTs/ASTs) are typically used to store hazardous waste. Regulations regarding USTs used to store hazardous materials require owners and operators to register, install, monitor, and remove their tanks according to established standards and procedures. Releases are to be reported to the local Certified Unified Program Agency. Chapter 6.67 of the California Health and Safety Code (Sections 25270–25270.13) regulates the storage of petroleum in ASTs and requires construction methods and monitoring to prevent petroleum releases. Owners of ASTs containing petroleum products with an aggregate storage capacity greater than 1,320 gallons are required to prepare and implement spill prevention and response strategies and to contribute to the Environmental Protection Trust Fund that is used to respond to some spills. Proper drainage, dikes, and walls are required to prevent accidental discharges from endangering employees, facilities, or the environment.

California Occupational Safety and Health Administration

The California Occupational Safety and Health Administration (Cal/OSHA) is the primary agency responsible for worker safety in the handling and use of chemicals in the work place. Cal/OSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR 337–340). The regulations specify requirements for employee training, availability of safety equipment, accident prevention programs, and hazardous substance exposure warnings.

Public Utilities Transmission Line Safety Requirements

California Public Utilities Commission General Order 95: Rules for Overhead Transmission Line Construction

General Order 95 (GO 95) was adopted in 1941 and updated in January 2012. Additionally, on February 5, 2014, California Public Utilities Commission (CPUC) decision D.14-02-015 revised GO 95 to incorporate new and modified rules to reduce the fire hazards associated with overhead power lines and aerial communication facilities in close proximity to power lines. GO 95 is the key standard governing the design, construction, operation, and

maintenance of overhead electric lines in the state. It includes safety standards for overhead electric lines, including minimum distances for conductor spacing and minimum conductor ground clearance, standards for calculating maximum sag, electric line inspection requirements, and vegetation clearance requirements.

Rule 31.2, Inspection of Lines, requires that lines be inspected frequently and thoroughly to ensure they are in good condition, and that lines temporarily out of service be inspected and maintained as not to create a hazard.

Rule 35, Tree Trimming, defines minimum vegetation clearance around power lines. Rule 35 guidelines, at the time of trimming, require the following:

- Four-foot [4-foot] radial clearances for any conductor of a line operating at 2,400 volts or more, but less than 72,000 volts (this would apply to SDG&E's proposed project)
- Six-foot [6-foot] radial clearances for any conductor of a line operating at 72,000 volts or more, but less than 110,000 volts
- Ten-foot [10-foot] radial clearances for any conductor of a line operating at 110,000 volts or more, but less than 300,000 volts ~~(this would apply to SDG&E's proposed project)~~
- Fifteen-foot [15-foot] radial clearances for any conductor of a line operating at 300,000 volts or more.

SDG&E will achieve post-trim clearances considering factors such as annual compliance, environmental conditions, line movement, proper pruning standards, species' potential growth, and structural defects in order to maintain the minimum approach distances allowed per CPUC General Order 95, Rule 35 and California Public Resources Code Section 4293.

Under California Public Utilities Code, Section 1708.5, interested persons are permitted to petition the CPUC to adopt, amend, or repeal a regulation. In response to the 2007 wildfires in San Diego County, on November 6, 2007, SDG&E submitted a petition to the CPUC requesting that the CPUC issue an Order Instituting Rulemaking to determine whether GO 95 should be amended or whether more rules should be adopted to address disaster preparedness, including damage from Santa Ana Wind-driven firestorms (CPUC and BLM 2008). The petition requested that the CPUC consider several items, including the following:

- Operating rural electrical lines differently during severe fire weather
- Mitigating potential hazards associated with rural lines, including undergrounding line, using steel poles in place of wood, and shortening spans between poles
- Better coordinating disaster management efforts among agencies, municipalities, local jurisdictions, and utilities

- Maintaining electrical line rights-of-way free of vegetation
- Adopting a statewide Disaster Management Plan.

On February 5, 2014, in this rulemaking, CPUC decision D.14-02-015 revised GO 95 to incorporate new and modified rules to reduce the fire hazards associated with overhead power lines and aerial communication facilities in close proximity to power lines.

California Public Resources Code

The California Public Resources Code (PRC) regulations are discussed in further detail as follows:

- **PRC, Section 4291** requires a reduction of fire hazards around buildings, requiring 100 feet of vegetation management around all buildings, and is the primary mechanism for conducting fire prevention activities on private property within CAL FIRE [California Department of Forestry and Fire Protection] jurisdiction.
- **PRC, Section 4292 s**tates a that a minimum firebreak of 10 feet in all directions from the outer circumference of such pole or tower be established around any pole that supports a switch, transformer, lightning arrester, line junction, or end or corner pole. All vegetation shall be cleared within the firebreak.
- **PRC, Section 4293** establishes the minimum vegetation clearance distances (between vegetation and energized conductors) required for overhead transmission line construction. Minimum clearances are discussed as follows:
    - A minimum radial clearance of 4 feet shall be established for any conductor of a line operating at 2,400 or more volts but less than 72,000 volts.
    - A minimum radial clearance of 6 feet shall be established for any conductor of a line operating at 72,000 or more volts but less than 110,000 volts.
    - A minimum radial clearance of 10 feet shall be established for any conductor of a line operating at 110,000 or more volts but less than 300,000 volts.
    - A minimum radial clearance of 15 feet shall be established for any conductor of a line operating at 300,000 or more volts.

Specific requirements applicable to the construction and operation of SDG&E's proposed project include those from PRC, Division 4, Chapter 6:

- **Section 4427** – Operation of fire-causing equipment
- **Section 4428** – Use of hydrocarbon-powered engines near forest, brush, or grass-covered lands without maintaining firefighting tools

- **Section 4431** – Gasoline-powered saws, etc.; firefighting tools
- **Section 4442** – Spark arrestors as fire prevention measures; requirements, exemptions.

D.7.2.3 Regional Policies, Plans, and Regulations

San Diego County, Site Assessment and Mitigation Program

The County Department of Environmental Health (DEH) maintains the Site Assessment and Mitigation (SAM) list of contaminated sites that have previously or are currently undergoing environmental investigations and/or remedial actions. The County SAM Program, within the Land and Water Quality Division of the DEH, has a primary purpose to protect human health, water resources, and the environment within the County by providing oversight of assessments and cleanups in accordance with the California Health and Safety Code and CCR. SAM's Voluntary Assistance Program also provides staff consultation, project oversight, and technical or environmental report evaluation and concurrence (when appropriate) on projects, including properties contaminated with hazardous substances.

Airport Land Use Compatibility Plans

The County of San Diego has adopted the ALUCPs for the four airports located within 15 miles of the project alignment: Aqua Caliente Airport, Gillespie Field, Jacumba Airport, and Ramona Airport. ALUCPs are plans that guide property owners and local jurisdictions in determining what types of proposed new land uses are appropriate around airports. They are intended to protect the safety of people, property, and aircraft on the ground and in the air in the vicinity of the airport. They also protect airports from encroachment by new incompatible land uses that could restrict their operations. The ALUCPs define an area around the airports known as the Airport Influence Area (AIA), which is established by factors including airport size, operations, and configuration, as well as the safety, airspace protection, noise, and over-flight impacts on the land surrounding an airport. None of the project components are located within any of the AIAs of the nearest airports (County of San Diego 2010, 2011a, 2011b, 2011c). Therefore, SDG&E's proposed project is not subject to the restrictions applicable to the ALUCPs/AIAs.

D.7.3 Environmental Effects

D.7.3.1 Definition and use of CEQA Significance Criteria/Indicators under NEPA

The CEQA criteria and guidelines described below are also used as indicators of adverse effect under NEPA. The following public health and safety significance criteria were derived from previous environmental impacts assessments and from Appendix G of the CEQA

Guidelines (14 CCR 15000 et seq.). Under CEQA, public health and safety impacts would be significant if the project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials
- 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 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
- Result in a safety hazard for people residing or working in the project area (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) or result in a safety hazard for people residing or working in the project area (for a project within the vicinity of a private airstrip)
- Result in a change in air traffic pattern, including either an increase in traffic levels or a change in location that results in substantial safety risks
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
- Create safety hazards due to structural failure
- Create induced shock hazards.

D.7.3.2 Applicant Proposed Measures

SDG&E has proposed Applicant Proposed Measure (APM) HYD-09 which includes measures to handle hazardous materials. This APM would be implemented as part of SDG&E's proposed project to reduce impacts due to hazardous materials (see Section B.7 of this EIR/EIS).

D.7.3.3 Direct and Indirect Effects

Impact PHS-1: Result in a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials

Construction

Approval of SDG&E's proposed project would authorize the continued operation and maintenance of SDG&E electric facilities within the Cleveland National Forest and authorize the power line replacement projects. As discussed in above in Section D.7.1, no evidence of

PCBs was observed along the project alignment during the Phase I site reconnaissance, and SDG&E staff have indicated that PCBs are not currently used in the SDG&E transmission and distribution line components. Petroleum products, such as vehicle equipment fuel, and transformer oil, paint, and solvents would be transported, stored, and used during construction and operation of the project. Storage of these hazardous materials would occur in the construction staging areas along the project alignment. Herbicides may be used prior to construction activities and during operation of the project to clear and maintain vegetation along the alignment. To minimize impacts associated with the routine transport, use, or disposal of hazardous materials, Mitigation Measures (MM) MM PHS-1 and MM PHS-2 are provided to ensure agency oversight of the handling of hazardous material during construction and implementation of best management practices (BMPs) would occur. With implementation of MM PHS-1 and MM PHS-2, adverse and significant impacts due to potential hazardous substance spills during construction would be mitigated under NEPA and under CEQA would be less than significant with mitigation (Class II).

MM PHS-1 San Diego Gas & Electric (SDG&E) shall provide written documentation that all staff, including contractor, and subcontractor project personnel, have received training regarding the appropriate work practices necessary to effectively implement hazardous materials procedures and protocols and to comply with the applicable environmental laws and regulations, including, without limitation, hazardous materials spill prevention and response measures.

MM PHS-2 San Diego Gas & Electric (SDG&E) shall implement best management practices (BMPs) to prevent impacts from release of hazardous materials during construction, operation, and maintenance activities. Typical BMPs could include, but would not be limited to, practices such as the use of absorbent pads for spill containment, specified locations for vehicle refueling, and a daily vehicle inspection schedule designed to identify leaking fuels and/or oils as early as possible. No hazardous material as defined by 40 CFR ~~335~~ 355 shall be stored on site above threshold planning quantities, as defined in Appendices A and B of 40 CFR 355.~~, and a~~All vehicle maintenance activities shall be conducted off site at designated locations specified for this activity. In the event emergency maintenance is required on site, or removal of the equipment to an off-site repair facility is determined by SDG&E to be infeasible, SDG&E will use BMPs to prevent the release of hazardous materials during these emergency maintenance activities. SDG&E will be required to complete a Spill Response and Notification Plan for agency approval before commencing construction.

During construction the project may require the use of explosives. These activities would be limited to areas where explosives are absolutely necessary, and precautions would be taken to

limit accessibility to recreational users and the general public. Prior to removing earth or rock with the use of explosives, a pre-blast survey and blasting plan would be prepared for the project (MM PHS-3). The pre-blast survey would be conducted for structures within a minimum radius of 1,000 feet from the identified blast site. Sensitive receptors that could reasonably be affected by blasting would also be surveyed as part of the pre-blast survey. The blasting plan would outline the anticipated blasting procedures for the removal of rock material at pole locations and would address air-blast limits, ground vibrations, and maximum peak particle velocity for ground movement to ensure that all application regulatory measures are met.

MM PHS-3 In the event that rock blasting is used during construction, a noise and vibration calculation will be prepared and submitted to the California Public Utilities Commission and the County of San Diego for review before blasting at each site. The construction contractor will ensure compliance with all relevant local, state, and federal regulations relating to blasting activities. In addition to any other requirements established by the appropriate regulatory agencies, the pre-blast survey and blasting plan shall meet the following conditions:

- The pre-blast survey shall be conducted for structures within a minimum radius of 1,000 feet from the identified blast site to be specified by San Diego Gas & Electric (SDG&E) or SDG&E's contractor. Sensitive receptors that could reasonably be affected by blasting shall be surveyed as part of the pre-blast survey. Notification that blasting would occur shall be provided to all owners of the identified structures to be surveyed prior to commencement of blasting. The pre-blast survey shall be included in the final blasting plan.
- The final blasting plan shall address air-blast limits, ground vibrations, and maximum peak particle velocity for ground movement, including provisions to monitor and assess compliance with the air-blast, ground vibration, and peak particle velocity requirements. The blasting plan shall meet criteria established in Chapter 3 (Control of Adverse Effects) in the *Blasting Guidance Manual* of the U.S. Department of Interior Office of Surface Mining Reclamation and Enforcement.
- The blasting plan shall outline the anticipated blasting procedures for the removal of rock material at the proposed pole locations. The blasting procedures shall incorporate line control to full depth and controlled blasting techniques to create minimum breakage outside the line control and maximum rock fragmentation within the target area. Prior to blasting, all applicable regulatory measures shall be met. The applicant, general contractor, or its subcontractor (as appropriate) shall keep a record of each blast for at least 1 year from the date of the last blast.

With implementation of MM PHS-3, adverse and significant public health and safety impacts due to the possible use of explosives during construction would be mitigated under NEPA, and under CEQA would be considered less than significant with mitigation (Class II).

Operations and Maintenance

Operations and maintenance of the proposed power line replacement projects along with the other SDG&E electrical facilities proposed to be covered under the MSUP would require routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks similar to those currently conducted by SDG&E. These activities would not increase in duration or intensity with implementation of SDG&E's proposed project. No chemical or hazardous materials (40 CFR 335) are anticipated to be produced, stored, or disposed of as a result of operation and maintenance. As part of maintenance activities, minimal amount of chemicals, such as pesticides would be used at the project site. Chemicals would be stored according to applicable requirements and regulations to limit the risk of adverse effects. Additionally, material used for maintenance activities would be transported, handled, and contained in accordance with all federal, state, and local laws regulating the use of hazardous materials. Consequently, the use of chemicals and materials alone for their intended purpose would not pose a significant risk to the public. However, accidental spills during operation and maintenance activities could occur. With implementation of MM PHS-1 and MM PHS-2, adverse and significant impacts due to potential hazardous substance spills during operations and maintenance would be mitigated under NEPA, and under CEQA would be less than significant with mitigation (Class II).

Impact PHS-2: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school

As shown on Figure D.7-1, there are five schools located within a quarter mile of the proposed power line replacement projects for TL682, TL629, C157, and C449.

As discussed under Impact PHS -1, hazardous materials used during the construction, operation, and maintenance activities along the project alignment may inadvertently be released through spills or leaks. An accidental release of a hazardous material in close proximity to a school may result in adverse impacts. However, with the incorporation of MM PHS-1 through MM PHS-3, the potential to create a significant hazard through release of hazardous materials would be substantially reduced, and potential adverse and significant impacts from the accidental release of hazardous materials to schools would therefore be mitigated under NEPA and would be considered less than significant with mitigation (Class II) under CEQA.

Table D.7-1
Public Health and Safety Impacts Associated with SDG&E's Proposed Project

Project Components (listed from north to south)	Description of Impact	Significance Determination
TL682	TL 682 is adjacent to the Denver C. Fox Outdoor Education School, which is located at 24102 Highway 76, Santa Ysabel, California. During construction, maintenance, and operation of TL682, hazardous materials, such as petroleum products and solvents, would be used and may inadvertently be released through spills or leaks, which could impact students and result in a significant impact.	Adverse under NEPA and less than significant with mitigation under CEQA (Class II)
TL626	There are no schools within a one-quarter mile of this portion of the project alignment.	No impact identified.
TL625	There are no schools within a one-quarter mile of this portion of the project alignment.	No impact identified.
TL629	TL 629 is adjacent to the Descanso Elementary School, which is located at 24842 Viejas Boulevard, Descanso, California, and the Pine Valley Elementary School, located at 7454 Pine Boulevard, Pine Valley, California. During construction, maintenance and operation of TL629, hazardous materials, such as petroleum products and solvents, would be used and may inadvertently be released through spills or leaks, which could impact students resulting in a significant impact.	Adverse under NEPA and less than significant with mitigation under CEQA (Class II)
TL6923	There are no schools within a one-quarter mile of this portion of the project alignment.	No impact identified.
C79	There are no schools within a one-quarter mile of this portion of the project alignment.	No impact identified.
C157	C157 passes next to Camp Barrett, located up Sky Valley Road, with a mailing address of 21077 Lyons Valley Road, Alpine, California. During construction, maintenance, and operation of C157, hazardous materials, such as petroleum products and solvents, would be used and may inadvertently be released through spills or leaks, which could impact students and result in a significant impact.	Adverse under NEPA and less than significant with mitigation under CEQA (Class II)
C442	There are no schools within a one-quarter mile of this portion of the project alignment.	No impact identified.
C440	There are no schools within a one-quarter mile of this portion of the project alignment.	No impact identified.

Table D.7-1
Public Health and Safety Impacts Associated with SDG&E's Proposed Project

Project Components (listed from north to south)	Description of Impact	Significance Determination
C449	The section of C449 that is proposed for undergrounding is adjacent to the Mountain Empire High School, located at 3305 Buckman Springs Road, Pine Valley, California, and the Cottonwood Community Day School, located at 3291 Buckman Springs Road, Pine Valley, California. During construction, maintenance, and operation of C449, hazardous materials, such as petroleum products and solvents, would be used and may inadvertently be released through spills or leaks, which could impact students and result in a significant impact.	Adverse under NEPA and less than significant with mitigation under CEQA (Class II)

Impact PHS-3: 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

With the exception of one site located along TL629, there are no other known hazardous materials sites located within SDG&E's proposed project impact area. As shown on Figure D.7-1, one known hazardous material site has been identified along TL629 between poles Z173105 and Z173109. A release of gasoline to soil and groundwater from two underground storage tanks occurred at the Pine Valley Trailer Park, which resulted in elevated levels of hazardous materials in the soil and groundwater below Highway 80 (the project alignment). Though TL629 crosses the area of suspected contaminated soils along Highway 80, SDG&E's proposed project does not include any ground-disturbing activities within this area as the power lines would be strung above ground between poles that are not within the area of suspected contamination. To ensure that the project would not excavate contaminated soils and expose people to hazardous materials present, MM PHS-4 would be implemented that would properly identify the area of suspected contamination during construction and instruct all personnel to avoid the area. With implementation of MM PHS-4, adverse and significant impacts due to potential disturbance of a known hazardous materials site along TL629 would be mitigated under NEPA, and would be less than significant with mitigation (Class II) under CEQA.

MM PHS-4 Prior to construction, all San Diego Gas & Electric (SDG&E), contractor, and subcontractor project personnel anticipated to work between poles Z173105 and Z173109 shall receive training regarding the location of suspected soil and groundwater contamination along TL629 between poles Z173105 and Z173109, and will be instructed to avoid any ground disturbance in the area.

Impact PHS-4: Result in a safety hazard for people residing or working in the project area (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) or 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 is not located within a public airport land use plan or within 2 miles of a public airport; however, there are four private airports and four public airports as shown in Figure D.7-1 located within a 15-mile radius of the proposed power line replacement projects. The Reider Ranch Airport, located approximately 0.75 mile south of TL6923 in Potrero, is the closest airport. The second nearest airport is the On the Rocks Airport, located approximately 1 mile from TL625 in Alpine. Additionally, the Flying T Ranch Airport is a privately owned airport located approximately 5.25 miles west of TL626, and the Rancho Vallecito Airport is a privately owned airport located on County Highway S2 in Julian, approximately 5.5 miles north of C440.

The project would replace existing power lines and associated wooden poles with steel poles. The new steel poles would have a maximum height between 100 and 120 feet replacing existing wood poles with a maximum height of 90 feet. The proposed new steel replacement poles would not be considered a potential obstruction to air traffic by the FAA, as the proposed components would not exceed 200 feet in height, in accordance with FAA Final rule on July 21, 2010 (75 FR 42296,CFR Part 77 for the "Safe, Efficient Use and Preservation of the Navigable Airspace.") Because the new steel poles would be a maximum of 120 feet and not located with an airport land use plan, they would not extend into navigable air space. In addition, in areas where the power lines cross canyons and drainages that exceed 200 feet, such as over the San Diego River canyon (TL626) and I-8 near State Route 79 (TL625), SDG&E will continue to comply with FAA Advisory Circular AC 70/7460-1K regarding the use of marker balls on wires. Therefore, the proposed new steel poles and power lines would not increase safety hazards related to obstructions with aircraft.

SDG&E's proposed project would require occasional, short-term helicopter support during construction, operations, and maintenance. Temporary use of helicopters is not expected to interfere with air traffic patterns. However, if helicopters are used for the installation or removal of structures, MM PHS-5 and MM PHS-6 will apply and will ensure that helicopter use follows all safety procedures in compliance with FAA regulations (MM PHS-5 supersedes APM-06). With implementation of these measures, adverse and significant impacts to air traffic patterns and air safety due to the use of helicopters would be mitigated under NEPA and less than significant with mitigation under CEQA (Class II).

MM PHS-5 Prior to flight operations for helicopter use during construction as well as operations, San Diego Gas & Electric (SDG&E) shall coordinate with local air traffic control and comply with all Federal Aviation Administration (FAA)

regulations regarding helicopter use to prevent conflicts with air traffic generated by local airstrips. Documentation verifying SDG&E has coordinated with local air traffic control shall be provided to California Public Utilities Commission prior to use of helicopters for construction and operations and maintenance activities. SDG&E shall prepare an Aviation Safety Plan for Forest Service approval prior to any use of helicopters in support of activities on the Cleveland National Forest. The Aviation Safety Plan will outline the procedures used to ensure safe transportation of external loads, and will identify coordination requirements with Forest Service aviation resources operating in the area.

MM PHS-6 ~~Should helicopters be required to lift any~~ If, during construction activities, it is anticipated or planned that helicopters will be used for external load operations, including carrying structures, San Diego Gas & Electric (SDG&E) ~~shall~~ will prepare a Helicopter Lift Plan. This plan will be prepared in accordance with and comply with all relevant FAA regulations, as well as SDG&E's Aviation Operations Manual. ~~to outline helicopter operations and safety procedures for the project. The Helicopter Lift Plan will be prepared consistent with applicable FAA regulations pertaining to these operations and consistent with SDG&E avian safety standards included in SDG&E's Aviation General Operations Manual.~~ Prior to initiation of construction activities for each alignment, if determined that helicopters would be used, ~~T~~the Helicopter Lift Plan will be provided to the California Public Utilities Commission ~~(CPUC)prior to initiating activities~~.

Impact PHS-5: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan

During the construction period, all streets would remain open to emergency vehicles. The only indirect impact would result from construction vehicles using roadways to access pole construction sites. Because the number of vehicles would represent a minimal contribution to average daily traffic flow, these vehicles would not impair traffic flow. Additionally, as discussed in Section D.14.3.2, per APM TRANS-05, the applicant would prepare and implement a Traffic Control Plan during construction, and per APM TRANS-03, emergency vehicles will be provided access even in the event of temporary road or lane closures. With implementation of APM TRANS-03 and APM TRANS-05, the project would not block emergency vehicle access along any of the designated emergency roads and, consequently, would not interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would not be adverse under NEPA, and would be considered less than significant (Class III) under CEQA.

Impact PHS-6: Create safety hazards due to structural failure

For a discussion of fire hazards see Section D.8, Fire and Fuels Management, of this EIR/EIS.

Extreme Weather

While wind speeds in the study area have been observed to 115 mph (Schroeder et al. 1964), and the proposed steel poles would be subject to increased risk of lightning strikes due to their composition and increased height, SDG&E will be required as discussed in Section D.7.2.2, State Laws and Regulations, and in Section D.8, Fire and Fuels Management, of this EIR/EIS, to design the proposed new steel poles and associated facilities in accordance with the safety requirements of the CPUC's General Order 95 (GO 95). GO 95 is the key standard governing the design, construction, operations, and maintenance of overhead electrical lines in the State of California. As further discussed in Section D.8, Fire and Fuels Management, based on the conservative nature of GO 95, operation of the proposed power line replacement projects and associated hardware would not pose a significant safety hazard due to structural failure precipitated by high winds and or lightning.

Seismic Activity

Strong earthquake-induced ground shaking can result in damage to aboveground structures. Currently, GO 95 and NESC contain no provisions or requirements for seismic loading, but instead focus on loading requirements based on effects of wind-, ice-, gravity, conductor-, and temperature-induced loading. ASCE Manual 74 "Guidelines for Electrical Transmission Line Loading" similarly has no provisions for seismic loading, but does comment that power line structures are not typically designed for seismic loading, and that wind/ice combinations and broken wire loadings generally exceed design earthquake loads. SDG&E avoids structure and foundation locations on seismic faults, and also designs for earthquake-induced soil liquefaction effects if foundations are located in soils prone to liquefaction. ~~Transmission lines are designed to withstand strong ground shaking and moderate ground-deformation impacts associated with strong seismic shaking. However, unsafe conditions could occur along the project alignment should power lines or poles break due to moderate to high levels of ground shaking or liquefaction in the area.~~ Implementation of MM PHS-7 and MM PHS-8 would reduce impacts associated with ground shaking and liquefaction because they would ensure that the project adhere to all applicable engineering design and construction codes that would reduce adverse effects resulting from fault rupture both during construction and operational phase.

MM PHS–7 **Conduct geotechnical investigations**. The applicant shall perform design-level geotechnical investigations to evaluate the potential for liquefaction, lateral spreading, seismic slope instability, and ground-cracking hazards to affect the approved project and all associated facilities. Where these hazards are found to exist, appropriate engineering design and construction measures that meet California Building Code (CBC), ~~and Institute of Electrical and Electronics Engineers (IEEE)~~CPUC General Order 95, and Electric Power Research Institute

(EPRI) Moment Foundation Analysis and ~~d~~Design parameters shall be incorporated into the project designs. ~~Appropriate measures for project facilities could include construction of pile foundations, ground improvement of liquefiable zones, installation of flexible bus connections, and incorporation of slack in underground cables to allow ground deformations without damage to structures.~~

MM PHS-8 **Facilities inspections conducted following major seismic event**. If large levels of ground shaking (such as Modified Mercalli Intensity VI or greater) are experienced or a major earthquake (magnitude 6.0 and above) occurs along the Elsinore Fault, a professional licensed geologist, geotechnical engineer, and structural engineer ~~hired by the project applicant~~employed or contracted by SDG&E shall perform facilities inspections as quickly as possible. Careful examination shall be conducted of all project facilities within the identified area of effect. Any required repair or needed improvements shall be implemented as soon as feasible to ensure that the integrity of project facilities has not been compromised.

Based on the conservative nature of the specification in CPUC's GOs 95 and 128, operation and maintenance of the proposed power line replacement projects along with all facilities proposed to be covered under the MSUP would not pose a significant safety hazard due to structural failure precipitated by extreme weather (high winds, lightning). With implementation of standard geotechnical design measures (MM PHS-7 and MM PHS-8), potential adverse effects due to seismic hazards would be mitigated. Therefore, adverse and significant impacts to public safety due to structural failure precipitated by either extreme weather and or seismic event would be mitigated under NEPA, and under CEQA, impacts would be considered less than significant with mitigation (Class II).

Impact PHS-7: Induced Shock Hazards

As discussed in Section D.7.2.2 State Laws and Regulations, SDG&E will be required to design the proposed power line replacement projects in accordance with the safety requirements of CPUC's GO 95, which includes guidelines and minimum clearances to address and protect the public from shock hazards including minimum distances for conductor spacing and conductor clearance as well as standards for calculating maximum sag. Based on the conservative nature of the specification in CPUC's GO 95, operation and maintenance of the proposed power line replacement projects along with all facilities proposed to be covered under the MSUP would not pose a significant safety hazard due to induced shock hazards; therefore, under NEPA this impact would not be adverse and under CEQA would be less than significant (Class III).

D.7.4 Forest Service Proposed Actions

D.7.4.1 TL626 Alternative Routes

Environmental Setting/Affected Environment

Sections D.7.1 and D.7.2 describe the existing environmental setting associated with SDG&E's proposed project. Each of the five options for Forest Service proposed action alternatives for TL626 would relocate a segment of TL626. The farthest relocation would be 2 miles to the east of the existing alignment and would primarily be located in undeveloped areas similar to the proposed reconstruction of TL626. Therefore, for purposes of the analysis conducted in this EIR/EIS, the public health and safety environmental setting, except where noted, is assumed to be similar to that identified in Sections D.7.1 and D.7.2.

Options 1 and 2 SDG&E Proposed Overhead Alignments Through/Around Inaja and Cosmit Reservation Lands

Environmental Effects

Impacts PHS-1 through PHS-7: This alternative would reroute a 3.7-mile segment of TL626 to the east along a new undisturbed ROW (Figure B-4a), which under Option 1 would consist of 5.5 miles and under Option 2 would consist of 5.6 miles. Options 1 and 2 would consist of similar construction as well as operations and maintenance activities as that described for SDG&E's proposed project. Due to the rural nature of the new ROWs proposed under this alternative, there would not be a substantial change to the baseline condition including the presence of hazardous materials, number of sensitive receptors, schools, or airports that could be exposed to hazardous materials or public safety issues; therefore, construction and operation impacts related to hazardous substances and public safety would essentially be the same for the relocation of TL626 under options 1 and 2 and would reflect the impact findings similar to those discussed in Section D.7.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, with implementation of MM PHS-1, MM PHS-2, MM PHS-3, MM PHS-4, MM PHS-5, MM PHS-6, MM PHS-7, and MM PHS-8, adverse and significant Impacts PHS-1 through PHS-7 would be mitigated under NEPA, and under CEQA impacts would be less than significant with mitigation (Class II).

Options 1 and 2 would result in greater impacts to aviation hazards (Impact PHS-4) than SDG&E's proposed project as a result of new poles and power lines in an area where none previously existed. The new poles and lines would create an obstacle to be avoided and would require attention from pilots. This identified impact would be adverse; therefore, MM PHS-9 has been provided to mitigate this impact. Under NEPA, impacts would be adverse but mitigated.

Under CEQA, impacts would be significant and would be mitigated to a level that is considered less than significant (Class II).

MM PHS-9 Consult with and inform the Federal Aviation Administration (FAA) and Local Fire Agencies. The applicant shall consult with the FAA and local fire agencies to avoid potential safety issues associated with proximity to airports and landing strips and to determine where fire protection aircrafts operate in the County. Prior to construction, the applicant shall provide written notification to the FAA, local fire agencies, and the appropriate land use jurisdictional agency, stating when and where the new structures and electric lines will be erected, and shall install markers if requested by FAA. The applicant shall also provide all agencies contacted with aerial photos or topographic maps clearly showing the location of new structures and power lines.

Option 3 Partial Underground Relocation in Boulder Creek Road

Environmental Effects

Impacts PHS-1 through PHS-7: Options 3a and 3b would consist of placing a segment of TL626 underground in Boulder Creek Road as shown in Figure B-4b. The rerouted underground segment of Option 3a is approximately 11.4 miles long, and the rerouted segment of Option 3b is approximately 6.3 miles long (each option includes an approximately 1-mile overland segment to interconnect back into the existing TL626 alignment). During construction, soil disturbance would be greater under this alternative as open trenching would be more invasive than excavation for power line poles. This additional trenching activity and soil disturbance required to underground Options 3a and 3b would slightly increase the potential to encounter contaminated soils as well as affect emergency access. Due to the rural and largely undeveloped nature in the vicinity of Boulder Creek Road, there would not be a substantial change to the baseline condition including the presence of hazardous materials, or the number of sensitive receptors or schools that could be exposed to hazardous materials or public safety issues. Therefore, as with SDG&E's proposed project, with implementation of MM PHS-1, MM PHS-2, MM PHS-3, MM PHS-4, MM PHS-5, MM PHS-6, MM PHS-7, and MM PHS-8, adverse and significant Impacts PHS-1 through PHS-7 would be mitigated under NEPA, and under CEQA impacts would be less than significant with mitigation (Class II).

Overall long-term impacts associated with structural failure (Impact PHS-6) and flight operations (Impact PHS-4) would be reduced for this portion of SDG&E's proposed project as the majority of the line would be underground; however, for the new 1-mile overhead segment impacts would be similar to SDG&E's proposed project because facilities would be constructed above ground in a new ROW. With implementation of MM PHS-5, MM PHS-6, MM PHS-7, MM PHS-8, and

MM PHS-9 potential adverse effects would be mitigated under NEPA, and under CEQA, significant impacts would be considered less than significant with mitigation (Class II).

Option 4 Overhead Relocation Along Boulder Creek Road

Environmental Effects

Impacts PHS-1 through PHS-7: This alternative would reroute a segment of TL626 along Boulder Creek Road and overland as shown in Figure B-4a. The rerouted segment would be approximately 4.7 miles longer than proposed by the project. Construction and operation impacts related to hazardous substances and public safety would reflect the impact findings similar to those discussed in Section D.7.3.3 for SDG&E's proposed project. Due to the rural nature of the vicinity of Boulder Creek Road proposed under this alternative there would not be a substantial change to the baseline condition including the presence of hazardous materials, number of sensitive receptors, schools, or airports that could be exposed to hazardous materials or public safety issues. Therefore, as with SDG&E's proposed project, with implementation of MM PHS-1, MM PHS-2, MM PHS-3, MM PHS-4, MM PHS-5, MM PHS-6, MM PHS-7, and MM PHS-8, adverse and significant Impacts PHS-1 through PHS-7 would be mitigated under NEPA, and under CEQA impacts would be less than significant with mitigation (Class II).

Option 4 would result in greater impacts to aviation hazards (Impact PHS-4) than SDG&E's proposed project as a result of new poles and power lines in an area where none previously existed. The new poles and lines would create an obstacle to be avoided and would require attention from pilots. This identified impact would be adverse; therefore, MM PHS-9 has been provided to mitigate this impact. Under NEPA, impacts would be adverse but mitigated. Under CEQA, impacts would be significant and would be mitigated to a level that is considered less than significant (Class II).

Option 5 Reroute and Undergrounding around Inaja Picnic Area

Environmental Effects

Impacts PHS-1 through PHS-7: Option 5 would reroute less than a 0.5-mile segment in close proximity to the existing TL626 alignment (Figure B-4c). All other project components would remain the same. Construction and operational impacts related to hazardous substances and public safety would essentially be the same for the relocation of TL626 under Option 5 as described in Section D.7.3.3 for SDG&E's proposed project. Due to the rural nature in the vicinity of the affected portion of TL626 proposed under this alternative, there would not be a substantial change to the baseline condition including the presence of hazardous materials, number of sensitive receptors, schools, or airports that could be exposed to hazardous materials or public safety issues. Therefore, as with SDG&E's proposed project, with implementation of

MM PHS-1, MM PHS-2, MM PHS-3, MM PHS-4, MM PHS-5, MM PHS-6, MM PHS-7, and MM PHS-8, adverse and significant Impacts PHS-1 through PHS-7 would be mitigated under NEPA, and under CEQA impacts would be less than significant with mitigation (Class II).

Due to steep terrain, Option 5 would result in helicopter use during construction and operations and maintenance, increasing public safety concerns over helicopter use as described in Impact PHS-4. In addition, greater impacts to aviation hazards (Impact PHS-4) than SDG&E's proposed project as a result of relocating an overhead portion of TL626 in an area where none previously existed. Although within 0.5 mile of the exiting line, the new poles and lines would create an obstacle to be avoided and would require attention from pilots. This identified impact would be adverse; therefore, MM PHS-9 has been provided to mitigate this impact. Under NEPA, impacts would be adverse but mitigated. Under CEQA, impacts would be significant and would be mitigated to a level that is considered less than significant (Class II).

D.7.4.2 C157 Partial Relocation to Avoid Designated Wilderness

Option 1 SDG&E Proposed Alignment between Two Wilderness Areas

Option 2 City of San Diego Modified Alignment

Environmental Setting/Affected Environment

Sections D.7.1 and D.7.2 describe the existing environmental setting associated with SDG&E's proposed project. The Forest Service proposed actions for C157 would be in the same geographic region as SDG&E's proposed project; therefore, the public health and safety environmental setting would be the same as that identified in Sections D.7.1 and D.7.2.

Environmental Effects

Impacts PHS-1 through PHS-7: Options 1 and 2 would reroute an approximately 2-mile segment of C157 to the south of the existing alignment approximately 0.25 mile along new undisturbed ROW (Figure B-5a). All other project components would remain the same. Construction and operational impacts related to hazardous substances and public safety would essentially be the same for the relocation of C157 under Options 1 and 2, as described in Section D.7.3.3 for SDG&E's proposed project. Due to the rural nature in the vicinity of C157 proposed under this alternative, there would not be a substantial change to the baseline condition including the presence of hazardous materials, number of sensitive receptors, schools, or airports that could be exposed to hazardous materials or public safety issues. Therefore, as with SDG&E's proposed project, with implementation of MM PHS-1, MM PHS-2, MM PHS-3, MM PHS-4, MM PHS-5, MM PHS-6, MM PHS-7, and MM PHS-8, adverse and significant Impacts PHS-1

through PHS-7 would be mitigated under NEPA, and under CEQA impacts would be less than significant with mitigation (Class II).

Options 1 and 2 would result in greater impacts to aviation hazards (Impact PHS-4) than SDG&E's proposed project as a result of relocating an overhead portion of C157 in an area where none previously existed. Although within 0.25 mile of the exiting line, the new poles and lines would create an obstacle to be avoided and would require attention from pilots, but the existing obstacle would be removed. This identified impact would be adverse; therefore, MM PHS-9 has been provided to mitigate this impact. Under NEPA, impacts would be adverse but mitigated. Under CEQA, impacts would be significant and would be mitigated to a level that is considered less than significant (Class II).

D.7.4.3 C440 Mount Laguna Underground Alternative

Environmental Setting/Affected Environment

Sections D.7.1 and D.7.2 describe the existing environmental setting associated with C440. This alternative would consist of undergrounding approximately 14.3 miles of C440 proposed for replacement within existing roadways in the Laguna Mountain Recreation Area. As this area is in the same geographic region as SDG&E's proposed project, the public health and safety environmental setting would be the same as that identified in Sections D.7.1 and D.7.2.

Environmental Effects

Impacts PHS-1 through PHS-7: During construction, soil disturbance would be greater under this alternative as open trenching would be more invasive than excavation for power line poles. Although the underground ROW would be within existing roadways, this additional trenching activity and soil disturbance required to underground would increase the potential to encounter contaminated soils as well as affect emergency access. Due to the rural nature in the vicinity of C440, there would not be a substantial change to the baseline condition concerning the presence of hazardous materials, schools, or airports that could be exposed to hazardous materials or public safety issues. However, there would be an increase in the number of sensitive receptors including residences and recreational users that could be affected by short-term construction activities. Similar to SDG&E's proposed project, with implementation of MM PHS-1, MM PHS-2, MM PHS-3, MM PHS-4, MM PHS-5, MM PHS-6, MM PHS-7, and MM PHS-8, adverse and significant Impacts PHS-1 through PHS-7 would be mitigated under NEPA, and under CEQA impacts would be less than significant with mitigation (Class II).

Long-term impacts associated with structural failure Impact PHS-6 and flight operations Impact PHS-4 would be reduced for this portion of SDG&E's proposed project to no impact.

D.7.5 BIA Proposed Action

Environmental Setting/Affected Environment

Sections D.7.1 and D.7.2 describe the existing environmental setting associated with TL682. The BIA proposed action for TL682 would relocate poles and underground approximately 1,500 feet on Tribal lands. As this area is in the same geographic region as SDG&E's proposed project, the environmental setting would be the same as that identified in Sections D.7.1 and D.7.2.

Environmental Effects

Impacts PHS-1 through PHS-7: During construction, soil disturbance would be greater under this alternative as open trenching would be more invasive than excavation for power line poles. This additional trenching activity and soil disturbance required to underground a portion of TL682 would slightly increase the potential to encounter contaminated soils. However, because the modifications proposed to TL 682 under this alternative would occur primarily along the existing ROW for TL 682, there would not be a change to the baseline condition including the presence of hazardous materials, number of sensitive receptors, schools, or airports that could be exposed to hazardous materials or public safety issues. Therefore, as with SDG&E's proposed project, with implementation of MM PHS-1, MM PHS-2, MM PHS-3, MM PHS-4, MM PHS-5, MM PHS-6, MM PHS-7, and MM PHS-8, adverse and significant Impacts PHS-1 through PHS-7 would be mitigated under NEPA, and under CEQA impacts would be less than significant with mitigation (Class II).

D.7.6 Additional Alternatives

D.7.6.1 Partial Removal of Overland Access Roads

Environmental Setting/Affected Environment

This alternative would be in the same study area as SDG&E's proposed project; therefore, the environmental setting would be the same as that identified in Sections D.7.1 and D.7.2.

Environmental Effects

Impacts PHS-1 through PHS-7: Under this alternative, overland access in rugged terrain and that exceed grades of 25% for appreciable distances in proximity to creeks (as outlined in Section C.4.2) would be removed and the areas restored (up to 1~~0~~.5 miles). With the exception of impacts associated with helicopter use and the increase in response times for maintenance and emergency considerations, impacts and mitigation measures related to hazardous substances and public safety would essentially be the same for this alternative as described in Section D.7.3.3 for SDG&E's proposed project. Impacts identified under Impact

PHS-4 (flight operations) could increase under this alternative, as there may be increased helicopter use both during construction and operations in the areas where access roads have been removed. MM PHS-5 and MM PHS-6 would apply to ensure that helicopter use will follow safety procedures and be in compliance with FAA regulations. With implementation of these measures, adverse and significant impacts would be mitigated under NEPA and less than significant with mitigation under CEQA (Class II).

D.7.6.2 Removal of TL626 from Service

Environmental Setting/Affected Environment

This alternative would remove TL626 from service and replace it with system upgrades, either with TL6931 upgrades or a TL625 loop-in, as described below. In order to serve existing customers, segments of TL626 would also be converted from 69 kV to 12 kV. The setting associated with these upgrades is described as follows:

a. Upgrade to the existing 69 kV TL6931 from the Crestwood Substation to the Boulevard Substation: The setting associated with this component is largely described in SDG&E's TL6931 Fire Hardening Project Proponent's Environmental Assessment (PEA) (SDG&E 2012b). As described in SDG&E's PEA, the existing ROW supports a 69 kV line. No hazardous sites have been identified within the existing ROW, and no schools exist within 0.25 mile of the ROW. The nearest airport is located approximately 7 miles southeast of the ROW.

b. Loop-in TL625 into the Suncrest Substation (see Figure C-2). The setting associated with the new 3-mile TL625 loop-in is largely located within the CNF approximately 100 feet from the Sunrise Powerlink ROW between Japatul Road and Suncrest Substation. This area has been described in the Sunrise Powerlink Project Final EIR/EIS. As described in the Sunrise Powerlink EIR/EIS, the majority of the terrain associated along the proposed 3-mile TL625 loop-in consists of rugged and remote terrain with little potential to encounter hazardous materials. The closest sensitive receptor identified is a school located over 5 miles to the northeast.

c. Convert a 6.5-mile portion of TL626 between the Santa Ysabel and Boulder Creek substations from 69 kV to 12 kV, along with a 6.8-mile section that is co-located with C79 within the same study area as SDG&E's proposed project; therefore, the environmental setting would be the same as that identified in Sections D.7.1 and D.7.2 for this component.

Environmental Effects

Reconstruction of TL6931

Impacts PHS-1 through PHS-7: Under this alternative, a 6-mile portion of TL6931 would be reconstructed, or a new 3-mile 69 kV loop-in would be developed along the Sunrise Powerlink, and segments of TL626 would be converted from 69 kV to 12 kV.

Reconstruction of TL6931 would consist of construction as well as operations and maintenance activities similar to that described for the project. Due to the nature of the existing TL6931 alignment, there would not be a substantial change to the baseline condition including the presence of hazardous materials, number of sensitive receptors, schools, or airports that could be exposed to hazardous materials or public safety issues. Therefore, as with SDG&E's proposed project, with implementation of MM PHS-1 through MM PHS-8, adverse and significant Impacts PHS-1 through PHS-7 associated with this component would be mitigated under NEPA, and under CEQA impacts would be less than significant with mitigation (Class II).

Development of the New 3-Mile Loop-in of TL625

Impacts PHS-1 through PHS-7: Development of the new TL625 loop-in would consist of construction as well as operations and maintenance activities similar to those described for the project in areas of rugged terrain. Due to the existing undeveloped nature of the proposed alignment, there would not be a substantial change to the baseline condition including the presence of hazardous materials, number of sensitive receptors, schools, or airports that could be exposed to hazardous materials or public safety issues. Therefore, Impacts PHS-1 through PHS-3 and PHS-5 through PHS-7 would reflect similar impact findings previously discussed in Section D.7.3.3. As with SDG&E's proposed project, implementation of MM PHS-1 through MM PHS-4 and MM PHS-7 would under NEPA mitigate adverse Impacts PHS-1through PHS-3 and adverse Impacts PHS 5 through PHS-7 associated with this component. Under CEQA significant impacts would be less than significant with mitigation (Class II).

Due to the intervening topography, an increase in helicopter use both during construction and operations and maintenance would be required, increasing public safety concerns over helicopter use as described in Impact PHS-4. In addition, the loop-in would result in constructing an overhead line in an area where none previously existed. However, it would be adjacent to the existing Sunrise Powerlink project, which serves as the major aerial obstacle in the area. Although adjacent to the existing 500 kV, the addition of the loop-in would be a new facility in the area that would create an obstacle to be avoided and would require attention from pilots. This identified impact would be adverse; therefore, MM PHS-9 has been provided to mitigate this impact. With implementation of MM PHS-5, MM PHS-6, and MM PHS-9, adverse and

significant Impact PHS-4 associated with this component would be mitigated under NEPA, and under CEQA impacts would be less than significant with mitigation (Class II).

Convert Segments of TL626 from 69 kV to 12 kV

Impacts PHS-1 through PHS-7: Conversion of segments of TL626 to 12 kV would consist of construction as well as operations and maintenance activities similar to those described for the project; therefore, Impacts PHS-1 through PHS-7 would reflect similar impact findings previously discussed in Section D.7.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, implementation of MM PHS-1 through MM PHS-7 would under NEPA mitigate adverse Impacts PHS-1 through PHS-7 associated with this component, and under CEQA significant impacts would be less than significant with mitigation (Class II).

D.7.7 No Action Alternative

Environmental Effects

Impacts PHS-1 through PHS-7: Under the No Action Alternative, the MSUP would not be issued, and SDG&E would be required to remove the existing electric lines and facilities on CNF-managed lands as well as develop additional transmission upgrades elsewhere as described in Section C.1.4 of this EIR/EIS. While none of the facilities associated with SDG&E's proposed project would be constructed, removal of the electric lines and restoration activities within the CNF along with the development of additional transmission lines in conformance with California ISO requirements and/or alternative means of delivering electrical service would result in similar construction impacts as described in Section D.7.3. Although similar, these impacts could vary depending on length and the location of electric lines pursued; therefore overall impacts to public health and safety would not be reduced.

D.7.8 No Project Alternative

Environmental Effects

Impacts PHS-1 through PHS-7: Under the No Project Alternative, the proposed power line replacement projects would not be built, and the existing SDG&E electrical facilities would remain; therefore, none of the hazardous materials construction impacts described in Section D.7.3 would occur. The ongoing public health and fire risks associated with structural failure Impact PHS-6 due to extreme weather conditions would continue as further discussed in Section D.8 Fire and Fuels. Operations and maintenance of SDG&E electrical facilities would continue and include routine and periodic pole inspections and equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks and would be based on the requirements of the existing permits. These activities would not increase in

duration, intensity, or frequency over existing conditions; therefore, no impacts over existing conditions to public health and safety would occur.

D.7.9 Mitigation Monitoring, Compliance, and Reporting

Table D.7-2 presents the mitigation monitoring, compliance, and reporting program for public health and safety for the MSUP/PTC power line replacement projects and alternatives.

Table D.7-2
Mitigation Monitoring, Compliance, and Reporting – Public Health and Safety

Mitigation Measure	**MM PHS-1**: San Diego Gas & Electric (SDG&E) shall provide written documentation that all staff, including contractor, and subcontractor project personnel, have received training regarding the appropriate work practices necessary to effectively implement hazardous materials procedures and protocols and to comply with the applicable environmental laws and regulations, including, without limitation, hazardous materials spill prevention and response measures.
Location	All construction work areas for SDG&E's proposed project and all alternative locations.
Compliance Documentation[a] and Consultation	a. Conduct training program including content in mitigation measure b. Provide documentation (attendee sign-in sheets) of project personnel training to the CPUC and Forest Service. c. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. b. and c. Prior to notice to proceed and throughout construction.
Responsible Agency	*SDG&E's Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629), BLM (TL629 and TL6923), CSP (C79) *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM PHS-2**: San Diego Gas & Electric (SDG&E) shall implement best management practices (BMPs) to prevent impacts from release of hazardous materials during construction, operation, and maintenance activities. Typical BMPs could include, but would not be limited to, practices such as the use of absorbent pads for spill containment, specified locations for vehicle refueling, and a daily vehicle inspection schedule designed to identify leaking fuels and/or oils as early as possible. No hazardous material, as defined by 40 CFR ~~335~~ 355, shall be stored on site above threshold planning quantities, as defined in Appendices A and B of 40 CFR 355. ~~and a~~All vehicle maintenance activities shall be conducted ~~off-site~~ at designated locations within approved staging areas or other locations specified for this activity. In the event emergency maintenance is required on site, or removal of the equipment to an off-site repair facility is determined by SDG&E to be infeasible, SDG&E will use BMPs to prevent the release of hazardous materials during these emergency maintenance activities. SDG&E will be required to complete a Spill Response and Notification Plan for agency approval before commencing construction.
Location	All construction work areas for SDG&E's proposed project and all alternative~~s~~ locations.
Compliance Documentation[a] and Consultation	a. Prepare a Spill Response and Notification Plan b. Implement measures as defined and as further defined in the project SWPPP. c. CPUC/Forest Service Monitor: Line item in compliance monitoring report

Table D.7-2
Mitigation Monitoring, Compliance, and Reporting – Public Health and Safety

Timing	a. Prior to construction b. During construction, operation, and maintenance activities c. During construction
Responsible Agency	*SDG&E's Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629), BLM (TL629 and TL6923), CSP (C79) *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM PHS-3**: In the event that rock blasting is used during construction, a noise and vibration calculation will be prepared and submitted to the California Public Utilities Commission and the County of San Diego for review before blasting at each site. The construction contractor will ensure compliance with all relevant local, state, and federal regulations relating to blasting activities. In addition to any other requirements established by the appropriate regulatory agencies, the pre-blast survey and blasting plan shall meet the following conditions: • The pre-blast survey shall be conducted for structures within a minimum radius of 1,000 feet from the identified blast site to be specified by San Diego Gas & Electric (SDG&E) or SDG&E's contractor. Sensitive receptors that could reasonably be affected by blasting shall be surveyed as part of the pre-blast survey. Notification that blasting would occur shall be provided to all owners of the identified structures to be surveyed prior to commencement of blasting. The pre-blast survey shall be included in the final blasting plan. • The final blasting plan shall address air-blast limits, ground vibrations, and maximum peak particle velocity for ground movement, including provisions to monitor and assess compliance with the air-blast, ground vibration, and peak particle velocity requirements. The blasting plan shall meet criteria established in Chapter 3 (Control of Adverse Effects) in the *Blasting Guidance Manual* of the U.S. Department of Interior Office of Surface Mining Reclamation and Enforcement. • The blasting plan shall outline the anticipated blasting procedures for the removal of rock material at the proposed pole locations. The blasting procedures shall incorporate line control to full depth and controlled blasting techniques to create minimum breakage outside the line control and maximum rock fragmentation within the target area. Prior to blasting, all applicable regulatory measures shall be met. The applicant, general contractor, or its subcontractor (as appropriate) shall keep a record of each blast for at least 1 year from the date of the last blast.
Location	All construction work areas for SDG&E's proposed project and all alternative~~s~~ locations.
Compliance Documentation[(a)] and Consultation	a. Prepare a program-level blasting plan followed by specific blasting plans during construction b. CPUC/Forest Service Monitor: Line item in compliance monitoring report
Timing	a. and b. Prior to and during construction

Table D.7-2
Mitigation Monitoring, Compliance, and Reporting – Public Health and Safety

Responsible Agency	*SDG&E's Proposed Project*: CPUC, Forest Service and County, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629), BLM (TL629 and TL6923), CSP (C79) *Forest Service Proposed Actions*: CPUC and Forest Service and County, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service and County, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service and County, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	MM PHS-4: Prior to construction, all San Diego Gas & Electric (SDG&E), contractor, and subcontractor project personnel anticipated to work between poles Z173105 and Z173109 shall receive training regarding the location of suspected soil and groundwater contamination along TL629 between poles Z173105 and Z173109, and will be instructed to avoid any ground disturbance in the area.
Location	Along TL629 between poles Z173105 and Z173109.
Compliance Documentation[a] and Consultation	a. Conduct training program including content in mitigation measure b. Provide documentation (attendee sign-in sheets) of project personnel training to the CPUC.
Timing	a. Prior to notice to proceed for TL629 b. Prior to and during construction
Responsible Agency	CPUC
Mitigation Measure	MM PHS-5: Prior to flight operations for helicopter use during construction as well as operations, San Diego Gas & Electric (SDG&E) shall coordinate with local air traffic control and comply with all Federal Aviation Administration (FAA) regulations regarding helicopter use to prevent conflicts with air traffic generated by local airstrips. Documentation verifying SDG&E has coordinated with local air traffic control shall be provided to California Public Utilities Commission prior to use of helicopters for construction and operations and maintenance activities. SDG&E shall prepare an Aviation Safety Plan for Forest Service approval prior to any use of helicopters in support of activities on the Cleveland National Forest. The Aviation Safety Plan will outline the procedures used to ensure safe transportation of external loads, and will identify coordination requirements with Forest Service aviation resources operating in the area.
Location	All construction work areas for SDG&E's proposed project and all alternative~~s~~ locations.
Compliance Documentation[a] and Consultation	a. Prepare an Aviation Safety Plan as defined in measure b. Documentation showing coordination with Forest Service aviation resources as defined in plan, local air traffic control, and compliance with all applicable FAA regulations. c. CPUC/Forest Service Monitor: Line item in compliance monitoring report
Timing	a and b. Prior to use of helicopters for construction activities c. During construction
Responsible Agency	*SDG&E's Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629), BLM (TL629 and TL6923), CSP (C79) *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)

Table D.7-2
Mitigation Monitoring, Compliance, and Reporting – Public Health and Safety

Mitigation Measure	**MM PHS-6:** ~~Should helicopters be required to lift any~~ If, during construction activities, it is anticipated or planned that helicopters will be used for external load operations, including carrying structures, San Diego Gas & Electric (SDG&E) ~~shall~~ will prepare a Helicopter Lift Plan. This plan will be prepared in accordance with and comply with all relevant FAA regulations, as well as SDG&E's Aviation Operations Manual. ~~to outline helicopter operations and safety procedures for the project. The Helicopter Lift Plan will be prepared consistent with applicable FAA regulations pertaining to these operations and consistent with SDG&E avian safety standards included in SDG&E's Aviation General Operations Manual.~~ Prior to initiation of construction activities for each alignment, if determined that helicopters would be used, ~~T~~the Helicopter Lift Plan will be provided to the California Public Utilities Commission ~~(CPUC)prior to initiating activities~~.
Location	All construction work areas for SDG&E's proposed project and all alternative~~s~~ locations.
Compliance Documentation[a] and Consultation	a. Helicopter Lift Plan b. CPUC/Forest Service Monitor: Line item in compliance monitoring report
Timing	a.. Prior to construction-related flight operations b. During construction
Responsible Agency	*SDG&E's Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629), BLM (TL629 and TL6923), CSP (C79) *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM PHS-7: Conduct geotechnical investigations.** The applicant shall perform design-level geotechnical investigations to evaluate the potential for liquefaction, lateral spreading, seismic slope instability, and ground-cracking hazards to affect the approved project and all associated facilities. Where these hazards are found to exist, appropriate engineering design and construction measures that meet California Building Code (CBC), ~~and Institute of Electrical and Electronics Engineers (IEEE)~~CPUC General Order 95, and Electric Power Research Institute (EPRI) Moment Foundation Analysis and ~~d~~Design parameters shall be incorporated into the project designs. ~~Appropriate measures for project facilities could include construction of pile foundations, ground improvement of liquefiable zones, installation of flexible bus connections, and incorporation of slack in underground cables to allow ground deformations without damage to structures.~~
Location	All construction work areas for SDG&E's proposed project and all alternatives.
Compliance Documentation[a] and Consultation	a. Geotechnical investigations for liquefaction, lateral spreading, seismic slope instability, and ground-cracking hazards for approved project facilities. b. CPUC/Forest Service Monitor: Line item in compliance monitoring report
Timing	a. Prior to construction b. During construction
Responsible Agency	*SDG&E's Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629), BLM (TL629 and TL6923), CSP (C79) *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)

Table D.7-2
Mitigation Monitoring, Compliance, and Reporting – Public Health and Safety

Mitigation Measure	**MM PHS-8: Facilities inspections conducted following major seismic event.** If large levels of ground shaking (such as Modified Mercalli Intensity VI or greater) are experienced or a major earthquake (magnitude 6.0 and above) occurs along the Elsinore Fault, a professional licensed geologist, geotechnical engineer, and structural engineer ~~hired by the project applicant~~employed or contracted by SDG&E shall perform facilities inspections as quickly as possible. Careful examination shall be conducted of all project facilities within the identified area of effect. Any required repair or needed improvements shall be implemented as soon as feasible to ensure that the integrity of project facilities has not been compromised.
Location	All construction work areas for SDG&E's proposed project and all alternative~~s~~ locations.
Compliance Documentation[a] and Consultation	a. Professional investigation of all approved project facilities following a major seismic event b. Submittal of report (indicates required repairs or needed improvements, actions taken to repair facilities, if needed, and timing of repair work)
Timing	a. Following a major seismic event b. During construction and operation
Responsible Agency	*SDG&E's Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629), BLM (TL629 and TL6923), CSP (C79) *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)

[a] All compliance documentation and consultation records to be available for CPUC and Forest Service staff review upon request.

D.7.10 Residual Unavoidable Effects

Under NEPA, SDG&E's proposed project would result in adverse but mitigated impacts. Mitigation measures presented in Section D.7.9, along with APMs provided in Section D.7.3.2, would mitigate all impacts. Under CEQA, implementation of mitigation measures presented in Section D.7.9 would mitigate all significant public health and safety impacts to less than significant. Therefore, no residual effects would occur for SDG&E's proposed project or alternatives.

D.7.11 References

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FAA. 2014d. "Rancho Vallecito." National Flight Data Center. Accessed January 28, 2014. https://nfdc.faa.gov/nfdcApps/airportLookup/airportDisplay.jsp?category=nasr&airportId=46CA.

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SDG&E. 2012b. *Proponent's Environmental Assessment for the TL6931 Fire Hardening/Wind Interconnect Project*. December 2012. Accessed April 2014. http://www.cpuc.ca.gov/environment/info/dudek/Wind_Interconnect/SDGE%20Wind%20Interconnect%20PEA.pdf.

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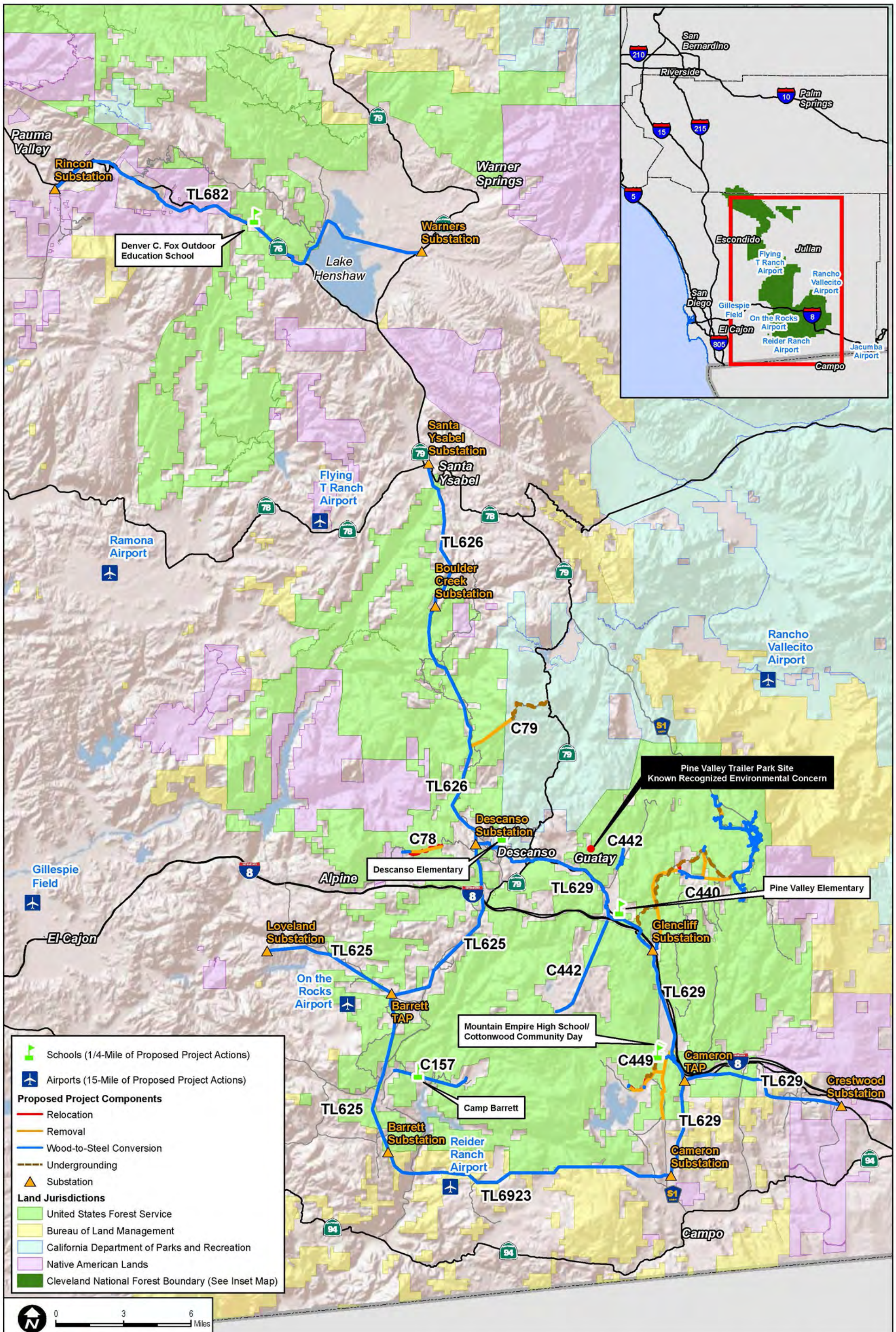

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SOURCE: SDG&E 2011; SanGIS 2012; Bing Maps

FIGURE D.7-1

Project Area Facilities/Sites that Concern Public Health and Safety

MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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D.8 Fire and Fuels Management

This section addresses potential fire hazard impacts resulting from construction and operation of the proposed power line replacement projects along with the operation and maintenance activities proposed for authorization under the MSUP. Section D.8.1 provides a description of the existing setting/affected environment for fire hazards in the project study area. Applicable regulations, plans, and standards are listed in Section D.8.2. An analysis of the SDG&E proposed project's impacts/environmental effects and discussion of mitigation measures are provided in Section D.8.3. Section D.8.4 provides an analysis of the U.S. Forest Service (Forest Service) proposed actions. Section D.8.5 discusses the Bureau of Indian Affairs (BIA) proposed action and additional project alternatives are described in Section D.8.6. The No Action Alternative is discussed in Section D.8.7, and the No Project Alternative is described in Section D.8.8. Section D.8.9 provides mitigation monitoring, compliance, and reporting information. Section D.8.10 addresses residual effects of the project. The references cited in this section are provided in Section D.8.11.

D.8.1 Environmental Setting/Affected Environment

Methodology and Assumptions

As wildfire-related impacts require analysis of a larger area than that associated with a given project, including up to several miles beyond SDG&E's proposed project's immediate footprint and influence area, this analysis encompasses the power line replacement projects' study area, as identified in Figure B-1. Information utilized for specific fire-related risk assessment was based on limited site visits and extensive review of aerial images, vegetation (fuels) coverage maps, wildfire history and frequency data (FRAP 2013), fire hazard severity zone data (FRAP 2013), fire threat data (FRAP 2013), and U.S. Geological Survey (USGS) 7.5-minute quadrangles. Additionally, a review of previously prepared environmental documents including SDG&E's *Master Special Use Permit, Cleveland National Forest, Orange and San Diego Counties, California, Revised Plan of Development* (SDG&E 2013) the *Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) and Proposed Land Use Amendment for the Sunrise Powerlink Project* (CPUC and BLM 2008), the *Final Environmental Impact Report/Environmental Impact Statement for the East County Substation, Tule Wind, and Energia Sierra Juarez Gen-Tie Projects* (CPUC and BLM 2011), and the *Final Initial Study and Mitigated Negative Declaration for San Diego Gas & Electric Company Tie-Line 637 Wood-to-Steel Project* (CPUC 2014) was conducted to support preparation of this section.

Review of available information necessary to analyze overall fire risk includes: California Department of Forestry and Fire Protection's (CAL FIRE's) Fire and Resource Assessment Program (FRAP) maps and datasets (FRAP 2013); the Forest Service Cleveland National

Forest (CNF) *Land and Resource Management Plan, Part 2* (Forest Service 2005a), the *Biological Technical Report for SDG&E Company Electric Safety and Reliability Plan Project* (Chambers Group 2012); the 2010 California Fire Code; the 2010 California Building Code (Chapter 7A); the 2011 County of San Diego Consolidated Fire Code; the *County of San Diego Guidelines For Determining Significance and Report Format and Content Requirements for Wildland Fire and Fire Protection* (County of San Diego 2010a); and the 2010 San Diego County *Multi-Jurisdictional Hazard Mitigation Plan* (County of San Diego 2010b).

D.8.1.1 General Overview

The CNF includes a variety of fuel types, including areas of woodland and forest. These fuels influence fire ignitions and spread. The dense stands of trees (timber fuels), combined with several years of below normal rainfall, have resulted in an average white fir mortality of 50% on the CNF, with some areas reaching 90% mortality (Forest Service 2012). In areas dominated by pine trees, bark beetles are attacking residual forests resulting in a continual cycle of tree mortality (Forest Service 2005a). High tree mortality in pine and fir-dominated stands has resulted in an unnatural accumulation of overstory surface fuels. Concurrently, an increased density of young shade-tolerant trees has formed in the understory of such stands and can act as ladder fuel that may result in surface fire transition to crown fire (Forest Service 2012). Another pest affecting forest systems on the CNF is the goldspotted oak borer (GSOB; *Agrilus auroguttatus*), which was detected in San Diego County in 2002. GSOB has contributed to the mortality of more than 80,000 oak trees over approximately 4,900 square kilometers (3,044 square miles) within San Diego County, and the infested area continues to grow as GSOB populations increase and spread (CISR 2013). As a result of increased tree mortality and heavy understory fuel loads, many of the forested areas in the MSUP/Power Line Replacement study area are being replaced with chaparral and scrub vegetation after a wildfire.

The shrub-dominated plant communities associated with SDG&E's proposed project area are typically dominated by chaparral species. This fuel type, particularly old chaparral, is highly flammable. Adaptations to the local dry, Mediterranean climate include specialized roots, stems, and leaves. The latter two become available fuels of importance and contribute to the intensity of wildfire. For example, chaparral leaves are coated with ether extractives, such as oils, fats, terpenes, and waxes. The extractive content is highest during fall (the height of fire season in the study area) and lowest during the spring. Additionally, the amount of moisture in chaparral communities is lowest in the fall. These qualities make Southern California chaparral some of the most volatile wildfire fuels in the United States (Forest Service 2012).

Grassland fuels ignite and burn more readily than the forest and shrub communities. Grass fires are characterized as having lower fire intensity and a faster rate of spread than fires burning in shrub and forest fuel types.

Additionally, the fire environment in the study area is considered one of several areas that are classified as "wildfire corridors" because a large portion of the fuel bed has not burned in 40 years or more (SanGIS 2011). With the ratio of dead to live fuels gradually increasing with age, a parallel increase in fire intensity is expected. In chaparral types, for example, the larger proportion of dead plant material, the more vigorously fires burn. Typically, the dead fraction increases with the age of the chaparral (Biswell 1989). At 20 years of age, the dead ratio is about 20%; at 30 years, 30%; at 40 years, 40%; and at 50 years, 45% to 50%. The age of the fuel beds in the study area range from 20 to 40+ years. Therefore, vegetation conditions for chaparral (fuel type and age class) within the study area can be characterized as being supportive of high-intensity surface fires with a high resistance to control.

Based on Fire Hazard Severity Zone (FHSZ) mapping data (FRAP 2013), the proposed power line replacement projects would be located primarily within a Very High FHSZ, with some smaller portions located in areas classified as High FHSZ or Moderate FHSZ. CAL FIRE uses FHSZs to classify anticipated fire-related hazards for the entire state and includes classifications for State Responsibility Areas (SRAs), Local Responsibility Areas (LRAs), and Federal Responsibility Areas (FRAs). Fire hazard measurements take into account the following elements: vegetation, topography, weather, crown fire production, and ember production and movement. The Very High Fire Hazard Severity designation can be attributed to a variety of factors including highly flammable, dense, drought-adapted chaparral vegetation' seasonal, strong winds; and a Mediterranean climate[1] that results in vegetation drying during the months most likely to experience Santa Ana winds. Santa Ana winds are winds originating from the Great Basin that create extreme fire weather conditions characterized by low humidity, sustained high speeds, and extremely strong gusts. Santa Ana winds typically blow from the northeast over the Peninsular Range. As the air is forced through coastal mountain passes, wind speeds of 40 miles per hour (mph) can be maintained for hours with gusts from 70 to 115 mph possible (Schroeder et al. 1964). On ~~February 15~~ April 30, 2014~~3~~, a ~~9~~101 mph gust was recorded at the SDG&E Sill Hill weather station, near TL626 (~~Weather Underground 2013~~SDGEWeather.com 2014). Winds can exceed 100 mph, particularly near the mouth of canyons oriented along the direction of airflow; this situation can lead to serious fire suppression problems, resulting in temporary closure of sections of main highways (BLM 2007). Figure D.8-1, Fire Hazard Severity Zone Map, identifies the CAL FIRE Fire Hazard Severity Zone designations in the study area.

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[1] Weather patterns are typical of Southern California with a Mediterranean climate consisting of mild wet winters and warm to hot, dry summers.

Topography

In general, central and eastern San Diego County and southern Orange County include terrain that is favorable to wildfire spread including steep slopes, ravines, mountains, and valleys. Dominant topographical features include the Palomar, Cuyamaca, and Laguna mountains of the Peninsular Range in San Diego County, as well as Lucas and San Juan canyons in Orange County. Topography in the study area varies from relatively flat pasturelands to steep, rocky cliffs in higher elevation mountain areas. The elevation within the study area ranges from 1,030 to 6,100 feet.

Fire History

Regional fire history information can provide an understanding of fire frequency, fire type, the most vulnerable project areas, significant ignition sources, and other information relevant to understanding the fire and fuels environment in an area. Fire history information is a useful tool for predicting where wildfires tend to burn, and there have been numerous recorded wildfires in the vicinity of the study area. Fire history data was obtained from CAL FIRE's FRAP database (FRAP 2013). FRAP has been working cooperatively with the Forest Service to compile a seamless inventory of fire data throughout California (Iberdrola Renewables 2010); therefore, the FRAP data set includes the CNF fire history records. Fire history records document nearly 900 wildfires within the study area between 1910 and 2012 (FRAP 2013).[2] Wildfires excluded from the FRAP data set (less than 10 acres in size) also occur in the study area. Due to suppression efforts or other site-specific, weather, or environmental variables, these fires do not grow to a size to be included in the FRAP database. Nevertheless, their presence is an important component of the fire history in the study area. Based on historic fire incident records for all agencies, a total of 5,547 vegetation fires occurred in CAL FIRE's San Diego Unit between 1998 and 2008 (CAL FIRE 2014a). During this same period, 174 fires were recorded in the FRAP database (3% of total fires recorded), indicating that small fires are a common occurrence in the region and can occasionally grow into large fires and that fire suppression efforts in the San Diego Unit have been successful in keeping the majority of vegetation fires under 10 acres in total size.

While burning has occurred throughout the study area, higher burn frequencies are evident in the San Diego River watershed, the Temescal Creek watershed, and the San Miguel

[2] Fire history records are derived from polygon geographic information system (GIS) data from CAL FIRE's FRAP, which includes data from CAL FIRE, Forest Service Region 5, the Bureau of Land Management (BLM), the National Park Service (NPS), contract Counties, and other agencies. The data set is a comprehensive fire perimeter GIS layer for public and private lands throughout the state and covers fires 10 acres and greater between 1878 and 2012.

Mountain/Lyon Peak area. Based on a review of the fire history information, average fire return interval for the power line replacement projects study area is less than 1 year, with many fires having occurred within the same year. Average fire return interval for large fires (>15,000 acres) in the study area is 4 years, with intervals ranging from 0 (multiple fires in the same year) to 17 years (FRAP 2013).

Major Wildfires

As discussed in the 2010 *Multi-Jurisdictional Hazard Mitigation Plan* prepared by San Diego County's Office of Emergency Services, wildland fires have prompted five Proclaimed States of Emergency, and wildland–urban interface fires have prompted three Proclaimed States of Emergency within the County between 1950 and 2007 (County of San Diego 2010b). The worst wildfires in the County's history occurred in October 2003 and again in October 2007. The 2007 fires included the Witch Creek Fire along with six other smaller fires that burned throughout the County resulting in the burn over of 369,000 acres of land, 2,670 structures, 239 vehicles, 2 commercial properties, and subsequent costs exceeding $1.5 billion. The Witch Creek Fire was the largest of the October 2007 wildfires and burned a total of 197,990 acres, surpassing the 1970 Laguna Fire (174,158 total acres burned), and becoming the largest power line-caused wildfire in the state (CAL FIRE 2014b). The wildfire started in Witch Creek Canyon near Santa Ysabel and quickly spread to urbanized areas to the west. The 2007 wildfires in San Diego County were responsible for 10 civilian deaths, 23 civilian injuries, and 89 firefighter injuries (County of San Diego 2007). The second worst wildland fire season occurred during October 2003 and included the Cedar, Paradise, Otay, and Roblar fires. The 2003 fires burned a total of over 390,000 acres of land and 3,241 structures, and resulted in 16 deaths (CAL FIRE 2003). Major contributing factors to the extreme wildfires in 2003 and 2007 were regional drought, high temperatures, and strong Santa Ana winds (County of San Diego 2010b). Table D8-1 presents wildfires in excess of 15,000 acres within the study area between 1910 and 2012.

Table D.8-1
Wildfires Larger than 15,000 within the Proposed
MSUP/PTCPower Line Replacement Projects Study Area

Fire	Date	Acres Burned	Fire Cause
Vail Fire	July 1989	15,808	Unknown/Unidentified
Palomar Fire	October 1987	16,100	Debris
Otay No. 322 Fire	October 1996	16,562	Campfire
Horse Fire	July 2006	16,677	Campfire
Unnamed Fire	1947	17,156	Unknown/Unidentified
Guejito Fire	October 1993	17,820	Power Line
Coyote Fire	July 2003	18,704	Lightning

Table D.8-1
Wildfires Larger than 15,000 within the Proposed MSUP/PTCPower Line Replacement Projects Study Area

Fire	Date	Acres Burned	Fire Cause
Ortega Fire	October 1993	21,011	Miscellaneous
Unnamed Fire	1929	22,336	Miscellaneous
Unnamed Fire	1967	29,083	Miscellaneous
Unnamed Fire	1929	30,494	Miscellaneous
Otay Fire	October 2003	44,725	Miscellaneous
Outside Origin No. 42 Fire	November 1956	46,602	Miscellaneous
Unnamed Fire	1928	48,612	Miscellaneous
Poomacha Fire	December 2007	49,390	Miscellaneous
Paradise Fire	November 2003	56,427	Arson
Pines Fire	July 2002	61,690	Power Line
Unnamed Fire	1913	62,426	Unknown/Unidentified
Conejos Fire	August 1950	62,849	Miscellaneous
Unnamed Fire	1928	62,967	Miscellaneous
Unnamed Fire	1944	64,419	Miscellaneous
Steward Fire	1958	68,105	Unknown/Unidentified
Harris Fire	November 2007	90,728	Unknown/Unidentified
Laguna Fire	October 1970	174,158	Power Line
Witch Creek Fire	October 2007	197,990	Power Line
Cedar Fire	October 2003	280,278	Equipment Use

Source: FRAP 2013.

Fires Caused by Power Lines

Power lines of different voltages may cause fires in different ways. Due to system components, distribution and transmission lines are susceptible to different wildfire-causing events. For example, distribution lines are mounted with devices (transformers and capacitors), some of which include internal oils that can explode and ignite nearby vegetation. Also, fallen or wind-blown tree limbs and debris is more likely to come into contact with distribution lines because these lines are spaced much closer together than transmission lines and are typically closer to the ground. Arcing (which occurs when electrons are able to jump a gap in a circuit) from a single conductor to ground through vegetation contact can occur on power lines of all voltages, but generally the distance to the ground of conductors on all facilities limits the potential for this event to occur (arcing between conductor phases is more likely to occur) (CPUC and BLM 2008). Of the various voltage lines, 69-kilovolt (kV) transmission lines can be subject to conductor-to-conductor contact when high winds force two conductors on a single pole to oscillate so excessively that they come in contact with one another (also known as “mid-line” slap) (CPUC and BLM 2008). Nearby vegetation can catch fire from sparks resulting from

conductor-to-conductor contact. Arcing occurring at line faults can also occur during high winds or when vegetation comes into contact with the lines. The use of automatic line fault reclosers can increase ignition potential if the lines are reenergized without proper inspection and repair. Maintenance activities can also inadvertently result in fires on transmission lines of any voltage, depending on the specific components of the system in question. Although power line structures (including wood and steel poles and steel lattice structures) are designed to retain their structural integrity in high-wind environments, high winds can (in rare cases) blow over these structures. When such an event occurs, the protection and control systems of power lines systems are designed to safeguard against the threat of wildland fire by shutting off power immediately, thereby disrupting electrical flow along the line (CPUC and BLM 2008). This approach, however, does not always work as designed, and sparks generated prior to power shut down can ignite nearby vegetation.

Small- and medium-voltage power line ignitions caused by high winds were responsible for four of the largest fires recorded in California between 1923 and 2007: the Witch Creek Fire (which eventually merged with the Guejito Fire) (2007), the Campbell Complex (1990), the Laguna Fire (1970), and the Clampitt Fire (1970). Both the Witch Creek and Laguna Fires occurred within SDG&E territory. In 2007, the Witch Creek Fire and the smaller Rice Fire (which burned approximately 9,500 acres) were ignited by an SDG&E distribution line failure during windy conditions. According to a report prepared by the California Public Utilities Commission's (CPUC's) Consumer Protection and Safety Division, the Witch Creek Fire was caused by conductor contact on an SDG&E 69 kV transmission line during Santa Ana wind conditions and the Rice Fire was caused by a tree limb falling and coming into contact with an SDG&E 12 kV conductor during Santa Ana wind conditions (CPUC 2008). The 2007 Guejito Fire (which merged with the Witch Creek Fire) was caused by contact between a Cox Communications' lashing wire and an SDG&E 12 kV conductor during Santa Ana wind conditions. In all cases, the Consumer Protection and Safety Division found that the responsible party was in violation of CPUC General Order 95, Rule 31.1 (CPUC 2008). General Order 95, Rule 31.1 is discussed in Section D.8.2.

In addition to high winds and vegetation maintenance violations, contact between large birds and power lines and gunshots fired at power line hardware can also result in wildfires. Fire can result from birds coming into contact with two closely spaced conductors, resulting in an unintended electrical arc or "flashover" (CPUC and BLM 2008). Bird-related flashovers, which are more common on lines where conductors are positioned close together and can hence be contacted by outstretched wings, can result in fires if the feathers of an electrocuted bird catch fire and come into contact with ground vegetation. Wider spacing of conductors minimizes the possibility of this type of flashover; therefore, the risk of flashover decreases with increasing voltage as higher-voltage lines are required to be spaced at greater intervals. Additionally, protective covers

on the conductors where they attach to poles minimizes bird electrocution and associated flash over. Regarding gun shots, it is common in remote areas for vandals to shoot at power line components, including ceramic insulators. Lower-voltage lines are more susceptible to damage from gun shots and possess a greater wildfire potential when compared to higher-voltage lines. The support structures associated with lower-voltage lines are shorter than those associated with higher-voltage lines, making insulators and conductors placed on lower-voltage lines easier targets for vandals. Similarly, the structural integrity of steel conductors associated with higher-voltage lines is greater than the integrity afforded to similar hardware located on lower-voltage lines, resulting in a less dramatic response to being hit by bullets and resulting in lower occurrences of vandalism.

As previously discussed, inadequate maintenance practices around power lines and associated structures can also result in wildfires, such as when the structural integrity of the power lines or structures is degraded and trees or vegetation are allowed to grow to the point of contacting hardware, such as conductors. California Public Resources Code 4293 establishes the minimum clearance requirements for overhead power lines. These requirements are discussed in Section D.8.2.

Environmental Effects of Past Fires

Although wildfire can benefit natural ecosystems that have evolved with occasional burning and that benefit from the stimulation of growth through the reproduction of plants and wildlife habitat, fire can also be detrimental to biological and other natural resources, such as air quality and water quality.

Biological Resources

Flora

Grassland communities, usually non-native grasses, will readily establish after wildfires in chaparral and scrub communities. With repeated burning at short intervals of up to several years, it is possible to convert chaparral and scrub to non-native grasslands. Chaparral and scrub vegetation communities will typically re-sprout and absent fire or other disturbances will return to pre-fire conditions. Chaparral communities also tend to repopulate many of the San Diego County forest types following stand-replacing fire. The chaparral may establish for the first several years after the fire event, whereupon the tree cover will begin to establish (Forest Service 2000a). Because vegetation communities can be converted following fire, these changes in dominant vegetation communities can drastically affect plant and animal habitat and can affect the prevalence of special-status species.

Fauna

Generally speaking, fires injure or kill a relatively small proportion of wild animals. For example, birds and larger mammals can flee wildfire, and small mammals and reptiles can seek refuge in subterranean burrows. Habitat changes resulting from fires have a much more profound impact on faunal populations and communities than does the fire itself. Fires can result in short-term increases in vegetation productivity and the availability and nutrient content of forage and browse (Forest Service 2000b). These increases can in turn lead to increases in herbivore populations. However, any increase in population size is highly dependent upon the population's ability to survive in the post-fire environment (Forest Service 2000b). In general, fires that devastate a landscape featuring many shrubs and trees reduce habitat cover for species requiring cover and increase habitat for species (such as raptors) that prefer open areas (Forest Service 2000b).

Air Quality

Carbon dioxide, water vapor, carbon monoxide, particulate matter, hydrocarbons, and other constituent materials are all present in wildfire smoke. The specific composition of smoke depends largely on the fuel type (vegetation types contain different amounts of cellulose, oils, waxes, and starches, which when ignited produce different compounds). In addition, hazardous air pollutants and toxic air contaminants, such as benzene and formaldehyde, are also present in smoke. However, the principal pollutant of concern from wildfire smoke is particulate matter. In general, particulate matter from smoke is very small in size and can be inhaled into the deepest recesses of the lungs, presenting a serious health concern (Lipsett 2008).

Factors including weather, stage of fire, and terrain can all dictate fire behavior and the impact of smoke on the ground. Wind, for instance, generally results in lower smoke concentrations because wind causes smoke to mix with a larger volume of air. Regional weather systems, such as the Santa Ana winds of Southern California, on the other hand, can spread fire quickly and result in numerous devastating impacts. The Santa Ana winds effectively work to reverse the typical onshore flow patterns and blow winds from dry, desert Great Basin areas westward toward the coast. As a result, coastal communities can be impacted by fires originating in inland areas (Lipsett 2008).

Large quantities of pollutants can be released by wildland fires over a relatively short period of time. Air quality during large fires can become severely hazardous and can remain impaired for several days after the fire is ignited.

Water Quality

Fire can impact water quality by increasing potential for erosion and sedimentation in areas where vegetation has been burned, resulting in increased water temperature through removal or drastic modification of shade-providing trees and vegetation. Water chemistry can also be altered through the introduction of pollutants and chemical constituents. Aquatic environments may also be impacted through the introduction of fire retardant chemicals used during firefighting activities.

Erosion and Sedimentation

Watersheds severely burned by wildfire are vulnerable to accelerated rates of soil erosion and can experience large amounts of post-fire sediment deposits. Increases in post-fire suspended sediments in streams and lakes (in addition to possible increases in turbidity) can result from erosion and overland flow, channel scouring, and creep accumulations in stream channels after an event (Forest Service 2005b). While less is known regarding the effect of fire on turbidity, it has been observed that post-fire turbidity levels in stream water are affected by the steepness of the burned watershed (Forest Service 2005b). The little data available regarding post-fire turbidity levels has indicated that U.S. Environmental Protection Agency (EPA) water quality standard for turbidity can be exceeded after a fire event (Forest Service 2005b).

Water Temperature

When fire burns stream bank vegetation and shade trees, water temperature can rise, which in turn can lead to thermal pollution, which leads to increased biological activity in the stream. Increased activity levels place a greater demand on the dissolved oxygen content of the water and can affect the survivability and sustainability of aquatic populations and communities (Forest Service 2005b). Water temperature increases up to 62° Fahrenheit (°F) have been recorded in stream flows following fires in which the stream bank vegetation was burned (Forest Service 2005b).

Water Chemistry

Ash deposits generated by a fire can affect the pH of water immediately after the event, potentially increasing to levels that violate water quality standards. In addition, increases in the pH of nearby soil can also cause increases in stream flow pH (Forest Service 2005b). Dissolved nitrogen levels can increase after fires as a result of accelerated mineralization and nitrification (dissolved nitrogen is commonly studied as an indicator of fire disturbance), but these levels do not typically exceed established water quality standards (USDA 2005b). Dissolved phosphorous, sulfur, chloride, and

total dissolved solids levels can increase after a fire, but studies have shown that these increases typically do not result in violation of drinking water quality standards (Forest Service 2005b).

Fire Retardant

The use of fire retardants to protect communities, sensitive resources, or other assets has proven highly effective, but it can have a direct effect on aquatic environments. The use of ammonium-based retardants can affect water quality and, in some instances, they can be toxic to aquatic biota (Forest Service 2005b). Nitrogen-containing retardants can potentially affect drinking water quality, and retardants containing sodium ferrocyanide (YPS) can potentially be lethal for aquatic organisms (Forest Service 2005b).

Assets at Risk

CAL FIRE's Fire and Resource Assessment Program (FRAP) prepared the document entitled *California's Forests and Rangelands: 2010 Assessment*. This document satisfies 2008 Federal Farm Bill provision that each state conduct an assessment of forest resources, which is intended to identify key issues facing each state and requires the delineation of spatial areas called Priority Landscapes. Priority Landscapes are intended to focus investments and other programs to address issues identified in the assessment. Priority Landscape data sets related to fire include an evaluation of fire risk as related to carbon, community water, ecosystem health, forest economics, human infrastructure, range economics, recreation and open space, and wildlife.

Highly-ranked Priority Landscapes within SDG&E's proposed project study area related to wildfire include carbon sequestration potential, community water supply, ecosystem health, human infrastructure (including transmission lines), range economics, recreation, and wildlife (FRAP 2010). Utilizing the Priority Landscape data set, CAL FIRE's San Diego Unit has identified three Priority Landscapes that have little or no recorded fire history in the past 30 years (CAL FIRE 2013). Two of these areas are within SDG&E's proposed project study area and identified assets at risk from wildfire include watershed value (supporting Lake Morena, Barrett Reservoir, Loveland Reservoir, Vail Lake, and Lake Henshaw), public recreational trails, camp grounds, scenic overviews, and cultural values based on numerous Indian reservation and historical sites.

Communities at Risk

In addition, assets at risk from wildfire include all structures within approximately 40 miles to the west of SDG&E's proposed project area, stretching to the urbanized areas of Valley Center, Escondido, Ramona, Santee, El Cajon, Chula Vista, and some coastal cities. This area includes terrain, vegetation, and climate that have historically supported wildfire spread. Some of the area

has no recorded fire history; other areas haven't burned for 40 years, since the Laguna Fire in 1970, indicating that fuels may be heavy and would readily spread fire. The result of an ignition under worst-case conditions would be potential wildfire threat to all structures and communities to the west of SDG&E's proposed project area. Within SDG&E's proposed project study area, rural development is typical with several nearby communities being listed as a federally recognized community at risk of wildfire, including: Alpine, Borrego Springs, Boulder Oaks, Boulevard, Cameron Corners, Campo, Descanso, Dulzura, Guatay, Harbison Canyon, Jamul, Julian, Lakeside, Mesa Grande, Mount Laguna, Pine Valley, Potrero, Ramona, Ranchita, San Pasqual, Santa Ysabel, and Warner Springs (California Fire Alliance 2013).

From a regional wildfire perspective, SDG&E's proposed project is located in an area designated by the County of San Diego as within wildfire corridors with continuous fuel beds, based on fuel ages, topography, and climate. Based on this designation, it is feasible that communities and individual structures within SDG&E's proposed project study area may be impacted should a wildfire ignite from a proposed project-related source.

Firefighting

United States Forest Service

Wildland fire suppression responsibility on federal and private lands within the congressional boundary of the CNF is provided by the Forest Service. In central San Diego County, Forest Service firefighting facilities can be co-located with firefighting operations of other jurisdictions such as CAL FIRE and San Diego County to share resources (CPUC and BLM 2008). The joint CAL FIRE and Forest Service Firefighting Air Attack Base in Ramona (operated May through November) is an example of shared resources. During extended wildland fire attack, federal resources can be mobilized throughout the country to support these incidents. CNF resources include the following:

- 28 fire engine companies
- Three "Hotshot" handcrews
- One medium-sized helicopter
- One type-1 helicopter (heli-tanker)
- Access to air tankers jointly used by Angeles National Forest and San Bernardino National Forest.

Bureau of Land Management

Power lines associated with SDG&E's proposed project traverse Bureau of Land Management (BLM)-administered lands in two locations, including a 1.3-mile segment associated with TL629 and a 4.9-mile segment associated with TL6923. These areas are located in the southern portion of SDG&E's proposed project within the Hauser Mountain area (TL6923) and the Morena Valley areas (TL629). The BLM maintains several programs in the disciplines of fire suppression, preparedness, fuels management, prevention and education, community assistance, and protection and safety, all of which are intended to safely protect the public, natural landscape, and wildlife habitat from fire-related damage (BLM 2009). The various programs of the BLM are discussed briefly as follows.

- The Fire and Aviation Directorate Program is tasked with providing aerial firefighting support for fires occurring on BLM lands. Aircraft used by the BLM are BLM-owned and contracted.
- The Community Assistance and Protection Program includes mitigation and prevention, education, and community outreach. Experts within this program are typically deployed to fire-prone areas before a fire starts to educate the community regarding fire management and suppression activities.
- The Fuels Management Program focuses on protecting communities and natural resources while providing for local economic opportunities. Through this program, fuels are effectively managed through collaboration with local communities and agencies in the form of community wildfire protection programs, fuels treatment, biomass utilization, and local fuels management contracts.

It should be noted that in addition to maintaining these programs, the BLM provides funding for firefighting efforts (through Community Assistance Grants) in the rural areas of San Diego County. In the past, funding has been used for wildfire training to local volunteers responsible for responding to fires on BLM lands. In San Diego County, BLM lands are under a Direct Protection Agreement with CAL FIRE, which specifies that CAL FIRE provides fire response resources and is responsible for conducting investigations regarding the recovery of fire suppression costs (CPUC and BLM 2008).

SDG&E's proposed project is located within the California Desert District and in the El Centro Fire Management Zone of the BLM. The current Fire Management Plan (FMP) for the California Desert District was developed in 1998 and was designed around a "fire management zone" concept based on distinct vegetation communities and the strategies for fire suppression within each of those communities. The intent was for objectives and constraints identified for fire-suppression activities to be developed by Land Use Plan decisions associated with resources. The FMP categorized the proposed project area as Fire Management Zone (FMZ) 6, which is a CAL

FIRE Direct Protection Area. This means that CAL FIRE is the primary fire protection agency for BLM-managed lands in the area (CPUC and BLM 2008).

The primary objective of CAL FIRE's fire policy is to suppress all vegetation fires of 10 acres or less upon initial attack, based on "assets at risk analysis," which favors protection of structures in the wildland urban interface. CAL FIRE and BLM operate under a Cooperative Fire Protection Plan that implores CAL FIRE to consider BLM's resource protection standards in order to develop the least-cost/least-damaging suppression strategy possible. During wildfire incidents on BLM lands, BLM is required to send a resource advisor to work directly with the CAL FIRE incident commander to ensure resource values are fully protected or at least mitigated. This requirement is applicable to all vegetation fires occurring in the proposed project area (CPUC and BLM 2008).

California Department of Forestry and Fire Protection – San Diego Unit

CAL FIRE's San Diego Unit is responsible for fire protection services on all SRA lands within San Diego and Imperial Counties. The San Diego Unit is responsible for 1.2 million acres of SRA for wildland fire protection. For coordinated wildland fire protection services (exchanging acres) the San Diego Unit has fire suppression responsibility for 1.4 million acres of State Direct Protection Area (CAL FIRE 2013). The San Diego Unit is well equipped for firefighting activities in the region. Equipment and personnel at the disposal of the San Diego Unit include the following:

- 18 CAL FIRE fire stations, 26 CAL FIRE fire engines
- 14 local government stations with 18 fire engines
- 24 local government Volunteer Fire Stations with 53 fire engines
- 4 CAL FIRE/California Department of Corrections and Rehabilitation Conservation Camps with 19 handcrews
- One CAL FIRE/Forest Service Air Attack Base equipped with one CAL FIRE OV-10 Air Attack Aircraft, two CAL FIRE S-2T Air Tankers, and one Forest Service Type 2 Helicopter
- Two CAL FIRE/San Diego Sheriff Type 2 Helicopters
- Four CAL FIRE bulldozers
- One CAL FIRE/Forest Service Interagency Command Center, Monte Vista Headquarters.

The San Diego Unit is headquartered at 2249 Jamacha Road in El Cajon.

California State Parks

State wilderness and recreational areas in the general vicinity of SDG&E's proposed project include Cuyamaca Rancho State Park, Anza-Borrego Desert State Park, and Palomar Mountain State Park, although only Cuyamaca Rancho State Park includes components of SDG&E's proposed project. Cuyamaca Rancho State Park is located in east central San Diego County spanning the crest of the Cuyamaca Mountains in the Peninsular Ranges. Anza-Borrego Desert State Park reaches from the higher elevations of the Peninsular Ranges in eastern San Diego County to the desert floor on the western edge of Imperial County. Palomar Mountain State Park is located at the peak of Palomar Mountain, to the east of Pauma Valley. State Parks are SRA lands; therefore wildland fire protection is provided by CAL FIRE.

County of San Diego

Fire protection services within the County of San Diego are provided by various city and rural district fire departments. Fire protection resources are primarily dependent on locality and need. Incorporated cities typically have their own fire departments to provide fire services within their jurisdictional boundaries. Unincorporated areas of the County occur within SDG&E's proposed project area and San Diego Rural Fire Protection District (SDRFPD) provides fire services in both LRA and SRA. In SRA, CAL FIRE has the primary responsibility for suppressing wildfires. In addition to LRAs, County Service Areas have also been identified and services to these areas are typically provided by volunteer fire departments. FRAs are typically the responsibility of the Forest Service, but military and civilian departments on bases within these areas provide services. In addition, there are numerous Fire Safe Councils—volunteer groups that meet with fire agencies to assist with fuel-reduction strategies and fire safety education.

The unincorporated area of the County of San Diego has a Cooperative Fire Protection Agreement with CAL FIRE for fire and emergency services in the SDRFPD. CAL FIRE responds to wildland fires, structure fires, floods, hazardous material spills, swift water rescues, civil disturbances, earthquakes, and medical emergencies.

The San Diego County Fire Authority (SDCFA) was created by the County Board of Supervisors in July 2008 to improve fire protection and emergency medical services in the region. The authority's goal is to unify the administrative support, communications, and training of 15 rural fire agencies and extend "around the clock" protection to 1.5 million acres of the unincorporated County that previously had either limited or part-time "on-call" protection by 2012. To date, SDCFA has purchased 46 pieces of fire apparatus, including 18 water tenders and 14 Type II engines for use by fire agencies in the unincorporated communities (SDCFA 2014).

Tribal Fire Departments

Several Indian reservations are located within or adjacent to SDG&E's proposed project area. A summary of firefighting resources for each reservation is provided below.

Campo Indian Reservation: The Campo Reservation Fire Protection District provides fire protection for the Campo Indian Reservation. District firefighting equipment includes three brush fire engines, one water tender, two utility vehicles, one truck, and one engine. The district operates three staffing shifts: A Shift (one fire captain, one firefighter, and one probationary firefighter), B Shift (one fire captain, one firefighter driver/operator, and one probationary firefighter), and C Shift (one fire captain, one firefighter driver/operator, and one probationary firefighter). Additional district staffing includes a fire chief, an operations chief, and a prevention chief.

La Jolla Indian Reservation: The La Jolla Band maintains an all-volunteer fire department that responds to small fires on the reservation. If the volunteers are unavailable or a larger force is needed, ~~the Lake Henshaw Department responds or~~ the Rincon Reservation Fire Department responds. CAL FIRE provides emergency fire protection backup. The station's firefighting equipment includes one brush engine and one structure engine.

Pauma and Yuima Indian Reservation: The Pauma Reservation Fire Department is a 12-person, full-time professional fire department that primarily serves the Pauma Reservation and the 86,000-square-foot Pauma Casino. The Pauma Reservation Fire Department has mutual aid agreements with CAL FIRE and the Pala and Rincon Reservation Fire Departments. The department is augmented by reserve firefighters. Department firefighting equipment includes a Type 1 fire engine and a Type 3 brush fire engine.

Viejas Indian Reservation: The Viejas Fire Department consists of 20 professionally trained firefighters using one fire engine, one truck company, two ambulances, and other emergency equipment. The department provides emergency services to residents, visitors, and structures located on the 1,609-acre Viejas Reservation, including the Viejas Casino and Outlet Mall. In addition, the Viejas Fire Department provides aid to other departments in San Diego County, as well as to CAL FIRE and the Forest Service. The Viejas Fire Department is fully funded by the Viejas Tribal Government with revenues provided by Tribal Government Gaming.

D.8.1.2 Project-Specific Fire Environment – Proposed Power Line Replacement Projects

The fire environment, comprised of vegetation (fuels), weather, and topography, directly affects the potential risk of ignition and fire spread from project-related activities and

infrastructure. The following provides the fire environment specific to each of the proposed power line replacement projects.

TL682

The right-of-way (ROW) of TL682 follows the San Luis Rey River through a steep, v-shaped canyon vegetated with oak woodlands and chaparral. Grasslands and pasturelands dominate the landscape near Lake Henshaw. Elevations range from 1,030 feet above mean sea level (amsl) in Pauma Valley to 2,836 feet amsl at the Warner Springs substation. Fuel beds in the canyon associated with the San Luis Rey River are between 20 and 40 years old. Vegetation conditions surrounding the ROW can be characterized as being supportive of high-intensity surface fires with a high resistance to control.

TL626

The ROW of TL626 traverses through valleys (Santa Ysabel, Paine Bottom, and Echo Valley), steep ridge tops and canyons (San Diego River and Temesal Canyon Creek) vegetated with oak savanna and woodlands, riparian forests, and chaparral. Elevations range from approximately 3,000 feet amsl to 3,800 feet amsl. Fuel beds along TL626 are less than 20 years old. Vegetation conditions surrounding the ROW of TL626 can be characterized as being supportive of moderate to high-intensity surface fires with a high resistance to control.

TL625

The ROW of TL625 traverses through valleys (Lyons Valley and Japatul Valley), along steep ridgelines, canyons, and the Cuyamaca Mountain Range which are vegetated with oak savanna and woodlands, riparian forests, chaparral, and grasslands. Elevations range from approximately 1,800 feet amsl to 3,500 feet amsl. Fuel beds along TL625 are primarily over 40 years old. Vegetation conditions surrounding the ROW of TL625 can be characterized as being supportive of high-intensity surface fires with a high resistance to control.

TL629

The ROW of TL629 traverses through valleys (Descanso, Pine, Cameron, and Miller valleys), over relatively steep ridgelines, and along a v-shaped canyon with Interstate 8 (I-8) running through it. Vegetative fuel types are primarily chaparral and oak savanna or oak woodlands. Elevations range from approximately 2,800 feet amsl to 4,000 amsl. Fuel beds along TL629 are primarily over 40 years old with some areas showing no record of historic fires. Vegetation conditions surrounding the ROW of TL629 can be characterized as being supportive of high-intensity surface fires with a high resistance to control.

TL6923

The ROW of TL6923 traverses over ridgetops, through valleys (Cameron Valley and Long Potrero) and steep canyons (McAlmond, Hauser, Rattlesnake, Cottonwood Creek) vegetated with oak woodlands, riparian forests, and chaparral. Elevations range from approximately 1,050 feet amsl to 3,100 feet amsl. In general, fuel beds along TL6923 are between 20 and 40 years old. Vegetation conditions surrounding the ROW of TL6923 can be characterized as being supportive of high-intensity surface fires with a high resistance to control.

C79

C79 begins at TL626 (elevation 3,803 feet amsl) and terminates at the top of Cuyamaca Peak (elevation 6,512 feet amsl). The ROW of circuit traverses along a ridgeline vegetated with chaparral and coniferous forests. Fuel beds along the circuit ROW are less than 20 years old. Vegetation conditions surrounding the ROW of C79 can be characterized as being supportive of moderate to high intensity surface fires with the potential for crown fires in the coniferous forests and present a high resistance to control.

C78

The ROW of C78 traverses from Viejas Valley at 2,500 feet amsl along the lower slopes of Poser Mountain to Viejas Grade Road (3,257 feet amsl). Native grasslands and chaparral are found on the valley and hillside, respectively. Fuel beds along the circuit ROW are less than 20 years old. Vegetation conditions surrounding the ROW of C78 can be characterized as being supportive of moderate intensity surface fires with a moderate resistance to control.

C157

The ROW of C157 traverses through valleys and uneven terrain with steep drainages vegetated with chaparral and oak woodlands. Elevations range from 1,600 feet to 2,600 feet amsl. Native grasslands and chaparral are situated on the valley and hillside, respectively. Fuel beds along the circuit ROW are 20 to 40 years old. Vegetation conditions surrounding the ROW of C157 can be characterized as being supportive of high intensity surface fires with a high resistance to control.

C442

The ROW of C442 traverses along valleys and uneven terrain vegetated with chaparral, oak woodlands, and coniferous forests. Elevations range from 3,900 feet amsl to 4,100 feet amsl. Fuel beds along the circuit ROW are 40+ years old. Vegetation conditions surrounding the ROW of C442 can be characterized as being supportive of high intensity surface fires and the potential for crown fires in the coniferous forests with a high resistance to control.

C440

C440 begins at the Buckman Springs Substation (elevation 3,300 feet amsl) and continues along Sunrise Highway to Mount Laguna peak, terminating at the unincorporated community of Mount Laguna (6,100 feet amsl). The ROW of C440 traverses the base of Mount Laguna to the top with the slopes vegetated with chaparral at the lower elevations and coniferous forest at the higher elevations. Fuel beds along the circuit ROW are over 40 years old. Vegetation conditions surrounding the ROW of C440 can be characterized as being supportive of high intensity surface fires and the potential for crown fires in the coniferous forests with a high resistance to control.

C449

The ROW of C449 follows the terrain along Cottonwood Valley with an elevation around 3,100 feet amsl. Vegetative fuel types consist of oak savanna, oak woodlands, and chaparral. Fuel beds along the circuit ROW are between 20 to 40 years old. Vegetation conditions surrounding the ROW of the circuit can be characterized as being supportive of moderate to high intensity surface fires.

D.8.2 Applicable Regulations, Plans, and Standards

This section summarizes federal, state, and regional environmental regulations, plans, and standards applicable to SDG&E's proposed project in regards to fire and fuels management. In addition to the federal and state regulations identified, the TL682 and TL629 power line replacement projects may be subject to the BIA's policies and regulations and tribe-specific policies and plans.

D.8.2.1 Federal Regulations and Other Standards

Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission (FERC) requires utilities to adopt and maintain minimum clearance standards between vegetation and power lines. These clearances vary depending on voltage. In most cases, the minimum clearances required in state regulations are greater than the federal requirement. California, for example, has adopted General Order 95 rather than the North American Electric Reliability Corporation (NERC) Standards as the electric safety standard for the state (CPUC and BLM 2008). FERC is not discussed further in this section, as compliance with state requirements will ensure that the federal requirements are met.

National Fire Protection Association Codes, Standards, Practices, and Guides

National Fire Protection Association (NFPA) codes, standards, recommended practices, and guides ("NFPA Documents"), are developed through a consensus standards development process

approved by the American National Standards Institute (ANSI). This process brings together professionals representing varied viewpoints and interests to achieve consensus on fire and other safety issues. NFPA standards are recommended guidelines and nationally accepted good practices in fire protection but are not law or "codes" unless adopted as such or referenced as such by the California Fire Code or the Local Fire Agency.

- NFPA 10, Fire Extinguishers: A long-standing standard that specifies the types, sizes, rating, and locations for portable fire extinguishers. It also provides information on how to calculate the number and size of portable fire extinguishers needed.
- NFPA 11, Fire Fighting Foam (Low, Medium, and High Expansion Foam): NFPA 11 is a long-standing standard that provides recommendations for design and installation of firefighting foam systems and portable equipment. It also provides recommendations regarding calculating the amount of foam concentrate and solution needed on a flammable or combustible liquid fire.
- NFPA 30, Flammable and Combustible Liquids Code: This standard provides recommendations for storage, use, and handling of flammable and combustible liquids. It provides detailed information regarding tank storage, spacing, dispensing of liquids, portable containers, and other related operations. NFPA 30 is referenced by the California Fire Code.
- NFPA 70, National Electrical Code: NFPA 70 is the standard for the design and installation of electrical systems. It includes recommendations for various types of occupancies and also provides recommendations and criteria for the location and installation of "explosion proof" electrical systems.
- NFPA 497, Classification of Flammable Liquids, Gases, and Vapors, and for Electrical Area Installations in Chemical Process Areas: NFPA 497 is the standard that is utilized along with NFPA 70 to determine flammable gas, flammable liquid, and combustible liquid hazards and to recommend the areas that require explosion-proof electrical systems. It also sets forth the extent of the classified areas. Although the title says chemical process areas, it is used as a standard for explosion-proof electrical as it defines various risks and contains numerous diagrams to help the electrical system designer.

Federal Wildland Fire Management Policy

The Federal Wildland Fire Management Policy was developed in 1995, updated in 2001, and again in 2009, by the National Wildfire Coordinating Group, a federal multi-agency group that establishes consistent and coordinated fire management policy across multiple federal jurisdictions. An important component of the Federal Wildland Fire Management Policy is the acknowledgement of the essential role of fire in maintaining natural ecosystems. The Federal

Wildland Fire Management Policy and its implementation are founded on the following guiding principles:

- Firefighter and public safety is the first priority in every fire management activity.
- The role of wildland fire as an essential ecological process and natural change agent will be incorporated into the planning process.
- Fire management plans, programs, and activities support land and resource management plans and their implementation.
- Sound risk management is a foundation for all fire management activities.
- Fire management programs and activities are economically viable, based upon values to be protected, costs, and land and resource management objectives.
- Fire management plans and activities are based upon the best available science.
- Fire management plans and activities incorporate public health and environmental quality considerations.
- Federal, state, tribal, local, interagency, and international coordination and cooperation are essential.
- Standardization of policies and procedures among federal agencies is an ongoing objective.

National Fire Plan

The National Fire Plan was a presidential directive in 2000 as a response to severe wildland fires that had burned throughout the United States. The National Fire Plan focuses on reducing fire impacts on rural communities and providing assurance for sufficient firefighting capacity in the future (Forest Service 2013). It is a long-term investment that will help protect natural resources in addition to communities. The plan is a long-term commitment based on cooperation and communication among federal agencies, states, local governments, tribes and interested publics. The Forest Service, U.S. Fish and Wildlife Service, the BIA, BLM, and National Park Service use the National Plan Operations and Reporting System to plan and report accomplishments funded by the National Fire Plan.

There are five key areas addressed under the National Fire Plan:

1. Firefighting and Preparedness
2. Rehabilitation and Restoration
3. Hazardous Fuels Reduction

4. Community Assistance
5. Accountability.

International Fire Code

Created by the International Code Council, the International Fire Code addresses a wide array of conditions hazardous to life and property including fire, explosions, and hazardous materials handling or usage (although not a federal regulation, but rather the product of the International Code Council). The International Fire Code places an emphasis on prescriptive and performance-based approaches to fire prevention and fire protection systems. Updated every 3 years, the International Fire Code uses a hazards classification system to determine the appropriate measures to be incorporated in order to protect life and property (often times these measures include construction standards and specialized equipment). The International Fire Code uses a permit system (based on hazard classification) to ensure that required measures are instituted.

International Wildland–Urban Interface Code

The International Wildland–Urban Interface (WUI) Code is published by the International Fire Code and is a model code addressing wildfire issues.

National Electric Safety Code 1977, 2006

The National Electric Safety Code covers basic provisions related to electric supply stations, overhead electric supply and communication lines, and underground electric supply and communication lines. The code also contains work rules for construction, maintenance, and operational activities associated with electric supply and communication lines and equipment. The code, which must be adopted by states on an individual basis, is not applicable in the State of California. As stated previously, the State of California has adopted its own standard (General Order 95) rather than a general national standard. The National Electric Safety Code is not discussed further.

North American Electric Reliability Corporation Standards

NERC is a nonprofit corporation comprising 10 regional reliability councils. The overarching goal of NERC is to ensure the reliability of the bulk power system in North America. To achieve its goal, NERC develops and enforces reliability standards; monitors the bulk power systems; and educates, trains, and certifies industry personnel (NERC 2013). In order to improve the reliability of regional electric transmission systems and in response to the massive widespread power outage that occurred on the Eastern seaboard in 2003, NERC developed a transmission vegetation management program that is applicable to all transmission lines operated at 200 kV

and above to lower voltage lines designated by the Regional Reliability Organization as critical to the reliability of the electric system in the region. The plan, which became effective on April 7, 2006, establishes requirements of the formal transmission vegetation management program, which include identifying and documenting clearances between vegetation and any overhead, ungrounded supply conductors, while taking into consideration transmission line voltage, the effects of ambient temperature on conductor sag under maximum design loading, fire risk, line terrain and elevation, and the effects of wind velocities on conductor sway (NERC 2006). The clearances identified must be no less than those set forth in the Institute of Electrical and Electronics Engineers (IEEE) Standard 516-2003, Guide for Maintenance Methods on Energized Power Lines (NERC 2006).

Institute of Electrical and Electronics Engineers Standard 516-2003

The IEEE is a leading authority in setting standards for the electric power industry. Standard 516-2003, *Guide for Maintenance Methods on Energized Power Lines*, establishes minimum vegetation-to-conductor clearances in order to maintain electrical integrity of the electrical system.

USDA Forest Service Management Plans

There are no specific directions in the National Fire Plan, CNF Land Management Plan (Part 1), or CNF Fire Management Plan to special-use holders on their responsibilities for forest management activities. The primary goal of the CNF Land Management Plan (Part 2) is to enhance the sustainability and health of the National Forest. The strategic direction of these land management practices is outlined in Part 2 where varying management practices are focused within the WUI to reduce wildfire ignitions and large-scale damage due to catastrophic wildfires. The management plan focuses on the following:

- Fire Prevention
  - Prevent wildfire ignitions within the WUI
  - Continue to implement the Border Fire Prevention Program to reduce human caused wildfires related to immigration
  - Prohibit campfires outside of developed recreation areas
  - Implement activity restrictions and access to National Forest System lands dependent upon fuel and weather conditions and the availability of fire suppression resources.
- Direct Community Protection
  - Ongoing effort to reducing the amount of high to moderate fire risk areas within the WUI by mechanical or prescribed burning of hazardous fuels

  - Promote the removal of diseased and dying trees adjacent to structures and access/evacuation routes.
- Fire Suppression Emphasis
  - Improve wildland fire suppression capability within the WUI by promoting coordination with other fire agencies
  - During periods of limited firefighting resource availability, communities within the National Forest Direct Protection Area should be given highest priority for initial attack.
- Firefighter and Public Safety
  - Integrate fire management activities with other fire agencies in a cost-effective manner
  - Conduct inspections that ensure defensible space requirements are met around structures within CNF jurisdiction
  - Coordinate with local Fire Safe Councils to support evacuation and community fire protection plans.
- Fuelbreaks and Indirect Community Protection
  - Maintain system of fuel breaks to minimize fire size
  - Pre-plan fire suppression activities to avoid further disruption of sensitive areas and the spread of noxious weeds.

The project activity level (PAL) is a scientifically based system to regulate all industrial and contractual activities on National Forest System lands in California. The PAL is designed to reduce the risk of large damaging wildfires and the legal vulnerability of the agency, contractors, or permittees. The system is fire danger and climatology based, using Energy Release Components and Ignition Components to determine ratings. It provides a single decision support matrix for regulating industrial and service activities on the CNF.

Forest Service Special Use Permit Requirements

Forest Service special use permits require that permittees comply with all applicable federal, state, county, and municipal laws, regulations, and other legal requirements (Clause I F), keep the ROW clear of vegetation that may cause fires (Clause F-15), and prepare a Fire Control Plan (Clause F-20). Permittees have a general duty to protect all federal land and interest from damage, and are liable for all damage, including fire suppression costs, associated with the use and occupancy authorized by the permit (Clause IV F). Power line permits are classified as a high-risk use by Forest Service regulations (36 CFR 251.56(d)(2)) and are subject to strict

liability requirements. The Forest Service would recover compensation for any damages with the assistance of the U.S. Justice Department.

The Forest Service has also adopted California Public Resource Code Sections 4292 and 4293, by Regional Forester Order, which incorporates the power line clearing requirements established by CAL FIRE and described in the following section in more detail. The rules established by CPUC General Order 95 would also apply to the permittee.

D.8.2.2 State Laws and Regulations

California Fire Code

The California Fire Code (CFC) is contained within Title 24, Chapter 9 of the California Code of Regulations (CCR). Based on the International Fire Code, the CFC is created by the California Buildings Standards Commission and regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. Similar to the International Fire Code, the CFC and the California Building Code (CBC) use a hazards classification system to determine the appropriate measures to incorporate to protect life and property.

14 CCR 1250 et seq., Fire Prevention Standards for Electric Utilities, provides specific exemptions from electric pole and tower firebreak and electric conductor clearance standards, and it specifies when and where standards apply. Section 1254 of Title 14 presents guidelines for minimum clearance requirements around utility poles.

California Health and Safety Code

State fire regulations are established in Section 13000 of the California Health and Safety Code. The section establishes building standards, fire protection device equipment standards, high-rise building and childcare facility standards, interagency support protocols, and emergency procedures. Also, Section 13027 states that the state fire marshal shall notify industrial establishments and property owners having equipment for fire protective purposes of the changes necessary to bring their equipment into conformity with, and shall render them such assistance as may be available in converting their equipment to, standard requirements.

California Public Utilities Commission General Order 95: Rules for Overhead Transmission Line Construction

General Order (GO) 95 was adopted in 1941 and updated in January 2012. Additionally, on February 5, 2014, CPUC decision D.14-02-015 revised GO 95 to incorporate new and modified rules to reduce the fire hazards associated with overhead power lines and aerial communication facilities in close proximity to power lines. GO 95 is the key standard governing the design,

construction, operation, and maintenance of overhead electric lines in the state. It includes safety standards for overhead electric lines, including minimum distances for conductor spacing and minimum conductor ground clearance, standards for calculating maximum sag, electric line inspection requirements, and vegetation clearance requirements.

Rule 31.2, Inspection of Lines, requires that lines be inspected frequently and thoroughly to ensure they are in good condition, and that lines temporarily out of service be inspected and maintained as to not create a hazard.

Rule 35, Tree Trimming, defines minimum vegetation clearance around power lines. At the time of trimming, Rule 35 guidelines require the following:

- 4-foot radial clearances for any conductor of a line operating at 2,400 volts or more, but less than 72,000 volts
- 6-foot radial clearances for any conductor of a line operating at 72,000 volts or more, but less than 110,000 volts
- 10-foot radial clearances for any conductor of a line operating at 110,000 volts or more, but less than 300,000 volts (this would apply to the project)
- 15-foot radial clearances for any conductor of a line operating at 300,000 volts or more.

Rule 48, Ultimate Strength of Materials, requires that structural members and their connection be designed and constructed so that the structures and parts thereof will not fail or be seriously distorted at any load less than their maximum working loads, which includes loads resulting from wind exposure. This rule was updated based on the February 5, 2014, CPUC decision.

Under California Public Utilities Code Section 1708.5, interested persons are permitted to petition the CPUC to adopt, amend, or repeal a regulation. In response to the 2007 wildfires in San Diego County, on November 6, 2007, SDG&E submitted a petition to the CPUC requesting that the CPUC issue an Order Instituting Rulemaking to determine whether GO 95 should be amended or if more rules should be adopted to address disaster preparedness, including damage from Santa Ana wind-driven firestorms (CPUC and BLM 2008). According to SDG&E, the petition requested that the CPUC consider several items, including the following:

- Operating rural electrical lines differently during severe fire weather
- Mitigating potential hazards associated with rural lines including undergrounding line, using steel poles in place of wood, and shortening spans between poles
- Better coordinating disaster management efforts among agencies, municipalities, local jurisdictions, and utilities

- Maintaining electrical line ROWs free of vegetation
- Adopting a state-wide Disaster Management Plan.

On February 5, 2014, in this rulemaking, CPUC decision D.14-02-015 revised GO 95 to incorporate new and modified rules to reduce the fire hazards associated with overhead power lines and aerial communication facilities in close proximity to power lines.

California Department of Forestry and Fire Protection

CAL FIRE is tasked with reducing wildfire-related impacts and enhancing California's resources. CAL FIRE responds to all types of emergencies including wildland fires and residential/ commercial structure fires. In addition, CAL FIRE is responsible for the protection of approximately 31 million acres of private land within the state and, at the local level, is responsible for inspecting defensible space around private residences. CAL FIRE is responsible for enforcing State of California fire safety codes included in the CCR and California Public Resources Code. Public Resources Code 4291 states generally that any person operating any structure located on brush-covered lands or land covered with flammable material is required to maintain defensible space around the structure. 14 CCR 1254 identifies minimum clearance requirements required around utility poles. In SRAs within the jurisdiction of CAL FIRE, the Fire Safety Inspection Program is an important tool for community outreach and enforcement of state fire codes.

CAL FIRE also inspects utility facilities and makes recommendations regarding improvements in facility design and infrastructure. Joint inspections of facilities by CAL FIRE and the utility owner are recommended by CAL FIRE so that each entity may assess the current state of the facility and successfully implement fire prevention techniques and policies. Violations of state fire codes discovered during inspections are required to be brought into compliance with the established codes. If a CAL FIRE investigation reveals that a wildfire occurred as a result of a violation of a law or negligence, the person responsible can be charged criminally, civilly, or both (CAL FIRE n.d.). In cases where a violation of a law or negligence has occurred, CAL FIRE has established the Civil Cost Recovery Program, which requires parties liable for wildfires to pay for wildfire-related damages.

In the section of Southern California where SDG&E's proposed project would be located, the power line hazard reduction standards are applicable year-round due to the scope of the fire season. More detailed descriptions of the applicable codes and regulations and images of exempt and non-exempt power line structures may be found in the *CAL FIRE Power Line Fire Prevention Field Guide* (CAL FIRE 2008).

California Public Resources Code

These regulations are discussed in further detail as follows:

- **Public Resource Code 4291** requires a reduction of fire hazards around buildings, requiring 100 feet of vegetation management around all buildings, and is the primary mechanism for conducting fire prevention activities on private property within CAL FIRE jurisdiction.
- **Public Resources Code 4292** states a that a minimum firebreak of 10 feet in all directions from the outer circumference of such pole or tower be established around any pole which supports a switch, transformer, lightning arrester, line junction, or end or corner pole. All vegetation shall be cleared within the firebreak.
- **Public Resources Code 4293** establishes the minimum vegetation clearance distances (between vegetation and energized conductors) required for overhead transmission line construction. Minimum clearances are discussed as follows:
    - A minimum radial clearance of 4 feet shall be established for any conductor of a line operating at 2,400 or more volts but less than 72,000 volts.
    - A minimum radial clearance of 6 feet shall be established for any conductor of a line operating at 72,000 or more volts but less than 110,000 volts.
    - A minimum radial clearance of 10 feet shall be established for any conductor of a line operating at 110,000 or more volts but less than 300,000 volts.
    - A minimum radial clearance of 15 feet shall be established for any conductor of a line operating at 300,000 or more volts.

Specific requirements applicable to the construction and operation of SDG&E's proposed project include those from Public Resources Code, Division 4, Chapter 6:

- **Section 4427** – Operation of fire-causing equipment
- **Section 4428** – Use of hydrocarbon-powered engines near forest, brush, or grass-covered lands without maintaining firefighting tools
- **Section 4431** – Gasoline-powered saws, etc.; firefighting tools
- **Section 4442** – Spark arrestors of fire prevention measures, requirements, exemptions.

Fire Hazard Severity Zones

CAL FIRE mapped FHSZs in San Diego County based on fuel loading, slope, fire weather, and other relevant factors as directed by Public Resources Code Sections 4201–4204 and

Government Code Sections 51175–51189. FHSZs are ranked from moderate to very high and are categorized for fire protection within an FRA, SRA, or LRA under the jurisdiction of a federal agency, CAL FIRE, or local agency, respectively.

California Strategic Fire Plan

The 2010 Strategic Fire Plan for California is the statewide plan for adaptive management of wildfire as a cooperative effort between the State Board of Forestry and Fire Protection and CAL FIRE. The central goals that are critical to reducing and preventing the impacts of fire revolve around both suppression and fire prevention efforts. The key goals include:

1. Improved availability and use of information on hazard and risk assessment
2. Land use planning, including general plans, new development, and existing developments
3. Shared vision among communities and the multiple fire protection jurisdictions, including county-based plans and community-based plans such as Community Wildfire Protection Plans
4. Establishing fire resistance in assets at risk, such as homes and neighborhoods
5. Shared vision among multiple fire protection jurisdictions and agencies
6. Levels of fire suppression and related services
7. Post-fire recovery.

While the plan puts emphasis on pre-fire adaptive management of risk, including measures such as fuel breaks, defensible space, and other fuel reduction strategies, it does not contain any specific requirements or regulations but rather acts as an assessment of current fire management practices and standards and makes recommendations on how best to improve the practices and standards in place (CAL FIRE 2013).

California Code of Regulations Title 14 Section, Sections 1252, 1253, and 1254

14 CCR Sections 1252 and 1253 state that in San Diego County, power line hazard reduction standards are applicable year round. Power line hazard reduction strategies include pole brush clearing; in southeastern San Diego County, CAL FIRE is responsible for inspecting local implementation of these strategies.

14 CCR Section 1254 states that the fire break minimum clearance requirements of California Public Resources Code 4292 are applicable within an imaginary cylindroidial space surrounding each pole or tower on which a switch, fuse, transformer, or lightning arrester is attached. The radius of the cylindroid is 3.1 meters (10 feet) measured horizontally from the outer

circumference of the specified pole or tower with height equal to the distance from the intersection of the imaginary vertical exterior surface of the cylindroid with the ground to an intersection with a horizontal plane passing through the highest point at which a conductor is attached to such pole of tower. Flammable vegetation and materials located wholly or partially within the firebreak space shall be treated as follows:

- At ground level: remove flammable materials, including but not limited to, ground liter, duff, and dead or desiccated vegetation that will allow fire to spread
- From 0 to 2.4 meters (0 to 8 feet) above ground level: remove flammable trash, debris, or other materials, including grass, herbaceous, and brush vegetation. All limbs and foliage of living trees shall be removed up to a height of 2.4 meters (8 feet)
- From 2.2 meters (8 feet) to horizontal plane of highest point of conductor attachment: remove dead, diseased, or dying limbs and foliage from living sound trees and any dead, diseased, or dying trees in their entirety.

CAL FIRE Civil Cost Recovery Program

The California Legislature has ruled that since wildland fires cost taxpayers millions of dollars per year, taxpayers should not be responsible for costs associated with suppressing fires caused by an act of human carelessness. The CAL FIRE Civil Cost Recovery Program was established to recover firefighting costs when the fires are a result of people (or entities) violating the law or being negligent in their actions. For overhead electric lines, these violations are generally related to non-compliance with vegetation clearance requirements.

Examples of cost recovery related to transmission lines include the following (CAL FIRE n.d.):

- In 1996, Southern California Edison was billed $7.9 million for fire suppression costs for the Calabasas Fire. A settlement was negotiated for $6.55 million just prior to trial in 2003. CAL FIRE determined that the fire was caused when a eucalyptus branch was bent by the wind into a lightning arrestor.
- The largest amount ever billed by CAL FIRE to date was to Pacific Gas & Electric (PG&E) in 1990 for $8.2 million. The Campbell Fire burned over 125,000 acres and destroyed 27 structures in Tehama County. CAL FIRE determined that the fire was caused by a tree limb that made contact with a 500 kV power line. PG&E had not maintained the 10-foot clearance around its power line as required by law. PG&E eventually agreed to a negotiated settlement of $5 million.

D.8.2.3 Regional Policies, Plans, and Regulations

Eastern San Diego County Resource Management Plan

Section 2.8 of the Eastern San Diego County Resource Management Plan establishes goals, objectives, and management actions associated with wildland fire management on BLM-managed lands. The following goals and objectives are applicable to the power line replacement projects:

WFM-01 Protect human life (both firefighters and public) and communities, property, and the natural resources on which they depend. Firefighter and public safety are the highest priority in all fire management activities.

WFM-02 Reduce hazardous fuels around communities at risk within the wildland–urban interface using mechanical, manual, biological, and prescribed fire treatments, where applicable.

WFM-03 Appropriate management response for resource benefits will range from full suppression to the appropriate strategy to safely contain and control wildland fires in the planning area.

WFM-04 Maintain natural biological processes through the use of fire as a natural disturbance.

CAL FIRE San Diego Unit Strategic Fire Plan

The San Diego Administrative Unit of CAL FIRE has developed a Strategic Fire Plan for San Diego County, encompassing 1.2 million acres of SRA within San Diego and Imperial counties. The Strategic Fire Plan identifies 53 communities within San Diego County that are potentially at risk of wildland fires (CAL FIRE 2013). The Strategic Fire Plan does not contain any specific requirements; rather, it assesses current fire-management policies, analyzes assets within San Diego County at risk of damage due to wildfire, and makes recommendations on how best to protect San Diego County's natural and man-made resources from wildfire damage. The Plan also evaluates Priority Landscape data in identifying at risk resources within the County, which include water (soil erosion after wildfires damage water flumes and storage facilities), structures, wildlife, air quality, cultural resources, recreation areas, and power and communication infrastructure.

The Strategic Fire Plan also provides a description of various programs and projects intended to reduce the occurrence of large damaging fire. These programs/projects include Battalion Pre-fire plans, fuel breaks, defensible parameters around communities, clearances around structures, and

a diverse mosaic of fuels and continuity that would help existing policies and strategies achieve success when combating fires (CAL FIRE 2013).

Southwest Powerlink Memorandum of Understanding

~~A fire prevention Memorandum of Understanding (MOU) was agreed upon by SDG&E and CAL FIRE for vegetation management activities associated with the Southwest Powerlink (SWPL). The MOU states that vegetation management within the SWPL easement areas is mutually beneficial as reducing vegetation would minimize wildfire potential and improve the reliability and integrity of the transmission line while at the same time improve the safety of firefighters working near the transmission line. The MOU specifies vegetation management activities that are the responsibility of CAL FIRE and those that are the responsibility of SDG&E. For example, CAL FIRE is responsible for notifying SDG&E in advance of prescribed burns located near SWPL facilities and structures, and for monitoring the fire danger in the area and notifying SDG&E when conditions are too hazardous to conduct vegetation management activities. SDG&E, on the other hand, is responsible for notifying CAL FIRE on days where the SWPL's reliability is critical and prescribed burns should not take place adjacent to the SWPL, as well as for filing the appropriate paperwork with CAL FIRE when requesting CAL FIRE assistance regarding vegetation management activities within the SDG&E easement. SDG&E only participates as a partner with CAL FIRE when such clearing would mutually benefit both parties.~~

County of San Diego General Plan Public Safety Element

The following policies included in the General Plan's Public Safety Element are applicable to SDG&E's proposed project:

- **Policy 1:** The County shall seek to reduce fire hazards to an acceptable level of risks.
- **Policy 2:** The County will consider constraints in terms of fire hazards in land use decisions. Within designated areas where population or building densities may be inappropriate to the hazards present, measures will be taken to mitigate the risk of life and property loss.
- **Policy 3:** The County will support the planning and coordinate implementation of a countywide fuel break and fuel management system.

County of San Diego Code of Regulatory Ordinances

The following sections of the County Code of Regulatory Ordinances would be applicable to SDG&E's proposed project:

Title 6, Division 8, Chapter 4: Removal of Combustible Vegetation and Other Flammable Materials Ordinance No. 9633 (Sections 68.401–68.406)

The Removal of Combustible Vegetation and Other Flammable Materials Ordinance establishes that combustible vegetation; dead, dying or diseased trees; green waste; rubbish; and other materials on private property can create fire hazards resulting in conditions that are potentially injurious to the health, safety, and welfare of the public. The ordinance goes on to state that combustible vegetation and other materials are public nuisances that must be abated, and the requirements for abatement must be enforced in all County Service Areas and in the unincorporated areas of the County outside of a fire protection district or municipal water district. Fire protection districts and municipal water districts have either adopted their own combustible vegetation abatement programs or have adopted the County ordinance.

Clearance requirements and combustible vegetation removal protocols are established in Sections 68.404 and 68.406 of the ordinance. Section 68.404 states that "no responsible party shall permit on a parcel any accumulation of combustible vegetation; dead, dying or diseased trees; green waste; rubbish; or other flammable materials within thirty (30) feet of the property line when such accumulation endangers property or the health, safety, or welfare of residents of the vicinity" and that "no responsible party shall permit on a parcel any accumulation of combustible vegetation, dead, dying or diseased trees, green waste, rubbish, or other flammable materials within ten (10) feet of each side of the improved width of highways, private roads and driveways" (County of San Diego 1985). Section 68.406 requires that combustible vegetation removal be conducted so as to leave the plant root structure intact to stabilize the soil and prevent erosion, and that areas where combustible vegetation removal has occurred may be replanted with fire-resistant shrubbery and planting materials (County of San Diego 1985). The ordinance also requires that vegetation removal be conducted in conformance with all federal, state, and local environmental laws and regulations.

Title 9, Division 6, Chapter 1: County Fire Code (Ordinance No. 10148, Section 96.1.4903)

Section 96.1.4903 states that the County Department of Planning and Land Use or the applicable fire protection district may require an applicant for a parcel map, specific plan, or major use permit located in a WUI fire area to prepare and submit a Fire Protection Plan (FPP) as part of the approval process. According to the County Fire Code, the WUI fire area is a geographic area identified by the state as a "Fire Hazard Severity Zone" (FHSZ; the power line replacement projects would be located primarily within a Very High FHSZ). The FPP, which requires that the topography, combustible vegetation, and fire history (among other factors) be considered during development of the plan, addresses water supply, vehicular and emergency apparatus access, travel time to the nearest fire station, structure setback from property lines, ignition-resistant

building features, fire protection systems and equipment, impacts to existing emergency services, defensible space, and vegetation management.

County of San Diego 2011 Consolidated Fire Code

The first consolidated fire code was created in 2001 through a collaboration between the County of San Diego and local fire protection districts and essentially assured consistency between County and local district fire ordinances for the purpose of public health and safety. The consolidated code includes minimum requirements for access, water supply, distribution, construction type, fire protection systems, and vegetation management within the County. The code also regulates hazardous materials and hazardous substance releases. The County's 2011 Consolidated Fire and County Building Codes, as a package, were recently certified by the State Board of Forestry and Fire Protection as meeting the 14 CCR SRA Fire Safe Regulations requirements, and authorizing its use in lieu of Title 14. The County is obligated to enforce the Code, and therefore, it must be applied to this project where applicable.

Border Agency Fire Council

Formally created during the 1996 fire season, the Border Agency Fire Council (BAFC) consists of 38 member organizations representing fire protection, law enforcement, legislators, health care workers, natural resource managers, and elected officials in the United States and Mexico. The member organizations meet quarterly during the winter and every 6 to 8 weeks during the fire season at the CAL FIRE San Diego Unit headquarters in El Cajon. The BAFC promotes fire prevention and suppression strategies within the border area in order to prevent wildfires and minimize potential damage. Due to collaborative efforts of the member organizations, the BAFC has been successful at altering the natural environment to allow for better access for emergency services while at the same time respecting the natural values of the border area (BAFC 2012). In addition, the BAFC has been at the forefront in establishing and maintaining the International Fuel Break at Otay Mountain, which seeks to protect life and property in nearby communities, improve endangered species habitat, enhance national security as a result of open areas, and maintain areas around the Border Fence (completed in 2009) (BAFC 2012). The member organizations of the BAFC include the BLM, CAL FIRE, San Diego Fire and Rescue, SDRFPD, and SDG&E. The southern portions of SDG&E's proposed project are located within the BAFC's Area of Concern (BAFC 2012).

San Diego County Multi-Jurisdictional Hazard Mitigation Program

Required by the federal Disaster Mitigation Act of 2000, the Multi-Jurisdictional Hazard Mitigation Plan is a comprehensive countywide plan that identifies potential risks associated with natural and man-made disasters and discusses ways to minimize resulting damage. Many purposes are served by the document including enhancing public awareness, creating a decision

tool for management, promoting compliance with state and federal program requirements, enhancing local policies for hazard mitigation capability, providing inter-jurisdictional coordination, and achieving regulatory compliance (County of San Diego 2010b). The plan also identifies goals, objections, and actions for each participating jurisdiction in the County.

Numerous natural and man-made hazards including coastal storms, dam failure, earthquake, flood, and structure/wildland fires are profiled in the plan. Each profiled disaster is discussed in terms of the nature of the disaster, the history of the disaster in San Diego County, and the location and extent/probability of occurrence and magnitude. Many of these are ranked differently by individual jurisdictions. However, all jurisdictions rated wildfire as a high (based on the firestorms of 2003 and 2007) probability of occurrence and a severe impact on the communities in their jurisdictions. The plan identifies nine general goals and numerous objectives for the County of San Diego, including the following applicable goals:

- **Goal 2:** Reduce the possibility of damage and losses to existing assets, including people, critical facilities/infrastructure, and public facilities due to wildfire.
- **Goal 4:** Increase public understanding and support for effective hazard mitigation.
- **Goal 5:** Improve hazard mitigation coordination and communication with federal, state, local, and tribal governments.
- **Goal 6:** Promote disaster resistant existing and future development.
- **Goal 7:** Build and support local capacity and commitment to continuously become less vulnerable to hazards.
- **Goal 10:** Reduce the possibility of damage and losses to existing assets, including people, critical facilities/infrastructure, and public facilities due to severe weather.

San Diego Fire Chiefs Association Defensible Space Memorandum of Understanding

In response to the Harmony Grove Fire in 1997, the San Diego County Fire Chiefs' Association and the Fire District's Association of San Diego County entered into an MOU with the California Department of Fish and Wildlife (CDFW; formerly the California Department of Fish and Game), U.S. Fish and Wildlife Service (USFWS), and CAL FIRE (San Diego Fire Chiefs' Association 2007). The removal of flammable vegetation within 100 feet of any structure and 30 feet from any roadway without a biological survey is permitted by the MOU. The intent of the MOU was to establish guidelines by which CAL FIRE, cities, and fire districts can continue to protect lives and property from the threat of fires by requiring the flammable vegetation abatement pursuant to applicable state and local regulations. The MOU is also intended to establish a cooperative mechanism through which the USFWS and CDFW may "assess, minimize, and help account for

potential adverse impacts to sensitive species and habitats resulting from vegetation abatement activities" (San Diego County Fire Chiefs' Association 2007).

D.8.3 Environmental Effects

D.8.3.1 Definition and Use of CEQA Significance Criteria/Indicators under NEPA

The CEQA criteria and guidelines described below are also used as indicators of adverse effects under NEPA. Based on Appendix G of CEQA Guidelines (14 CCR 15000 et seq.), project-related wildfire impacts would be considered significant if any of the following were to occur:

- Construction and operation activities associated with the proposed project along with operation and maintenance activities under the MSUP would significantly increase the probability of a wildfire resulting in damaging impacts to communities, firefighter health and safety, and/or natural resources.
- The presence of overhead power lines significantly increases the probability of a wildfire resulting in damaging impacts to communities, firefighter health and safety, and/or natural resources
- The presence of the project creates obstructions to fire suppression efforts, resulting in damaging impacts to communities and/or natural resources
- Activities associated with project construction, operation, or maintenance result in a fuel vegetation matrix with an increased ignition potential and rate of fire spread.

Under NEPA, the effects of the alternatives are based on the overall risk of power line-related wildfires.

D.8.3.2 Applicant Proposed Measures

Applicant Proposed Measures (APMs) APM HAZ-01 through APM HAZ-06 were proposed by SDG&E to reduce impacts related to wildland fire. The following summarizes each APM.

- **APM-HAZ-01:** Provides for carrying emergency fire suppression equipment, conducting worker-awareness trainings, restrictions on smoking and idling vehicles, and construction restrictions during Red Flag Warnings (RFWs).
- **APM-HAZ-02:** Requires implementation of Electric Distribution Operation 3017 to maintain fire safety while meeting all operational and service requirements.
- **APM-HAZ-03:** Requires clearing of dead and decaying vegetation from work or storage areas, staging areas, stringing sites, and access roads.

- **APM-HAZ-04:** Provides for fire suppression tools to be kept within 50 feet of work activities.
- **APM-HAZ-05:** Provides for daily monitoring of weather and fire danger.
- **APM-HAZ-06:** Prevents construction in areas affected by a RFW or Project Activity Level E designation.

Section B.7.1 of the EIR/EIS provides additional detail regarding these APMs.

D.8.3.3 Direct and Indirect Effects

Impact FF-1: Increase the probability of a wildfire due to construction, operations, and maintenance activities

Construction, operations, and maintenance activities associated with SDG&E's proposed project could ignite the on-site vegetation and start a wildfire by introducing potential sources of ignition.

Construction Phase

Project construction would result in up to 132 workers per day (estimated peak) occurring in the project area for the estimated 5-year construction period. The following construction activities may result in ignition sources:

- Earth-moving equipment—heated exhausts or sparks may result in ignition
- Chainsaws—may result in vegetation ignition from overheating, spark, fuel leak, etc.
- Vehicles—heated exhausts in contact with vegetation may result in ignition
- Helicopters—heated exhausts in contact with vegetation may result in ignition, potential for helicopters to clip existing power or transmission lines resulting in sparks and ignition potential
- Welders—open heat source may result in metallic sparks coming into contact with vegetation
- Wood chippers—include flammable fuels and hydraulic fluid that may overheat and spray onto vegetation with a hose failure
- Compost piles—large piles that are allowed to dry and are left on site for extended periods may result in combustion and potential for embers landing in adjacent vegetation
- Grinders—sparks from grinding metal components may land on a receptive fuel bed

- Torches—heat source, open flame, and resulting heated metal shards may come in contact with vegetation
- Dynamite/blasting—if blasting is necessary, may cause vegetation ignition from open flame, excessive heat, or contact of heated material on dry vegetation.

Operation and Maintenance Phase

Operation and maintenance of the proposed power line replacement projects, as well as ongoing operation and maintenance activities for all other SDG&E electric facilities proposed to be covered under the MSUP would include the presence of humans and vehicles as well as heat- and spark-generating equipment similar to those currently used by SDG&E. While these activities would not increase in duration or intensity with implementation of SDG&E's proposed project, they would constitute potential ignition sources.

Maintenance activities that may result in wildfire ignition include regular vegetation maintenance, requiring motorized hand tools or other small machinery, including string trimmers, brush cutters, chain saws, and chippers, to minimize the potential for fire. Electrical transmission line maintenance would include four-wheel-drive vehicles, helicopters, boom trucks, line trucks, and water trucks, and as needed, heavier equipment necessary for accessing the poles and attached components. Existing road maintenance activities may include use of graders, excavators, dozers, and rollers.

Operation and maintenance activities would also include scheduled, routine operational maintenance, including monitoring and maintenance of facilities and equipment. Monitoring is likely to include routine visual and infrared aerial inspections of project infrastructure via helicopter or ground-based inspections of underground components and overhead structures. Additionally, vegetation inspections will be conducted to ensure proper vegetation clearances are maintained in accordance with PRC Section 4292 and CPUC GO 95 requirements. Finally, special inspections and patrols will occur on a non-routine, as-needed basis. These regular maintenance activities would reduce the ignition potential during operation and maintenance activities.

SDG&E's proposed project also includes the following removal and undergrounding components which will also reduce the ignition potential during operation and maintenance activities.

- **TL626:** Removal of road segment between poles Z372130 and Z372131 would reduce ignition potential during the operations and maintenance phase.
- **TL629:** Undergrounding 792-foot segment would reduce ignition potential during the operations and maintenance phase.

- **C79:** Removal of 2.2 miles of overhead circuit and 4.2 miles of existing access roads would reduce ignition potential during the operations and maintenance phase.
- **C78:** Relocation of a portion of overhead circuit to along Viejas Grade Road would reduce ignition potential during the operations and maintenance phase.
- **C442:** Removal of 0.6-mile road segment would reduce ignition potential during the operations and maintenance phase.
- **C440:** Removal of 7.14 miles of overhead circuit and 4.0 miles of existing access roads would reduce ignition potential during the operations and maintenance phase.
- **C449:** Removal of 5.63 miles of overhead circuit and 2.4 miles of existing access roads would reduce ignition potential during the operations and maintenance phase.

Wildfire Risk Evaluation

Construction, operations, and maintenance activities associated with SDG&E's proposed project would be located adjacent to native Southern California fuels and/or other combustible materials found in the project area. Regardless of the fuel density and load, these various ignition sources have the capacity to ignite nearby vegetation, resulting in wildfire, especially during weather events that include low humidity and high wind speeds. Exacerbating this situation is data indicating that human activity (including accidental ignitions from various construction and transmission line related activities) is the leading cause of wildfire damage with regard to burned acreage in Southern California (Keeley and Fotheringham 2003).

Any of the proposed construction, operations, and maintenance activities may result in vegetation ignitions given the presence of flammable fuels within the proximity of SDG&E's proposed project components. As previously described, regional assets at risk include carbon sequestration potential, community water supply, ecosystem health, human infrastructure (including transmission lines), range economics, recreation, and wildlife (FRAP 2010). Additionally, assets at risk from wildfire include all structures within approximately 40 miles to the west of SDG&E's proposed project area, which may be subject to wildfire resulting from an ignition under worst-case weather conditions.

The potential risk of wildfire ignition and spread associated with construction, operations, and maintenance of SDG&E's proposed project can be managed and pre-planned so that the potential for vegetation ignition is reduced. In addition, pre-planning and personnel fire awareness and suppression training not only results in lower probability of ignition, but also in higher probability of fire control and extinguishment in its incipient stages. Data indicate that 95% of all wildfire ignitions are controlled during initial attack (Smalley 2008). Data also indicates that

90% of the acres burned in Southern California occur during RFW periods, while 90% of wildfires occur during non-RFW periods and burn only 10% of the total burned acres.

SDG&E has proposed APM HAZ-01 through APM HAZ-06 (see Section B.7.1 of this EIR/EIS, and summary of measures, below) to reduce impacts related to wildland fire hazards due to operations and maintenance activities. Implementation of APM HAZ-01 would provide for worker-awareness trainings that cover fire prevention and safety, restrictions on smoking and idling vehicles, and construction restrictions during RFWs, as outlined in SDG&E's Electric Standard Practice 113-1 (2012). It will also provide training for practices to reduce the likelihood of fire ignition and to quickly extinguish ignitions that may occur. Further, it provides for coordination with fire agencies and restricts construction activities during the days when fire spread would be most likely (RFW periods), among others. Implementation of APM HAZ-03 would provide for clearing of dead and decaying vegetation from work or storage areas, staging areas, stringing sites, and access roads prior to starting construction activities. Additionally, implementation of APM HAZ-06 would prevent construction activity in areas affected by a RFW or PAL E designation. While implementation of APM HAZ-01 through APM HAZ-06 would reduce the potential for construction, operations, and maintenance activities to ignite a wildfire, this impact is considered adverse and significant. Therefore, Mitigation Measures (MM) MM FF-1 and MM FF-2, which provide clarification and supersede APM HAZ-01, have been provided to further mitigate the increased probability of igniting a wildfire due to construction or maintenance activities of SDG&E's proposed project. With implementation of APM HAZ-03 and APM HAZ-06, along with MM FF-1 and MM FF-2, impacts would be less than significant under CEQA (Class II).

Under NEPA, implementation of APM HAZ-03 and APM HAZ-06, along with MM FF-1 and MM FF-2, would reduce the risk of wildfire caused by construction, operations, and maintenance, but would not eliminate the risk. These APMs and mitigation measures are effective methods to reduce risk, particularly those measures that restrict work during periods of high fire danger.

MM FF-1 **Develop and Implement a Construction Fire Prevention/Protection Plan.** SDG&E shall develop a multiagency Construction Fire Prevention/Protection Plan in consultation with the U.S. Forest Service, Bureau of Land Management (BLM), Bureau of Indian Affairs (BIA), California Department of Forestry and Fire Protection (CAL FIRE), San Diego Rural Fire Protection District (SDRFPD), and San Diego County Fire Authority (SDCFA) to the satisfaction of lead agencies. SDG&E shall monitor construction activities to ensure implementation and effectiveness of the plan. The final plan will be approved by the commenting agencies prior to the initiation of construction activities and shall be implemented

during all construction activities by SDG&E. At minimum, the plan will include the following:

- Procedures for minimizing potential ignition
  - Vegetation clearing
  - Fuel treatment area establishment
  - Parking requirements
  - Smoking restrictions
  - Hot work restrictions
- Red Flag Warning restrictions
- Fire coordinator role and responsibility
- Fire suppression equipment on site at all times work is occurring
- Requirements of Title 14 of the California Code of Regulations, 918 958.1 "Fire Protection" for the private land portions
- Applicable components of the SDG&E Wildland Fire Prevention and Fire Safety Electric Standard Practice 113-1 (July 2012)
- Emergency response and reporting procedures
- Emergency contact information
- Worker education materials; kick-off and tailgate meeting schedules
- Other information as provided by responsible and commenting agencies (as appropriate for each project).

Additional restrictions conditions will include the following:

- During the construction phase of the project, the applicant shall implement ongoing fire patrols. The applicant shall maintain fire patrols during construction hours and for 1 hour after end of daily construction and hotwork.
- Fire Suppression Resource Inventory —In addition to 14 CCR ~~918~~958.1(a), (b), and (c), the applicant shall update in writing the 24-hour contact information and on-site fire suppression equipment, tools, and personnel list on a quarterly basis during proposed project construction and provide it to the Forest Service, BLM, BIA, SDRFPD, SDCFA, and CAL FIRE.

- During Red Flag Warning events, as issued daily by the National Weather Service in State Responsibility Areas (SRAs) and Local Responsibility Areas (LRAs), and when the Forest Service Project Activity Level (PAL) is "E" on Cleveland National Forest (CNF) (as appropriate), all non-essential, non-emergency construction and maintenance activities shall cease or be required to operate under a Hot Work Procedure. The Hot Work Procedure will be in compliance with the applicable sections in NFPA 51-B "Fire prevention during welding, cutting, or other hot work" and CFC Chapter 26 "Welding and other Hot Work."
- The applicant and contractor personnel shall be informed of changes to the Red Flag event status and PAL as stipulated by CAL FIRE and CNF.
- All construction crews and inspectors shall be provided with radio and/or cellular telephone access that is operational throughout the project area to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction activities at each construction site. All fires shall be reported to the fire agencies with jurisdiction in the project area immediately upon ignition identification/discovery.
- Each crew member shall be trained in fire prevention, initial attack firefighting, and fire reporting. Each member shall carry at all times a laminated card listing pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on contact cards shall be updated and redistributed to all crew members as needed, and outdated cards destroyed, prior to the initiation of construction activities on the day the information change goes into effect.
- Each member of the construction crew shall be trained and equipped to extinguish small fires with hand-held fire extinguishers in order to prevent them from growing into more serious threats. Each crew member shall at all times be within 100<u>50</u> feet of <u>fire suppression equipment, as outlined in ESP 113.1</u>a vehicle containing equipment necessary for fire suppression as outlined in the final Construction Fire Prevention/ Protection Plan.

SDG&E will provide a draft copy of the Construction Fire Prevention/ Protection Plan to the responsible fire agencies for comment a minimum of 90 days prior to the start of any construction activities. The final plan will be approved by the responsible lead agencies with input from the fire and permitting agencies, as desired, prior to the initiation of construction activities

and provided to SDG&E for implementation during all construction prior to the initiation of construction activities. All construction work on the proposed power line replacement projects shall follow the Construction Fire Prevention/Protection Plan guidelines and commitments.

MM FF-2 Develop and Implement an Operations and Maintenance Fire Prevention/Protection Plan. The plan will address all SDG&E electric facilities proposed to be covered under the Master Special Use Permit (MSUP) both on and off within the Cleveland National Forest (CNF), and other project facilities off the CNF, and will be implemented during all operational maintenance work associated with the project for the life of the project, including construction operations. This plan will satisfy the requirements of the SDG&E Project-Specific Fire Plan, as identified in SDG&E's Electric Standard Practice 113-1. Important fire safety concepts that shall be included in the plan and make it an essential overall mitigation measure are the following:

- Guidance on where maintenance activities may occur (non-vegetated areas, cleared access roads, and work pads that are approved as part of the project design plans)
- Fuel treatment area maintenance
- When vegetation work will occur (prior to any other work activity)
- Timing of vegetation clearance work to reduce likelihood of ignition and or fire spread
- Coordination procedures with fire authority
- Integration of the project's Construction Fire Prevention/Protection Plan content
- Personnel training and fire suppression equipment
- Red Flag Warning restrictions for operation and maintenance work
- Fire safety coordinator role as manager of fire prevention and protection procedures, coordinate with fire authority and educator
- Communication protocols
- Incorporation of responsible agency review and approved Response Plan mapping and assessment.
- Other information as provided by responsible and commenting agencies, as applicable.

SDG&E will provide a draft copy of the Operations and Maintenance Fire Prevention/Protection Plan to the responsible fire agencies for comment a minimum of 90 days prior to the completion of the first project segment. The final plan will be approved by the ~~responsible lead agencies~~CPUC and Forest Service prior to~~ energizing the project~~ the first construction segment being deemed complete and the final plan will be provided to SDG&E for implementation during all operations and maintenance activities.

Impact FF-2: Increase the probability of a wildfire due to the presence of project facilities including overhead power lines

The proposed power line replacement project components, along with other SDG&E electric facilities proposed to be covered under the MSUP, include the following ignition sources similar to those currently operated by SDG&E:

- Transformers—Pole-mounted transformers are subject to occasional failure and explosion, sending sparks and hot materials out in all directions.
- Power and distribution lines—Energized lines may arc or may be downed during high winds causing ignition of vegetation.
- Poles/conductors—Poles/conductors may be struck by lightning, may invite bird roosting, and may become targets for backcountry shooters, all of which can result in sparks and vegetation ignition.

Power and distribution lines can start fires in a number of ways, including the following:

- Uncleared vegetation, especially trees, coming into contact with lines or conductors
- Sparks (from exploding hardware such as transformers) coming into contact with vegetation
- Wind-blown debris coming into contact with hardware such as transformers and conductors
- Conductor-to-conductor contact
- Transmission poles blown down by high winds
- Dust or dirt buildup on power line hardware
- Aircraft or helicopter, or attached features such as fire-fighting water buckets, coming into contact with power line hardware and support structures
- Wildlife coming into contact with power line and/or associated hardware.

As discussed below while these ignition sources would continue to be present, the probability that they would ignite a wildfire would decrease with implementation of SDG&E's proposed project.

The proposed power line replacement projects would replace existing wood pole structures with new steel pole structures, in addition to minor relocation, removal, and undergrounding, generally within the same ROW alignment as the existing power lines. Replacement of existing fire-susceptible wooden poles with 2,104 fire-resistant steel poles will result in a fire-hardened alignment that would protect proposed project facilities in the event of a wildland fire. Wooden poles supporting power lines are susceptible to damage and deterioration from fire, woodpeckers, termites, and weather, including wind and/or lightning. The existing wood poles are also natural products with inherent variability in the material strength properties. The proposed new steel poles are not susceptible the same level of deterioration and would remain standing during wildfire conditions due to construction with fire-resistant material. The new steel poles are also engineered with minimal variability in design and strength, resulting in improved system reliability and safety.

Proposed steel poles are, in general, designed to withstand extreme wind-loading, compared with existing wood poles, which were designed for historical wind-loads. During Santa Ana conditions, as the air is forced through coastal mountain passes, wind speeds of 40 mph can be maintained for hours with gusts from 70 to 115 mph possible in the project study area (Schroeder et al. 1964). On ~~February 15~~April 30, ~~2013~~2014, a ~~9~~101 mph gust was recorded at the SDG&E Sill Hill weather station, near TL626 (~~Weather Underground 2013~~SDGEWeather.com 2014). Winds can exceed 100 mph, particularly near the mouth of canyons oriented along the direction of airflow (BLM 2007). Therefore, in some instances, especially along TL626 in the area of Sill Hill, standard steel pole design parameters may be exceeded. However, as discussed in Section D.8.2.2, State Laws and Regulations, SDG&E is required to design electric overhead lines in accordance with safety requirements of the CPUC's GO 95. GO 95 was adopted in 1941 and last updated in January 2012. Additionally, on February 5, 2014, CPUC decision 14-02-015 revised GO 95 to incorporate new and modified rules to reduce the fire hazards associated with overhead power lines and aerial communication facilities in close proximity to power lines. GO 95 is the key standard governing the design, construction, and maintenance of overhead electric lines in the state. It includes safety standards for overhead electric lines, including minimum distances for conductor spacing and minimum conductor ground clearance, standards for calculating maximum sag, electric line inspection requirements, and vegetation clearance requirements. Additionally, GO 95 identifies material's strength requirements (Rule 48) and maximum working load conditions (Rule 43). As noted, SDG&E is required to design the project components in accordance with CPUC's GO 95.

Existing wood poles are also susceptible to failure or pole fires resulting from lighting strikes, whereas the proposed steel poles will reduce the potential of failure due to a lighting strike. While

the likelihood of pole failure resulting from a lightning strike is reduced with steel poles, steel poles increase the risk of lightning strikes, due to their composition and increased height. However, as stated above, SDG&E will be required to design electric overhead lines in accordance with safety requirements of the CPUC's GO 95 and implement proper grounding procedures and installation of proper grounding devices to minimize this risk and increase system reliability.

Additionally, the replacement of existing aluminum or copper conductors with aluminum-clad, steel-supported conductors will increase the safety of the lines, as well as improve efficiency and response times when repairs to the 69 kV power lines are required. The larger, stronger conductors will be significantly more resistant to potential damage from extreme wind conditions, lightning strikes, and tree-line contact in comparison with the existing conductors. The proposed conductors will also reduce the potential for line breakages or other failures that could result during hazardous weather conditions.

Under SDG&E's proposed project, the new pole heights are also generally increased which will allow for increased conductor spacing and appropriate ground clearances. The increased height and spacing provides for greater distances between conductors and reduces risk of conductor to conductor contact, as well as risk of contact with vegetation or human activity on the ground (SDG&E 2013). The overall distance of overhead power lines will also be reduced from 145.9 miles to 129.5 miles as a result of undergrounding portions of the system. Finally, proposed multi-stranded steel core conductors would remain in service even if several steel strands are damaged, including by foreign objects or gunshots, which have been the cause of damaged conductors in the backcountry. These design components of the proposed system would reduce fire risk in comparison with the existing system by enhancing the safety and reliability of the power line system during extreme weather conditions.

Power line relocation and undergrounding activities would remove 16.43 miles of existing 12 kV overhead power lines and replace/relocate them with 11.81 miles of new underground lines. Undergrounding activities will also allow for the removal of 11.2 miles of existing power line access roads. Approval of the proposed power line replacement projects would decrease the quantity and spatial extent of project facilities (roads) and overhead power lines in the project study area, thereby decreasing the quantity and extent of potential ignition sources.

As discussed above, the proposed power line replacement projects would replace fire susceptible wood poles with fire resistant steel poles, install new heavier and stronger conductors and increase spacing resulting in a fire-hardening alignment. Based on the conservative nature of G.O 95, operation of the proposed electrical lines, poles, and associated hardware would not pose a significant hazard precipitated by high winds or fires initiated by downed conductors or lightning. In addition to the proposed fire hardening of the various alignments, the project

includes a net reduction in overhead lines which will further reduce the potential for wildfires. Therefore, the presence of the proposed power line replacement projects along with other SDG&E electric facilities proposed to be covered under the MSUP would not increase the probability of igniting a wildfire or exceed the CEQA significance threshold. Therefore, under CEQA, this impact would be less than significant (Class III).

Under NEPA, the design features associated with SDG&E's proposed project will reduce the risk associated with a portion of the existing electrical system, but not eliminate the risk. The risk would not be reduced for the circuits that are part of the MSUP but not part of the power line replacement projects. Overall risk reduction depends on successful implementation of vegetation management and power line maintenance requirements as required by GO 95 and PRC 4293. The utilities and regulatory agencies have placed increased emphasis on implementing these requirements to reduce the risk of power line-related fires.

Impact FF-3: Reduce the effectiveness of firefighting due to the presence of the overhead power lines.

Approval of the proposed power line replacement projects would authorize the continued operation and maintenance of SDG&E electric facilities within the CNF and authorize the proposed power line replacement projects. SDG&E's proposed project would replace existing wood pole structures with new steel pole structures, in addition to minor relocation, removal and undergrounding, generally within the same ROW alignment as the existing power lines. Power line relocation and undergrounding activities would remove 16.43 miles of existing 12 kV overhead power lines and replace/relocate it with 11.81 miles of new underground lines. The overall distance of overhead power lines would be reduced from 145.9 miles to 129.5 miles as a result of undergrounding portions of the system. Approval of the proposed power line replacement projects would decrease the quantity and spatial extent of overhead power lines in the project study area, thereby decreasing the potential conflict with firefighting efforts.

Ground-Based Firefighting

The presence of overhead power lines can present various ground-based fire attack hazards. Wildland firefighters working around energized transmission lines may be exposed to electrical shock hazards including the following: direct contact with downed power lines, contact with electrically charged materials and equipment due to broken lines, contact with smoke that can conduct electricity between lines, and the use of solid-stream water applications around energized lines. Between 1980 and 1999 in the United States, there were 10 firefighter fatalities due to electrical structure contact during wildfire suppression (~~NFPA~~ NIOSH 2002~~1~~). Maintaining a safety buffer greatly reduces the risk of electrical structure contact, and it may reduce the effectiveness of ground-based frontal attacks. Most firefighting agencies implement safety buffers as provided in the International Fire Service Training

Association's *Fundamentals of Wildland Firefighting* manual(Goodson 1998). Depending on the fire circumstances, the presence of power lines may result in the decision to let a fire burn through an area before attacking with ground and aerial firefighting resources.

A potential outcome of not providing immediate attack on a wildfire ignition is that it is able to build in size and intensity, especially under weather favorable to fire spread. Delays in containment allow for rapid fire perimeter growth through a fueled flaming front and through fire brand spotting. Vegetation containing dead material often results in ember production that, under windy conditions, can rapidly increase fire spread rate by igniting spot fires as much as 2 to 3 miles or more in front of the flame front. This type of fire behavior significantly complicates fire containment.

However, the proposed power line replacement projects will occur generally within the same ROW alignment, and overhead power line placement would be essentially the same as currently exists. The proposed power line replacement projects would decrease the quantity of access roads by 11.2 miles and overhead power lines by 16.43 miles along portions of the power line system (TL629, C79, C440, and C449). Removal of 11.2 miles of access roads may reduce the capability of ground-based firefighting resources to access some areas; however, many of the roads to be removed have steep gradients (>25%), are not in advantageous tactical areas, or could otherwise pose a risk to responding firefighters and would therefore not be used for access. Removal of existing access roads also coincides with removal of overhead power lines and poles, thereby reducing potential ignition sources in these areas. Further, repair and maintenance of existing access roads (to remain) will continue to facilitate access by ground-based firefighting resources.

Aerial Firefighting

The presence of overhead power lines can present various aerial fire attack hazards including increasing the risk of power line direct contact by aircraft or water buckets, resulting in a "no fly" zone or restricting aerial water or retardant drop effectiveness in areas with power lines. Limiting the effectiveness of aerial fire containment activities can be considered significant since this form of fire attack has proven to be an especially effective means of slowing or containing fires, particularly in areas where there is limited access or longer response times. However, the proposed power line replacement projects will occur generally within the same ROW alignment, and overhead power line placement would be essentially the same as currently exists. Further, the proposed power line replacement projects would decrease the quantity of overhead power lines by 16.43 miles along portions of the power line system (TL629, C79, C440, and C449).

Under NEPA, impacts of SDG&E's proposed project related to reducing the effectiveness of firefighting would not be adverse; under CEQA this impact would be less than significant (Class III).

Impact FF-4: Introduce non-native plants, which would contribute to an increased ignition potential and rate of fire spread

Approval of the SDG&E's proposed project would authorize the continued operation and maintenance of SDG&E electric facilities within the CNF and authorize the proposed power line replacement projects. Vegetation clearing and minor grading of access roads, staging areas, pole work areas, stringing sites, fly yards, and trench work areas associated with SDG&E's proposed project would remove native vegetation as part of the requirements for construction. Routine vegetation management around project facilities and vegetation removal for access road maintenance during operations will also require removal of native vegetation. Whenever native vegetation is removed and soils are disturbed, the potential for non-native plant establishment increases. Section B.4, Biological Resources, of this EIR/EIS also addresses impacts associated with non-native plant establishment. Removal of native plants may allow aggressively establishing non-native plants to successfully germinate and become established due to the lack of competition for sunlight and soil moisture. Once established, it is common for non-native plants to spread, especially those plants listed on the California Invasive Plant Council's invasive plant list (http://www.cal-ipc.org/).

Non-native plants may be spread by a variety of means, including from animal, human, and vehicle dispersal, among others. Non-native plant establishment is most prevalent where competition is scarce and there has been soil disturbance. The introduction/release and proliferation of non-native, invasive plants may be facilitated by the project's construction and maintenance activities. If allowed to proliferate, larger areas may be affected, and following natural disturbances such as wildfire, these large areas may be prone to conversion to non-native fuels, such as non-native, annual grasses. In turn, non-native grasses are more prone to ignite and carry wildfire due to their tendency to dry earlier in the season than native plants and their structure (fine, flashy fuels) and dry fuel moisture, which is conducive to fast fire spread. These types of fuels often burn more frequently than native fuels, which results in the exclusion of the native plants and the proliferation of the non-native plants. Invasive annual grasses may also influence fire spread by changing the horizontal spacing characteristics of a native fuel bed. Naturally occurring sparse shrubs with substantial spacing may become "connected" through the grasses creation of a fine fuel continuum between patchy, perennial shrubs, allowing wildfires to expand further into otherwise sparsely vegetated wildlands (Brooks 2008).

Establishment and corresponding spread of invasive plants within the project study area would adversely influence fire behavior by altering fuel beds; increasing the fine, flashy fuel load; potentially increasing the fire frequency; and contributing to increases in fire spread rates. The introduction of non-native plants with an increased ignition potential and rate of wildfire spread is considered an adverse, significant impact that can be mitigated by following the prevention

and management protocol outlined in Mitigation Measure MM FF-2 as well as including the restoration of areas affected by project activities with native plantings, where appropriate as described in Section D.4, Biological Resources, of this EIR/EIS. MM BIO-4 will result in the preparation of a restoration plan for implementation in all disturbed areas outside the area that would receive at least annual vegetation removal. The restoration plan will revegetate disturbed areas with native plants common to the eco-region and in densities and species diversity that are consistent with pre-project conditions. Therefore, with implementation of MM FF-2 and MM BIO-4, project activities resulting in the potential increase in ignition sources due to the introduction of non-native species would be mitigated under NEPA, and under CEQA, would be less than significant with implementation of mitigation (Class II).

D.8.4 Forest Service Proposed Actions

Environmental Setting/Affected Environment

Sections D.8.1 and D.8.2 describe the existing fire setting associated with SDG&E's proposed project. The Forest Service proposed actions would be in the same geographic area as SDG&E's proposed project; therefore, the fire and fuels setting would remain the same as that identified in Sections D.8.1 and D.8.2.

D.8.4.1 TL626 Alternative Routes

Options 1 and 2 SDG&E Proposed Overhead Alignments Through/Around Inaja and Cosmit Reservation Lands

Environmental Effects

Impacts FF-1 and FF-2: This alternative would reroute a 3.7-mile segment of TL626—to the east along a new undisturbed ROW (Figure B-4a) which under Option 1 would consist of 5.5 miles and under Option 2 would consist of 5.6 miles. All other project components would remain the same. Options 1 and 2 would consist of similar construction as well as operations and maintenance activities as that described for SDG&E's proposed project. Both options would also be located within an area classified as having high fire severity similar to that described for SDG&E's proposed project.

While impacts FF-1 and FF-2 associated with construction and maintenance activities under Options 1 and 2 would increase over that identified for SDG&E's proposed project due to the longer overhead alignment in a new ROW, the overall impacts findings are anticipated to be similar to those discussed in Section D.8.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, with implementation of APM HAZ-01 through APM HAZ-06, along with

MM FF-1 and MM FF-2, impacts FF-1 and FF-2 would be would be less than significant with mitigation under CEQA (Class II).

Under NEPA, implementation of APM HAZ-03 and APM HAZ-06, along with MM FF-1 and MM FF-2, would reduce the risk of wildfire caused by construction, operations, and maintenance (Impact FF-1), but not eliminate the risk. These APMs and mitigation measures are effective methods to reduce risk, particularly those measures that restrict work during periods of high fire danger.

For impact FF-2, the design features associated with SDG&E's proposed project will reduce the risk associated with a portion of the existing electrical system, but not eliminate the risk. Overall risk reduction depends on successful implementation of vegetation management and power line maintenance requirements as required by GO 95 and PRC 4293. The utilities and regulatory agencies have placed increased emphasis on implementing these requirements to reduce the risk of power line-related fires.

Impact FF-3: Options 1 and 2 would result in greater impacts to aerial firefighting as a result of new poles and power lines in an area where none previously existed; however, the aerial hazards in the Cedar Creek area would be eliminated. The new poles and lines would create an obstacle to be avoided during aerial firefighting. This identified impact would be adverse; however, with implementation of MM PHS-9, impacts would be mitigated under NEPA. Under CEQA, impacts would be significant and would be mitigated to a level that is considered less than significant (Class II).

Impact FF-4: Ground disturbance associated with construction of the new steel poles and access roads would remove native vegetation within the development areas and within fuel buffers. Whenever native vegetation is removed and soils are disturbed, the potential for non-native plant establishment increases. Therefore, the fire-related impacts associated with the introduction of non-native plants and their impacts on fire behavior would be greater under Options 1 and 2 than those identified for SDG&E's proposed project. While Impact FF-4 would increase over that identified for SDG&E's proposed project, the overall impacts findings are anticipated to be similar to those discussed in Section D.8.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, implementation of Mitigation Measures MM FF-2 and MM BIO-1d would mitigate this impact under NEPA, and under CEQA, the impact would be less than significant with mitigation (Class II).

Option 3 Partial Underground Relocation in Boulder Creek Road

Environmental Effects

Options 3a and 3b would consist of placing a segment of TL626 underground in Boulder Creek Road as shown in Figure B-4b. The rerouted underground segment of Option 3a is approximately 11.4 miles long, and Option 3b is 6.3 miles long (each option includes an approximately 1-mile overland segment to interconnect back into the existing TL626 alignment).

Impacts FF-1 and FF-2: Construction impacts resulting from this alternative would be similar to those identified for SDG&E's proposed project in Section D.8.3.3. The relocation and undergrounding of the power line included under Options 3a and 3b would still introduce construction- and/or maintenance-related impacts associated with an increase in the amount of human activity in the project area and the introduction of a variety of ignition sources. In addition, the 1-mile overhead component would introduce new poles and lines in an area where none previously existed. Implementation of APM HAZ-01 through APM HAZ-06 along with MM FF-1 through FF-2 would mitigate the increased probability of a wildfire during construction or maintenance. This impact would be less than significant with mitigation under CEQA (Class II).

Under NEPA, implementation of APM HAZ-03 and APM HAZ-06, along with MM FF-1 and MM FF-2, would reduce the risk of wildfire caused by construction, operations, and maintenance, but not eliminate the risk. These APMs and mitigation measures are effective methods to reduce risk, particularly those measures that restrict work during periods of high fire danger.

Impact FF-3: Options 3a and 3b would result in reduced impacts to aerial firefighting as a result of undergrounding a portion of TL626 in Boulder Creek Road. While new poles and lines would be installed for the 1-mile overhead portion in a new ROW where aerial obstructions did not exist previously, the overall extent of overhead power lines along TL626 would be reduced, thereby reducing the extent of aboveground obstacles to be avoided during aerial firefighting. With implementation of MM PHS-9, impacts resulting from the 1-mile overhead portion would be mitigated under NEPA. Under CEQA, impacts would be significant and would be mitigated to a level that is considered less than significant (Class II).

Impact FF-4: The undergrounding of Options 3a and 3b would increase ground disturbance and the likelihood of non-native plant establishment along Boulder Creek Road. Therefore, the fire-related impacts associated with the introduction of non-native plants and their impacts on fire behavior would be similar to those identified for SDG&E's proposed project identified in Section D.8.3.3. Implementation of MM FF-2 and MM BIO-4 would mitigate this impact under NEPA, and under CEQA, the impact would be less than significant with mitigation (Class II).

Option 4 Overhead Relocation in Boulder Creek Road

Environmental Effects

Impacts FF-1 and FF-2: This alternative would reroute a segment of TL626 along Boulder Creek Road and overland as shown in Figure B-4a. The rerouted segment would be approximately 4.7 miles longer than proposed by the project. All other project components would remain the same. Option 4 would consist of similar construction as well as operations and maintenance activities as that described for SDG&E's proposed project and would be located within an area classified as having high fire severity similar to that described for SDG&E's proposed project. While impacts FF-1 and FF-2 associated with construction and maintenance activities would increase due to the longer overhead alignment compared to those identified for SDG&E's proposed project, the overall impacts findings are anticipated to be similar to those discussed in Section D.8.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, with implementation of APM HAZ-01 through APM HAZ-06, along with MM FF-1 and MM FF-2, impacts FF-1 and FF-2 would be less than significant with mitigation under CEQA (Class II).

Under NEPA, implementation of APM HAZ-03 and APM HAZ-06, along with MM FF-1 and MM FF-2, would reduce the risk of wildfire caused by construction, operations, and maintenance, but would not eliminate the risk. These APMs and mitigation measures are effective methods to reduce risk, particularly those measures that restrict work during periods of high fire danger.

For impact FF-2, the design features associated with SDG&E's proposed project will reduce the risk associated with a portion of the existing electrical system, but not eliminate the risk. Overall risk reduction depends on successful implementation of vegetation management and power line maintenance requirements as required by GO 95 and PRC 4293. The utilities and regulatory agencies have placed increased emphasis on implementing these requirements to reduce the risk of power line-related fires.

Impact FF-3: Option 4 would result in greater impacts to aerial firefighting as a result of new poles and power lines in an area where none previously existed; however, this would be off-set in part by removing the existing aerial hazards in the Boulder Creek and Cedar Creek drainages. The new poles and lines would create an obstacle to be avoided during aerial firefighting. Although the alignment would follow an existing roadway alignment, this identified impact would be adverse. With implementation of MM PHS-9, impacts would be mitigated under NEPA. Under CEQA, impacts would be significant and would be mitigated to a level that is considered less than significant (Class II).

Impact FF-4: The rerouted segment would be approximately 8.3 miles longer than proposed by the project and would therefore increase ground disturbance and the likelihood of non-native plant establishment along Boulder Creek Road. Therefore, the fire-related impacts associated with the introduction of non-native plants and their impacts on fire behavior would be similar to those identified for SDG&E's proposed project identified in Section D.8.3.3. Implementation of Mitigation Measures MM FF-2 and MM BIO-4 would mitigate this impact under NEPA, and under CEQA, the impact would be less than significant with implementation of mitigation (Class II).

Option 5 Reroute and Undergrounding around Inaja Picnic Area

Environmental Effects

Impacts FF-1 and FF-2: This alternative would reroute less than a 0.5-mile segment in close proximity to the existing TL626 (Figure B-4c). All other project components would remain the same. Option 5 would consist of similar construction as well as operations and maintenance activities as that described for SDG&E's proposed project and would be located within an area classified as having high fire severity similar to that described for the prosed project. While impacts FF-1 and FF-2 associated with construction and maintenance activities would increase due to the longer alignment compared to those identified for SDG&E's proposed project, the overall impacts findings are anticipated to be similar to those discussed in Section D.8.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, with implementation of APM HAZ-01 through APM HAZ-06, along with MM FF-1 and MM FF-2, impacts FF-1 through FF-3 would be less than significant with mitigation under CEQA (Class II). .

Under NEPA, implementation of APM HAZ-03 and APM HAZ-06, along with MM FF-1 and MM FF-2, would reduce the risk of wildfire caused by construction, operations, and maintenance, but would not eliminate the risk. These APMs and mitigation measures are effective methods to reduce risk, particularly those measures that restrict work during periods of high fire danger.

For impact FF-2, the design features associated with SDG&E's proposed project will reduce the risk associated with a portion of the existing electrical system, but not eliminate the risk. Overall risk reduction depends on successful implementation of vegetation management and power line maintenance requirements as required by GO 95 and PRC 4293. The utilities and regulatory agencies have placed increased emphasis on implementing these requirements to reduce the risk of power line-related fires.

Impact FF-3: Option 5 would result in greater impacts to aerial firefighting as a result of new poles and power lines in an area where none previously existed; however, this would be off-set by the removal of the existing aerial hazard downstream from the new location. This identified

impact would be adverse; however, with implementation of MM PHS-9, impacts would be mitigated under NEPA. Under CEQA, impacts would be significant and would be mitigated to a level that is considered less than significant (Class II).

Impact FF-4: The rerouted segment would be approximately 0.5 mile longer than proposed by the project and would therefore increase ground disturbance and the likelihood of non-native plant establishment along Boulder Creek Road. Therefore, the fire-related impacts associated with the introduction of non-native plants and their impacts on fire behavior would be similar to those identified for SDG&E's proposed project identified in Section D.8.3.3. Implementation of Mitigation Measures MM FF-2 and MM BIO-4 would mitigate this impact under NEPA, and under CEQA, the impact would be less than significant with mitigation (Class II).

D.8.4.2 C157 Partial Relocation to Avoid Designated Wilderness

Option 1 SDG&E Proposed Alignment between Two Wilderness Areas

Option 2 City of San Diego Modified Alignment

Environmental Effects

Impacts FF-1 through FF-4: Options 1 and 2 would reroute an approximately 2-mile segment of C157 to the south of the existing alignment approximately 0.25 mile along a new undisturbed ROW (Figure B-5a) (increase of overall alignment is 0.2 mile). All other project components would remain the same. Impacts associated with construction and maintenance activities would be essentially the same for relocating C157 under Options 1 and 2 as those identified for SDG&E's proposed project in Section D.8.3.3. As with SDG&E's proposed project, implementation of APM HAZ-01 through APM HAZ-06, along with MM FF-1, MM FF-2, and MM BIO-4, under NEPA would mitigate the increased probability of a wildfire during construction or maintenance and under CEQA, this impact would be less than significant with mitigation (Class II).

Options 1 and 2 would result in greater impacts to aerial firefighting (Impact FF-3) than SDG&E's proposed project as a result of relocating an overhead portion of C157 in an area where none previously existed. Although within 0.25 mile of the exiting line, the new poles and lines would create an obstacle in a new location to be avoided during aerial firefighting, but would remove the existing obstacle. Impact FF-3 would be adverse; however, with implementation of MM PHS-9, impacts would be mitigated under NEPA. Under CEQA, impacts would be significant and would be mitigated to a level that is considered less than significant (Class II).

D.8.4.3 C440 Mount Laguna Underground Alternative

Environmental Effects

Impact FF-1: This alternative would consist of undergrounding approximately 14.3 miles of C440 proposed for replacement within existing roadways in the Laguna Mountain Recreation Area. Construction impacts resulting from this alternative would be similar to those identified for SDG&E's proposed project in Section D.8.3.3. The relocation and undergrounding of C440 as proposed in this alternative would still introduce construction- and/or maintenance-related impacts associated with an increase in the amount of human activity in the project area and the introduction of a variety of ignition sources. Implementation of APM HAZ-01 through APM HAZ-06 and Mitigation Measures MM FF-1 through MM FF-2 would mitigate the increased probability of a wildfire during construction or maintenance. Under CEQA, this impact would be less than significant with mitigation (Class II). Under NEPA, implementation of APM HAZ-03 and APM HAZ-06, along with MM FF-1 and MM FF-2, would reduce the risk of wildfire caused by construction, operations, and maintenance, but would not eliminate the risk. These APMs and mitigation measures are effective methods to reduce risk, particularly those measures that restrict work during periods of high fire danger.

Impact FF-2: Undergrounding C440 would reduce the probability of a wildfire during operations, compared to replacement of the line in place overhead as proposed, to no impact.

Impact FF-3: Impact FF-3 would reflect impact findings previously discussed in Section D.8.3.3 for SDG&E's proposed project. Undergrounding C440 would not create an interference with the effectiveness of ground-based or aerial firefighting. Therefore, this impact associated with C440 would be reduced to no impact.

Impact FF-4: The undergrounding of approximately 14.3 miles of C440 would increase ground disturbance and the likelihood of non-native plant establishment along the existing roadways. Therefore, the fire-related impacts associated with the introduction of non-native plants and their impacts on fire behavior would be slightly greater than those identified for SDG&E's proposed project identified in Section D.8.3.3. Under NEPA, this impact would be adverse. Mitigation Measures MM FF-2 and MM BIO-4 have been provided. Therefore, the introduction of non-native species would be mitigated under NEPA, and under CEQA, would be less than significant with mitigation (Class II).

D.8.5 BIA Proposed Action

Environmental Effects

Impact FF-1: Construction impacts resulting from this alternative would be similar to those identified for SDG&E's proposed project in Section D.8.3.3. The relocation and undergrounding of the power line included under this alternative would still introduce construction- and/or maintenance-related impacts associated with an increase in the amount of human activity in the project area and the introduction of a variety of ignition sources. Implementation of APM HAZ-01 through APM-06 along with Mitigation Measures MM FF-1 through MM FF-2 would mitigate the increased probability of a wildfire during construction or maintenance, and under CEQA, this impact would be less than significant with mitigation (Class II).

Impacts FF-2 and FF-3: While the undergrounding of approximately 1,500 feet of the power line would result in less potential for ignition from the undergrounded segment; the presence of the overhead power line associated with the remaining TL682 components and the project as a whole presents an ongoing source of potential wildfire ignitions; therefore impacts would be similar to those identified for SDG&E's proposed project.

Impact FF-4: The undergrounding of TL682 would increase ground disturbance and the likelihood of non-native plant establishment. However, all other components would remain the same. Therefore, as the underground segment is not substantial, the fire-related impacts associated with the introduction of non-native plants and their impacts on fire behavior would be marginally greater than those identified for SDG&E's proposed project identified in Section D.8.3.3. Implementation of Mitigation Measures MM FF-2 and MM BIO-4 would mitigate this impact under NEPA, and under CEQA, this impact would be less than significant with mitigation (Class II).

D.8.6 Additional Alternatives

D.8.6.1 Partial Removal of Overland Access Roads

Environmental Setting/Affected Environment

This alternative would be in the same study area as SDG&E's proposed project; therefore, the environmental setting would be the same as that identified in Sections D.8.1 and D.8.2.

Environmental Effects

Impacts FF-1 through FF-4: Under this alternative, overland access in rugged terrain that exceeds grades of 25% for appreciable distances in proximity to streams (as outlined in Section C.4.2) would be removed and the areas restored. This alternative removes up to 11~~0~~.5 miles of certain segments of existing exclusive use access roads that are too steep to effectively control road drainage, particularly along TL626 (Boulder Creek) and TL625 (Barber Mountain/Carveacre). Removal of access roads in these areas would increase the response times required for maintenance or emergency conditions. However, ~~B~~because the overall power line facilities would remain primarily as proposed under this alternative, Impacts FF-1 through FF-4 would reflect similar impact findings previously discussed in Section D.8.3.3 for SDG&E's proposed project. Accordingly, identified impacts and mitigation measures would the same as identified in Section D.8.3.3.

D.8.6.2 Removal of TL626 from Service

Environmental Setting/Affected Environment

This alternative would remove TL626 from service and replace with system upgrades, either with TL6931 upgrades or a TL625 loop-in as described below. In order to serve existing customers, segments of TL626 would also be converted from 69 kV to 12 kV. The setting associated with these upgrades is described as follows:

a. Upgrade to the existing 69 kV TL6931 from the Crestwood Substation to the Boulevard Substation: The setting associated with this component is largely described in SDG&E's TL6931 Fire Hardening Project Proponent's Environmental Assessment (PEA) (SDG&E 2012). As described in SDG&E's PEA, the existing ROW supports a 69 kV line and is located in an area designated as having a very high fire risk.

b. Loop-in TL625 into the Suncrest Substation (see Figure C-2). The setting associated with the new 3-mile TL625 loop-in is largely located within the CNF approximately 100 feet from the Sunrise Powerlink ROW between Japatul Road and Suncrest Substation. This area has been described in the Sunrise Powerlink Project Final EIR/EIS. As described in the Sunrise Powerlink EIR/EIS, the majority of the terrain associated along the proposed 3-mile TL625 loop-in consists of rugged and remote terrain with very high fire risk.

c. Convert a 6.5-mile portion of TL626 between the Santa Ysabel and Boulder Creek Substations from 69 kV to 12 kV, along with a 6.8-mile section co-located with C79 within the same study area as SDG&E's proposed project; therefore, the environmental setting would be the same as that identified in Sections D.8.1 and D.8.2 for this component.

Environmental Effects

Impacts FF-1 through FF-4: Under this alternative, a 6-mile portion of TL6931 would be reconstructed or a new 3-mile 69 kV loop-in would be developed along the Sunrise Powerlink, and segments of TL626 would be converted from 69 kV to 12 kV.

Reconstruction of TL6931

Reconstruction of TL6931 would consist of construction as well as operations and maintenance activities similar to those described for SDG&E's proposed project. Due to the nature of the existing TL6931 alignment, there would not be a substantial change to the baseline condition including the presence of facilities in an area identified as having a high fire risk. Therefore, as with SDG&E's proposed project, with implementation of APM HAZ-01 through APM HAZ-06 and Mitigation Measures MM FF-1 through FF-2, Impacts FF-1 through FF-4 associated with reconstructing TL6931 would be mitigated under NEPA, and under CEQA impacts would be less than significant with mitigation (Class II).

Development of the New 3-Mile Loop-in of TL625

Development of the new TL625 loop-in would consist of construction as well as operations and maintenance activities similar to those described for SDG&E's proposed project in areas of rugged terrain. Due to the existing undeveloped nature of the proposed alignment, there would not be a substantial change to the baseline condition including the presence of a high fire hazard area; therefore, Impacts FF-1 and FF-2 would reflect similar impact findings as previously discussed in Section D.8.3.3. As with SDG&E's proposed project, implementation of APM HAZ-01 through APM HAZ-06 and MM FF-1 and MM FF-2 would mitigate Impacts FF-1 and FF-2 associated with this component, and under CEQA, impacts would be less than significant with mitigation (Class II).

Under NEPA, implementation of APM HAZ-03 and APM HAZ-06, along with MM FF-1 and MM FF-2, would reduce the risk of wildfire caused by construction, operations, and maintenance, but not eliminate the risk. These APMs and mitigation measures are effective methods to reduce risk, particularly those measures that restrict work during periods of high fire danger. For impact FF-2, the design features associated with SDG&E's proposed project will reduce the risk associated with the new lines, but would not eliminate the risk. Overall risk reduction depends on successful implementation of vegetation management and power line maintenance requirements as required by GO 95 and PRC 4293. The utilities and regulatory agencies have placed increased emphasis on implementing these requirements to reduce the risk of power line-related fires.

This alternative would result in new poles and power lines in an area where none previously existed. However, the loop-in would be adjacent to an existing 500 kV line (Sunrise Powerlink), which serves as the major aerial obstacle in the area. Consequently, the addition of a 69 kV line adjacent to an existing 500 kV line would have little to no impact during aerial firefighting. Nevertheless, the loop-in would create a new facility on the ground that would need to be avoided during aerial firefighting. With implementation of MM PHS-9, adverse impacts would be mitigated under NEPA. Under CEQA, significant impacts would be less than significant with mitigation (Class II).

The new loop-in would be approximately 3 miles and would, therefore, create a potential for non-native plant establishment along the new alignment. However, due to the intervening topography, helicopter use both during construction and operations and maintenance would be required rather than overland access. Therefore, Impact FF-4 associated with the introduction of non-native plants and their impacts on fire behavior would be similar to those identified for SDG&E's proposed project as described in Section D.8.3.3. Implementation of Mitigation Measures MM FF-2 and MM BIO-4 would mitigate this impact under NEPA, and under CEQA, would be less than significant with implementation of mitigation (Class II).

Convert Segments of TL626 from 69 kV to 12 kV

Conversion of segments of TL626 to 12 kV would consist of similar construction as well as operations and maintenance activities as that described for the project; therefore, Impacts FF-1 through FF-4 would reflect similar impact findings previously discussed in Section D.8.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, implementation of APM HAZ-01 through APM HAZ-06 and MM FF-1, FF-2 and MM BIO-4 under NEPA would mitigate Impacts FF-1through FF-4 associated with this component and under CEQA impacts would be less than significant with mitigation (Class II).

D.8.7 No Action Alternative

Environmental Effects

Impacts FF-1 through FF-4: Under the No Action Alternative, the MSUP would not be issued, and SDG&E would be required to remove the existing electric lines and facilities on CNF-managed lands as well as develop additional transmission upgrades elsewhere as described in Section C.1.4 of this EIR/EIS. While none of the facilities associated with SDG&E's proposed project would be constructed, removal of the electric lines and restoration activities within the CNF along with the development of additional power lines and/or alternative means of delivering electrical service elsewhere in conformance with California Independent System Operator (CAISO) requirements,

would result in similar fire hazards as described in Section D.8.3, and therefore overall impacts to fire and fuels management would not be reduced.

D.8.8 No Project Alternative

Environmental Effects

Impacts FF-1 through FF-4: Under the No Project Alternative, the proposed power line replacement projects would not be built, and the existing SDG&E electrical facilities would remain. Operations and maintenance of SDG&E electrical facilities would continue and include routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks and would be based on the requirements of the existing permits. These activities would not increase in duration, intensity, or frequency over existing conditions. As the facilities would remain in place, none of the construction impacts described in Section D.8.3 would occur. Therefore, Impact FF-1 associated with construction of the proposed power line replacement projects would be eliminated. The risks associated with starting a fire (Impact FF-2) would be higher under the No Project Alternative, as the fire hardening of the existing electric lines as proposed would not occur and the fire hazards associated with the existing electric lines would remain. Impact FF-3, presence of overhead facilities reducing the effectiveness of firefighting, and Impact FF-4, project activities introducing non-native plants, would remain the same as under the existing condition.

D.8.9 Mitigation Monitoring, Compliance, and Reporting

Table D.8-2 presents the mitigation monitoring, compliance, and reporting program for fire and fuels management for the power line replacement projects and alternatives.

Table D.8-2
Mitigation Monitoring, Compliance, and Reporting – Fire and Fuels Management

Mitigation Measure	**MM FF-1: Develop and Implement a Construction Fire Prevention/Protection Plan.** SDG&E shall develop a multiagency Construction Fire Prevention/Protection Plan in consultation with the U.S. Forest Service, Bureau of Land Management (BLM), Bureau of Indian Affairs (BIA), California Department of Forestry and Fire Protection (CAL FIRE), San Diego Rural Fire Protection District (SDRFPD), and San Diego County Fire Authority (SDCFA) to the satisfaction of lead agencies. SDG&E shall monitor construction activities to ensure implementation and effectiveness of the plan. The final plan will be approved by the commenting agencies prior to the initiation of construction activities and shall be implemented during all construction activities by SDG&E. At minimum, the plan will include the following:
	• Procedures for minimizing potential ignition
	  ○ Vegetation clearing
	  ○ Fuel treatment area establishment

Table D.8-2
Mitigation Monitoring, Compliance, and Reporting – Fire and Fuels Management

	○ Parking requirements ○ Smoking restrictions ○ Hot work restrictions • Red Flag Warning restrictions • Fire coordinator role and responsibility • Fire suppression equipment on site at all times work is occurring • Requirements of Title 14 of the California Code of Regulations, 918 "Fire Protection" for the private land portions • Applicable components of the SDG&E Wildland Fire Prevention and Fire Safety Electric Standard Practice 113-1 (July 2012) • Emergency response and reporting procedures • Emergency contact information • Worker education materials; kick-off and tailgate meeting schedules • Other information as provided by responsible and commenting agencies (as appropriate for each project). Additional restrictions will include the following: • During the construction phase of the project, the applicant shall implement ongoing fire patrols. The applicant shall maintain fire patrols during construction hours and for 1 hour after end of daily construction and hotwork. • Fire Suppression Resource Inventory – In addition to 14 CCR 918.1(a), (b), and (c), the applicant shall update in writing the 24-hour contact information and on-site fire suppression equipment, tools, and personnel list on a quarterly basis and provide it to the Forest Service, BLM, BIA, SDRFPD, SDCFA, and CAL FIRE. • During Red Flag Warning events, as issued daily by the National Weather Service in State Responsibility Areas (SRAs) and Local Responsibility Areas (LRAs), and when the Forest Service Project Activity Level (PAL) is "E" on Cleveland National Forest (CNF) (as appropriate), all non-essential, non-emergency construction and maintenance activities shall cease or be required to operate under a Hot Work Procedure. The Hot Work Procedure will be in compliance with the applicable sections in NFPA 51-B "Fire prevention during welding, cutting, or other hot work" and CFC Chapter 26 "Welding and other Hot Work." ○ The applicant and contractor personnel shall be informed of changes to the Red Flag event status and PAL as stipulated by CAL FIRE and CNF. ○ All construction crews and inspectors shall be provided with radio and/or cellular telephone access that is operational throughout the project area to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction activities at each construction site. All fires shall be reported to the fire agencies with jurisdiction in the project area as soon as the fire is identified/discovered.~~immediately upon ignition.~~ ○ Each crew member shall be trained in fire prevention, initial attack firefighting, and fire reporting. Each member shall carry at all times a laminated card listing pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on contact cards shall be updated and redistributed to all crew members as needed, and outdated cards destroyed, prior to the initiation of

Table D.8-2
Mitigation Monitoring, Compliance, and Reporting – Fire and Fuels Management

	construction activities on the day the information change goes into effect. ○ Each member of the construction crew shall be trained and equipped to extinguish small fires with hand-held fire extinguishers in order to prevent them from growing into more serious threats. Each crew member shall at all times be within ~~100~~ 50 feet of ~~a vehicle containing equipment necessary for~~ fire suppression equipment, as outlined in ESP 113.1. ~~the final Construction Fire Prevention/Protection Plan.~~ SDG&E will provide a draft copy of the Construction Fire Prevention/Protection Plan to the responsible fire agencies for comment a minimum of 90 days prior to the start of any construction activities. The final plan will be approved by the responsible lead agencies with input from the fire and permitting agencies, as desired, prior to the initiation of construction activities and provided to SDG&E for implementation during all construction prior to the initiation of construction activities. All construction work on the proposed power line replacement projects shall follow the Construction Fire Prevention/Protection Plan guidelines and commitments.
Location	All access roads and work areas for SDG&E's proposed project and all alternatives.
Compliance Documentation[(a)] and Consultation	a. Prepare Construction Fire Prevention/Protection Plan b. Approval and implementation of Construction Fire Prevention/Protection Plan c. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. Draft Plan: At least 90 days prior to scheduled start of construction. b. Final Plan: At least 30 days prior to scheduled start of construction (plan in effect throughout construction). c. During construction
Responsible Agency	CAL FIRE, SDRFPD, SDCFA for proposed project and all alternatives *SDG&E's Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629), BLM (TL629 and TL6923), CSP (C79) *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM FF-2: Develop and Implement an Operations and Maintenance Fire Prevention/ Protection Plan.** The plan will address all SDG&E electric facilities proposed to be covered under the Master Special Use Permit (MSUP) ~~both on and off~~ within the Cleveland National Forest (CNF), and other project facilities off the CNF, and will be implemented during all operational maintenance work associated with the project for the life of the project., ~~including construction operations.~~ This plan will satisfy the requirements of the SDG&E Project Specific Fire Plan, as identified in SDG&E's Electric Standard Practice 113-1. Important fire safety concepts that shall be included in the plan and make it an essential overall mitigation measure are the following: • Guidance on where maintenance activities may occur (non-vegetated areas, cleared access roads, and work pads that are approved as part of the project design plans) • Fuel treatment area maintenance • When vegetation work will occur (prior to any other work activity) • Timing of vegetation clearance work to reduce likelihood of ignition and or fire spread • Coordination procedures with fire authority

Table D.8-2
Mitigation Monitoring, Compliance, and Reporting – Fire and Fuels Management

	• Integration of the project's Construction Fire Prevention/Protection Plan content • Personnel training and fire suppression equipment • Red Flag Warning restrictions for operation and maintenance work • Fire safety coordinator role as manager of fire prevention and protection procedures, coordinate with fire authority and educator • Communication protocols • Incorporation of responsible agency review and approved Response Plan mapping and assessment. • Other information as provided by responsible and commenting agencies,as applicable. SDG&E will provide a draft copy of the Operations and Maintenance Fire Prevention/Protection Plan to the responsible fire agencies for comment a minimum of 90 days prior to the completion of the first project segment. The final plan will be approved by the ~~responsible lead agencies~~CPUC and Forest Service prior the first construction segment being deemed complete and the final plan will be ~~to energizing the project and~~ provided to SDG&E for implementation during all operations and maintenance activities.
Location	All access roads and work areas for SDG&E's proposed project and all alternatives.
Compliance Documentation[(a)] and Consultation	a. Prepare draft Operations and Maintenance Fire Prevention/Protection Plan b. Approval and implementation of plan (no operations and maintenance work during Red Flag Warnings and Very High PAL) c. Ongoing coordination with Fire Authority d. CPUC/Forest Service monitor: Line item in compliance monitoring reports
Timing	a. Draft Plan: At least 90 days prior to completion of the first project segment b. Final Plan: At least 30 days prior to completion of the first project segment (revision every 5 years thereafter) c. and d. During construction [b], operations and maintenance
Responsible Agency	CAL FIRE, SDRFPD, SDCFA for proposed project and all alternatives *SDG&E's Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629), BLM (TL629 and TL6923), CSP (C79) *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)

[a] All compliance documentation and consultation records to be available for CPUC and Forest Service staff review upon request.
[b] This is intended to clarify that construction of certain segments will be completed and enter the operations and maintenance phase prior to others; therefore, certain segments will adhere to the Construction Fire Prevention/Protection Plan and others will adhere to the Operations and Maintenance Fire Prevention/Protection Plan, all within the overall construction period (5 years) for the project. Furthermore, compliance with both plans may be noted as a line item in compliance monitoring reports throughout the construction period.

D.8.10 Residual Unavoidable Effects

Under NEPA, SDG&E's proposed project and alternatives would reduce the risk of power line-related wildfires by adopting the mitigation measures summarized in Section D.8.9, along with APMs provided in Section D.8.3.2, but would not eliminate that risk. Under CEQA,

implementation of mitigation measures presented in Section D.8.9 would mitigate all fire and fuels management impacts to less than significant. Therefore, under CEQA, no residual unavoidable effects would occur for SDG&E's proposed project or alternatives.

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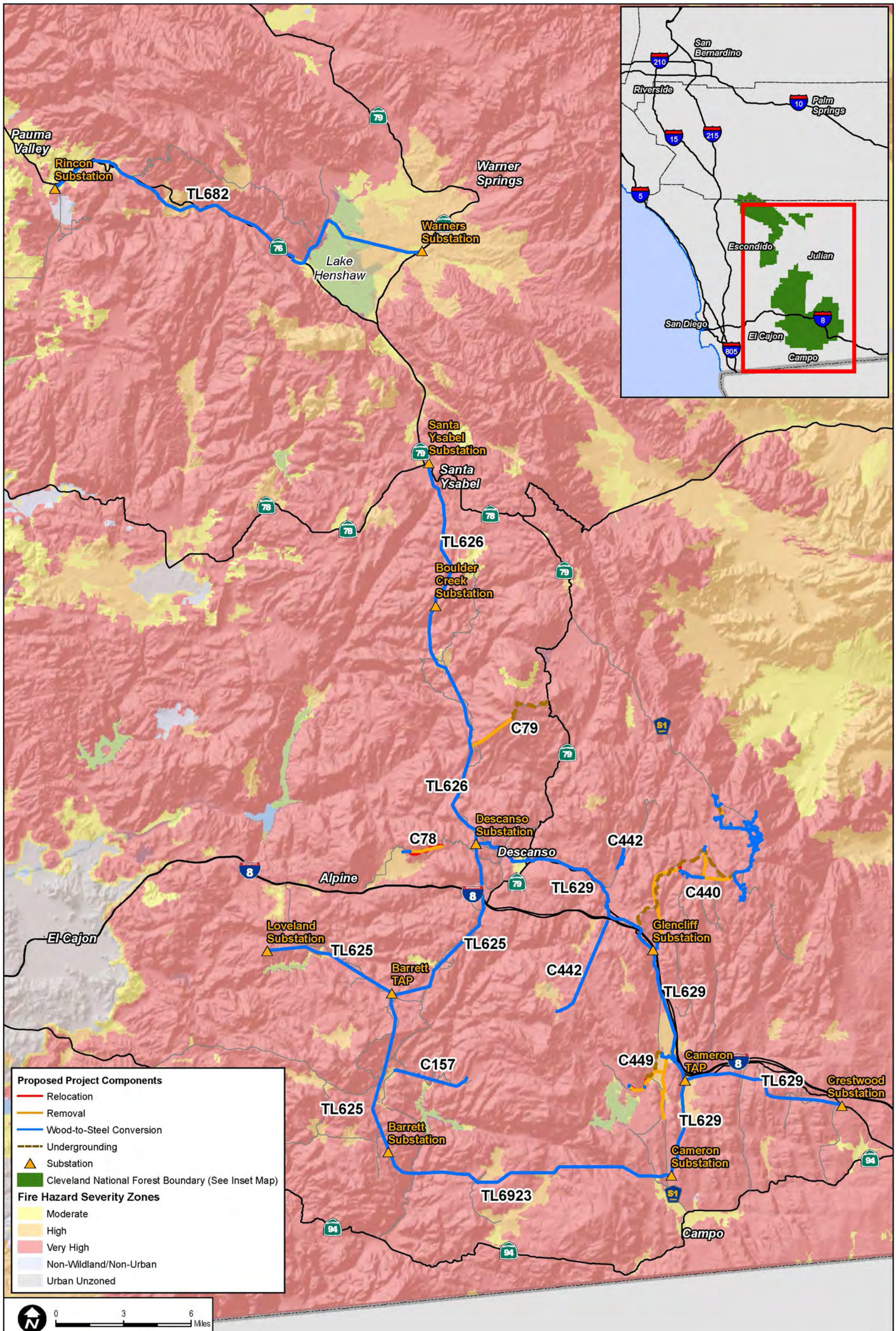

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SOURCE: SDG&E 2011; SanGIS 2012; Bing Maps

FIGURE D.8-1

Fire Hazard Severity Zones

MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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D.9 Hydrology and Water Quality

This section addresses potential hydrology and water quality impacts resulting from construction and operation of the proposed power line replacement projects along with the operation and maintenance activities proposed for authorization under the MSUP. Section D.9.1 provides a description of the existing setting/affected environment, and the applicable regulatory framework related to hydrology and water quality is introduced in Section D.9.2. An analysis of impacts/environmental effects of SDG&E's proposed project and discussion of mitigation are provided in Section D.9.3. The U.S. Forest Service (Forest Service) proposed action is described in Section D.9.4, and Section D.9.5 discusses the Bureau of Indian Affairs (BIA) proposed action. Additional alternatives are discussed in Section D.9.6. Section D.9.7 discusses the No Action Alternative and Section D.9.8 describes the No Project Alternative. Section D.9.9 provides mitigation monitoring, compliance, and reporting information. Section D.9.10 addresses residual effects of the project and Section D.9.11 lists the references cited in this section.

D.9.1 Environmental Setting/Affected Environment

This section presents a discussion of existing surface water, drainage, flooding, water quality, and groundwater resources within the study area, including a description of locations susceptible to erosion, a list of water quality impaired streams and lakes, and areas susceptible to flood hazards.

Methodology and Assumptions

The existing SDG&E electric facilities (power lines, access roads and other facilities) to be covered under the proposed MSUP are located within the Trabuco, Palomar, and Descanso ranger districts within the Cleveland National Forest (CNF). Existing SDG&E electric facilities within the CNF are located in southwestern Orange County and southeastern San Diego County, with the majority of the study area (which includes all of the proposed power line replacement projects) located within and surrounding the Palomar and Descanso ranger districts in San Diego County. These existing facilities are routinely maintained and repaired as needed. The erosion and water quality impacts associated with these past actions are part of the baseline for the analysis of SDG&E's proposed project.

Baseline hydrologic conditions in SDG&E's proposed project study area were obtained from a review of pertinent documents from the U.S. Geological Survey (USGS), California Department of Water Resources (DWR), State Water Resources Control Board (SWRCB), San Diego Regional Water Quality Control Board (RWQCB), and the County of San Diego. In addition, SDG&E's Plan of Development was also reviewed to assess the existing environmental setting (SDG&E 2013). Finally, a slope analysis was conducted using geographic information system (GIS) data to approximate the grade of SDG&E's exclusive-use

access roads and sum the length of road segments in different slope classes. The analysis was based on a slope layer created from a digital elevation model with a 10-meter resolution, and the access road layer split to length intervals of no greater than 100 feet.

D.9.1.1 Regional Hydrologic Setting

The County of San Diego is divided into two hydrologic regions—the Colorado River Hydrologic Region, which drains in an easterly direction into the Salton Sea, and the South Coast Hydrologic Region, which drains in a westerly direction toward the Pacific Ocean and encompasses most of the County, parts of southwestern Riverside County, and southwestern Orange County. The Peninsular Mountain Range generally forms the divide between these two regions. SDG&E's proposed project is predominantly located within the South Coast Hydrologic Region, although a short segment of distribution line C440 near Mount Laguna is located within the Colorado River Hydrologic Region. While surface water can drain through the County's watersheds, the arid and semi-arid climates mean this surface water is often also infiltrated into the subsurface saturated zone to become groundwater, and be a source of recharge for groundwater aquifers (including both fractured rock aquifers and unconfined alluvial basin aquifers). Aquifers are recharged at varying rates depending upon a number of factors, primarily the amount and frequency of rainfall and the hydraulic conductivity of the underlying soil and rock.

SDG&E's proposed project is located within eight major watersheds (also referred to by the SWRCB as "hydrologic units"), including (from north to south), the San Juan Watershed, the Santa Margarita Watershed, the San Luis Rey Watershed, the San Dieguito Watershed, the San Diego River Watershed, the Sweetwater Watershed, the Otay Watershed, and the Tijuana Watershed (Figure D.9-1). All of these watersheds convey surface water from mountainous open space areas (such as the CNF) through heavily urbanized areas (such as the San Diego metropolitan area), and eventually out to the Pacific Ocean. The Tijuana River Watershed drains into Mexico before eventually discharging to the Pacific Ocean just north of the international border. As indicated earlier, a small segment of C440 is located in the Anza Borrego Watershed (draining in an easterly direction toward the Salton Sea). The transmission and distribution alignments that would be upgraded along with the long-term operation and maintenance activities proposed for authorization under the MSUP are generally located in the upper or middle reaches of these major watersheds; the proposed power line replacement projects cross numerous drainages, tributaries, and main-stem streams which are further discussed below.

The overall climate in the County of San Diego varies between a mild coastal climate in the west, to wider temperature ranges and more precipitation in the mountains in the central portion of the County, and a hotter and drier climate in the desert and desert transitional areas

in the eastern portion of the County. SDG&E's proposed project is within the central portion of the County at elevations ranging from approximately 1,300 to 5,500 feet (SDG&E 2013). Regionally, the County's coastal areas on average see less than 10 inches of rain per year, the mountain peaks in excess of 40 inches, and the deserts less than 3 inches (County of San Diego 2011). A majority of the precipitation in the region of SDG&E's proposed project is in the form of rain and falls between the months of November and February; however, monsoonal moisture during the late summer months can often be the source of localized high intensity storms. Higher elevations, particularly the mountains within the CNF, will also receive some precipitation in the form of snow.

D.9.1.2 Surface Water Hydrology

The San Diego River Basin Region, which encompasses the South Coast Hydrologic Region, is divided into 11 hydrologic units (HUs), 54 hydrologic areas (HAs), and 147 hydrologic subareas (HSAs). As defined in the Water Quality Control Plan for the San Diego Basin, HUs are the entire watershed of one or more streams; HAs are major tributaries and/or major groundwater basins within the HU; and HSAs are major subdivisions of HAs, including both water-bearing and non-water-bearing formations (San Diego RWQCB 2011). Numerous erosion gullies, swales, and dry washes transect SDG&E's proposed project. During heavy rain events, runoff starts as sheet flow and concentrates in several paths as it flows into area streams. As shown in Figure D.9-1, major USGS blue-line streams in the MSUP area include the San Luis Rey River, the Sweetwater River, Cottonwood Creek, Pine Valley Creek, the San Diego River, and Cedar Creek, among others. Aside from these major drainages, surface water features associated with the proposed power line replacement projects include scattered wetland communities, narrow, sandy ephemeral washes, and streambeds.

TL682

TL682 is located within the San Luis Rey HU, which defines the watershed area of the San Luis Rey River. The river extends over 55 miles across northern San Diego County forming a watershed with an area of approximately 360,000 acres or 562 square miles, which ultimately drains to the Pacific Ocean near Oceanside at the Camp Pendleton Marine Corps Base (Project Clean Water 2013). TL682 spans across both the middle and upper watersheds of the river, which are separated by Lake Henshaw—a reservoir along the San Luis Rey River owned and operated by the Vista Irrigation District. Water from the San Luis Rey River is diverted approximately 10 miles downstream of Lake Henshaw Dam to serve the municipal drinking water needs of customers in Escondido and Vista. Approximately 6.5 miles of the eastern power line segment is located in the Upper San Luis Rey River watershed and the remaining western portion of the power line is located in the Middle San Luis Rey Watershed.

The USGS National Hydrography Dataset was reviewed to identify the sub-watersheds, blue-line streams, and other hydrologic features which would be encompassed by, crossed by, or in close proximity to TL682. Table D.9-1 separates the power line by drainage area, and identifies the watersheds and hydrologic features within each.

Table D.9-1
Watersheds and Hydrologic Features – TL682

HUC 10 Name	HUC 12 Name	HUC 12 Code	Length within watershed	Named Creeks / Rivers Spanned	No of times spanned	Type
Middle San Luis Rey River	Pauma Creek–San Luis Rey River	180703030202	3.5 miles (eastern part of TL682)	Plaisted Creek	1	Intermittent
				Potrero Creek	1	Intermittent
				Unnamed	1	Intermittent
	Paradise Creek–San Luis Rey River	180703030201	10 miles (central part of TL682)	Unnamed	11	Intermittent
				Cedar Creek	1	Perennial
				San Luis Rey River	4	Perennial
				Wigham Creek	1	Perennial
Upper San Luis Rey River	Matagual Creek–San Luis Rey River	180703030105	6.5 miles (western part of TL682)	Lake Henshaw Inundation Area	NA	NA
				San Luis Rey River	1	Perennial
				Unnamed	1	Intermittent
	Buena Vista Creek	180703030104	1.2 miles (western part of TL682)	Buena Vista Creek	6	Intermittent

Note: The hydrologic features are based on the USGS National Hydrography Dataset and not a formal jurisdictional delineation of waters for SDG&E's proposed project. In addition, watershed boundaries and names provided in this table are similar, but not the same, as those contained in the Water Quality Control Plan for the San Diego Region.

TL626

TL626 is aligned predominantly in a north–south direction and is located within three major watersheds (HUs), including (from north to south) the San Dieguito Watershed, the San Diego River Watershed, and the Sweetwater Watershed. The vast majority of the alignment is within the San Diego River Watershed with the northern tip within the San Dieguito Watershed and the southern tip within the Sweetwater Watershed. With a land area of approximately 440 square miles, the San Diego River Watershed is the second largest HU in San Diego County (Project Clean Water 2013). TL626 spans across the upper portion of the watershed, which is separated from the lower watershed by El Capitan Reservoir—one of the five reservoirs in the San Diego River Watershed that supply water to as many as 760,000 residents in the region. The mouth of the San Diego River discharges into the Pacific Ocean at the community of Ocean Beach.

Table D.9-2 separates the power line by drainage area, and identifies the watersheds and hydrologic features within each.

Table D.9-2
Watersheds and Hydrologic Features – TL626

HUC 10 Name	HUC 12 Name	HUC 12 Code	Length of segment within watershed	Named Creeks / Rivers Spanned	No of times spanned	Type
Upper San Ysabel Creek	Dan Price Creek–San Isabel Creek	180703040101	1 mile (northern end of TL626)	Unnamed	1	Intermittent
Upper San Diego River	Ritchie Creek–San Diego River	180703040502	5 miles (northern part of TL626)	San Diego River	1	Intermittent
				Sentenac Creek	1	Intermittent
				Unnamed	2	Intermittent
				Orinoco Creek	1	Intermittent
				Temescal Creek	1	Intermittent
	Cedar Creek	180703040501	3.5 miles (central part of TL626)	Unnamed	2	Intermittent
				Cedar Creek	1	Perennial
				Kelley Creek	1	Intermittent
	Boulder Creek	180703040503	3.5 miles (central part of TL626)	Sheep Camp Creek	1	Intermittent
				Boulder Creek	1	Intermittent
				Unnamed	1	Intermittent
	Conejos Creek	180703040504	6.4 miles (southern part of TL626)	Conejos Creek	1	Intermittent
				Unnamed	4	Intermittent

Note: The hydrologic features are based on the USGS National Hydrography Dataset and not a formal jurisdictional delineation of waters for SDG&E's proposed project. In addition, watershed boundaries and names provided in this table are similar, but not the same, as those contained in the Water Quality Control Plan for the San Diego Region.

TL625

TL625 is a "Y"-shaped alignment with three segments intersecting at Barrett Tap. It is located partially within the Sweetwater Watershed and partially within the Tijuana Watershed. The Sweetwater River Watershed (along with the Otay and Pueblo San Diego watersheds) combine to form the San Diego Bay watershed area. The Sweetwater River Watershed is the largest of the three encompassing 230 of the approximately 415-square-mile total (Project Clean Water 2013). The Tijuana River watershed encompasses a region of approximately 1,750 square miles on either side of the California–Baja California border. Although only 27% of the watershed area is within California, the river discharges to the Tijuana Estuary and Pacific Ocean on the U.S. side of the international border (Project Clean Water 2013).

Table D.9-3 separates the power line by drainage area, and identifies the watersheds and hydrologic features within each.

Table D.9-3
Watersheds and Hydrologic Features – TL625

HUC 10 Name	HUC 12 Name	HUC 12 Code	Length of segment within watershed	Named Creeks / Rivers Spanned	No of times spanned	Type
Lower Cottonwood Creek	McAlmond Canyon–Cottonwood Creek	180703 050302	0.5 miles (southern end of TL625)	Unnamed	1	Intermittent
Pine Valley Creek	Middle Pine Valley Creek	180703 050202	2.5 miles (northern part of TL625)	Unnamed	2	Intermittent
	Lower Pine Valley Creek	180703 050203	5 miles (southern branch of TL625)	Unnamed	4	Intermittent
				Wilson Creek	1	Intermittent
Upper Sweetwater River	Taylor Creek	180703 040802	9.1 (central part of TL625)	Unnamed	8	Intermittent
				Taylor Creek	2	Perennial and Intermittent
	Viejas Creek–Sweetwater River	180703 040803	0.5 miles (western branch of TL625)	Sweetwater River	1	Perennial
	Loveland Reservoir–Sweetwater River	180703 040901	2.2 miles (western end of TL625)	Unnamed	2	Intermittent
	Viejas Creek–Sweetwater River	180703 040803	1.5 miles (northern part of TL625)	Sweetwater River	1	Perennial
	Descanso Creek–Sweetwater River	180703 040801	1 miles (northern end of TL625)	None	NA	NA
Upper San Diego River	Conejos Creek	180703 040504	0.4 miles (northern end of TL625)	None	NA	NA

Note: The hydrologic features are based on the USGS National Hydrography Dataset and not a formal jurisdictional delineation of waters for SDG&E's proposed project. In addition, watershed boundaries and names provided in this table are similar, but not the same, as those contained in the Water Quality Control Plan for the San Diego Region.

TL629

Similar to TL625, TL629 is located partially within the Sweetwater Watershed and partially within the Tijuana Watershed, and consists of three branches that come together at Cameron Tap. TL629 is primarily within the Tijuana Watershed, and compared to the other TL segments, has a more arid, desert-like climate. Table D.9-4 separates the power line by drainage area, and identifies the watersheds and hydrologic features within each.

Table D.9-4
Watersheds and Hydrologic Features – TL629

HUC 10 Name	HUC 12 Name	HUC 12 Code	Length of segment within watershed	Named Creeks / Rivers Spanned	No of times spanned	Type
Upper Sweetwater River	Descanso Creek–Sweetwater River	180703040801	5.4 miles (western part of TL629)	Sweetwater River	1	Perennial
				Descanso Creek	1	Intermittent
				Sagamatum Creek	1	Intermittent

Table D.9-4
Watersheds and Hydrologic Features – TL629

HUC 10 Name	HUC 12 Name	HUC 12 Code	Length of segment within watershed	Named Creeks / Rivers Spanned	No of times spanned	Type
Pine Valley Creek	Middle Pine Valley Creek	180703050202	1.4 miles (middle part of TL629)	None	NA	NA
	Upper Pine Valley Creek	180703050201	3 miles (middle part of TL629)	Unnamed	4	Intermittent
				Pine Valley Creek	1	Perennial
Upper Cottonwood Creek	Kitchen Creek–Cottonwood Creek	180703050102	7 miles (middle part of TL629)	Unnamed	2	Intermittent
				Cottonwood Creek	5	Perennial
				Kitchen Creek	1	Intermittent
	La Posta Creek	180703050101	6.7 miles (eastern part of TL629)	La Posta Creek	2	Intermittent
				Unnamed	3	Intermittent
Tecate Creek	Miller Creek–Campo Creek	180703050401	3.7 miles (eastern end of TL629)	Miller Creek	1	Intermittent
				Unnamed	2	Intermittent
	Campo Valley–Campo Creek	180703050402	2.3 miles (southern end of TL629)	None	NA	NA

Note: The hydrologic features are based on the USGS National Hydrography Dataset and not a formal jurisdictional delineation of waters for SDG&E's proposed project. In addition, watershed boundaries and names provided in this table are similar, but not the same, as those contained in the Water Quality Control Plan for the San Diego Region.

TL6923

TL6923 is an east–west oriented power line located between the southern ends of TL629 and TL625. It is located entirely within the Tijuana River Watershed. Table D.9-5 separates the power line by drainage area, and identifies the watersheds and hydrologic features within each.

Table D.9-5
Watersheds and Hydrologic Features – TL6923

HUC 10 Name	HUC 12 Name	HUC 12 Code	Length of segment within watershed	Named Creeks / Rivers Spanned	No of times spanned	Type
Tecate Creek	Campo Valley–Campo Creek	180703050402	1.4 miles (eastern end of TL6923)	Unnamed	1	Intermittent
Upper Cottonwood Creek	Moreno Reservoir–Cottonwood Creek	180703050103	3.3 miles (east-central part of TL6923)	Hauser Creek	1	Intermittent
				Unnamed	5	Intermittent

Table D.9-5
Watersheds and Hydrologic Features – TL6923

HUC 10 Name	HUC 12 Name	HUC 12 Code	Length of segment within watershed	Named Creeks / Rivers Spanned	No of times spanned	Type
Lower Cottonwood Creek	Potrero Creek	180703050301	2.4 miles (central part of TL6923)	Potrero Creek	1	Intermittent
				Unnamed	1	Intermittent
	McAlmond Canyon–Cottonwood Creek	180703050302	6.6 miles (western part of TL6923)	Cottonwood Creek	1	Intermittent
				San Diego City Conduit (Canal)	1	Intermittent
				Unnamed	6	Intermittent

Note: The hydrologic features are based on the USGS National Hydrography Dataset and not a formal jurisdictional delineation of waters for SDG&E's proposed project. In addition, watershed boundaries and names provided in this table are similar, but not the same, as those contained in the Water Quality Control Plan for the San Diego Region.

Distribution Lines

Distribution Lines C78, C79, C157, C440, and C449 would be located within a variety of watersheds, mainly in the southern portion of the MSUP area near the Desconso, Glencliff, and Barrett substations, and the Cameron and Barrett Taps. Table D.9-6 separates the distribution lines by drainage area, and identifies the watersheds and hydrologic features within each.

Table D.9-6
Watersheds and Hydrologic Features – Distribution Lines

Segment	HUC 10 Name	HUC 12 Name	Named Creeks / Rivers Spanned	No of times spanned	Type
C442	Pine Valley Creek	Middle Pine Valley Creek	Unnamed	1	Intermittent
	Upper Cottonwood Creek	Morena Reservoir-Cottonwood Creek	None	NA	NA
	Pine Valley Creek	Upper Pine Valley Creek	Unnamed	1	Intermittent
			Pine Valley Creek	4	Perennial
	Pine Valley Creek	Upper Pine Valley Creek	None	NA	NA
C157	Pine Valley Creek	Lower Pine Valley Creek	Barrett Lake Inundation Area	NA	NA
			Pine Valley Creek	1	Intermittent
			Unnamed	3	Intermittent
C449	Upper Cottonwood Creek	Kitchen Creek–Cottonwood Creek	Unnamed	7	Intermittent
			Cottonwood Creek	2	Intermittent
	Upper Cottonwood Creek	Morena Reservoir–Cottonwood Creek	None	NA	NA
	Upper Cottonwood Creek	La Posta Creek	La Posta Creek	1	Intermittent

Table D.9-6
Watersheds and Hydrologic Features – Distribution Lines

Segment	HUC 10 Name	HUC 12 Name	Named Creeks / Rivers Spanned	No of times spanned	Type
C440	Upper Cottonwood Creek	Kitchen Creek-Cottonwood Creek	Unnamed	8	Intermittent
			Cottonwood Creek	2	Perennial
	Pine Valley Creek	Upper Pine Valley Creek	Unnamed	4	Intermittent
	Upper Cottonwood Creek	La Posta Creek	None	NA	NA
	Vallecito Creek	Potrero	None	NA	NA
	Vallecito Creek	Upper Vallecito Creek	None	NA	NA
C78	Upper Sweetwater River	Viejas Creek–Sweetwater River	Unnamed	2	Intermittent
C79	Upper San Diego River	Conejos Creek	None	NA	NA
	Upper Sweetwater River	Descanso Creek-Sweetwater River	None	NA	NA
	Upper San Diego River	Boulder Creek	None	NA	NA

D.9.1.3 Surface Water Quality

Water quality impairments, as defined in Clean Water Act (CWA) Section 303(d) for waters crossed by SDG&E's proposed project are identified in Table D.9-7 (see section D.9.2, Applicable Regulations, Plans, and Standards for more information about CWA Section 303(d)). The San Luis Rey River, east of Interstate 15 (I-150, is listed as impaired for nitrogen (additional impairments west of I-15 exist and are listed in Table D.9-7). TL682 spans the impaired section of the river immediately west of Lake Henshaw. The transmission line also comes within close proximity of the northern edge of the river in some locations along Highway 76. The closest existing pole is located approximately 110 feet from the river.

Cottonwood Creek, within the Tijuana Watershed, is listed as impaired for selenium. This creek begins in Pine Valley and flows south, crossing under Highway 8 and into to Morena Reservoir, which is also a 303(d)-listed water body (listed for phosphorus, color, manganese, pH, and ammonia as nitrogen). The creek then flows west to Barrett Lake, and south along Barrett Lake Road. TL629 spans Cottonwood Creek along I-8, and TL6932 spans the creek in one location along Barrett Lake Road. The closest existing pole is located approximately 40 feet from Cottonwood Creek. Morena Reservoir is located over 8,000 feet from any of the proposed power line replacement projects.

Loveland Reservoir near TL625 is listed as impaired for aluminum, manganese, dissolved oxygen, and pH. TL625 spans a few of the northern branches of this reservoir along Japatul Valley Road. The closest existing pole along any of the proposed power line replacement projects is located approximately 145 feet from the reservoir. Distribution line C442 crosses a segment of Pine Valley Creek at two locations and closely parallels the creek in several other locations where it is identified as impaired for turbidity (sediment).

Finally, TL629, C442, and C440 would involve work within a High Receiving Water Risk Watershed, as defined in the SWRCB Construction General Permit Guidance (SWRCB n.d.). These are watersheds that drain either directly or indirectly to water bodies that are either (1) 303(d) listed as being impaired for sediment/siltation, (2) have a U.S. Environmental Protection Agency (EPA)-approved, sediment-related total maximum daily load (TMDL), or (3) have the existing beneficial uses of SPAWN (Fish Spawning), MIG (Fish Migration), and COLD (Cold Water Habitat) according to the most recent applicable Regional Board Basin Plan.

Table D.9-7
Approved 2010 CWA Section 303(d) List of Water Quality Limited Segments Crossed by SDG&E's Proposed Project

Power/ Transmission Line	Water Body Name	Pollutant (Pollutant Category)	Source or Source Category	Proposed or Approved TMDL Completion Date
C442	Pine Valley Creek	Turbidity (Sediment)	Unknown	2019
~~TL625, TL629, TL6023, C440~~	~~Cottonwood Creek~~	~~Sediment Toxicity (Toxicity)~~	~~Unknown, Urban Runoff/Storm Sewers~~	~~2019~~
		~~DDT (Pesticides)~~	~~Unknown~~	~~2019~~
TL625, TL629, TL6023, C440	Cottonwood Creek (Tijuana River Watershed)	Selenium (Metals/Metalloids)	Unknown	2019
TL682	San Luis Rey River (W of I-15)	Chloride and Total Dissolved Solids (TDS) (Salinity)	Urban Runoff/Storm Sewers, Surface Mining, Golf Course Activities, Agriculture-Storm Runoff, Flow Regulation/Modification, Unknown Sources	2019
		Enterococcus and Fecal Coliform (Pathogens)	Unknown	2021
		Toxicity and Phosphorus	Unknown, Urban Runoff/Storm Sewers	2021
		Total Nitrogen as N (Nutrients)	Unknown, Urban Runoff/Storm Sewers	2021
	San Luis Rey River (E of I-15)	Total Nitrogen as N (Nutrients)	Unknown~~, Urban Runoff/Storm Sewers~~	2021
	Buena Vista Creek	Sediment Toxicity	Unknown Point/Nonpoint Sources	2019
		Selenium	Unknown	2019

Table D.9-7
Approved 2010 CWA Section 303(d) List of Water Quality Limited Segments Crossed by SDG&E's Proposed Project

Power/ Transmission Line	Water Body Name	Pollutant (Pollutant Category)	Source or Source Category	Proposed or Approved TMDL Completion Date
TL625	Loveland Reservoir	Aluminum~~, Selenium,~~ and Manganese (Metals/Metalloids)	Unknown	2019
		Oxygen, Dissolved (Nutrients)	Unknown	2019
		pH (Miscellaneous)	Unknown	2019

Source: SWRCB 2010

D.9.1.4 Hydrologic Soil Groups

Infiltration of water through soil can reduce the amount of water that reaches stormwater management systems, filter pollutants and contaminants from the water, and recharge the watershed. The U.S. Department of Agriculture Natural Resources Conservation Service (NRCS; formerly the Soil Conservation Service [SCS]), classifies a soil's infiltration characteristics into four Hydrologic Soil Groups (HSG):

- **Group A:** Low runoff potential. Soils having high infiltration rates even when thoroughly wetted and consisting chiefly of deep, well-drained sands or gravels.
- **Group B:** Soils having moderate infiltration rates when thoroughly wetted and consisting chiefly of moderately deep to deep, moderately well- to well-drained sandy loam soils with moderately fine to moderately coarse textures.
- **Group C:** Soils having slow infiltration rates when thoroughly wetted and consisting chiefly of silty-loam soils with a layer that impedes downward movement of water, or soils with moderately fine to fine texture.
- **Group D:** High runoff potential. Soils having very slow infiltration rates when thoroughly wetted and consisting chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a claypan or clay layer at or near the surface, and shallow soils over nearly impervious material.

Group A and B soils possess the greatest infiltration rates (unless soils are compacted during construction) and are generally best suited to stormwater infiltration. However, the San Diego area has a relatively high concentration of Groups C and D soils, which possess lower infiltration rates that either limit the use of infiltration-based stormwater management systems or require soil amendments to assist infiltration systems.

Figure D.9-2 shows the soil hydrologic groups within the project area, and Table D.9-8 breaks down each segment by soil hydrologic groups underlying the proposed work areas. The project is predominantly underlain by soils with hydrologic groups B and C, indicating a moderate susceptibility to erosion; however, certain segments, such as distribution line C78 and transmission line TL6923, are underlain by substantial areas of soils with a high runoff potential.

Table D.9-8
Soil Hydrologic Groups within Work Areas, by Segment

Segment	Hydrologic Groups (acres / percent of segment work area disturbance[1])							
	A		*B*		*C*		*D*	
C157	—	0%	0.8	92%	0.0	3%	0.0	4%
C440	—	0%	5.5	82%	1.2	18%	—	0%
C442	0.3	20%	1.0	71%	0.1	5%	0.1	4%
C449	1.1	63%	0.4	21%	—	0%	0.3	15%
C78	—	0%	—	0%	0.4	74%	0.1	26%
C79[2]	—	0%	0.1	10%	0.6	48%	0.0	1%
TL625	—	0%	18.0	36%	26.9	53%	5.7	11%
TL626	—	0%	1.2	6%	16.6	78%	3.4	16%
TL629	18.2	36%	22.1	44%	7.4	15%	3.0	6%
TL682	5.2	17%	17.3	56%	5.5	18%	1.9	6%
TL6923	1.4	14%	2.4	25%	2.1	22%	3.7	39%
Work Area Total	**26.1**	**15%**	**68.8**	**39%**	**60.7**	**35%**	**18.3**	**10%**

Notes:
1 Work area disturbance includes pole installation sites, stringing sites, staging yards, and fly yards. Figures above are not inclusive of access road improvements.
2 About 40% of the work areas within C79 were outside the extent of the soil survey data and thus these are not included in the calculation.
Source: SSURGO 2007

D.9.1.5 Groundwater Resources

Groundwater is the primary source of water supply for land uses in the immediate vicinity of SDG&E's proposed project; most rural residences (in unincorporated parts of the County on private lands) rely almost entirely on groundwater wells for their source of water. Only the western tips of the TL682 and TL625 segments are within the service area boundaries of the San Diego County Water Authority (SDCWA) member agencies.

SDG&E's proposed project area is primarily underlain by a fractured rock aquifer consisting of granitic rock intruding older metamorphic rocks that form mountain ranges generally separated by northwest trending valleys, subparallel to faults branching from the San Andreas Fault. Sediment filled valleys form hydrogeologically distinct aquifer systems characterized by unconfined groundwater with a greater storage capacity compared to fractured rock aquifers. Because less water is typically stored in fractured rock, seasonal variations in precipitation and

drought conditions often result in greater variations in water levels than in similar conditions where aquifers comprise sediments (County of San Diego 2007). Within SDG&E's proposed project area, there are four DWR-defined groundwater basins (consisting of sediment-filled basins/valleys): the Campo Valley, the Cottonwood Valley, the Warner Valley, and the San Luis Rey groundwater basins (DWR 2003, 2004a–c). These basins underlie relatively localized portions of four of the transmission line segments and one of the distribution line segments (TL629, TL626, TL682, TL6923, and C449).

The location of the DWR-defined groundwater basins are described below.

Groundwater Basins

Cottonwood Valley (TL629 and C449)

The Cottonwood Valley Groundwater Basin (approximately 3,850 acres) underlies portions of TL629 and C449. The basin is bounded by crystalline rocks of the Peninsular Ranges, except on the west where it is bounded by Moreno Reservoir. The primary water bearing deposits are Quaternary alluvium and residuum consisting of gravel, sand, silt, and clay in deposits that reach a maximum thickness of 100 feet. Groundwater in the basin is dominantly calcium bicarbonate in character with total dissolved solids (TDS) content ranging from about 130 to 645 milligrams per liter (mg/L) when measured in 1967 (DWR 2004a).

Campo Valley (TL629 and TL6923)

The Campo Valley Groundwater Basin (approximately 3,550 acres) underlies portions of TL629 and TL6923. The principal water-bearing unit of the basin is Quaternary alluvium which consists of gravel, sand, silt, and clay. The alluvium ranges in thickness from a few feet to roughly 100 feet, with an average of 55 feet and well yield typically under 40 gallons per minute (gpm) (DWR 2003). The alluvium contains water of calcium bicarbonate character with electrical conductivity readings that were around 800 micromhos (μΩ/cm) when tested in the 1960s; TDS concentration ranged from 219 to 480 mg/L, also tested in the 1960s; and water is generally rated suitable for domestic and irrigation uses (DWR 2003).

The Campo Valley is also federally designated as a sole-source aquifer. EPA defines a sole or principal source aquifer as an aquifer that supplies at least 50% of the drinking water consumed in the area overlying the aquifer. These areas may have no alternative drinking water source(s) that could physically, legally, and economically supply all those who depend on the aquifer for drinking water.

Warner Valley (TL682)

The Warner Valley Groundwater Basin (approximately 24,000 acres) underlies TL682 in Warner Valley and Valle de San Jose, the upper drainage of the San Luis Rey River in northeastern San Diego County. The basin is bounded on the west by Lake Henshaw and the Elsinore fault, and on all other sides by impermeable crystalline rocks of the Peninsular Ranges. Sediments reach at least 900 feet thick in the basin, and well yields average about 800 gpm, with maximum yields up to 1,800 gpm (DWR 2004b). Groundwater in this basin is dominantly sodium bicarbonate in character, though some calcium bicarbonate water is found in the southern part of the basin. Some sulfate and chloride rich water is found near Warner Hot Springs in the eastern part of the basin. Analyses of water sampled in the 1960s show a range in TDS content from 168 to 638 mg/L and an average about 304 mg/L. Groundwater is generally rated suitable for irrigation and domestic uses except near Warner Hot Springs, where it is rated inferior for irrigation use because of sodium content and for domestic use because of high fluoride concentrations (DWR 2004b).

San Luis Rey Valley (TL682)

The San Luis Rey Valley Groundwater Basin (approximately 29,700 acres) also underlies TL682 within an east–west-trending alluvium-filled valley located along the western coast of San Diego County. The basin is bounded on the east, northeast, and southeast by the contact of alluvium with impermeable Mesozoic granitic and Pre-Cretaceous metamorphic rocks and on the west by the Pacific Ocean. The principal water bearing deposits within the basin are Quaternary and younger alluvium, which are estimated to yield an average of 500 gpm, but exceed rates of 2,000 gpm (DWR 2004c). Water in this basin is of calcium-bicarbonate, calciumsulfate-bicarbonate, and calcium-sulfate types. The Department of Health Services data for 19 wells show a TDS content of 530 to 7,060 mg/L, with an average of approximately 1,258 mg/L; values for total dissolved solids ranged from 960 to 3,090 mg/L in 1983; and electrical conductivity readings for the basin range from 500 to 1,300 µmho (DWR 2004c).

Fractured Rock Aquifers

Groundwater resources in the crystalline bedrock underlying the Peninsular Ranges is contained within fracture systems within the rock. Groundwater yield in any one place within the fractured rock system depends highly on the width, orientation, continuity, and interconnectedness of fractures within the rock.

Groundwater quality in the fractured rock aquifers of San Diego County has not been as extensively studied as the unconfined alluvial aquifers. Existing water quality data for large highly utilized unconfined aquifers is continually collected by state and local water agencies as well as the California Department of Public Health and the DWR. Of California's approximately

16,000 public-supply wells, 80% are in groundwater basins designated by DWR and characterized as unconfined alluvial aquifers (USGS 2011). Fractured rock aquifers, on the other hand, are highly variable and often have low production rates. Information on groundwater quality within fractured rock aquifers is scarce and/or not publicly available. The County Guidelines for groundwater resources document does not identify the project area as being within a specific groundwater problem area (such as overdrafted basin or areas with high levels of naturally occurring radioactive elements) (County of San Diego 2007).

As part of the California Groundwater Ambient Monitoring and Assessment Program, limited data was collected from hard rock aquifers within the San Diego Drainages Hydrogeologic Province in an attempt to understand potential water quality concerns within the province (USGS 2011). The hard rock study area was the largest (at 850 square miles), and the spatial density of sampled wells (public supply wells) was very low. Nevertheless, the data may be useful and broadly representative of the project area because the sampled wells, like SDG&E's proposed project, are primarily completed within bedrock composed of fractured and decomposed granite.

The results by the USGS (2011) provide a general idea of potential groundwater concerns existing in the project area. The results relevant to fractured rock aquifers are summarized below.

- **Inorganic Constituents (with health-based benchmarks)**: One or more of the inorganic constituents with health-based benchmarks (i.e., Maximum Contaminant Level (MCL), Health Advisory Level, Notification Level) were high (relative to those benchmarks) in 25% of the hard rock study area; these included vanadium (V), arsenic (As), and boron (B). Vanadium and arsenic concentrations were not correlated to either urban or agricultural land use, indicating natural sources as the primary contributors of these constituents to groundwater. Boron was positively correlated with urban land uses, suggesting that anthropogenic activities are a contributing source of boron to groundwater.
- **Inorganic constituents (with aesthetic benchmarks):** Inorganic constituents with aesthetic benchmarks that were detected at high relative-concentrations include manganese (Mn) (in 33.3% of the hard rock study area) and TDS (in 16.7% of the hard rock study area). TDS concentrations were correlated to agricultural land use suggesting that agricultural practices are a contributing source of TDS to groundwater. Manganese concentrations were highest in groundwater with low dissolved oxygen and pH indicating that the reductive dissolution of oxyhydroxides in the bedrock may be an important mechanism for the mobilization of manganese in groundwater. TDS concentrations were highest in shallow wells and in modern (< 50 years) groundwater, which indicates anthropogenic activities are a source of TDS concentrations in groundwater.

- **Organic constituents:** Concentrations of organic constituents above the health-based benchmarks were not detected.

The study also indicated that several samples in the hard rock study area had radioactive elements in the medium (gross alpha) to high (radon 222) range (USGS 2011). According to Figure 4 of the San Diego County Guidelines for Groundwater Resources, portions of SDG&E's proposed project would be located within an area identified as being a problem area for nitrates and radioactive elements (County of San Diego 2007). This includes the area in and around Descanso; areas near Campo, the Cameron Tap, and the Cameron Substation; and an area west and south of the Barrett Substation.

D.9.1.6 Flood Hazards

Many of the streams to be crossed by the proposed power line replacement projects have 100-year floodplains or flood hazard areas designated by the Federal Emergency Management Agency (FEMA). The 100-year floodplain is the area that would be inundated by a flood with a recurrence interval of once in 100 years, on average. The purpose of the floodplain delineations is to identify flood hazard areas for flood insurance purposes and to inform the public and local permitting agencies about flood hazards so that construction and other activities in flood prone areas can be managed in a manner that will reduce or mitigate future flood damage. Since floodplain mapping is usually done as an aid to local governments in urban areas or areas that are expected to be prone to urbanization, most watercourses in outlying areas (including portions of SDG&E's proposed project area) are not mapped even though they may be subject to substantial flood hazards. It is reasonable to assume that all watercourses which convey natural flows, whether mapped as floodplains or flood hazard areas or not, present some level of flood risk.

In addition to flooding in response to heavy rainfall, there is a potential risk of flooding due to failure of an upstream dam. San Diego County Multi-jurisdictional Hazard Mitigation Plan identifies potential dam inundation zones within San Diego County. Dam owners are required by state law to prepare and file Dam Inundation Maps with the State Office of Emergency Services. These maps delineate the areas at risk in the event of failure for each dam. Portions of SDG&E's proposed project fall within dam inundation zones. This includes portions of proposed project that are located downstream of Barrett Dam, Barrett Spillway, Henry Jr. Dam, Cuyamaca Dam, Cuyamaca Spillway, and Lake Henshaw Dam (SanGIS 2012).

The flood hazard is not limited to inundation. Bank erosion and bed scour (a lowering or destabilization of the channel bed during a flow event) are also hazards that should be taken into consideration in designing infrastructure in or near a natural watercourse. Most natural washes are subject to bank erosion and bed scour at some level. In the project area, erosion and scour are

more likely to be a concern in the desert areas (e.g., Tijuana watershed), but could occur anywhere along the power line alignments.

Flood hazard areas are described for each segment below, and were identified based on review of FEMA flood maps and dam inundation zones compiled by the County (SanGIS 2012).

TL682

A fly yard and staging area, a stringing site, and 13 poles (or pole work sites) are located within or partially within a 100-year flood hazard area along Buena Vista Creek, northeast of Lake Henshaw. In addition, six stringing sites and seven pole work sites are located within or partially within the inundation area associated with Lake Henshaw (i.e., this is the area that would be inundated if the reservoir filled to capacity).

In addition, six poles along TL682 are within the dam failure inundation zone downstream of the Lake Henshaw Dam. The Lake Henshaw Dam inundation zone follows the entire length of the San Luis Rey River, from the west side of Lake Henshaw, to the Pacific Ocean at the City of Oceanside. TL682 generally follows Highway 76, from Lake Henshaw to the community of Rincon, which parallels the north side of the San Luis Rey River. The components of TL682 that are within the inundation zone are those which are in close proximity to the San Luis Rey River.

TL626

TL626 crosses the 100-year flood hazard area associated with the San Diego River, though all poles are located outside of the flood plain. One pole work site is located within the inundation zone of the Lake Cuyamaca Dam and the Cuyamaca Dam Spillway. The actual pole locations, however, are located on either side of Boulder Creek, approximately 4.0 miles southwest, and downstream of, Lake Cuyamaca.

TL629

There are several 100-year flood zones mapped along TL629 associated with Pine Valley Creek, Descanso Creek, Sagamatum Creek, and the Sweetwater River. In and around Descanso, there are 15 pole work sites, 2 stringing sites, and 1 staging area located within or partially within 100-year flood zones. There are no dam inundation zones mapped along the segment. In addition, there is one pole work site, and one stringing site within or partially within the 100-year flood zone associated with Pine Valley Creek. There are no dam inundation zones mapped along this segment.

TL6923

TL6923 spans the 100-year flood hazard area associated with Cottonwood Creek, though all poles and proposed work sites are located outside of the flood plain. One pole and one stringing site of TL6923 are within or partially within the dam inundation zone associated with Barrett Lake, along Cottonwood Creek. The primary dam upstream of this location is the Barrett Dam Spillway, which feeds directly into the creek, approximately 2.0 miles north of where the line crosses the creek. Barrett Dam and Henry Jr. Dam are two additional dams that control flow into Barrett Lake.

C157

There are two pole work sites upstream of Barrett Lake located in 100-year flood hazard areas. There are no dam inundation zones mapped along this segment.

C442

Fifteen pole locations, two stringing sites, and one staging area are located within the 100-year flood hazard area associated with Pine Valley Creek. There are no dam inundation zones mapped along this segment.

TL625, C79, C78, C440, and C449

No flood hazard areas have been identified or mapped along these segments.

D.9.2 Applicable Regulations, Plans, and Standards

This section discusses federal, state, and regional environmental regulations, plans, and standards applicable to SDG&E's proposed project. As described in Section D.4, Biological Resources, wetlands, open water features, and drainages may be under the jurisdiction of the U.S. Army Corps of Engineers (ACOE) as wetlands or waters of the United States; California Department of Fish and Wildlife (CDFW) as riparian areas, lakes, or streambeds; or the RWQCB as waters of the state. These regulatory agencies make the ultimate determinations of which features are subject to their respective jurisdiction. Formal jurisdictional delineations have not been completed for SDG&E's proposed project, though one would be required prior to project implementation by the various regulatory agencies to determine what permitting actions would be necessary.

D.9.2.1 Federal Regulations

Clean Water Act

Increasing public awareness and concern for controlling water pollution led to enactment of the Federal Water Pollution Control Act Amendments of 1972. As amended in 1977, this law became commonly known as the Clean Water Act (CWA) (33 U.S.C. 1251 et seq.). The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. The CWA established basic guidelines for regulating discharges of pollutants into the waters of the United States. The CWA requires that states adopt water quality standards to protect public health, enhance the quality of water resources, and ensure implementation of the CWA.

CWA Section 208

Under Section 208 of the CWA, the SWRCB is required to designate management agencies to implement provisions of water quality management plans. On August 16, 1979, the SWRCB designated the Forest Service as the Water Quality Management Agency (WQMA) for all activities on national forest system lands in California. The Pacific Southwest Region (Region 5) of the Forest Service prepared a handbook titled *Water Quality Management for National Forest System Lands in California, Best Management Practices*, which describes current Forest Service practices and procedures for protection of water resources. Implementation of the practices and procedures meet the Forest Service's obligations as a designated WQMA.

The best management practices (BMPs) presented in the handbook are divided into eight categories, including timber management, road and building site construction, mining, recreation, vegetation management, fire suppression and fuels management, watershed management, and range management. Although the handbook clarifies that BMPs described under one category may also have applicability in other areas, BMPs most relevant to SDG&E's proposed project are associated with road and building site construction, vegetation management, and fire suppression and fuels management. The Forest Service is currently in the process of updating BMPs regarding non-point source pollution that may occur as a result of road management activities on Forest Service lands in the Pacific Southwest Region. Activities associated with road management include travel route planning, design, construction, operation, maintenance, reconstruction, storage, and decommissioning. The BMPs are to be applied as needed to prevent adverse impacts of road management activities on water, aquatic, and riparian resources to the extent possible. BMPs range from suggested practices to prohibitions, as required by Forest Service directives, and cover specific categories such as assessing damaged roads after storms, wet weather operations standards, and BMP monitoring.

CWA Section 303 and 304

Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States (33 U.S.C. Section 1313). Section 304(a) requires the EPA to publish water quality criteria that accurately reflect the latest scientific knowledge on the kinds and extent of effects that pollutants in water may have on human health and welfare (33 U.S.C. Section 1314(a)). Where multiple uses exist, water quality standards must protect the most sensitive use. Water quality standards are typically numeric, although narrative criteria based on biomonitoring methods may be employed when numerical standards cannot be established or when they are needed to supplement numerical standards.

Section 303(c)(2)(b) of the CWA requires states to adopt numerical water quality standards for toxic pollutants for which the EPA has published water quality criteria and that could reasonably be expected to interfere with designated uses in a water body.

Under Section 303(d) of the CWA, states, territories, and authorized tribes are required to develop a list of waterways (or segments thereof) with poor water quality. Waters on the list do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. The law requires that these jurisdictions establish priority rankings for waters on the list and develop action plans, including the identification of TMDLs for associated pollutants, to improve water quality. As discussed above in the environmental setting, there are several water bodies within SDG&E's proposed project area that have been classified as 303(d) waters; however, none have established TMDLs.

Section 401 of the Clean Water Act

Section 401 of the CWA requires an applicant for a federal permit, such as the construction or operation of a facility that may result in the discharge of a pollutant into navigable waters, to obtain certification that the proposed activity will comply with state water quality standards (i.e., beneficial uses, water quality objectives, and anti-degradation policy) from the state in which the discharge originates (33 U.S.C. 1341). This process is known as water quality certification. For projects in western San Diego County, the San Diego RWQCB, Region 9, issues Section 401 water quality certifications. For projects in eastern San Diego County, the Colorado River Basin RWQCB, Region 7, issues Section 401 water quality certifications. SDG&E's proposed project is primarily located within Region 9, although a small portion of the C440 line would be located in Region 7.

Section 404 of the Clean Water Act

Section 404 of the CWA established a permitting program to regulate the discharge of dredged or filled material into waters of the United States, which include wetlands adjacent to national waters (33 U.S.C. 1344). This permitting program is administered by the ACOE and enforced by the EPA. For more information on Section 404 of the CWA, see Section D.4, Biological Resources, of this EIR/EIS.

Section 402 of the Clean Water Act

The National Pollutant Discharge Elimination System (NPDES) permit program, as authorized by Section 402 of the CWA, was established to control water pollution by regulating point sources that discharge pollutants into waters of the United States (33 U.S.C. 1342). In the State of California, the EPA has authorized the SWRCB permitting authority to implement the NPDES program. Projects that disturb one or more acres are required to obtain NPDES coverage under the NPDES General Permit for Storm Water Discharges Associated with Construction Activity, Order No. 99-08-DWQ. The Construction General Permits require the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP describes BMPs the discharger would use to protect stormwater runoff. The SWPPP must contain a visual monitoring program, a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs, and a sediment-monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. On September 2, 2009, the SWRCB issued a new NPDES General Permit for Storm Water Associated with Construction Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002), that became effective July 1, 2010. This new permit requires that construction and demolition sites meet more stringent, measurable (quantitative) standards for discharge management. New requirements include a risk-based permitting approach, Numeric Action Levels and Numeric Effluent Limitations, post-construction standards for discharges, increased BMP requirements, and increased monitoring and reporting requirements.

Safe Drinking Water Act

The Safe Drinking Water Act (42 U.S.C. 201) was originally passed by Congress in 1974 to protect public health by regulating the public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources, including rivers, lakes, reservoirs, springs, and groundwater wells. The act authorizes the EPA to set national health-based standards for drinking water to protect against both naturally occurring and man-made contaminants that may be found in drinking water. The EPA states that established drinking water standards must be met, and water agencies must work together to enforce standards.

Through Title 40, Part 144, of the Code of Federal Regulations (CFR) (40 CFR 144), the Safe Drinking Water Act prohibits any injection activity that could allow the movement of fluid-containing contaminants into underground sources of drinking water if the presence of that contaminant could cause a violation of any primary drinking water regulation under 40 CFR 142, or that would otherwise adversely affect public health. This regulation allows the director to take emergency action if a known contaminant is present or is likely to enter a public water system or underground drinking water source.

Federal Insecticide, Fungicide, and Rodenticide Act

The Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136 et seq.) is a federal law that set up the basic U.S. system of pesticide regulation to protect applicators, consumers, and the environment. It is administered and regulated by the EPA and the appropriate environmental agencies of the respective states. A significant revision in 1972 by the Federal Environmental Pesticide Control Act and several others have expanded EPA's present authority to oversee the sales and use of pesticides with emphasis on the preservation of human health and protection of the environment by "(1) strengthening the registration process by shifting the burden of proof to the chemical manufacturer, (2) enforcing compliance against banned and unregistered products, and (3) promulgating the regulatory framework missing from the original law." The act prohibits sale of any pesticide in the United States unless it is registered and labeled to indicate approved uses and restrictions. It is a violation of the law to use a pesticide in a manner that is inconsistent with the label instructions.

Forest Service CNF Land Management Plan

The Soil, Water, and Air Program of the Forest Service CNF Land Management Plan (LMP) encompasses all activities associated with the management of water quality and supply, soil productivity and stability, air quality management, hazardous materials mitigation, and geologic and paleontologic resource management on National Forest lands. National Forest managers are required to emphasize management of groundwater and surface water resources to benefit ecosystem health and National Forest administrative needs on their respective forests.

The following policies pertain to surface and groundwater hydrology and water quality:

AM 2

Forest-wide Inventory is a CNF Land Management policy, which promotes developing and maintaining the capacity (processes and systems) to provide and analyze the scientific and technical information needed to address agency priorities, by engaging in the following actions:

- Identify and map all riparian areas.

- Inventory and analyze geologic and hydrologic resources (fossils, caves, groundwater basins and extractions, geologic Special Interest Areas, geologic features along scenic corridors, etc.) that are available to the public, affect other resources, or need special management or protection.
- Identify and mitigate geologic hazards (seismic activity, sliding land, land subsidence, flooding and erosion) through landscape and watershed planning, sediment placement site planning, engineering design, reclamation and maintenance.
- Inventory surface and groundwater extractions, diversions, miles/acres of streams, acres of water bodies, acres of riparian, etc.
- The validation of watershed standards for cumulative effects (less than 20% manipulation/year and less than 40% over 5 years).

WAT 1

Watershed Function is a policy providing the protection, maintenance and restoration of natural watershed functions including slope processes, surface water and groundwater flow and retention and riparian area sustainability, by the following actions:

- Restore, maintain and improve watershed conditions. Assure that approved and funded rehabilitation and emergency watershed treatments are implemented in an effective and timely manner.
- Maintain or restore soil properties and productivity to ensure ecosystem health (soil microbiota and vegetation growth), soil hydrologic function, and biological buffering capacity.
- Manage RCAs [riparian conservation areas] to maintain or improve conditions for riparian dependent resources. RCAs include aquatic and terrestrial ecosystems and lands adjacent to perennial, intermittent, and ephemeral streams, as well as around meadows, lakes, reservoirs, ponds, wetlands, vernal pools, seeps, springs and other water bodies. Riparian dependent resources are those natural resources that owe their existence to the area, such as fish, amphibians, reptiles, fairy shrimp, aquatic invertebrates, plants, birds, mammals, soil and water quality.
- Maintain natural stream channel conductivity, connectivity and function.
- Assess and manage geologic resources and hazards to integrate earth science principals and relationships into ecosystem management, reduce risks to people and resources, and to interpret and protect unique values.

- Identify, prioritize based on risk, and mitigate the impacts of abandoned and inactive landfills on water, soil and other resources. Stabilize and reclaim where necessary, abandoned and inactive landfills to maintain proper watershed function, public safety and resource benefit.
- Inventory, analyze and prioritize abandoned mines to identify chemical and physical hazards, historic significance, and biological resources prior to reclamation. Mitigate safety hazards and adverse environmental impacts, conduct reclamation as needed, and assure that water quality standards are met.
- Maintain watershed integrity by replacing or disposing of displaced soil and rock debris in approved placement sites.

WAT 2

Water Management is a policy for the management of groundwater and surface water in order to maintain or improve water quantity and quality in ways that minimize adverse effects. The management policy outlines the following actions:

- Assess the impacts of existing and proposed groundwater extractions and tunneling projects and proposals to assure that developments will not adversely affect aquatic, riparian or upland ecosystems and other uses, resources or rights (e.g., Tribal water rights).
- Promote water conservation at all national forest administrative and authorized facilities. Protect and improve water quality through implementing BMPs and other project-specific water quality protection measures for all national forest and authorized activities. Include appropriate conservation and water quality mitigation measures in the review response when reviewing non-forest water-related projects that may affect forest resources.
- Conserve and protect high quality water sources in quantities adequate to meet national forest needs.
- Take corrective actions to minimize conditions leading to state listing of 303(d) impaired waters on National Forest System land. For those waters that are both on and off National Forest System land ensure USFS [Forest Service] management does not contribute to listed water quality degradation.
- Actively pursue the acquisition of water rights and water allocation processes to secure instream flow and groundwater resources for current and future needs sufficient to sustain native riparian dependent resources and other forest resources and uses.
- Identify the need for and encourage the establishment of water releases for current and future uses to maintain instream flow needs, including channel maintenance, and to protect and eliminate impacts on riparian dependent resources.

- Participate in all Federal Energy Regulatory Commission licensing and re-licensing efforts on National Forest System land to ensure sufficient consideration and protection is provided for riparian dependent resources. Incorporate instream flow, riparian, and other natural resource management requirements into 4(e) license conditions.
- Monitor water development projects to ensure that instream flows are meeting riparian dependent resource needs.
- To maintain or improve habitat containing threatened, endangered, proposed, candidate, and sensitive species coordinate activities with CDFG [CDFW], NOAA [National Oceanic and Atmospheric Administration] Fisheries, USFWS [U.S. Fish and Wildlife Service], SWRCB, and other appropriate agencies involved in recommending instream flow and surface water requirements for waterways.
- Cooperate with federal, tribal, state and local governments, and private entities to secure the instream flows that are needed to maintain, recover, and restore riparian dependent resources, channel conditions, and aquatic habitat.

WAT 3

Hazardous Materials is a policy for the management of known hazardous materials risks. The management policy outlines the following actions:

- Develop a Hazardous Materials Response Plan that addresses risk and standard cleanup procedures.
- Coordinate with federal, tribal, state, city and county agencies, and local landowners to develop emergency response guidelines for hazardous spills on National Forest System land or on adjacent non-National Forest System land with the potential to affect threatened, endangered, proposed, candidate, and sensitive fish and amphibian habitat. In the event of hazardous material spills in known habitat on National Forest System land, Forest Service will contact the USFWS and NOAA Fisheries (as appropriate) within 24 hours. Quickly contact resource personnel and use them as consultants to minimize impacts to habitat and to initiate emergency consultation with the USFWS if necessary. Provide habitat maps to response personnel for hazardous spills.

National Flood Insurance Program

FEMA administers the National Flood Insurance Program (NFIP) under the U.S. Department of Homeland Security. The program encourages the adoption and enforcement by local communities of floodplain management ordinances that reduce flood risks. In support of the

program, FEMA identifies flood hazard areas throughout the United States on FEMA flood hazard boundary maps.

D.9.2.2 State Laws and Regulations

California Fish and Game Code

Sections 1601–1603 of the California Fish and Game Code require a Streambed Alteration Agreement between the CDFW and any entity proposing to substantially divert or obstruct the natural flow or effect changes to the bed, channel, or bank of any river, stream, or lake. The agreement is designed to protect the fish and wildlife values of a river, lake, or stream.

Porter–Cologne Water Quality Control Act

The Porter–Cologne Water Quality Control Act of 1967 (California Water Code, Section 13000 et seq.) requires the SWRCB and the nine RWQCBs to adopt water quality criteria to protect state waters. These criteria include the identification of beneficial uses, narrative and numerical water quality standards, and implementation procedures. The criteria for the proposed project area are contained in the Water Quality Control Plan for the Colorado River Basin Plan, Region 7, adopted by the Colorado River Basin RWQCB on November 17, 1993, and the Water Quality Control Plan for the San Diego Basin adopted by the Colorado River Basin RWQCB with amendments through April 25, 2007.

State Maximum Contaminant Levels

As part of the California Safe Drinking Water Act, the State Department of Health Services sets primary and secondary standards for drinking water supplies. MCLs set by DHS are either as stringent or more stringent than federal MCLs.

CCR Title 22 Standards for the Use of Recycled Water

Title 22 contains standards for the use of recycled water for general construction purposes as detailed in Chapter 3, Article 3, Section 60307—Use of Recycled Water for Other Purposes. Recycled water used for soil compaction, mixing concrete, and/or dust control on roads and streets provided the water meets at least disinfected secondary-23 recycled water standards. Disinfected secondary-23 recycled water means recycled water that has been oxidized and disinfected so that the median concentration of total coliform bacteria in the disinfected effluent does not exceed a most probable number (MPN) of 23 per 100 milliliters utilizing the bacteriological results of the last 7 days for which analyses have been completed, and the number of total coliform bacteria does not exceed an MPN of 240 per 100 milliliters in more than one sample in any 30-day period.

In addition, Chapter 3, Article 4, Section 60310—Use Area Requirements, states that no irrigation with, or impoundment of, disinfected secondary-2.2 or disinfected secondary-23 recycled water shall take place within 100 feet of any domestic water supply well and that any use of recycled water shall comply with the following: (1) any irrigation runoff shall be confined to the recycled water use area, unless the runoff does not pose a public health threat and is authorized by the regulatory agency; (2) spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities; and (3) drinking water fountains shall be protected against contact with recycled water spray, mist, or runoff.

D.9.2.3 Regional Policies, Plans, and Regulations

Water Quality Control Plans

The RWQCBs govern the protection of surface waters by assessing the attainment of designated beneficial uses and by issuing permits and/or certifications, such as CWA Section 401 water quality certifications and Section 402 (NPDES) permits. Each RWQCB is responsible for water quality control planning within its region through a Water Quality Control Plan, or Basin Plan. The proposed project is subject to the Region 7 (Colorado River Basin) and Region 9 (San Diego Basin) plans.

D.9.3 Environmental Effects

D.9.3.1 Definition and Use of CEQA Significance Criteria/Indicators under NEPA

The CEQA criteria and guidelines described as follows are also used as indicators of adverse effects under NEPA. Significance criteria, or thresholds, listed in Appendix G of the CEQA Guidelines area used to determine the significance of potential impacts due to a project. Based on these criteria, a project would have a significant hydrology- or water quality-related effect on the environment if it would:

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 pre-existing 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 a 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 sedimentation on- or off-site.

d. Substantially alter the existing drainage pattern of a 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 which would result in flooding on- or off-site.

e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

f. 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.

Use of Hydrology and Water Quality Thresholds

The Hydrology and Water Quality significance standards in Appendix G of the CEQA Guidelines (listed above) have been modified for the purpose of this analysis to better fit SDG&E's proposed project. The following impact statements collectively address criterion a) through f) above:

Construction-Related Impacts

- Stormwater runoff from temporary work areas during construction could result in increased levels of turbidity (i.e., sediment) and other common construction-related contaminants to local rivers, creeks or other water bodies (including groundwater). *[Appendix G criteria a), c), d), and f)]*
- Non-stormwater discharges during construction; including groundwater dewatering discharges, drilling muds, and/or water for dust control; could introduce contaminants into local rivers, creeks or other water bodies (including groundwater). *[Appendix G criteria a), b), and f)]*
- Construction-related water requirements, if supplied by local water purveyors that rely on groundwater, could deplete groundwater supplies or result in a lowering of the local groundwater table. For the purpose of this EIR/EIS, the County of San Diego *Guidelines for Determining Significance, Report Format and Content Requirements: Groundwater Resources* (County of San Diego 2007) shall serve as the criteria for determining the significance of groundwater impacts. An indirect significant impact

of the project could occur if imports of groundwater from off-site sources would *[Appendix G criteria b)]*:

- Reduce the level of groundwater in storage to 50% or less as a result of groundwater extraction, as shown using a soil moisture balance, or equivalent analysis, conducted using a minimum of 30 years of precipitation data, including drought periods, or
- Result in a decrease in water level of 20 feet or more in off-site groundwater wells after a 5-year projection of drawdown, or a decrease in saturated thickness of 5% or more in the off-site wells, if site-specific data indicates water bearing fractures exist which substantiate an interval of more than 400 feet between the static water level in each off-site well and the deepest major water bearing fracture in the well(s).

Although the SDG&E proposed project may derive water from groundwater sources on federal land (e.g., tribal lands) in addition to private County lands (e.g., small local water districts), the County of San Diego guidelines provide useful thresholds for defining what would constitute substantial depletion of groundwater supplies or interference with local water table levels. Therefore, they are also used as a method of identifying the severity of adverse impacts under NEPA.

Operation and Maintenance Impacts

- Regrading and repair of access roads during construction, if not conducted in a manner that permanently addresses chronic erosion issues, would continue to expose road beds to accelerated erosion and rills, thereby increasing turbidity levels in downstream water bodies. *[Appendix G criteria c), and d)]*
- Typical maintenance activities, such as vegetation management, pesticide and herbicide application, and other as-needed repairs would involve materials, debris, or earthwork that could adversely affect water quality. *[Appendix G criteria c), and d)]*

Determinations of No Impact

Criteria g) through j) above collectively address questions related to exposure to flood hazards. However, SDG&E's proposed project would have no impact related to these issues for the following reasons:

- *SDG&E's proposed project does not involve housing or habitable structures*: Although the project alignments would cross several floodplains—as described in Section D.9.1.6—it would not actually result in an increased safety hazard to the public because it does not propose housing or other habitable structures within a floodplain.

- *The proposed poles would replace existing poles and are narrow in width*: Therefore, SDG&E's proposed project would not cause any appreciable changes in the timing, extent, or severity of flooding hazards within, adjacent or downstream of the SDGE right-of-way (ROW). This is because steel poles would replace older wood poles, would be placed hundreds of feet apart, and the width of the poles would not be sufficient to substantially block, alter or redirect flood flows.

D.9.3.2 Applicant Proposed Measures

SDG&E has proposed Applicant Proposed Measures (APMs) HYD-01 through HYD-11 which include BMPs to control erosion during construction. These APMs are part of the project, and the impact analysis assumes that all APMs will be implemented as defined in Section B.7 of this EIR/EIS.

D.9.3.3 Direct and Indirect Effects

Impact HYD-1: Result in increased levels of turbidity (i.e., sediment) and other common construction-related contaminants to local rivers, creeks, or other water bodies (including groundwater) due to stormwater runoff during construction

Fire hardening (wood-to-steel pole replacement), relocation, removal, and undergrounding of the existing overhead power and distribution lines would require construction activities and methods that have the potential to introduce sediment and other construction-related pollutants (e.g., fuels, grease, debris) into local receiving waters. This potential impact is applicable to all five existing 69-kilovolt (kV) power lines (totaling approximately and 114.8 miles) and all six existing 12 kV distribution lines (totaling approximately 31.1 miles), because all cross or eventually drain to the watercourses identified in Tables D.9-1 through D.9-7. This impact analysis primarily addresses the short-term effects on construction activity, whereas Impacts HYD-5 and HYD-6 addresses the long-term effects of construction and routine maintenance activities.

Impact Mechanisms

There are two typical ways that construction activities could adversely affect water quality:

- **Land disturbances:** Land disturbances such as vegetation removal, compaction, grading, and excavation can potentially increase sediment levels in stormwater runoff by eroding soils that have been loosened or newly exposed by construction activity. Land disturbances can also decrease the infiltration capacity of soils in the work area through compaction of native soils from foot traffic, heavy machinery, and equipment laydown. Depending on the pattern, magnitude, and extent of construction activities, stormwater flows that would otherwise not be erosive, can become both channelized and accelerated, leading to soil loss,

rilling and/or gullying on site or down-gradient. Land disturbances would be required to complete access road repairs (i.e., blading, smoothing, stabilizing, and/or compacting the surface), prepare temporary work areas, establish stringing sites, install steel poles, underground existing lines, and remove existing access roads.

- **Spill and/or leaks:** Materials that could contaminate the construction area or spill or leak include diesel fuel, gasoline, lubrication oil, cement slurry, hydraulic fluid, antifreeze, transmission fluid, lubricating grease, and construction-related trash and debris. Due to the nature of the construction activities, only minor quantities of these materials would be required in any one work area along the line. The amount used would be the minimum necessary to fuel vehicles, power equipment, and complete installation activities (see Table B-8, Typical Construction Equipment by Activity, in Section B, Project Description). Fly yards, however, would need to have larger quantities of fuel on site to refuel helicopters. Improper management of hazardous materials could result in accidental spills or leaks, which could locally contaminate either shallow groundwater or the closest surface water body.

These potential impacts are predominantly temporary because all work areas would be restored to pre-construction conditions to the extent practicable (APM-HYD-10) and according to the project-specific SWPPP, further described below. Access roads improvements, however, would remain to facilitate future maintenance activities over the long-term (access road impacts are discussed in greater detail under Impact HYD-5).

The exact acreage of ground disturbance that would be required is not precisely known. However, it is expected that pole work areas would require about 45.7 acres; staging areas would require approximately 31.8 acres; trench work areas would require approximately 19 acres (over a distance of 1.3 miles); and 12 fly yards would require about 1.1 acres each. In addition, it is anticipated that road repair work would be needed along many portions of the existing access roads. Most of the temporary work areas required would overlap with locations that have been previously disturbed due to previous operation and maintenance activities along the existing lines (e.g., existing roads, turnaround/turnout areas, and pole bases), and the required disturbances would be highly dispersed both geographically and over time. This means that at any one time, a much smaller area would be disturbed, and as construction proceeds over the 5-year period, construction activities would proceed incrementally along each of the project alignments. Table B-8 (in Section B, Project Description) provides estimates of the duration of construction activities that would occur for various project components. Typical pole replacement activities would range in duration from a couple days to a week at any one pole work area depending on installation methods and local conditions.

Therefore, SDG&E's proposed project's impacts to previously undisturbed land (i.e., native soils and vegetation) would be geographically dispersed in scattered locations along the linear ROW

and generally incremental in nature. This is because temporary work areas have been located to maximize use of existing roads and previously disturbed land, and because new disturbances of native soils and vegetation would be geographically disconnected and generally confined to areas around existing roads, turnaround/turnout areas, and pole bases.

Watershed Sensitivity and Water Quality Impairments

Construction activities have the greatest potential to adversely affect water quality when conducted during the rainy season, within erosion-prone soils, and/or within sediment-sensitive watersheds or 303(d)-listed water bodies (see Section D.9.1.4 and Table D.9-7). Power line TL629, and distribution lines C442 and C440 would involve work within a "High Receiving Water Risk Watershed." This refers to watersheds that drain either directly or indirectly to water bodies that are either (1) 303(d) listed as being impaired for sediment/siltation, (2) have an EPA-approved, sediment-related TMDL, or (3) have the existing beneficial uses of SPAWN (Fish Spawning), MIG (Fish Migration), and COLD (Cold Water Habitat). Although none have approved TMDLs, downstream beneficial uses could be adversely affected through violation of RWQCB water quality objectives for suspended solids, TDS, sediment, and turbidity.

Furthermore, as indicated in Table D.9-8, although all ground-disturbing construction activities would expose soils to erosion, certain soils are more prone to generating runoff, due to their unique physical characteristics such as low infiltration rates, restricting layers, or shallow groundwater. The project is predominantly underlain by soils with hydrologic groups B and C, which indicate a moderate susceptibility to erosion. However, certain segments, such as C78 and TL6923 are underlain by substantial areas of hydrologic group D soils with a high runoff potential. Construction activities within these areas have a greater potential to result in erosion and sedimentation if rainfall occurs during the construction period. As indicated above, most pole replacement activities would take place at any one pole for a matter of days before moving on to the next pole; however, staging area, fly yards, and other longer lasting land disturbances would have a greater potential to be exposed to rainfall because they would be used for a longer duration.

Pollutant categories that construction activities have the potential to release include sediment, debris (trash and litter), oils and grease, fuels, and substances that can change the pH or oxygen levels (e.g., decaying organic matter, concrete washouts). The creeks that have impairments under Section 303(d) of the CWA that project construction activities have the potential to contribute to are:

- San Luis Rey River: Much of the existing TL682 alignment is parallel to the San Luis Rey River, which has a number of water quality impairments including salinity (chloride and TDS), pathogens (enterococcus and fecal coliform), toxicity and phosphorus, and nutrients

(total nitrogen as N). The construction activities planned for the alignment would not include activities with the potential to contribute pathogens, toxicity or nutrients. However, runoff from construction sites could potentially introduce additional suspended solids and total dissolved solids.

- Pine Valley Creek: Distribution line C442 crosses a segment of Pine Valley Creek at two locations and closely parallels the creek in several other locations where it is identified as impaired for turbidity (sediment). Distribution line C440 does not cross the creek but is within its watershed and thus could also contribute sediment.
- Loveland Reservoir: The Loveland Reservoir near TL625 is listed as impaired for aluminum, manganese, dissolved oxygen, and pH. TL625 spans a few of the northern branches of this reservoir along Japatul Valley Road. The closest existing pole along any of the proposed power line replacement projects is located approximately 145 feet from the reservoir. Runoff from construction sites could potentially adversely affect dissolved oxygen levels and pH.

Cottonwood creek is also listed as impaired for selenium, toxicity, and DDT (pesticides), but construction activities would not involve discharges of these substances, which are normally associated with agricultural activities and urban runoff/storm sewers.

Impact Reduction Strategies Built into the Project Design

Although construction activities described above have the potential to contribute pollutants to local receiving waters, compliance with state and local water quality regulations and integration of APMs into project design and construction would ensure that potential impacts are minimized to the greatest extent feasible. The applicant would be required to comply with the SWRCB's NPDES General Permit for Storm Water Associated with Construction Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002, as amended) because each of the power line replacement projects would exceed 1 acre of land disturbance. Accordingly, the applicant must prepare a project-specific SWPPP before construction begins, and it must be kept on the construction site(s) throughout the construction process. The SWPPP must identify all pollutant sources and non-stormwater discharges associated with the construction activity, and must identify water quality BMPs that are appropriate for the construction activities proposed (i.e., linear underground/overhead projects [LUP]). The type and number of BMPs are also based on a project-specific risk determination which takes into account both local soil erosivity and receiving water risk. The SWPPP must be developed and implemented by Qualified SWPPP Practitioner(s), who will evaluate site-specific conditions and the water quality sensitivity of receiving waters to choose the most appropriate BMPs. The SWPPP must

also include numerous compliance monitoring and reporting procedures that ensure that relevant water quality standards are being met.

APM HYD-05 acknowledges the requirement that the project must prepare a SWPPP, and many of the other APMs listed in section B.7 of this EIR/EIS represent examples of BMPs that SDG&E will implement as part of the SWPPP (including APM HYD-01, APM HYD-02, APM HYD-03, APM HYD-06, APM HYD-09, and APM HYD-10). There are a number of lists and sources of water quality BMPs for the control of construction-related pollutants. Two particularly relevant sources that will be used in the selection and design of BMPs include SDG&E's own BMP manual, which provide practical BMPs that are well-suited for linear construction of electrical infrastructure, as well as the Forest Service Southwest Region's *Water Quality Management for Forest System Lands in California, Best Management Practices* document, which addresses typical water quality design challenges for roads and facilities on Forest Service land. These BMP manuals will be used as appropriate per APM HYD-07 and APM HYD-08. Additionally, SDG&E's proposed project's general APMs (APM GEN-01, APM-GEN-03, APM GEN-04, and APM GEN-05) address construction site cleanup and debris management and other BMPs, which would be protective of water quality.

Standard BMPs typically included in a construction SWPPP include perimeter controls, stabilization of exposed soils not actively being used for construction, proper use and containment of hazardous materials, preventing release of fuels and greases (e.g., containment berms, controlled storage, proper labeling, drip pans under vehicles), and good housekeeping practices. The exact location and type of BMPs to be installed during construction would depend on site-specific conditions, construction schedule, and proposed activities, all of which would be outlined in the SWPPP.

The SWRCB designated the Forest Service as the WQMA for all activities on National Forest System lands in California, meaning the Forest Service has the authority to implement state and federal water quality laws within the CNF. The water quality management best practices manual developed by the Forest Service Pacific Southwest Region (Region 5) describes current Forest Service practices and procedures for protection of water resources. Implementation of the practices and procedures in the manual (per APM HYD-07) meet the Forest Service's obligations as a designated WQMA.

Conclusion

The required implementation of a SWPPP per the SWRCB Construction General Permit and implementation of APMs HYD-01 through HYD-10 as described in Section B.7 of this EIR/EIS would ensure that construction activities associated with proposed project would not violate any federal, state, or regional water quality standards or waste discharge requirements or otherwise

substantially degrade surface or groundwater quality during construction. Implementation of Mitigation Measure (MM) MM HYD-1, which stipulates that the permittee is responsible for the prevention and control of soil erosion and gullying, would further ensure the implementation and enforcement of these standard procedures, and therefore adverse and significant impacts to water quality during construction (Impact HYD-1) would be mitigated under NEPA and under CEQA would be less than significant with mitigation (Class II).

MM HYD-1 **Erosion Control Plan/Stormwater Pollution Prevention Plan**. ~~For project components on federal land,~~ SDG&E shall develop and implement an Erosion Control Plan (ECP) for construction, operations, and maintenance activities in order to prevent and control soil erosion and gullying ~~on federal land~~. The ECP shall include Forest Service best management practices specific to re-vegetation requirements (scarifying the soil, and fertilizing, seeding and/or mulching, as required to achieve proper post-construction site stabilization) and incorporate Construction General Permit Stormwater Pollution Prevention Plan (SWPPP) requirements for each construction segment as the SWPPP(s) for that segment are completed.~~;~~ ~~integrate requirements from the Construction General Permit, which likewise requires permittees to demonstrate implementation of post-construction cover requirements for final stabilization (i.e., re-vegetation); and integrate best management practices from the project's Stormwater Pollution Prevention Plan (see below).~~ Additionally, the ECP shall ~~compliment~~ complement restoration goals and objectives identified in the Habitat Restoration Plan, as required under MM BIO-4. The ECP shall be updated for each construction segment and provided to the California Public Utilities Commission (CPUC) and the federal agencies for review and approval prior to ~~the~~ each agency's Notice to Proceed issuance for that construction segment. ~~The ECP shall be submitted to the Forest Service for review and approval prior to Notice to Proceed issuance.~~

As required by the Construction General Permit, SDG&E shall develop a ~~Storm Water Pollution Prevention Plan (~~SWPPP~~)~~ for the project or for individual construction segments, as required, to reduce soil erosion during construction. The SWPPP(s) and verification of submittal to the RWQCB shall be submitted to the CPUC and Forest Service prior to Notice to Proceed issuance for the respective construction segment. SDG&E shall provide the CPUC and Forest Service with subsequent amendments to the SWPPP as part of SDG&E's weekly compliance reports. ~~within 48 hours of the SWPPP amendment being submitted to the RWQCB; amendments shall be provided to the Forest Service to append to the ECP.~~ In weekly construction compliance

reports, SDG&E shall note when Storm Water Construction Site Inspection Report Forms have been posted to the Storm Water Multiple Application and Report Tracking System (SMARTS) following -storm events.

Impact HYD-2: Introduce contaminants into local rivers, creeks or other water bodies (including groundwater) due to non-stormwater discharges during construction

Non-stormwater discharges during construction could include construction-related dewatering discharges (to keep excavations free of water) drilling muds, and/or dust control. If non-stormwater discharges enter downstream creeks or groundwater, they could potentially degrade water quality and/or violate water quality objectives of the applicable RWQCB Basin Plan.

Dewatering

The majority of construction-related grading and excavation activities would be unlikely to encounter groundwater, due to their shallow nature and the arid setting. Except for areas immediately adjacent to flowing streams, the region is in a climate and geologic setting that is unlikely to feature a shallow groundwater table. Nevertheless, the potential to encounter shallow groundwater is highly dependent on local geologic and climatic conditions and the depth of construction-related excavations, and therefore it is possible that construction-related dewatering discharges could be required. Dewatering is more likely to be required for undergrounding activities because they would require excavation of linear trenches. Various lengths of undergrounding are proposed for C449 (1.8 miles), C440 (8.4 miles), C79 (2.8 miles), and TL629 (700 feet). As detailed in Section D.7, Public Health and Safety, there is no evidence of existing hazardous materials or contamination within the temporary work areas, which means that, if encountered, groundwater would most likely be free of contaminants, and discharge to surface water would not likely violate Basin Plan standards.

Nonetheless, any dewatering activity that would discharge to the land surface would need to comply with the provisions of the SWPPP which will be required to address non-stormwater discharges as described under Impact HYD-1. SDG&E's BMP manual (BMP 3-01) also acknowledges that discharges of non-stormwater from a trench or excavation that contain sediment or other pollutants directly to a sanitary sewer, storm drain, creek bed, or other receiving water is prohibited. The preferred method of discharge would be to a landscaped, vegetated, or soil area, or into an infiltration basin, so long as the water only contains sediment (no other pollutants) and that all sediment would filter out. If there is evidence that other pollutants are present in the groundwater, the applicant would be required to obtain a separate permit from the RWQCB or local jurisdiction. In such cases, the applicant may be required to use a vacuum truck and haul the water to an authorized discharge location or implement various methods of treatment on site prior to discharging the water.

Implementation of the SWPPP (APM HYD-05) and the applicant's other APMs (APM HYD-08 and APM HYD-09) would ensure that non-stormwater discharges from construction site dewatering would not violate basin plan objectives or substantially degrade water quality. Implementation of Mitigation Measure MM HYD-1 would further ensure the implementation and enforcement of these standard procedures; therefore, adverse and significant impacts to water quality during construction (Impact HYD-2) due to dewatering would be mitigated under NEPA and under CEQA would be less than significant with mitigation (Class II).

Dust Control

Non-stormwater discharges during construction would also include periodic application of water for dust control purposes. Since the practice of dust control is necessary during windy and dry periods to prevent wind erosion and dust plumes, water would be applied in sufficient quantities to wet the soil, but not so excessively as to produce runoff from the construction site. Water applied for dust control would either quickly evaporate or locally infiltrate into shallow surface soils. This is reflected in SDG&E's BMP manual (BMP 4-08), which states that water would only be applied in a manner that does not generate runoff (APM HYD-08). Therefore, water applied for dust control would not result in appreciable effects on groundwater or surface water features and thus has little to no potential to cause or contribute to exceedances of water quality objectives contained in the relevant Basin Plan, regardless of whether off-site sources of water are imported for the purposes of dust control.

If off-site recycled water is used for dust control or other purposes, SDG&E would be required to comply with Title 22 standards for the use of recycled water for "other" purposes, which includes soil compaction, concrete mixing, and dust control (22 CCR Division 4, Chapter 3, Article 3, Section 60307). This includes the requirement to use at least disinfected secondary-23 recycled water (see regulatory setting for definition). Title 22 also imposes limits on the use of recycled water intended to be protective of domestic wells on nearby properties (22 CCR Division 4, Chapter 3, Article 4, Section 60310). For example, the Padre Dam Municipal Water district provides recycled water to construction projects (including for use in dust control and grading) only because it has been authorized to do so under San Diego RWQCB Order No. 97-49, Waste Discharge Requirements and Water Reclamation Requirements for the Production and Purveyance of Recycled Water for Padre Dam Municipal Water District, San Diego County. SDG&E's BMP manual (BMP 4-08), also states that reclaimed water used for dust control would meet California Department of Health Services and RWQCB requirements.

Implementation of the SWPPP (APM HYD-05) and the applicant's other APMs (APM HYD-07, APM HYD-08, and APM HYD-09) would ensure that dust control activities would not violate basin plan objectives or substantially degrade water quality. Implementation of

Mitigation Measure MM HYD-1 would further ensure the implementation and enforcement of these standard procedures; therefore, adverse and significant impacts to water quality during construction (Impact HYD-2) due to dust control would be mitigated under NEPA and under CEQA would be less than significant with mitigation (Class II).

Impact HYD-3: Deplete groundwater supplies or result in a lowering of the local groundwater table

SDG&E's proposed project would require water for the purposes of dust-control and micro-pile foundation installation during construction and insulator washing during periodic maintenance. Water for both construction and maintenance purposes would be sourced from off site. SDG&E's proposed project would not use or develop on-site water wells. If the water supply from off-site is sourced from groundwater wells and is voluminous relative to the well's typical usage, SDG&E's proposed project could indirectly result in adverse effects on aquifer storage or result in well interference (i.e., lowering of water levels) in the local area surrounding the production well(s) used. Because the power line replacement projects are geographically dispersed over a wide area, water supplied for construction and maintenance activities would likely come from several sources depending on the location of specific activities along the power and distribution line alignments. Water imports may include use of surface water or reclaimed water, neither of which would adversely affect groundwater resources. Refer to Section D.12, Public Services, of this EIR/EIS, subsection D.12.1.2 for a listing of potential sources of water supply that have been identified by SDG&E. Because SDG&E has not identified specific water sources or obtained formal commitments from water purveyors, this analysis assumes as a worst-case scenario (related to groundwater resources) that the project's construction-related water demands would be served entirely by local groundwater purveyors (i.e., private/tribal water users or small municipal/community water districts) in eastern San Diego County.

Construction

Construction-related water usage is needed mainly to provide for dust control and minimal earthwork activities (e.g., concrete mixing for installation of micro-pile foundations). Water usage can be highly variable depending on climatic conditions, soil types, fire-threat conditions vegetation types, among a host of variables. The Applicant estimated water usage requirements for the proposed power line replacement projects by examining several factors, including; the duration of each project phase, the number of pole work areas, miles of conductor, miles of access road, or miles of undergrounding to be included in each phase; and the average water requirements per day for each type of work to be conducted. Based on these factors, the applicant estimates that approximately 5 to 10 million gallons of water per year will be required to complete all phases of SDG&E's proposed projects' construction over an approximate 5-year period. SDG&E intends to use a variety of water sources, both commercial and private.

The majority of the proposed power line replacement projects would be located within a groundwater-dependent portion of San Diego County. Examples of small community water districts near SDG&E's proposed projects that are groundwater-dependent include Descanso, Pine Valley Mutual Water Company, Live Oak Springs, Jacumba Community Service District, and La Mesa and/or El Cajon local community services districts. Most of the small water districts are located along or near TL629, C442, and C440. The eastern ends of TL682 and TL625B would be in the service area of member agencies of the San Diego County Water Authority (e.g., Padre Dam Municipal Water District and Yuima/Pauma Municipal Water District), which derive water supplies primarily from surface water diversions. There are private domestic wells scattered throughout the non-federal lands in the project area.

Given that the applicant would have a range of options to meet water supply needs, it is estimated that short-term construction demands can be met using local sources of groundwater.

However, because the estimated water demands are uncertain and specific sources have not been identified by the applicant, off-site imports of water are assumed to represent a potentially significant and adverse impact with respect to groundwater. Implementation of MM HYD-2a and MM HYD-2b would mitigate adverse impacts to groundwater supply under NEPA and under CEQA, impacts would be reduced to a less-than-significant level (Class II) by providing the lead agencies with documentation of purchased water sources and groundwater evaluations demonstrating that use of such sources would not result in significant impacts to groundwater in storage or neighboring wells.

Operation and Maintenance

Water requirements for the operation and maintenance of SDG&E's proposed project would include dust control required during periodic access road maintenance and for insulator washing. SDG&E has estimated long-term water usage to be 130,000 gallons per year to be purchased from local sources. Given that implementation of Mitigation Measures MM HYD-2a and MM HYD-2b would reduce the short term impacts of construction, which are greater in magnitude and intensity, they would likewise reduce the long-term impacts of water usage to not adverse under NEPA and less than significant with mitigation under CEQA (Class II).

MM HYD-2a **Documentation of Purchased Water Source(s).** For water that is to be purchased from one or more public or private water/utility district(s), private landowners, or from tribes, SDG&E shall provide to the CPUC written documentation from such district(s) and/or landowners indicating the total amount of water to be provided and the time frame that the water will be made available to the project. The documentation shall also indicate the type of water (potable or reclaimed) and the specific source of the water (groundwater

well or surface diversions). The sources and amounts of water to be obtained by SDG&E shall be documented in a water supply plan to be submitted to the CPUC prior to notice to proceed for each project component ~~as a condition of receiving a permit to construct~~.

MM HYD-2b **Groundwater Evaluations of Off-Site Sources.** For identified water sources that derive their water supply from groundwater, SDG&E shall commission a groundwater study by a registered/certified hydrogeologist, as reviewed and approved by CPUC, to assess the existing condition of the underlying groundwater/aquifer and all existing wells (with owners' permission) in the vicinity of proposed well location/water sources and to verify that the proposed source is capable of supplying the amount of water needed. The groundwater study shall evaluate whether the volume and duration of the proposed groundwater use would exceed County of San Diego thresholds for impacts with respect to groundwater supply and well interference. If the evaluation indicates the potential for significant impacts, the registered/certified hydrogeologist shall recommend feasible mitigation measures (e.g., a groundwater monitoring program) to avoid exceeding applicable thresholds. The groundwater evaluation shall be provided along with the documentation of purchased water sources, and the CPUC shall not authorize construction of the project unless such documentation has been provided by SDG&E and approved by CPUC. If the evaluation finds that impacts cannot be avoided given the volume and duration of the proposed groundwater use, the CPUC will not authorize use of the water source and shall require SDG&E to seek other viable sources of water.

Total confirmed water supplies from the combination of above documented sources shall equal the total gallons of water needed through construction of the project. SDG&E shall submit monthly water logs documenting compliance with the water supply plan and groundwater thresholds.

Impact HYD-4: Re-grading and repair of access roads during construction and maintenance, if not conducted in a manner that permanently addresses chronic erosion issues, would continue to expose road beds to accelerated erosion and rills, thereby increasing turbidity levels in downstream water bodies.

SDG&E maintains a network of approximately 45 miles of exclusive use access roads within and outside of the CNF used to operate and maintain SDG&E's existing electrical facilities. As described in Section A, Introduction, of this EIR/EIS, numerous comments and photographs

were received from the public in response to the Notice of Preparation for SDG&E's proposed project relating concerns about the condition of SDG&E's network of maintenance roads, particularly in the vicinity of Cedar and Boulder creeks, along TL626. No new roads are proposed as part of the project; rather existing roads will be maintained and repaired (i.e., smoothing, stabilizing, and resurfacing) as necessary to facilitate construction activities, and some existing road segments will be removed. Access to poles that are isolated from existing roads would be accomplished using helicopters and/or on-foot.

Access Road Removals

Road removals proposed as part of the project (approximately 11 miles) would be beneficial from a water quality perspective because any erosion and sedimentation already occurring along the roads would be reduced or eliminated. In particular, the removal of the access road associated with C440, due to its location partially within a sediment-sensitive watershed (Pine Valley Creek ~~Valley~~ watershed), could greatly reduce the potential for continuing erosion and sedimentation within the watershed. In addition, the road removal associated with C79 would occur in areas that cut steeply across the topography. Table D.9-9 shows the length and slope of the SDG&E access roads to be removed, and can be considered to approximate the magnitude of beneficial impacts.

Table D.9-9
SDG&E Exclusive-Use Access Roads to be Removed, by Distribution Line and Grade (Miles)

Exclusive Access Road Grade	C440	C442	C449	C79	Total (miles) / Percent
0%–10%	0.74	0.03	1.79	0.45	3.01 / 27%
10%–25%	1.92	0.36	0.45	1.73	4.45 / 40%
25%–40%	1.08	0.16	0.07	1.56	2.88 / 26%
>40%	0.30	0.01	0.01	0.44	0.76 / 7%
Total	**4.04**	**0.56**	**2.31**	**4.18**	**11.10 / 100%**

The roads would be decommissioned in accordance with Forest Service BMPs (APM HYD-07) for road removal. Implementation of APM HYD-07 would ensure that removal and restoration of existing access roads would not violate basin plan objectives or substantially degrade water quality. Implementation of Mitigation Measures MM HYD-1 and MM HYD-3, which stipulates that the permittee is responsible for the prevention and control of soil erosion and gullying, would further ensure the implementation and enforcement of these standard procedures; therefore, adverse and significant impacts to water quality (Impact HYD-4) due to access road removal would be mitigated under NEPA and under CEQA would be less than significant with mitigation (Class II).

MM HYD-3 ~~Implement~~ Access Road Decommissioning ~~Best Practices~~Plan. SDG&E shall prepare an Access Road Decommissioning Plan for review and approval by the CPUC and Forest Service within 1 year of project approval or permit issuance. The plan will be prepared by qualified professionals (e.g., PG, PE, or CEG contracted by SDG&E) whose qualifications are reviewed and approved by the CPUC and the Forest Service. The plan will include a schedule for decommissioning activities.

Under the plan, SDG&E shall be responsible for the prevention and control of soil erosion and gullying in areas proposed for access road removal and shall implement the following activities:

- Remove any flagging, signs, or other markings within or around sensitive resource areas after road removal, except where such signs are necessary for long-term access control and interpretation purposes.
- Remove temporary fill and structures to the extent practical.
- Provide appropriate access control for temporary work areas, such as fencing, posts, and/or signage, and ensure gates are locked in accordance with MM-REC-1 to minimize unauthorized traffic and/or access road circumvention during construction.
- Ensure that the road surface is in stable condition when the road is closed. Seed and fertilize disturbed surfaces as necessary.
- To facilitate regeneration, back blade or otherwise scarify road beds where appropriate. Use native grass or forb mixes if available.
- All earthwork shall be confined to the road corridor and no soil shall be sidecast onto adjacent areas; if necessary, excess soil material shall be incorporated into restoration activities or hauled off site to an approved disposal facility.
- Activities will complement restoration goals and objectives identified in the Habitat Restoration Plan, as required under MM BIO-4.

Implementation of MM HYD-3 would ensure that long-term effects of road removal on hydrology and water quality would be beneficial, as the former road beds would be recolonized with vegetation, and natural soil forming processes would be allowed to resume.

Access Road Regrading and Maintenance

Construction and long-term maintenance activities along the remaining portion of the existing access roads would continue to result in periodic sediment delivery into receiving waters.

Because SDG&E's exclusive-use access roads are generally sited within the existing power line and distribution line ROWs, the associated access roads often cut a linear path across the landscape without regard to topography or the typical practice of establishing roads as close to parallel to elevation contours as possible. As a result, many portions of the access roads exceed grades that would be considered acceptable under modern standards and have experienced significant erosion issues and remain chronic problems and sources. For example, Forest Service guidelines recommend avoiding construction of roads with grades in excess of 10%. In addition, San Diego County's minimum design and construction requirements for private roads allow road grades of up to 20%, or under certain exceptions, up to 25% (which would require special authorization). Although these standards do not apply to SDG&E's proposed project because 1) no new roads are proposed, and 2) no discretionary action from the County of San Diego is required, they indicate what is typically considered acceptable under modern design standards.

For comparison, Table D.9-10 provides road mileage by grade and demonstrates the substantial steepness of the existing network of access roads maintained by SGD&E. Although SDG&E's proposed project would represent a continuation of existing conditions and thus may not necessarily worsen or create new areas of erosion or rilling relative to what is currently taking place, the MSUP would authorize the continued use of SDG&E's exclusive-use roads and long-term maintenance activities, which would include periodic road reconditioning. In areas experiencing chronic erosion issues, this essentially means periodically importing soil material to fill in and compact ruts, potholes, and other erosional features. Over the long-term, and with heavy rains periodically washing the material away, the amount of sediment entering nearby creeks could be significant for activities located within sediment-sensitive watersheds, within or immediately adjacent to resource conservation areas (RCAs), or along exceedingly steep sections of the access roads. The primary consideration in determining the severity of the issue is the degree to which erosional features are connected to intermittent/perennial creeks and/or high-order drainages. As shown in Table D.9-10, the access roads associated with TL625 and TL626 are particularly steep with around 40% of the total length of their access roads exceeding 25% grade.

Table D.9-10
SDG&E Exclusive Use Access Roads to be Maintained / Repaired, by Distribution Line and Grade (Miles)

Exclusive Access Road Grade	C157	C440	C442	C449	C78	C79	TL625	TL626	TL629	TL682	TL6923	Total
0%–10%	0.16	0.19	1.13	0.39	0.03	0.00	1.70	1.35	3.20	0.10	0.24	8.50/24%
10%–25%	0.23	0.42	1.46	0.03	0.02	0.00	5.19	4.51	3.14	0.66	0.79	16.45/46%
25%–40%	0.06	0.02	0.66	0.00	0.01	0.00	3.16	2.95	0.51	0.28	0.22	7.86/22%

Table D.9-10
SDG&E Exclusive Use Access Roads to be Maintained / Repaired, by Distribution Line and Grade (Miles)

Exclusive Access Road Grade	C157	C440	C442	C449	C78	C79	TL625	TL626	TL629	TL682	TL6923	Total
>40%	0.00	0.00	0.23	0.00	0.00	0.00	1.18	1.16	0.12	0.05	0.07	2.82/8%
Total	**0.45**	**0.63**	**3.47**	**0.42**	**0.06**	**0.00**	**11.23**	**9.97**	**6.97**	**1.09**	**1.33**	**35.63**

SDG&E power and distribution lines within CNF where no improvements are planned would also continue to be maintained consistent with current practice, including periodic road reconditioning. Access roads associated with these lines, where present, and where steep or poorly located, are also likely to be contributing excessive sediment loads to local creeks and streams, especially where such lines are located within RCAs. Although the extent, magnitude, and severity of adverse impacts would not change in these locations, several are located within RCAs or sediment-sensitive watersheds and also have unpaved access roads that may be contributing to higher levels of turbidity in local receiving waters than might otherwise occur under natural conditions.

These ongoing impacts would continue with issuance of the MSUP and are considered adverse under NEPA and significant under CEQA and therefore, in addition to complying with existing regulations and implementing the APMs, the applicant shall implement MM HYD-4. MM HYD-4 would assess the condition of the existing road network and would ensure that, where necessary, access roads are redesigned by a qualified professional engineer or engineering geologist to adequately handle stormwater runoff. Redesign of problematic road segments, as identified in the condition assessment to better handle stormwater runoff, would substantially reduce the amount of yearly imports of fill and thus would also reduce the potential for sedimentation within nearby waterways.

MM HYD-4 **Access Road Condition Evaluation and Repair Design Report.** Planned grading and repair activities along SDG&E exclusive-use access roads that a) exceed grades of 15% (over a minimum distance of 100 feet), b) are within resource conservation areas (RCAs), or c) are anywhere within a sediment-sensitive watershed (as defined by the SWRCB) shall be evaluated by a qualified professional (e.g., PG, PE, or CEG contracted by SDG&E and reviewed and approved by the CPUC and the Forest Service) prior to initiating construction on the associated segment, who will ~~and~~ identify areas

experiencing chronic erosion and drainage issues. At a minimum, segments shall include, but are not limited to, the following:

- TL626 south of Eagle Creek Road and north of Boulder Creek Road
- TL625 in the Vicinity of Barber Mountain Road
- TL625 north of Lyons Valley Road and south of Carveacre Road
- C442 east of Oak Valley and south of I-8, on the western flanks of Long Peak
- Short segments of TL629 on either side of Cameron Valley and east of Pine Valley

The qualified professional shall design an engineered solution(s) to be implemented within the existing access roadway disturbance area in accordance with Forest Service standards, as described in Forest Service Handbook 2509.22 (Section 12.2), for each area determined to experience chronic erosion and/or drainage issues prior to beginning work on those facilities associated with the problematic access road. The designed solution(s) shall be included –into the approved project to ensure the avoidance or minimization of substantial damage or soil loss along the identified road segments.

Examples of such solutions could include, but are not limited to, the following:

- Crowning road sections with gentle slopes to prevent standing water on the road.
- Outsloping roads at 3%–5% wherever possible.
- Where required for proper maneuvering and safety, insloping roads at 3%–5% into properly designed ditches.
- Installing rolling dips, ditch relief culverts, and/or water bars at intervals appropriate for the road grade and the soil erosivity.
- Minimizing the number of water crossings and maintaining crossings as close to a 90-degree angle as possible to the streambed.
- Constructing perennial and seasonal/ephemeral stream crossings so as not to change the cross-sectional area of the stream channel or impede fish migration.
- Constructing perennial and seasonal/ephemeral stream crossings with materials that will not degrade water quality (e.g., concrete, coarse rock, riprap, and/or gabions).

- Surfacing roads with erosion-resistant materials such as rock or asphalt concrete.

The Access Road Condition Evaluation and Repair Design Report shall identify locations, if any, where no feasible and/or effective solutions can be implemented to adequately handle runoff or comply with Forest Service soil and water quality management standards as contained in Forest Service Handbook 2509.22 (Section 12.2). The report will be updated for each construction segment according to SDG&E's final construction schedule.

In these locations, the qualified professional shall recommend options in the report that would minimize project-related and future runoff issues, such as eliminating use of the road for the purposes of the project (i.e., requiring access by helicopter), or re-aligning the problematic segment of road and decommissioning/restoring this segment in accordance with MM HYD-3 (decommissioning). Should CPUC and Forest Service agree that the latter recommendation (or both recommendations together) is most appropriate, CPUC and Forest ~~s~~Service may request that the qualified professional design an engineered solution(s) for the road segment re-alignment (designed in accordance with the aforementioned Forest Service standards). The re-alignment would be included into the final report and into the project design.

Construction of ~~the power line replacement projects~~each segment shall not proceed until the report section pertaining to that segment has been reviewed and approved by the Forest Service with concurrence from the CPUC. In the event there are disputes regarding specific problem locations, CPUC and Forest Service will allow construction ~~may elect~~ to proceed on those portions of the construction segment not impacted by access roads requiring evaluation under this measure~~with the projects~~; however, SDG&E shall not work in areas under dispute until resolution is achieved.

With some exceptions described below, implementation of MM HYD-4 would mitigate impacts from construction-related road repairs and long-term maintenance under NEPA; under CEQA, this impact would be less than significant with mitigation (Class II).

C79, C442, TL625, TL626, and TL629

For road segments within the Pine Valley Creek Watershed (i.e., TL629 and C442), due to the watershed's impairment for sediment, as well as certain segments along lines C79, TL625, and TL626, due to extended segments of very steep terrain (e.g., greater than 25%), there may be no

way to feasibly avoid substantial long-term effects on erosion and sedimentation without decommissioning (removing) or realigning the road segment to a lower slope. This is because the effectiveness of typical engineered drainage designs—such as crowning, out-sloping and installation of rolling dips, ditch relief culverts, and/or water bars—decreases substantially for long sections of very steep access roads. Public responses to the Notice of Preparation included supporting evidence (photographs, descriptions, and slope measurements) to show segments of TL626 in the Boulder Creek vicinity are experiencing substantial erosion and sedimentation every winter during strong storms. Where conditions are similar along access roads associated with other lines, similar effects may occur.

The terrain analysis along the exclusive-use SDG&E access roads—summarized in Table D.9-10—was conducted to identify locations along the proposed lines that exceed grades of 25% for appreciable distances. Sections likely to be especially problematic to fix, even with implementation of engineered designs (i.e., MM HYD-4), include:

- TL626 south of Eagle Creek Road and north of Boulder Creek Road: Access roads for this segment of the line cross steep terrain on either side of Boulder Creek, Cedar Creek, and Kelly Creek along the flanks of Sill Hill, Mineral Hill, and Sunshine Mountain. Steeply sloped sections of the access roads exceed 400 feet in places.
- TL625 in the Vicinity of Barber Mountain Road: Access roads for this segment of the line cross steep terrain on the sides of Barber Mountain, across Pats Canyon, and near Wilson Creek.
- TL625 north of Lyons Valley Road and south of Carveacre Road: Access roads for this segment of the line crosses steep terrain east of Lawson and Gaskill Peaks and west of the Pine Creek Wilderness.
- C442 east of Oak Valley and south of I-8, on the western flanks of Long Peak, cut a straight path over hilly terrain, resulting in local segments along 1 mile of the access roads.
- Short segments of TL629 on either side of Cameron Valley and east of Pine Valley have grades that exceed 25%

The exact location and length of road segments that are too steep to implement in-place design fixes would be determined by a qualified professional reviewed and approved by the CPUC and the Forest Service (e.g., PG, PE, or CEG) as part of the Access Road Condition Evaluation and Repair Design Report (MM HYD-4). However, for the reasons stated above, the effects of such road segments under NEPA would be adverse and unavoidable, and under CEQA, this impact (Impact HYD-4) would be significant and unavoidable (Class I).

Impact HYD-5: Adversely affect water quality due to typical maintenance activities, such as vegetation management, pesticide, and herbicide application

As part of routine maintenance, SDG&E removes flammable trash, debris, or other materials; grass; herbaceous and brush vegetation; and limbs and foliage of living trees to a distance of 10 horizontal feet from the outer circumference of the pole. For all steel poles, SDG&E clears to bare ground an approximately 5-foot-radius around the poles that have exposed, external ground wires, and trims all encroaching trees or other vegetation within approximately 10 feet of the pole. Vegetation would be removed using mechanical equipment, such as chainsaws, weed trimmers, rakes, shovels, and brush hooks. In addition, SDG&E may utilize pesticides and herbicides in specific areas as needed, and in accordance with product label specifications. Application of pesticides generally requires one person in a pick-up truck and takes only minutes to spray around the base of the pole—within a radius of approximately 10 feet for distribution and 20 feet for power line poles—subject to the vegetation clearance requirements described in the Operation Plan. While the proposed project is not within the watershed of a creek impaired with pesticides or herbicides under CWA Section 303(d); ~~T~~these activities, particularly herbicide and pesticide application, could potentially result in degradation of downstream water quality, and therefore Mitigation Measure MM HYD-5 is proposed.

MM HYD-5 **Procedural Requirements for Pesticide and Herbicide Applications.** Pesticide and herbicide application shall occur under the direction of a professional pesticide applicator with either a Qualified Applicator License (QAL) or an Agricultural Pest Control Adviser License in the State of California (see MM BIO-32 for additional biological training requirements for applicators with a QAL). Label instructions and all applicable laws and regulations shall be strictly followed in the application of pesticides and herbicides and disposal of excess materials and containers. Only those materials registered by the EPA for the specific purpose planned shall be authorized for use. Before applying any pesticides or herbicides on National Forest System land, SDG&E shall receive approval from the Forest Service for all pesticides and herbicides proposed for use on National Forest System land prior to their application on these lands. For portions of the project crossing BLM lands, SDG&E shall obtain a BLM Pesticide Use Permit as well. Additionally, prior to any pesticide or herbicide use, SDG&E shall submit an anticipated schedule to the Forest Service for planned use within the CNF on an annual basis, or more frequently as needed, and will work with the Forest Service to determine the appropriate pesticide and herbicide per location.

Given the coordination and approvals required, as described in Mitigation Measure MM HYD-5, and that herbicides and pesticides would be used in spot treatment only (e.g. tree stumps and branches), the impacts to water quality would be immeasurable, and therefore not adverse under NEPA with required mitigation and less than significant with mitigation under CEQA (Class II).

~~C440, C449, and TL 629C~~

~~Because Cottonwood Creek is impaired with pesticides under Section 303(d) of the CWA, even minor or negligible contributions would be considered unacceptable, and would represent a violation of water quality objectives and CWA Section 303(d). No other creek or water body affected by SDG&E's proposed project is impaired with herbicides or pesticides, and thus this impact is limited to maintenance areas along C440, C449, and TL 629C that are within the watershed of Cottonwood Creek. Some of the proposed poles, while not located directly within the active creek bed, are located within the Forest Service riparian conservation area for the creek. Operation and maintenance activities involving pesticide application in these areas would have the greatest potential to violate water quality objectives. Therefore, Impact HYD-5 would be adverse under NEPA and potentially significant under CEQA for maintenance areas along C440, C449, and TL 629C. Implementation of MM HYD-6, which would prohibit use of pesticides within RCAs along Cottonwood Creek, would avoid any contribution of pesticides as a result of pesticide or herbicide application and thus would mitigate this impact under NEPA, and under CEQA, the impact would be less than significant with mitigation (Class II).~~

~~**MM HYD-6 Pesticide Use Prohibition along Cottonwood Creek (C440, C449, and TL629C).** SDG&E shall not use pesticides in routine operations and maintenance activities on poles located within the RCAs associated with Cottonwood Creek. Instead, SDG&E must achieve pest management goals using non-chemical methods.~~

D.9.4 Forest Service Proposed Actions

D.9.4.1 TL626 Alternative Routes

Environmental Setting/Affected Environment

Each of the five Forest Service proposed actions would relocate a segment of the TL626. The farthest relocation would be approximately 2 miles east of the existing alignment. The hydrological and water quality study area would be similar to SDG&E's proposed project; therefore, the environmental setting is assumed to be similar to that described in Sections D.9.1 and D.9.2 except where noted.

Options 1 and 2 SDG&E Proposed Overhead Alignments Through/Around Inaja and Cosmit Reservation Lands

Environmental Effects

Impacts HYD-1 and HYD-2: Options 1 and 2 would reroute a segment of TL626 to the east along a new undisturbed ROW approximately 5.5 miles (Option 1) and 5.6 miles (Option 2; Figure B-4a). While these options would avoid identified HYD-1 and HYD-2 impacts associated with SDG&E's replacement of TL626 as discussed in Section D.9.3.3, they would also require construction of approximately 3.9 miles of new access roads to reach new pole locations. All other project components would remain the same. While no hydrological surface features have been identified within the proposed alignments for Options 1 and 2, there are a number of hydrological features including Sandy Creek, Cedar Creek, and Dehr Creek within 50 to 200 feet of the proposed alignments that could be impacted by construction. Because the new ROW will require a greater disturbance area due to the longer distance and need for new access roads compared to reconstruction of TL626 in place as proposed, an incremental increase in water quality impacts would occur during short-term construction activities due to additional runoff, sedimentation, or erosion. Similar to SDG&E's proposed project, it is anticipated that HYD-1 and HYD-2 impacts would be reduced with implementation of APM HYD-01 through APM HYD-10, which would ensure that construction activities would not violate any federal, state, or regional water quality standards or waste discharge requirements, and with implementation of MM HYD-1, which stipulates SDG&E is responsible for preparing a SWPPP and the prevention and control of soil erosion and gullying. Therefore, adverse and significant impacts (Impacts HYD-1 and HYD-2) would be mitigated under NEPA and under CEQA would be less than significant with mitigation (Class II).

Impact HYD-3: The nature of impacts with respect to off-site water imports associated with options 1 and 2 would be similar to those described in Section D.9.3.3 for SDG&E's proposed project for construction, operations, and maintenance. There could be an incremental increase in the amount of water needed during construction for dust control purposes due to the longer alignment under options 1 and 2. However, impacts to groundwater supply would reflect the impact findings similar to those discussed in Section D.9.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, implementation of MM HYD-2a and MM HYD-2b would mitigate adverse impacts to groundwater supply (Impact HYD-3) under NEPA, and under CEQA, impacts would be reduced to a less-than-significant level (Class II) by providing the lead agencies with documentation of purchased water sources and groundwater evaluations demonstrating that use of such sources would not result in significant impacts to groundwater in storage or neighboring wells.

Impact HYD-4: Options 1 and 2 would reroute a segment of TL626 to the east along a new undisturbed ROW. While these options, as discussed in Section D.9.3.3, would avoid identified HYD-4 impacts determined to be significant and unavoidable (Class I, due to steepness of creek crossings) for the section of TL626 that would be relocated under these alternative routes, they would require the construction of 3.9 miles of new access roads. Construction and long-term maintenance activities along these access roads could result in periodic sediment delivery into receiving waters and therefore is considered adverse under NEPA and significant under CEQA. While these options would result in the development of new and longer access roads, the access roads would be built in far more moderate terrain with a limited number of stream crossings compared to SDG&E's proposed project. Therefore, with implementation of MM HYD-4, Impact HYD-4 would be mitigated under NEPA and under CEQA would be less than significant with mitigation (Class II).

Impact HYD-5: Vegetation management impacts would reflect similar impact findings previously discussed in Section D.9.3.3 for SDG&E's proposed project. Options 1 and 2 would require similar routine maintenance and vegetation management practices as compared to SDG&E's proposed project. Therefore, with implementation of MM HYD-5, which provides procedural requirements for pesticide and herbicide applications, adverse and significant impacts would be mitigated under NEPA and under CEQA would be less than significant with mitigation (Class II). This alternative is not within the watershed of a creek impaired with pesticides or herbicides under CWA Section 303(d).

Option 3 Partial Underground Relocation in Boulder Creek Road

Environmental Effects

Impacts HYD-1 and HYD-2: While options 3a and 3b would avoid identified HYD-1 and HYD-2 impacts associated with SDG&E's replacement of TL626 as discussed in Section D.9.3.3, they would consist of placing a segment of TL626 underground in Boulder Creek Road as shown in Figure B-4b. The rerouted underground segment of Option 3a is approximately 11.4 miles long, and Option 3b is 6.3 miles long (each option includes an approximately 1-mile overland segment to interconnect back into the existing TL626 alignment). For Option 3a, approximately 25 locations along Boulder Creek Road exceed 12% slope. Additionally, Boulder Creek Road crosses approximately 10 hydrological features through which open trenching would not be feasible. These locations, along with areas consisting of tight turns, would require use of jack-and-bore or HDD construction techniques, resulting in approximately 75,200 square feet (approximately 1.7 acres) of temporary impacts during construction. The remaining approximately 10.5 miles of Boulder Creek Road would be open trenched, resulting in approximately 138,600 square feet (approximately 3.2 acres) of temporary impacts during

construction. This option would result in approximately 90,000 cubic yards of temporary excavation for the jack-and-bore pits (estimated at 20 feet in depth) and approximately 60 splice vaults (assuming 1 splice vault every 1,000 feet of the duct package). For Option 3b, approximately nine turns have an insufficient radius within the existing road bed to permit construction of underground duct packages. Approximately 12 locations along this segment of Boulder Creek Road exceed 12% slope. Additionally, this segment of Boulder Creek Road crosses approximately five hydrological features through which open trenching would not be feasible. These 26 locations would require jack-and-bore construction techniques to be used, resulting in approximately 41,600 square feet (approximately 1 acre) of temporary impacts during construction. The remaining approximately 5.3 miles of Boulder Creek Road would be open trenched, resulting in approximately 69,960 square feet (approximately 1.6 acres) of temporary impacts during construction. Option 3b would result in approximately 48,286 cubic yards of temporary excavation for the jack-and-bore pits (estimated at 20 feet in depth) and approximately 33 splice vaults (assuming 1 splice vault every 1,000 feet of the duct package).

Because undergrounding within Boulder Creek Road would create a substantially larger disturbance area and would cross more hydrological features compared to reconstruction of TL626 in place as proposed, a substantial increase in water quality impacts would occur during short-term construction activities due to additional runoff, sedimentation, or erosion. Due to the number of creek crossings, impacts from installation of the underground electric line would be considered significant and would be mitigated with implementation of MM HYD-6 and HYD-7. Mitigation Measures MM HYD-6~~7~~ and MM HYD-7~~8~~ would mitigate for adverse impacts because they would ensure that where the project undergrounds the electric line at water features, impacts to the water features and groundwater resources would be minimized to the greatest extent possible through avoidance of the water feature and using measures to reduce potential releases of soils and contaminants as part of the effort to avoid the water feature. Under NEPA, impacts would be adverse but mitigated. Under CEQA, impacts would be significant and would be mitigated to a level that is considered less than significant (Class II). In addition, similar to SDG&E's proposed project, it is anticipated that HYD-1 and HYD-2 adverse and significant impacts would be reduced with implementation of APM HYD-01 through APM HYD-10, which would ensure that construction activities would not violate any federal, state, or regional water quality standards or waste discharge requirements, and with implementation of MM HYD-1, which stipulates SDG&E is responsible for preparing a SWPPP and the prevention and control of soil erosion and gullying. Therefore, adverse and significant impacts would be mitigated under NEPA and under CEQA would be less than significant with mitigation (Class II).

MM HYD-6~~7~~ **Implementation of Creek-Crossing Procedures.** Where creek crossings can be completed during dry season, with no flows present in the creek, seasonally

timed restorative open trenching will be completed. This procedure will use minimum trench widths. Trench cut material will ~~not~~ be placed outside of the creek bed and outside of 100-year inundated areas. Trench fill will be compacted and replaced to match~~existing conditions, including matching~~ existing creek bed gradations, and ~~restoring~~ vegetation will be restored. Open trenching restoration will be completed prior to any wet season flows and will include anti-erosion action plans for any unplanned rainfall during construction. SDG&E shall obtain all required permits prior to completing open trenching through drainages. In any case, flows will be isolated from open trenching by best management practices mandated by the General Construction Permit. Areas of trenching would be restored and/or vegetated at completion of work.

Where creek crossings cannot be completed during the dry season, creek crossings shall use jack-and-bore or horizontal directional drilling procedures to avoid direct impacts and shall be conducted in a manner that does not result in sediment-laden discharge or hazardous materials release to the water body. SDG&E shall develop a Jack-and-Bore/Horizontal Directional Drill (HDD) Contingency Plan for this work in accordance with MM HYD-7~~8~~. Additionally, SDG&E shall implement the following measures during jack-and-bore or horizontal directional drilling operations and shall be included in the HDD Contingency Plan:

a. Site preparation shall begin no more than 10 days prior to initiating horizontal bores to reduce the time soils are exposed adjacent to creeks and drainages.

b. Trench and/or bore pit spoil shall be stored a minimum of 25 feet from the top of the bank or wetland/riparian boundary. Spoils shall be stored behind a sediment barrier and covered with plastic or otherwise stabilized (i.e., tackifiers, mulch, or detention).

c. Portable pumps and stationary equipment located within 100 feet of a water resource (i.e., wetland/riparian boundary, creeks, and drainages) shall be placed within secondary containment with adequate capacity to contain a spill (i.e., a pump with 10-gallon fuel or oil capacity should be placed in secondary containment capable of holding 15 gallons). A spill kit shall be maintained on site at all times.

d. ~~Immediately~~ Within 24 hours following backfill of the bore pits, disturbed soils shall be seeded and stabilized to prevent erosion, and

temporary sediment barriers shall be left in place until restoration is deemed successful.

SDG&E shall obtain the required permits prior to conducting creek crossing, jack-and-bore, and/or horizontal directional drilling work. Required permits may include U.S. Army Corps of Engineers Clean Water Act Section 404, Regional Water Quality Control Board Clean Water Act 401, and California Department of Fish and Wildlife Streambed Alteration Agreement Section 1602. SDG&E shall implement all pre- and post-construction conditions identified in the permits issued.

MM HYD-7~~8~~ **~~Jack-and-Bore/~~Horizontal Directional Drill Contingency Plan.** If ~~jack-and-bore or~~ horizontal directional drilling is to be used during construction, SDG&E shall prepare a ~~Jack-and-Bore/~~Horizontal Directional Drill (HDD) Contingency Plan to address procedures for containing an inadvertent release of drilling fluid (frac-out). The plan shall contain specific measures for monitoring frac-outs, for containing drilling mud, and for notifying agency personnel. The plan shall also discuss spoil stockpile management, hazardous materials storage and spill cleanup, site-specific erosion and sediment control, and housekeeping procedures, as described in the Stormwater Pollution Prevention Plan. The ~~Jack-and-Bore~~ HDD Contingency Plan shall be submitted to the CPUC, Forest Service, Bureau of Indian Affairs, and ACOE 60 days prior to construction.

SDG&E shall obtain the required permits prior to conducting work associated with horizontal directional drilling activities. Required permits may include U.S. Army Corps of Engineers Clean Water Act Section 404, Regional Water Quality Control Board Clean Water Act 401, and California Department of Fish and Wildlife Streambed Alteration Agreement Section 1602. The applicant shall implement all pre- and post-construction conditions identified in the permits issued for the jack-and-bore/horizontal directional drilling.

Impact HYD-3: The nature of impacts with respect to off-site water imports associated with Option 3 would be similar to those described in Section D.9.3.3 for SDG&E's proposed project for construction, operations, and maintenance. There could be an incremental increase in the amount of water needed during construction. However, impacts to groundwater supply would reflect the impact findings similar to those discussed in Section D.9.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, implementation of MM HYD-2a and MM HYD-2b would mitigate adverse impacts to groundwater supply under NEPA, and under CEQA,

impacts would be reduced to a less-than-significant level (Class II) by providing the lead agencies with documentation of purchased water sources and groundwater evaluations demonstrating that use of such sources would not result in significant impacts to groundwater in storage or neighboring wells.

Impact HYD-4: Options 3a and 3b would reroute a segment of TL626 and avoid identified HYD-4 impacts as discussed in Section D.9.3.3 determined to be significant and unavoidable (Class I, due to steepness of creek crossings) for the section of TL626 that would be relocated. As no new access roads or repair of access roads would be required along Boulder Creek Road, no HYD-4 impacts would occur.

Impact HYD-5: HYD-5 hydrology impacts associated with undergrounding a portion of TL626 in Boulder Creek Road would be slightly reduced from SDG&E's proposed project, as undergrounding in an existing roadway easement would reduce vegetation management required along this segment. Although impacts are slightly less than SDG&E's proposed project, impacts from this alternative and the project as a whole would remain adverse but mitigated under NEPA with implementation of MM HYD-5. Under CEQA, impacts would be less than significant with implementation of MM HYD-5 (Class II).

Option 4 Overhead Relocation along Boulder Creek Road

Environmental Effects

Impacts HYD-1and HYD-2: Option 4 would consist of placing a segment of TL626 overhead in Boulder Creek Road and overland as shown in Figure B-4a. The rerouted segment of Option 4 is approximately 4.7 miles longer than that proposed by the project. Option 4 would minimize potential short-term impacts of construction on water quality because the realigned segment would follow existing roads and thus use of existing disturbed areas would be maximized. However, overall construction impacts related to water quality would reflect the impact findings similar to those discussed in Section D.9.3.3 for SDG&E's proposed project, due to the similar construction activities required for pole placement under this alternative. Therefore, with implementation of APM HYD-01 through APM HYD-10 and MM HYD-1, Impacts HYD-1 and HYD-2 would be mitigated by requiring that ground disturbance be controlled through implementation of the SWPPP and BMPs. Under NEPA, impacts would be adverse but mitigated, and under CEQA, impacts would be significant but less than significant with mitigation (Class II).

Impact HYD-3: Option 4 relocates a segment of TL626 overhead along Boulder Creek Road. All other project components remain the same. Although this segment is slightly longer, the impacts with respect to off-site water imports (Impact HYD-3) associated with Option 4 would

be substantially the same as those described in Section D.9.3.3. Therefore, similar to SDG&E's proposed project, with implementation of APM HYD-07 and MM HYD-1 through HYD-5, Impacts HYD-3 through HYD-5 would be adverse but mitigated under NEPA, and under CEQA would be significant but less than significant with mitigation (Class II).

Impact HYD-4: Option 4 would reroute a segment of TL626 overhead along Boulder Creek Road and avoid identified HYD-4 impacts as discussed in Section D.9.3.3, determined to be significant and unavoidable (Class I, due to steepness of creek crossings) for the section of TL626 that would be relocated under this option,

Impact HYD-5: Although this segment is slightly longer, the impacts with respect to vegetation management (Impact HYD-5) associated with Option 4 would be substantially the same as those described in Section D.9.3.3. Therefore, similar to SDG&E's proposed project, with implementation of APM HYD-07 and MM HYD-1 through HYD-5, Impacts HYD-3 through HYD-5 would be adverse but mitigated under NEPA, and under CEQA would be significant but less than significant with mitigation (Class II).

Option 5 Reroute and Undergrounding around Inaja Picnic Area

Environmental Effects

Impacts HYD-1 through HYD-5: Option 5 would consist of relocating a portion of TL626 around the Inaja Picnic Area and as shown in Figure B-4c would consist of approximately 2,100 feet of relocated overhead alignment along with a 400-foot underground segment located within an existing parking lot. All other project components would remain the same. While helicopter use may increase in order to construct the overhead lines in the new alignment, overall, construction activities, worker crews, construction schedule, and operational activities would essentially be the same as SDG&E's proposed project as well as the project as a whole. Therefore, ~~C~~construction and operational impacts related to hydrology and water quality would essentially be the same for the relocation of TL626 under Option 5 as described in Section D.9.3.3 for SDG&E's proposed project. As the Inaja Picnic area is located in the same area of SDG&E's proposed project, just south of SR-78 immediately east of the existing alignment for TL626, there would not be a substantial change to the baseline condition regarding the hydrological resources that would be impacted during construction. Therefore, as with SDG&E's proposed project, with implementation of APMs~~S~~ HYD-01 through HYD-11, as well as MMs HYD-1 through HYD-5~~6~~, as applicable, impacts would be reduced. Impacts HYD-1, HYD-2, HYD-3, and HYD-5 are anticipated to be adverse under NEPA, and under CEQA less than significant with mitigation (Class II). As this alternative does not remove the steep road associated with SDG&E's proposed TL626, Impact HYD-4 would remain adverse and unavoidable under NEPA and significant and unavoidable under CEQA (Class I).

D.9.4.2 C157 Partial Relocation to Avoid Designated Wilderness

Option 1 SDG&E Proposed Alignment between Two Wilderness Areas

Option 2: City of San Diego Modified Alignment

Environmental Setting/Affected Environment

Sections D.9.1 and D.9.2 describe the existing environmental setting associated with SDG&E's proposed project. The Forest Service proposed action for C157 would be in the same geographic region as SDG&E's proposed project; therefore, the hydrology and water quality setting would be the same as that identified in Sections D.9.1 and D.9.2.

Environmental Effects

Impacts HYD-1 and HYD-2: Options 1 and 2 would reroute an approximately 2-mile segment of C157 to the south of the existing alignment approximately 0.25 mile along new undisturbed ROW (Figure B-5a). All other project components would remain the same. Construction and operational impacts related to water resources would essentially be the same as described for SDG&E's proposed project in Section D.9.3.3; therefore, as with SDG&E's proposed project, implementation of APM HYD-01 through APM HYD-10 and MM HYD-1 would mitigate these adverse impacts under NEPA by requiring that ground disturbance and non-stormwater discharges during construction be controlled through implementation of the SWPPP and BMPs. Under CEQA, significant Impacts HYD-1 and HYD-2 would be less than significant with mitigation (Class II).

Impact HYD-3: The impacts with respect to off-site water imports (Impact HYD-3), would be substantially the same as those described in Section D.9.3.3. Therefore, similar to SDG&E's proposed project, with implementation of APM HYD-07 and MM HYD-1 through MM HYD-5, Impacts HYD-3 through HYD-5 would be adverse but mitigated under NEPA, and under CEQA would be significant but less than significant with mitigation (Class II).

Impact HYD-4: As no SDG&E exclusive use access roads are along the C157 alignment or required for options 1 and 2, no impacts to HYD-4 would occur.

Impact HYD-5: Vegetation management impacts would reflect similar impact findings previously discussed in Section D.9.3.3 for SDG&E's proposed project. Options 1 and 2 would require similar routine maintenance and vegetation management practices as compared to SDG&E's proposed project. Therefore, with implementation of MM HYD-5, which provides procedural requirements for pesticide and herbicide applications, impacts would be adverse but

mitigated under NEPA and under CEQA would be significant but less than significant with mitigation (Class II).

D.9.4.3 C440 Mount Laguna Underground Alternative

Environmental Setting/Affected Environment

Sections D.9.1 and D.9.2 describe the existing environmental setting associated with C440. This alternative would consist of undergrounding approximately 14.3 miles of C440 proposed for replacement within existing roadways in the Laguna Mountain Recreation Area. As this area is in the same geographic region as SDG&E's proposed project, the hydrology and water quality environmental setting would be the same as that identified in Sections D.9.1 and D.9.2.

Environmental Effects

Impacts HYD-1 and HYD-2: During installation of the underground portion of this alternative, trenching and grading activities would be greater than the project, exposing soils and removing vegetative cover that would compromise soil structure and increase the risk of erosion (Impact HYD-1). Due to similar construction equipment being used under this alternative as with SDG&E's proposed project, there would not be a substantial change regarding non-stormwater discharges during construction (Impact HYD-2). As with SDG&E's proposed project, implementation of APMs HYD-01 through HYD-10 and MM HYD-1 would mitigate these impacts under NEPA by requiring implementation of the SWPPP and BMPs.. Under CEQA, impacts would be less than significant with mitigation (Class II).

Impact HYD-3: The nature of impacts with respect to off-site water imports associated would be similar to those described in Section D.9.3.3 for SDG&E's proposed project for construction, operations, and maintenance. There could be an incremental increase in the amount of water needed during construction. However, impacts to groundwater supply would reflect the impact findings similar to those discussed in Section D.9.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, implementation of MM HYD-2a and MM HYD-2b would mitigate adverse impacts to groundwater supply under NEPA, and under CEQA, impacts would be reduced to a less-than-significant level (Class II) by providing the lead agencies with documentation of purchased water sources and groundwater evaluations demonstrating that use of such sources would not result in significant impacts to groundwater in storage or neighboring wells.

Impact HYD-4: As no new access roads or repair of access roads would be required along C440, impact HYD-4 would not occur.

Impact HYD-5: HYD-5 hydrology impacts associated with the undergrounding C440 would be reduced from SDG&E's proposed project, as undergrounding in existing roadway easements would reduce vegetation management required along these segments. C440 is within the watershed of a creek impaired with pesticides or herbicides under CWA Section 303(d); however, since 14.3 miles of C440 would be undergrounded, Impact HYD-5 would be reduced from SDG&E's proposed project. Although impacts are less than SDG&E's proposed project, MM HYD-5 ~~and MM HYD-6~~ would be implemented to control pesticide and herbicide use to limit contamination of nearby water bodies. Therefore, adverse and significant impacts would be mitigated under NEPA and under CEQA would be less than significant with mitigation (Class II).

D.9.5 BIA Proposed Action

Environmental Setting/Affected Environment

Sections D.9.1 and D.9.2 describe the existing environmental setting associated with TL682. The BIA proposed action for TL682 would relocate poles and underground approximately 1,500 feet on Tribal lands. As this area is in the same geographic region as SDG&E's proposed project, the environmental setting would be the same as that identified in Sections D.9.1 and D.9.2.

Environmental Effects

Impacts HYD-1 through HYD-5: During construction, soil disturbance would be greater under this alternative as open trenching would be more invasive than excavation for power line poles. This additional trenching activity and soil disturbance would increase the potential for exposing soils and removing vegetative cover, slightly increasing the risk of soil erosion. However, because the modifications proposed to TL682 under this alternative would occur primarily along the existing ROW for TL682, there would not be a change to the baseline condition. Therefore, as with SDG&E's proposed project, with implementation of APM HYD-01 through APM HYD-11, as well as MM HYD-1 through MM HYD-5~~6~~, as applicable, impacts would be reduced. Impacts HYD-1 through HYD-5 are anticipated to be adverse but mitigated under NEPA, and under CEQA impacts would be significant but less than significant with mitigation (Class II).

D.9.6 Additional Alternatives

D.9.6.1 Partial Removal of Overland Access Roads

Environmental Setting/Affected Environment

This alternative would be in the same study area as SDG&E's proposed project; therefore, the hydrology and water quality setting would remain the same as that identified in Sections D.9.1 and D.9.2.

Environmental Effects

Impacts HYD-1 through HYD-5: Up to ~~10~~11.5 miles of SDG&E exclusive-use access roads were identified as being especially problematic from an erosion and sedimentation standpoint due to the potential for slopes to exceed a gradient of 25%. This alternative would include removal of approximately 2 miles of problematic road segments within the Pine Valley Creek Watershed (i.e., TL629 and C442), due to the watershed's impairment for sediment, as well as certain segments along lines C79, TL625, and TL626, due to extended segments of very steep terrain (e.g., greater than 25% slope). As discussed in Section D.9.3.3, there may be no way to feasibly avoid substantial long-term effects on erosion and sedimentation (Impact HYD-4) without decommissioning (removing) or realigning these road segments as proposed under this alternative. While SDG&E would carry out maintenance activities along these segments using helicopters, as described in SDG&E's Plan of Development (SDG&E 2013), any additional disturbance areas required for helicopter use and footpaths to access pole locations rendered inaccessible by the road removal would be temporary, isolated, disconnected, and lesser in disturbance area than the area of road to be removed. The primary adverse effect of the unpaved roads in steep terrain is to channel stormwater and convey it at erosive velocities—an impact that would not occur with isolated landing pads and narrow footpaths. This alternative would therefore reduce HYD-4 impacts that were determined to be adverse and unavoidable under NEPA, and under CEQA, to be significant and unavoidable (Class I), to mitigated under NEPA and less than significant with mitigation under CEQA (Class II), without creating additional impacts to HYD-1 through HYD-5.

D.9.6.2 Removal of TL626 from Service

Environmental Setting/Affected Environment

This alternative would remove TL626 from service and replace it with system upgrades, either with TL6931 upgrades or a TL625 loop-in as described below. In order to serve existing customers, segments of TL626 would also be converted from 69 kV to 12 kV. The setting associated with these upgrades is described as follows:

a. Upgrade to the existing 69 kV TL6931 from the Crestwood Substation to the Boulevard Substation: The setting associated with this component is largely described in SDG&E's TL6931 Fire Hardening Project Proponent's Environmental Assessment (PEA) (SDG&E 2012). As described in SDG&E's PEA, the existing ROW supports a 69 kV line. The TL6931 alignment is located within RWQCB Regions 7 and 9 in the Anza-Borrego HU and the Tijuana HU. Surface flows from TL6931 in the Anza-Borrego HU flows towards Walker Creek, which flows to Carrizo Creek, and ultimately to the Salton Sea, and in the Tijuana River HU they flow to Campo Creek, which flows to the Tijuana River, and

ultimately to the Pacific Ocean. The downstream receiving waters—the Salton Sea and Tijuana River—are 303(d) listed water bodies. TL6931 does not overlie a groundwater basin and is not located within a 100-year flood zone.

b. Loop-in TL625 into the Suncrest Substation (see Figure C-2). The setting associated with the new 3-mile TL625 loop-in is largely located within the CNF approximately 100 feet from the Sunrise Powerlink ROW between Japatul Road and Suncrest Substation. This area has been described in the Sunrise Powerlink Project Final EIR/EIS. As described in the Sunrise Powerlink EIR/EIS, the proposed 3-mile TL625 loop-in is located in the Sweetwater HU of the San Diego River Basin. The loop-in would be located near Taylor Creek. In addition, many unnamed, intermittent creeks and drainages are present throughout the vicinity, and the loop-in is in close proximity to other surface waters, such as riparian areas and erosional features. Further, the loop-in would be located in the vicinity of two water bodies that are listed as impacted pursuant to Section 303(d) of the Clean Water Act, including the Sweetwater River (approximately 1 mile from the closet portion of the loop-in) and Loveland Reservoir (approximately 2 miles from the closest portion of the loop-in). The loop-in would not be located within a delineated groundwater basin.

c. Convert a 6.5-mile portion of TL626 between Santa Ysabel and Boulder Creek Substations from 69 kV to 12 kV, along with a 6.8-mile section that is co-located with C79 within the same study area as SDG&E's proposed project; therefore, the environmental setting would be the same as that identified in Sections D.9.1 and D.9.2 for this component.

Environmental Effects

Under this alternative, a 6-mile portion of TL6931 would be reconstructed, or a new 3-mile 69 kV loop-in would be developed along the Sunrise Powerlink, and segments of TL626 would be converted from 69 kV to 12 kV.

Reconstruction of TL6931

Impacts HYD-1 and HYD-2: Reconstruction of TL6931 would consist of construction as well as operations and maintenance activities similar to that described for the project. Due to the nature of the existing TL6931 alignment, there would not be a substantial change to the baseline condition with the exception of surface hydrology within the Anza-Borrego HU; therefore, Impacts HYD-1 and HYD-2 would have similar impact findings to those described for SDG&E's proposed project in Section D.9.3.3. As with SDG&E's proposed project, with implementation of APM HYD-01 through APM HYD-10, which would ensure that construction activities would not violate any federal, state, or regional water quality standards or waste discharge requirements, and with implementation of MM HYD-1, which stipulates SDG&E is responsible for preparing a

SWPPP and the prevention and control of soil erosion and gullying, water quality impacts would be reduced. Therefore, adverse and significant impacts would be mitigated under NEPA and under CEQA would be less than significant with mitigation (Class II).

Impact HYD-3: The nature of impacts with respect to off-site water imports associated with this alternative would be similar to those described in Section D.9.3.3 for SDG&E's proposed project for construction, operations, and maintenance. There would not be a substantial change to the amount of water needed during construction for dust control purposes. Therefore, the overall magnitude of potential impacts on groundwater resources would be similar to SDG&E's proposed project. Implementation of MM HYD-2a and MM HYD-2b would mitigate adverse impacts to groundwater supply under NEPA, and under CEQA, significant impacts would be reduced to a less-than-significant level (Class II) by providing the lead agencies with documentation of purchased water sources and groundwater evaluations demonstrating that use of such sources would not result in significant impacts to groundwater in storage or neighboring wells.

Impact HYD-4: TL6931 will not require new access roads and is located in areas with predominately flat to gently sloping terrain. Therefore, this alternative would avoid identified HYD-4 impacts determined to be significant and unavoidable (Class I, due to steepness of creek crossings) for the section of TL626 that would be removed. Impact HYD-4 would be reduced from those described in Section D.9.3.3 for SDG&E's proposed project to not adverse under NEPA and less than significant under CEQA (Class III).

Impact HYD-5: Vegetation management impacts would reflect similar impact findings previously discussed in Section D.9.3.3 for SDG&E's proposed project. This alternative would require similar routine maintenance and vegetation management practices as compared to SDG&E's proposed project. Therefore, with implementation of MM HYD-5, which provides procedural requirements for pesticide and herbicide applications, impacts would be adverse but mitigated under NEPA and under CEQA would be significant but less than significant with mitigation (Class II). Further, TL6931 is within watersheds with water bodies impaired with pesticides or herbicides under CWA Section 303(d). Although these impaired water bodies (the Tijuana River and Salton Sea) are downstream, MM HYD-~~6~~ 5 would be implemented to limit contamination of nearby water bodies. Therefore, impacts would be mitigated under NEPA and under CEQA would be less than significant with mitigation (Class II).

Development of the New 3-Mile Loop-in of TL625

Impacts HYD-1 and HYD-2: Development of the new TL625 loop-in would consist of construction as well as operations and maintenance activities similar to those described for the project in areas of rugged terrain. Due to the existing undeveloped nature of the proposed alignment, there would not be a substantial change to the baseline condition including the surface

water features that could be exposed to erosion and sedimentation during construction activities. Hydrology impacts during construction would occur primarily due to grading of pad and helicopter landing sites and reflect similar findings as described in Impacts HYD-1 and HYD-2 discussed in Section D.9.3.3 for SDG&E's proposed project. Therefore, implementation of APM HYD-01 through APM HYD-10 and MM HYD-1, under NEPA, would mitigate Impacts HYD-1 and HYD-2 associated with the loop-in. Under CEQA, impacts would be less than significant with mitigation (Class II).

Impact HYD-3: There would not be a substantial change regarding the amount of water needed during construction for dust control purposes under this alternative. Therefore, the overall magnitude of potential impacts on groundwater resources would be similar to SDG&E's proposed project. Implementation of MM HYD-2a and MM HYD-2b would mitigate adverse impacts to groundwater supply under NEPA and under CEQA, impacts would be reduced to a less-than-significant level (Class II).

Impact HYD-4: Due to the rugged terrain, helicopters would be used to construct as well as operate and maintain the proposed TL625 loop-in. Because no new access would be required, no impacts resulting from accelerated erosion and rills due to steep access roads (Impact HYD-4) would occur and therefore this alternative would avoid identified HYD-4 impacts determined to be significant and unavoidable (Class I, due to steepness of creek crossings) for the section of TL626 that would be removed.

Impact HYD-5: Vegetation management impacts would reflect similar impact findings previously discussed in Section D.9.3.3 for SDG&E's proposed project. This alternative would require similar routine maintenance and vegetation management practices as compared to SDG&E's proposed project. Therefore, with implementation of MM HYD-5~~ and MM HYD-6~~, which provides procedural requirements for pesticide and herbicide applications, impacts would be adverse but mitigated under NEPA and under CEQA would be significant but less than significant with mitigation (Class II).

Convert Segments of TL626 from 69 kV to 12 kV

Impacts HYD-1 through HYD-5: Conversion of segments of TL626 to 12 kV would consist of construction as well as operations and maintenance activities similar to those described for the project; therefore, Impacts HYD-1 through HYD-5 would reflect similar impact findings previously discussed in Section D.9.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, with implementation of APM HYD-01 through APM HYD-11, as well as MM HYD-1 through MM HYD-5~~6~~, as applicable, adverse and significant Impacts HYD-1 through HYD-5 would be mitigated under NEPA, and under CEQA would be less than significant with mitigation (Class II).

D.9.7 No Action Alternative

Environmental Effects

Impacts HYD-1 through HYD-5: Under the No Action Alternative, the MSUP would not be issued, and none of the facilities associated with SDG&E's proposed project would be constructed and the existing electric lines and access roads within the CNF would be removed. These areas would be restored to conditions acceptable to the Forest Service and would be managed consistent with the CNF LMP. Under the No Action Alternative, SDG&E would need to redesign the existing electric system to avoid National Forest System lands in order to meet the electric demand in their service territory, and in conformance with California Independent System Operator (CAISO) requirements.

The greatest adverse effect of SDG&E's proposed action, as described in Section D.9.3.3, is associated with the long-term operation and maintenance of exclusive use access roads that are experiencing chronic erosion due to their alignment and steepness (Class I impact related to Impact HYD-4). The No Action Alternative would remove this chronic source of erosion. Because the MSUP would not be reissued and roads that have been experiencing erosion would be restored to conditions acceptable to the Forest Service, the No Action Alternative would reduce unavoidable adverse (Class I) impacts associated with Impact HYD-4. However, because road/facility decommissioning within Forest Service lands, and construction of alternative facilities elsewhere to meet the electric demand would involve similar construction-related impacts as described under Impacts HYD-1 through HYD-3 (Section D.9.3.3), the class/severity of adverse impacts would not change substantially under the No Action Alternative. The operation and maintenance impacts described under Impact HYD-5 would be equally applicable to areas outside Forest Service lands and thus the class/severity of Impact HYD-5 would likewise not change substantially under the No Action Alternative.

D.9.8 No Project Alternative

Environmental Effects

Impacts HYD-1 through HYD-5: Under the No Project Alternative, the proposed power line replacement projects would not be built, and the existing SDG&E electric facilities would remain; therefore, none of the construction impacts described in Section D.9.3 would occur. Operation and maintenance of SDG&E electrical facilities would continue and include routine and periodic access road maintenance, equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks and would be based on the requirements of the existing permits. The existing erosion and gullying conditions in steep-slope areas along exclusive use access roads and within the SDG&E ROW would continue to be repaired as

needed (seasonally) by SDG&E, typically by importing soil and filling in rutted areas and potholes. This would represent an ongoing degradation issue as excessive levels of sediment would continue to be carried by stormwater flows into waterways and locally increase turbidity levels in creeks (when flowing). Operation and maintenance activities would not increase in duration, intensity, or frequency over existing conditions; therefore, the severity of impacts under existing conditions to hydrology and water quality would not change.

D.9.9 Mitigation Monitoring, Compliance, and Reporting

Table D.9-11 presents the mitigation monitoring, compliance, and reporting program for hydrology and water quality for the power line replacement projects and alternatives.

Table D.9-11
Mitigation Monitoring, Compliance, and Reporting – Hydrology and Water Quality

Mitigation Measure	**MM HYD-1**: **Erosion Control Plan / Stormwater Pollution Prevention Plan.** ~~For project components on federal land,~~ SDG&E shall develop and implement an Erosion Control Plan (ECP) for construction, operations, and maintenance activities in order to prevent and control soil erosion and gullying ~~on federal land~~. The ECP shall include Forest Service best management practices specific to re-vegetation requirements (scarifying the soil, and fertilizing, seeding and/or mulching, as required to achieve proper post-construction site stabilization) and incorporate Construction General Permit SWPPP requirements for each construction segment as the SWPPP(s) for that segment are completed.~~;~~ ~~integrate requirements from the Construction General Permit, which likewise requires permittees to demonstrate implementation of post-construction cover requirements for final stabilization (i.e., re-vegetation); and integrate best management practices from the project's Stormwater Pollution Prevention Plan (see below).~~ Additionally, the ECP shall ~~compliment~~ complement restoration goals and objectives identified in the Habitat Restoration Plan, as required under MM BIO-4. The ECP shall be updated for each construction segment and provided to the ~~California Public Utilities Commission (~~CPUC~~)~~ and the federal agencies for review and approval prior to ~~the~~ each agency's Notice to Proceed issuance for that construction segment. ~~The ECP shall be submitted to the Forest Service for review and approval prior to Notice to Proceed issuance.~~ As required by the Construction General Permit, SDG&E shall develop a Storm Water Pollution Prevention Plan (SWPPP) for the project or for individual construction segments, as required, to reduce soil erosion during construction. The SWPPP(s) and verification of submittal to the RWQCB shall be submitted to the CPUC and Forest Service prior to Notice to Proceed issuance for the respective construction segment. SDG&E shall provide the CPUC and Forest Service with subsequent amendments to the SWPPP as part of SDG&E's weekly compliance reports.~~;~~ ~~within 48 hours of the SWPPP amendment being submitted to the RWQCB; amendments shall be provided to the Forest Service to append to the ECP.~~ In weekly construction compliance reports, SDG&E shall note when Storm Water Construction Site Inspection Report Forms have been posted to the Storm Water Multiple Application and Report Tracking System (SMARTS) following storm events.
Location	All construction work areas for SDG&E's proposed project and all alternatives.

Table D.9-11
Mitigation Monitoring, Compliance, and Reporting – Hydrology and Water Quality

Compliance Documentation[(a)] and Consultation	a. Prepare Draft Erosion Control Plan / Stormwater Pollution Prevention Plan and submit to agencies b. Submit Final approved Erosion Control Plan / Stormwater Pollution Prevention Plan (SWPPP) c. CPUC/Forest Service monitor: Line item in compliance monitoring reports d. Implement post-construction maintenance activities and note in compliance monitoring reports
Timing	a. Prior to notice to proceed b. Prior to and during construction c. During construction d. Post construction
Responsible Agency	*SDG&E's Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629), BLM (TL629 and TL6923), CSP (C79) *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM HYD-2a**: **Documentation of purchased water source(s)**. For water that is to be purchased from one or more public or private water/utility district(s), private landowners, or from tribes, SDG&E shall provide to the CPUC written documentation from such district(s) and/or landowners indicating the total amount of water to be provided and the time frame that the water will be made available to the project. The documentation shall also indicate the type of water (potable or reclaimed) and the specific source of the water (groundwater well or surface diversions). The sources and amounts of water to be obtained by SDG&E shall be documented in a Water Supply Plan to be submitted to the CPUC ~~as a condition of receiving a permit to construct~~prior to notice to proceed for each project component.
Location	All construction work areas for SDG&E's proposed project and all alternatives.
Compliance Documentation[(a)] and Consultation	a. Submit Water Supply Plan including copies of "will serve" letters providing verification that water quantities are available to meet project needs.
Timing	a. Prior to notice to proceed for each project component.
Responsible Agency	*SDG&E's Proposed Project and all Alternatives*: CPUC and Forest Service
Mitigation Measure	**MM HYD-2b**: **Groundwater Evaluations of Off-Site Water Import Sources**. For identified water sources that derive their water supply from groundwater, SDG&E shall commission a groundwater study by a registered/certified hydrogeologist, as reviewed and approved by CPUC, to assess the existing condition of the underlying groundwater/aquifer and all existing wells (with owner's permission) in the vicinity of proposed well location/water sources and to verify that the proposed source is capable of supplying the amount of water needed. The groundwater study shall evaluate whether the volume and duration of the proposed groundwater use would exceed County of San Diego thresholds for impacts with respect to groundwater supply and well interference. If the evaluation indicates the potential for significant impacts, the registered/certified hydrogeologist shall recommend feasible mitigation

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Mitigation Monitoring, Compliance, and Reporting – Hydrology and Water Quality

	measures (e.g., a groundwater monitoring program) to avoid exceeding applicable thresholds. The groundwater evaluation shall be provided along with the documentation of purchased water sources, and the CPUC shall not authorize construction of the project unless such documentation have been provided by SDG&E and approved by CPUC. If the evaluation finds that impacts cannot be avoided given the volume and duration of the proposed groundwater use, the CPUC will not authorize use of the water source and shall require SDG&E to seek other viable sources of water. Total confirmed water supplies from the combination of above documented sources shall equal the total gallons of water needed through construction of the project. SDG&E shall submit monthly water logs documenting compliance with the water supply plan and groundwater thresholds.
Location	All construction work areas for SDG&E's proposed project and all alternatives.
Compliance Documentation[a] and Consultation	~~a. Submittal of groundwater study (County of San Diego groundwater thresholds must not be exceeded)~~ ~~b~~a. Copy of water study with verified groundwater quantities and will serve letters providing verification that water adds up to equal estimated project construction needs ~~c~~b. Provide monthly water logs documenting compliance with the water supply plan and groundwater thresholds
Timing	~~a. At least 60 days prior to notice to proceed~~ ~~b~~a. At least 30 days prior to noticed to proceed for each project component. ~~c~~b. During construction
Responsible Agency	*SDG&E's Proposed Project and all Alternatives*: CPUC and Forest Service
Mitigation Measure	**MM HYD-3**: ~~**Implement**~~ **Access Road Decommissioning** ~~**Best Practices**~~**Plan.** SDG&E shall prepare an Access Road Decommissioning Plan for review and approval by the CPUC and Forest Service within 1 year of project approval or permit issuance. The plan will be prepared by qualified professionals (e.g., PG, PE, or CEG contracted by SDG&E) whose qualifications are reviewed and approved by the CPUC and the Forest Service. The plan will include a schedule for decommissioning activities. Under the plan, SDG&E shall be responsible for the prevention and control of soil erosion and gullying in areas proposed for access road removal and shall implement the following activities:: • Remove any flagging, signs, or other markings within or around sensitive resource areas after road removal, except where such signs are necessary for long-term access control and interpretation purposes. • Remove temporary fill and structures to the extent practical. • Provide appropriate access control for temporary work areas, such as fencing posts, and/or signage, and ensure gates are locked in accordance with MM-REC-1 to minimize unauthorized traffic and/or access road circumvention during construction • Ensure that the road surface is in stable condition when the road is closed. Seed and fertilize disturbed surfaces as necessary. • To facilitate regeneration, back blade or otherwise scarify road beds where

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Mitigation Monitoring, Compliance, and Reporting – Hydrology and Water Quality

	appropriate. Use native grass or forb mixes if available. • All earthwork shall be confined to the road corridor and no soil shall be sidecast onto adjacent areas; if necessary, excess soil material shall be incorporated into restoration activities or hauled off site to an approved disposal facility. • Activities will complement restoration goals and objectives identified in the Habitat Restoration Plan, as required under MM BIO-4.
Location	Road removal locations for SDG&E's proposed projects and all alternatives.
Compliance Documentation[(a)] and Consultation	a. Implement access road decommissioning best practices (MSUP permit condition for Forest Service) b. Monitor success of passive restoration, prevention of unauthorized use/access c. CPUC/Forest Service Monitor: Line item in compliance monitoring report
Timing	a. and b. During construction and operation c. During construction
Responsible Agency	*SDG&E's Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629), BLM (TL629 and TL6923), CSP (C79) *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM HYD-4**: **Access Road Condition Evaluation and Repair Design Report**. Planned grading and repair activities along SDG&E exclusive-use access roads that a) exceed grades of 15% (over a minimum distance of 100 feet), b) are within RCAs, or c) are anywhere within a sediment-sensitive watershed (as defined by the SWRCB) shall be evaluated by a qualified professional (e.g., PG, PE, or CEG contracted by SDG&E and reviewed and approved by the CPUC and the Forest Service) prior to initiating construction on the associated segment, who will ~~and~~ identify areas experiencing chronic erosion and drainage issues. At a minimum, segments shall include, but are not limited to, the following: • TL626 south of Eagle Creek Road and north of Boulder Creek Road • TL625 in the Vicinity of Barber Mountain Road • TL625 north of Lyons Valley Road and south of Carveacre Road • C442 east of Oak Valley and south of I-8, on the western flanks of Long Peak • Short segments of TL629 on either side of Cameron Valley and east of Pine Valley The qualified professional shall design an engineered solution(s) to be implemented within the existing access roadway disturbance area in accordance with Forest Service standards, as described in Forest Service Handbook 2509.22 (Section 12.2), for each area determined to experience chronic erosion and/or drainage issues prior to beginning work on those facilities associated with the problematic access road. The designed solution(s) shall be included into the approved project to ensure the avoidance or minimization of substantial damage or soil loss along the identified road segments.

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	Examples of such solutions could include, but are not limited to the following: • Crowning road sections with gentle slopes to prevent standing water on the road • Outsloping roads at 3%-5% wherever possible • Where required for proper maneuvering and safety, insloping roads at 3-5% into properly designed ditches • Installing rolling dips, ditch relief culverts, and/or water bars at intervals appropriate for the road-grade and the soil erosivity • Minimizing the number of water crossings, and maintaining crossings as close to a 90-degree angle as possible to the streambed. • Constructing perennial and seasonal/ephemeral stream crossings so as not to change the cross-sectional area of the stream channel or impede fish migration. • Constructing perennial and seasonal/ephemeral stream crossings with materials that will not degrade water quality (e.g., concrete, coarse rock, riprap and/or gabions) • Surfacing roads with erosion-resistant materials such as rock or asphalt concrete. The Access Road Condition Evaluation and Repair Design Report shall identify locations, if any, where no feasible and/or effective solutions can be implemented to adequately handle runoff or comply with Forest Service soil and water quality management standards as contained in Forest Service Handbook 2509.22 (Section 12.2). The report will be updated for each construction segment according to SDG&E's final construction schedule. In these locations, the qualified professional shall recommend options for access road removal (i.e., requiring access by helicopter) or realignment (e.g., to achieve a lower slope) that would still achieve project objectives. Construction of each segment ~~the power line replacement projects~~ shall not proceed until the report section pertaining to that segment has been reviewed and approved by CPUC and Forest Service. In the event there are disputes regarding specific problem locations, CPUC and Forest Service will allow construction to proceed on those portions of the construction segment not impacted by access roads requiring evaluation under this measure; however, SDG&E shall not work in areas under dispute until resolution is achieved.
Location	SDG&E exclusive use access roads for SDG&E's proposed project and all alternatives.
Compliance Documentation[a] and Consultation	a. Prepare Access Road Condition Evaluation and Repair Design Report b. Final review and approval of report ~~c. Access roads shall be designed to handle the peak flow in a 10-year return period storm without incurring substantial damage or soil loss (e.g., fill failure, gullying, extensive rilling).~~ ~~d~~c. CPUC/Forest Service Monitor: Line item in compliance monitoring report
Timing	a. and b. Prior to start of construction for each individual replacement project. c. Prior to final design d. Prior to notice to proceed and during construction

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Responsible Agency	*SDG&E's Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629), BLM (TL629 and TL6923)) *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM HYD-5**: **Procedural Requirements for Pesticide and Herbicide Applications.** Pesticide and herbicide application shall occur under the direction of a professional pesticide applicator with either a Qualified Applicator License (QAL) or an Agricultural Pest Control Adviser License in the State of California (see MM-BIO-32 for additional biological training requirements for applicators with a QAL)~~.~~. Label instructions and all applicable laws and regulations shall be strictly followed in the application of pesticides and herbicides and disposal of excess materials and containers. Only those materials registered by the EPA for the specific purpose planned shall be authorized for use. Before applying any pesticides or herbicides on National Forest System land, SDG&E shall receive approval from the Forest Service for all pesticides and herbicides proposed for use on National Forest System land prior to their application on these lands.~~.~~ For portions of the project crossing BLM lands, SDG&E shall obtain a BLM Pesticide Use Permit as well. Additionally, prior to any pesticide or herbicide use, SDG&E shall submit an anticipated schedule to the Forest Service for planned use within the CNF on an annual basis, or more frequently as needed, and will work with the Forest Service to determine the appropriate pesticide and herbicide per location.
Location	All construction work areas for SDG&E's proposed project and all alternatives.
Compliance Documentation[(a)] and Consultation	a. Pesticide applicator qualifications b. Implement in accordance with EPA requirements c. Provide pesticide application schedule
Timing	a. At least 2 weeks prior to first pesticide application b. Post-construction during routine operation and maintenance~~During construction, operation, and maintenance~~ c. Submit on annual basis (or more frequently as needed)
Responsible Agency	Forest Service
~~**Mitigation Measure**~~	~~**MM HYD-6**: **Pesticide Use Prohibition along Cottonwood Creek (C440, C449, and TL629C)**. SDG&E shall not use pesticides in routine O&M activities on poles located within the RCAs associated with Cottonwood Creek. Instead SDG&E must achieve pest management goals using non-chemical methods.~~
~~*Location*~~	~~RCAs associated with Cottonwood Creek (C440, C449, and TL 629C)~~
~~*Compliance Documentation[(a)] and Consultation*~~	~~a. Provide documentation of non-chemical methods to be used in RCAs~~
~~*Timing*~~	~~a. During 5-year construction and routine O&M~~
~~*Responsible Agency*~~	~~*SDG&E's Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629), BLM (TL629 and TL6923), CSP (C79)~~ ~~*Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit~~

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Mitigation Monitoring, Compliance, and Reporting – Hydrology and Water Quality

	~~Tribe (TL626)~~ ~~*BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682)~~ ~~*Partial Removal of Overland Access Roads*: Forest Service~~ ~~*Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)~~
Mitigation Measure	**MM HYD-6~~7~~: Implementation of Creek-Crossing Procedures.** Where creek crossings can be completed during dry season, with no flows present in the creek, seasonally timed restorative open trenching will be completed. This procedure will use minimum trench widths. Trench cut material will ~~not~~ be placed outside of the creek bed and outside of 100-year inundated areas. Trench fill will be compacted and replaced to ~~existing conditions, including matching~~ match existing creek bed gradations, and ~~restoring~~ vegetation will be restored. Open trenching restoration will be completed prior to any wet season flows, and will include anti-erosion action plans for any unplanned rainfall during construction. SDG&E shall obtain all required permits prior to completing open trenching through drainages. In any case, flows will be isolated from open trenching by best management practices mandated by the General Construction Permit. Areas of trenching would be restored and/or vegetated at completion of work. Where creek crossing cannot be completed during the dry season creek crossing shall use jack-and-bore procedures to avoid direct impacts and shall be conducted in a manner that does not result in sediment-laden discharge or hazardous materials release to the water body. SDG&E shall develop a Jack-and-Bore/Horizontal Directional Drill (HDD) Contingency Plan for this work in accordance with MM-HYD-8. Additionally, SDG&E shall implement the following measures during horizontal boring (jack-and-bore) operations and shall be included in the HDD Contingency Plan: 1 Site preparation shall begin no more than 10 days prior to initiating horizontal bores to reduce the time soils are exposed adjacent to creeks and drainages. 2 Trench and/or bore pit spoil shall be stored a minimum of 25 feet from the top of the bank or wetland/riparian boundary. Spoils shall be stored behind a sediment barrier and covered with plastic or otherwise stabilized (i.e., tackifiers, mulch, or detention). 3 Portable pumps and stationary equipment located within 100 feet of a water resource (i.e., wetland/riparian boundary, creeks, and drainages) shall be placed within secondary containment with adequate capacity to contain a spill (i.e., a pump with 10-gallon fuel or oil capacity should be placed in secondary containment capable of holding 15 gallons). A spill kit shall be maintained on site at all times. 4 ~~Immediately~~ Within 24 hours following backfill of the bore pits, disturbed soils shall be seeded and stabilized to prevent erosion, and temporary sediment barriers shall be left in place until restoration is deemed successful. SDG&E shall obtain the required permits prior to conducting creek crossing work. Required permits may include ACOE CWA Section 404, Regional Water Quality Control Board Clean Water Act 401, and CDFG Streambed Alteration Agreement 1602. SDG&E shall implement all pre- and post-construction conditions identified in the permits issued.

Table D.9-11
Mitigation Monitoring, Compliance, and Reporting – Hydrology and Water Quality

Location	TL626 alternative alignment (Option 3 underground in Boulder Creek Road)
Compliance Documentation[a] and Consultation	a. Implement Creek Crossing Procedures during the dry season b. Prepare a Jack-and-Bore HDD Contingency Plan with associated SWPPP in accordance with the requirements and timing in MM-HYD-8 c. Conduct directional drilling rather than trenching, where/when applicable d. CPUC/Forest Service Monitor: Line item for standard trenching (Creek Crossing Procedures) in compliance monitoring report
Timing	a. During creek-crossing construction activities b. At least 60 days prior to construction c. Prior to and during construction d. During construction
Mitigation Measure	**MM HYD-7~~8~~: ~~Jack-and-Bore/~~Horizontal Directional Drill Contingency Plan.** If ~~jack-and-bore or~~ horizontal directional drilling is to be used during construction, SDG&E shall prepare a ~~Jack-and-Bore/~~Horizontal Directional Drill (HDD) Contingency Plan to address procedures for containing an inadvertent release of drilling fluid (frac-out). The plan shall contain specific measures for monitoring frac-outs, for containing drilling mud, and for notifying agency personnel. The plan shall also discuss spoil stockpile management, hazardous materials storage and spill cleanup, site-specific erosion and sediment control, and housekeeping procedures, as described in the Stormwater Pollution Prevention Plan. The Jack-and-Bore HDD Contingency Plan shall be submitted to the CPUC, Forest Service, Bureau of Indian Affairs, and ACOE 60 days prior to construction. SDG&E shall obtain the required permits prior to conducting work associated with jack-and-bore/horizontal directional drilling activities. Required permits may include U.S. Army Corps of Engineers Clean Water Act Section 404, Regional Water Quality Control Board Clean Water Act 401, and CDFG Streambed Alteration Agreement Section 1602. The applicant shall implement all pre- and post-construction conditions identified in the permits issued for the jack-and-bore/horizontal directional drilling.
Location	TL626 alternative alignment (Option 3 underground in Boulder Creek Road)
Compliance Documentation[a] and Consultation	a. Prepare Jack-and-Bore HDD Contingency Plan with associated SWPPP and obtain required permits b. Approval and implementation of Jack-and-Bore HDD Contingency Plan, if necessary d. CPUC/Forest Service Monitor: Line item in compliance monitoring report
Timing	a. Prior to creek-crossing construction activities b. Prior to and during construction, if applicable c. During construction
Responsible Agency	*Forest Service Proposed Action – Option 3*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), ACOE

[a] All compliance documentation and consultation records to be available for CPUC and Forest Service staff review upon request.

D.9.10 Residual Unavoidable Effects

Up to 10.5 miles of SDG&E exclusive-use access roads were identified as being especially problematic from an erosion and sedimentation standpoint due to the potential for slopes to

exceed a gradient of 25%, including approximately 2 miles of problematic road segments within the Pine Valley Creek Watershed (i.e., Tl629 and C442), due to the watershed's impairment for sediment, as well as certain segments along C79, TL625, and TL626, due to extended segments of very steep terrain (e.g., greater than 25% slope). As discussed in Section D.9.3.3, there may be no way to feasibly avoid substantial long-term effects on erosion and sedimentation (Impact HYD-4) without decommissioning (removing) or realigning these road segments, as proposed under the Partial Removal of Overland Access Roads Alternative. While implementation of MM HYD-4 would ensure that levels of erosion and sedimentation are reduced compared to existing conditions, implementation of MM HYD-4 would not reduce identified unavoidable Class I HYD-4 impacts.

D.9.11 References

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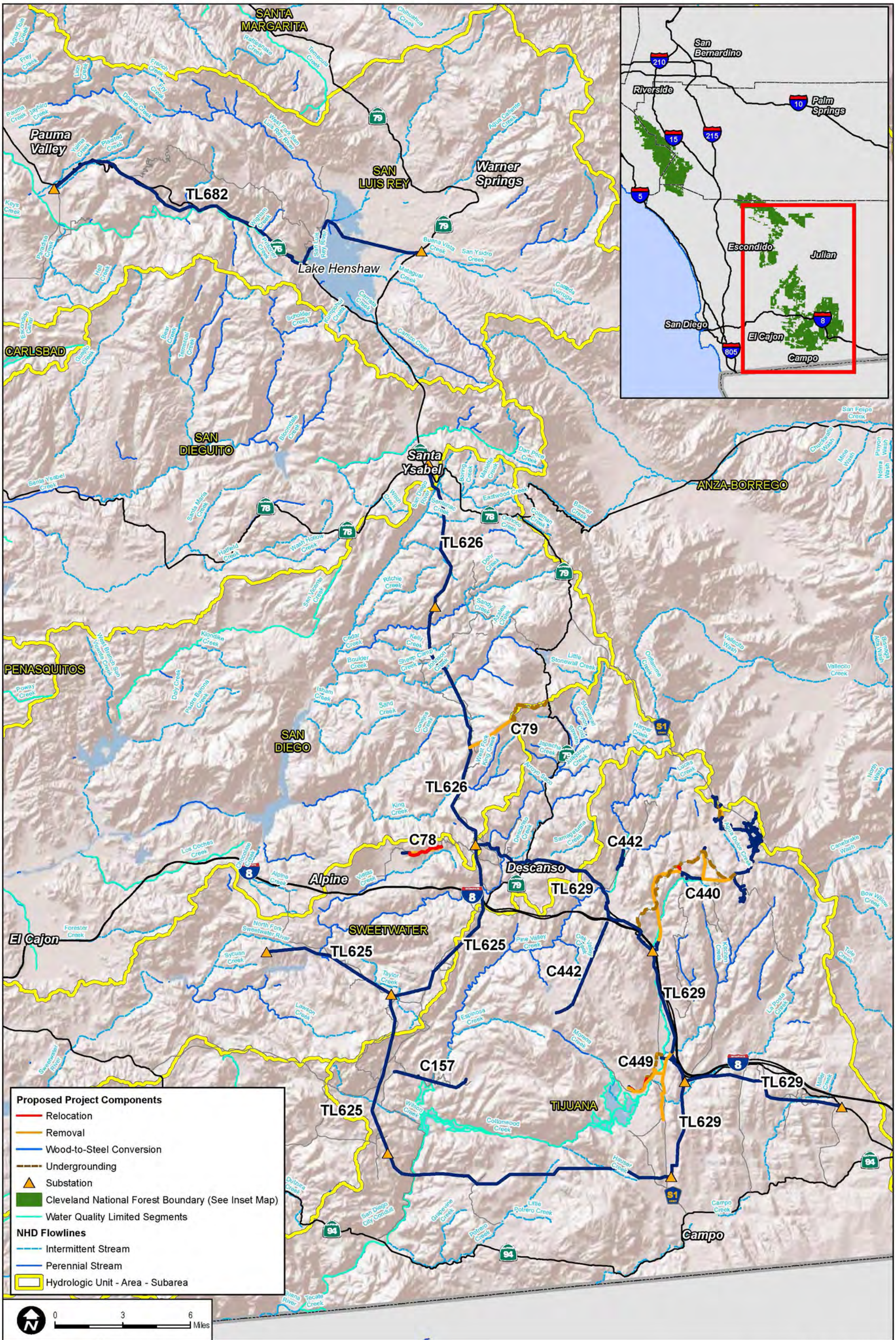

DUDEK

7014

SOURCE: SDG&E 2011; SanGIS 2012; Bing Maps

FIGURE D.9-1

Watersheds and Major Streams

MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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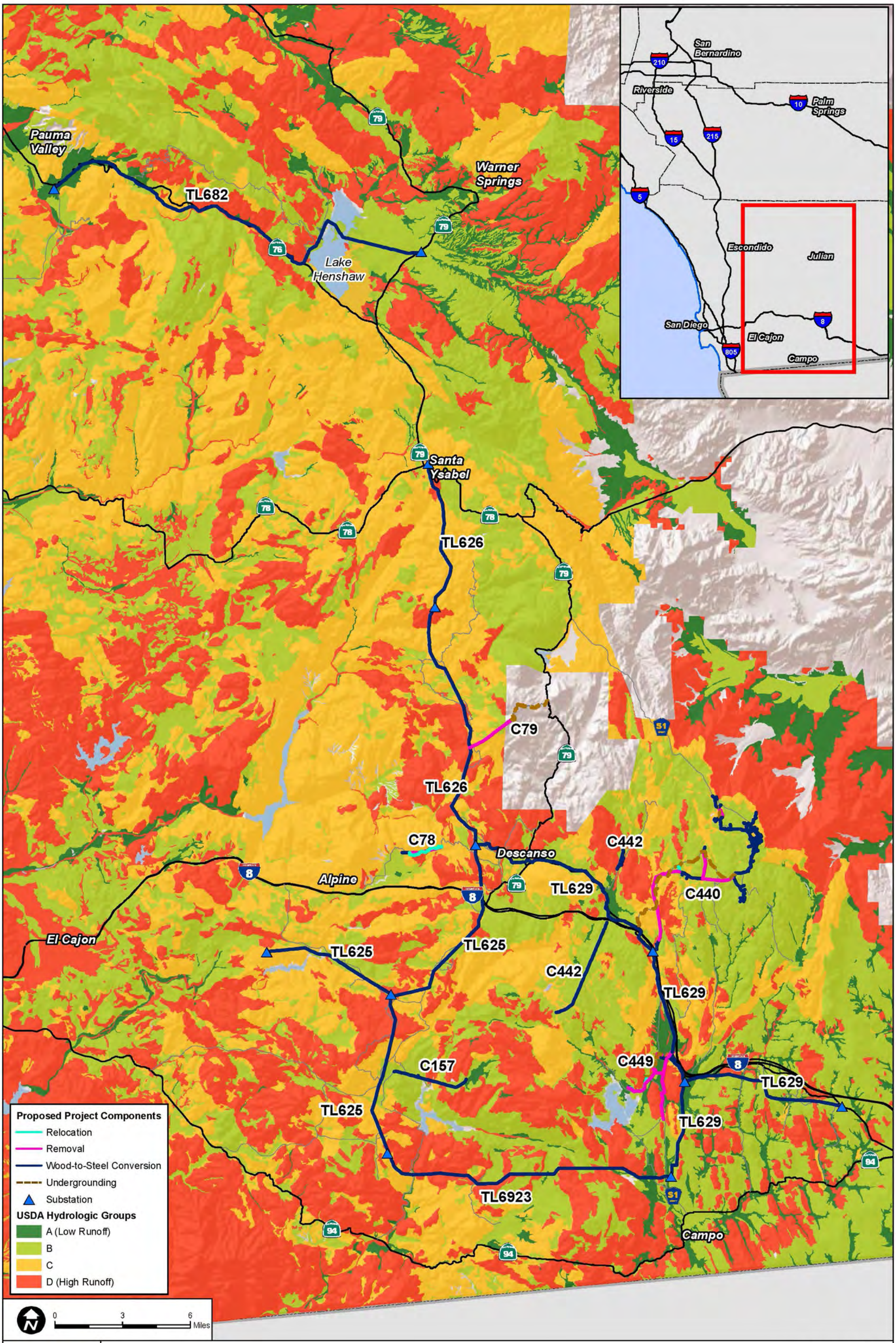

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SOURCE: SDG&E 2011; SanGIS 2012; USDA

FIGURE D.9-2

Hydrologic Groups

MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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D.10 Land Use and Planning

This section addresses potential impacts on existing, planned, and proposed land uses resulting from the construction and operation of the proposed power line replacement projects along with the operations and maintenance activities proposed for authorization under the MSUP. Section D.10.1 provides a description of the environmental setting, while Section D.10.2 discusses applicable land use plans, policies, and ordinances. An analysis of the environmental impacts resulting from implementation of SDG&E's proposed project is provided in Section D.10.3, and impacts resulting from the Forest Service proposed action are discussed in Section D.10.4. Section D.10.5 discusses the BIA proposed action and additional alternatives are discussed in Section D.10.6. Section D.10.7 analyzes the No Action Alternative and the No Project Alternative is analyzed in Section D.10.8. Section D.10.9 provides mitigation monitoring, compliance, and reporting information. Residual Effects are analyzed in Section D.10.10. Lastly, Section D.10.11 lists the references cited in this section.

Aside from impacts to the existing and planned land uses analyzed in this section, a number of additional land use related topics are addressed in other sections of this EIR/EIS. Aesthetic/visual resource issues are described in Section D.2; noise is addressed in Section D.11; recreation issues are addressed in Section D.13; and transportation and traffic issues are addressed in Section D.14. Additionally, conflicts with any applicable habitat conservation plan or natural community conservation plan are addressed in Section D.4, Biological Resources, of this EIR/EIS.

D.10.1 Environmental Setting/Affected Environment

This section provides a description of existing land uses and sensitive receptors near the various components of SDG&E's proposed project.

Methodology and Assumptions

Baseline existing land use conditions in SDG&E's proposed project area were obtained from site visits, a review of aerial photographs, SDG&E's Revised Plan of Development for the Master Special Use Permit Cleveland National Forest (SDG&E 2013), the Recirculated Draft EIR/Supplemental EIS for the Sunrise Powerlink Project (CPUC and BLM 2008a), and the Final EIR/EIS and Proposed Land Use Amendment for the Sunrise Powerlink Project (CPUC and BLM 2008b). The Final EIS/EIR for the ECO Substation, Tule Wind, and ESJ Gen-Tie Line Project (CPUC and BLM 2010) was also reviewed for existing baseline data. In addition to identifying baseline conditions, these documents were used to identify the location of sensitive land uses occurring in the area. Sensitive land uses are land uses that are particularly susceptible to construction and operational disturbances (such as noise and traffic) and include residences, educational institutions, and select public facilities including medical and religious facilities.

Recreational facilities are also considered sensitive land uses and are addressed in Section D.13, Recreation, of this EIR/EIS.

Existing and proposed land use information was obtained from Part 2 (Cleveland National Forest Strategy) of the Southern California National Forests Land Management Plan (LMP) (Part 2 is herein referred to as the CNF LMP) (Forest Service 2005); the proposed Southern California National Forests LMP Amendment (for purpose of this analysis herein referred to as the CNF LMP Amendment) (Forest Service 2013); and the County of San Diego General Plan Land Use Element (County of San Diego 2011) that includes subregional and community plans applicable to lands traversed by existing SDG&E electric facilities (power lines, access roads, and other facilities) to be covered under the proposed MSUP. Other land use plans and ordinances reviewed included the South Coast Resource Management Plan (RMP) (BLM 1994), the South Coast Draft RMP and EIS (BLM 2011), the Cuyamaca Rancho State Park General Plan (California Department of Parks and Recreation 1986), and the County of San Diego Zoning Ordinance (County of San Diego 2014a). California State Parks is currently in the process of updating the existing Cuyamaca Rancho State Park General Plan, and an EIR will be prepared. However, at this time, proposed revisions to existing management zones and policies are not available for public review.

D.10.1.1 General Overview

As shown on Figure B-1, Regional Overview Map, the MSUP study area is located within the Trabuco, Palomar and Descanso ranger districts in the Cleveland National Forest (CNF) in southeastern Orange County, southwestern Riverside County, and San Diego County, with the majority of the study area including all of the proposed power line replacement projects located within and surrounding the Palomar and Descanso ranger districts in San Diego County. In general, the CNF is comprised of forested and mountainous to chaparral-covered semi-d esert lands featuring undeveloped backcountry areas, Congressionally designated wilderness, and limited areas of concentrated recreation residential development. Lands are accessible and occasionally bisected by local roads, state highways, and interstates, and visitors are provided diverse recreational opportunities including hiking, camping, horseback riding, and off-highway vehicle (OHV) areas. In addition to existing transmission and distribution lines, numerous access roads traverse the CNF, and several communication sites are distributed across the area.

Trabuco Ranger District

The Trabuco Ranger District lies at the boundary of Orange, Riverside, and San Diego counties and is generally comprised of chaparral-covered lands supporting backcountry trail-based recreation including hiking, biking, and horseback riding, and developed campground and picnic sites. The eastern portion of the district includes the undeveloped east-facing slopes of the Santa

Ana Mountains surrounded by rapidly developing urban communities situated along the Interstate 15 (I-15) corridor. In addition to higher elevation mountainous areas, undeveloped canyon lands and designated wilderness (i.e., the San Mateo Canyon Wilderness) are located in the northern and western portions of the Trabuco Ranger District and offer additional trail-based recreation opportunities for surrounding urban and suburban communities.

Palomar Ranger District

Located between the Trabuco and Descanso ranger districts, the Palomar Ranger District encompasses the CNF from State Route 79 (SR-79) in Riverside County south to the perimeter of the Capitan Grande Indian Reservation in eastern San Diego County. In addition to tribal lands, the CNF is interspersed with county, state, and private lands. North of SR-76, the Palomar Ranger District is generally characterized by mountainous terrain supporting trail-based recreation and offering scenic viewing opportunities, family and group campgrounds, and picnicking areas. In addition to lightly developed areas near Palomar Mountain, the Agua Tibia Wilderness and the Cutca Valley Recommended Wilderness are located in the northern portion of the district. South of State Route 76, the national forest maintains a primarily mountainous character and is comprised of generally undeveloped backcountry lands that eventually transition to valley and foothill interface zones abutting existing rural communities. Further to the south (south of SR-78) the Palomar Ranger District encompasses lands featuring steep canyon and chaparral and occasional woodland covered terrain traversed by a network of unpaved access roads. Dispersed rural residential development is located on lands outside of the CNF but generally, the Palomar Ranger District area supports backcountry trail-based recreation.

Descanso Ranger District

National Forest lands within the Descanso Ranger District generally display a rugged, mountainous to semi-desert character; however, the heavily visited northwest portion of the Laguna Mountain area features a high concentration of private and public recreation uses and supports some of the largest permitted livestock grazing operations in the CNF (Forest Service 2005a). In addition, meadows, several communication sites, the abandoned Mount Laguna Air Force base, and the Mount Laguna Observatory are located in the area. Further to the south, the Descanso Ranger District is bisected by the I-8 travel corridor and is characterized by the most mixed land ownership pattern in the CNF (Forest Service 2005a). This portion of the district acts as a transition zone between the outskirts of metropolitan San Diego and the relatively undeveloped mountain, desert, and open space areas of eastern San Diego County (Forest Service 2005a) and supports several rural residential communities located along the I-8 corridor. Lastly, the southernmost portion of the district has an open space character with large expanses

of undeveloped land including existing wilderness (i.e., Pine Creek Wilderness and Hauser Wilderness) and two recommended wilderness areas.

As shown on Figure B-2, U.S. Forest Service (Forest Service) lands and other federal, state, tribal, and local jurisdictional lands occur within the proposed power line replacement projects study area, including Bureau of Land Management (BLM), California Department of Parks and Recreation, and Native American lands.

Table D.10-1 lists the land use jurisdiction and occupied area (in miles) associated with each of the proposed power line replacement project components.

Table D.10-1
Agency Jurisdiction of Project Components

Proposed Project Component	Jurisdiction	Number of Miles under Jurisdiction*
Power Line Replacement Project Components (69-kilovolt facilities)		
TL682	CPUC	15.6
	CNF	1.32
	Tribal (La Jolla Indian Reservation)	3.06
	Tribal (Pauma and Yuima Indian Reservation)	0.18
TL626	CPUC	10.65
	CNF	7.99
TL625	CPUC	16.16
	CNF	6.26
	BLM	0.05
TL629	CPUC	29.75
	CNF	8.95
	Tribal (Campo Indian Reservation)	0.56
	BLM	0.71
TL6923	CPUC	7.01
	CNF	3.17
	BLM	3.22
Distribution Circuit Replacement Project components (12-kilovolt facilities)		
C79	CNF	1.85 (removal)
	California State Parks	0.38 (removal) 2.86 (underground)
C78	CNF	1.41 (removal) 1.81 (reconductor)
	Tribal (Viejas Indian Reservation)	0.06 (reconductor)
	CPUC	0.02 (removal) 0.21 (reconductor)

Table D.10-1
Agency Jurisdiction of Project Components

Proposed Project Component	Jurisdiction	Number of Miles under Jurisdiction*
C157	CNF	1.71 (reconductor)
	CPUC	1.8 (reconductor)
C442	CNF	3.67 (reconductor)
	CPUC	2.52 (reconductor)
C440	CNF	5.76 (removal) 4.26 (underground) 11.88 (reconductor))
	State	0.09 (reconductor)
	CPUC	1.38 (removal) 4.09 (underground) 5.08 (reconductor)
C449	CNF	4.93 (removal) 0.39 (underground) 1.72 (reconductor)
	CPUC	0.7 (removal) 0.23 (underground) 0.58 (reconductor)

Source: SDG&E 2013

Existing Land Uses

In addition to undeveloped backcountry areas, federal designated wilderness, and recreation residential development, existing land uses in the study area include scattered public facilities and utilities (e.g., electrical substations, transmission and distribution lines, communication infrastructure, etc.), trail-based and other recreation opportunities, unpaved access roads and paved roads, highways, and interstates, row crops and other agricultural uses, narrow and broad meadows and drainage areas, and several creeks and other waterways. The relatively diverse assemblage of existing land uses within the CNF reflects the mildly fluctuating character of the landscape, the influence of adjacent land areas including rural residential development on County and Tribal lands and state wilderness in the Cuyamaca Rancho State Park, and the provision of access and basic utilities to remote forest areas and surroundings.

Planned Land Uses

Planned land uses are those designated in long-range planning documents including LMPs, RMPs, and general plans and are intended to guide the future development and growth patterns of a given jurisdiction. As stated previously, in addition to Forest Service lands, BLM, California Department of Parks and Recreation, Native American, and County of San Diego

jurisdictional lands occur in the study area; and therefore, the planned lands uses established by these jurisdictions in relevant long-range documents are discussed below.

Forest Service

The CNF LMP and the ~~proposed~~ approved LMP Amendment are the relevant long-range planning documents for the national forest. In the CNF, the Forest Service has established seven land use zones to identify appropriate management activities on forest lands. The seven land use zones as established in the existing LMP are listed and summarized in Table D.10-2, below. The existing distribution of land use zones within the CNF is depicted on Figure D.10-1. The ~~proposed~~ distribution of land use zones within the CNF pursuant to the CNF LMP Amendment adopted on October 23, 2014, are depicted on Figure D.10-2.

Table D.10-2
Cleveland National Forest LMP Land Use Zones

Land Use Zone	Description
Developed Area Interface	Includes areas adjacent to communities or concentrated developed areas with more scattered or isolated community infrastructure. The level of human use and infrastructure is typically higher than in other zones.
Back Country	Includes areas of the national forest that are generally undeveloped with few roads. Most of the national forest's remote recreation and administrative facilities are found in this zone and the level of human use and infrastructure is generally low to moderate.
Back Country Motorized Use Restricted	Includes areas of the national forest that are generally undeveloped with few roads. Few facilities are found in this zone (some may occur in remote locations), and the level of human use and infrastructure is low to moderate.
Back County Non-Motorized	Includes areas of the national forest that are undeveloped with few, if any roads. Developed facilities supporting dispersed recreation activities are minimal and generally limited to trails and signage. The level of human use and infrastructure is low.
Critical Biological	Includes the most important areas on the national forest to manage for the protection of species-at-risk. Facilities are minimal to discourage human use. The level of human use and infrastructure is low to moderate.
Existing Wilderness	Includes Congressionally designated wildernesses. Only uses consistent with all applicable wilderness legislation and with the primitive character are allowed in existing wilderness.
Recommended Wilderness	Includes land that the Forest Service is recommending to Congress for wilderness designation and will be managed in the same manner as existing wilderness so that the wilderness attributes of the area are retained until legislation is passed, or the area is released from consideration.

Source: Forest Service 2005a.

Regarding wilderness, four federal designated wildernesses are located within the CNF. These include the Agua Tibia Wilderness in the northern extent of the Palomar Ranger District, the Hauser Wilderness and Pine Creek Wilderness in the southern extent of the Descanso Ranger District, and San Mateo Canyon Wilderness in the southern extent of the Trabuco Ranger District. Designated wilderness located near the proposed power line replacement projects are concentrated in the southern extent of the Descanso Ranger District and include the 6,834-acre Hauser Wilderness and the 13,368-acre Pine Creek Wilderness (Forest Service 2005a). Recommended Wilderness in the CNF includes the 8,619-acre Cutca Valley Inventoried Roadless Area (IRA) in the northern part of the Palomar Ranger District, the 430-acre Pine Creek area located in the Pine Creek Valley and adjacent to the Pine Creek Wilderness, and the 2,302-acre Hauser South Expansion Area near the Hauser Wilderness (Forest Service 2005a). IRAs are generally large, unfragmented tracts of Forest Service lands without existing roads that could potentially be suitable for roadless area conservation such as through wilderness designation or other protection measures (Forest Service 2005a). In addition to existing Recommended Wilderness, the majority of the Barker Valley, Caliente, Eagle Peak, No Name, and Sill Hill IRAs, along with the Upper San Diego River and Cedar Creek publically proposed undeveloped areas, ~~would be~~ were designated as Recommended Wilderness by the LMP Amendment (Forest Service ~~2013~~2014).

BLM

Both TL625 and TL629 briefly traverse BLM lands near the southernmost extent of the CNF in San Diego County and the South Coast RMP and the Draft RMP revision are the applicable planning documents for BLM lands in the MSUP study area. The South Coast RMP does not apply land use zones to all BLM lands included in the RMP area; rather, regulatory designations intended to protect specific resources are applied to lands sparingly. For example, contiguous BLM lands in the Hauser Mountain and McAlmond Canyon vicinity are managed as a wildlife habitat management area (HMA), and grazing allotments are established near the Potrero, Hauser Mountain, Cameron, and Clover Flat areas (BLM 1994). Portions of TL6923 traverse the Potrero and Hauser Mountain grazing allotments, and portions of TL629 between the Cameron Tap and Cameron substation may traverse the Cameron and Clover Flat grazing allotments. While the existing RMP establishes wildlife HMAs and grazing allotments for select lands in the MSUP study area, it does not discuss the range of uses consistent with those designations.

California Department of Parks and Recreation

The Cuyamaca Rancho State Park General Plan and the pending General Plan Update are the applicable planning documents for state park lands located in the MSUP study area. According to the General Plan, the majority of state parks lands (13,200 acres) are designated wilderness;

10,224 acres are designated scenic open space; and 2,560 acres are designated cultural preserves (California Department of Parks and Recreation 1986). Regarding the proposed power line replacement projects, approximately 16 existing support poles and 1,800 feet of distribution line associated with C79 on the western slopes of Cuyamaca Peak are located within designated wilderness (i.e., the Cuyamaca Mountain State Wilderness). The remaining two poles and approximately 150 feet of C79 distribution line under California State Parks land use authority are located outside of designated state wilderness. Further, the proposed underground alignment of C79 within the state park and more specifically, within Lookout Road, would be located outside of designated wilderness on undesignated state park lands. West of Azalea Spring Fire Road and Fern Flat Fire Road (Azalea Spring Fire Road essentially becomes Fern Flat Fire Road south of Lookout Road), state wilderness boundaries are established approximately 120 to 175 feet on either side of Lookout Road.

In addition to the existing General Plan, the California State Parks is in the process of preparing an updated General Plan for Cuyamaca Rancho State Park; however, the draft update General Plan document was not available for review during preparation of this EIR/EIS. As such, the future allocation of land use zones in the state park in the vicinity of the underground alignment of C79 along Lookout Road is not known at this time.

Native American lands

As shown in Table D.10-1 above, portions of the project traverse Native American lands. More specifically, TL682 traverses lands of the La Jolla Band of Luiseno Indians and the Pauma-Yuima Band of Mission Indians; TL629 traverses the Campo Indian Reservation between the Cameron Tap and the Crestwood Substation; and the reconductoring of C78 partially occurs on the Viejas Indian Reservation. Similar to other land use jurisdictional authorities in the project area, Native American tribes are anticipated to have general or specific land use plans that delineate land use zones or areas on Tribal lands intended to guide the future development of lands. However, the land use plan of Native American tribes in the project area were not readily available for review during preparation of this EIR/EIS.

County of San Diego

While the CPUC and Forest Service have independent jurisdiction and approval authority for the project (the CPUC is the lead agency under California law and the Forest Service is the lead federal agency), state agencies such as the CPUC are required to consider local land use policies and regulations when making decisions. Therefore, County of San Diego General Plan land use and zoning designations applied to lands traversed by proposed power line replacement projects and located outside of CNF boundary are summarized in Tables D.10-3 and D.10-4 and identified (where applicable) in Section D.10.1.2.

Table D.10-3
County of San Diego General Plan Land Use Designations

Land Use Designation	Intended Land Use
Rural Lands (RL-20, 40, or 80)	Densities provided include one dwelling unit (DU) per 20, 40, or 80 acres. The rural land designation is intended to reflect and preserve the rural agricultural, environmentally constrained, and natural backcountry areas of the County.
Public/Semi-Public Facilities	Designation is applied to lands on which major facilities are built and maintained for use.
Semi-Rural 10 (SR-10)	Density provides for one DU per 10 gross acres (development may be further constrained due to the presence of slopes greater than 25%).
Open Space – Conservation (OS-C)	Designation is typically applied to large tracts of lands, undeveloped and usually dedicated to open space. Allowed uses included habitat preserves, passive recreation, and reservoirs.
Public Agency Lands	Designation is applied to state parks, national forests, or other public agency non-conservation lands not under the purview of the County.
Rural Commercial (C-4)	Designation provides for small-scale and civic development including small office or residences of up to 2 units per gross acres. Retail stores, eating and drinking establishments, libraries, and visitor-oriented services are also encouraged by this designation.
Village Residential (VR-2 or VR-2.9)	Densities provide for 2 units per gross acre or 2.9 units per gross acre. Single and very low-density multifamily development is encouraged by this designation.

Source: County of San Diego 2011

Table D.10-4
County of San Diego Zoning Designations

Zoning Designations	Intent and Permitted Uses
Single-Family Residential (RS)	Intended to create and enhance areas where family residential uses are the principal use and where certain essential services are conditionally permitted. Permitted uses include family residential, essential services (fire protection), horticulture (cultivation), tree crops, and row and field crops. Conditionally permitted uses include minor impact utilities, small schools, postal services, and community recreation.
Rural Residential (RR)	Intended to create and enhance residential areas where agricultural use compatible with permanent residential uses is desired. Permitted uses include family residential, essential services (fire protection), horticulture (all types), tree crops, and row and field crops.
Open Space (S80)	Intended to provide for appropriate control for land generally unsuitable for intensive development. Permitted uses include family residential, essential services (fire protection), horticulture (all types), tree crops, row and field crops, and packing and processing (limited).
General Rural (S92)	Intended to provide controls for lands with rugged terrain, ground water dependency, fire or erosion susceptibility, or other development constraints. Same basic permitted uses as the Open Space (S80) zone.
Transportation and Utility Corridor (S94)	Intended to create and protect corridors for existing/future transportation or utility facilities. Permitted uses include essential services (fire protection), horticulture (all types), tree crops, and row and field crops.
Limited Agriculture (A70)	Intended to create and preserve areas for agricultural crop production. Same basic permitted uses as the Open Space (S80) zone.

Table D.10-4
County of San Diego Zoning Designations

Zoning Designations	Intent and Permitted Uses
General Agriculture (A72)	Intended to create and preserve areas for raising crops and animals. Permitted uses include family residential essential services (fire protection and law enforcement), horticulture (all types), tree crops, row and field crops, and packing and processing (limited).
Indian Reservation	Tribal lands
Heavy Commercial (C37)	Intended to create and enhance areas where commercial use is the primary focus. Permitted uses include (but are not limited to) law enforcement services, minor impact utilities, animal sales and services, automotive and equipment, retail services, and horticulture (all types)
Rural Commercial (C40)	Intended to create and enhance commercial centers serving agricultural areas with a broad range of goods and services. Largely the same permitted uses as the Heavy Commercial (C37) zone.

Source: County of San Diego 2014a

D.10.1.2 Environmental Setting for the Proposed Power Line Replacement Projects

TL682

Existing Land Uses

As shown in Figure B-3, the existing TL682 runs parallel to -SR-76 west from Rincon Substation to East Grade Road, and then travels north along the western shore of Lake Henshaw, crosses the lake and then heads east to Warner Substation located near SR-79. TL682 originates at SDG&E's existing Rincon Substation, located approximately 11 miles east of I-15 and 900 feet south of the SR-76/County Highway S6 (Valley Center Road) intersection. From the substation, TL682 travels in a northeasterly direction across County lands for approximately 1.7 miles, crossing County Highway S6, rural residential lands, active agricultural lands, and SR-76. TL682 then turns in an easterly direction and briefly crosses an isolated portion of the Pauma and Yuima Indian Reservation supporting rural residential land uses. Upon exiting Tribal lands, the power line traverses SR-76 and undeveloped, agricultural, and rural residential County jurisdictional lands for approximately 1 mile. At this point TL682 briefly traverses rural residential Tribal lands of the La Jolla Indian Reservation and then spans SR-76 and an isolated patch of County rural residential lands surrounded by Tribal lands (see Figure B-3) for approximately 2.5 miles.

Approximately 6 miles east of the Rincon Substation, TL682 re-enters Tribal lands of the La Jolla Indian Reservation and spans undeveloped, rural residential and recreation lands, SR-76, and the San Luis Rey River. Recreational land uses along the approximate 3-mile segment through the reservation include the Amago Sports Park (a 3-track moto-cross park); and the La Jolla Indian Campground features seven camping areas accommodating both tents and RVs and also includes walking trails, a trading post, sports bars, arcade game room, and a dump station

(see Section D.13, Recreation, for additional information). After exiting the reservation, TL682 then proceeds in a southeasterly direction towards Lake Henshaw primarily over undeveloped County and Forest Service lands located adjacent to SR-76 and the San Luis Rey River. In addition to undeveloped lands, TL682 traverses the Denver C. Fox Outdoor Education School, which provides outdoor education programs established by the Department of Education and San Diego County school districts to area youths.

After passing the school, the power line then briefly traverses County rural residential lands located adjacent to SR-76. From there TL682 proceeds in a southeasterly direction across Forest Service lands and traverses the San Luis Rey Picnic Grounds. The picnic grounds offer 17 picnic sites and provide access to a nearby fishing pond (Wildernessnet.com 2013). After passing the picnic grounds, the power line traverses the San Luis Rey River and undeveloped County and Forest Service land located adjacent to SR-76 for approximately 2 miles prior to turning to the north near East Grade Road and travelling around the western shoreline of Lake Henshaw (see Figure B-3). Along this segment, the power line traverses undeveloped County and Forest Service lands. After travelling in a northerly direction, TL682 then turns to the southeast, crosses Lake Henshaw and undeveloped lands within the drainage basin of the lake, and finally arrives at the Warners Substation located approximately 2.5 miles southwest of the community of Warner Springs. Prior to interconnecting to the Warners Substation, the power line crosses SR-79.

Planned Land Uses

Outside of the CNF, TL682 traverses a generally rural and agricultural landscape supporting rural and semi-rural residential land uses and rural residential and limited agriculture zoning. The various rural and semi-rural land use designations applied to lands traversed by TL682 (including SR-10, RL-20, RL-40, and RL-80; see Table D.10-3 for descriptions) support single-family residences and occasionally, accessory buildings and structures associated with on-site agricultural operations. Segments of TL682 also traverse the La Jolla Indian Reservation and the Pauma and Yuima Indian Reservation (reservations are designated Tribal Lands and zoned Indian Reservation by the County of San Diego), and rural residential and recreation uses are located in the general vicinity of the power line. Portions of the power line on Forest Service lands within the CNF are designated Public Agency Lands and zoned Open Space – Conservation by the County (see Table D.10-3). Within the CNF, undeveloped lands in the vicinity of TL682 are generally designated Back Country or Back-Country Non-motorized (for example, the Denver C. Fox Outdoor Education School is located on land designated Back Country Non-motorized). The power line also spans Forest Service lands designated Critical Biological and Developed Area Interface. Portions of the San Luis Rey River through the CNF are designated Critical Biological by the Forest Service as the river supports a large population of southwestern willow flycatcher. Forest Service lands near East Grade Road and Lake

Henshaw support power line access roads and are therefore designated Developed Area Interface. Lastly, as TL682 travels north from SR-76 and along East Grade Road to cross the Lake Henshaw drainage, the power line crosses Forest Service-designated Back Country and Developed Area Interface lands located ~~in~~ adjacent to the Barker Valley IRA. As stated previously, the CNF LMP Amendment would redesignate the majority of lands in the Barker Valley IRA to Recommended Wilderness; however, the land use zones applied to the portion of the ~~IRA~~ National Forest crossed by TL682 would not be redesignated by the CNF LMP Amendment. Rather, the area traversed by the power line would maintain the existing Back Country and Developed Area Interface land use zone designations.

TL626

Existing Land Uses

As shown on Figure B-4, TL626 originates at SDG&E's existing Santa Ysabel Substation which is located approximately 1,000 feet east of the SR-79/SR-78 intersection in the unincorporated community of Santa Ysabel. From the substation, TL626 travels south, crossing SR-79, rural residential lands, and undeveloped lands located south of the community of Santa Ysabel. Approximately 1 mile south of the substation, TL626 enters Forest Service lands, traverses the San Diego River and the Inaja Memorial Picnic Area and National Recreation Trail, and then exits the CNF north of Senatac Creek and northwest of Pine Hills. The Inaja Memorial Picnic Area experiences light visitor use and features a parking area, covered picnic tables, and restroom facilities. A short looped hiking trail, the Inaja National Recreation Trail, is located nearby. West of Pine Hills, TL626 travels in a southerly direction, traversing sparsely developed rural residential County lands and then re-enters the CNF north of the Boulder Creek Substation. Between the Boulder Creek Substation and the Descanso Substation (both located on County lands), TL626 spans sparsely developed County and Forest Service lands featuring unpaved access roads and supporting several creeks. South of C79, TL626 travels in a southwesterly direction for approximately 2 miles and then turns to the southeast and generally follows Boulder Creek Road towards the unincorporated community of Descanso. Along Boulder Creek Road, TL626 traverses rural residential lands uses and passes near the Stallion Oaks Campground. In addition, prior to entering the Descanso Substation, the power line traverses the California Riding and Hiking Trail, which is partially aligned along Boulder Oaks Road. The area surrounding the Descanso Substation supports rural residential development, dirt access roads, and natural lands.

Planned Land Uses

Upon exiting the Santa Ysabel substation, TL626 travels south and briefly traverses the eastern extent of the small County of San Diego community of Santa Ysabel. Along this segment,

TL626 spans County lands designated Open Space (Conservation), Rural Commercial, Village Residential 2.9 (VR-2.9), and Rural Lands (RL-80). County lands are zoned Rural Residential (RR), Heavy Commercial (C37), and General Agriculture (A72), respectively, and the allocation of land use and zoning designations reflects the rural residential character of the Santa Ysabel community. To the south, TL626 spans Forest Service lands designated Developed Area Interface, Back Country Non-Motorized, and Back Country near SR-79 and the Inaja Memorial Picnic Area. TL626 then briefly exits the CNF and traverses County lands designated Rural Lands 40 (RL-40) and zoned General Agriculture (A72). The remaining portion of TL626 is located on County lands and Forest Service lands in the CNF and spans rural residential lands (County) and lands designated Developed Area Interface, Back Country, Back Country Non-motorized, and Back Country Motorized Use Restricted by the Forest Service prior to interconnecting with the Descanso Substation.

Portions of TL626 span the Upper San Diego and Cedar Creek publicly proposed undeveloped areas and the No Name and Sill Hill IRAs. The ~~preferred~~ adopted alternative of the CNF LMP Amendment ~~would~~ designated the majority of the land use zones associated with these areas as Recommended Wilderness. TL626 largely avoids lands in the Upper San Diego publicly proposed undeveloped areas and in the No Name and Sill Hill IRAs that ~~would be~~were designated Recommended Wilderness by the LMP Amendment; however, portions of Recommended Wilderness in the Cedar Creek publicly proposed undeveloped area ~~would be~~are traversed by a ~~short~~ 1.7-mile segment of the existing TL626 alignment.

TL625

Existing Land Uses

TL625 has three distinct segments that together cover approximately 22 miles. The northern segment (i.e., Descanso Substation to the Barrett Tap) begins at the Descanso Substation and travels in southerly direction passing through the rural residential area of Descanso and via an alignment along an existing dirt access road. West of Vieja Grade Road, the power line travels along an existing dirt road maintained by the Forest Service for approximately 1 mile and then briefly traverses County lands and the Sweetwater River. South of the river, TL625 briefly traverses undeveloped Forest Service lands via an existing dirt access road prior to crossing I-8 and then again crosses Forest Service lands south of the interstate. TL625 then proceeds south to Japatul Valley Road and then generally follows the roadway alignment for approximately 6 miles to the Barrett Tap. Both Forest Service and County lands are traversed by this segment of the power line, and land uses adjacent to Japatul Valley Road include rural residential and agriculture (several roads and creeks are spanned by this segment of the existing alignment).

From the Barrett Tap to the Loveland Substation, TL625 follows Japatul Road and briefly traverses County lands for approximately 0.5 mile (see Figure B-5). The power line then traverses Forest Service lands for 1 mile along Japatul Road, crossing undeveloped lands and an existing high-voltage power line. TL625 then traverses rural residential County lands located south of Japatul Road and then re-enters the CNF south of Japatul Road and the Sweetwater River. From this location, the power line proceeds in a easterly direction along elevated terrain located north of Loveland Reservoir (the line crosses the reservoir where Sweetwater River enters the water body from the northeast) and crosses the access trail connecting the reservoir parking area off of Japatul Road to the public fishing access area along the reservoir shoreline. This segment of TL625 also traverses the California Riding and Hiking Trail south of Japatul Road and north of Loveland Reservoir. The power line then traverses undeveloped County lands prior to arriving at the Loveland Substation.

South of the Barrett Tap, TL625 crosses a patchwork of County and Forest Service jurisdictional lands featuring rural residential land uses, undeveloped lands, and dirt access roads. Near Lyons Valley Road and northwest of C157, TL625 crosses the alignment of an existing high voltage power line and then proceeds in a southwesterly direction crossing Lyons Valley Road, Skye Valley Road, and Wilson Creek. TL625 then enters Forest Service lands, turns to the southeast and travels alongside an existing Forest Service road. Undeveloped and rural residential County lands are briefly traversed by the power line which continues along a southeasterly alignment spanning both County and Forest Service lands prior to interconnecting with the Barrett Substation. As shown on Figure B-5, east of the Barrett Substation TL625 briefly traverses undeveloped BLM-managed lands prior to spanning County lands and entering the substation site.

Planned Land Uses

TL625 traverses County and Forest Service lands and briefly traverses BLM lands between the Barrett Tap and the Barrett Substation. Between the Descanso Substation and the Barrett Tap, TL625 spans moderately developed rural residential areas and is primarily located adjacent to paved or unpaved roadways. Applicable land use zones within the CNF include Developed Area Interface and Back Country Motorized Use Restricted. County of San Diego land use and zoning designations along the same alignment reflect the rural and agricultural character of the area and include RL-40, S92 (General Rural), A70 and A72, and S80. Between the Barrett Tap and the Loveland Substation, land use designations adjacent to the TL625 alignment are similar to those identified above for the northern segment; however, near the Loveland Reservoir, TL625 traverses non- Forest Service Public Agency Lands. Because these lands surround the Loveland Reservoir, they are assumed to be under Sweetwater Authority ownership (Sweetwater Authority owns the reservoir). Between the Barrett Tap and the Barrett Substation, TL625 traverses a rural

landscape featuring scattered residences, undeveloped, lands, several creeks, and a network or paved and unpaved roads. Residences are generally located in the vicinity of TL625 near the Barrett Tap on lands designated RL-40 and zoned A72 by the County. Forest Service lands along the alignment include Developed Area Interface, Back Country, and Back Country Motorized Use Restricted, and these areas generally support undeveloped lands and unpaved access roads. Lastly, TL625 briefly traverses BLM lands near the Barrett Substation; however, these lands have not been allocated land use designations by the BLM in the South Coast RMP.

TL625 does not traverse existing wilderness and would not traverse Forest Service lands subject to land use zone reallocation as a result of the ~~proposed~~ adopted CNF LMP Amendment. Also, based on a review of publicly available information, BLM lands traversed by TL625 would not be subject to land use reallocation or redesignation subject to the Draft South Coast RMP.

TL629

Existing Land Uses

For purposes of this analysis, TL629 is discussed as four distinct segments: Descanso Substation to the Glencliff Substation, Glencliff Substation to Cameron Tap, Cameron Tap to Cameron Substation, and Cameron Tap to Crestwood Substation. As shown on Figure B-6, the various segments of TL629 traverse Forest Service lands, County lands, BLM lands, and Tribal lands associated with the Campo Indian Reservation. A general summary of the land uses traversed by TL629 is provided below.

From the Descanso Substation, TL629 proceeds east, traversing rural residential land and the Sweetwater River, and then turns to the south travelling adjacent to Tanglewood Drive/River Drive towards Viejas Boulevard and Descanso Elementary School. At the intersection of Tanglewood Drive/River Drive and Viejas Boulevard, TL629 is located adjacent to Descanso Elementary School. The power line then follows Viejas Boulevard east to SR-79, passing rural residential neighborhoods in the community of Descanso. At SR-79, TL629 briefly turns north, crosses the state route, and then heads southeast to Old Highway 80. East of SR-79, TL629 travels alongside Old Highway 80 to the east and passes rural residential land uses and undeveloped lands adjacent to the highway. Approximately 6 miles east of the Descanso Substation in the community of Guatay, TL629 enters the CNF and briefly traverses Forest Service lands, passing within 200 feet of the Pine Creek Trailhead, as the line turns to the south towards the community of Pine Valley (see Figure B-6). The Pine Creek Trailhead provides access to trails located north and south of I-8, including the Secret Canyon Trail which provides northerly access to the Pine Creek Wilderness (see Section D.13, Recreation, for additional information). Upon exiting Forest Service lands southeast of the Pine Valley Trailhead, TL629 crosses Pine Valley Creek and Old Highway 80. Prior to spanning I-8, TL629 passes through

rural residential areas of the Pine Valley community and passes within of 200 feet of Pine Valley Regional Park and the adjacent Pine Valley Multiple Species Conservation Plan (MSCP) Preserve (see Section D.13 for additional information) and within 1,000 feet on Pine Valley Elementary School. TL629 then proceeds south to Pine Valley Road and then turns to the east for approximately 2 miles prior to crossing Sunrise Highway and I-8. After crossing Sunrise Highway and the interstate, the power line traverses Forest Service lands and generally follows Old Highway 80 south to the Glencliff Substation (the substation is located outside of the CNF).

From the Glencliff Substation, TL629 briefly heads east, exits County jurisdictional lands and enters the CNF east of Old Highway 80, and then turns to the south following the Old Highway 80 alignment. The power line generally traverses undeveloped lands located adjacent to the highway; however, approximately 1 mile south of the Glencliff Substation, TL629 traverses Cottonwood Creek. Further to the south, TL629 exits Forest Service lands and traverses County jurisdictional lands adjacent to Old Highway 80 for approximately 2 miles. Land uses along this segment include the SDG&E Mountain Empire Training Facility that provides equipment training for SDG&E employees on dozers, digger derricks, boom trucks, bobcats, and backhoes (County of San Diego 2008) and an SDG&E communications facility located adjacent to the training facility. On County lands to the south, TL629 traverses a narrow tributary of Kitchen Creek, re-enters Forest Service lands, crosses the Pacific Crest National Scenic Trail (PCT), and passes within 200 feet of the Forest Service -managed Boulder Oaks Campground. South of the campground the power line deviates from the highway alignment and travels along an unimproved Forest Service road to the Cameron Tap.

South of the Cameron Tap, TL629 briefly traverses Forest Service lands alongside an existing access road and then exits the CNF and crosses undeveloped County lands and La Posta Creek. Approximately 1 mile south of the Cameron Tap, TL629 re-enters the CNF and proceeds to the south traversing several access roads and Cameron Truck Trail. The remaining 3 miles of TL629 into the Cameron Substation is aligned alongside existing roads, traverses rural residential and undeveloped County lands, and briefly spans public lands managed by the BLM. BLM-managed lands alongside the alignment are primarily undeveloped but support access roads and existing electrical infrastructure.

As shown on Figure B-6, east of the Cameron Tap TL629 proceeds in a northeasterly direction and briefly follows the alignment of La Posta Creek and Old Highway 80. County jurisdictional lands supporting local roadside commercial uses and undeveloped lands are located along this short segment of TL629. Further to the east, the power line spans a U.S. Immigration and Naturalization Service (INS) facility that includes several large buildings to support INS operations, surface parking areas for employees and fleet service vehicles, utilities infrastructure (e.g., fuel and water storage tanks), and other miscellaneous support structures for maintenance

and operational purposes. After traversing the INS facility, TL629 enters Forest Service lands and travels alongside an existing access road for approximately 2 miles. After exiting the CNF, TL629 briefly proceeds east and then turns south and follows an access road across County and BLM jurisdictional lands. Along this segment, the power line traverses sparsely developed rural residential lands, Miller Creek, and dirt access roads. West of the Crestwood Substation, TL629 enters the Campo Indian Reservation and proceeds in a southeasterly direction to the substation across primarily undeveloped lands and access roads. The Golden Acorn Casino and Travel Center is located approximately 1,100 feet north of the Crestwood Substation.

Planned Land Uses

As shown on Figure B-6, north of I-8 TL629 is located adjacent to existing roadways and spans both County and Forest Service lands near the unincorporated communities of Descanso, Guatay, and Pine Valley. South of I-8 and the Glencliff Substation, TL629 is generally located adjacent to existing roadways and traverses both County and Forest Service lands. Segments of TL629 also briefly traverse public lands managed by the BLM and Tribal lands of the Campo Kumeyaay Nation. Between the Descanso and Glencliff substations, the TL629 alignment follows paved roadways in rural communities, and the applicable County land use designation (i.e., RL-40, RL-80, SR-10, SR-4) and zoning (i.e., S92, A70, S80) along this segment reflect the rural character of the surrounding area. Forest Service lands traversed by TL629 are designated Developed Area Interface presumably on account of their location adjacent to existing paved roadways including Old Highway 80. Between the Glencliff Substation and Cameron Tap, TL629 primarily follows the alignment of Old Highway 80 and traverses Forest Service lands designated Developed Area Interface and Back Country; Developed Area Interface land use zones are located near the Glencliff Substation, and Forest Service lands adjacent to the I-8 corridor (including the Boulder Oaks campground) are designated Back Country. County land use and zoning designations adjacent to the TL629 alignment along Old Highway 80 between the Glencliff Substation and the Cameron Tap include rural lands (RL-40 and RL-80), General Rural (S92), General Agriculture (A72), and Open Space (S80). Between the Cameron Tap and the Cameron Substation and the Cameron Tap and Crestwood Substation, a patchwork of County, Forest Service, and BLM lands is present; Forest Service land use zones along the alignment include Back Country and Back Country Motorized Use Restricted, and County land use and zoning designations include RL-40, RL-20, S92, and S80. As stated previously, public lands in the project area and within the boundary of the South Coast RMP are not assigned land use zones or designations by the BLM. Lastly, at this time, land use zones established by the Campo Kumeyaay Nation and applied to Campo Tribal lands are unknown; however, Campo lands are identified as Tribal Lands and zoned Indian Reservation by the County of San Diego.

Forest Service lands traversed by TL629 are not subject to land use zone reallocations ~~proposed~~ adopted by the CNF LMP Amendment. In addition, based on a review of publicly available information, BLM lands traversed by TL629 are not subject to reallocation or redesignation per the Draft South Coast RMP.

TL6923

Existing Land Uses

Located between the Barrett Substation and the Cameron Substation, TL6923 is an east–west power line that traverses County, BLM, and Forest Service lands south of Hauser Creek and north of SR-94 (see Figure B-7). From the Barrett Substation, TL6923 briefly crosses designated County open space and then enters BLM-managed public lands. After crossing Tumeric Way, the power line turns to the south and follows the roadway for approximately 900 feet, at which point TL6923 leaves the roadway, briefly traverses undeveloped lands, and then follows an unnamed dirt access road to the southeast. TL6923 then turns to the east, follows an existing access road, and then traverses open space, Barrett Lake Road, and the southerly tributary of Cottonwood Creek (see Figure B-7). TL6923 proceeds in an easterly direction through McAlmond Canyon and then traverses higher elevation BLM-managed lands to the south. Upon exiting BLM lands, TL6923 follows existing dirt access roads and briefly traverses a small valley in Round Potrero supporting agricultural uses. Upon re-entering BLM lands approximately 6 miles east of the Barrett Substation, TL6923 follows an existing access road, enters the CNF and traverses Potrero Creek. TL6923 turns to the northeast, briefly traverses BLM lands, and follows an existing dirt access road across Forest Service lands. This segment of the power line parallels the alignment of an existing high voltage power line (i.e., the Sunrise Powerlink) and south of the Hauser Wilderness, TL6923 and the Sunrise Powerlink span the PCT at three separate locations. TL6923 runs parallel to the Sunrise Powerlink for approximately 3 miles and crosses the 500-kilovolt (kV) power line north of Big Potrero Truck Trail and at Hauser Creek. Near the Hauser Creek crossing, TL6923 turns to the southeast and traverses County lands supporting limited agriculture, rural residential land uses, and transportation uses (the line crosses Big Potrero Truck Trail and Lake Morena Drive). East of Lake Morena Drive TL6923 follows an existing dirt access road up and over a small hill into the Cameron Substation.

Planned Land Uses

As shown on Figure B-7, TL6923 spans County of San Diego and BLM-managed lands located north of the unincorporated community of Potrero. County land use and zoning designations surrounding the eastern portion of the alignment reflect the sparsely developed, rural character of the area (land use designations include OS-C and RL-40), and the rural residential/agricultural

character of the area surrounding the western extent of the alignment is expressed through rural and semi-rural residential land use and zoning designations allocated in the Lake Morena and Campo areas. Forest Service lands traversed by TL6923 are remotely located and generally supports trail-based recreation use including segments of the PCT located south of Hauser Mountain and the Hauser Wilderness. Applicable Forest Service land use zones traversed by TL6923 include Back Country Motorized Use Restricted and Back Country.

TL6923 does not traverse the Hauser South Recommended Wilderness, and Forest Service lands traversed by TL6923 are not subject to land use zone reallocations ~~proposed~~ adopted by the CNF LMP Amendment. In addition, based on a review of publicly available information, BLM lands traversed by TL6923 are not subject to reallocation or redesignation per the Draft South Coast RMP, and TL6923 does not traverse public lands within the Hauser Mountain Wilderness Study Area.

C79

Existing Land Uses

C79 is an approximate 2-mile distribution line located within the CNF and Cuyamaca Rancho State Park (see Figure B-4). From its deviation from TL626, C79 travels in a northeasterly direction across undeveloped Forest Service lands, Boulder Creek Road and other dirt access roads. Approximately 0.5 mile east of TL 626, C79 enters the King Creek Research Natural Area (RNA) and remains within boundaries of the RNA for approximately 1.5 miles. Managed by the Forest Service for preservation of 50-acre Cuyamaca cypress (*Cupressus stephensonii*) stands in the King Creek drainage, the 1,000-acre King Creek RNA occupies the southwest-facing slope of Cuyamaca Peak (Forest Service 2013b). According to the CNF LMP, uses that retain the research values for which the area is designated are appropriate within RNA (Forest Service 2005a). Upon exiting the RNA, C79 traverses the western slopes of Cuyamaca Peak and terminates atop the peak. From Cuyamaca Peak, C79 follows Lookout Road within Cuyamaca Rancho State Park and descends the east-facing slope of the peak to an existing utility pole located east of the Paso Picacho campground and SR-79. Within the State Park, C79 traverses the Cuyamaca Mountain State Wilderness (approximately 13,200 acres of the state park's 24,700 acres, are designated as wilderness) (California Department of Parks and Recreation 2013).

Planned Land Use

As shown on Figure B-4, the existing C79 alignment spans Forest Service and state park lands. Applicable Forest Service land use zones traversed by C79 include Back Country, Back Country Non-motorized, and Critical Biological (the King Creek RNA is designated Critical Biological). Within state park boundaries, segments of the existing overhead C79 alignment traverse the

Cuyamaca Mountain State Wilderness and non-wilderness lands (lands adjacent to Lookout Road are managed by the Department of Parks and Recreation as scenic open space).

The existing overhead alignment of C79 within the CNF does not traverse existing Recommended Wilderness; however, lands traversed by C79 are subject to the land use zone reallocations ~~proposed~~ adopted by the CNF LMP Amendment (Forest Service 2014). More specifically, existing Back Country Non-motorized lands adjacent to the King Creek RNA (i.e., lands within the Sill Hill IRA) ~~would be~~were redesignated Recommended Wilderness. In addition, as stated in Section D.10.1.1, the Department of Parks and Recreation is in the process of preparing an updated General Plan for Cuyamaca Rancho State Park; however, the draft General Plan document is not yet available for public review. As such, the future allocation of land use zones in the state park including those applicable to the C79 alignment along Lookout Road is not known at this time.

C78

Existing Land Uses

C78 is located in the vicinity of Viejas Indian Reservation and runs from Simon Drive east for approximately 2 miles, mostly across Forest Service-administered lands, and terminates at Via Arturo Road on County jurisdictional lands. The C78 alignment is depicted on Figure B-5. East of Simon Road, the C78 alignment spans a sparsely developed rural residential area on the outskirts of the Viejas Indian Reservation. Approximately one residence is located in the vicinity of the C78 alignment near Viejas Grade Road (an unpaved road), and the distribution line traverses a undulating, primarily undeveloped landscape. A short segment of C78 is also aligned along Via Arturo, a narrow unpaved road with connectivity to Viejas Grade Road.

Proposed Land Uses

As shown on Figure B-5, C78 traverses County and Forest Service lands. Applicable County land use designations traversed by the alignment include RL-40, and applicable Forest Service land use zones include Developed Area Interface and Back Country. Further reflecting the open, rural character of area surrounding the C78 alignment, zoning designations spanned by C78 include A70, S80, and S92.

Forest Service lands traversed by C78 are not subject to land use zones reallocations ~~proposed~~ adopted by the CNF LMP Amendment. In addition, C78 does not traverse Recommended Wilderness established in the CNF LMP.

C157

Existing Land Uses

C157 is approximately 3.5 miles long and spans primarily undeveloped County of San Diego land and Forest Service lands within the CNF near Barrett Lake (see Figure B-5). As measured from west to east and for purposes of SDG&E's proposed project, C157 originates at Skye Valley Road (approximately 0.5 mile east of Japatul Lyons Valley Road) and proceeds in an easterly direction across undeveloped lands along the general alignment of Skye Valley Road. C157 traverses undeveloped County and Forest Service lands located south of Skye Valley Road and approximately 1.5 miles east of Lyons Valley Road, a short segment of C157 extends to the north, crosses a local creek with connectivity to Barrett Lake, and terminates at Camp Barrett. Camp Barrett is a 24-hour, minimum-security boys-only juvenile rehabilitation facility operated by the County of San Diego Probation Department (County of San Diego 2013). Delinquent males between the ages of 16.5 and 18 years old are typically sentenced to Camp Barrett for a period of between 270 and 547 days where they are required to attend school, complete assigned camp work tasks, and complete a demanding structural program focused on successful reintegration (County of San Diego 2013). From the extension to Camp Barrett, C157 also proceeds in an easterly direction, crossing Skye Valley Road, undeveloped lands, and Pine Valley Creek. North of Barrett Lake, C157 briefly traverses the Pine Creek Wilderness (approximately 500 feet of the line is located within Pine Creek Wilderness), spans County lands and then again traverses the Pine Creek Wilderness, non-wilderness Forest Service lands and the Hauser Wilderness. After exiting the Hauser Wilderness and Forest Service lands, C157 briefly proceeds in a southeasterly direction, crosses Skye Valley Road, and then turns to the northeast towards its terminus at Skye Valley Ranch.

Planned Land Uses

In addition to spanning the Back Country Motorized Use Restricted land use zone in the CNF, segments of C157 traverse Existing Wilderness (i.e. the Pine Creek Wilderness and the Hauser Wilderness) located north and east of Barrett Lake. In addition to Forest Service lands, C157 also spans County lands and land use and zoning designations along the C157 alignment include OS-C, RL-40, and A72. With the exception of Skye Valley Ranch and Camp Barrett, existing development near the C157 alignment is extremely sparse and consists primarily of unpaved access roads.

Forest Service lands spanned by C157 are not subject to land use zone reallocations ~~proposed~~ adopted by the CNF LMP Amendment.

C442

Existing Land Uses

As shown on Figure B-6, C442 includes a segment north of I-8 and a segment south of the interstate. North of I-8, C442 is generally located adjacent to Pine Creek Road and Pine Creek Tract, a small access road providing access to residences located east of Pine Creek Road and Pine Creek. From south to north, C442 travels in a northerly direction and periodically extends beyond the main alignment to provide service to rural residences along Pine Creek Road and Pine Creek Tract. C442 is primarily located west of Pine Creek; however, two crossings are made to provide service to homes located east of the creek. Approximately 36 residences are located within 1,000 feet of C442. At its southern terminus, C442 is located within 800 feet west of the Noble Canyon trailhead.

South of I-8, C442 originates west of the Bear Valley OHV Trailhead and south of a small turnaround parking area located at the southern terminus of Pine Valley Road. Located on Forest Service lands, the Bear Valley OHV Trailhead provides OHV enthusiasts access to the Bear Valley Trail which in turn provides access to the Coral Canyon OHV Area to the south. From the trailhead, C157 proceeds in a southerly direction alongside a dirt Forest Service road, and approximately 2 miles of the line are located on Forest Service lands within CNF. After exiting the CNF, C157 proceeds in a slightly southwesterly direction along an existing access road and undeveloped County lands. The segment of C157 located on County jurisdictional lands passes within 1,000 feet of three residences.

Planned Land Uses

North of I-8, C442 is located entirely on Forest Service lands designated Developed Area Interface. The rural residential neighborhood spanned by C442 is located adjacent to Pine Creek Road and Pine Creek Tract and encompasses the Forest Service-designated Pine Creek Recreation Residential Tract. South of I-8, C442 spans Developed Area Interface and Back Country Non-motorized designated lands situated between the Pine Creek Wilderness to the west and I-8 to the east. With the exception of the existing distribution circuit, access roads, and dispersed residences near the southern terminus of C442 and Los Pinos Road, the area surrounding the distribution circuit is undeveloped. County land use and zoning designations applied to lands surrounding the southern segment of C442 include RL-80 and A72.

Forest Service lands traversed by C442 are not subject to land use zone reallocations as ~~proposed~~ adopted by the CNF LMP Amendment.

C440

Existing Land Uses

As shown in Figure B-6, C440 traverses Forest Service lands in the CNF including the Laguna Mountain Recreation Area and several discontiguous "islands" of County jurisdictional land. From the Glencliff Substation, C440 crosses I-8 and then turns to the north; approximately 1 mile of this segment of the distribution circuit is located on primarily undeveloped County lands. C440 continues in a northerly direction across Forest Service lands prior to crossing Sunrise Highway and then generally follows the alignment of the highway for approximately 4 miles. As shown on Figure B-6, C440 deviates from the highway, exits CNF, and briefly traverses undeveloped County lands near Sheephead Mountain Road. This segment travels in an easterly direction and eventually branches off to the north, spanning County lands, Forest Service lands, and Sunrise Highway. West of Kitchen Creek Road, C440 reenters the CNF and turns to the north toward Sunrise Highway. Near Wooded Hill Road, C440 again branches to the south, traverses Forest Service and County lands, and provides power to rural residences located along Morris Ranch Road (residences are located on County lands) and south of Agua Dolce Creek. The main alignment of C440 continues to follow Sunrise Highway in a northerly direction and spans Forest Service lands and small pockets of County lands. Land uses near this segment of C440 include undeveloped lands, rural residential lands, commercial businesses (i.e., The Eagle and the Bear Café) and recreation land uses including the Forest Service-managed Burnt Rancheria Campground and the PCT.

North of the Burnt Rancheria Campground, C440 is concentrated along Sunrise Highway and branches off in multiple locations to provide power to numerous recreation residences located east and west of the highway. Additional land uses near C440 include undeveloped forestlands, visitor serving commercial and lodging, public facilities (fire station), recreation including the Desert View picnic area and trail, the PCT and the Laguna Campground. Further to the north, C440 traverses multiple Forest Service roads and several recreation trails located near the Laguna Campground. Additional detail regarding recreation facilities, trails, and other opportunities available in the Laguna Mountain Recreation Area is provided in Section D.13, Recreation.

The proposed underground alignment of C440 originates near the intersection of Old Highway 80 and Sunrise Highway, and proceeds in a northerly direction along the highway on Forest Service lands for approximately 4 miles. The alignment then briefly exits the CNF and traverses County lands (the proposed underground alignment remains within the Sunrise Highway right-of-way) and then re-enters the national forest and continues in an easterly direction for approximately 3 miles. This segment of the proposed C440 undergrounding terminates west of

Wooded Hill Road and approximately 1.5 miles southwest of the Burnt Rancheria Campground. A discontiguous, approximate 0.50-mile underground segment of C440 is also proposed near the Laguna Campground and more specifically, along Los Huecos Road.

Planned Land Uses

C440 is primarily located adjacent to Sunrise Highway and within the CNF land use zones consist primarily of Developed Area Interface with occasional allocations of Back Country. Lands adjacent to Sunrise Highway generally support access roads, recreation residences, and public facility and limited commercial development, and therefore, the Developed Area Interface land use zone is often applied. Land use designations associated with County lands in the vicinity of the existing overhead distribution line and proposed underground alignment include RL-80, Public/Semi-Public Facility, and Public Agency Lands. Relevant zoning designations include A72, S80, and S92.

Forest Service lands traversed by C440 (i.e., the existing overhead and the proposed underground alignments) are not subject to land use zone reallocations as ~~proposed~~ adopted by the CNF LMP Amendment.

C449

Existing Land Uses

C449 is approximately 7 miles long and traverses Forest Service land in CNF and County lands near Lake Morena County Park and the Morena Reservoir (see Figure B-6). C449 is primarily located on Forest Service lands; however, three relatively short segments of the distribution circuit traverse County lands. The western alignment of C449 originates on Forest Service lands approximately west of Old Highway 80. From this point, C449 proceeds in a westerly direction towards Buckman Springs Road, spans Cottonwood Creek and the PCT, and then heads north and passes within 500 feet of Mountain Empire High School. C449 then turns south and travels along Buckman Springs Road and Morena Stokes Road towards Camp Morena. While the proposed underground alignment is located alongside Morena Stokes Road, a portion of the existing overhead alignment is located east of Buckman Springs Road and Morena Stokes Road, and spans Cottonwood Creek, the PCT and the Lake Morena County Park boundary. The western segment of C449 (both the existing overhead and the proposed underground alignments) terminates at Camp Morena, a Navy installation and component of Naval Base Coronado (Naval Base Coronado 2013).

For purposes of this analysis, the "eastern" segment of C449 originates near Old Highway 80 and Boulder Oaks Campground and as a component of SDG&E's proposed project, the eastern

segment of C449 would be removed. This segment of C449 is located on Forest Service lands and spans the PCT twice, Old Highway 80 and Boulder Oaks Campground and then proceeds in a southerly direction across undeveloped Forest Service and County lands located east of La Posta Creek. Near Buckman Springs Road, C449 spans La Posta Creek and then follows the alignment of Buckman Springs Road to its terminus just south of Morena Village Drive. Two residences are located within 1,000 feet of the southern terminus of the eastern segment of C449.

Planned Land Uses

On Forest Service lands, C449 traverses several CNF land use zones including Back Country, Back Country Non-motorized, Back Country Motorized Use Restricted, and Developed Area Interface. County lands traversed by C449 generally display a rugged, rural character and are designated public agency lands (this designation coincides with CNF boundary and Forest Service land use jurisdiction), RL-80 and RL-40. County zoning designations allocated in the vicinity of C449 include A72 and S80.

Forest Service lands traversed by C449 (i.e., the existing overhead and the proposed underground alignments) are not subject to land use zone reallocations as ~~proposed~~ adopted by the CNF LMP Amendment.

D.10.2 Applicable Regulations, Plans, and Standards

The following section presents a description of plans, policies, ordinances, and regulations applicable to SDG&E's proposed project. In addition to the federal regulations identified in Table D.10-5, TL682 traverses lands of the La Jolla Band of Luiseno Indians and the Pauma-Yuima Band of Mission Indians, TL629 traverses the Campo Indian Reservation between the Cameron Tap and the Crestwood Substation, and the proposed reconductoring of C78 partially occurs on the Viejas Indian Reservation. Therefore, construction, operations, and maintenance activities associated with these facilities may be subject to land use regulations and/policies of the Bureau of Indian Affair (BIA) and Tribe-specific policies and plans.

Table D.10-5 lists the applicable land use plans and regulations by proposed component.

Table D.10-5
Applicable Plans and Regulations by Project Component

Project Component	Applicable Plans and Regulations*
TL682	Forest Service Strategic Plan
	Southern California National Forests Land Management Plan
	Southern California National Forests Land Management Plan Amendment
	Forest Service Manual 2700 - Chapter 2720
	Wild and Scenic Rivers Act of 1968
	Federal Land Policy Management Act
TL6261	Forest Service Strategic Plan
	Southern California National Forests Land Management Plan
	Southern California National Forests Land Management Plan Amendment
	Forest Service Manual 2700 - Chapter 2720
	Federal Land Policy Management Act
TL625	Forest Service Strategic Plan
	Southern California National Forests Land Management Plan
	Southern California National Forests Land Management Plan Amendment
	Forest Service Manual 2700 - Chapter 2720
	Federal Land Policy Management Act
	2001 Roadless Rule
	BLM South Coast Resource Management Plan
	BLM South Coast Resource Management Plan Draft Revision
TL629	Forest Service Strategic Plan
	Southern California National Forests Land Management Plan
	Southern California National Forests Land Management Plan Amendment
	Forest Service Manual 2700 - Chapter 2720
	Wild and Scenic Rivers Act of 1968
	Federal Land Policy and Management Act
	CFR 36 Section 261.20 Pacific Crest National Scenic Trail and Comprehensive Management Plan for the Pacific Crest National Scenic Trail
	BLM South Coast Resource Management Plan
	BLM South Coast Resource Management Plan Draft Revision
TL6923	Forest Service Strategic Plan
	Southern California National Forests Land Management Plan
	Southern California National Forests Land Management Plan Amendment
	Forest Service Manual 2700 - Chapter 2720
	Federal Land Policy Management Act
	CFR 36 Section 261.20 Pacific Crest National Scenic Trial and Comprehensive Management Plan for the Pacific Crest National Scenic Trail
	BLM South Coast Resource Management Plan
	BLM South Coast Resource Management Plan Draft Revision

Table D.10-5
Applicable Plans and Regulations by Project Component

Project Component	Applicable Plans and Regulations*
C79	Forest Service Strategic Plan
	Southern California National Forests Land Management Plan
	Southern California National Forests Land Management Plan Amendment
	Forest Service Manual 2700 – Chapter 2720
	Wilderness Act of 1964
	Federal Land Policy Management Act
	California Wilderness Preservation System
	Cuyamaca Rancho State Park General Plan and Cuyamaca Rancho State Park Draft General Plan Revision
C78	Forest Service Strategic Plan
	Southern California National Forests Land Management Plan
	Southern California National Forests Land Management Plan Amendment
	Forest Service Manual 2700 – Chapter 2720
	Federal Land Policy Management Act
C157	Forest Service Strategic Plan
	Southern California National Forests Land Management Plan
	Southern California National Forests Land Management Plan Amendment
	Forest Service Manual 2300 – Recreation, Wilderness, and Related Resource Management. Chapter 2320 – Wilderness Management
	Forest Service Manual 2700 – Chapter 2720
	Wilderness Act of 1964
	Federal Land Policy Management Act
C442	Forest Service Strategic Plan
	Southern California National Forests Land Management Plan
	Southern California National Forests Land Management Plan Amendment
	Forest Service Manual 2700 – Chapter 2720
	Federal Land Policy Management Act
C440	Forest Service Strategic Plan
	Southern California National Forests Land Management Plan
	Southern California National Forests Land Management Plan
	Forest Service Manual 2700 – Chapter 2720
	Federal Land Policy Management Act
	Wild and Scenic Rivers Act of 1968
C449	Forest Service Strategic Plan
	Southern California National Forest Land Management Plan
	Southern California National Forest Land Management Plan Amendment
	Forest Service Manual 2700 – Chapter 2720
	Federal Land Policy Management Act
	Wild and Scenic Rivers Act of 1968

Notes:

* Pursuant to Article 12, Section 8, of the California Constitution, SDG&E's proposed project is not subject to local plans, policies, or regulations. The CPUC and Forest Service have independent jurisdiction and approval authority for the project; the CPUC is the lead

agency under California law and the Forest Service is the lead federal agency. However, state agencies such as the CPUC are required to consider local land use policies and regulations when making decisions. Therefore, while local plans and policies are not considered applicable and are not listed Table D.10-5, they are included in Appendix LU-1a for informational purposes only and are utilized to assist in determining local land use compatibility.

[1] Forest Service Manual 2300 (as it relates to wilderness management) would be applicable to project activities for portions of TL626. ~~pending approval and adoption of the Southern California National Forests LMP Amendment.~~

D.10.2.1 Federal Regulations

Forest Service

Forest Service Strategic Plan

The Strategic Plan provides direction that guides the Forest Service in delivering its mission to "sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations" (Forest Service 2007). Strategic plans are prepared every 5 years to identify major issues important to the management of national resources and to establish strategic goals that the Forest Service will focus on nationwide for the 5-year period. Key items of the Fiscal Years 2007–2012 strategic plan (a current Fiscal Year plan covering 2013 is not yet available for public review) identified for Forest Service focus includes the provision and sustainment of benefits to the American people, conservation of open space, addressing energy resource needs, and protecting forests and grasslands from conversion to other uses (Forest Service 2007).

Southern California National Forests Land Management Plan

The Southern California National Forests LMP describes the strategic direction at a broad program-level for managing the Angeles, Los Padres, San Bernardino, and Cleveland national forests (collectively referred to as the Southern California National Forests). The LMP consists of three interrelated parts (Part 1, 2, and 3) that work together to "facilitate the use of adaptive management and the development of the management activities" in order to move the national forest towards their desired outcome (Forest Service 2005b, 2005a, and 2005c, respectively). Part 1 of the LMP is a vision document that identifies existing management challenges, strategic goals and desired conditions (Forest Service 2005b). Part 2 consists of the CNF LMP and discusses the various land use designations (and suitable uses for each designation), place-based programs, and special designation overlays applicable to the CNF (Forest Service 2005a). Part 3 provides design criteria/forest plan standards and guidelines applicable to the Southern California National Forests including CNF (Forest Service 2005c). The key items contained within Parts 1 through 3 of the Southern California National Forests LMP are discussed below to emphasize their relevancy to SDG&E's proposed project.

Part 1 Southern California National Forests Vision

- **Goal 7.1.** Retain natural areas as a core for a regional network while focusing the built environment into the minimum land area needed to support growing public needs.

Goal 7.1 is related to the general desired condition that natural and cultural features of the landscape maintain a "sense of place" and that built elements and alterations complement the character of the landscape. To this end, the LMP explains "facilities supporting urban infrastructure needs are clustered on existing sites or designated corridors, minimizing the number of acres encumbered by special-use authorizations. Special-uses serve public needs, provide public benefits, and conform to resource management and protection objectives. All uses are in full compliance with the terms and conditions of the authorization. There is a low level of increase in the developed portion of the landscape as measured by road densities; in fact, over time, the built environment is shifted away from or designed to better protect resource values" (Forest Service 2005b).

In addition, Appendix A, Government Performance and Results Act Priority National Goals, discusses the goals identified in the Forest Service Strategic Plan and identifies applicable objectives that support the goals. In regards to established direction to help meet energy resource needs, Appendix A explains that "the nation's forests and grasslands play a significant role in meeting America's need for producing and transmitting energy and unless otherwise restricted, National Forest System lands are available for energy exploration, development, and infrastructure occupancy (e.g., well sites, pipelines, and transmission lines" (Forest Service 2005b).

Part 2 Cleveland National Forest Strategy (CNF LMP)

Under the existing CNF LMP, seven land use zones have been identified in the CNF, and the majority of lands (over 50%) are designated Back Country, Back Country Motorized Use Restricted, or Back Country Non-Motorized (Forest Service 2005a). Table D.10-6, below, lists the seven identified land use zones, the existing allocation of each land use zone within the CNF, and the suitability of land use zones for (non-rec) special uses as determined by the Forest Service. The LMP also establishes the suitability of major utility corridors in land uses zones; however, the Forest Service classifies major utility corridors as those containing power transmission lines, pipelines, telecommunication lines, and associated right-of-ways (ROWs), and the three designated major utility corridors in the CNF—Valley/Serrano, the West-Wide Energy Corridor, and Sunrise Powerlink—support or could support a 500 kV transmission line. Because SDG&E's proposed project considers existing 69 kV power lines and 12 kV distribution lines, the proposed project is not considered to encompass major utilities. Instead, portions of SDG&E's proposed project with

associated access roads are considered Developed Facilities, while portions lacking roads are considered Non-recreational Special Uses: Low Intensity Land Use.

Table D.10-6
Land Use Zones within Cleveland National Forest

Land Use Zone	Allocation within CNF (acres / % of total forest acreage)	Suitability of Non-recreational Special Uses: Low-Intensity Land Use [1] in Land Use Zone	Suitability of Developed Facilities[1] in Land Use Zone
Developed Area Interface	40,705 / 9.7%	Suitable	Suitable
Back Country	61,024 / 14.5%	Suitable	Suitable
Back Country Motorized Use Restricted	48,582 / 11.5%	Suitable	*By Exception
Back Country Non-motorized	181,535 / 43.1%	*By Exception	Not Suitable
Critical Biological	2,131 / 0.5%	*By Exception	Not Suitable
Recommended Wilderness	11,377 / 2.7%	*By Exception	Not Suitable
Existing Wilderness	75,523 / 17.9%	*By Exception	Not Suitable

Source: Forest Service 2005a.
Notes:
* By Exception = Conditions which are not generally compatible with the land use zone but may be appropriate under certain circumstances.
1 Portions of SDG&E's proposed project lacking roads are considered Non-recreational Special Uses: Low Intensity Land Use. Portions of SDG&E's proposed project with associated access roads (i.e., portions of TL626 and portions of C442) are considered Developed Facilities.

Per the CNF LMP, specific uses are allowed on National Forest lands except when identified as not suitable due to law, national or regional policy, or forest plan revisions. While identified activities may generally occur unless the forest plan prohibits them, activities are not authorized based solely on land use zoning. The suitable uses identified by the Forest Service per each land use zone are intended as guidance for consideration of future activities and do not affect existing authorized occupancy and uses.

A summary of each land use zone is provided in Section D.10.1.

Special Designation Overlays

Special designation overlays function as overlays to the primary land use zones designated in the CNF. Special designation overlays included in the CNF include Wild and Scenic Rivers, IRAs, RNAs, Special Interest Areas, and Other Designations.

Within the MSUP study area, the Wild and Scenic River overlay is applied to Cottonwood Creek the San Luis Rey River, and San Mateo Creek. Cottonwood Creek and the San Luis Rey River are eligible wild and scenic rivers and are spanned by existing power lines and a distribution circuit. TL629, C440, and C449 traverse Cottonwood Creek in the Descanso Ranger District (more specifically, within the Morena and Laguna places), and TL682 traverses the San Luis Rey

River in the Palomar Ranger District. Located in the Trabuco Ranger District, San Mateo Creek is an eligible wild and scenic river. San Mateo Creek is not traversed by a power line or distribution circuit included in the proposed power line replacement projects, but it is located in the MSUP study area, and therefore, it is assumed that ongoing operations and maintenance work associated with existing infrastructure subject to the proposed MSUP could occur near the creek. According to the LMP, all existing facilities, management actions, and approved uses are allowed in eligible river corridors until a decision is made on inclusion into the National Wild and Scenic River System (provided that uses do not interfere with the protection and enhancement of the river's "remarkable" values) but proposed uses and new facilities are not allowed if they could potentially affect wild and scenic eligibility (Forest Service 2005a).

The King Creek, Agua Tibia, and Organ Valley RNAs are included within the MSUP study area. Located within the Descanso Ranger District, the King Creek RNA is spanned by the existing C79 alignment east of its confluence with TL626 near Boulder Creek Road. The target element of interest for the King Creek RNA is a 50-acre Cuyamaca cypress stand in the King Creek drainage, and according to the LMP, uses that retain the research values for which the site is designated are appropriate (Forest Service 2013). Located in the Agua Tibia Wilderness in the northern extent of the Palomar Ranger District, the Agua Tibia RNA is not spanned by an existing power line or distribution circuit subject to the proposed power line replacement projects, but could support activities that would be covered under the proposed MSUP. The Agua Tibia RNA was established for the study of bigcone Douglas-fir (*Pseudotsuga macrocarpa*) trees. Lastly, the Organ Valley RNA is located atop Black Mountain in the Palomar Ranger District, and while the RNA would not be traversed by any of the proposed power line replacement projects, lands underlying the area would be subject to the proposed MSUP. The Organ Valley RNA is dedicated to the study of Engelmann oaks (*Quercus engelmannii*) (Forest Service 2005a).

Existing Special Interest Areas within the vicinity of the proposed power line replacement projects includes the west fork of the San Luis Rey River. According to the CNF LMP, the west fork is of special interest due to populations of native trout located in the Barker Valley area (Forest Service 2005a). Additional Special Interest Areas in the MSUP study area include the Tecate Cypress of Guatay Mountain (Descanso Ranger District) and the botanical resources of the Chiquito Basin and Pine Mountain (Trabuco Ranger District).

Other designations of note identified by in the LMP include OHV areas, transportation corridors, and recreational residential tracts. The Corral Canyon OHV Area is located in the Descanso Ranger District and the Wildomar OHV Area is located in the Santa Ana Mountains and the Trabuco Ranger District. In addition, SR-74 (Ortega Highway) and I-8 through the CNF are Designated Transportation Corridors, and the Valley/Serrano utility corridor (a 12-mile corridor that supports an existing 500 kV transmission line) is the sole Designated Utility Corridor in the

CNF. Lastly, the Guatay, Burnt Rancheria, Laguna, and Pine Creek recreation residential tracts are located near the proposed power line replacement projects in the Descanso Ranger District.

Place-Based Program Emphasis

The CNF is divided into a series of geographical units that are referred to as "Places." Each place has its own landscape character as well as a distinct theme, setting, desired condition, and program emphasis. The desired condition "paints a picture of what the Place could be as the national forest implements activities as it moves towards the overall forest-wide desired conditions," and the program emphasis identifies prioritized activities that the CNF intends to emphasize over the next 3 to 5 years.

Places included within the MSUP study area where proposed power line replacement projects are located are identified and described below. For land use purposes, the desired condition and land use based-program emphasis for each area is included below.

Trabuco Ranger District

Silverado Place. The Silverado Place encompasses canyon lands and mountainous terrain located in the northwestern extent of the Trabuco Ranger District in Orange County. The desired condition of the Silverado Place is that it be maintained as a natural appearing landscape functioning as a backdrop for southern Orange County. The land use based-program emphasis for the area includes improved forest health through vegetative maintenance, development of fire protection measures for canyon communities, improved water quality, and improved access and enhanced trail-based recreation opportunities.

San Mateo Place. The San Mateo Place is primarily an undeveloped landscape that includes the west-facing slopes of the central and south Santa Ana mountains. In addition to the San Mateo Canyon Wilderness (included in the southern part of San Mateo Place), SR-74 (Ortega Highway) traverses the area and separates federally designated wilderness occurring to the north from non-wilderness area occurring to the south. The desired condition for the San Mateo Place is that it be maintained as a predominantly naturally evolving landscape that functions as a wildland and wilderness retreat for area residents. The land use based-program emphasis for the area includes maintenance of the existing primitive and semi-primitive character of the area, preservation of solitude and challenge within designated wilderness, and protection of diverse plant and animal species and their habitat.

Elsinore Place. The Elsinore Place is surrounded by urban development and includes the east-facing slopes of the Santa Ana Mountains that serve as the backdrop for motorists and communities located along the I-15 corridor between the Riverside County and San Diego

County border and the city of Corona. The desired condition for the area is that it be maintained as an undeveloped island in rapidly urbanizing southern Riverside County, and the land use based-program emphasis includes the provision of a variety of quality recreational experiences, maintenance of the primarily natural appearance, and improvement of community protection and defensible space.

Palomar Ranger District

Aguanga Place. Located in the northern portion of the Palomar Ranger District, the Aguanga Place forms a scenic backdrop along SR-79 and supports dispersed recreation use, developed camping, and wilderness use. The desired condition for the Aguanga Place is that it be maintained as a natural appearing landscape, and program emphasis for the area includes the obtainment of additional conservation easements for wildlife connectivity, and maintenance of the scenic integrity of the rural backdrop and the remote and rural character of the landscape.

Palomar Mountain Place. The Palomar Mountain Place encompasses elevations ranging from less than 3,000 feet at the Lake Henshaw spillway to over 6,100 feet at the summit of Palomar Mountain (this elevation range also includes the West Fork of the San Luis Rey River). Access to the Palomar Mountain Place is provided by SR-76, and most visitors access the area from population centers to the west. The desired condition of the area is that it be maintained as a natural appearing landscape. Land Use based-program emphasis for the area includes improvement of public facilities, acquisition of ROWs to enhance access on existing Forest Service roads, and maintenance of roads to accommodate fire equipment and enhancement of remote driving opportunities.

San Dieguito – Black Mountain Place. The San Dieguito – Black Mountain Place is comprised of open space offering diverse opportunities for remote recreation use. The desired condition of the San Dieguito – Black Mountain Place is that it be maintained as a natural appearing landscape to serve as a backyard to rural communities in the area. Land use based-program emphasis for the area includes management of vegetation to enhance community protection, and preservation of wildlife and threatened, proposed endangered, candidate, and sensitive species habitat (Forest Service 2005a).

Descanso Ranger District

Sweetwater Place. The Sweetwater Place is a transition zone between the southwestern deserts and the urbanized communities along the Southern California coast, and the area encompasses the urban fringe of San Diego including the communities of Alpine, Descanso, Pine Valley, Guatay, Japatul Valley, and the Viejas Indian Reservation. Valued landscape attributes to be preserved include built elements that are unobtrusive and exhibit a consistent

architectural theme and the undeveloped character of the area (Forest Service 2005a). Land Use based-program emphasis for the area includes management efforts to help ensure that activities on neighboring private lands are consistent with National Forest land management objectives, minimization of private encumbrance of public lands, and an increased emphasis on boundary management and land adjustments.

Upper San Diego River Place. The Upper San Diego River Place is described as a remote, primitive landscape featuring rugged river canyons, waterfalls, and scenic vista within a rapidly urbanizing area to the west (Forest Service 2005a). The desired condition of the area is that it be maintained as a remote, natural appearing landscape functioning as a respite for the surrounding urban population. In addition, the valued landscape attributes to be preserved include broad, undisturbed expanses of landscape and built elements that are rustic and unobtrusive (Forest Service 2005a). Land Use based-program emphasis for the area includes maintenance of the natural-appearing setting for dispersed recreation activities, acquisition of ROW to improve access, and assessment of the landscape for additional developed campground and enhanced tail-based recreation.

Pine Creek Place. The southern portal of the PCT, Pine Creek Wilderness, Hauser Wilderness, Horsethief Trailhead (and Horsethief Canyon Trail), and recommended wilderness (Pine Creek and Hauser South) are located within the Pine Creek Place. The Forest Service seeks to maintain the Pine Creek Place as a predominately naturally evolving area that functions as a "remote, undeveloped, wilderness landscape where only ecological changes are evident" (Forest Service 2005a). Land use based-program emphasis for the area is to maintain the current character and level of development within the Pine Creek Place, promote wilderness values and managed wilderness areas in accordance with up-to-date wilderness plans, move towards the elimination of existing roads and power lines within wilderness areas, and minimize trespass with motorized vehicles (Forest Service 2005a).

Laguna Place. Located in the heart of the Laguna Mountains, the Laguna Place has a high concentration of private and public recreation uses including recreation residences, resorts, clubs, campground, picnic areas, interpretive sites, trails and trailheads, and a visitor information center (Forest Service 2005a). In addition to the Noble Canyon National Recreation Trail and the PCT, which pass through the Laguna Place and the Laguna Mountain Recreation Area, the Laguna Place supports livestock grazing operations, communication sites, and the abandoned Mount Laguna Air Force Base (Forest Service 2005a). The desired condition for the Laguna Place is a natural appearing landscape that functions as a popular year-round recreation and local scenic touring National Forest destination. Program emphasis for management of the Laguna Place includes protection of the area's unique scenic attributes and ecosystems; maintenance of the natural appearance of the landscape; maintenance of views along the Sunrise Scenic Byway,

Noble Canyon National Recreation Trail, and the PCT; and the provision of high quality recreation settings, experiences, and facilities. In addition, the management of the trail system to minimize user and resource conflicts is also discussed and noted in the place-based program emphasis for Laguna Place (Forest Service 2005a).

Forest-Specific Design Criteria

Part 2 of the LMP contains policies specific to the CNF. Policies applicable to SDG&E's proposed project are listed below.

- **CNF S5.** Consolidate major transportation and utility corridors by co-locating facilities and/or expanding existing corridors.

While CNF S6 (place new power lines (33 kV or less), telephone lines, and television cables underground wherever possible) is applicable to distribution lines, none of the 12 kV distribution circuits included in the proposed power line replacement projects are new. Rather, the six distribution circuits would be converted from wood to steel poles, relocated, removed, and/or placed underground.

In addition to the criteria listed above, criteria related to the protection of biological resources would also be relevant to SDG&E's proposed project; however, these measures are discussed in Section D.4, Biological Resources.

Appendix B, Program Strategies and Tactics, of Part 2 of the Southern California National Forests LMP, describes detailed program strategies that the national forest may implement to achieve desired conditions and goals. Strategies address species of concern management, prevention and control of invasive species, vegetation restoration, restoration of forest health, insect and disease management, watershed function and water management, wilderness, recreation, landscape character, and non-recreation special use authorization. Applicable land use-based strategies associated with non-recreation special use authorizations are listed below. Strategies applicable to biological resources are also listed below; however, they are further discussed and analyzed in Section D.4, Biological Resources.

- **SD 1 Wilderness.** Protect and manage wilderness to improve the capability to sustain a desired range of benefits and values and so that changes in ecosystems are primarily a consequence of natural processes. Protect and manage the areas recommended for wilderness designation to maintain their wilderness values.
- **SD 3 Research Natural Areas.** Protect and manage research natural areas to maintain unmodified conditions and natural processes. Identify a sufficient range of opportunities to meet research needs. Compatible uses and management activities are allowed.

- **LM 1 Landscape Aesthetics.** Manage landscapes and built elements in order to achieve scenic integrity objectives. Also, use the best environmental design practices to harmonize changes in the landscape and to advance environmentally sustainable design solutions.
- **LM 2 Landscape Restoration.** Restore landscapes to reduce visual effects of management activities and nonconforming features. Also, prioritize landscape restoration activities in key places (Aguanga, Elsinore, Laguna, Morena, Palomar Mountain, Pine Creek, San Dieguito/Black Mountain, San Mateo, Silverado, Sweetwater, and Upper San Diego River). Integrate restoration activities with other resource restoration.
- **LM 3 Landscape Character.** Maintain the character of National Forest System lands in order to preserve their intact nature, valued attributes, and open space. Maintain the integrity of the expansive, unencumbered landscapes and traditional cultural features that provide the distinctive character of places. Plan, design, and improve infrastructure along scenic travel routes to meet scenic integrity objectives.
- **Lands 2 – Non-recreation Special Use Authorizations.** Administer existing special-use authorizations in threatened, endangered, proposed, and candidate species habitats to ensure they avoid or minimize impacts to threatened, endangered, proposed and candidate species and their habitats; cultural and scenic resources; and open space values. Require special-use authorizations to maximize opportunities to co-locate facilities and minimize the encumbrance of National Forest System land. For special-use authorization holders operating within threatened, endangered, proposed, and candidate species key and occupied habitats, develop and provide information and education on the ways to avoid and minimize effects of their activities on occupied threatened, endangered, proposed, and candidate species habitat. Use signing, barriers, or other suitable measures to protect threatened, endangered, proposed, and candidate species in key and occupied habitats within the special-use authorization areas.

Part 3 Design Criteria for the Southern California National Forests

Relevant land use and planning-related design criteria of Part 3 of the LMP (Forest Service 2005c) are identified below.

- **Aesthetics Management Standards S9.** Design management activities to meet the Scenic Integrity Objectives (SIOs) shown on the Scenic Integrity Objectives Map.
- **Aesthetics Management Standards S10.** Scenic Integrity Objectives will be met with the following exceptions:
    - Minor adjustments not to exceed a drop of one SIO level is allowable with the Forest Supervisor's approval.

- Temporary drops of more than one SIO level may be made during and immediately following project implementation providing they do not exceed three years in duration.

- **When Implementing Lands and Special-Uses Activities S42.** Include provisions for raptor safety when issuing permits for new power lines and communication sites. Also implement these guidelines for existing permits within one year in identified high-use flyways of the California condor, and within five years in other high-use raptor flyways. Coordinate with California Department of Fish and Game, U.S. Fish & Wildlife Service, and power agencies to identify the high-use flyways.
- **Applicable within Riparian Conservation Areas S47.** When designing new projects in riparian areas, apply the Five-Step Project Screening Process for Riparian Conservation Areas as described in Appendix E, Five-Step Project Screening Process for Riparian Conservation Areas. This design criterion is discussed in detail in Section D.4, Biological Resources, of this EIR/EIS.

As stated above within the Special Designation Overlays discussion, Cottonwood Creek, San Luis Rey River, and San Mateo Creek are eligible wild and scenic rivers; and therefore, Wild and Scenic River Standards S59 is applicable to SDG&E's proposed project.

- **Wild and Scenic River Standards S59:** Manage eligible wild and scenic river segments to perpetuate their free-flowing condition and proposed classifications, and protect and enhance their outstandingly remarkable values and water quality through the suitability study period and until designated or released from consideration. When management activities are proposed that may compromise the outstandingly remarkable value(s), potential classification, or free-flowing character of an eligible wild and scenic river segment, a suitability study will be completed for that eligible river segment prior to initiating activities.

Additional design criteria addressing fish and wildlife would also be relevant and applicable to SDG&E's proposed project. Please refer to Section D.4, Biological Resources, for a discussion of design criteria applicable to biological resources.

Southern California National Forests LMP Amendment

The Forest Service ~~is currently developing~~adopted an amendment to the 2005 Southern California National Forests LMP in October 2014. In addition to revising land use zone allocations for select IRAs within the Angeles, Cleveland, Los Padres, and San Bernardino N~~n~~ational F~~f~~orests~~)~~, the LMP Amendment ~~would also modify~~modified existing LMP monitoring protocols. The need for an amendment was prompted by a January 2011 Settlement Agreement

approved for *California Resources Agency, et al. v. United States Department of Agriculture*, and *Center for Biological Diversity, et al. v. United States Department of Agriculture*. The amendment ~~Monitoring requirement~~ updated~~s~~ ~~would pertain~~ the monitoring requirements for~~to~~ forest health, riparian condition, and biological resource condition, and regarding revisions to existing land use allocations, the LMP Amendment ~~identifies~~ allocated 80,000 acres of Recommended Wilderness in four new recommended wilderness areas in the Southern California National Forests (Forest Service ~~2013~~2014).

While the ~~proposed~~ adopted LMP Amendment would not establish new land use zones within the CNF, it ~~would increase the distribution of more restrictive land use zones in IRAs, more specifically,~~reallocated areas to the Back County Non-Motorized and Recommended Wilderness land use zone allocations in the Coldwater, Ladd, and Trabuco IRAs in south Orange County and southwestern Riverside County, and in the Barker Valley, Caliente, Upper San Diego River, Cedar Creek, Eagle Peak, No Name, and Sill Hill IRAs in San Diego County. ~~Operations and maintenance activities proposed for authorization under the MSUP may occur in the Coldwater, Ladd, Trabuco, and Caliente IRAs; however, t~~The proposed power line replacement projects do not traverse these Coldwater, Ladd, Trabuco, and Caliente IRAs~~IRAs~~, and ~~the~~ therefore, the land use reallocations proposed in these areas by the LMP A~~a~~mendment are not discussed. The eastern portion of the existing TL682 alignment between East Grade Road and Lake Henshaw is located near the Barker Valley IRA; the existing TL626 alignment spans the Cedar Creek, No Name, and Sill Hill IRAs; and the C79 alignment spans the No Name and Sill Hill IRA. TL626 is also located near the Upper San Diego River and Eagle Peak IRAs. Nearly all CNF lands within the aforementioned IRAs ~~would be~~were redesignated Recommended Wilderness as a result of the LMP Amendment.

In addition to the Recommended Wilderness land use zone redesignations that would affect select IRA lands traversed by segments of the TL626 and C79, the ~~proposed~~ adopted LMP Amendment would alter the distribution of other land use zones in CNF IRAs. Table D.10-7 lists the existing distribution of land use zones in the Upper San Diego River, Cedar Creek, Eagle Peak, No Name, and Sill Hill IRAs of the CNF, and the distribution of land use zones ~~proposed~~ adopted in the LMP Amendment.

Table D.10-7
Existing and ~~Proposed~~ Adopted Land Use Zone
Distribution in Select IRAs of the Cleveland National Forest

Land Use Zone	Existing Acres	~~Proposed~~ Adopted Acres (per LMP Amendment)
Back County	6,072	1,775
Back Country Motorized Use Restricted	5,475	3,226

Table D.10-7
Existing and ~~Proposed~~ Adopted Land Use Zone
Distribution in Select IRAs of the Cleveland National Forest

Land Use Zone	Existing Acres	~~Proposed~~ Adopted Acres (per LMP Amendment)
Back Country Non-motorized	68,057	34,772
Critical Biological	506	506
Developed Area Interface	2,995	1,317
Recommended Wilderness	0	41,511
Existing Wilderness	0	0
Total Acres[1]	**83,106**	**83,106**

Source: Forest Service ~~2013~~2014
Note: Total acres is total acreage of select IRAs in the CNF. Select IRAs include the Upper San Diego River, Cedar Creek, Eagle Peak, No Name, and Sill Hill IRAs.

2001 Roadless Area Conservation Rule

The 2001 Forest Service Roadless Area Conservation Rule (2001 Roadless Rule) was implemented to provide, within the context of multiple use management, lasting protection for inventoried roadless areas within the National Forest System (36 CFR § 294.10). Under the 2001 Roadless Rule, new road construction and reconstruction is generally prohibited in Inventoried Roadless Areas (IRAs), and timber harvest is only permitted under a few limited exceptions. Activities within the IRAs described in this chapter, including Barker Valley, Sill Hill, and No Name, are subject to this prohibitions in this regulation.

Forest Service Manual 2300 – Recreation, Wilderness and Related Resource Management

Chapter 2320, Wilderness Management, of Forest Service Manual 2300 contains direction for the management of Forest Service lands designated by Congress as units in the National Wilderness Preservation System. Per Section 2323.1, Management of Recreation, the Forest Service is tasked with the provision of opportunities for public use, enjoyment, and understanding of the wilderness, as well as opportunities for solitude or a primitive and unconfined type of recreation (Forest Service 2006). Regarding improvements and nonconforming facilities and activities in wilderness (Section 2323.13f), trails that fit the natural landscape "as unobtrusively as possible" and bridges designed to minimize the impact on wilderness and displaying minimal size and complexity are identified as acceptable transportation systems in wilderness (Forest Service 2006). Further, Section 2324.3 Management of Structures and Improvements, directs the Forest Service to "limit structures and improvements for administrative purposes or under special use permit to those actually needed for management, protection, and use of wilderness for the purpose for which wilderness was established" (Forest Service 2006).

Region 5 Supplement to Forest Service Manual 2700 – Special Uses Supplement Number 2700-2011-1

Chapter 2720, Special Uses Management, of the Region 5 Supplement to Forest Service Manual 2700, contains direction for power lines on National Forests in the Pacific Southwest Region in order to eliminate or mitigate long-term conflicts between power lines and the management of National Forest lands and resources and to eliminate identified fire and safety hazards. The following direction is provided in Chapter 2720 for power lines up to and including 35 kV and power lines over 35 kV:

a. Power Lines Up To and Including 35 kV. Place all new power line installations underground, except where the environmental analysis indicates that aerial construction provides better protection for National Forest resource and environmental values. The authorizing officer shall require undergrounding of existing aerial power line installations, especially when the holder proposes those lines for upgrading, replacement, or reconstruction, except where the environmental analysis clearly indicates that aerial construction provides better protection for National Forest resource and environmental values.
b. Power Lines Over 35 kV. Forest Service officers may authorize aerial construction, except for those areas where the environmental analysis clearly indicates unacceptable effects on National Forest resource and environmental values. While it is technically feasible to underground electric power lines over 35 kV, construction costs and operational problems increase substantially. Consider undergrounding only after a thorough assessment of the situation by the authorizing officer.

Wilderness Act of 1964

The Wilderness Act of 1964 (16 U.S.C. 1131 et seq.) established a National Wilderness Preservation System that sought to ensure that future development and an increasing population did not hamper the preservation and protection of lands in their natural state. The Wilderness Act provides the definition of a federal wilderness area.

According to Section 2(c) of the Act, wilderness is defined as:

> A wilderness area, in contrast to those areas where a man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. A wilderness area is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence without permanent improvements or human habitation which is protected and

> managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of lands or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

In addition, Section 4(c) of the Wilderness Act prohibits certain uses (including commercial enterprises, permanent or temporary roads, motor vehicles, motorized equipment, motorboats, landing of aircraft, any form of mechanical transport, and structures or installations) from occurring on federally designated wilderness areas (16 U.S.C. 1131 et seq.). An act of Congress is required to formally designate an area recommended for preservation and protection as wilderness. In the event that Congress decides not to formally designate a recommended area as wilderness, the area is managed consistent with the Back Country Non-Motorized land use zone.

Within the CNF, federally designated wilderness areas are delineated by the Existing Wilderness land use zone and include the Pine Creek Wilderness and Hauser Wilderness in the Descanso Ranger District, the Agua Tibia Wilderness in the Palomar Ranger District, and the San Mateo Canyon Wilderness in the Trabuco Ranger District. National Forest lands designated Recommended Wilderness are managed similar to existing wilderness such that the identified wilderness attributes of the area are retained until Congress passes legislation, or the area is released from consideration. ~~Three a~~Areas of Recommended Wilderness ~~are located~~ in the CNF include~~:~~ Cutca Valley (8,619 acres) near the existing Agua Tibia Wilderness, Pine Creek (430 acres) near the Pine Creek Wilderness, ~~and~~ Hauser South (2,302 acres) near the Hauser Wilderness,~~.~~ ~~Also~~and, as discussed above, additional forest service lands ~~would be~~ redesignated Recommended Wilderness ~~upon approval and adoption of the proposed~~with adoption of the LMP Amendment.

Federal Land Policy and Management Act (FLPMA)

~~The Federal Land Policy and Management Act (FLPMA) of 1976 (43 U.S.C. 1701 et seq.) directs public land managers to use and observe the principles of multiple use and sustained yield when developing and revising land use plans. Per Section 103(c), multiple use "means the management of public land and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the America public." Sustained yield refers to the achievement and maintenance in perpetuity of a regular periodic output of the renewable resources of public lands consistent with multiple use.~~

Title V, Rights-of-Way, of the Federal Land Policy and Management Act (FLPMA) authorizes the Secretary of the Interior, with respect to public lands, and the Secretary of Agriculture, with respect to lands within the National Forest System (with the exception of designated wilderness), to grant, issue, or renew ROWs "over, under or through" lands for systems for the generation, transmission, and distribution of electric energy (43 U.S.C. 1701 et seq.). Further, ROWs and permits granted "shall be limited to a reasonable term" with consideration given to facility cost, useful life of facilities, and the public purpose the facility serves (43 U.S.C. 1701 et seq.). Also, FLPMA authorizes the Secretary with jurisdiction over the project in question to require ROW applicants to submit a plan of construction, operation, and rehabilitation for the ROW if significant environmental impacts are anticipated. ROW grants must contain terms and conditions that minimize damage to scenic and aesthetic values and fish and wildlife habitat and otherwise protect the environment; require compliance with applicable air and water quality standards established by or pursuant to applicable federal or state law; and require compliance with state standards for public health and safety, environmental protection, and siting, construction, operation, and maintenance of or for ROWs for similar purposes if those standards are more stringent than applicable federal standards.

Wild and Scenic Rivers Act of 1968

The Wild and Scenic Rivers Act of 1968 (16 U.S.C. 1271 et seq.) preserves select rivers or sections or rivers in their free-flowing condition in order to protect water quality of such rivers and achieve "vital" national conservation measures. The 1968 act established a National Wild and Scenic Rivers System through designation of the initial components of the systems and determined methods by which additional rivers or sections of rivers could be added. A river system may be listed on the Nationwide Rivers Inventory (an inventory of designated wild, scenic, and recreational rivers) if it is free-flowing and has one or more outstanding remarkable values such as exceptional scenery or recreation opportunities, unusual geological formations, rare plant and animal life, and cultural of historical artifacts judged to be of more than local or regional significance (16 U.S.C. Section 1271). The following is a general summary of wild, scenic, and recreational river areas as provided by 16 U.S.C. Section 1273:

- **Wild river areas**: Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.
- **Scenic river areas**: Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

- **Recreational river areas**: Those rivers or sections of river that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

Designated rivers are required to prepare and implement a Comprehensive River Management Plan and a boundary declaration within a designated time frame.

Approximately 12 miles of Cottonwood Creek in the Descanso Range District, and 3.3 miles of the San Luis Rey River (Main) in the Palomar Ranger District are eligible for designation as recreational rivers. Approximately 5 miles of San Mateo Creek in the Trabuco Ranger District is eligible for designation as a wild river (Forest Service 2005a).

BLM South Coast Resource Management Plan

As stated in Section D.10-1, the South Coast RMP and the Draft RMP revision are the applicable planning documents for BLM lands in the project study area. However, the RMP does not apply land use zones to all public lands with the planning area boundary. Rather, specific land use, biological, and recreational designations such as grazing allotments, habitat management areas, and wilderness study areas are used to identify the presence of important environmental resources. Within SDG&E's proposed project area, public lands in the vicinity of Hauser Mountain and McAlmond Canyon are managed as a wildlife habitat management area. Further, grazing allotments on public lands near Potrero, Hauser Mountain, Cameron, and Clover Flat also occur within SDG&E's proposed project area.

BLM South Coast Resource Management Plan Draft Revision

The BLM is currently in the process of preparing a draft revision to the existing South Coast RMP. The Draft RMP revision identifies the Hauser Mountain Wilderness Study Area (WSA) which coincides with contiguous BLM lands in the Hauser Mountain area located south of the existing TL6923 and 500 kV Sunrise Powerlink alignments. While the Hauser Mountain WSA was initially identified in a 1987 wilderness character inventory study conducted by the BLM (preparation and maintenance of public land inventories is required by Section 201(a) of FLPMA), the area is not discussed in the 1994 RMP. According to Section 603(a) of FLPMA (43 U.S.C. 1701 et seq.), WSAs encompass roadless areas of 5,000 acres or more and roadless islands of public lands identified as displaying "wilderness characteristics" and thus suitable for inclusion in the National Wilderness Preservation System. Despite its designation as a WSA in 1987, the Hauser Mountain WSA has yet to obtain formal wilderness designation from Congress. In the interim (i.e., until the federal government makes a formal decision regarding future designation of the WSA) the area will be managed in a manner that maintains its wilderness

characteristics. The draft RMP revision also maintains the existing Potrero and Hauser Mountain grazing allotments (BLM 2011).

Comprehensive Management Plan for the Pacific Crest National Scenic Trail

The purpose of the Comprehensive Management Plan for the PCT is to provide overall guidance and objectives for development and management of the trail. The comprehensive plan is intended to be general, and more specific planning is accomplished at the BLM, National Park Service, and National Forest level in regards to the specific issues and opportunities for portions of the trail located in those jurisdictions. Within the comprehensive plan, general design criteria for the trail is provided, but guidelines for land uses adjacent to the trails are not provided. However, the plan does contain several Memorandum of Agreements (MOAs) between the Forest Service, the U.S. Department of Agriculture, the National Park Service, and the U.S. Department of the Interior concerning the PCT that establishes an agreement between all responsible parties to "afford each other opportunities to review and comment on development plans and programs affecting the trail" (Forest Service 1982). In addition, the agreement encourages local governments with authority to zone private lands adjacent to the trail ROWs to control the uses of such properties such that trail-adjacent private development will harmonize with the purpose of the trail (Forest Service 1982).

36 Code of Federal Regulations (CFR) 261.20 Pacific Crest National Scenic Trail

Use of motorized vehicles on the PCT without a special-use authorization is prohibited by 36 CFR 261.20.

D.10.2.2 State Laws and Regulations

California Wilderness Preservation System

Established by California Public Resources Code, Chapter 5093.30 (also known as the California Wilderness Act), the California Wilderness Preservation System pertains to state-owned lands designated by the legislature as "wilderness areas" or portions of the state park system designated as "state wilderness" by the State Park and Recreation Commission. The intent of the state wilderness preservation system is similar to that of the national wilderness preservation system: to manage wilderness areas and state wilderness for the enjoyment of the public while also preserving and protecting these areas. Management of these areas is subject to the requirements set forth within Sections 5093.30 to 5093.40 and 5019.50 to 5019.80 of the California Public Resources Code. The following is a discussion of the applicable requirements established within these sections.

The definitions of wilderness areas and state wilderness are established in California Public Resources Code Sections 5093.33(c) and 5019.68, respectively. The definition of these areas are similar except that State Park and Recreation Commission-designated state wilderness areas permit structures to be located on these lands provided that the structures existed prior to the designation of the area as a state wilderness, and provided that the State Park and Recreation Commission has determined that the structure(s) may be maintained and used in a manner compatible with the preservation of the wilderness environment. The definition of wilderness areas is consistent with that of wilderness as defined in the Wilderness Act of 1964 (see Section D.10.2.2), and the definition of state wilderness is provided below.

State wilderness, per Section 5019.68 of the California Public Resources Code, is defined as:

> Areas where the earth and its community of life are untrammeled by man and where man himself is a visitor and does not remain. A state wilderness is further defined to mean an area of relatively undeveloped state-owned or leased land which has retained its primeval character and influence or has been substantially restored to a near-natural appearance, without permanent improvements or human habitat, other than semi-improved campgrounds, or structures which existed at the time of classification of the area as a state wilderness and which the State Park and Recreation Commission has determined may be maintained and used in a manner compatible with the preservation of the wilderness environment, or primitive latrines, which is protected and managed to preserve its natural conditions.

Both wilderness areas and state wilderness must have outstanding opportunities for solitude and recreation, contain at least 5,000 acres of land, and contain ecological, geological, or other resources of scientific or scenic value.

Pursuant to California Public Resources Code, Section 5093.36(a), the State Parks and Recreation Commission is responsible for "preserving the wilderness character of an area" and ensuring that "wilderness areas are devoted to the purposes of recreational, scenic, scientific, educational, conservation, and historic use." In addition, nonconforming uses on State Park Lands are typically not permitted unless approved by the State Park and Recreation Commission. As stated in California Public Resources Code 5093.36 (b), "commercial enterprises, temporary or permanent roads, structures or installations, motor vehicles, motorized equipment, landing or hovering of aircraft, flying of aircraft lower than 2,000 feet aboveground, and other forms of mechanical transport are not permitted on State Park Lands unless it is necessary in an emergency involving the health and safety of persons within the wilderness area."

Cuyamaca Rancho State Park General Plan

The intent of the 1986 Cuyamaca Rancho State Park General Plan is to "guide the Department of Parks and Recreation in protection of the [park's] natural and cultural resources and in development of recreational facilities" (California Department of Parks and Recreation 1986). The plan contains five elements, three of which are particularly relevant in regards to management of land uses within the park: the Resources Element and the Land Use and Facilities Element. The Resources Element identifies the natural, cultural, aesthetic, and recreational resources of the park and sets management policies for the protection and use of these resources, and the Land Use and Facilities Element identifies current and proposed land uses (California State Parks 1986). An additional element, the Operations Element, describes the operational guidelines for existing facilities within the park; however, this element is more concerned with visitor-serving facilities and optimized use of the park by a broad segment of the population.

According to the Resources Element summary of aesthetic resources, the Department of Parks and Recreation supports an overall goal of placing all overhead utility lines serving park facilities underground and for all overhead utility lines not serving necessary park facilities to be rerouted around the park (California State Parks 1986). In addition, the General Plan also supports the removal of communication equipment and other conspicuous man-made features from all prominent peaks in the park. Regarding the Land Use and Facilities Element, the General Plan notes that of the Park's more than 24,600 acres, 13,200 acres (54%) are classified as wilderness; 2,560 acres (10%) are classified as cultural preserves; and remaining lands are used as scenic open space (California Department of Parks and Recreation 1986).

Due to alterations to the park landscape resulting from the 2003 Cedar Fire, California State Parks is currently holding open meetings and conducting public outreach in order to draft a new long-range plan for Cuyamaca Rancho State Park. The new plan is anticipated to address reconstruction and relocation of damaged or destroyed facilities, identification of new cultural sites uncovered during the 2003 fire, and possible realignment of the park's trails to "better fit the changed landscape" (Schmidt 2012). According to California State Parks, a Preliminary Draft General Plan and Draft EIR will be available in spring 2014, and the Final General Plan and EIR will be available in fall 2014 (California Department of Parks and Recreation 2013).

D.10.2.3 Regional Policies, Plans, and Regulations

Regional/local policies, plans, and regulations are summarized for the proposed power line replacement projects in Appendix LU-1a. Existing SDG&E electric facilities (power lines, distribution circuits, access roads and other facilities) to be covered under the proposed MSUP are located within the Trabuco, Palomar and Descanso ranger districts which encompass

portions of southeastern Orange County, southwestern Riverside County, and San Diego County. All of the proposed power line replacement projects discussed in detail in this document are located within and surround the Palomar and Descanso ranger districts in San Diego County. As such, policies, plans, and regulations of Orange, Riverside and San Diego counties are considered in Appendix LU-1a.

It should however, be noted that pursuant to Article 12, Section 8, of the California Constitution, SDG&E's proposed project is not subject to local plans, policies, or regulations. The CPUC and Forest Service have independent jurisdiction and approval authority for the project; the CPUC is the lead agency under California law and the Forest Service is the lead federal agency. However, state agencies such as the CPUC are required to consider local land use policies and regulations when making decisions. Therefore, local plans and policies including the General Plans of the County of San Diego, County of Riverside, and County of Orange, are considered and included in Appendix LU-1a for information purposes in order to assist in determining local land use compatibility.

D.10.3 Environmental Effects

D.10.3.1 Definition and Use of CEQA Significance Criteria/ Indicators under NEPA

The CEQA criteria and guidelines described below are also used as indicators of adverse effects under NEPA. The following land use significance criteria were derived from previous environmental impacts assessments and from Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.). Under CEQA, land use impacts would be significant if the project would:

- Temporarily disturb land uses at or near project components.
- Physically divide an established community.
- 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.

D.10.3.2 Applicant Proposed Measures

The applicant has not proposed measures to reduce the potential land use impacts of SDG&E's proposed project.

D.10.3.3 Direct and Indirect Effects

Impact LU-1: Disturb land uses at or near project components due to construction

Given the proximity of existing power lines and distribution circuits to sensitive land uses including rural residential, recreation, and wilderness, construction activities associated with the proposed power line replacement projects could temporarily disturb land uses. For purposes of this analysis, it is assumed that construction activities occurring within 1,000 feet of a sensitive land use could result in potentially significant impacts associated with land use conflicts, potential access blockage, and indirect effects including the generation of dust and noise. For those residences and other sensitive land uses greater than 1,000 feet from the proposed route and construction activities, construction-related impacts would not be adverse under NEPA, and under CEQA would be considered less than significant (Class III) due to their distance from SDG&E's proposed project and the attenuation of impacts that distance would afford. Note, impacts to recreational resources are further discussed in Section D.13 of this EIR/EIS.

Table D.10-8 lists the sensitive land uses that would be temporarily disturbed during construction ~~impacts~~ and classification of the impacts under CEQA and NEPA identified for each component of the proposed power line replacement projects.

Table D.10-8
Sensitive Land Uses within 1,000 Feet of Project Components[1]

Project Component	Sensitive Land Use	Description ~~of Impact~~	Significance Determination
TL682	Rural Residential and Recreation	TL 682 passes within 1,000 feet of approximately 96 residences and within 1,000 feet of the Amago Sports Park, the La Jolla Indian Campground~~,~~ and the San Luis Rey Picnic Grounds. ~~Construction activities including the use of helicopters would temporarily disturb these sensitive land uses.~~	Adverse under NEPA and less than significant with mitigation under CEQA (Class II)
TL626	Rural Residential Recreation	TL626 passes within 1,000 feet of approximately 66 residences and within 1,000 feet of the Inaja Memorial Picnic Area and National Recreation Trail, the Stallion Oaks Campground, and the California Riding and Hiking Trail.	Adverse under NEPA and less than significant with mitigation under CEQA (Class II)
TL625	Rural Residential and Recreation	TL625 passes within 1,000 feet of approximately 147 residences and within 1,000 feet of the Loveland Reservoir access trails and the California Riding and Hiking Trail.	Adverse under NEPA and less than significant with mitigation under CEQA (Class II)
TL629	Rural Residential, Recreation, MSCP Preserve, Elementary Schools	TL629 passes within 1,000 feet of approximately 461 residences and within approximately 1,000 feet of the Pine Creek Trailhead near Old Highway 80, Pine Valley Regional Park, Pine Creek MSCP Preserve, the Pacific Crest National Scenic Trail, and Boulder Oaks Campground. TL629 also passes within 1,000 feet of Descanso Elementary School (intersection of Tanglewood Drive and Viejas Boulevard) and Pine Valley Elementary School.	Adverse under NEPA and less than significant with mitigation under CEQA (Class II)

Table D.10-8
Sensitive Land Uses within 1,000 Feet of Project Components[1]

Project Component	Sensitive Land Use	Description ~~of Impact~~	Significance Determination
TL6923	Rural Residential and Recreation	TL6923 passes within 1,000 feet of approximately 16 residences and spans the Pacific Crest National Scenic Trail south of Hauser Canyon.	Adverse under NEPA and less than significant with mitigation under CEQA (Class II)
C79	Research Natural Area, Recreation and Wilderness	C79 would be removed from Forest Service lands through the King Creek RNA and from the west-facing slopes of Cuyamaca Peak. Within Cuyamaca Rancho State Park, the underground alignment of C79 follows Lookout Road and passes within 1,000 feet of Cuyamaca Mountains State Wilderness and the Paso Picacho Campground. Lookout Road is used by hikers and cyclists to access Cuyamaca Peak.	Adverse under NEPA and less than significant with mitigation under CEQA (Class II)
C78	Rural Residential	C78 passes within 1,000 feet of approximately 6 residences located on the Viejas Indian Reservation.	Adverse under NEPA and less than significant with mitigation under CEQA (Class II)
C157	Wilderness and Rural Residential	C157 passes within 1,000 feet of an existing residence and spans the Pine Creek Wilderness and the Hauser Wilderness (designated National Forest Wilderness).	Adverse under NEPA and less than significant with mitigation under CEQA (Class II)
C442	Rural Residential and Recreation	C442 passes within 1,000 feet of approximately 39 residences and within 1,000 feet of the Noble Canyon Trailhead and Trail and the Bear Valley OHV Trailhead and Trail.	Adverse under NEPA and less than significant with mitigation under CEQA (Class II)
C440	Rural Residential and Recreation	C440 passes within 1,000 feet of approximately 158 residences and within 1,000 feet of recreation areas/facilities/trails in the Laguna Mountain Recreation Area including the Burnt Rancheria Campground, the Pacific Crest National Scenic Trail, the Desert View Trail and Picnic Area, and the Laguna Campground.	Adverse under NEPA and less than significant with mitigation under CEQA (Class II)
C449	Rural Residential, Mountain Empire High School, and Recreation	C449 passes within 1,000 feet of approximately 2 residences, Mountain Empire High School, Pacific Crest National Scenic Trail, Lake Morena County Park, and Boulder Oaks Campground	Adverse under NEPA and less than significant with mitigation under CEQA (Class II)

Note:
1 The 1,000-foot distance referenced in this table is used to identify sensitive land uses that may be potentially impacted by land use conflicts, potential access blockage, and indirect effects including the generation of dust and noise during construction activities. Please see Section D.13, Recreation, for specific distances between project components and identified recreation facilities.

As listed in Table D.10-8, power lines proposed to be replaced traverse or border terrain supporting sensitive land uses including rural residences, schools, federally designated wilderness, and recreational areas including trails, parks, campgrounds, and picnic areas. More specifically, these power lines are located within 1,000 feet of approximately 992 residences, 3 schools, 1 designated state wilderness and 2 federally designated wilderness areas, and over 30 recreation areas, facilities, and trails. Potential impacts during construction of the power line

replacement projects could include temporary use conflicts between light-duty vehicles belonging to residents and heavy-duty construction vehicles and intermittent restriction of access caused by construction activity (i.e., trenching) and/or the presence of heavy construction equipment and vehicles on project area roadways. Further, construction of SDG&E's proposed project may also result in reduced or degraded access to residential, recreational, and/or wilderness lands due to increased traffic volumes on construction access routes and local roads and noise and air quality disturbances generated by the constant movement of materials and equipment to and from construction staging areas and power line and distribution circuit alignment work areas. Absent mitigation, temporary impacts to sensitive land uses located within 1,000 feet of a power line or distribution circuit alignment are considered potentially significant under CEQA and adverse under NEPA. However, with implementation of Mitigation Measure (MM) MM LU-1, temporary use conflicts and other disturbances of land uses at or near project components would be mitigated under NEPA and would be less than significant with mitigation under CEQA (Class II).

MM LU-1 Prepare Construction Notification Plan. Forty-five (45) days prior to construction of the first segment, the project applicant shall prepare and submit a Construction Notification Plan to the appropriate land use jurisdiction agency for approval. The plan will be updated with additional information 45 days before construction of each additional segment. The plan shall identify the procedures that will be used to inform private landowners, schools, and agencies with authority over recreational areas/~~-~~facilities of the location and duration of construction, identify approvals that are needed prior to posting or publication of construction notices, and include text of proposed public notices and advertisements. The plan shall address at a minimum the following components:

- **Public notice mailer.** A public notice mailer shall be prepared and mailed no less than 15 days prior to construction. The notice shall state the type of construction activities that will be conducted and the location and duration of construction, including all helicopter activities. The project applicant shall mail the notice to all residents or property owners within 1,000 feet of project components and to all land use agencies having jurisdiction over a recreation area/facility located within 1,000 feet of a project component. If construction delays of more than ~~7~~ 30 days occur, an additional notice shall be prepared and distributed. To facilitate access to properties obstructed by construction activities, the project applicant shall notify property owners and tenants at least 24 hours in advance of construction activities and shall provide alternative access if required.

- **Newspaper/Website advertisements.** Fifteen (15) days prior to construction of any project component, notices shall be placed in local newspapers and bulletins, including Spanish language newspapers and bulletins, and on the relevant websites of jurisdictional agencies. The Forest Supervisor, District Rangers, and Public Affairs Officer of the Cleveland National Forest shall also be notified. The notices shall state when and where construction will occur and provide information about the public liaison person and hotline. If construction is delayed for more than 7 days, an additional round of noticing shall occur and shall discuss the status and schedule of construction.
- **Public venue notices.** Thirty (30) days prior to construction, notice of construction shall be posted at public venues, such as libraries, community notification boards, ~~post offices,~~ rest stops, community centers, trailheads, informational kiosks, and other public venues applicable to the power line and distribution circuits under construction, such as at trailheads for trails traversed by the electrical infrastructure in question, to inform potentially affected parties of the purpose and schedule of construction activities.
- **Public liaison person and toll-free information hotline.** The project applicant shall identify and provide a public liaison person before and during construction to respond to concerns of neighboring property owners about noise, dust, and other construction disturbance. Procedures for reaching the public liaison officer via telephone or in person shall be included in notices distributed to the public. The project applicant shall also establish a toll-free telephone number for receiving questions or complaints during construction and shall develop procedures for responding to callers. Procedures for handling and responding to calls shall be addressed in the Construction Notification Plan.

Impact LU-2: Divide an established community or disrupt land uses at or near project components

The proposed power line replacement projects would replace existing wood poles with new weathered steel poles, in addition to minor relocation, removal, and undergrounding, generally within the same ROW alignment as the existing power lines. The continued operations and maintenance of existing electric facilities within the CNF to be covered under the MSUP, along with approval of the proposed power line replacement projects, would not introduce a new land use or establish a permanent barrier or obstacle between uses nor create a physical division or separation of use when compared to the existing conditions. Furthermore, support poles and

electricity lines are currently present and visible in the landscape and would continue to be so upon implementation of SDG&E's proposed project. Travel within and outside of the project area would not be physically impeded by the presence of structures or underground trenches, and a physical division would not be created by these structures/features. As such, no land use impacts relating to the division of an established community would occur.

Impact LU-3: Conflict with applicable land use plans, policies, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect

SDG&E's proposed project's consistency with federal and state plans, policies, and regulations is provided in Appendix LU-1b. Table D.10-9 lists the power line replacement projects, applicable plans and regulations, and a consistency determination summary. Where a potential conflict with a plan was identified in Appendix LU-1b, a focused discussion is provided below after Table D.10-9.

Table D.10-9
Plans and Regulations Consistency Analysis Summary

Project	Plans and Regulations	Consistency Analysis Summary
All	Forest Service Strategic Plan	Consistent
TL682	Southern California National Forests Land Management Plan	Consistent
	Southern California National Forests Land Management Plan Amendment	Consistent
	Forest Service Manual 2700 – Chapter 2720	Consistent
	Wild and Scenic Rivers Act of 1968	Consistent
	Federal Land Policy Management Act	Consistent
	Regional Plans and Regulations	Consistent
TL626	Southern California National Forests Land Management Plan	Inconsistent
	Southern California National Forest Land Management Plan Amendment[1]	Inconsistent
	Forest Service Manual 2700 – Chapter 2720	Consistent
	Federal Land Policy Management Act	Consistent
	Regional Plans and Regulations	Consistent
TL625	Southern California National Forests Land Management Plan	Consistent
	Southern California National Forest Land Management Plan Amendment	Consistent
	Forest Service Manual 2700 – Chapter 2720	Consistent
	Federal Land Policy Management Act	Consistent
	BLM South Coast Resource Management Plan	Consistent
	BLM South Coast Resource Management Plan Draft Revision	Consistent
	Regional Plans and Regulations	Inconsistent

Table D.10-9
Plans and Regulations Consistency Analysis Summary

Project	Plans and Regulations	Consistency Analysis Summary
TL629	Southern California National Forests Land Management Plan	Consistent
	Southern California National Forests Land Management Plan Amendment	Consistent
	Forest Service Manual 2700 – Chapter 2720	Consistent
	Wild and Scenic Rivers Act of 1968	Consistent
	Federal Land Policy Management Act	Consistent
	CFR 36 Section 261.20 Pacific Crest National Scenic Trail and Comprehensive Management Plan for the Pacific Crest National Scenic Trail	Consistent
	BLM South Coast Resource Management Plan	Consistent
	South Coast Resource Management Plan Draft Revision	Consistent
	Regional Plans and Regulations	Consistent
TL6923	Southern California National Forests Land Management Plan	Consistent
	Southern California National Forests Land Management Plan Amendment	Consistent
	Forest Service Manual 2700 – Chapter 2720	Consistent
	Federal Land Policy and Management Act	Consistent
	CFR 36 Section 261.20 Pacific Crest National Scenic Trail and Comprehensive Management Plan for the Pacific Crest National Scenic Trail	Consistent
	Federal Land Management Policy Act	Consistent
	South Coast Resource Management Plan	Consistent
	South Coast Resource Management Plan Draft Revision	Consistent
	Regional Plans and Regulations	Consistent
C79	Southern California National Forests Land Management Plan	Consistent
	Southern California National Forests Land Management Plan Amendment	Consistent
	Forest Service Manual 2700 – Chapter 2720	Consistent
	Wilderness Act of 1964	Consistent
	Federal Land Management Policy Act	Consistent
	California Wilderness Preservation System/California Wilderness Act	Consistent
	Cuyamaca Rancho State Park General Plan	Consistent
	Cuyamaca Rancho State Park Draft General Plan Revision	Consistent
C78	Southern California National Forests Land Management Plan	Consistent
	Southern California National Forest Land Management Plan Amendment	Consistent
	Forest Service Manual 2700 – Chapter 2720	Consistent
	Regional Plans and Regulations	Consistent
C157	Southern California National Forests Land Management Plan	Inconsistent
	Southern California National Forests Land Management Plan Amendment	~~Inconsistent~~NA
	Forest Service Manual 2300 – Recreation, Wilderness and Related Resource Management Chapter 2320, Wilderness Management)	Inconsistent
	Forest Service Manual 2700 – Chapter 2720	Consistent
	Wilderness Act of 1964	Inconsistent
	Federal Land Policy Management Act	Consistent

Table D.10-9
Plans and Regulations Consistency Analysis Summary

Project	Plans and Regulations	Consistency Analysis Summary
C442	Southern California National Forests Land Management Plan	Inconsistent
	Southern California National Forests Land Management Plan Amendment	~~Inconsistent~~NA
	Forest Service Manual 2700 – Chapter 2720	Consistent
	Federal Land Policy Management Act	Consistent
	Regional Plans and Regulations	Consistent
C440	Southern California National Forests Land Management Plan	Consistent
	Southern California National Forests Land Management Plan Amendment	Consistent
	Forest Service Manual 2700– Chapter 2720	Consistent
	Federal Land Policy Management Act	Consistent
	Regional Plans and Regulations	Consistent
C449	Southern California National Forests Land Management Plan	Consistent
	Southern California National Forest Land Management Plan Amendment	Consistent
	Forest Service Manual 2700 – Chapter 2720	Consistent
	Federal Land Policy Management Act	Consistent
	Wild and Scenic Rivers Act of 1968	Consistent
	Regional Plans and Regulations	Consistent

Note: 1. Forest Service Manual 2300 (as it relates to wilderness management) and the Wilderness Act of 1964 would apply to ~~be applicable to~~ TL626~~. pending approval and adoption of the Southern California National Forests LMP Amendment.~~

Existing Plans and Policies

TL626

An approximate ~~0.75~~1.7-mile segment of the existing and SDG&E-proposed TL626 alignment traverses Forest Service lands zoned ~~Back Country Non-Motorized~~Recommended Wilderness, and an approximately 0.75 mile segment of TL626, colocated with C79, traverses Forest Service lands zoned as Back Country Non-Motorized. This segment of TL626 is also located within the Sill Hill IRA. This portion of TL626 is supported by accompanying access road and as such, is considered a Developed Facility by the Forest Service. As stated in Table D.10-6, Developed Facilities are not considered a suitable activity/use within the ~~Back Country Non-Motorized~~Back County Non-Motorized or Recommended Wilderness land use zones. This ~~ongoing~~ conflict with the CNF LMP land use zones would continue under SDG&E's proposed project and is considered a conflict under NEPA and a significant impact under CEQA. Approval of a project-~~–~~specific plan amendment, as described by MM LU-2, would provide an exception for ~~–~~SDG&E's proposed project for TL626.

MM LU-2~~———~~If the Forest Service selects to leave TL626 or C442 in place, it would have to approve ~~In order to allow for existing and proposed facilities, the~~

~~Forest Service will approve~~ a project-specific CNF Land Management Plan Amendment contemporaneously with the decision to authorize the MSUP and pole replacement project. The project-specific plan amendment would amend the Land Management Plan to allow –project-specific exemptions for inconsistences with the CNF Land Management Plan land use zones and standards.

~~With implementation of MM LU-2, portions of TL626 considered being Developed Facilities by the Forest Service within the Back Country Non-Motorized land use zone would be allowed and therefore conflicts with the CNF LMP would be addressed as required by the National Forest Management Act and resolved under NEPA. Under CEQA, impacts would be less than significant with mitigation (Class II). While MM LU-2 would provide an exception for the project and allow authorization of the project , it does not reduce the project effects that caused the conflict with the plan. Those physical effects are analyzed under impacts to the existing and planned land uses (Impacts LU-1 and LU-2) and in other land use-related topics addressed in this EIR/EIS. Aesthetic/visual resource issues are described in Section D.2, biological resources are addressed in Section D.4, hydrology and erosion issues are addressed in Section D.9, noise is addressed in Section D.11, and recreation issues are addressed in Section D.13 of this EIR/EIS.~~

With implementation of MM LU-2, inconsistencies with the LMP Amendment would be allowed and more specifically, the portion of TL626 being considered Developed Facilities by the Forest Service would be allowed within the Back Country Non-Motorized and Recommended Wilderness land use zones. With implementation of MM LU-2, conflicts with the CNF LMP Amendment would be addressed as required by the National Forest Management Act and resolved under NEPA. Under CEQA, impacts would be less than significant with mitigation (Class II). While MM LU-2 would provide an exception for the project and allow authorization of the project, it does not address the physical effects associated with the project-specific plan amendment. Those physical effects are analyzed under impacts to the existing and planned land uses (Impacts LU-1 and LU-2) and in other land use-related topics addressed in this EIR/EIS. Aesthetic/visual resource issues are described in Section D.2, biological resources are addressed in Section D.4, hydrology and erosion issues are addressed in Section D.9, noise is addressed in Section D.11, and recreation issues are addressed in Section D.13 of this EIR/EIS.

C442

An approximate 1.8-mile segment of the existing and SDG&E-proposed C442 alignment and accompanying access road traverses the Back Country Non-Motorized land use zone. This segment is considered a Developed Facility by the Forest Service and therefore, is not a suitable use/activity within the Back Country Non-Motorized land use zone. This ongoing conflict with

the CNF LMP land use zones would continue under SDG&E's proposed project for C442 and is considered a conflict under NEPA and a significant impact under CEQA. With implementation of MM LU-2, inconsistencies with the Back Country Non-Motorized land use zone of the CNF LMP would be allowed and therefore conflicts with the CNF LMP would be addressed as required by the National Forest Management Act and resolved under NEPA. Under CEQA, impacts would be less than significant with mitigation (Class II). While MM LU-2 would provide an exception for the project and allow authorization of the project, it does not reduce the project effects that caused the conflict with the plan. Those physical effects are analyzed under impacts to the existing and planned land uses (Impacts LU-1 and LU-2) and in other land use-related topics addressed in this EIR/EIS. Aesthetic/visual resource issues are described in Section D.2, biological resources are addressed in Section D.4, hydrology and erosion issues are addressed in Section D.9, noise is addressed in Section D.11, and recreation issues are addressed in Section D.13 of this EIR/EIS.

C157

The existing alignment of C157 is approximately 3.5 miles in length and as shown in Figure B-5 is partially located within the Congressionally designated Pine Creek Wilderness area and the Hauser Wilderness area. More specifically, approximately 0.1 mile of the existing alignment (2 poles) is located in the Pine Creek Wilderness area, and 0.5 mile of the alignment (7 poles) is located within the Hauser Wilderness area. SDG&E's proposed project for C157 would replace 9 existing wood poles with 10 new steel poles within Congressionally designated wilderness and the established Wilderness land use zone of the CNF LMP. The Wilderness land use zone is the most restrictive in terms of suitable uses of the seven land uses zones applied to lands in the CNF. As shown in Table D.10-6, (Non-Recreational) Special Use: Low Intensity Land Uses are permitted in the Wilderness land use zone (by exception), however, Developed Facilities are not suitable uses in the Wilderness land use zone. Also, pursuant to Section 4(c) of the Wilderness Act of 1964, structures and installations are prohibited in wilderness. As such, reauthorization of C157 through federally designated wilderness and replacement pole activities within the wilderness land use zone would conflict with the regulation of suitable uses within the wilderness land use zone as established in Table 2.2.3 of the Part 2 of the Southern California National Forests LMP. As such, impacts associated with C157 to designated wilderness lands would be adverse under NEPA and significant under CEQA. Because SDG&E's proposed project for C157 would affect lands afforded legal protections under the Wilderness Act of 1964 and would require an act of Congress to allow authorization, which cannot now be known to be feasible, it has been determined for purposes of the analysis conducted in this EIR/EIS, that no feasible mitigation measure is available to address the conflict. Therefore, while SDG&E is free to lobby Congress for special authority or exemption to allow their proposed project for C157 to remain in designated wilderness, Impact

LU-3 associated with SDG&E's proposed project for C157 is considered adverse and unavoidable under NEPA and significant and unmitigable under CEQA (Class I).

Power Line Replacement Projects (Forest Service Manual 2700 – Chapter 2720)

Although Forest Service policy and plan direction favors undergrounding new and existing electric lines under 12 kV, an exception is provided where resource impacts would be greater than overhead construction. As described in Section C.5.7 of this EIR/EIS, the greater impact of undergrounding all existing electric transmission lines and circuits would not be consistent with agency policy and therefore, the proposed power line replacement projects would be consistent with policy direction and guidance established in Forest Service Manual 2700 – Chapter 2720.

Regional Plans and Regulations

TL625

TL625 crosses Loveland Reservoir waters, and support poles are located in relatively close proximity to the northern shoreline of the reservoir near the Forest Service parking area off Japatul Lane. Per SDG&E Safety Standard G8367 Pesticide Management, SDG&E may use one of two insecticides (Hit Squad Industrial Insecticide and Blast 'Em) and may use an assortment of herbicides during pole brushing, cut stump treatments associated with tree removals, or other operations and maintenance activities where vegetation removal is necessary for fire safety reasons (see Section B, Project Description, of this EIR/EIS for full list). While application of herbicides would occur under the direction of a professional pesticide applicator with either a Qualified Applicator License or an Agricultural Pest Control Adviser License in the State of California, potential use of herbicides along the TL625 alignment near Loveland Reservoir and the Sweetwater River would conflict with Conservation Policy 21 of the Alpine Community Plan. Conservation Policy 21 prohibits the use of herbicides in the Alpine Planning Area, particularly in proximity of the Loveland Reservoir and its tributaries. See Section D.9, Hydrology and Water Quality, of this EIR/EIS for further discussion of the use of herbicides and pesticides and associated impacts.

~~**Pending Plans and Regulations**~~

~~***TL626***~~

~~The proposed project would entail wood-to-steel replacement of existing TL626 poles located in the Cedar Creek and Sill Hill IRAs. As shown in Figure D.10-2, under the proposed adopted Southern California National Forests LMP Amendment, existing Back Country and Back Country Non-motorized land use zones associated with these areas would bewere re-designated~~

~~as Recommended Wilderness and approximately 1.7 miles of the SDG&E's proposed TL626 alignment would be located in the Recommended Wilderness land use zone. As such, and pending approval and adoption of the Southern California National Forests LMP Amendment, SDG&E's proposed project for TL626 would entail the installation of a use/activity considered not suitable in the Recommended Wilderness land use zone. This inconsistency with the LMP Amendment land use zones is considered a conflict under NEPA and a potentially significant impact under CEQA. With implementation of MM LU-2, inconsistencies with the LMP Amendment would be allowed and more specifically, the portion of TL626 being considered Developed Facilities by the Forest Service would be allowed within the Recommended Wilderness land use zone. With implementation of MM LU-2, conflicts with the CNF LMP Amendment would be addressed as required by the National Forest Management Act and resolved under NEPA. Under CEQA, impacts would be less than significant with mitigation (Class II). While MM LU-2 would provide an exception for the project and allow authorization of the project, it does not address the physical effects associated with the project-specific plan amendment. Those physical effects are analyzed under impacts to the existing and planned land uses (Impacts LU-1 and LU-2) and in other land use-related topics addressed in this EIR/EIS. Aesthetic/visual resource issues are described in Section D.2, biological resources are addressed in Section D.4, hydrology and erosion issues are addressed in Section D.9, noise is addressed in Section D.11, and recreation issues are addressed in Section D.13 of this EIR/EIS.~~

D.10.4 Forest Service Proposed Actions

D.10.4.1 TL626 Alternative Routes

Environmental Setting/Affected Environment

Options 1 through 4 would reroute TL626 and traverse a combination of CNF-managed lands, private lands, and Tribal lands. The new ROWs would largely cross undeveloped and rural lands designated in the San Diego County General Plan as Public Agency Lands and Rural Land as well as Resource Conservation Areas, and would also traverse lands designated Public/Semi-Public Facilities and Semi-Rural Residential. Sensitive land uses would be similar to that identified in Sections D.10.1 and D.10.2, except that four residences are located in the vicinity of these routes compared to none along the existing TL626.

Option 5, which would relocate a portion of TL 626 around the Inaja Picnic area, is located entirely within the CNF and in the same geographic region as SDG&E's proposed project; therefore, the environmental setting would be similar to that identified in Sections D.10.1 and D.10.2.

With the exception of the alternative segments of TL626, all other aspects and impacts of SDG&E's proposed project would remain unchanged.

Options 1 and 2: SDG&E Proposed Overhead Alignments Through/Around Inaja and Cosmit Reservation Lands

Environmental Effects

Impact LU-1: This alternative would reroute a segment of TL626 to the east along a new undisturbed ROW approximately 5.5 miles (Option 1) or 5.6 miles (Option 2) (Figure B-4a). All other project components would remain the same. Temporary disturbance due to construction would be greater than the project due to the increased activities required to develop a new and longer ROW along with the need to develop new access and would have a greater potential to affect sensitive receptors compared to the reconstruction of TL626 in place as proposed. For residences within 1,000 feet or less from Option 1 and 2 components, residences would be temporarily disturbed by construction activities due to the presence of heavy construction equipment on temporary and permanent access roads, the constant movement of materials and facility equipment to sites and return trips to construction staging areas, and the resulting noise and air quality disturbances. However, with implementation of MM LU-1 as required for SDG&E's proposed project, temporary adverse and significant construction impacts to sensitive receptors would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

Impact LU-2: Options 1 and 2 would establish a new overhead ROW on the periphery of the community of Pine Hills, which consists of a sparsely developed rural landscape. The establishment of a new ROW and overhead power line alignment across undeveloped or sparsely developed rural lands would create a new, linear pattern in the natural-appearing landscape where none are currently visible. While development of the new 69 kV transmission line would not physically displace residential or other land uses, residences would be subject to potential indirect impacts to the quality, access, and functionality of residential land uses associated with visual quality, noise, and public health and safety impacts, as further described in this EIR/EIS, and therefore placement of the 69 kV power line as proposed under Options 1 and 2 would disrupt the physical arrangement of an established community. With implementation of MM LU-3, this adverse and significant impact would be mitigated under NEPA and would be less than significant with mitigation under CEQA (Class II).

MM LU-3 **Revise project elements to minimize land use conflicts**. Ninety (~~At least~~ 90) days prior to completing final transmission line design for the approved route, the project applicant shall notify landowners of parcels through which the alignment would pass regarding the specific location of the ROW, individual towers, staging areas, access roads, or other facilities associated with the project that would occur on the subject property. The notified parties shall be

provided ~~at least~~ 30 days in which to identify conflicts with any planned development on the subject property and to work with the project applicant to identify potential reroutes of the alignment that would be mutually acceptable to the project applicant and the landowner. Property owners whose land may be divided into potentially uneconomic parcels shall be afforded this same opportunity, even if development plans have not been established. The project applicant shall endeavor to accommodate these reroutes to the extent that they are feasible and do not create adverse impacts to resources or to other properties that would be greater in magnitude than impacts that would occur from construction and operation of the alignment as originally planned.

Impact LU-3: Options 1 and 2 would realign a segment of TL626 into primarily private lands designated by the County of San Diego as Public Agency Lands and Rural Land as well as Resource Conservation Areas and lands designated Public/Semi-Public Facilities and Semi-Rural Residential. The Rural Land area traversed by options 1 and 2 is sparsely settled with several residences and would require a new ROW. Option 1 would require a new ROW from the Inaja and Cosmit Reservation and approximately 12 private landowners. Under Option 2, a new ROW would be required from the Forest Service and approximately 13 private landowners. Both Options 1 and 2 would traverse Forest Service lands zoned Back Country Non-Motorized and would be considered Developed Facilities along this segment. As a result, Options 1 and 2 would be inconsistent with the established land use zones of the existing CNF LMP. Options 1 and 2 would however avoid the Cedar Creek IRA and lands ~~that would be~~ designated Recommended Wilderness by the ~~forthcoming~~ adopted LMP Amendment. Therefore, when compared to SDG&E's proposed project for TL626, authorization of Options 1 and 2 would result in fewer land use conflicts by avoiding inconsistencies with the Recommended Wilderness land use zone of the CNF LMP Amendment. Construction, operations, and maintenance would proceed in a similar fashion as that described for SDG&E's proposed project.

Inconsistencies with the land use zones of the existing CNF LMP are considered a conflict under NEPA and a significant impact under CEQA. With implementation of MM LU-2, inconsistencies with the existing CNF LMP and portions of Options 1 and 2 considered Developed Facilities within the Back Country Non-Motorized land use zone would be allowed. Therefore, conflicts with the CNF LMP would be addressed as required by the National Forest Management Act and resolved under NEPA. Under CEQA, impacts would be less than significant with mitigation (Class II). While MM LU-2 resolves the conflict with the CNF LMP and allows for a viable project, it does not reduce the project effects that caused the conflict with the plan. Those physical effects are analyzed under impacts to the existing and planned land uses (Impacts LU-1 and LU-2) and in other land use-related topics addressed in this EIR/EIS. Aesthetic/visual resource issues are described in Section D.2, biological resources are addressed

in Section D.4, hydrology and erosion issues are addressed in Section D.9, noise is addressed in Section D.11, and recreation issues are addressed in Section D.13 of this EIR/EIS. MM LU-2 would be included in any decision that authorizes this alternative.

Option 3 Partial Underground Relocation in Boulder Creek Road

Environmental Effects

Impact LU-1: Options 3a and 3b would consist of placing a segment of TL626 underground in Boulder Creek Road as shown in Figure B-4b. The rerouted underground segment of Option 3a is approximately 11.4 miles long, and Option 3b is 6.3 miles long (each option includes an approximately 1-mile overland segment to interconnect back into the existing TL626 alignment. Temporary impacts resulting from construction activities would be greater than those identified for SDG&E's proposed project due to open trenching along Boulder Creek Road. However, impacts would occur within an existing road ROW. Due to the rural and largely undeveloped nature in the vicinity of Boulder Creek Road, there would not be a substantial change to the baseline condition including the number of sensitive receptors. Therefore, as with SDG&E's proposed project, with implementation of MM LU-1, adverse and significant Impact LU-1 would be mitigated under NEPA and under CEQA, impacts would be less than significant with mitigation (Class II).

Impact LU-2: The proposed undergrounded portions of the 69 kV transmission line along Boulder Creek Road would not divide an established community or disrupt land uses adjacent to the power line. Additionally, the 1-mile overhead segment to interconnect back into the existing TL626 would be located to the west of the community of Pine Hills, primarily within the CNF and would not divide an established community. While development of the new overhead ROW would not physically displace residential or other land uses, residences would be subject to potential indirect impacts to the quality, access, and functionality of residential land uses associated with visual quality, noise, and public health and safety impacts, as further described in this EIR/EIS. Therefore, establishment of a new approximately –1-mile-long overhead ROW as proposed under Options 3a and 3b would disrupt nearby land uses. With implementation of MM LU-3, this adverse and significant impact would be mitigated under NEPA and would be less than significant with mitigation under CEQA (Class II).

Impact LU-3: By relocating the identified segment of TL626 to Boulder Creek Road and out of the Cedar Creek IRA, Options 3a and 3b would avoid Forest Service lands designated Back Country Non-Motorized by the existing CNF LMP and lands that ~~would be~~were designated Recommended Wilderness by the ~~forthcoming~~ adopted LMP Amendment. Therefore, Option 3a and 3b would avoid conflicts with the established land use zones of the existing CNF LMP and

the LMP Amendment and by comparison, would result in fewer CNF LMP land use conflicts than SDG&E's proposed project for TL626.

While a short segment would be installed overhead near the community of Pine Hills, nearly all of Option 3a and Option 3b would be installed underground within Boulder Creek Roadway (see Figure B-4b). Because Boulder Creek Road is a County of San Diego-maintained road, SDG&E would be required to obtain an encroachment permit for underground work from the County of San Diego Department of Public Works. Construction, operations, and maintenance would proceed in a similar fashion as that described for SDG&E's proposed project. Failure to obtainment an encroachment permit from the applicable land use jurisdictional agency would be considered a conflict under NEPA and a potentially significant impact under CEQA. Therefore, MM LU-3 has been provided. With implementation of MM LU-4, land use conflicts under NEPA would be addressed and resolved. Under CEQA, impacts would be less than significant with mitigation under CEQA (Class II).

MM LU-4 Prior to construction, for any structure or object that is placed in, under, or over any portion of a county roadway, SDG&E shall obtain, from the San Diego County Director, Department of Public Works (DPW), a written encroachment permit in accordance with Section 71 (Highway and Traffic) of the San Diego County code of Regulatory Ordinances.

Option 4 Overhead Relocation along Boulder Creek Road

Environmental Effects

Impact LU-1: Option 4 would consist of placing a segment of TL626 overhead in Boulder Creek Road and overland as shown in Figure B-4a. The rerouted segment of Option 4 is approximately 4.7 miles longer that proposed by the project. Construction and operation impacts related to land use and planning would reflect the impact findings similar to those discussed in Section D.10.3.3 for SDG&E's proposed project. Due to the rural nature in the vicinity of Boulder Creek Road proposed under this alternative, there would not be a substantial change to the baseline condition including the number of sensitive receptors. Therefore, as with SDG&E's proposed project, with implementation of MM LU-1, Impact LU-1 would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

Impact LU-2: Option 4 would establish a new overhead ROW on the periphery of the community of Pine Hills, which consists of a sparsely developed rural landscape. The establishment of a new ROW and overhead power line alignment across undeveloped or sparsely developed rural lands would create a new, linear pattern in the natural-appearing landscape where none are currently visible. While development of the new 69 kV power line would not

physically displace residences or other land uses, these residences would be subject to potential indirect impacts to the quality, access, and functionality of residential land uses associated with visual quality, noise, and public health and safety impacts as further described in this EIR/EIS and therefore placement of the 69 kV power line as proposed under Option 4 would disrupt the physical arrangement of an established community. With implementation of MM LU-3, this adverse and significant impact would be mitigated under NEPA and would be less than significant with mitigation under CEQA (Class II).

Impact LU-3: Impact LU-3 would primarily reflect impact findings previously discussed in Section D.10.4.1 for the TL626 option 3a. By relocating the identified segment of TL626 to Boulder Creek Road and out of the Cedar Creek IRA, Option 4 would avoid Forest Service lands designated Back Country Non-Motorized by the existing CNF LMP. In addition, Option 4 would avoid lands that ~~would be~~were designated Recommended Wilderness by the ~~forthcoming~~ adopted LMP Amendment. Therefore, Option 4 would avoid conflicts with the established land use zones of the existing CNF LMP and the LMP Amendment and by comparison, would result in fewer CNF LMP land use conflicts than SDG&E's proposed project for TL626. Option 4 would however construct an overhead alignment adjacent to and/or crossing Boulder Creek Road and would require an encroachment permit from the County of San Diego, a new ROW from private property owners, and a new ROW from the Inaja and Cosmit Reservation. As construction, operations, and maintenance would proceed in a similar fashion as that described for SDG&E's proposed project, it is anticipated that with implementation of MM LU-3 and MM LU-4, development of Option 4 would not conflict with local policies, ordinances, or regulations. Therefore, with implementation of MM LU-4, land use plan and policy conflicts would be resolved under NEPA. Under CEQA, impacts would be less than significant with mitigation (Class II).

Option 5 Reroute and Undergrounding around Inaja Picnic Area

Environmental Effects

Impacts LU-1 and LU-2: Option 5 would reroute less than 0.5-mile segment in close proximity to the existing TL626 alignment (Figure B-4c). All other project components would remain the same. Construction and operational impacts related to land use and planning would essentially be the same for the relocation of TL626 under Option 5 as described in Section D.10.3.3 for SDG&E's proposed project. Due to the rural nature in the vicinity of the effected portion of TL626 proposed under this alternative, there would not be a substantial change to the baseline condition including the number of sensitive receptors. Therefore, as with SDG&E's proposed project, with implementation of MM LU-1, adverse and significant Impact LU-1 would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation

(Class II). Because travel within and outside of the project area would not be physically impeded by the presence of new structures or line associated with Option 5, a physical division of an established community would not occur. As such, LU-2 impacts associated with the division of an established community and/or disruption of land uses during operations would not be adverse under NEPA and under CEQA, impacts would be less than significant (Class III).

Impact LU-3: Within the CNF, the overhead and underground segments of Option 5 would traverse the Developed Area Interface and Back Country Non-Motorized land uses zones. While these land use zones are also traversed by SDG&E's proposed project, the establishment of Option 5 would likely entail the installation of the power line and construction of access road across the Back Country Non-Motorized land use zone located north of pole Z213737. As such, a short segment of Option 5 would be considered a Developed Facility and would conflict with the established –land use zones of the LMP. The remaining segments of TL626 would be the same as identified for SDG&E's proposed project and would result in similar conflicts with the existing LMP and LMP Amendment. Due to the establishment of an access road on Forest Service lands zoned Back Country Non-Motorized north of pole Z213737 and southeast of the Inaja Memorial Trail scenic overlook, Option 5 would result in a new inconsistency with the established land use zones of the existing LMP. This conflict does not occur in the existing condition. Therefore, by comparison, Option 5 would result in greater CNF LMP land use conflicts than SDG&E's proposed project for TL626.

Inconsistencies with the land use zones of the existing CNF LMP are considered a conflict under NEPA and a significant impact under CEQA. With implementation of MM LU-2, inconsistencies with the existing CNF LMP and the CNF LMP Amendment would be allowed. Therefore, conflicts with the CNF LMP would be resolved as required by the National Forest Management Act. Under CEQA, impacts would be less than significant with mitigation (Class II). While MM LU-2 resolves the conflict with the CNF LMP and allows for a viable project, it does not reduce the project effects that caused the conflict with the plan. Those physical effects are analyzed under impacts to the existing and planned land uses (Impacts LU-1 and LU-2) and in other land use-related topics addressed in this EIR/EIS. Aesthetic/visual resource issues are described in Section D.2, biological resources are addressed in Section D.4, hydrology and erosion issues are addressed in Section D.9, noise is addressed in Section D.11, and recreation issues are addressed in Section D.13 of this EIR/EIS. MM LU-2 would be included in any decision that authorizes this alternative.

D.10.4.2 C157 Partial Relocation to Avoid Designated Wilderness

Option 1 SDG&E Proposed Alignment between Two Wilderness Areas

Option 2 City of San Diego Modified Alignment

Environmental Setting/Affected Environment

Sections D.10.1 and D.10.2 describe the existing environmental setting associated with proposed project. The Forest Service proposed action for C157 would be in the same geographic region as SDG&E's proposed project; therefore, the land use and planning setting would be similar as that identified in Sections D.10.1 and D.10.2. A portion of C157 traverses lands under the jurisdiction of the City of San Diego near Barrett Reservoir, as shown in Figure B-5a.

With the exception of the alternative segments of C157, all other aspects and impacts of SDG&E's proposed project would remain unchanged.

Environmental Effects

Impacts LU-1: Options 1 and 2 would reroute an approximately 2-mile segment of C157 to the south of the existing alignment approximately 0.25 mile along new undisturbed ROW (Figure B-5a). All other project components would remain the same. Construction and operational impacts related to land use would essentially be the same for the relocation of C157 under options 1 and 2 as described in Section D.10.3.3 for SDG&E's proposed project. Due to the rural nature in the vicinity of C157 proposed under this alternative, there would not be a substantial change to the baseline condition including the number of sensitive receptors. Therefore, as with SDG&E's proposed project, with implementation of MM LU-1, adverse and significant Impact LU-1 would be mitigated under NEPA, and under CEQA, impacts would be less than significant with mitigation (Class II).

Impact LU-2: Options 1 and 2 shift the alignment approximately 0.25 mile south from the existing alignment; therefore, as with SDG&E's proposed project, they would not divide an established community and no impact would occur (Impact LU-2).

Impact LU-3: The project as proposed for C157 is not consistent with the Wilderness Act of 1964, as C157 is currently within the boundaries of the federally designated Pine Creek Wilderness and the Hauser Wilderness. Under options 1 and 2, C157 would be realigned to locate poles and the distribution line outside of the designated wilderness areas. As such, Options 1 and 2 would avoid lands zoned Existing Wilderness by the existing CNF LMP and would avoid Congressionally designated wilderness. Compared to SDG&E's proposed project for C157,

Options 1 and 2 of this alternative would result in fewer conflicts with the established land use zones of the CNF LMP.

Option 1: Option 1 would comply with the provisions of the Wilderness Act of 1964 and would avoid the Existing Wilderness land use zone. However, Option 1 would be relocated within an area that the City of San Diego has ranked as highest priority for conservation in the draft City Public Utilities Department's LMP, and therefore, would conflict with the suitability of uses within a designated conservation area. A conflict with the City's conservation area is considered an adverse impact under NEPA and potentially significant impact under CEQA. Selection of Option 2 would mitigate this impact under NEPA, and under CEQA the impact would be mitigated to less than significant (Class II).

Option 2: Option 2 would comply with the provisions of the Wilderness Act of 1964, avoids the Existing Wilderness land use zone and avoids impacts to the City's draft LMP. Therefore, LU-3 impacts would not be adverse under NEPA and less than significant under CEQA (Class III).

D.10.4.3 C440 Mount Laguna Underground Alternative

Environmental Setting/Affected Environment

Sections D.10.1 and D.10.2 describe the existing environmental setting associated with C440. This alternative would consist of undergrounding an additional approximately 14.3 miles of C440 proposed for replacement within existing roadways in the Laguna Mountain Recreation Area. As this area is in the same geographic region as SDG&E's proposed project, the land use and planning environmental setting would be the same as that identified in Sections D.10.1 and D.10.2.

With the exception of the alternative segments of C440, all other aspects and impacts of SDG&E's proposed project would remain unchanged.

Environmental Effects

Impact LU-1: Besides undergrounding C440 as proposed by the project, this alternative would consist of undergrounding an additional 14.3 miles of C440 within existing ~~paved~~ roadways in the Laguna Mountain Recreation Area. All other project components would remain the same. There would be an increase in the number of sensitive receptors including residences and recreational users that could be affected by temporary construction activities. Similar to SDG&E's proposed project, with implementation of MM LU-1, adverse and significant Impact LU-1would be mitigated under NEPA, and under CEQA, impacts would be less than significant (Class II).

Impact LU-2 Impact LU-2 would reflect similar impact findings previously discussed in Section D.10.3.3 for SDG&E's proposed project. As such, no land use impacts relating to the division of an established community would occur.

Impact LU-3: The entirety of the Laguna Mountain Recreation Area is designated Developed Area Interface. Both Non-Recreational Special Uses: Low Intensity Land Uses and Developed Facilities are considered suitable uses within the Developed Area Interface land use zone. As such, development of this alternative would not conflict with the established land use zones of the existing CNF LMP. In addition to undergrounding segments of C440 as proposed by SDG&E, this alternative would underground an additional 14.3 miles of C440 within existing paved roadways in the Laguna Mountain Recreation Area. The County of San Diego maintains Sunrise Highway, Mt. Laguna Drive, Mt. Laguna Place, and Los Huecos Road within the Laguna Mountain Recreation Area (County of San Diego 2014b) and accordingly, underground work along these roads would require an encroachment permit from the County of San Diego Department of Public Works. As construction, operations, and maintenance would proceed in a similar fashion as that described for SDG&E's proposed project, it is anticipated that with implementation of MM LU-4, development of this alternative would not conflict with local policies, ordinances, or regulations. Therefore, with implementation of MM LU-4, conflicts with local policies, ordinances, or regulations would be addressed and resolved under NEPA. Under CEQA, impacts would be less than significant with mitigation (Class II).

D.10.5 BIA Proposed Action

Environmental Setting/Affected Environment

Sections D.10.1 and D.10.2 describe the existing environmental setting associated with TL682. The BIA proposed action for TL682 would relocate poles and underground approximately 1,500 feet on Tribal lands. As this area is in the same geographic region as SDG&E's proposed project, the land use and planning setting would be similar to that identified in Sections D.10.1 and D.10.2.

Environmental Effects

Impact LU-1: This alternative would consist of placing approximately 1,500 feet of TL682 underground and relocating poles on Tribal lands. All other project components would remain the same. Temporary LU-1 impacts resulting from construction activities would be slightly greater than those identified for SDG&E's proposed project due to open trenching required for the undergrounding. However, because the modifications proposed to TL682 under this alternative would occur primarily along the existing ROW for TL682, there would not be a change to the baseline condition including the number of sensitive receptors. Therefore, as

with SDG&E's proposed project, with implementation of MM LU-1, adverse and significant Impact LU-1would be mitigated under NEPA, and under CEQA, impacts would be less than significant (Class II).

Impact LU-2: Similar to SDG&E's proposed project, the construction, operations, and maintenance of this alternative would not divide an established community. As such, no land use impacts relating to the division of an established community would occur.

Impact LU-3: Impact LU-3 would reflect impact findings previously discussed in Section D.6.3.3 for SDG&E's proposed project. There would be no additional conflicts with local land use plans or policies with implementation of this alternative.

D.10.6 Additional Alternatives

D.10.6.1 Partial Removal of Overland Access Roads

Environmental Setting/Affected Environment

This alternative would be in the same study area as SDG&E's proposed project; therefore, the environmental setting would be the same as that identified in Sections D.10.1 and D.10.2.

Environmental Effects

Impacts LU-1: Under this alternative, overland access in rugged terrain that exceeds grades of 25% for appreciable distances in proximity to creeks (as outlined in Section C.4.2) would be removed and the areas restored. This alternative removes up to 11~~0~~.5 miles of certain segments of existing exclusive use access roads that are too steep to effectively control road drainage, particularly along TL626 (Boulder Creek) and TL625 (Barber Mountain/Carveacre). All other project components would remain the same. Construction impacts would be essentially the same as SDG&E's proposed project as described in Section D.10.3.3 because there would be no change to temporary construction impacts identified for sensitive land uses under this alternative. Therefore, as with SDG&E's proposed project, with implementation of MM LU-1, adverse and significant Impact LU-1 would be mitigated under NEPA, and under CEQA, impacts would be less than significant (Class II).

Impact LU-2: This alternative would reflect impact findings previously discussed in Section D.10.3.3 for SDG&E's proposed project; therefore, no impact would occur.

Impact LU-3: Impact LU-3 would be reduced under this alternative as the exclusive use access road along TL626 associated with the highly impacted Cedar Creek riparian area within the CNF LMP Amendment area would be removed reducing conflicts with the LMP (see Section D.4,

Biological Resources, for additional details). Access roads in areas designated as Back County Non-Motorized or Recommended Wilderness would also be removed, avoiding a conflict with the LMP land use zones. There would be no additional conflicts with local land use plans or policies with implementation of this alternative.

D.10.6.2 Removal of TL626 from Service

Environmental Setting/Affected Environment

This alternative would remove TL626 from service and replace with system upgrades; either with TL6931 upgrades or a TL625 loop-in as described below. In order to serve existing customers, segments of TL626 would also be converted from 69 kV to 12 kV. The setting associated with the upgrades is described as follows:

a. Upgrade the existing 69 kV TL6931 from the Crestwood Substation to the Boulevard Substation. The setting associated with this component is largely described in SDG&E's TL6931 Fire Hardening Project PEA (SDG&E 2012). As described, the setting consists of the existing TL6931 surrounded by sparsely undeveloped rural land designated in the San Diego County General Plan as Rural and Semi-Rural land uses. Sensitive receptors include approximately 20 residences identified within 200 feet of the existing ROW; no other sensitive receptors have been identified within 0.25 mile of the ROW.
b. Loop-in TL625 into the Suncrest Substation (see Figure C-2). The setting associated with the new 3-mile TL625 loop-in is largely located within the CNF approximately 100 feet from the Sunrise Powerlink ROW between Japatul Road and Suncrest Substation. This area has been described in the Sunrise Powerlink Project Final EIR/EIS. As described in the Sunrise Powerlink EIR/EIS, the majority of the terrain associated along the proposed 3-mile TL625 loop-in consists of rugged and remote terrain with the closest sensitive receptors located 500 feet from the proposed alignment.
c. Convert a 6.5-mile portion of TL626 between the Santa Ysabel and Boulder Creek Substations, along with a 6.8-mile section that is co-located with C79, from 69 kV to 12 kV, which is within the same study area as SDG&E's proposed project. Therefore, the environmental setting would be the same as that identified in Sections D.10.1 and D.10.2.

Environmental Effects

Under this alternative, a 6-mile portion of TL6931 would be reconstructed, or a new 3-mile 69 kV loop-in would be developed along the Sunrise Powerlink, and segments of the TL626 would be converted from 69 kV to 12 kV.

Reconstruction of TL6931

Impacts LU-1: Reconstruction of TL6931 would consist of construction activities similar to that described for the project. Due to the nature of the existing TL6931 alignment, there would not be a substantial change to the baseline condition including the presence of sensitive receptors that could be exposed to temporary construction land use impacts, and therefore LU-1 impacts would reflect similar impact findings previously discussed in Section D.10.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, with implementation of MM LU-1, adverse and significant Impact LU-1 would be mitigated under NEPA, and under CEQA impacts would be less than significant with mitigation (Class II).

Impact LU-2: The proposed reconstruction would follow the existing TL 6931, which currently divides an established community. The proposed reconstruction of TL6931 would not alter the current baseline condition in such a way as to further divide an established community, and this component would reflect similar impact findings previously discussed in Section D.10.3.3 for SDG&E's proposed project. Therefore, no impact would occur (Impact LU-2).

Impact LU-3: Reconstruction of TL6931 would avoid identified adverse and significant Class II LU-3 impacts associated with SDG&E's proposed replacement of TL626, as discussed in Section D.10.3.3, without creating additional impact. Within the San Diego County General Plan, the Mountain Empire Subregional Plan and Boulevard Subregional Planning Area contain policies applicable to TL6931. As described in SDG&E's TL6931 Fire Hardening Project PEA, the reconstruction of TL6931 is consistent with relevant policies of these plans, such as maintaining unobstructed access to power lines, review by SDG&E of encroachments to facilities or alteration of drainage patterns, and the use of existing ROWs for development of new transmission lines. As TL6931, is consistent with applicable planning documents, impacts to relevant land use plans or policies would not be adverse under NEPA, and under CEQA would be less than significant (Class III).

Development of the New 3-Mile Loop-in of TL625

Impacts LU-1: Development of the new TL625 loop-in would consist of similar construction as well as operations and maintenance activities as that described for the project in areas of rugged terrain. Due to the existing undeveloped nature of the proposed alignment, there would not be a substantial change to the baseline condition including the number of sensitive receptors. Therefore, Impact LU-1 would reflect similar impact findings previously discussed in Section D.10.3.3. As with SDG&E's proposed project, implementation of MM LU-1 would, under NEPA, mitigate adverse Impact LU-1 associated with this component, and under CEQA, significant impacts would be less than significant with mitigation (Class II).

Impact LU-2: The proposed loop-in of TL625 would follow the Sunrise Powerlink and would not alter the current baseline condition in such a way as to further divide an established community; therefore, this component would reflect similar impact findings previously discussed in Section D.10.3.3 for SDG&E's proposed project. Therefore, no impact would occur (Impact LU-2).

Impact LU-3: The loop-in of TL 626 would avoid identified adverse and significant Class II LU-3 impacts associated with SDG&E's proposed replacement of TL626, as discussed in Section D.10.3.3, without creating additional impact. The proposed loop-in of TL625 adjacent to the existing Sunrise Powerlink is consistent with CNF LMP direction to co-locate facilities and would occur within suitable land use zones. Therefore, Impact LU-3 would not be adverse under NEPA and would be less than significant under CEQA (Class III).

Convert Segments of TL626 from 69 kV to 12 kV

Impact LU-1: Conversion of segments of TL626 to 12 kV would consist of similar construction as well as operations and maintenance activities as that described for the project; therefore, Impact LU-1 would reflect similar impact findings previously discussed in Section D.10.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, implementation of MM LU-1 would mitigate adverse and significant Impact LU-1 associated with this component. Under NEPA impacts would be mitigated, and under CEQA, impacts would be less than significant with mitigation (Class II).

Impact LU-2: Similar to SDG&E's proposed project, the construction, operations, and maintenance of this alternative would not divide an established community. As such, no land use impacts relating to the division of an established community would occur.

Impact LU-3: Conversion of segments of TL626 to 12 kV and removal of the rest of TL626, including approximately 3.5 miles of the existing line and associated access roads that are causing water quality impacts in the Cedar Creek watershed, would eliminate conflicts with the CNF LMP resulting for reconstruction of TL626 as proposed. Conversion and removal of TL626 as proposed would avoid some conflicts with established land use zones of the existing CNF LMP and with lands that ~~would be~~were designated Recommended Wilderness by the LMP Amendment. The portion of the converted TL626 in the Sill Hill IRA would conflict with the Back County Non-motorized LUZ because of the access road. With implementation of MM LU-2, inconsistencies with the LMP Amendment would be allowed and more specifically, the converted portion of TL626 being considered Developed Facilities by the Forest Service would be allowed within the Back Country Non-Motorized land use zone. With implementation of MM LU-2, conflicts with the CNF LMP Amendment would be addressed as required by the National

Forest Management Act and resolved under NEPA. Therefore, Impact LU-3 would not be adverse under NEPA and would be less than significant under CEQA (Class III).

D.10.7 No Action Alternative

Environmental Effects

Impact LU-1 through LU-3: Under the No Action Alternative, the MSUP would not be issued, and SDG&E would be required to remove the existing electric lines and facilities on CNF-managed lands, thereby eliminating identified land use conflicts (Impact LU-3), as discussed in Section D.10.3.3. However, under the No Action Alternative, SDG&E would be required to develop additional transmission upgrades elsewhere as described in Section C.1.4 of this EIR/EIS. While none of the facilities associated with SDG&E's proposed project would be constructed, removal of the electric lines and restoration activities within the CNF along with the development of additional transmission lines in conformance with California Independent System Operator (CAISO) requirements and/or alternative means of delivering electrical service elsewhere would result in similar or greater land use impacts as described in Section D.10.3.

D.10.8 No Project Alternative

Environmental Effects

Impacts LU-1 through LU-3: Under the No Project Alternative, the proposed power line replacement projects would not be built, and the existing SDG&E electric facilities would remain; therefore, none of the construction impacts described in Section D.10.3 would occur. However, the ongoing land use conflicts with the CNF LMP associated with TL626 and C442 and conflicts with the Wilderness Act and CNF LMP associated with C157 would continue. Operation and maintenance of SDG&E electrical facilities would continue and include routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks and would be based on the requirements of the existing permits. These activities would not increase in duration, intensity, or frequency over existing conditions; therefore, no additional impacts over existing conditions to land use and planning would occur.

D.10.9 Mitigation Monitoring, Compliance, and Reporting Program

Table D.10-10 presents the mitigation monitoring, compliance, and reporting program for land use for SDG&E's proposed project and alternatives.

Table D.10-10
Mitigation Monitoring, Compliance, and Reporting – Land Use

Mitigation Measure	**MM LU-1: Prepare Construction Notification Plan**. Forty-five (45) days prior to construction of the first segment, the project applicant shall prepare and submit a Construction Notification Plan to the appropriate land use jurisdiction agency for approval. The plan will be updated with additional information 45 days before construction of each additional segment. The plan shall identify the procedures that will be used to inform private landowners, schools, and agencies with authority over recreational areas/facilities of the location and duration of construction; identify approvals that are needed prior to posting or publication of construction notices; and include text of proposed public notices and advertisements. The plan shall address at a minimum the following components: • Public notice mailer. A public notice mailer shall be prepared and mailed no less than 15 days prior to construction. The notice shall identify construction activities that would restrict, block, remove parking, or require a detour to access existing residential properties and other sensitive land uses. The notice shall state the type of construction activities that will be conducted and the location and duration of construction, including all helicopter activities. The project applicant shall mail the notice to all residents or property owners within 1,000 feet of project components and to all land use agencies having jurisdiction over a recreation area/facility located within 1,000 feet of a project component. If construction delays of more than ~~7~~ 30 days occur, an additional notice shall be prepared and distributed. To facilitate access to properties obstructed by construction activities, the project applicant shall notify property owners and tenants at least 24 hours in advance of construction activities and shall provide alternative access if required. • Newspaper/website advertisements. Fifteen (15) days prior to construction of any project component, notices shall be placed in local newspapers and bulletins, including Spanish language newspapers and bulletins, and on the relevant websites of jurisdictional agencies. The Forest Supervisor, District Rangers, and Public Affairs Officer of the Cleveland National Forest shall also be notified. The notice shall state when and where construction will occur and provide information about the public liaison person and hotline. If construction is delayed for more than 7 days, an additional round of newspaper notices shall be placed to discuss the status and schedule of construction. • Public venue notices. Thirty (30) days prior to construction, notice of construction shall be posted at public venues such as libraries, community notification boards, ~~post offices,~~ rest stops, community centers, trailheads, informational kiosks, and other public venues applicable to the electrical facility under construction to inform affected residents and recreationists of the purpose and schedule of construction activities. • Public liaison person and toll-free information hotline. The project applicant shall identify and provide a public liaison person before and during construction to respond to concerns of neighboring property owners about noise, dust, and other construction disturbance. Procedures for reaching the public liaison officer via telephone or in person shall be included in notices distributed to the public. The project applicant shall also establish a toll-free telephone number for receiving questions or complaints during construction and shall develop procedures for responding to callers. Procedures for handling and responding to calls shall be addressed in the Construction Notification Plan.
Location	Any project component where residences are located within 1,000 feet of SDG&E's proposed project and all alternatives.
Compliance Documentation[(a)] and Consultation	a. Prepare construction notification plan as defined. b. Provide construction notices for review and approval c. CPUC/Forest Service Monitor: Line item in compliance monitoring report
Timing	a. At least 45 days prior to construction as defined b. Prior to construction as defined c. During construction

Table D.10-10
Mitigation Monitoring, Compliance, and Reporting – Land Use

Responsible Agency	*SDG&E's Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629), BLM (TL629 and TL6923), CSP (C79), *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM LU-2:** If the Forest Service selects to leave TL626 or C442 in place, it would have to approve ~~In order to allow for existing and proposed facilities, the Forest Service will approve~~ a project-specific CNF Land Management Plan Amendment contemporaneously with the decision to authorize the MSUP and pole replacement project. The project-specific plan amendment would amend the Land Management Plan to allow project-specific exemptions for inconsistences with the CNF Land Management Plan land use zones and standards.
Location	TL626, C442, TL626 Forest Service Alternative (Options 1,2, and 5)
Compliance Documentation[(a)] and Consultation	a. Forest Service amends the LMP contemporaneously with the authorization of the MSUP and approval to rebuild, operate, and maintain TL626, C442, and TL626 Forest Service Alternative (Options 1, 2, and 5) as proposed or modify the land use zones b. The LMP Amendment is described in any project Record of Decision authorizing TL626, C442, and TL62 Forest Service Alternative (Options 1, 2, and 5) as proposed
Timing	a. and b. Contemporaneously with the Record of Decision
Responsible Agency	Forest Service
Mitigation Measure	**MM LU-3: Revise project elements to minimize land use conflicts**. At least Ninety (90) days prior to completing final transmission line design for the approved route, the project applicant shall notify landowners of parcels through which the alignment would pass regarding the specific location of the ROW, individual towers, staging areas, access roads, or other facilities associated with the project that would occur on the subject property. The notified parties shall be provided ~~at least~~ 30 days in which to identify conflicts with any planned development on the subject property and to work with the project applicant to identify potential reroutes of the alignment that would be mutually acceptable to the project applicant and the landowner. Property owners whose land may be divided into potentially uneconomic parcels shall be afforded this same opportunity, even if development plans have not been established. The project applicant shall endeavor to accommodate these reroutes to the extent that they are feasible and do not create adverse impacts to resources or to other properties that would be greater in magnitude than impacts that would occur from construction and operation of the alignment as originally planned.
Location	TL626 alternative alignment (Option 1, 2, and 4) where new ROW across private lands would be required
Compliance Documentation[(a)] and Consultation	a. Provide verification of property owner notification. b. Identified by property owners provide potential conflicts to SDG&E c. SDG&E provides potential conflicts to the Forest Service and CPUC for review d. SDG&E shall provide written responses to each submitted conflict/comment. e. CPUC/Forest Service Monitor: Line item in compliance monitoring report
Timing	a. At least 90 prior to final transmission line design b. At least 30 prior to final transmission line design c. Reasonable and feasible reroutes reviewed by CPUC, Forest Service, BIA and Inaja and Cosmit Tribe to minimize land use conflicts. Reduced land use conflicts to be reviewed against potential increased impacts to other resource areas. d. Prior to final transmission line design e. Prior to notice to proceed

Table D.10-10
Mitigation Monitoring, Compliance, and Reporting – Land Use

Responsible Agency	CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626)
Mitigation Measure	**MM LU-4**: Prior to construction, for any structure or object that is placed in, under, or over any portion of a county roadway, SDG&E shall obtain, from the San Diego County Director, Department of Public Works (DPW), a written encroachment permit in accordance with Section 71 (Highway and Traffic) of the San Diego County code of Regulatory Ordinances.
Location	TL626 alternative alignment (Option 3 and 4 in and along Boulder Creek Road), C440 Additional Undergrounding Alternative (County-maintained roads in Laguna Mountain Recreation Area)
Compliance Documentation[a] and Consultation	a. Provide verification of Encroachment Permit(s) obtained from the San Diego County Department of Public Works b. CPUC/Forest Service Monitor: Line item in compliance monitoring report
Timing	a. and b. Prior to construction
Responsible Agency	CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626)

[a] All compliance documentation and consultation records to be available for CPUC and Forest Service staff review upon request.

D.10.10 Residual Unavoidable Effects

As discussed in Section D.10.3.3, C157 as proposed would result in adverse and unmitigable land use conflicts (Impact LU-3). C157 would conflict with the Forest Service LMP and with provisions of the Wilderness Act. While SDG&E is free to lobby Congress for a special exemption to rebuild, operate, and maintain C157 as proposed, the statutory conflict requiring Congressional action would be considered adverse and unavoidable under NEPA and significant and unmitigable under CEQA (Class I).

Forest Service proposed actions including TL 626 Options 1 through 4, and C157 Options 1 and 2, as well as the Removal of TL626 from service alternative would relocate portions of these lines and thereby reduce Impact LU-3 adverse and unmitigable impacts under NEPA and significant and unavoidable under CEQA (Class I), to mitigated under NEPA and less than significant with mitigation under CEQA (Class II).

D.10.11 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for the Implementation of the California Environmental Quality Act, as amended.

16 U.S.C. 1131–1136. Wilderness Act of 1964, as amended. Public Law 88-577.

16 U.S.C. 1271–1287. National Wild and Scenic Rivers Act.

36 CFR 261.20. Pacific Crest National Scenic Trail.

43 U.S.C. 1701–1785. Federal Land Policy and Management Act of 1976, as amended.

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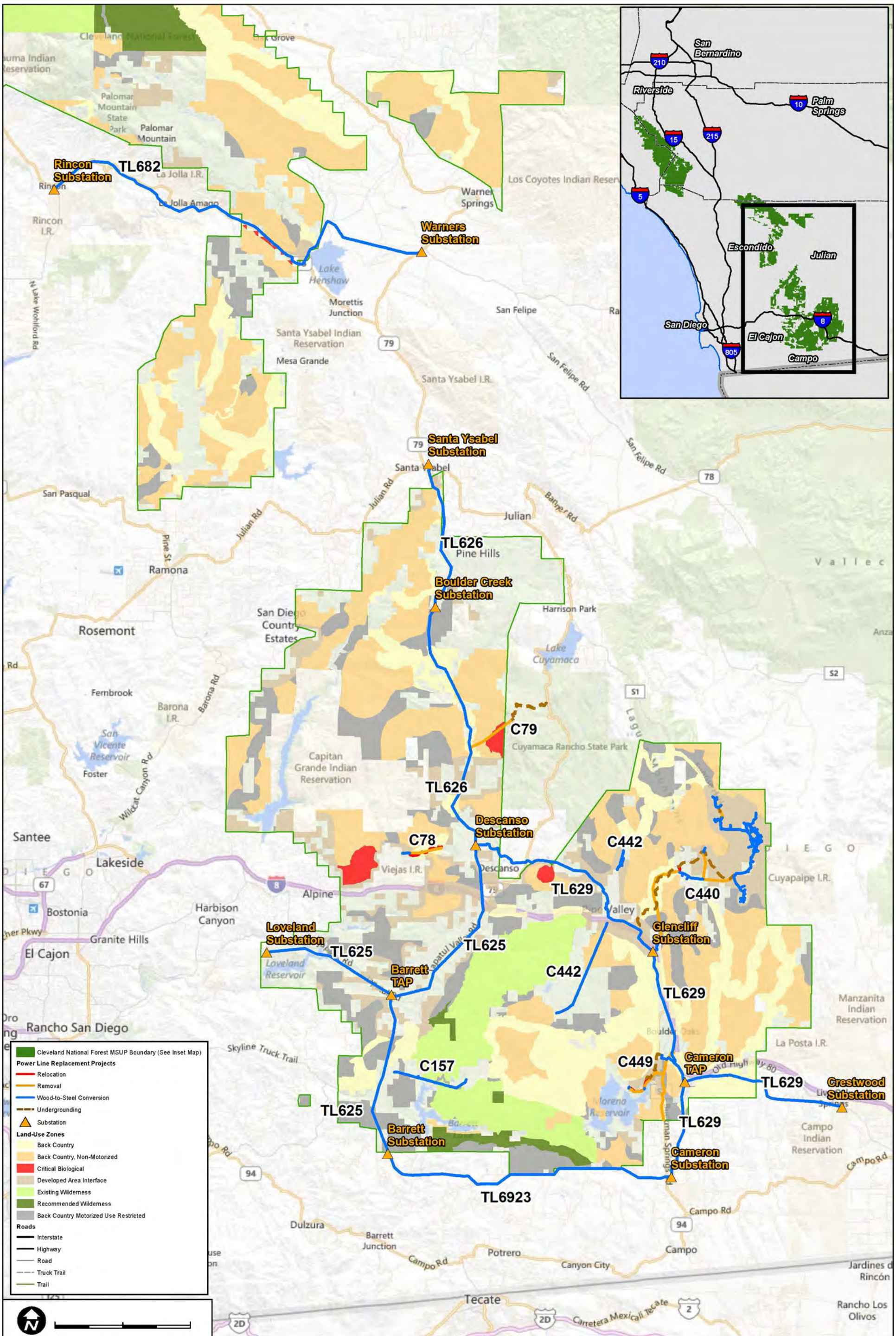

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FIGURE D.10-1

Cleveland National Forest Land Use Zones (Existing)

MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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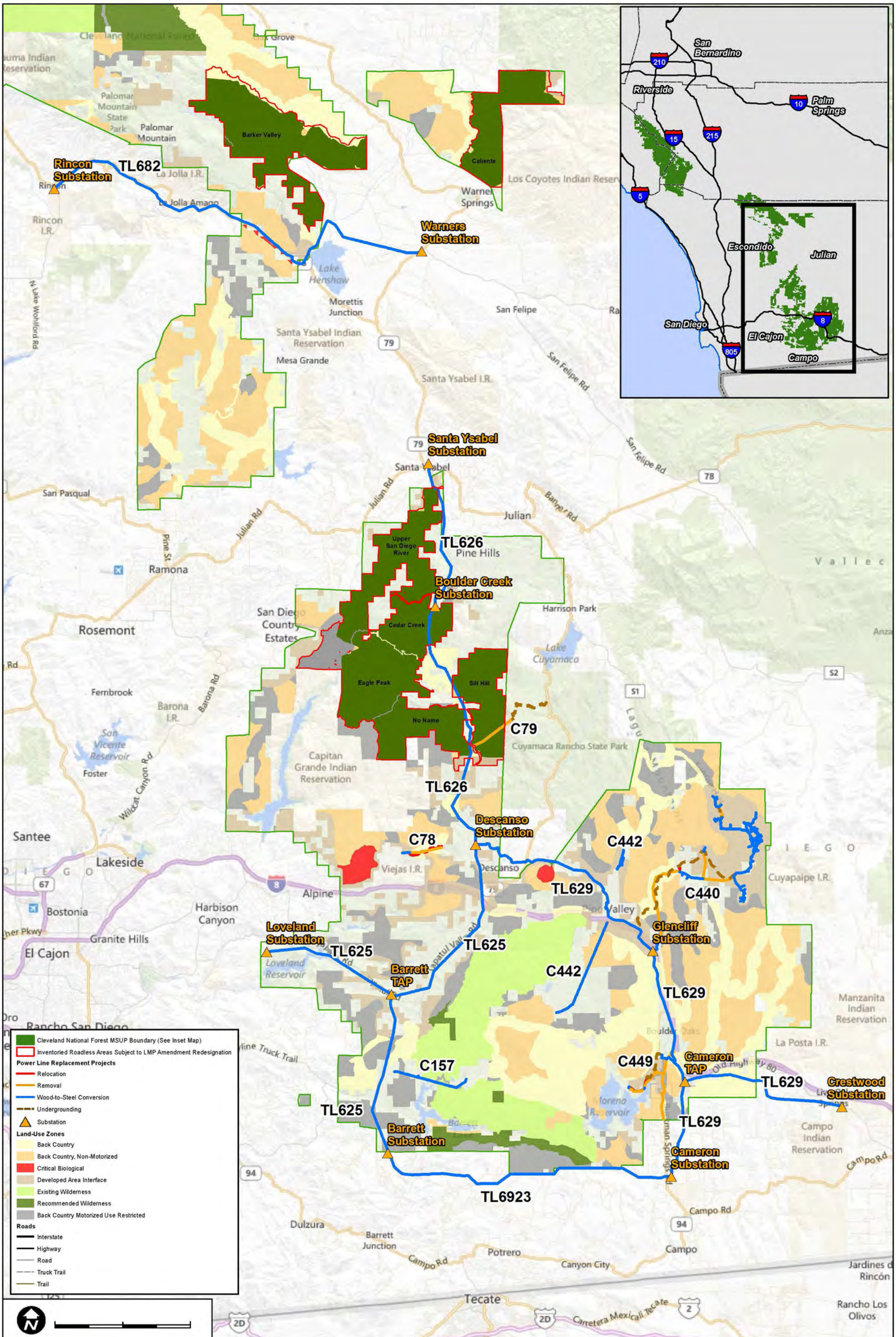

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FIGURE D.10-2

Cleveland National Forest Land Use Zones (LMP Amendment)

MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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D.11 Noise

This section addresses potential noise impacts resulting from construction and operation of the proposed power line replacement projects along with the operation and maintenance activities proposed for authorization under the MSUP. Section D.11.1 provides a description of the existing noise setting/affected environmental, and the applicable noise ordinances and limitations are introduced in Section D.11.2. An analysis of impacts/environmental effects of SDG&E's proposed project and discussion of mitigation are provided in Section D.11.3. The U.S. Forest Service (Forest Service) proposed action is described in Section D.11.4, and Section D.11.5 discusses the Bureau of Indian Affairs (BIA) proposed action. Additional alternatives are described in Section D.11.6. Section D.11.7 discusses the No Action Alternative, and Section D.11.8 describes the No Project Alternative. Section D.11.9 provides mitigation monitoring, compliance, and reporting information. Section D.11.10 addresses residual effects of the project, and Section D.11.11 lists the references cited in this section.

D.11.1 Environmental Setting/Affected Environment

This section provides a description of ambient noise levels and sensitive noise receptors near the various components of SDG&E's proposed projects.

Methodology and Assumptions

The existing SDG&E electric facilities (power lines, access roads, and other facilities) to be covered under the proposed MSUP are located within the Trabuco, Palomar, and Descanso ranger districts within the Cleveland National Forest (CNF) within southwestern Orange County and southeastern San Diego County, with the majority of the study area including all of the proposed power line replacement projects located within and surrounding the Palomar and Descanso ranger districts in San Diego County. These existing facilities are currently operating and routinely maintained and repaired as necessary. The noise impacts associated with these past actions are part of the baseline for the analysis of SDG&E's proposed project and alternatives.

Ambient noise data and baseline information included in this section is based on information from the *Cleveland National Forest Electric Safety and Reliability Project Technical Noise Study Report* prepared by Acentech in April 2012.

D.11.1.1 General Characteristics of Community Noise

To describe environmental noise and to assess project impacts on areas that are sensitive to community noise, a measurement scale that simulates human perception is customarily used. The

basic terminology and concepts of noise are described in this section. Technical terms are defined in Table D.11-1.

Table D.11-1
Definitions of Technical Terms Related to Noise

Term	Definition
Ambient noise level	This is the composite of noise from all sources near and far; the normal or existing level of environmental noise at a given location.
A-weighted sound level (dBA)	The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network; the A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Community noise equivalent level (CNEL)	CNEL is the average equivalent A-weighted sound level during a 24-hour day, and it is calculated by adding 5 dB to sound levels in the evening (7 p.m. to 10 p.m.) and adding 10 dB to sound levels in the night (10:00 p.m. to 7:00 a.m.).
Decibel (dB)	This is a unit for measuring sound pressure level equal to 10 times the logarithm to the base 10 of the ratio of the measured sound pressure squared to a reference pressure, which is 20 micropascals.
Equivalent noise level (L_{eq})	This is the sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period. L_{eq} is designed to average all loud and quiet sound levels occurring over a time period.

Sound (noise) levels are measured in decibels (dB). Table D.11-2 depicts common sound levels for various noise sources. Community noise levels are measured in terms of A-weighted sound level. The A-weighted scale of frequency sensitivity accounts for the sensitivity of the human ear, which is less sensitive to low frequencies, and correlates well with human perceptions of the annoying aspects of noise. The A-weighted decibel scale (dBA) is cited in most noise criteria.

Table D.11-2
Typical Sound Levels Measured in the Environment and Industry

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	— 110 —	Rock band
Jet flyover at 1,000 feet		
	— 100 —	
Gas lawnmower at 3 feet		
	— 90 —	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	— 80 —	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower, 100 feet	— 70 —	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	— 60 —	
		Large business office

Table D.11-2
Typical Sound Levels Measured in the Environment and Industry

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Quiet urban daytime	— 50 —	Dishwasher in next room
Quiet urban nighttime	— 40 —	Theater, large conference room (background)
Quiet suburban nighttime		
	— 30 —	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	— 20 —	
		Broadcast/recording studio
	— 10 —	
Lowest threshold of human hearing	— 0 —	Lowest threshold of human hearing

Source: Caltrans 2009, p. 2-21.

People are generally more sensitive and annoyed by noise during the evening and nighttime. Thus, another noise descriptor used in community noise assessments, the community noise equivalent level (CNEL), was introduced. The CNEL scale represents a time-weighted 24-hour average noise level based on the A-weighted sound level. CNEL accounts for the increased noise sensitivity during the evening (7 p.m. to 10 p.m.) and nighttime hours (10 p.m. to 7 a.m.) by adding 5 dB and 10 dB, respectively, to the average sound levels occurring during these hours. Another noise descriptor, termed the day–night average sound level (L_{dn}), is also used. The L_{dn} is similar to CNEL except there is no penalty for the noise level occurring during the evening hours.

Human activities cause community noise levels to be widely variable over time. For simplicity, sound levels are usually best represented by an equivalent level over a given time period (L_{eq}). The L_{eq}, or equivalent sound level, is a single value (in dBA) for any desired duration, which includes all of the time-varying sound energy in the measurement period, usually 1 hour.

Community noise levels are usually closely related to the intensity of nearby human activity. Noise levels are generally considered low when ambient levels are below 45 dBA, moderate in the 45 to 60 dBA range, and high above 60 dBA. In wilderness areas, the L_{dn} noise levels can be below 35 dBA. In small towns or wooded and lightly used residential areas, L_{dn} is more likely to be around 50 or 60 dBA. Levels around 75 dBA are more common in busy urban areas, and levels up to 85 dBA occur near major freeways and airports. Although people often accept the higher levels associated with very noisy urban residential and residential–commercial zones, they nevertheless are considered adverse to public health.

D.11.1.2 Noise Environment and Sensitive Noise Receptors in the Project Area

The existing noise environment in the study area is dominated by noises associated with the rural, public, semipublic, and agricultural land uses. Traffic along freeways, highways, and local roadways also contributes to the existing noise environment. Due to the various land uses and noise sources, different levels of noise are present within the study area. Ambient noise levels tend to be lowest in the open, undeveloped areas that comprise much of the study area. Noise levels are typically the highest near the major transportation facilities, including Interstate 8 (I-8), and State Routes 76 and 78 (SR-76 and SR-78).

The existing noise environment also includes noise associated with operations and maintenance activities required to maintain the existing transmission lines. Ongoing existing operations and maintenance activities that generate noise in the study area include: the use of four-wheel-drive vehicles, helicopters, boom trucks, and line trucks to access the transmission lines and poles; washing activities; tree and vegetation trimming activities; access road maintenance; and hardware replacement and repair work.

The existing transmission lines generate corona noise, which is also considered an existing operational noise. Corona noise is the audible noise created when energy dissipates from electrical conductive equipment. As energy dissipates from electrical conductive equipment, some of the energy causes local pressure changes that result in audible noise, or in radio or television interference. The audible corona noise generated by corona discharge is characterized as a hissing or crackling sound that may be accompanied by a hum. Slight irregularities or water droplets on the conductor and/or insulator surface accentuate the electric field strength near the conductor surface, making corona discharge and the associated audible noise more likely. Therefore, corona noise from transmission lines is often pronounced after wet weather, when the transmission lines are wet and the noise from the weather event is over. The corona noise from the existing single-circuit 69-kilovolt (kV) power line ranges from 9 dBA L_{eq}, under typical conditions, to 24 L_{eq} dBA, under worst-case conditions (SDG&E 2013a).

Sensitive noise receptors, such as residential uses, where excessive noise levels would be considered an annoyance are distributed throughout the project area. A description of noise-sensitive receptors and the existing noise environment associated with the proposed power line replacement projects is presented below. Existing noise measurements were taken by Acentech at various locations that were selected to be representative of existing conditions along the proposed power line replacement projects. Over a 25-hour period, 1-hour L_{eq} noise measurements were taken at each location using one of several noise monitors: a Larson Davis Model 870, Larson Davis Model 820, or a Rion Model NL 31 (Acentech 2012).

TL682

The Denver C. Fox Outdoor Education School, located on Forest Service lands at 24102 Highway 76, Santa Ysabel; the La Jolla Indian Campground located at the La Jolla Indian Reservation; and 96 residential properties are considered to be sensitive noise receptors along the TL682 alignment (for more information see Section D.10, Land Use). Noise measurements were made at two locations along TL682, locations S and T, as shown on Figure D.11-1.

Location S was within the San Luis Rey Picnic Area, 70 feet south of SR-76. Noise measurements were taken on September 6 and September 7, 2011. Sources of ambient noise included local traffic on SR-76, aircraft, and natural sounds (such as cicada during nighttime periods). The average daytime L_{eq} was 48 dBA, and the CNEL was 67 dBA.

Location T was within the La Jolla Indian Reservation, approximately 1,150 feet south of the SR-76/Poomacha Road intersection. Noise measurements were taken on September 6 and September 7, 2011. Sources of ambient noise included traffic on SR-76, residential activities, and natural sounds. The average daytime L_{eq} was 41 dBA, and the CNEL was 48 dBA.

TL626

The Stallion Oaks Campground, located off Boulder Creek Road, and 66 residential properties are considered to be sensitive noise receptors along the TL626 alignment (for more information see Section D.10, Land Use). Noise measurements were made at three locations along TL626, locations M, N, and U, as shown on Figure D.11-1.

Location M was in Inaja Memorial Park, approximately 180 feet south of Old Julian Road (SR-78/SR-79), and approximately 1,100 feet east of TL626. Noise measurements at location M were taken on August 31 and September 1, 2011. Sources of ambient noise at this location included traffic on Old Julian Road (SR-78/SR-79) located approximately 180 feet north of the measurement location, aircraft, and natural sounds (nighttime cicadas). The average daytime L_{eq} at location M was 52 dBA and the CNEL was 64 dBA.

Location N was along Burrell Way, south of the Descanso Trail intersection, and approximately 625 feet north of Boulder Creek Road. Noise measurements were taken at location N on September 1 and September 2, 2011. Sources of ambient noise at this location included local traffic, aircraft, and natural sounds (nighttime cicadas). The average daytime noise at location N was 42 dBA L_{eq}, and the CNEL was 53 dBA.

Location U was approximately 200 feet west of Boulder Creek Road, and 440 feet northwest of the intersection with Sherilton Valley Road in the CNF. Noise measurements at this location

were taken on September 1 and 2, 2011. Sources of ambient noise included local traffic, aircraft, and natural sounds (nighttime cicadas). The average daytime L_{eq} was 37 dBA, and the CNEL was 44 dBA.

TL625

There are 147 residential properties that are considered to be sensitive noise receptors along the TL625 alignment (for more information see Section D.10, Land Use). Noise measurements along TL625 were made at three locations: A, B, and E, as shown on Figure D.11-1.

Location A noise measurements were taken at 19605 Japatul Road on August 31 and September 1, 2011. Ambient noise included traffic on Japatul Road located approximately 1,025 feet north of the measurement location, local ranch activity, aircraft, and natural sounds. The average daytime L_{eq} was 41 dBA, and the CNEL was 44 dBA.

Location B is approximately 2,375 feet southwest of the intersection between Japatul Road/Carveacre Road and 7,170 feet west of Lyons Valley Road on Forest Service-administered land. Noise measurements were taken at this location on June 8 and 9, 2011, and ambient noise sources included traffic on Carveacre Road and Japatul Road located approximately 1,025 feet north of the measurement location, aircraft, and natural sounds. The average daytime L_{eq} was 44 dBA, and the CNEL was 45 dBA.

Location E was at 22779 Japatul Valley Road, approximately 875 feet east of Japatul Valley Road where TL625 crosses Illahee Drive. Noise measurements were taken at this location between September 2 and 6, 2011, and ambient noise sources included traffic on Japatul Valley Road located approximately 1,025 feet north of the measurement location, aircraft, and natural sounds (nighttime cicadas). The average daytime L_{eq} was 42 dBA, and the CNEL was 56 dBA.

TL629

The Descanso Elementary School (located at 24842 Viejas Boulevard, Descanso), Pine Valley Elementary School (located at 7454 Pine Boulevard, Pine Valley), the Lake Morena County Park Campground, the Boulder Oaks Campground (located west of Old Highway 80), and 461 residential properties are considered to be sensitive noise receptors along the TL629 alignment (for more information see Section D.10, Land Use). Noise measurements were made at four locations along TL629—locations C, J, K, and L—as shown on Figure D.11-1.

Location C was at the Boulder Oaks Campground approximately 1065 feet south of the Campground entrance, and 450 feet southwest of Old Highway 80. Noise measurements were taken at this location between August 31 and September 1, 2011, and ambient noise sources

included traffic on I-8 located approximately 1,000 feet east of the measurement location, aircraft, and natural sounds. The average daytime L_{eq} was 44 dBA, and the CNEL was 52 dBA.

Location J was at the intersection of Meadow Lane/Tanglewood Drive, approximately 55 feet north of Tanglewood Drive in Descanso. Noise measurements were taken at this location on June 9 and 10, 2011, and ambient noise sources included local traffic, aircraft, and natural sounds. The average daytime L_{eq} was 53 dBA, and the CNEL was 53 dBA.

Location K was at 27408 Old Highway 80, approximately 55 feet north of Tanglewood Drive in Guatay. Noise measurements were taken at this location on June 8 and 9, 2011, and ambient noise included local traffic on Old Highway 80 approximately 325 feet south, barnyard animals within 50 feet north, gardening activities, and natural sounds. The average daytime L_{eq} was 48 dBA, and the CNEL was 53 dBA.

Location L was at TL629 Pole Z41000, 230 feet south of Cameron Truck Trail and 2,950 feet east of Beckman Springs Road. Noise measurements were taken at this location on June 8 and 9, 2011, and ambient noise sources included local traffic on local roads, ranching activities, and natural sounds. The average daytime L_{eq} was 45 dBA, and the CNEL was 51 dBA.

TL6923

There are 16 residential properties that are considered to be sensitive noise receptors along the TL6923 alignment (for more information see Section D.10, Land Use). Noise measurements were made at two locations along TL6923—locations F and F'—as shown on Figure D.11-1.

Location F was at 1875 Lake Morena Drive, approximately 580 feet east of Lake Morena Drive and near the TL6923 alignment. Noise measurements were taken at this location on June 9 and 10, 2011, and ambient noise sources included local traffic on Lake Morena Drive, aircraft (helicopter activity was observed 4,000 to 5,000 feet west of the site), and natural sounds. The average daytime L_{eq} was 55 dBA, and the CNEL was 52 dBA.

Location F' was at 1704 Lake Morena Drive, approximately 250 feet west of Buckman Springs Road, 375 feet south of Lake Morena Drive, 500 feet north of Campo Elementary School, and 3,000 feet south of Cameron Substation. Noise measurements were taken at this location on June 8 and 9, 2011, and ambient noise sources included local traffic on Lake Morena Drive and Beckman Springs Road, aircraft, and natural sounds. The average daytime L_{eq} was 47 dBA, and the CNEL was 52 dBA.

C79

The Paso Picacho Campground (within Cuyamaca Rancho State Park) is considered to be a sensitive noise receptor along the C79 alignment (for more information see Section D.10, Land Use). Noise measurements were taken along C79 at one location, location P, which was on the north side of Lookout Road, approximately 330 feet west of SR-79 and adjacent to Paso Picacho Campgrounds, Cuyamaca Rancho State Park (refer to Figure D.11-1). Noise measurements were taken at this location on September 7 and 8, 2011, and ambient noise sources included local traffic on SR-79, activity associated with the campgrounds and the nearby Cuyamaca Fire Station, aircraft, and natural sounds (nighttime cicada). The average daytime L_{eq} was 44 dBA, and the CNEL was 66 dBA.

C78

There are six residential properties that are considered to be sensitive noise receptors along the C78 alignment (for more information see Section D.10, Land Use). Access to the line was not provided by the Viejas Tribal Council, and no noise measurements were made for this distribution line.

C157

Sensitive noise receptors along the C157 alignment are Camp Barrett, located at 21077 Lyons Valley Road, and one residential property (for more information see Section D.10, Land Use). Noise measurements were taken along C157 at one location—location D—which was along the northern side of Sky Valley Road, approximately 925 feet south of where C157 crosses over Barrett Lake (refer to Figure D.11-1). Noise measurements were taken at this location on June 8 and 9, 2011, and ambient noise sources included aircraft and natural sounds. The average daytime L_{eq} was 40 dBA, and the CNEL was 46 dBA.

C442

There are 39 residential properties are considered to be sensitive noise receptors along the C442 alignment (for more information see Section D.10, Land Use). Noise measurements were taken along C442 at locations O and R as shown on Figure D.11-1.

Location O was approximately 880 feet south of eastbound I-8, within the CNF. Noise measurements were taken at this location on September 2 and 6, 2011, and ambient noise sources at this remote location included aircraft and natural sounds (wind in the trees and nighttime cicada). The average daytime L_{eq} was 35 dBA, and the CNEL was 58 dBA.

Location R was approximately 2.7 miles north of I-8 and 115 feet east of Pine Creek Road. Noise measurements were taken at this location on September 7 and 8, 2011, and ambient noise at this remote location included local traffic and natural sounds (wind in the trees and nighttime cicada). The average daytime L_{eq} was 40 dBA, and the CNEL was 54 dBA.

C440

The Burnt Rancheria Campground, located off of Sunrise Highway, the Laguna Campground located at 10678 Sunrise Highway, and 158 residential properties are considered to be sensitive noise receptors along the C440 alignment (for more information see Section D.10, Land Use). Noise measurements were taken along C440 at locations H and I as shown on Figure D.11-1.

Location H was approximately 320 feet east of Morris Ranch Road and 2,980 feet south of San Diego County Road S1 (Sunrise Highway). Noise measurements were taken at this location between September 2 and 6 2011, and ambient noise at this remote location included aircraft and natural sounds (wind in the trees and nighttime cicada). The average daytime L_{eq} was 45 dBA, and the CNEL was 58 dBA.

Location I was at the entrance to Laguna Campground south of Laguna Meadows Road, Laguna Recreation Area, approximately 885 feet southwest of San Diego County Road S1 (Sunrise Highway). Noise measurements were taken at this location on June 8 and 9, 2011, and ambient noise at this remote location included local traffic, aircraft and natural sounds. The average daytime L_{eq} was 44 dBA, and the CNEL was 42 dBA.

C449

The Mountain Empire High School, located at 3305 Buckman Springs Road in Pine Valley; the Lake Morena County Park Campground, located off of Buckman Springs Road; the Boulder Oaks Campground, located west of Old Highway 80; and two residential properties are considered to be sensitive noise receptors along the C449 alignment (for more information see Section D.10, Land Use). Noise measurements were taken at this location on June 8 and 9, 2011, and ambient noise at this remote location included aircraft, local traffic on Morena Stokes Valley Road, activities within the Morena Conservation Camp, and natural sounds. The average daytime L_{eq} was 42 dBA, and the CNEL was 47 dBA.

D.11.2 Applicable Regulations, Plans, and Standards

Environmental noise is typically regulated by local governments. The State of California requires local jurisdictions to regulate environmental noise in their General Plan document, and in 1974, the U.S. Environmental Protection Agency (EPA) published guidelines on recommended

maximum noise levels to protect public health and welfare. The following discussion summarizes the federal and state recommendations and the local requirements as they relate to environmental noise.

D.11.2.1 Federal Regulations

The EPA has indicated that residential noise exposure of 55 dBA to 65 dBA is acceptable when analyzing land use compatibility (EPA 1981); however, these guidelines are not regulatory. With regard to noise exposure and workers, the federal Occupational Safety and Health Administration (OSHA) establishes regulations to safeguard the hearing of workers exposed to occupational noise (29 CFR 1910.95). OSHA specifies that sustained noise over 85 dBA (8-hour time-weighted average) can be a threat to workers' hearing, and if worker exposure exceeds this amount, the employer shall develop and implement a monitoring plan (29 CFR 1910.95 (d) (1)).

D.11.2.2 State Laws and Regulations

California Noise Control Act of 1973

Sections 46000 through 46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, finds that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also finds that there is a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the state to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

As with federal standards, State of California regulations (California Noise Exposure Regulations and 8 CCR 5095) address worker exposure noise levels. These regulations limit worker exposure to noise levels of 85 dB or lower over an 8-hour period. The State of California has not established noise levels for various non-work-related environments.

D.11.2.3 Regional Policies, Plans, and Regulations

San Diego County Code of Regulatory Ordinances Title 3, Division 6, Chapter 4, Sections 36.401–36.435, Noise Ordinance

The Noise Ordinance establishes prohibitions for disturbing, excessive, or offensive noise as well as provisions such as sound level limits for the purpose of securing and promoting the public health, comfort, safety, peace, and quiet for its citizens. Planned compliance with sound level limits and other specific parts of the ordinance allows presumption that the noise is not disturbing, excessive, or

offensive. Limits are specified depending on the zoning placed on a property (e.g., varying densities and intensities of residential, industrial, and commercial zones). Where two adjacent properties have different zones, the sound level limit at a location on a boundary between two properties is the arithmetic mean of the respective limits for the two zones, except for extractive industries. The 1-hour average sound level limit applicable to extractive industries, including but not limited to borrow pits and mines, shall be 75 dBA at the property line regardless of the zone in which the extractive industry is located. It is unlawful for any person to cause or allow the creation of any noise that exceeds the applicable limits of the Noise Ordinance at any point on or beyond the boundaries of the property on which the sound is produced.

Section 36.404 of the County Noise Ordinance contains sound level limits specific to receiving land uses. Sound level limits are in terms of a 1-hour average sound level. The allowable noise limits depend upon the County's zoning district and time of day. SDG&E's proposed project would be located in any zone within the County. Table D.11-3 lists the sound level limits for the County.

Table D.11-3
San Diego County Noise Ordinance Sound Level Limits

Zone	Applicable Limit 1-Hour Average Sound Level (dB)		
	7 a.m. to 7 p.m.	*7 p.m. to 10 p.m.*	*10 p.m. to 7 a.m.*
(1) RS, RD, RR, RHM, A70, A72, S80, S81, S87, S90, S92, RV, and RU with a density of less than 11 dwelling units per acre	50	50	45
(2) RRO, RC, RM, C30, S86, V5 and RV and RU with a density of 11 or more dwelling units per acre	55	55	50
(3) S94, V4, all other commercial zones.	60	60	55
(4) V1, V2	60	55	see below
V1	60	55	55
V2	60	55	50
V3	70	70	65
(5) M50, M52, M54	70	70	70
(6) S82, M56 and M58	75	75	75
(7) S88 (see note 4 below)			

Source: County of San Diego 2009
Notes:
1 If the measured ambient level exceeds the applicable limit noted in the table, the allowable 1-hour average sound level will be the ambient noise level. The ambient noise level will be measured when the alleged noise violation source is not operating.
2 The sound-level limit at a location on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two districts; provided, however, that the 1-hour average sound-level limit applicable to extractive industries, including but not limited to borrow pits and mines, will be 75 dB at the property line, regardless of the zone where the extractive industry is actually located.
3 Fixed-location, public utility distribution, or transmission facilities located on or adjacent to a property line shall be subject to the noise-level limits of this section, measured at or beyond 6 feet from the boundary of the easement upon which the equipment is located.
4 S88 zones are Specific Planning Areas, which allow different uses. The sound level limits present in Table D.11-3 that apply in an S88 zone depend on the use being made of the property. The limits in Table 3.9-2, subsection (1) apply to a property with a residential, agricultural, or civic use. The limits in subsection (3) apply to a property with a commercial use. The limits in subsection (5) apply to a property with an industrial use that would only be allowed in an M50, M52, or M54 zone. The limits in subsection (6) apply to all property with an extractive use or a use that would only be allowed in an M56 or M58 zone.

Section 36.408 of the County Noise Ordinance sets limits on the time of day and days of the week that construction can occur, as well as setting noise limits for construction activities. In summary, the ordinance prohibits operating construction equipment on the following days and times:

- Mondays through Saturdays except between the hours of 7:00 a.m. and 7:00 p.m.
- Sundays and days appointed by the president, governor, or board of supervisors for a public fast, Thanksgiving, or other holiday.

In addition, the code requires that between the hours of 7:00 a.m. and 7:00 p.m., no equipment shall be operated so as to cause an 8-hour average construction noise level in excess of 75 dBA 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 discussed above, the following additional maximum sound level limitations (as shown in Table D.11-4) shall apply to impulsive noise from construction equipment, per County Noise Ordinance Section 36.409.

Table D.11-4
Maximum Sound Level (Impulsive) Measured

Occupied Property Use	Decibels (dBA)
Residential, village zoning or civic use	82
Agricultural, commercial or industrial use	85

Source: County of San Diego 2011, County Noise Ordinance Section 36.409
Note: The maximum sound level limitations shall apply to impulsive noise from construction equipment 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, for 25 percent of the minutes in the measurement period.

County Guidelines for Noise Sensitive Uses Affected by Airborne Noise

The County of San Diego Department of Planning and Land Use (2009) has published guidelines for determining the significance of noise-sensitive uses affected by airborne noise. The guidelines consider a significant impact would occur if a project were to cause the exterior noise to exceed 60 dB (CNEL), or cause an increase of 10 dB (CNEL) over preexisting noise levels at outdoor living areas or private usable open space.

County Guidelines for Vibration and Groundborne Noise Impacts

The County of San Diego Department of Planning and Land Use (2009a) has also published guidelines for determining the significance of groundborne vibration and noise impacts for use during the preparation of CEQA documents. Vibration is considered significant if project implementation will expose specific uses (organized into three categories) to groundborne vibration or noise equal to or in excess of levels determined by the Federal Transit

Administration's (FTA's) Transit Noise and Vibration Impact Assessment (FTA 2006). County guidelines are provided in Table D.11.5.

Table D.11-5
Guidelines for Determining the Significance of Groundborne Vibration and Groundborne Noise Impacts

Land Use Category[1]	Groundborne Vibration Impact Levels (inches/second root mean square)		Groundborne Noise Impact Level (dB re 20 micropascals)	
	Frequent Events[2]	*Occasional or Infrequent Events[3]*	*Frequent Events[1]*	*Occasional or Infrequent Events[2]*
Category 1: Buildings where low ambient vibration is essential for interior operations (research and manufacturing facilities with special vibration constraints)	0.0018[4]	0.0018[4]	Not Applicable (N/A)[5,6]	N/A[4,5]
Category 2: Residences and buildings where people normally sleep (hotels, hospitals, residences, and other sleeping facilities)	0.0040	0.010	35 dBA	43 dBA
Category 3: Institutional land uses with primarily daytime use (schools, churches, libraries, other institutions, and quiet offices)	0.0056	0.014	40 dBA	48 dBA

Source: County of San Diego 2009
Notes:
1 "Frequent Events" is defined as more than 70 vibration events per day.
2 "Infrequent Events" is defined as fewer than 70 vibration events per day.
3 This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research would require detailed evaluation to define acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the heating, ventilation, and air conditioning (HVAC) systems and stiffened floors.
4 Vibration-sensitive equipment is not sensitive to groundborne noise.
5 There are some buildings, such as concert halls, TV and recording studios, and theaters that can be very sensitive to vibration and noise, but do not fit into any of the three categories.
6 For categories 2 and 3 with occupied facilities, isolated events such as blasting are significant when the peak particle velocity (ppv) exceeds 1 inch per second. Non-transportation vibration sources such as impact pile drivers or hydraulic breakers are significant when their ppv exceeds 0.1 inch per second. More specific criteria for structures and potential annoyance were developed by the California Department of Transportation (Caltrans) (2004) and would be used to evaluate these continuous or transient sources in the County of San Diego.

D.11.3 Environmental Effects

D.11.3.1 Definition and Use of CEQA Significance Criteria/Indicators under NEPA

The CEQA criteria and guidelines described as follows are also used as indicators of adverse effect under NEPA. Significance of noise impacts depends on whether the project would increase noise levels above the existing ambient levels by introducing new sources of noise. The following significance criteria are based on the CEQA checklist identified in Appendix G of the CEQA Guidelines. Under CEQA, noise impacts would be considered significant if SDG&E's proposed project would result in:

- Conflict with applicable noise restrictions or standards imposed by regulatory agencies

- Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels
- A substantial permanent increase in ambient noise levels (more than 5 dBA) above levels existing without the project at sensitive receptor locations
- A substantial temporary or periodic increase in ambient noise levels above levels existing without the project at sensitive receptor locations.

Use of Noise Thresholds

Given that environmental noise levels vary widely over time, a 3 dBA change is the minimum change in environmental noise that is perceptible and recognizable by the human ear. An increase in day–night environmental noise levels of more than 5 dBA (L_{dn} or CNEL) is considered to be a substantial increase and a significant impact. Intermittent noise sources are temporary or periodic, and they may also cause a significant impact over shorter durations if increases over 5 dBA could occur.

Use of Vibration Thresholds

No vibration-sensitive land uses (e.g., high-precision manufacturing facilities or research facilities with optical and electron microscopes) were identified during project area surveys. As such, the significance threshold for "excessive" ground-borne vibration depends on whether a nuisance, annoyance, or physical damage to any structure could occur.

D.11.3.2 Applicant Proposed Measures

SDG&E has proposed Applicant Proposed Measures (APMs) NOI-01 through NOI-10 which would be implemented as part of SDG&E's proposed project to reduce impacts associated with noise (see Section B.7 of this EIR/EIS).

D.11.3.3 Direct and Indirect Effects

Impact NOI-1: Disturb sensitive receptors and violate local rules, standards, and/or ordinances due to construction noise

Construction activities associated with the proposed power line replacement projects would result in temporary increases in noise levels in the active construction work areas. Most of the construction activities would utilize conventional construction equipment associated with such projects (e.g., trucks of various types, bulldozer, grader); however, helicopters would be used to transport materials and personnel to work areas not accessible by truck, as well as set poles and string conductors to those work areas. Construction activities would occur at individual pole site

sites and undergrounding areas and move along the various alignments linearly and therefore would be short-term at any given location. Total construction activities associated with SDG&E's proposed project would occur over a 5-year period.

Conventional Construction Methods

The project's conventional construction activities would temporarily increase local noise levels in the vicinity of the project alignment. Due to the presence of rural residences in SDG&E's proposed project vicinity, the residential threshold was utilized to determine construction noise impacts to this sensitive use. As discussed above, most of the construction activities would utilize conventional construction equipment associated with such projects (e.g., trucks of various types, bulldozer, grader). Table D.11-6 below lists the maximum noise levels of the various conventional construction activities, as well as the distance at which the San Diego County construction noise impact threshold would be exceeded for each of the construction activities

Table D.11-6
Construction Noise from Conventional Activities

Activity	Maximum L_{eq} at 50 feet	Distance to $L_{eq}(8)$ =75 dBA, feet
Improve Access Roads	85 dBA L_{eq}	<25 feet
Construct 1 Micropile Foundation (Truck set)*	86 dBA L_{eq}	180 feet
Install 1 Micropile Pole (Truck set)	79 dBA L_{eq}	80 feet
Construct 1 Direct-Bury Pole (Truck set)*	86 dBA L_{eq}	190 feet
String Conductor 1 phase	81 dBA L_{eq}	100 feet
Restore right-of-way	85 dBA L_{eq}	150 feet
Pole Removal Ground Access	66 dBA L_{eq}	<25 feet
Underground Conductor	88 dBA L_{eq}	150 feet

Source: Acentech 2012.
* Through the maximum noise level anticipated during construction of one micropile foundation is the same as the maximum noise level anticipated during construction of one direct-bury pole, the mix of equipment to be used differs as well as the duration of the equipment to be used. Thus, the 8-hour average noise level is different, and the distance at which the 75 dBA $L_{eq}(8)$ construction noise standard is exceeded is different.

As shown in Table D.11-6, the County's 8-hour construction noise standard of 75 dB is expected to be exceeded at different distances from the construction equipment depending on the type of construction equipment needed and the duration the equipment is expected to be operated during construction. The property lines of the nearest residences would be directly adjacent to the proposed alignment, similar to existing conditions. At this location, the 8-hour average construction sound level could exceed the 75 dBA threshold at the distances listed in Table D.11-6. Implementation of Mitigation Measure (MM) MM NOI-1 would mitigate temporary construction noise impacts by requiring SDG&E to implement appropriate noise reduction measures such as portable noise barriers or relocation of residents, if noise standards are exceeded.

MM NOI-1 In the event noise levels during construction activities are expected to exceed an 8-hour L_{eq} of 75 dBA at the nearest property line or within 190 feet of the existing and proposed project alignment where noise-sensitive areas are located, San Diego Gas & Electric (SDG&E) shall implement noise reduction measures to reduce noise levels to below 75 dBA. Measures to be implemented include: (1) portable noise barriers erected temporarily to reduce noise impacts at specific locations; or (2) if noise barriers would not reduce levels to below 75 dBA, depending on the location of residences and the level of construction noise, SDG&E shall offer to relocate affected residents until the impact has been determined to not be adverse.

Implementation of MM NOI-1 supersedes Applicant Proposed Measures APM NOI-5 and APM NOI-07 (see Section B, Table B-11 of this EIR/EIS). SDG&E also will implement APM NOI-01 through APM-NOI-04 which would also reduce impacts from noise generated at construction sites by notifying property owners of the construction schedule, positioning equipment away from residences to the extent possible, ensuring all equipment is maintained in accordance with the manufacturer's recommendations, and turning backup alarms down to the lowest setting whenever possible.

With implementation of SDG&E's proposed APM NOI-01 through APM NOI-04, and MM NOI-1, adverse and significant noise generated by construction activities conducted during daytime hours (between 7 a.m. and 7 p.m.) Monday through Saturday would be mitigated under NEPA, and under CEQA would be less than significant with mitigation (Class II).

Helicopter Use

The anticipated average helicopter use per day includes flying helicopters from a nearby airfield, such as Gillespie Field in El Cajon, to a laydown yard/staging area (fly yard/staging area). Fly yards/staging areas would be located along TL682 (two such yards would be located along this line) in the Pauma Valley/Lake Henshaw community areas, TL625 (six) in the Alpine community area (two on CNF managed lands and four on private land), TL629 (three) in the Pine Valley community area, and C79 (one) in the Descanso community area. From the laydown yard/staging area, the helicopter will pick up materials, poles, or personnel as required, then fly directly to the work area. Once at the work area, the helicopter will hover while delivering materials or assisting in pole-setting. Average flight times from Gillespie Field to the proposed power line replacement projects' staging areas are anticipated to require approximately 15 minutes of flight time per trip; typical hovering time at each work area is anticipated to be 2 to 5 minutes during pole setting, and 2 to 3 minutes when delivering materials. Helicopter-set poles typically require significantly less than 1 day of helicopter use per pole; for SDG&E's proposed

project, an average of approximately 10 poles per day are anticipated to be set using helicopters over an 8-hour period, requiring 2 to 5 minutes per work zone.

It is anticipated that approximately 514 poles will require helicopter setting over the 5-year construction period. Assuming an average of 10 poles set by helicopter per day, approximately 52, 8-hour days of helicopter flights—including one roundtrip flight from Gillespie Field and 10 round-trip flights to pole work areas each day—would be conducted for SDG&E's proposed project, resulting in a total of approximately 566 total round-trip helicopter flights over the 5-year construction period. A total of approximately 286 flight-hours over the 5-year construction period is anticipated. However, flight times may vary due to a number of factors, including local weather conditions, air traffic control requirements, and other unforeseen limitations on flight availability and regularity (SDG&E 2014).

Approximately three temporary helicopter fly yards within the CNF would be used for SDG&E's proposed project, and nine temporary helicopter fly yards outside the CNF would be used, as described in Table B-7 in Section B, Project Description. No helicopters would be stored at temporary fly yards overnight. Helicopters may be refueled at fly yards outside the CNF, if necessary. Approximately one of the three temporary helicopter fly yards within the CNF would be used for both helicopter landing and for equipment and material storage for SDG&E's proposed project. Approximately five of the nine temporary helicopter fly yards outside the CNF would be used for both helicopter landing and for equipment and material storage. Poles and steel cages for poured foundations would be assembled on site if there is adequate space at the work site or at the staging areas, then trucked to the job site or flown in and installed via helicopter. The fly yards would be accessed using existing access roads (SDG&E 2013b) and are shown in Figure D.11-1. (The detailed locations of the fly yards can be found in the Revised Plan of Development Attachment B, Detailed Route Maps (SDG&E 2013b.)

Helicopter noise is typically rated using the sound exposure level (SEL) at 500 feet above ground level during flyover or during approach and landing. When delivering equipment and materials and assisting with the installation and removal of poles and conductors, the helicopters are anticipated to operate at approximately 50 feet above ground level. In this instance, potential noise from helicopter operation is measured using L_{max}, which is the highest time-weighted sound level measured for the equipment at that height. Table D.11-7 presents the anticipated noise levels for the helicopters that are anticipated to be used during construction of SDG&E's proposed project at a flying height of 500 feet, as well as an operating height of 50 feet. During takeoff and approach, noise levels are anticipated to be approximately 3 to 8 dB higher than the L_{max} shown due to increased engine use during these times (SDG&E 2014).

Table D.11-7
Helicopter Noise Levels

Helicopter Type	SEL at 500 feet	Lmax at 50 feet
Erickson Air Crane	89	101
Hughes 500D	76	88
Kaman K-MAX	83	95
Bell 206L Long Ranger	81	93

Source: SDG&E 2014

Helicopter use would be compliant with all Federal Aviation Administration and Caltrans standards and regulations. In addition, SDG&E will also implement APM NOI-06 and APM NOI-09 which will limit the height that helicopters may fly over the entire project area when not landing or working at a site, and will ensure that SDG&E coordinates with San Diego County regarding flights occurring between 6:30 a.m. and 7:00 a.m. to avoid conflicts with the County noise ordinance. Due to the intermittent and temporary nature of helicopter use and the fact that the rest of the time construction would be carried out by ground crews, it is unlikely that noise levels would exceed the County threshold of 75 dB over an 8-hour period and therefore the CEQA threshold for determining a significant impact. Because there are no thresholds for determining whether a noise impact is significant under NEPA, the short-term disturbance to sensitive receptors caused by noise generated by helicopter use is considered to be a short-term adverse impact under NEPA.

To minimize disturbance due to noise generated by helicopter operations to nearby sensitive receptors, including residences, schools, and horses or other livestock, Mitigation Measure MM NOI-2 is provided. MM NOI-2 requires SDG&E to notify nearby sensitive receptors, including nearby residents, schools, and livestock facility owners, of scheduled helicopter use prior to flight operations.

MM NOI-2 At least 30 days before helicopter use and stringing operations are employed, San Diego Gas & Electric (SDG&E) shall prepare and submit a public notice mailer to the California Public Utilities Commission for approval. The public notice mailer shall be prepared and mailed no less than 7 days prior to helicopter use and stringing operations along the approved project alignment. SDG&E shall notify landowners, residents, schools, livestock facility owners, and CNF offices responsible for managing recreation areas within 590 feet in areas of fly yards and pole locations where helicopters will be used during construction to provide adequate notice of potential helicopter and/or stringing activity within the project vicinity. If construction is delayed for more than 7 days, an additional notice shall be mailed to discuss the status and schedule of helicopter use and stringing operations.

Implementation of MM NOI-1, APM NOI-06, and APM NOI-09, would ensure that the short-term and intermittent impacts from noise generated by helicopters throughout the project would be less than significant with mitigation under CEQA (Class II) and under NEPA would minimize disturbance to sensitive receptors.

Blasting

Blasting may be required if crews encounter rock while digging. Should blasting be required during construction, it would only occur once per day for a short period of time. Though generally resulting in elevated noise levels at the time the blasting is performed, blasting would actually reduce overall construction time required at each pole site. In the event that blasting is needed, Mitigation Measure MM NOI-3, which supersedes APM NOI-08, will be required that will ensure that SDG&E will prepare and implement a blasting plan consistent with SDG&E's blasting guidelines to reduce noise and vibration impacts to nearby sensitive receptors.

MM NOI-3 In the unlikely event that rock blasting is used during construction, SDG&E will prepare a blasting plan, that will include a noise and vibration calculation, and will be submitted to the California Public Utilities Commission and the County of San Diego for review before blasting at each site. Each blasting plan will be consistent with SDG&E's blasting guidelines to reduce noise and vibration impacts from blasting activities. The blasting contractor will be required to obtain a blasting permit and explosive permit per the San Diego County Regulatory Ordinances, and will ensure compliance with all relevant local, state, and federal regulations relating to blasting activities.

With implementation of MM NOI-3 adverse and significant impacts from noise generated by blasting activities throughout the project would be mitigated under NEPA, and would be less than significant with mitigation under CEQA (Class II).

Nighttime Construction

Construction activities will occur during the times established by the local ordinances (generally between 7 a.m. and 7 p.m. Monday through Saturday), with the exception of certain activities where nighttime and weekend construction activities are necessary, including, but not limited to, pulling of the conductor, which requires continuous operation or must be conducted during off-peak hours per agency requirements. Where construction activities would occur at night, Mitigation Measure MM NOI-4 would be required and would supersede SDG&E APM-NOI-10.

MM NOI-4 For any work that cannot occur during the allowable construction hours (between 7 a.m. and 7 p.m. Monday through Saturday), SDG&E will follow its established

protocols and will provide advance notice by mail to all property owners within 300 feet of planned construction activities. The announcement will state the construction start date, anticipated completion date, and hours of construction. SDG&E will also communicate the exception to the CPUC and San Diego County in advance of conducting the work. If necessary, SDG&E will temporarily relocate residents occupying properties located less than 220 feet from construction activities on an as-needed basis for the duration of construction activities that would affect them.

With implementation of MM NOI-4, adverse and significant noise-related impacts from construction activities occurring at night or on Sundays would be mitigated under NEPA, and would be less than significant with mitigation under CEQA (Class II).

All Construction Activities

Although, as discussed above, project construction activities could temporarily exceed County of San Diego construction noise standards, implementation of MM NOI-01 through MM NOI-04, and proposed APMs NOI-01 through NOI-04, APM NOI-06, and APM NOI-09 would reduce noise impacts by ensuring compliance with County noise standards. Therefore, since construction activities would not occur in any one place for an extended period of time and would be in compliance with County noise standards, adverse and significant impacts due to construction noise to sensitive receptors would be mitigated under NEPA and under CEQA would be less than significant with mitigation implemented (Class II).

Impact NOI-2: Cause groundborne vibration due to construction activity

Human response thresholds for vibration is barely perceptible at 0.035 ppv. Table D.11-8 shows common equipment vibration levels at a distance of 50 feet, which is the location of the closest sensitive receptor to the project alignment.

Table D.11-8
Vibration Source Levels for Construction Equipment at 50 Feet

Equipment	ppv at 50 feet
Caisson Drill	0.031
Loaded Truck	0.027
Small Bulldozer	0.001

Source: FTA 2006

As shown, vibration levels for typical construction equipment would be below the barely perceptible response level at 50 feet. Therefore, impacts would be less than significant.

Additionally, as previously discussed under Impact NOI-1, blasting activities are not anticipated; however, should blasting be required during construction, such activities would only occur once per day for a short period of time. As noted above in footnote 6 to Table D.11-5, for residential and institution uses (such as schools), isolated events such as blasting can result in significant vibration impacts when the ppv exceeds 1 inch per second. Therefore, in the event that blasting is needed, Mitigation Measure MM NOI-3, which supersedes APM-NOI-08, will be required that will ensure that SDG&E will prepare and implement a blasting plan consistent with SDG&E's blasting guidelines to reduce noise and vibration impacts to nearby sensitive receptors. With implementation of MM NOI-3, adverse and significant groundborne vibration generated by blasting activities would be mitigated under NEPA, and would be less than significant with mitigation under CEQA (Class II).

Impact NOI-3: Permanent noise levels due to corona noise from operations of the transmission lines

The corona noise from the existing single-circuit 69 kV power line ranges from 9 dBA L_{eq}, under typical conditions, to 24 L_{eq} dBA, under worst-case conditions and is below the County's noise ordinance limits. SDG&E's proposed project would replace wood poles with steel poles along with reconductoring of new power lines. The increased corona-related noise associated with the proposed power line replacement projects will not be noticeable (Acentech 2012). Therefore, corona noise due to operation and maintenance of the proposed power line replacement projects along with the other SDG&E facilities proposed for authorization under the MSUP would not result in an adverse impact under NEPA, and under CEQA, impacts would be considered less than significant (Class III).

Impact NOI-4: Increase in ambient noise levels due to routine inspection and maintenance activities

Operation and maintenance of the proposed power line replacement projects along with other SDG&E electric facilities proposed to be covered under the MSUP would require routine and periodic equipment testing, pole brushing, and other related ongoing maintenance tasks such as helicopter inspections, similar to those currently conducted by SDG&E. These activities would not increase in duration or intensity with implementation of SDG&E's proposed project. Some noise sensitive receptors may experience a periodic, temporary, short-term increase in noise due to these activities. Because noise generated during routine inspection and maintenance would be temporary and short-term, it is not anticipated to exceed the County's noise ordinance criteria at any one receptor location. As a result, noise from these operation and maintenance activities would not result in an adverse impact under NEPA, and under CEQA, impacts would be less than significant (Class III).

D.11.4 Forest Service Proposed Actions

D.11.4.1 TL626 Alternative Routes

Environmental Setting/Affected Environment

Options 1 through 4 for the Forest Service proposed actions for TL626 would relocate a segment of the line toward the east of the existing alignment. The farthest relocation would take place approximately 2 miles to the east of the existing alignment. As this area is in the same geographic region as SDG&E's proposed project, the environmental setting for options 1 through 4 would be similar to that identified in Sections D.11.1 and D.11.2, except that four residences are located in the vicinity of these routes compared to none along the existing TL626.

Option 5, which would relocate a portion of TL626 around the Inaja Picnic area, is located in the same geographic region as SDG&E's proposed project, and therefore, the environmental setting would be similar to that identified in Sections D.11.1 and D.11.2.

Options 1 and 2 SDG&E Proposed Overhead Alignments Through/Around Inaja and Cosmit Reservation Lands

Environmental Effects

Impacts NOI-1 and NOI-2: This alternative would reroute a segment of TL626 to the east along a new undisturbed ROW approximately 5.5 miles (Option 1) or 5.6 miles (Option 2) (Figure B-4a). All other project components would remain the same. Construction noise would be greater than SDG&E's proposed project due to the increased activities required to develop a new and longer ROW along with the need to develop new access and would have a greater potential to affect sensitive receptors compared to the reconstruction of TL626 in place as proposed. Similar to SDG&E's proposed project, it is anticipated that these impacts would be reduced with implementation of MM NOI-01 through MM NOI-04, and APM NOI-1 through APM NOI-10 which would ensure compliance with County noise standards. Therefore, since construction activities would not occur in any one place for an extended period of time and would be in compliance with County noise standards, short-term adverse and significant Impacts NOI-1 and NOI-2 would be mitigated under NEPA, and under CEQA would be less than significant with mitigation (Class II).

Impacts NOI-3 and NOI-4: Impacts would reflect similar impact findings previously discussed in Section D.11.3.3 for SDG&E's proposed project. The corona-related noise (Impact NOI-3) associated with options 1 and 2 would be similar to that described for SDG&E's proposed project, and therefore corona noise levels at the ROW are anticipated to be below the County's

noise ordinance limits. Thus, the corona noise would not result in an adverse impact under NEPA, and under CEQA, impacts would be considered less than significant (Class III). In addition, routine inspections and maintenance activities (Impact NOI-4) that were not previously present in the new ROW would occur. As with SDG&E's proposed project, some noise sensitive receptors may experience a periodic, temporary, short-term increase in noise due to these activities. Because noise generated during routine inspection and maintenance would be temporary and short-term, it is not anticipated to exceed the County's noise ordinance criteria at any one receptor location. As such, noise associated with operations and maintenance activities would not result in an adverse impact under NEPA, and under CEQA, impacts would be less than significant (Class III).

Option 3 Partial Underground Relocation in Boulder Creek Road

Environmental Effects

Impacts NOI-1 and NOI-2: Options 3a and 3b would consist of placing a segment of TL626 underground in Boulder Creek Road as shown in Figure B-4b. The rerouted underground segment of Option 3a is approximately 11.4 miles long, and Option 3b is 6.3 miles long (each option includes an approximately 1-mile overland segment to interconnect back into the existing TL626 alignment (see Figure B-4b)). While construction noise would be greater than the project due to the increased trenching activities required along Boulder Creek Road and would have a greater potential to affect sensitive receptors, helicopter use required to rebuild portions of the overhead alignment would be reduced. All other project components would remain the same. With implementation of MM NOI-01 through MM NOI-04 and APM NOI-01 through NOI-10, construction noise impacts would be reduced by ensuring compliance with County noise standards. Therefore, since construction activities would not occur in any one place for an extended period of time and would be in compliance with County noise standards, short-term adverse and significant impacts due to construction noise to sensitive receptors would be mitigated under NEPA, and under CEQA would be less than significant with mitigation (Class II).

Impacts NOI-3 and NOI-4: Impacts would reflect similar impact findings previously discussed in Section D.11.3.3 for SDG&E's proposed project. As options 3a and 3b would underground a portion of TL626 in Boulder Creek Road, impact findings for Impact NOI-3 (corona noise) and Impact NOI-4 (routine inspections and maintenance) previously discussed in Section D.11.3.3 would be reduced to no impact.

Option 4 Overhead Relocation along Boulder Creek Road

Environmental Effects

Impacts NOI-1 through NOI-4: Option 4 would consist of relocating a segment of TL626 overhead along Boulder Creek Road to the Pine Hills Fire Station (approximately 7.5 miles) and then merging with proposed Options 1 or 2 overland alignments for approximately 2.1 miles to interconnect with pole Z213680 (see Figure B-4a). All other project components would remain the same. Construction noise would have a greater potential to affect sensitive receptors than the project due to the increased activities required to develop a longer ROW and closer proximity of sensitive receptors compared to the reconstruction of TL626 in place as proposed. Similar to SDG&E's proposed project, these short-term adverse and significant impacts are anticipated to be mitigated under NEPA through ensuring compliance with the County's noise ordinance through implementation of MM NOI-1 through MM NOI-4, and APM NOI-01 through NOI-10, and under CEQA these impacts would be less than significant with mitigation (Class II).

Option 5 Reroute and Undergrounding around Inaja Picnic Area

Environmental Effects

Impacts NOI-1 through NOI-4: Option 5 would consist of relocating a portion of TL626 around the Inaja Picnic Area and as shown in Figure B-4c would consist of approximately 2,100 feet of relocated overhead alignment along with a 400-foot underground segment located within an existing parking lot. All other project components would remain the same. Construction and operational impacts related to noise and vibration would essentially be the same for the relocation of TL626 under Option 5 as described in Section D.11.3.3 for SDG&E's proposed project. Due to the undeveloped nature in the vicinity of the affected portion of TL626 proposed under this alternative, there would not be a substantial change to the baseline condition including the presence of sensitive receptors that could be exposed to noise impacts. Because the overland component would be in steep terrain, an increase in helicopter use both during construction and operations and maintenance would be required. Noise impacts during construction, including noise due to helicopter use, would reflect similar findings as described in Impacts NOI-1 through NOI-4 discussed in Section D.11.3.3 for SDG&E's proposed project. Therefore, as with SDG&E's proposed project, with implementation of MM NOI-1 through MM NOI-4, and APM NOI-01 through NOI-10, short-term adverse and significant Impacts NOI-1 through NOI-4 would be mitigated under NEPA, and under CEQA impacts would be less than significant with mitigation (Class II).

D.11.4.2 C157 Partial Relocation to Avoid Designated Wilderness

Option 1 SDG&E Proposed Alignment between Two Wilderness Areas

Option 2 City of San Diego Modified Alignment

Environmental Setting/Affected Environment

Sections D.11.1 and D.11.2 describe the existing environmental setting associated with proposed project. The Forest Service proposed action Options 1 and 2 for C157 would be in the same geographic region as SDG&E's proposed project; therefore, the environmental setting would be the same as that identified in Sections D.11.1 and D.11.2.

Environmental Effects

Impacts NOI-1 and NOI-2: Options 1 and 2 would reroute an approximately 2-mile segment of C157 to the south of the existing alignment approximately 0.25 mile along new undisturbed ROW (Figure B-5a). All other project components would remain the same. Construction and operational noise impacts would essentially be the same for the relocation of C157 under options 1 and 2, as described in Section D.7.3.3 for SDG&E's proposed project. Due to the undeveloped nature in the vicinity of C157 proposed under this alternative, there would not be a substantial change to the baseline condition including the presence of sensitive receptors that could be exposed to noise impacts. Therefore, as with SDG&E's proposed project, with implementation of MM NOI-01 through MM NOI-04, and APM NOI-01 through NOI-10, construction noise impacts would be reduced by ensuring compliance with County noise standards. Therefore, since construction activities would not occur in any one place for an extended period of time and would be in compliance with County noise standards, short-term adverse and significant impacts due to construction noise to sensitive receptors would be mitigated under NEPA and under CEQA would be less than significant with mitigation implemented (Class II).

Impacts NOI-3 and NOI-4: Impacts would reflect similar impact findings previously discussed in Section D.11.3.3 for SDG&E's proposed project. As C157 options 1 and 2 are within a 0.25 mile of the existing alignment and no new sensitive receptors would be near the new alignments, impact findings for Impact NOI-3 (corona noise) and Impact NOI-4 (routine inspections and maintenance) previously discussed in Section D.11.3.3 would be essentially the same. All other project components would remain the same; thus, impacts due to corona noise and the routine inspections and maintenance activities would not result in an adverse impact under NEPA, and under CEQA, impacts would be considered less than significant (Class III).

D.11.4.3 C440 Mount Laguna Underground Alternative

Environmental Setting/Affected Environment

As this area is in the same geographic region as SDG&E's proposed project and would consist of undergrounding within existing paved road ROWs, the environmental setting is assumed to be similar to that identified in Sections D.5.1 and D.5.2.

Environmental Effects

Impacts NOI-1 and NOI-2: Besides undergrounding C440 as proposed by the project, this alternative would consist of undergrounding an additional 14.3 miles of C440 within existing paved roadways in the Laguna Mountain Recreation Area. All other project components would remain the same. Construction noise would be greater than the project due to the increased trenching activities required within paved roadways and would have a greater potential to affect sensitive receptors. All other project components would remain the same. With implementation of MM NOI-01 through MM NOI-04 and APM NOI-01 through APM NOI-10, construction noise impacts would be reduced by ensuring compliance with County noise standards. Therefore, since construction activities would not occur in any one place for an extended period of time and would be in compliance with County noise standards, short-term adverse and significant impacts due to construction noise to sensitive receptors would be mitigated under NEPA and under CEQA would be less than significant with mitigation (Class II).

Impacts NOI-3 and NOI-4: As this alternative would underground C440 in existing roadways, impact findings for Impact NOI-3 (corona noise) and Impact NOI-4 (routine inspections and maintenance) previously discussed in Section D.11.3.3 would be reduced to no impact.

D.11.5 BIA Proposed Action

Environmental Setting/Affected Environment

Sections D.11.1 and D.11.2 describe the existing environmental setting associated with TL682. The BIA proposed action alternative for TL682 would relocate a portion of the line and underground approximately 1,500 feet on tribal lands. As this area is in the same geographic region as SDG&E's proposed project, the environmental setting would be similar to that identified in Sections D.11.1 and D.11.2.

Environmental Effects

Impacts NOI-1 and NOI-2: Because the modifications proposed to TL682 under this alternative would occur primarily along the existing ROW for TL682, there would not be a change to the

baseline condition including the presence of sensitive receptors that could be exposed to noise impacts. Therefore, impacts would reflect similar impact findings previously discussed in Section D.11.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, with implementation of MM NOI-01 through MM NOI-04, and APM NOI-01 through APM NOI-10, construction noise impacts NOI-1 and NOI-2 would be reduced by ensuring compliance with County noise standards. Therefore, since construction activities would not occur in any one place for an extended period of time and would be in compliance with County noise standards, short-term adverse and significant impacts due to construction noise to sensitive receptors would be mitigated under NEPA and under CEQA would be less than significant with mitigation (Class II).

Impacts NOI-3 and NOI-4: Impacts would reflect similar impact findings previously discussed in Section D.11.3.3 for SDG&E's proposed project. As C157 options 1 and 2 are within a 0.25 mile of the existing alignment and no new sensitive receptors would be near the new alignments, impact findings for Impact NOI-3 (corona noise) and Impact NOI-4 (routine inspections and maintenance) previously discussed in Section D.11.3.3 would be essentially the same. All other project components would remain the same. Thus, impacts due to corona noise and the routine inspections and maintenance activities would not result in an adverse impact under NEPA, and under CEQA, impacts would be considered less than significant (Class III).

D.11.6 Additional Alternatives

D.11.6.1 Partial Removal of Overland Access Roads

Environmental Setting/Affected Environment

This alternative would be in the same study area as SDG&E's proposed project; therefore, the environmental setting would be the same as that identified in Sections D.11.1 and D.11.2.

Environmental Effects

Impacts NOI-1 through NOI-4: Noise impacts would reflect similar impact findings previously discussed in Section D.11.3.3 for SDG&E's proposed project. This alternative would remove up to 11~~0~~.5 miles of exclusive use access roads that are greater than 25% grade and are too steep to effectively control road drainage, particularly along TL626 (Boulder Creek) and TL625 (Barber Mountain/Carveacre). Removal of segments of access roads as proposed under this alternative could increase helicopter use during both construction and operations and maintenance. Noise impacts, including noise due to helicopter use, would reflect similar findings as described in Impacts NOI-1 through NOI-4 discussed in Section D.11.3.3 for SDG&E's proposed project. Therefore, as with SDG&E's proposed project, implementation of MM NOI-01 through MM NOI-04, and APM NOI-01 through APM NOI-10 would, under NEPA, mitigate Impacts NOI-1

through NOI-4 associated with this component, and under CEQA impacts would be less than significant with mitigation (Class II).

D.11.6.2 Removal of TL626 from Service

Environmental Setting/Affected Environment

This alternative would remove TL626 from service and replace it with system upgrades, either with TL6931 upgrades or a TL625 loop-in as described below. In order to serve existing customers, segments of TL626 would also be converted from 69 kV to 12 kV. The setting associated with these upgrades is described as follows:

a. Upgrade to the existing 69 kV TL6931 from the Crestwood Substation to the Boulevard Substation: The setting associated with this component is largely described in SDG&E's TL6931 Fire Hardening Project Proponent's Environmental Assessment (PEA) (SDG&E 2012). As described in SDG&E's PEA, the existing ROW supports a 69 kV line. The predominant noise sources in the area include traffic on I-8 and local roadways. The noise surrounding the TL6931 alignment would be typical of open space and agricultural areas. Noise sensitive receptors include approximately 20 residences identified within 200 feet of the existing ROW; no other noise sensitive receptors have been identified within 0.25 mile of the ROW.

b. Loop-in TL625 into the Suncrest Substation (see Figure C-2). The setting associated with the new 3-mile TL625 loop-in is largely located within the CNF approximately 100 feet from the Sunrise Powerlink ROW between Japatul Road and Suncrest Substation. This area has been described in the Sunrise Powerlink Project Final EIR/EIS. As described in the Sunrise Powerlink EIR/EIS, the majority of the terrain associated along the proposed 3-mile TL625 loop-in consists of rugged and remote terrain with the closest sensitive receptors located 500 feet from the proposed alignment.

c. Convert a 6.5-mile portion of TL626 between Santa Ysabel and Boulder Creek Substations, along with a 6.8-mile section that is co-located with C79, from 69 kV to 12 kV within the same study area as SDG&E's proposed project; therefore, the environmental setting would be the same as that identified in Sections D.11.1 and D.11.2 for this component.

Environmental Effects

Under this alternative, a 6-mile portion of TL6931 would be reconstructed, or a new 3-mile 69 kV loop-in would be developed along the Sunrise Powerlink, and segments of TL626 would be converted from 69 kV to 12 kV.

Reconstruction of TL6931

Impacts NOI-1 through NOI-4: Reconstruction of TL6931 would consist of construction as well as operations and maintenance activities similar to that described for the project. Due to the nature of the existing TL6931 alignment, there would not be a substantial change to the baseline condition including the presence of sensitive noise receptors that could be exposed to noise impacts, and therefore noise impacts would reflect similar impact findings previously discussed in Section D.11.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, with implementation of MM NOI-01 through MM NOI-04, and APM NOI-01 through APM NOI-10, construction noise Impacts NOI-1 and NOI-2, including conventional construction methods, helicopter use, blasting, and night-time construction, would be reduced by ensuring compliance with County noise standards. Therefore, since construction activities would not occur in any one place for an extended period of time and would be in compliance with County noise standards, adverse and significant impacts due to construction noise to sensitive receptors would be mitigated under NEPA and under CEQA would be less than significant with mitigation implemented (Class II).

Impact findings for Impact NOI-3 (corona noise) and Impact NOI-4 (routine inspections and maintenance) previously discussed in Section D.11.3.3 would be essentially the same, and therefore similar to SDG&E's proposed project, noise impacts due to corona noise and the routine inspections and maintenance activities would not result in an adverse impact under NEPA, and under CEQA, impacts would be considered less than significant (Class III).

Development of the New 3-Mile Loop-in of TL625

Impacts NOI-1 through NOI-4: Development of the new TL625 loop-in would consist of construction as well as operations and maintenance activities similar to those described for the project in areas of rugged terrain. Due to the existing undeveloped nature of the proposed alignment, there would not be a substantial change to the baseline condition including the presence of noise sensitive receptors that could be exposed to noise impacts. Due to the intervening topography, an increase in helicopter use both during construction and operations and maintenance would be required. Noise impacts during construction, including noise due to helicopter use, would reflect similar findings as described in Impacts NOI-1 through NOI-4 discussed in Section D.11.3.3 for SDG&E's proposed project. Therefore, as with SDG&E's proposed project, implementation of MM NOI-01 through MM NOI-04, and APM NOI-01 through APM NOI-10 would, under NEPA, mitigate adverse Impacts NOI-1through NOI-4 associated with this component. Under CEQA, impacts would be less than significant with mitigation (Class II).

Convert Segments of TL626 from 69 kV to 12 kV

Impacts NOI-1 through NOI-4: Conversion of segments of TL626 to 12 kV would consist of construction as well as operations and maintenance activities similar to those described for the project; therefore, Impacts NOI-1 through NOI-4 would reflect similar impact findings previously discussed in Section D.7.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, implementation of MM NOI-01 through MM NOI-04, and APM NOI-01 through APM NOI-10 would, under NEPA, mitigate Impacts NOI-1through NOI-4 associated with this component. Under CEQA impacts would be less than significant with mitigation (Class II).

D.11.7 No Action Alternative

Environmental Effects

Impact NOI-1 through NOI-4: Under the No Action Alternative, the MSUP would not be issued, and SDG&E would be required to remove the existing electric lines and facilities on CNF-managed lands as well as develop additional transmission upgrades elsewhere as described in Section C.1.4 of this EIR/EIS. While none of the facilities associated with SDG&E's proposed project would be constructed, removal of the electric lines and restoration activities within the CNF along with the development of additional transmission lines in conformance with CAISO requirements and/or alternative means of delivering electrical service elsewhere would result in similar construction impacts as described in Section D.11.3, and therefore overall impacts to noise would not be reduced.

D.11.8 No Project Alternative

Environmental Effects

Impact NOI-1 through NOI-4: Under the No Project Alternative, the proposed power line replacement projects would not be built, and the existing SDG&E electric facilities would remain; therefore none of the construction impacts described in Section D.11.3 would occur. Operation and maintenance of SDG&E electrical facilities would continue and include routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks and would be based on the requirements of the existing permits. These activities would not increase in duration, intensity, or frequency over existing conditions; therefore no impacts over existing conditions to noise would occur.

D.11.9 Mitigation Monitoring, Compliance, and Reporting

Table D.11-9 presents the mitigation monitoring, compliance, and reporting program for noise and vibration for the power line replacement projects and alternatives.

Table D.11-9
Mitigation Monitoring, Compliance, and Reporting – Noise

Mitigation Measure	**MM NOI-1:** In the event noise levels during construction activities are expected to exceed an 8-hour L_{eq} of 75 dBA at the nearest property line or within 190 feet of the existing and proposed project alignment where noise-sensitive areas are located, San Diego Gas & Electric (SDG&E) shall implement noise reduction measures to reduce noise levels to below 75 dBA. Measures to be implemented could include: (1) portable noise barriers erected temporarily to reduce noise impacts at specific locations; or (2) if noise barriers would not reduce levels to below 75 dBA, depending on the location of residences and the level of construction noise, SDG&E shall offer to relocate affected residents until the impact has been determined to not be adverse.
Location	All construction work areas for SDG&E's proposed project and all alternatives.
Compliance Documentation[a] and Consultation	a. Monitor noise where noise sensitive areas are located b. Documentation of noise levels c. CPUC/Forest Service Monitor: Line item in compliance monitoring report
Timing	a, b, and c. During construction
Responsible Agency	*SDG&E's Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629), BLM (TL629 and TL6923), CSP (C79) *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM NOI-2**: At least 30 days before helicopter use and stringing operations are employed, San Diego Gas & Electric (SDG&E) shall prepare and submit a public notice mailer to the California Public Utilities Commission for approval. The public notice mailer shall be prepared and mailed no less than 7 days prior to helicopter use and stringing operations along the approved project alignment. SDG&E shall notify landowners, residents, schools, livestock facility owners, and CNF offices responsible for managing recreation areas within 590 feet in areas of fly yards and pole locations where helicopters will be used during construction to provide adequate notice of potential helicopter and/or stringing activity within the project vicinity. If construction is delayed for more than 7 days, an additional notice shall be mailed to discuss the status and schedule of helicopter use and stringing operations.
Location	All construction work areas for SDG&E's proposed project and all alternatives.
Compliance Documentation[a] and Consultation	a. Provide public notice mailer as defined in mitigation measure to CPUC. b. Mail notice to public c. CPUC/Forest Service Monitor: Line item in compliance monitoring report
Timing	a. At least 30 days before helicopter use and stringing operations b. At least 7 days prior to helicopter use and stringing operation c. During construction
Responsible Agency	*SDG&E's Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629), BLM (TL629 and TL6923), CSP (C79) *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)

Table D.11-9
Mitigation Monitoring, Compliance, and Reporting – Noise

Mitigation Measure	**MM NOI-3**: In the unlikely event that rock blasting is used during construction, SDG&E will prepare a blasting plan, that will include a noise and vibration calculation, and will be submitted to the California Public Utilities Commission and the County of San Diego for review before blasting at each site. Each blasting plan will be consistent with SDG&E's blasting guidelines to reduce noise and vibration impacts from blasting activities. The blasting contractor will be required to obtain a blasting permit and explosive permit per the San Diego County Regulatory Ordinances, and will ensure compliance with all relevant local, state, and federal regulations relating to blasting activities.
Location	All construction work areas for SDG&E's proposed project and all alternatives.
Compliance Documentation[a] and Consultation	a. Prepare noise and vibration calculation for rock blasting activities b. CPUC/Forest Service Monitor: Line item in compliance monitoring report
Timing	a. Prior to rock blasting activities b. During construction
Responsible Agency	*SDG&E's Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629), BLM (TL629 and TL6923), CSP (C79) *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	**MM NOI-4**: For any work that cannot occur during the allowable construction hours (between 7 a.m. and 7 p.m. Monday through Saturday), SDG&E will follow its established protocols and will provide advance notice by mail to all property owners within 300 feet of planned construction activities. The announcement will state the construction start date, anticipated completion date, and hours of construction. SDG&E will also communicate the exception to the CPUC and San Diego County in advance of conducting the work. If necessary, SDG&E will temporarily relocate residents occupying properties located less than 220 feet from construction activities on an as-needed basis for the duration of construction activities that would affect them.
Location	All construction work areas for SDG&E's proposed project and all alternatives.
Compliance Documentation[a] and Consultation	a. Provide public notice mailer as defined b. Provide verification of relocation of residents, if needed. c. CPUC/Forest Service Monitor: Line item in compliance monitoring report
Timing	a. At least 15 days prior to work occurring outside allowable construction hours b. At least 7 days prior to relocation of residents. c. During construction
Responsible Agency	*SDG&E's Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629), BLM (TL629 and TL6923), CSP (C79) *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)

[a] All compliance documentation and consultation records to be available for CPUC and Forest Service staff review upon request.

D.11.10 Residual Unavoidable Effects

Under NEPA, SDG&E's proposed project and alternatives would reduce the noise related to helicopter use by adopting the mitigation measures summarized in Section D.11.9, along with APMs provided in Section D.11.3.2, but not eliminate the potential for noise effects generated by helicopter use. Under CEQA, implementation of mitigation measures presented in Section D.11.9 would mitigate all significant noise impacts to less than significant (Class II). Therefore, no residual effects would occur for SDG&E's proposed project or alternatives.

D.11.11 References

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County of San Diego. 2009. *Guidelines for Determining Significance: Noise.* January 27, 2009. Department of Planning and Land Use, Department of Public Works. http://www.sdcounty.ca.gov/pds/docs/Noise-Guidelines.pdf

County of San Diego. 2011. Ordinance No. 9962 (N.S.): An Ordinance Amending Title 3, Division 6, Chapter 4 of the San Diego County Code of Regulatory Ordinances Relating to Noise Control and Abatement.

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SDG&E (San Diego Gas & Electric). 2012. *Proponent's Environmental Assessment for the TL6931 Fire Hardening /Wind Interconnect Project*. December 2012. Accessed April 2014. http://www.cpuc.ca.gov/environment/info/dudek/Wind_Interconnect/SDGE%20Wind%20Interconnect%20PEA.pdf.

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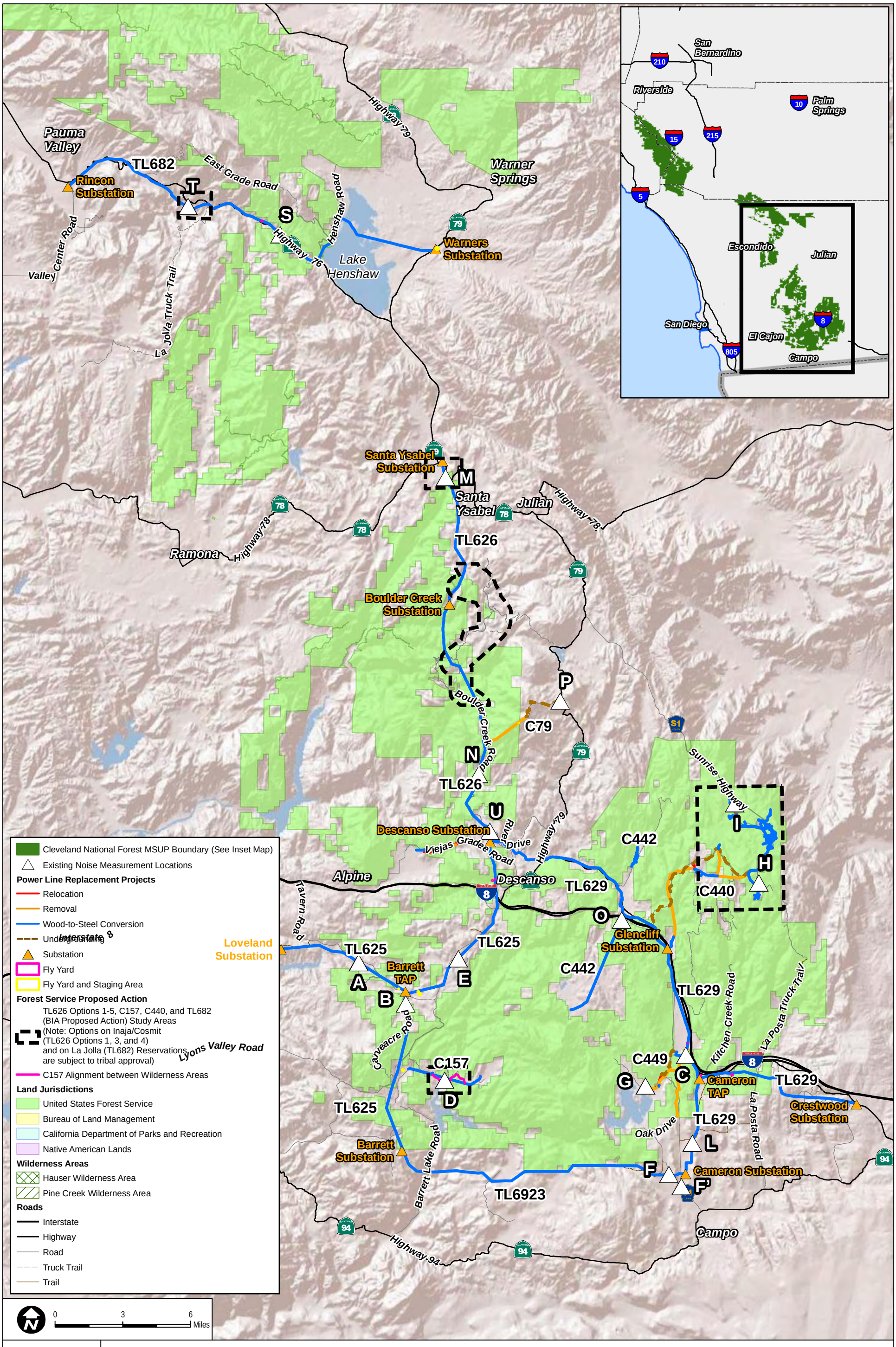

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SOURCE: SDG&E 2011; SanGIS 2012; Bing Maps

FIGURE D.11-1

Existing Noise Measurement Locations Overview Map

MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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D.12 Public Services and Utilities

This section discusses potential impacts to public services and utilities, including impacts to fire protection services, municipal water supplies, telecommunications infrastructure, and solid waste disposal capacity resulting from construction and operation of the proposed power line replacement projects along with the operation and maintenance activities proposed for authorization under the MSUP. The analysis is based on the review of existing resources, technical data, and applicable laws, regulations, and guidelines. Section D.12.1 provides a description of the existing environmental setting/affected environment, and the applicable regulations, plans, and standards are introduced in Section D.12.2. An analysis of impacts/environmental effects of SDG&E's proposed project and discussion of mitigation are provided in Section D.12.3. The U.S. Forest Service (Forest Service) proposed action is described in Section D.12.4, and Section D.12.5 discusses the Bureau of Indian Affairs (BIA) proposed action. Additional alternatives are described in Section D.12.6. Section D.12.7 discusses the No Action Alternative and Section D.12.8 describes the No Project Alternative. Section D.12.9 provides mitigation monitoring, compliance, and reporting information. Section D.12.10 addresses residual effects of the project, and Section D.12.11 lists the references cited in this section.

For a discussion regarding wildfire hazards resulting from implementation of SDG&E's proposed project please refer to Section D.8, Fire and Fuels Management. For a discussion of impacts to groundwater supplies please refer to Section D.9, Hydrology and Water Quality. For a discussion of other public services and utilities including wastewater, police, library, schools and hospitals please refer to Section G.5, Required CEQA/NEPA Topics, of this EIR/EIS.

D.12.1 Environmental Setting/Affected Environment

This section provides a description of existing fire protective services, municipal water providers, telecommunications infrastructure, and the solid waste handling and disposal facilities in the project area that would likely service the project.

Methodology and Assumptions

The existing SDG&E electric facilities (power lines, access roads, and other facilities) to be covered under the proposed MSUP are located within the Cleveland National Forest (CNF) within southwestern Orange County and southeastern San Diego County, with the majority of the study area including all of the proposed power line replacement projects located within San Diego County within and surrounding the CNF. These existing facilities are routinely maintained and operated as needed. The impacts to public services from these past actions are part of the baseline for the analysis of SDG&E's proposed project and alternatives.

Baseline public services information was obtained through a review of available protection services information within the project area as referenced below. Such sources include the California Department of Forestry and Fire Protection (CAL FIRE), the County of San Diego Fire Authority, California Department of Resources Recycling and Recovery (CalRecycle), and SanGIS (the San Diego Geographic Information Source, maintained by the County of San Diego and the City of San Diego).

D.12.1.1 Fire Protective Services

The study area is located in a rural area with few residents that includes areas of the CNF and areas statutorily designated by CAL FIRE as within the Very High Fire Hazard Severity Zone (CAL FIRE 2007).

The U.S. Forest Service provides fire protection and fire management services to CNF lands. Additionally, in rural San Diego County, there are several jurisdictions that provide fire protection services. The Forest Service provides fire protection services through funding and staffing of the 11 Forest Service fire stations listed in below Table D.12-1. The State of California also provides fire protective services in rural San Diego County through the CAL FIRE. Locally, the San Diego County Fire Authority provides fire protective services and/or manages overlapping fire protection agencies through management and oversight of County Service Areas, the San Diego Rural Fire Protection District, or contracted fire agencies (County of San Diego 2013). Additionally, there are Native American reservation fire protection services within the project area. Table D.12-1 lists the fire protection service providers within the project area, and Figure D.12-1 shows their locations relative to the project alignment.

Table D.12-1
Eastern San Diego County Fire Protection Service Providers

Map Location #	Fire Protection Agency	Station	Status
1	Alpine Fire Protection District	Alpine Fire Station	Full-Time
2	Barona Reservation Fire Department	Barona Reservation Fire Station	Full-Time
3	CALFIRE	CALFIRE Campo	Full-Time
4	CALFIRE	CALFIRE Cuyamaca	Full-Time
5	CALFIRE	CALFIRE Dulzura	Full-Time
6	CALFIRE	CALFIRE Flinn Springs	Full-Time
7	CALFIRE	CALFIRE Julian	Full-Time
8	CALFIRE	CALFIRE La Cima Camp	Seasonal
9	CALFIRE	CALFIRE Lyons Valley	Full-Time
10	CALFIRE	CALFIRE Potrero	Full-Time
11	CALFIRE	CALFIRE Puerta La Cruz Camp	Seasonal

Table D.12-1
Eastern San Diego County Fire Protection Service Providers

Map Location #	Fire Protection Agency	Station	Status
12	CALFIRE	CALFIRE Rincon	Full-Time
13	CALFIRE	CALFIRE Warner Springs	Full-Time
14	CALFIRE	CALFIRE Witch Creek	Full-Time
15	Campo Reservation Fire Department	Campo Reservation Fire Station	Part-Time
16	Campo Volunteer Fire Department	Campo Volunteer Fire Station	Part-Time
17	Fish and Wildlife Service	Fish & Wildlife Service Daley Ranch Fire Station	Seasonal
18	Intermountain Volunteer Fire & Rescue	Intermountain Volunteer Fire Station	Part-Time
19	Julian-Cuyamaca Fire Protection District	Julian-Cuyamaca Volunteer Fire Station 71	Part-Time
20	Julian-Cuyamaca Fire Protection District	Julian-Cuyamaca Volunteer Fire Station 74	Part-Time
21	North County Reservation Fire District	La Jolla Reservation Fire Station	Part-Time
22	Lakeside Fire Protection District	Lakeside Fire Station 26	Full-Time
23	San Diego Rural Fire Protection District	Lawson Valley	Part-Time
24	San Diego Rural Fire Protection District	Lee Valley	Part-Time
25	Mesa Grande Indian Reservation	Mesa Grande Reservation Fire Station	Part-Time
26	Mount Laguna Volunteer Fire Department	Mount Laguna Volunteer Fire Station	Part-Time
27	North County Reservation Fire District	North County Reservation Fire - La Jolla Station	Part-Time
28	Palomar Mountain Volunteer Fire Department	Palomar Mountain Volunteer Fire Station	Part-Time
29	Pine Valley Fire Protection District	Pine Valley Fire Station	Full-Time
30	Ramona Municipal Water District	Ramona Municipal Water District Fire Station 81	Full-Time
31	Ranchita Volunteer Fire Department	Ranchita Volunteer Fire Station 58	Part-Time
32	North County Reservation Fire Department	Rincon Reservation Fire Station	Part-Time
33	San Diego Rural Fire Protection District	San Diego Rural Deerhorn	Part-Time
34	San Diego Rural Fire Protection District	San Diego Rural Dehesa	Part-Time
35	San Diego Rural Fire Protection District	San Diego Rural Descanso	Full-Time
36	San Diego Rural Fire Protection District	San Diego Rural Dulzura	Part-Time
37	San Diego Rural Fire Protection District	San Diego Rural Harbison Canyon	Part-Time
38	San Diego Rural Fire Protection District	San Diego Rural Jamul	Full-Time
39	San Diego Rural Fire Protection District	San Diego Rural Lake Morena	Part-Time
40	San Diego Rural Fire Protection District	San Diego Rural Potrero	Part-Time
41	San Diego Rural Fire Protection District	San Diego Rural Tecate	Part-Time
42	San Miguel Fire Protection District	San Miguel Fire Station 18	Full-Time
43	North County Reservation Fire District	Santa Ysabel Reservation Fire Station	Part-Time
44	Sunshine Summit Volunteer Fire Department	Sunshine Summit Volunteer Fire Department	Part-Time
45	Sycuan Reservation Fire Department	Sycuan Reservation Fire Station	Full-Time
46	Forest Service	Forest Service Alpine Fire Station 47	Seasonal
47	Forest Service	Forest Service Cameron Fire Station 43	Seasonal
48	Forest Service	Forest Service Camp Ole 42	Seasonal
49	Forest Service	Forest Service Cottonwood Fire Station 44	Seasonal
50	Forest Service	Forest Service Descanso Fire Station 41	Seasonal
51	Forest Service	Forest Service Glencliff Fire Station 45	Seasonal

Table D.12-1
Eastern San Diego County Fire Protection Service Providers

Map Location #	Fire Protection Agency	Station	Status
52	Forest Service	Forest Service Goose Valley Fire Station 34	Seasonal
53	Forest Service	Forest Service Henshaw Fire Station 32	Seasonal
54	Forest Service	Forest Service Japatul 46	Seasonal
55	Forest Service	Forest Service Pine Hills 33	Seasonal
56	Forest Service	Forest Service San Vicente 35	Seasonal
57	Viejas Reservation Fire Department	Viejas Reservation Fire Station	Full-Time
58	Warner Springs Volunteer Fire Department	Warner Springs Volunteer Fire Station	Part-Time

Source: SANGIS 2012

Many of these fire protection service providers have mutual-aid agreements to provide fire protective services to areas within adjacent jurisdictions depending on the type of emergency. In addition to the fire protective service providers listed above, the Bureau of Land Management (BLM), through the Fire and Aviation Directorate Program, provides aerial firefighting support for fires occurring on BLM lands. Aircraft used by the BLM are BLM-owned and contracted. In addition, CAL FIRE has an air attack base located in Ramona and the Forest Service has one helicopter located on the CNF and a type 1 helicopter in Hemet.

The BLM also provides funding for firefighting efforts (through Community Assistance Grants) in the rural areas of San Diego County. In the past, funding has been used for wildfire training to local volunteers responsible for responding to fires on BLM lands. In San Diego County, BLM lands are under a Direct Protection Agreement with CAL FIRE, which specifies that CAL FIRE provides fire response resources and is responsible for conducting investigations regarding the recovery of fire suppression costs (CPUC and BLM 2008).

D.12.1.2 Municipal Water Providers

The amount of water needed for operation and maintenance of the existing power lines is highly variable depending on climatic conditions, soil types, fire-threat conditions vegetation types, among other variables. SDG&E estimates that approximately 130,000 gallons of water is used annually. When water is required it is purchased from a variety of water sources, including local municipal water districts, tribal wells, and private wells, and trucked to work sites (SDG&E 2014). Nearby local water districts include the following (LAFCO 2014):

- Descanso Community Water District
- Julian Community Service District
- Majestic Pines Community Services District

- Padre Dam Municipal Water District
- Ramona Municipal Water District
- South Bay Irrigation District
- Vista Irrigation District
- Wynola (California) Water District.

Water may also be purchased from private or tribal wells, or from other municipal water districts that are further away, including the Yuima Municipal Water District, Lakeside Water District, City of San Diego, and City of Escondido. The various municipal water providers get their water from underground wells, lakes, recycled water (for limited use such as irrigation or construction use), or from the San Diego County Water Authority, which imports up to 80% of its water from the Metropolitan Water District of Southern California (SDCWA 2014).

D.12.1.3 Telecommunications Infrastructure

AT&T provides telecommunications services in the project area and, in many areas, leases space on SDG&E's poles that are to be replaced under SDG&E's proposed project.

D.12.1.4 Solid Waste

Maintenance of the existing transmission lines requires activities that generate solid waste, such as tree and vegetation trimming activities, access road maintenance, and hardware replacement and repair work. The majority of the bulk of waste generated through maintenance of the existing transmission lines is vegetation waste. The amount of biomass generated annually from these power lines varies based mainly on the amount of water available to trees, brush, and annual plants growing in proximity to these facilities. Seasons with high rainfall amounts will subsequently yield greater amounts of biomass from vegetation management operations. Conversely, prolonged drought will generally yield less biomass, with the exception of tree decay and overall mortality caused by drought. On average, SDG&E estimates approximately 77 tons of biomass is generated annually from the maintenance of the existing power lines (SDG&E 2014).

Where maintenance activities occur in locations requiring crews to walk significant distances, SDG&E employs a Forest Service-approved practice of lopping and scattering vegetation waste in the vicinity of the work area. When maintenance crews are able to carry vegetation waste to their support vehicles for removal, the waste is chipped and either hauled to an approved recycling or landfill site, or is provided to customers in the local area, at their request, for use as erosion control, weed abatement, or landscaping materials. In these instances, the requesting customer signs a release form prior to receipt of the materials. Any materials hauled but not

released to a requesting customer are disposed of at an approved landfill, or deposited temporarily in one of several transfer and processing stations. SDG&E's currently approved disposal locations for vegetation wastes are the Sycamore Landfill, the Escondido Transfer and Recycling Center, the Ramona Transfer Station, and the Otay Landfill (SDG&E 2014).

In addition to the facilities listed above, there are several other permitted active landfills located within San Diego and Imperial counties with remaining capacity that could also serve the project. The landfills closest to the project alignment that would most likely receive solid waste generated during maintenance and construction activities occurring along the project alignment are listed below in Table D.12-2.

Table D.12-2
Solid Waste Disposal Facilities in the Project Area

Facility	Location	Permitted Disposal Rate/Throughput	Remaining Capacity
Allied Imperial Landfill	104 East Robinson Road, Imperial	1,700 tons/day	15,485,200 cubic yards (as of December 31, 2010)
Borrego Landfill	2449 Palm Canyon Road, Borrego Springs	50 tons/day	478,836 cubic yards (as of August 2009)
Imperial Solid Waste Site	1705 West Worthington Road, Imperial	18 tons/day	183,804 cubic yards (as of May 1, 2012)
Otay Landfill	1700 Maxwell Road, Chula Vista	5,830 tons/day	24,514,904 cubic yards (as of March 31, 2012)
Sycamore Landfill	8514 Mast Boulevard at West Hills Pkwy, San Diego	3,965 tons/day	47,388,428 cubic yards (as of September 30, 2006)

Sources: CalRecycle 2013a–e

The project would also be served by several materials recovery facilities, including the Ramona Materials Recovery Facility and Transfer Station located at 324 Maple Street in Ramona, which processes mixed municipal, construction/demolition, and green materials (CalRecycle 2013f).

D.12.2 Applicable Regulations, Plans, and Standards

D.12.2.1 Federal Regulations

U.S. Forest Service Land Management Plan

The U.S. Forest Service Land Management Plan (LMP) for the Southern California national forest includes the Angeles National Forest, the CNF, the Los Padres National Forest, and the San Bernardino National Forest. The proposed project is located within the Cleveland

National Forest. The following are LMP goals and policies (USDA 2005) applicable to public services and utilities.

- **LMP Policy:** Goal 7.1 – Retain natural areas as a core for a regional network while focusing the built environment into the minimum land area needed to support growing public needs. [LMP Part 1]
- Facilities supporting urban infrastructure needs are clustered on existing sites or designated corridors, minimizing the number of acres encumbered by special-use authorizations. Special-uses serve public needs, provide public benefits, and conform to resource management and protection objectives. All uses are in full compliance with the terms and conditions of the authorization. There is a low level of increase in the developed portion of the landscape as measured by road densities; in fact, over time, the built environment is shifted away from or designed to better protect resource values.
- **LMP Policy:** Lands 2 – Non-Recreation Special Use Authorizations [LMP Part 2]
    - Administer existing special-use authorizations in threatened, endangered, proposed and candidate species habitats to ensure they avoid or minimize impacts to threatened, endangered, proposed and candidate species and their habitats, cultural and scenic resources, and open space values.
    - Efficiently administer special-use authorizations (SUAs) on National Forest System lands.
    - Work with special-use authorization holders to better administer National Forest System land and to reduce administrative cost.
    - Require special-use authorizations to maximize opportunities to co-locate facilities and minimize the encumbrance on National Forest System land.
    - For special-use authorization holders operating within threatened, endangered, proposed and candidate species key and occupied habitats develop and provide information and education on the ways to avoid and minimize effects on their activities on occupied threatened, endangered, proposed and candidate species habitat.
    - Use signing, barriers, or other suitable measures to protect threatened, endangered, proposed and candidate species in key and occupied habitats within the special-use authorization areas.
- **LMP Policy:** CNF S6 – Place new power lines (33 kV or less), telephone lines, and television cables underground wherever possible.

D.12.2.2 State Laws and Regulations

California Integrated Waste Management Board Solid Waste Policies

Assembly Bill 939 (AB 939), the Integrated Waste Management Act, established an integrated waste management hierarchy to guide the California Integrated Waste Management Board (now the California Department of Resources Recycling and Recovery, or CalRecycle) and local agencies in the implementation of programs geared at (1) source reduction, (2) recycling and composting, and (3) environmentally safe transformation and land disposal. AB 939 also included waste diversion mandates that require all cities and counties to divert 50% of all solid waste through source reduction, recycling, and composting activities by 2000. In 2011 AB 341 was passed that requires CalRecycle to issue a report to the legislature that includes strategies and recommendations to enable the state to divert 75% of all solid waste generated in the state by 2020 (CalRecycle 2013g).

D.12.2.3 Regional Policies, Plans, and Regulations

County of San Diego Construction and Demolition Materials Ordinance

The County of San Diego Construction and Demolition Materials Ordinance (Sections 68.508 through 68.518 of the County Code of Regulatory Ordinances) is intended to increase diversion of construction and demolition materials from landfills in order to conserve landfill capacity and extend the useful life of local landfills. The ordinance requires that projects totaling over 40,000 square feet of construction prepare a debris management plan that specifies the type of project, total square footage of construction, and (among other items) the estimated volume and weight of construction and demolition debris that would be disposed of at a landfill. Applicants of applicable projects are required to submit a performance guarantee (payment) to the County to ensure that the project complies with the diversion standards (i.e., projects shall recycle 90% inert construction and demolition debris and 70% of all other construction and demolition debris) of the Construction and Demolition Materials Ordinance.

D.12.3 Environmental Effects

D.12.3.1 Definition and Use of CEQA Significance Criteria/Indicators under NEPA

The CEQA criteria and guidelines described below are also used as indicators of adverse effect under NEPA. The following public services and utilities significance criteria were derived from previous environmental impacts assessments and from Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.). Under CEQA, impacts related to public services and utilities would be significant if the project would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physical 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 fire protection, municipal water supplies, and telecommunications
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs
- Not comply with federal, state, and local statutes and regulations related to solid waste.

D.12.3.2 Applicant Proposed Measures

SDG&E has proposed Applicant Proposed Measures (APMs) GEN-02 and GEN-03, which include recycling and disposal methods to reduce impacts associated with solid waste (see Section B.7 of this EIR/EIS). SDG&E has also proposed APMs and other project design features to minimize impacts associated with fire hazards; they are evaluated in Section D.8, Fire and Fuels Management, of this EIR/EIS.

D.12.3.3 Direct and Indirect Effects

Impact PSU-1: Result in physical impacts associated with the provision of new or physically altered government facilities, need for new or physical 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 fire protection, municipal water supplies, and telecommunications

Fire Protection

As discussed above and shown in Table D.12-1 and Figure D.12-1, fire protection services are provided by the Forest Service, BLM, CAL FIRE, San Diego County Fire Authority, San Diego County Rural Fire Protection District, several other local fire protection districts, and Native

American reservation fire protection services. As discussed in Section D.8, Fire and Fuels Management, of this EIR/EIS, construction and operation and maintenance activities associated with SDG&E's proposed project would include potential ignition sources that could ignite a wildfire. However, as discussed in Section D.8, with implementation of APMs HAZ-01 through HAZ-06, along with mitigation measures MM FF-1, MM FF-2, and MM BIO-1d adverse and significant fire hazards due to the project would be mitigated; therefore, the demand for increased fire protection services in the study area would not increase with implementation of SDG&E's proposed project in such a way as to require the construction of new or physically altered facilities in order to maintain acceptable levels of service. Therefore, under NEPA, impacts to fire protection services would be mitigated, and under CEQA would be less than significant with mitigation (Class II).

Municipal Water Supplies

Water usage can fluctuate depending on many variables that include climatic conditions, soil types, and fire-threat conditions vegetation types. SDG&E estimated water usage requirements for their proposed project by examining several factors, including the duration of each project phase; the number of pole work areas; miles of conductor, miles of access road, or miles of undergrounding to be included in each phase; and the average water requirements per day for each type of work to be conducted. By calculating the average water requirements per day, per site type, and multiplying that average across the number of days for each phase included in the construction schedule, SDG&E anticipates that approximately 5 to 10 million gallons of water per year over an approximate 5-year period will be required to construct all phases of the proposed project (SDG&E 2014).

SDG&E intends to use a variety of water sources, both public and private including, but not limited to, the City of San Diego and local community services districts listed in Section D.12.1.2, and private groundwater extraction operations. Impacts and mitigation measures associated with the use of private groundwater extraction operations and to groundwater in general are discussed in Section D.9, Hydrology and Water Quality, of this EIR/EIS.

As listed in Section D.12.1.2 earlier, there are eight local water suppliers that serve the project area. Although the project's construction water demand would be temporary, it would occur over a 5-year period with no formal commitments yet provided by local water purveyors to supply the estimated water needed to construct the project. To ensure a confirmed reliable water supply, mitigation measure MM HYD-2a is provided. With implementation of MM HYD-2a, the construction water requirements of SDG&E's proposed project would be ensured without requiring new or expanded municipal water facilities or services; therefore, adverse and

significant construction-related impacts to municipal water services would be mitigated under NEPA, and under CEQA would be considered less than significant with mitigation (Class II).

Operation and maintenance of SDG&E's proposed project along with other SDG&E electric facilities proposed to be covered under the MSUP would require routine and periodic equipment testing, and maintenance activities similar to those currently conducted by SDG&E. These activities would not increase in duration or intensity with implementation of SDG&E's proposed project in such a way as to increase the existing demand for water estimated to be 130,000 gallons per year. Note estimated water demand could fluctuate depending on time of year and weather conditions. Water use during operations would not be considered excessive, and the previously identified eight local water suppliers that serve the project area and are assumed to have adequate supplies to accommodate the small volumes of water required during project operations. Therefore, impacts to municipal water supplies services due to operation and maintenance of SDG&E's proposed project would not exceed the significance threshold, and under NEPA would not be adverse and under CEQA would be less than significant (Class III).

Telecommunications Infrastructure

As stated above, AT&T provides telecommunications services in the project area and, in many areas, leases space on existing facilities proposed to be replaced as part of the proposed power line replacement projects. Where AT&T's telecommunications lines are currently strung on the same poles, replacement of the poles without coordination with AT&T could result in interruptions of telecommunications services or a delay in the removal of the existing poles. To mitigate this adverse and significant impact to a level that is considered not adverse under NEPA, and less than significant under CEQA (Class II), mitigation measure MM PSU-1 has been provided.

MM PSU-1 **AT&T Commitments**. Prior to receiving a Notice to Proceed with construction along each of the proposed power line replacement projects, SDG&E shall provide to the CPUC and Forest Service written commitment from AT&T confirming that AT&T facilities that are co-located on the proposed power line replacement projects will be relocated to SDG&E's new facilities. Facilities will be transferred in a manner that avoids interruptions of telecommunications services to the greatest degree possible. The timing of the relocation activities will be reviewed and approved by both the CPUC and Forest Service.

Impact PSU-2: Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.

The primary source of solid waste resulting from construction of SDG&E's proposed project would be wooden poles and associated appurtenances to be removed from the alignment and replaced. In accordance with APMs GEN-02 and GEN-03, described earlier, the majority of removed materials from the existing alignment would be recycled at a licensed facility within the area if it is determined that materials slated for disposal are nonhazardous and non-impacted. Treated wood products would be recycled or disposed of as appropriate at a licensed landfill in accordance with all federal, state, and local regulations. Conductors, hardware, and insulators associated with removed facilities would be recycled at an approved ~~facility, such as the SDG&E Mountain Empire Construction and Operations yard in Pine Valley, or recycled at a metal~~ recycling facility. Excavated soil would be reused on site, including as infill and recompaction of vacant holes created during pole removal. Also, in accordance with APM GEN-01, all excess soil not reused for backfill on site would spread on the site. For any material that cannot be recycled, permanent disposal of waste generated from SDG&E's proposed project would likely be sent to one of the landfills listed in Table D.12-2, which have a combined remaining capacity of approximately 88 million cubic yards. Overall, the majority of material to be removed would be recycled; thus, the amount of construction waste to be disposed at a landfill or other permitted facility is expected to be minimal. Therefore, construction of SDG&E's proposed project would not have a substantial impact on local solid waste facilities and would not result in the need for expansion of a landfill or other disposal site. Construction-related impacts on solid waste disposal facilities would not be adverse under NEPA, and would be less than significant (Class III) under CEQA.

Operation and maintenance of SDG&E's proposed project along with other SDG&E electric facilities proposed to be covered under the MSUP would require routine and periodic equipment testing and maintenance activities similar to those currently conducted by SDG&E. These activities would not increase in duration or intensity with implementation of SDG&E's proposed project in such a way as to increase the demand for solid waste disposal. The previously identified five local solid waste providers that serve the project area are assumed to have adequate capacity to accommodate the small volumes of solid waste generated during project operations. Therefore, impacts to municipal landfill services due to operation and maintenance of SDG&E's proposed project would not exceed the significance threshold, and under NEPA would not be adverse and under CEQA would be less than significant (Class III).

Impact PSU-3: Disruption of electric service to existing users

Short-term electric service interruptions during construction would likely occur during transfer of power from existing circuits to new circuits. Electric transfers would be phased in accordance with California Independent System Operator (CAISO) requirements in order to reduce the

potential for electric service interruptions during construction. Conformance with CAISO requirements would ensure that impacts to electric service during construction would not be adverse under NEPA and would be less than significant under CEQA (Class III).

D.12.4 Forest Service Proposed Actions

Environmental Setting/Affected Environment

Sections D.12.1 and D.12.2 describe the existing public service and utility setting associated with SDG&E's proposed project. Each of the Forest Service proposed action alternatives would be in the same geographic service area as SDG&E's proposed project; therefore, the public service and utility setting would remain the same as that identified in Sections D.12.1 and D.12.2.

D.12.4.1 TL626 Alternative Routes

Options 1 and 2 SDG&E Proposed Overhead Alignments Through/Around Inaja and Cosmit Reservation Lands

Options 3 and 4 Partial Underground/Overhead Relocation in/along Boulder Creek Road

Option 5 Reroute and Undergrounding around Inaja Picnic Area

Environmental Effects

Impacts PSU-1: Impacts generated from relocating TL626 as proposed in Options 1 through 5 would reflect similar impact findings previously discussed in Section D.12.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, there would be no new demand for increased fire protection services that require the construction of new or physically altered facilities in order to maintain acceptable levels of service. With implementation of APM HAZ-01 through APM HAZ-06, along with mitigation measures MM FF-1, MM FF-2, and MM BIO-1d, adverse and significant fire hazards due to the Forest Service proposed action for TL626 Options 1through 5 and the project as a whole would be mitigated. The fire risk under Option 3 would be reduced for this segment as the line would be undergrounded along Boulder Creek Road. Therefore, under NEPA, identified impacts from Options 1 through 5 to fire protection services would not be adverse, and under CEQA this impact would be less than significant (Class III).

The overall water volume required for construction and operation of the Forest Service proposed action for TL626 Options 1 through 5 would be greater than the water volumes required for construction of SDG&E's proposed project due to the overall greater disturbance areas required. As such, water use would increase over the reconstruction of TL626 in place as proposed.

However, with implementation of MM HYD-2a, the construction water needed for this alternative and project as a whole would be ensured without requiring new or expanded municipal water facilities or services; therefore, adverse and significant construction-related impacts to municipal water services would be mitigated under NEPA, and under CEQA would be considered less than significant with mitigation (Class II).

As with SDG&E's proposed project, it is anticipated that the eight local water suppliers that service the project area would have the water volumes needed during project operations to meet the demand for water supplies. Therefore, impacts to municipal water supplies during operations and maintenance of the Forest Service proposed action for TL626 Options 1 through 5 and the project as a whole would not be adverse under NEPA, and under CEQA would be less than significant (Class III).

As no telecommunication facilities are co-located on TL626, no impacts due to relocation of this line would occur.

Impact PSU-2: Impacts to waste facilities would reflect similar impact findings previously discussed in Section D.12.3.3. TL626 Relocation Options 1 through 5 would not change the amount of wooden poles that would be removed along the existing TL626 and the project as a whole. In addition, as with SDG&E's proposed project, excavated soils from poles and open trenching activities would be reused on site (Impact PSU-2). Therefore, the waste produced during construction activities would be the similar to SDG&E's proposed project. Although during operations there would be slight increase of operations and maintenance activities due to the longer lines under Options 1 through 5, this would be a marginal increase. As shown in table D.12-2, there is adequate capacity remaining at local waste facilities; therefore, waste providers are anticipated to have adequate capacity. Like SDG&E's proposed project, maintenance activities would be similar to those currently conducted by SDG&E; therefore, there would be no increase in demand for solid waste disposal during operation of this alternative. Therefore, identified impacts for waste facilities would not be adverse under NEPA and would be less than significant under CEQA (Class III).

Impact PSU-3: As discussed in Section D.12.3.3, electric transfers would be phased for options 1 through 5 in accordance with CAISO requirements in order to reduce the potential for electric service interruptions during construction. Therefore, identified impacts for electric service disruptions would be the same as SDG&E's proposed project. Impacts would not be adverse under NEPA and would be less than significant under CEQA (Class III).

D.12.4.2 C157 Partial Relocation to Avoid Designated Wilderness

Option 1 SDG&E Proposed Alignment between Two Wilderness Areas

Option 2 City of San Diego Modified Alignment

Environmental Effects

Impacts PSU-1, PSU-2, and PSU-3: Impacts generated from relocating C157 as proposed in options 1 and 2 would reflect the same impact findings previously discussed in Section D.12.3.3 for the proposed replacement of C157. As such, impacts to fire services, municipal water services, telecommunications, solid waste facilities, and disruption to electric service ~~disruptions~~ would essentially be the same as the proposed replacement of C157 as well as the project as a whole. Identified impacts to fire services, solid waste facilities, and disruption to electric service disruptions would not be adverse under NEPA and would be less than significant under CEQA (Class III). AT&T facilities are co-located on the C157 poles and would need to be relocated with the SDG&E facilities. With implementation of MM HYD-2a and MM PSU-1, adverse and significant water supply and telecommunication impacts identified would be mitigated under NEPA and under CEQA, would be considered less than significant with mitigation (Class II).

D.12.4.3 C440 Mount Laguna Underground Alternative

Environmental Effects

Impact PSU-1: Impacts would reflect similar impact findings previously discussed in Section D.12.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, there would be no new demand for increased fire protection services that require the construction of new or physically altered facilities in order to maintain acceptable levels of service. With implementation of APM HAZ-01 through APM HAZ-06, along with Mitigation Measures MM FF-1, MM FF-2, and MM BIO-1d, adverse and significant fire hazards due to this alternative and the project as a whole would be mitigated. The fire risk under this alternative would be slightly reduced as approximately 14.3 miles of C440 would be undergrounded. Therefore, under NEPA, identified impacts to fire protection services would not be adverse, and under CEQA this impact would be less than significant (Class III).

The partial undergrounding of C440 is not anticipated to require substantially more water than was identified in Section D.12.3.3 for construction and operation of SDG&E's proposed project. Therefore, similar to SDG&E's proposed project, approximately 5 to 10 million gallons of water would be required for construction, and 130,000 gallons of water per year would be used during

operation; thus, PSU-1 impacts under this alternative would be similar to those identified in Section D.12.3.3. Impacts would be adverse under NEPA. Mitigation Measure MM HYD-2a has been provided that would mitigate this impact. Under CEQA, impacts would be considered less than significant with mitigation (Class II).

Impacts to telecommunication services would be the same as those discussed in Section D.12.3.3. AT&T and SDG&E would be required to coordinate regarding co-location of telecommunication services on the portion of the facilities that would be undergrounded and with the project as a whole under this alternative. With implementation of MM PSU-1, impacts would not be adverse under NEPA, and would be less than significant under CEQA with mitigation (Class II).

Impact PSU-2: Impacts to waste facilities would reflect the same impact findings previously discussed in Section D.12.3.3. This alternative would not change the amount of wooden poles that would be removed along the existing C440 and the project as a whole. In addition, as with SDG&E's proposed project, excavated soils from open trenching activities would be reused on site (Impact PSU-2). Therefore, the waste produced during construction activities would be similar to SDG&E's proposed project. Like SDG&E's proposed project, maintenance activities would be similar to those currently conducted by SDG&E; therefore, there would be no increase in demand for solid waste disposal during operation of this alternative. Therefore, identified impacts for waste facilities would not be adverse under NEPA and would be less than significant under CEQA (Class III).

Impact PSU-3: As discussed in Section D.12.3.3, electric transfers under this alternative would also be phased in accordance with CAISPO requirements in order to reduce the potential for electric service interruptions during construction. Therefore, identified impacts for electric service disruptions would be the same as SDG&E's proposed project. Impacts would not be adverse under NEPA and would be less than significant under CEQA (Class III).

D.12.5 BIA Proposed Action

Environmental Effects

Impact PSU-1: Impacts would reflect similar impact findings previously discussed in Section D.12.3.3 for TL682. As with SDG&E's proposed project, there would be no new demand for increased fire protection services that require the construction of new or physically altered facilities in order to maintain acceptable levels of service. With implementation of APM HAZ-01 through APM HAZ-06, along with mitigation measures MM FF-1, MM FF-2, and MM BIO-1d, adverse and significant fire hazards due to this alternative and the project as a whole would be mitigated. The fire risk under this alternative would be marginally reduced with the

undergrounding of approximately 1,500 feet of TL682. Therefore, under NEPA, identified impacts to fire protection services would not be adverse, and under CEQA this impact would be less than significant with mitigation (Class II).

The partial undergrounding and relocation of TL682 would not require substantially more water than was identified in Section D.12.3.3 for construction and operation of SDG&E's proposed project. Therefore, similar to SDG&E's proposed project, approximately 5 to 10 million gallons of water would be required for construction, and 130,000 gallons of water per year would be used during operation; thus, PSU-1 impacts under this alternative would be similar to those identified in Section D.12.3.3. Impacts would be adverse under NEPA. Mitigation Measure MM HYD-2a has been provided that would mitigate this impact. Under CEQA, impacts would be considered less than significant with mitigation (Class II).

Impacts to telecommunication services would be the same as those discussed in Section D.12.3.3. AT&T and SDG&E would be required to coordinate regarding co-location of telecommunication services on the portion of the facilities that would be undergrounded and relocated. With implementation of MM PSU-1, adverse and significant impacts would be mitigated under NEPA, and considered less than significant with mitigation under CEQA (Class II).

Impact PSU-2: Impacts to waste facilities would reflect the same impact findings previously discussed in Section D.12.3.3. This alternative would not change the amount of wooden poles that would be removed along the existing TL682 and the project as a whole. In addition, as with SDG&E's proposed project, excavated soils from open trenching activities would be reused on site. Therefore, the waste produced during construction activities would be the similar to SDG&E's proposed project. Like SDG&E's proposed project, maintenance activities would be similar to those currently conducted by SDG&E; therefore, there would be no increase in demand for solid waste disposal during operation of this alternative. Therefore, identified impacts for waste facilities would not be adverse under NEPA and would be less than significant under CEQA (Class III).

Impact PSU-3: As discussed in Section D.12.3.3, electric transfers under this alternative would also be phased in accordance with CAISO requirements in order to reduce the potential for electric service interruptions during construction. Therefore, identified impacts for electric service disruptions would be the same as SDG&E's proposed project. Impacts would not be adverse under NEPA and would be less than significant under CEQA (Class III).

D.12.6 Additional Alternatives

D.12.6.1 Partial Removal of Overland Access Roads

Environmental Setting/Affected Environment

This alternative described below would be in the same geographic region as SDG&E's proposed project, therefore, the environmental setting would be the same as that identified in Sections D.12.1 and D.12.2.

Environmental Effects

Impacts PSU-1, PSU-2, and PSU-3: Impacts would reflect the same impact findings previously discussed in Section D.12.3.3 for SDG&E's proposed project. As such, impacts to fire services, municipal water services, telecommunications, solid waste facilities, and disruption to electric service ~~disruptions~~ would essentially be the same as SDG&E's proposed project. Identified impacts to fire services, solid waste facilities, and disruption to electric service disruptions would not be adverse under NEPA and would be less than significant under CEQA (Class III). With implementation of MM HYD-2a and MM PSU-1, adverse and significant water supply and telecommunication impacts identified would be mitigated under NEPA and under CEQA would be considered less than significant with mitigation (Class II).

D.12.6.2 Removal of TL626 from Service

Environmental Setting/Affected Environment

The system upgrades proposed under this alternative would be in the same geographic service area as SDG&E's proposed project; therefore, the public service and utility setting would remain the same as that identified in Sections D.12.1 and D.12.2.

Environmental Effects

Impact PSU-1: Impacts would reflect similar impact findings previously discussed in Section D.12.3.3 for SDG&E's proposed project as removed facilities would be replaced with facilities requiring similar public services within the same geographic region. As with SDG&E's proposed project, there would be no new demand for increased fire protection services that require the construction of new or physically altered facilities in order to maintain acceptable levels of service. With implementation of APM HAZ-01 through APM HAZ-06, along with mitigation measures MM FF-1, MM FF-2, and MM BIO-1d, adverse and significant fire hazards due to this alternative and the project as a whole would be mitigated. The fire risk under this alternative would be slightly reduced as the existing TL626 line would be removed from a very

high fire danger area, thereby indirectly decreasing potential demand on fire services. Therefore, under NEPA, identified impacts to fire protection services would not be adverse, and under CEQA this impact would be less than significant (Class III).

The partial removal of TL626 is not anticipated to require substantially more water than was identified in Section D.12.3.3 as removed facilities would be replaced with facilities having similar water requirements during construction and operation. Therefore, PSU-1 impacts under this alternative would be similar to those identified in Section D.12.3.3. Impacts would be adverse under NEPA. Mitigation Measure MM HYD-2a has been provided that would mitigate this impact. Under CEQA, impacts would be considered less than significant with mitigation (Class II).

Impacts to telecommunication services would be the same as those discussed in Section D.12.3.3. AT&T and SDG&E would be required to coordinate regarding co-location of telecommunication services on new facilities constructed under this alternative. With implementation of MM PSU-1, impacts would not be adverse under NEPA, and under CEQA would be less than significant (Class II).

Impact PSU-2: Impacts to waste facilities would reflect similar impact findings previously discussed in Section D.12.3.3 as removed facilities would be replaced with facilities requiring similar waste disposal services. Although, this alternative could increase the amount of wooden poles that would be removed due to both the removal of new poles in an existing ROW and the partial removal of poles from TL626, the landfills servicing this area have remaining capacity as shown in Table D.12-2. Like SDG&E's proposed project, maintenance activities would be similar to those currently conducted by SDG&E; therefore, there would be no increase in demand for solid waste disposal during operation of this alternative. Therefore, identified impacts for waste facilities during construction and operation would not be adverse under NEPA and would be less than significant under CEQA (Class III).

Impact PSU-3: As discussed in Section D.12.3.3, electric transfers under this alternative would also be phased in accordance with CAISO requirements in order to reduce the potential for electric service interruptions during construction. Therefore, identified impacts for electric service disruptions would be the same as SDG&E's proposed project. Impacts would not be adverse under NEPA and would be less than significant under CEQA (Class III).

D.12.7 No Action Alternative

Environmental Effects

Impacts PSU-1, PSU-2, and PSU-3: Under the No Action Alternative, the MSUP would not be issued, and SDG&E would be required to remove the existing electric lines and facilities on CNF-managed lands as well as develop additional transmission upgrades elsewhere as described in Section C.1.4 of this EIR/EIS. While none of the facilities associated with SDG&E's proposed project would be constructed, removal of the electric lines and restoration activities within the CNF along with the development of additional transmission lines in conformance with CAISO requirements and/or alternatives means of delivering electrical service elsewhere would result in similar construction and operation impacts as described in Section D.12.3, and therefore overall impacts to public services would not be reduced.

D.12.8 No Project Alternative

Environmental Effects

Impacts PSU-1, PSU-2, and PSU-3: Under the No Project Alternative, the proposed power line replacement projects would not be built, and the existing SDG&E electric facilities would remain, and therefore none of the construction impacts described in Section D.12.3 would occur. Operations and maintenance of SDG&E electrical facilities would continue and include routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks and would be based on the requirements of the existing permits. These activities would not increase in duration, intensity, or frequency over existing conditions; therefore, no impacts over existing conditions to existing fire protective services, municipal water providers, and telecommunications infrastructure, would occur.

D.12.9 Mitigation Monitoring, Compliance, and Reporting

Table D.12-3 presents the mitigation monitoring, compliance, and reporting program for public services and utilities for SDG&E's power line replacement projects and alternatives.

Table D.12-3
Mitigation Monitoring, Compliance, and Reporting – Public Services and Utilities

Mitigation Measure	**MM PSU-1: AT&T Commitments.** Prior to receiving a Notice to Proceed with construction along each of the proposed power line replacement projects, SDG&E shall provide to the CPUC and Forest Service written commitment from AT&T confirming that AT&T facilities that are co-located on the proposed power line replacement projects will be relocated to SDG&E's new facilities. Facilities will be transferred in a manner that avoids interruptions of telecommunications services to the greatest degree possible. The timing of the relocation activities will be reviewed and approved by both the CPUC and Forest Service.
Location	Along electric lines with co-located AT&T facilities.
Compliance Documentation[a] and Consultation	a. Record of written verification from AT&T that telecommunication facilities will be relocated on new poles and the timing of the relocation of facilities. b. CPUC/Forest Service Monitor: Line item in compliance monitoring report
Timing	a. and b. Prior to notice to proceed
Responsible Agency	SDG&E's *Proposed Project*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629), BLM (TL629 and TL6923), CSP (C79) *Forest Service Proposed Actions*: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) *BIA Proposed Action*: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) *Partial Removal of Overland Access Roads*: Forest Service *Removal of TL626 from Service*: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)

[a] All compliance documentation and consultation records to be available for CPUC and Forest Service staff review upon request.

D.12.10 Residual Unavoidable Effects

Under NEPA, SDG&E's proposed project and alternatives would result in adverse but mitigated impacts. Mitigation measures summarized in Section D.12.9, along with APMs provided in Sections D.12.3.2 and D.8.3.2 (fire hazards) would mitigate all impacts. Under CEQA, implementation of mitigation measures presented in Section D.12.9 would mitigate all public service and utility impacts to less than significant. Therefore, no residual effects would occur for SDG&E's proposed project or alternatives.

D.12.11 References

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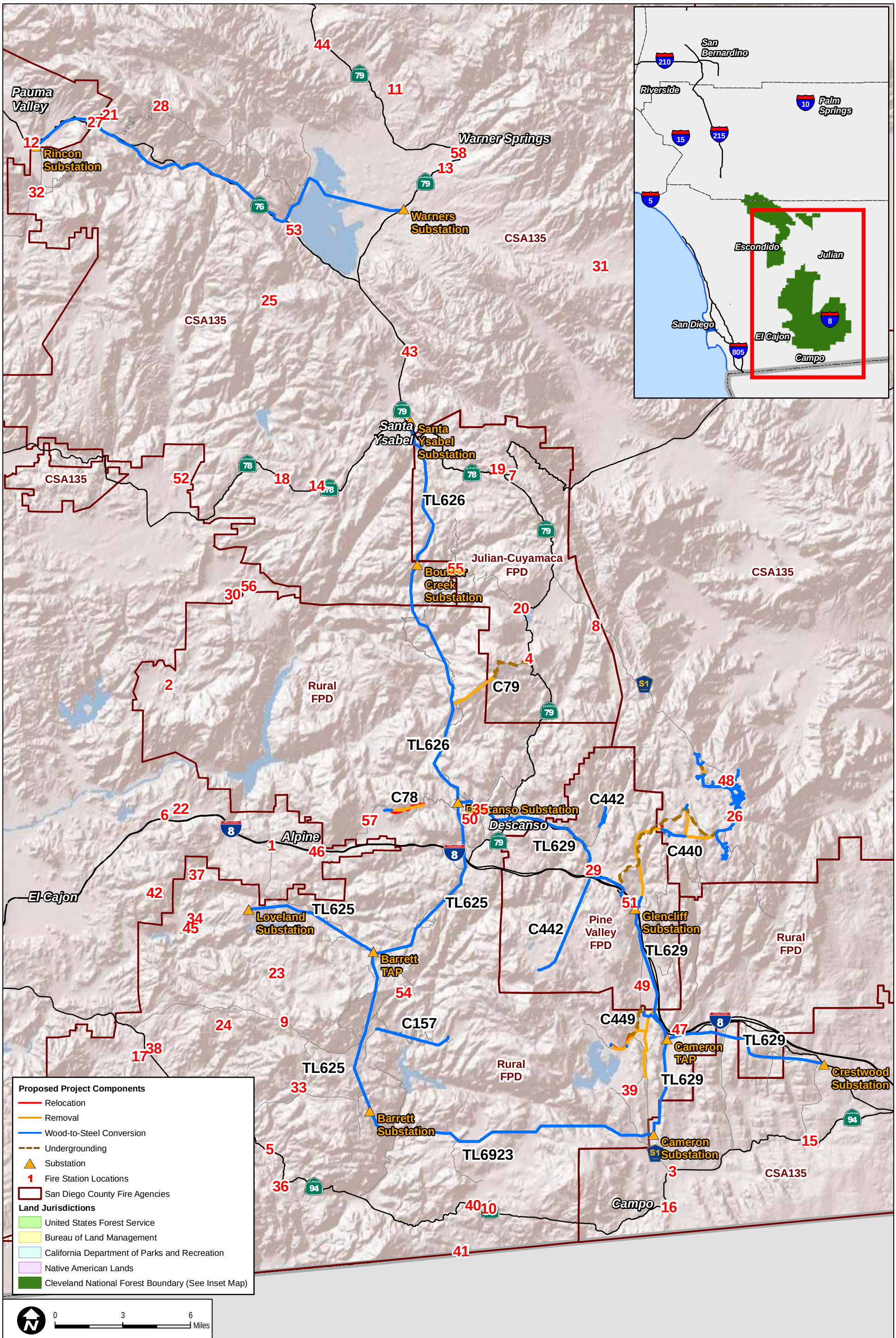

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SOURCE: SDG&E 2011; SanGIS 2011; 2012; Bing Maps

FIGURE D.12-1

Eastern San Diego County Fire Protection Agencies

MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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D.13 Recreation

This section discusses potential impacts to recreation areas and opportunities resulting from construction and operation of the proposed power line replacement projects along with the operations and maintenance activities proposed for authorization under the MSUP. Section D.13.1 provides a description of the existing environmental setting. The plans, policies, and ordinances applicable to the proposed project are introduced in Section D.13.2, and an analysis of SDG&E's proposed project impacts and a discussion of mitigation measures are provided in Section D.13.3. An analysis of the U.S. Forest Service (Forest Service) proposed action is provided in Section D.13.4, and Section D.13.5 discusses the Bureau of Indian Affairs (BIA) proposed action. Additional alternatives are discussed in Section D.13.6. The No Action Alternative is described in Section D.13.7, and the No Project Alternative is described in Section D.13.8. Mitigation, monitoring, compliance, and reporting information is provided in Section D.13.9. Residual effects of the project are summarized in Section D.13.10, and Section D.13.11 lists the references cited in this section.

Aside from impacts to recreation areas and opportunities analyzed in this section, a number of additional related topics are addressed elsewhere in this document. For example, visual resource impacts, specifically the visibility of project components from sensitive viewing locations, are described in Section D.2, Visual Resources; land use impacts including conflicts with applicable land use plans such as the Wilderness Act of 1964 are discussed in Section D.10, Land Use; and noise impacts are discussed in Section D.11, Noise.

D.13.1 Environmental Setting/Affected Environment

This section provides a description of recreation areas, facilities, and opportunities located near the various components of SDG&E's proposed project.

Methodology and Assumptions

Recreation areas and opportunities were identified through site visits, a review of aerial photographs, and a review of previously prepared environmental documents including SDG&E's *Revised Plan of Development*, *San Diego Gas & Electric Company, Master Special Use Permit Cleveland National Forest* (SDG&E 2013). Designated recreation areas, trails, and other recreational opportunities occurring within the Cleveland National Forest (CNF) were identified through a review of Part 2, Cleveland National Forest Strategy, of the Southern California National Forest Land Management Plan (LMP) (Part 2 is herein referred to as the CNF LMP) (Forest Service 2005); Forest Service field maps for the CNF (Trabuco, Palomar, and Descanso ranger districts) (Forest Service 2006); geographic information system (GIS data); and the Forest Service Cleveland National Forest website. Recreational opportunities within Cuyamaca Rancho

State Park were identified through a review of the State Park General Plan (California Department of Parks and Recreation 1986), GIS data, and from Cuyamaca Rancho State Park park brochure available from the state park website (California Department of Parks and Recreation 2010). County of San Diego (County) recreation areas, preserves, and trails were also identified through a review of the County of San Diego General Plan Conservation and Open Space Element (County of San Diego 2011a) and the Mobility Element (County of San Diego 2011b), and publicly available GIS data available from the San Diego Association of Governments (SANDAG). In addition, the community plans for areas of the County traversed by the power line replacement projects were also reviewed, as was the County of San Diego Trails Program Community Trails Master Plan (County of San Diego 2009a).

D.13.1.1 General Overview

The MSUP study area is located within the Trabuco, Palomar, and Descanso ranger districts within the CNF in southeastern Orange County, southwestern Riverside County, and San Diego County, with the majority of the study area including all of the proposed power line replacement projects located within and surrounding the Palomar and Descanso ranger districts in San Diego County (see Figure B-1, Regional Overview Map). Generally, the CNF is comprised of forested and mountainous to chaparral-covered semi-desert lands supporting undeveloped backcountry areas, federally designated wilderness, trail-based recreation, and limited areas of concentrated recreation residential development. National Forest System lands within the CNF are accessible and occasionally bisected by local roads, state highways, and interstates, and visitors are provided diverse recreational opportunities, including hiking, camping, mountain biking, horseback riding, and off-highway vehicle (OHV) areas. Primitive and unconfined recreation is permitted in designated wilderness, though motorized and mechanized forms of recreation are prohibited. Activities that are compatible with designated wilderness include non-motorized and non-mechanized forms of trail-based recreation including hiking, horseback riding, primitive camping, bird watching, and other activities that would not compromise the wilderness characteristics of designated areas.

Trabuco Ranger District

The Trabuco Ranger District lies at the boundary of Orange, Riverside, and San Diego counties and is generally comprised of steep, chaparral-covered topography supporting back country trail-based recreation including hiking, biking, and horseback riding, and developed campground and picnic sites. The eastern portion of the district includes the undeveloped east-facing slopes of the Santa Ana Mountains which are located adjacent to rapidly developing urban communities situated along the Interstate 15 (I-15) corridor, and primary visitor access to the ranger district is provided by Ortega Highway. In addition to developed recreation amenities (e.g., family and group campgrounds, trailheads) located in the vicinity of the Ortega Highway, federally

designated wilderness (i.e., the San Mateo Canyon Wilderness) is located in the southwest corner of the ranger district as is the Wildomar OHV area.

Palomar Ranger District

Comprised of Forest Service lands in southwestern Riverside County and northern San Diego County, the Palomar Ranger District includes the Agua Tibia Wilderness, several family and group camping facilities located in the vicinity of Palomar Mountain State Park and the Warner Springs area, picnic areas, and numerous trails, including the Pacific Crest National Scenic Trail and the Inaja Memorial Interpretative Trail (a designated National Recreation Trail) located near the community of Santa Ysabel. Located southeast of the city of Temecula in Riverside County and encompassing mountainous terrain in northern San Diego County, the Agua Tibia Wilderness offers approximately 25 miles of pathways, and the area features a diverse assemblage of vegetation communities including thick chaparral on steep hillsides and pine, fir, and oak trees on mountain tops. While camping and hiking is the primary recreational activity on Forest Service lands within the ranger district, the San Luis Rey picnic area and the Inaja Memorial picnic area are easily accessible off of State Route 76 (SR-76) and SR-79 and augment the trail-based recreation opportunities in the district.

Descanso Ranger District

Bisected by I-8 in eastern San Diego County, the Descanso Ranger District encompasses the heavily visited northwest portion of the Laguna Mountains (i.e., the Laguna Mountain Recreation Area), the Pine Creek Wilderness and Hauser Wilderness, the Corral Canyon OHV area, and segments of the Sunrise Scenic Byway (County of San Diego Route S1) and the Pacific Crest National Scenic Trail. Vegetation and topography of the area is variable with mountainous and steep pine-covered forested areas and wet meadows in the Laguna Mountain area, and chaparral, scrub oak, and rock outcropping-covered hillsides, dry valleys and steep canyons south of I-8. Developed recreational facilities within the Descanso Ranger District are relatively numerous and consist of family and group campgrounds, picnic areas, trailheads, and interpretive trails. Camping, mountain biking, hiking, trail running and off-roading are popular activities in the ranger district, and the elevation of the Laguna Mountain area provides opportunity for winter recreation (the area is heavily visited during snow events).

D.13.1.2 Environmental Setting for the Proposed Power Line Replacement Projects

Recreation opportunities in the general vicinity of SDG&E's proposed project are available within the CNF, State Park lands, and on other federal and local lands in the area. The Pine Creek Wilderness, Hauser Wilderness, and the Laguna Mountain Recreation Area, and

California State Parks (i.e., Palomar Mountain State Park, Cuyamaca Rancho State Park, and Anza-Borrego Desert State Park) provide opportunities for recreation. In addition, the Bureau of Land Management (BLM)-managed Sawtooth Mountain Wilderness and other public lands near Oriflamme Mountain and the Sawtooth Range are also located near the eastern extent of proposed power line replacement projects and provide limited recreational opportunities. All of the proposed power line replacement projects are located within and surrounding the Palomar and Descanso ranger districts in San Diego County, and therefore, the recreational opportunities within these areas form the primary focus of the environmental setting discussion below. Within CNF, several campgrounds, trails, and a designated OHV area are also located in the general vicinity of proposed power line replacement projects. Also, the Pacific Crest National Scenic Trail traverses lands within and outside of the CNF and several existing power lines (TL) and distribution circuits (C) including TL6923 and C449 span segments of the trail.

In addition to federal and state lands and facilities, County and local facilities including parks, trails and pathways, preserves, and lakes/reservoirs are located in the vicinity of proposed project and provide additional opportunities for recreation. It should be noted that the County of San Diego has a long-term lease with the City of San Diego for recreational uses at Lake Morena Reservoir.

The following discussion details the recreation areas and trails located near or traversed by the proposed power line replacement projects. The discussion is organized by power line/ distribution circuit and identifies federal and state, tribal (if applicable) and County and local recreation areas and associated opportunities located near the associated power line/distribution circuit.

D.13.1.2.1 Power Lines

TL682

Recreation areas and trails located near or traversed by TL682 are depicted on Figure D.13-1, listed in Table D.13-1, and discussed in greater detail below.

Table D.13-1
Recreation Areas and Trails Located Near or Traversed by TL682

Recreation Area/Trail	Distance and Orientation to TL682
Federal and State	
San Luis Rey Picnic Area	Traversed by TL682 1.7 miles west of the SR-76/East Grade Road intersection
Pacific Crest National Scenic Trail	2.5 miles northeast of TL682 at Warner Substation
Palomar Mountain State Park	2.5 miles north of TL682 at South Grade Road/County Highway S6 intersection

Table D.13-1
Recreation Areas and Trails Located Near or Traversed by TL682

Recreation Area/Trail	Distance and Orientation to TL682
Crestline Group Campground	2.5 miles north of TL682 at South Grade Road/County Highway S6 intersection
Fry Creek Campground	3.7 miles northeast of TL682 at South Grade Road/County Highway S6 intersection
Observatory Campground	3.6 miles northeast of TL682 at South Grade Road/County Highway S6 intersection
Tribal	
Amago Sports Park and La Jolla Indian Campground (La Jolla Indian Reservation)	Traversed by TL682 near Sengme Oaks Road
Local	
Hellhole Canyon Preserve	3.5 miles south of TL682 at Rincon Substation
Oak Knoll Campground	900 feet north of TL682 at the SR-76/South Grade Road intersection
Lake Henshaw	0.2 mile east of TL682 East Grade Road/County Highway S7 intersection
SR-76 Pathway (proposed)	SR-76 traversed by TL682 at multiple locations

Federal and State Recreation Areas and Trails

As shown on Figure D.13-1, TL682 traverses private, Tribal, and Forest Service-managed lands between the Rincon Substation and the Warner Substation in northern San Diego County, and segments of the power line parallel SR-76. Federal and state recreation areas and trails located near or traversed by TL682 include:

- **San Luis Rey Picnic Grounds.** Managed by the Forest Service and located within the CNF, the San Luis Rey Picnic Grounds offer 17 picnic sites, water, vault toilets, and access to the San Luis Rey River (Wildernet 2013).
- **Pacific Crest National Scenic Trail.** Administered by the Forest Service, the Pacific Crest National Scenic Trail (PCT) is one of the original national scenic trails established by Congress in the 1968 National Trails System Act. The PCT travels a total distance of 2,650 miles from the U.S.–Mexico international border near Campo, California, and through California, Oregon, and Washington to the Canadian border. A segment of the PCT crosses SR-79 near the community of Warner Springs.
- **Palomar Mountain State Park.** The forest and meadow landscape of the state park provides opportunities for camping, picnicking, hiking, and fishing, and a number of vista points offer panoramic views of the ocean and desert (California Department of Parks and Recreation 2013a). While South Grade Road and East Grade Road are the primary access

routes to the state park, there is a difference in elevation of approximately 2,000 vertical feet between the TL682 alignment in Pauma Valley and the southern park boundary.

- **CNF Managed Campgrounds.** The Crestline Group, Fry Creek, and Observatory campgrounds are accessible via SR-76, South Grade Road, and East Grade Road. Each of the campgrounds are located on Palomar Mountain and near the boundary of Palomar Mountain State Park but are managed by the CNF. According to the Forest Service, the Crestline Group Campground has a 50-person capacity and the Fry Creek and Observatory Campgrounds offer 20 and 42camping sites, respectively (Forest Service 2014a, 2014b, 2014c).

North of SR-76 and west of Lake Henshaw, TL682 spans Forest Service lands ~~within~~ near the Barker Valley Inventoried Roadless Area (IRA). IRAs consist of large, unfragmented tracts of roadless Forest Service lands potentially suitable for roadless area conservation such as through wilderness designation or other protection measures. While the Cleveland National Forest LMP amendment ~~would~~ redesignated the majority of land use zones in the Barker Valley IRA to Recommended Wilderness, and Recommended Wilderness is managed similarly to designated wilderness until a formal action is taken by Congress, the land use zones associated with the portions of the ~~IRA~~ National Forest crossed by TL682 did not change.~~are not proposed for designation as Recommended Wilderness~~. Rather, the areas traversed by TL682 ~~would~~ maintained the existing Back Country and Developed Area Interface land use zones.

Tribal Recreation Areas

As shown on Figure D.13-1, a segment of TL682 traverses the La Jolla Indian Reservation. Recreation areas on La Jolla Indian Tribal lands located near or traversed by TL682 include:

- **Amago Sports Park.** Located south of SR-76 and accessible via Sengme Oaks Road, the Amago Sports Park is a three-track public moto-cross park (Pro Ride 2013).
- **La Jolla Indian Campground**. Along with seven camping areas accommodating both tents and RVs, the campground features walking trails, a trading post, a sports bar, an arcade game room, and a dump station (La Jolla Band of Luiseno Indians 2013). Recreational tubing/floating on the stretch of San Luis Rey River within the boundaries of the La Jolla Indian Reservation is also offered (La Jolla Band of Luiseno Indians 2013).

Local Recreational Areas

Local recreation areas located near or traversed by TL682 include:

- **Hellhole Canyon Preserve.** The 1,900-acre preserve provides diverse recreational opportunities including 13.5 miles of non-motorized multi-use trails, an equestrian staging

area, an American with Disabilities Act (ADA) compliant lookout point, 10 primitive campsites, and a small amphitheater (County of San Diego 2013a).

- **Oak Knoll Campground.** Located on private land, the Oak Knoll campground caters to RVs (over 30 RV sites are available) but also accommodates tent campers and offers several cabins for rent (Oak Knoll Campground 2014).
- **Lake Henshaw.** In addition to year-round fishing at Lake Henshaw, tent and RV camping opportunities are available at the Lake Henshaw Resort. The resort is located approximately 0.80 mile southeast of the SR-76 and East Grade Road intersection (Lake Henshaw Resort 2013).
- **State Route 76 Pathway (Proposed)**. The County of San Diego has identified a proposed pathway along SR-76 through the entire Pala–Pauma Community Plan Area (County of San Diego 2009b).

TL626

Recreation areas and trails located near or traversed by TL626 are depicted on Figure D.13-2, listed in Table D.13-2, and discussed in greater detail below.

Table D.13-2
Recreation Areas and Trails Located Near or Traversed by TL626

Recreational Area/Trails	Distance and Orientation
Federal and State	
Inaja Memorial Picnic Area and National Recreation Trail	Located near the TL626 alignment approximately 1 mile south of the Santa Ysabel Substation. TL626 spans the San Diego River approximately 400 feet south of the trail alignment.
Cuyamaca Rancho State Park	1.5 miles east of TL626 at its intersection with C79 near Boulder Creek Road
Cedar Creek Road	0.65 mile west of TL626 at Three Sisters Waterfall Trailhead
Three Sisters Waterfall	The falls is accessed via a user-created trail located off Boulder Creek Road, approximately 0.65 mile west of TL626
California Riding and Hiking Trail	Traversed by TL626 approximately 0.5 mile north of the Descanso Substation
Local	
Santa Ysabel East Preserve	50 feet east of TL626 at the Santa Ysabel Substation
Santa Ysabel West Preserve	1.5 miles west of TL626 at the Santa Ysabel Substation
Trans-County Trail	Traversed by TL626 approximately 1.25 miles northwest of the confluence of Boulder Creek Road and Tule Springs Road.
Stallion Oaks Ranch Campground	50 feet east of TL626 near Boulder Creek Road/Burrell Way intersection
Boulder Oaks Road Pathway (existing)	Traversed by TL626 multiple times between C79 and the Descanso Substation

Federal and State Recreation Areas and Trails

Federal and state recreation areas and trails located near or traversed by TL626 include:

- **Inaja Memorial Picnic Area and National Recreation Trail.** Operated by the Forest Service, the day-use picnic area experiences light use during the week and heavier use on the weekend, and includes a parking area, covered picnic tables, and restroom facilities. The picnic ground is a memorial to firefighters from the San Diego County Honor Camp who died fighting the Inaja Fire in November 1956 (Forest Service 2006). The Inaja National Recreation Trail, a short looped hiking trail originating near the picnic area, meanders through chaparral trail and offers scenic views of the San Diego River canyon and El Cajon Mountain (Forest Service 2006). The picnic area and trail are accessible via SR-78 and SR-79. Benefits of inclusion in the National Recreation Trails Program include access to funding opportunities available through program partners and the Federal Highway Administration. Additional information regarding the National Recreation Trails and the National Trails System Act is provided in Section D.13.2.1.
- **Cuyamaca Rancho State Park.** Recreation areas within the state park near the TL626 alignment primarily consist of Lookout Road which provides access to Cuyamaca Peak, the California Riding and Hiking Trail, and Paso Picacho Campground (California Department of Parks and Recreation 2010). State park recreation areas are discussed in greater detail below for C79.
- **Cedar Creek Road.** An approximately 13-foot-wide dirt road that traverses rugged terrain, Cedar Creek Road is one of only two "green sticker" routes in the CNF Palomar District (Fredrickson, pers. comm. 2014). Green stickers are issued to OHVs for year-round use at/on all California OHV riding areas and routes (DMV 2014). According to the Motor Vehicle Use Map for the CNF (Palomar and Descanso Ranger Districts), between Eagle Peak Road and Boulder Creek Road Cedar Creek Road is open to all vehicles (Forest Service 2009a).
- **Three Sisters Waterfall.** The Three Sisters Waterfall Trail is a 4-mile out and back, user-created trail primarily accessed via Boulder Creek Road. The informal staging area is located approximately 10 miles northwest of the SR-79 and Old Highway 80 intersection in Descanso (San Diego Reader 2008). The user-created trail leads to a triple set of waterfalls located in Boulder Creek Canyon and on a busy day, the strenuous route is heavily used by hikers (Fredrickson, pers. comm. 2014).
- **California Riding and Hiking Trail.** Short segments of the California Riding and Hiking Trail are aligned within Burrell Way and Boulder Creek and are spanned by TL626 north of the Descanso Substation (SANGIS 2010). The California Riding and Hiking Trail is a historic regional and state trail established in 1945 that provides connectivity to Otay

Lakes, Loveland Reservoir, and Cuyamaca Rancho State Park. It should be noted that there are no maintained segments of the trail in the CNF (Hawkins, pers. comm. 2014).

Portions of TL626 span the Cedar Creek publicly proposed undeveloped area and the Sill Hill IRA. As discussed in Section D.10, Land Use, the CNF LMP Amendment redesignates existing Back Country and Back Country Non-Motorized Use land use zones within these areas to Recommended Wilderness, and as such, lands would be managed similar to designated wilderness to maintain wilderness characteristics until a formal decision by Congress is made.

Local Recreation Areas

Local recreation areas located near or traversed by TL626 include:

- **Santa Ysabel East and West Preserves.** Operated by the County of San Diego, the 3,800-acre Santa Ysabel Preserves provide oak woodland and native grassland habitat and offer 18.5 miles of multi-use trails, several interpretative programs, and picnic/rest areas (County of San Diego 2013b). Access to the East Preserve West Vista Loop Trail via SR-79 is located approximately 1.2 miles north of the northern extent of TL626 at Santa Ysabel Substation.
- **Trans-County Trail.** The Trans-County Trail is a proposed 110-mile-long trail currently in the planning stage that seeks to utilize existing trails and private trails traversing several administrative jurisdictions and provide connectivity from Borrego Springs to the Pacific Ocean (San Diego Natural History Museum 2014). Approximately 70% of the proposed trail alignment would utilize existing trails and the remaining 30% would require the acquisition of private trails and/or lands and trail construction (San Diego Natural History Museum 2014). At this time, the Trans-County Trail exists as a conceptual corridor and no specific trail alignment has been established. Also, there are no maintained segments of the trail located in the CNF (Hawkins, pers. comm. 2014). **Stallion Oaks Ranch Campground.** The approximate 19-site campground is located on private lands and is accessible via Boulder Oaks Road (Forest Service 2006).
- **Boulder Creek Pathway (existing).** North of the Descanso Substation, TL626 traverses an existing pathway aligned with the right-of-way (ROW) of Boulder Creek Road. The pathway is identified in the Descanso Community Trails and Pathway Plan (County of San Diego 2009c).

TL625

Recreation areas and trails located near or traversed by TL625 are depicted on Figure D.13-3, listed in Table D.13-3, and discussed in greater detail below.

Table D.13-3
Recreation Areas and Trails located near or traversed by TL625

Recreational Area/Trail	Distance and Orientation
Federal and State	
Pine Creek Wilderness	0.6 mile east of TL625 along Japatul Valley Road
Hauser Wilderness	2.4 miles east of TL625 at Barrett Lake Road
Horsethief Trailhead	1.5 miles east of TL625 at Carveacre Road
Cuyamaca Rancho State Park	1 mile east of TL625 at the Barrett Substation
California Riding and Hiking Trail	Traversed by TL625 multiple times between the Loveland Substation and Barrett Tap
Local	
Loveland Reservoir	Traversed by TL625 between the Loveland Substation and Barrett Tap and south of Japatul Road
Barrett Lake	2 miles east of TL625 at Barrett Lake Road
South Loveland Reservoir Trail, Japatul Road Pathway, Glens Trail, and North Loveland Reservoir Trail (proposed)	Traversed by TL625 between the Loveland Substation and Barrett Tap and south of Japatul Road (the Japatul Road Pathway is aligned within Japatul Road)
Wildwood Glen Lane Pathway (proposed)	Traversed by TL625 north of I-8 at Wildwood Glen Lane
Carve Acre Trail and the Japatul Trail (proposed)	Traversed by TL625 between Barrett Tap and Barrett Substation and west of Lyon Valley Road
Skye Valley Trail, the Barrett Lakes Road Pathway, Barrett Lake Road Pathway/Lake Trail Connector Trail, Lake Trail, Hunter's Camp Trail and the Manzanita to Lake Trail (existing)	Traversed by TL625 between Barrett Tap and Barrett Substation south of Carveacre Road

Federal and State Recreation Areas and Trails

Federal and state recreation areas and trails located near or traversed by TL625 include:

- **Pine Creek Wilderness**. Designated in 1984, the 13,368-acre Pine Creek Wilderness features rolling to mountainous terrain and a mosaic of scrub, riparian, and woodland vegetation (Forest Service 2005). Managed by the Forest Service, the Pine Creek Wilderness is lightly used by recreationists, and near the TL625 alignment, the wilderness is legally accessed by recreationists via the Horsethief Trailhead (located off Lyons Valley Road in the community of Jamul) (Forest Service 2006). Hiking and primitive camping comprise the recreational opportunities available in the Pine Creek Wilderness.
- **Hauser Wilderness.** Also designated in 1984, the 6,834-acre Hauser Wilderness has mountainous terrain with steep slopes, and granite boulder and rock outcrops are common features in the landscape (Forest Service 2005). Hauser Canyon and Hauser Creek define the southern boundary of the wilderness; Skye Valley Road defines the northern boundary; and the PCT crosses the southeastern-most corner of the designated area. Near the TL625 alignment, the wilderness may be legally accessed via Skye

Valley Road and/or the Hauser Creek Trail. Hiking and primitive camping comprise the available recreational opportunities in the wilderness.

- **Horsethief Trailhead.** Located off Lyons Valley Road in the community of Jamul, the Horsethief Trailhead provides access to the Pine Creek Wilderness via Barrett Truck Trail/Forest Service Road 16S04 and the Secret Canyon Trail (Forest Service 2006). Barrett Truck Trail/Forest Service Road 16S04 has been improved to provide access to the Forest Service Jamul Fire Station; however, south of the fire station, the road appears to be have been abandoned and is grown over by vegetation. A large parking/staging area for trail-based recreationists is provided off of Lyons Valley Road at Barrett Truck Trail.
- **Cuyamaca Rancho State Park.** Cuyamaca Rancho State Park is located east of the Descanso Substation on higher elevation terrain accessible via SR-79. As discussed in greater detail below for existing distribution circuit C79 (a considerable segment of C79 is located within state park boundaries), wilderness, camping, hiking, mountain biking and other recreational opportunities are available in the state park (California Department of Parks and Recreation 2010).
- **California Riding and Hiking Trail.** Near the TL625 alignment, the California Riding and Hiking Trail is aligned within existing roadway ROWs including Sequan Truck Trail and traverses primarily natural lands located south of Japatul Road and north of the Loveland Reservoir (SANGIS 2010).

In addition to crossing private and Forest Service-managed lands, TL625 briefly spans BLM-managed lands near the Barrett Substation. Based on a review of the *South Coast Resource Management* Plan (South Coast RMP), the applicable planning document for BLM lands in the project area, there are no developed recreational facilities on BLM lands near the Barrett Substation and TL625 alignment (BLM 1994).

TL625 does not traverse designated or recommended wilderness, and Forest Service lands within or near the alignment would not be subject to the land use zone redesignations ~~proposed~~ adopted by the CNF LMP Amendment. Also, based on a review of publicly available information, BLM lands traversed by TL625 near the Barrett Substation would not be subject to reallocation or redesignation per the Draft South Coast RMP revision (BLM 2011).

Local Recreation Areas

Local recreation areas located near or traversed by TL625 include:

- **Loveland Reservoir.** A designated parking area and trailhead to access the Loveland Reservoir shoreline is located off Japatul Road. Public fishing access along a 5-mile portion of the shoreline is provided year-round through a partnership between the Sweetwater

Authority and the Forest Service (Sweetwater Authority 2013). Boats, floats, and water craft are not permitted at the Sweetwater Authority-managed reservoir. TL625 traverses the Loveland Reservoir trail south of the designated parking area.

- **Barrett Lake.** Owned and operated by the City of San Diego, Barrett Lake is located near the confluence of Cottonwood and Pine Valley creeks (City of San Diego 2014). The lake is open three days a week and while catch-and-release fishing with barbless artificial lures is permitted by the California Department of Fish and Wildlife (CDFW), it is monitored and highly regulated. Between May 1 and September 29, a reservation system is employed by the CDFW, and anglers are required to carry both a valid fishing license and day-use permit. Fishing regulations employed at the lake are designed to protect the last significant population of northern-strain largemouth black bass (*Micropterus salmoides*) in the area (City of San Diego 2014). Seasonal waterfowl hunting is also permitted at the lake but similar to fishing, hunting is regulated via a reservation system. Barrett Lake is regularly accessed via Barrett Lake Road and approximately 2.3 miles north of the Barrett Substation, TL 625 traverses the roadway.

Between the Loveland Substation and the Barrett Tap, TL625 traverses several proposed community trails identified in the Alpine Community Trails and Pathway Plan including the South Loveland Reservoir Trail, Glens Trail, and the North Loveland Reservoir Trail (County of San Diego 2009d). North of Interstate 8 at Wildwood Glen Lane, TL 625 traverses Wildwood Glen Lane Pathway, a proposed pathway identified in the Descanso Community Trails and Pathways Plan (County of San Diego 2009c). Additional proposed community trails identified in the Alpine Community Trails and Pathway Plan are traversed by TL625 between the Barrett Tap and the Barrett Substation including the Carve Acre Trail and the Japatul Trail. Lastly, south of the Barrett Tap, TL625 traverses existing trails and pathways identified in the Jamul-Dulzura Community Trails and Pathways Plan including the Skye Valley Trail, the Barrett Lake Road Pathway, the Barrett Lake Road Pathway/Lake Trail Connector Trail, the Lake Trail, the Hunter's Camp Trail and the Manzanita to Lake Trail (County of San Diego 2009g).

TL629

Recreation areas and trails located near or traversed by TL629 are depicted on Figure D.13-4, listed in Table D.13-4, and discussed in greater detail below.

Table D.13-4
Recreation Areas and Trails Located Near or Traversed by TL629

Recreational Area/Trail	Distance and Orientation
Federal and State	
California Riding and Hiking Trail	Traversed by TL629 at Boulder Creek Road
Pine Creek Trailhead	200 feet south of TL629 between Descanso Substation and Glencliff Substation near the Old Highway 80/Pine Creek Road intersection
Noble Canyon Trailhead	1 mile northeast of TL629 between Descanso Substation and Glencliff Substation at the Old Highway 80/Pine Creek Road intersection
Bear Valley OHV Trailhead	0.3 mile north of TL629 between Descanso Substation and Glencliff Substation at the Pine Valley Road crossing
Bear Valley Trail	0.65 mile west of TL629 at the Glencliff Substation atop higher elevation terrain
Pacific Crest National Scenic Trail	Traversed by TL629 south of Kitchen Creek
Boulder Oaks Campground	200 feet west of TL629 south of Kitchen Creek and along Old Highway 80
Local	
Descanso Valley Pathway (proposed), Pine Creek Pathway (existing), Meadow Trail (proposed) and Old Highway 80 Pathway (proposed)	Traversed by TL629 between the Cameron Substation and the Glencliff Substation
Pine Valley Regional Park	250 feet east of TL629 between the Cameron Substation and the Glencliff Substation at Corte Madera Road
La Posta Creek/Old Highway 80 Pathway (proposed)	Adjacent to TL629 south of Kitchen Creek and along Old Highway 80
Lake Morena County Park	1.2 miles west of TL629 at the Cameron Tap
Cameron Truck Trail (existing), La Posta Connector Trail (proposed), and the La Posta Road Pathway (existing)	Traversed by TL629 between Cameron Tap and the Crestwood Substation
Buckman Springs Road Pathway (existing), Private Road Trail (existing), Cameron Truck Trail (existing), La Posta Truck Trail West Trail (existing), and Kitchen Creek Trail (existing)	Traversed by TL629 between Cameron Tap and Cameron Substation

Federal and State Recreation Areas and Trails

Federal and state recreation areas and trails located near or traversed by TL629 include:

- **California Riding and Hiking Trail.** Near the Descanso Substation, the California Riding and Hiking Trail is aligned within Boulder Creek Road and is traversed by TL629 (SANGIS 2010).
- **Pine Creek Trailhead.** Located off of Old Highway 80 between the communities of Guatay and Pine Valley, the Pine Creek Trailhead provides access to the Pine Creek Wilderness via the Secret Canyon Trail (Forest Service 2006). A parking area and

informational kiosk are provided at the trailhead. While TL6219 does not span the trailhead or associated parking area, the existing alignment and pole Z173123 are located approximately 200 feet south of the trailhead turn-off along Old Highway 80.

- **Noble Canyon Trailhead.** Accessible via Pine Creek Road, the Noble Canyon Trailhead provides access to the Noble Canyon National Recreation Trail and an informal network of trails located within the ridge and canyon landscape located east of Pine Valley and west of the Sunrise Highway (Forest Service 2006). The Noble Canyon National Recreation Trail provides connectivity to the PCT in the Laguna Mountain Recreation Area.
- **Bear Valley OHV Trailhead.** South of I-8 and accessed by Pine Valley Road, the Bear Valley OHV Trailhead provides access to OHV trails locate on Forest Service lands (Forest Service 2006). While access is rather indirect, the Corral Canyon OHV area, Bobcat Meadow Campground, and Four Corners OHV trailhead area accessible via the Bear Valley OHV trailhead and Bear Valley Road. The parking area adjacent to the Bear Valley OHV trailhead is also located near the southern alignment of C442 and is therefore discussed in Section D.13.1.2.2.
- **Pacific Crest National Scenic Trail.** South of Kitchen Creek and east of the Boulder Oaks Campground, a short segment of the PCT is aligned adjacent to Old Highway 80 ROW (Forest Service 2006). The PCT also crosses Old Highway 80 approximately 200 feet south of Kitchen Creek. Approximately four existing TL629 poles are located adjacent to Old Highway 80 and the existing power line spans the PCT alignment twice.
- **Boulder Oaks Campground.** While TL629 does not span the campground and poles are not located within the facility, the alignment is located adjacent to Old Highway 80 in close proximity to campsites. The developed campground offers 30 camp units, accommodates RV and equestrian trailers, and provides access to the PCT (a parking areas for PCT hikers is located within the campground). According to the Forest Service, the campground experiences light use and is closed between March and May during arroyo toad (*Bufo californicus*) breeding season (Forest Service 2013a).

Forest Service lands traversed by TL629 are not subject to land use zone redesignations of the CNF LMP Amendment. In addition, based on a review of publicly available information, BLM lands traversed by TL629 are not subject to reallocation or redesignation per the Draft South Coast RMP (BLM 2011).

Local Recreation Areas

Local recreation areas located near or traversed by TL 629 include:

- **Pine Valley Regional Park.** North of I-8 and east of Old Highway 80, the TL629 alignment passes within 250 feet of Pine Valley Regional Park. The County park offers three picnic areas, basketball and tennis courts, ball fields, and a play area, and is accessible via Old Highway 80 (County of San Diego 2013c).
- **Lake Morena County Park.** At the Cameron Tap, TL629 is located approximately 1.2 miles east of the eastern boundary of Lake Morena County Park. Facilities at the County park include a developed campground featuring 86 sites and wilderness cabins. In addition, fishing is permitted; 8 miles of multi-use trails are provided; and the campground is located in close proximity to the PCT (County of San Diego 2013d). Developed facilities are generally located along the southern shore of the reservoir and are located approximately 3.5 miles southwest of the Cameron Tap. Facilities are accessible via Buckman Springs Road, Oak Drive, and Lake Morena Drive.

In addition to local parks, TL629 also traverses several County pathways and trails. East of the Descanso Substation and along Viejas Boulevard, TL629 traverses the Descanso Valley Pathway, a proposed community pathway located along Viejas Boulevard and identified in the Descanso Community Trails and Pathways Plan (County of San Diego 2009c). Further to the east, TL629 crosses Pine Creek Road and Old Highway 80 prior to interconnecting to the Cameron Substation. In the Pine Valley area, TL629 traverses trails and pathways identified in the Pine Valley Community Trails and Pathways Plan, including the Pine Creek Pathway (existing), the Meadow Trail (proposed), and the Old Highway 80 Pathway (proposed) (County of San Diego 2009e).

Between the Glencliff Substation and the Cameron Tap, TL629 is located adjacent to Old Highway 80, west of I-8 and east of Forest Service lands. South of Kitchen Creek and along Old Highway 80, TL629 is located in close proximity to the La Posta Creek/Old Highway 80 Pathway, a proposed pathway located along Old Highway 80 identified in the Campo/Lake Morena Community Trails and Pathways Plan (County of San Diego 2009f). East of the Cameron Tap, TL629 traverses the Cameron Truck Trail Trail (existing), the La Posta Connector Trail (proposed), and the La Posta Road Pathway (existing) (these facilities are identified in the Campo/Lake Morena Community Trails and Pathway Plan). Between the Cameron Tap and the Cameron Substation, TL629 traverses additional trails identified in the Campo/Lake Morena Community Trails, including the Buckman Springs Road Pathway (existing), the Private Road Trail (existing), the La Posta Truck Trail West Trail (existing), Cameron Truck Trail Trail (existing), and the Kitchen Creek Trail (existing) (County of San Diego 2009f).

TL6923

Recreation areas and trails located near or traversed by TL6923 are depicted on Figure D.13-5, listed in Table D.13-5, and discussed in greater detail below.

Table D.13-5
Recreation Areas and Trails Located Near or Traversed by TL6923

Recreational Area/Trail	Distance and Orientation
Federal and State	
Hauser Wilderness	0.25 mile north of TL6923 at closest point (approximately 2.3 miles west of Lake Morena Drive)
Hauser Creek Trail	0.25 mile north of TL6923 at closest point (approximately 2.3 miles west of Lake Morena Drive)
Pacific Crest National Scenic Trail	Traversed by TL6923 on multiple occasions near the southeastern boundary of the Hauser Wilderness
Hauser Mountain Wilderness Study Area	0.60 mile south of TL6923 as measured from existing pole Z972866
Local	
Potrero Regional Park	3 miles southeast of TL6923 at Round Potrero Road
Lake Morena County Park	0.9 mile north of TL6923 at Hauser Creek Road
Manzanita to Lake Trail (existing) and the Barrett Lake Trail (existing)	Traversed by TL6923 south of Barrett Substation
Big Potrero Truck Trail (existing), the Big Potrero Spur Trail (existing), and the Lake Morena Drive Pathway (proposed)	Traversed by TL 6923 between Hauser Creek Road and the Cameron Substation

Federal and State Recreation Areas and Trails

Federal and state wilderness and recreation areas located near or traversed by TL6923 include:

- **Hauser Wilderness.** At its closest point, the TL6923 alignment is located approximately 0.25 mile south of the Hauser Wilderness and the Hauser Creek Trail. The Hauser Creek Trail follows Hauser Creek Road and is located just outside of southern boundary of the wilderness. Wilderness lands are located immediately north of the Hauser Creek Trail; however, there are no trailheads or designated trails off of the Hauser Creek Trail which would suggest that regular access to wilderness via the trial does not occur (Forest Service 2006).
- **Pacific Crest National Scenic Trail.** On the north-facing slopes of Hauser Canyon, TL6923 traverses a series of switchbacks and spans the PCT alignment on three separate occasions. This portion of the TL6923 alignment is located approximately 100 feet north of the Sunrise Powerlink which also traverses the PCT at three locations.

- **Hauser Mountain Wilderness Study Area.** As TL6923 descends into Hauser Canyon, the alignment is located in close proximity (approximately 0.60 mile) to BLM-managed lands comprising the Hauser Mountain Wilderness Study Area (WSA). The WSA encompasses 5,540 acres of remote and undeveloped BLM-managed lands, a significant portion of which comprise the broad summit of Hauser Mountain (BLM 2005).

Forest Service lands traversed by TL6923 are not subject to land use zone reallocations of the CNF LMP Amendment. In addition, based on a review of publicly available information, BLM lands traversed by TL6923 are not subject to reallocation or redesignation per the Draft South Coast RMP (BLM 2011).

Local Recreation Areas

Local recreation areas located near TL6923 include:

- **Potrero Regional Park.** Operated by the County of San Diego, Potrero Regional Park is located approximately 3 miles south of TL6923 at its crossing of Round Potrero Road. The 115-acre park offers camping, picnic areas, a playground, and a dance pavilion, and is accessible via SR-94, Potrero Valley Drive, and Potrero Park Drive (County of San Diego 2013f).
- **Lake Morena County Park.** The southern boundary of Lake Morena County Park is located approximately 0.9 mile north of TL 6923 at Hauser Creek Road. The TL6923 alignment spans Lake Morena Drive and Oak Drive which may be used to access the park's campground and trails County of San Diego 2013d).

In addition to local parks, several trails and pathways are also traversed or are located near the TL6923 alignment. South of the Barrett Substation, TL6923 traverses trails identified in the Jamul-Dulzura Community Trails and Pathways Plan including the Manzanita to Lake Trail (existing), and the Barrett Lake Trail (existing) (County of San Diego 2009g). Southeast of the Hauser Wilderness, TL6923 traverses several trails and pathways including the Big Potrero Truck Trail (existing), the Big Potrero Spur Trail (existing), and the Lake Morena Drive Pathway (proposed) included in the Campo/Lake Morena Community Trails and Pathway Plan (County of San Diego 2009f).

D.13.1.2.2 Distribution Circuits

C79

Recreation areas and trails located near or traversed by C79 are depicted on Figure D.13-2, listed in Table D.13-6, and discussed in greater detail below.

Table D.13-6
Recreation Areas and Trails Located Near or Traversed by C79

Recreation Area/Trail	Distance and Orientation
Federal and State	
Cuyamaca Rancho State Park and Cuyamaca Mountains State Wilderness	State park and state wilderness traversed by C79 between western park boundary and Cuyamaca Peak. East of Cuyamaca Peak, C79 would be located in non-wilderness state park lands and would be installed underground within Lookout Road east to Highway 79.
California Riding and Hiking Trail	Crosses Lookout Road and C79 underground alignment at Azalea Spring Fire Road
Paso Picacho Campground (within Cuyamaca Rancho State Park)	As close as 100 feet from proposed C79 underground alignment along Lookout Road
Local	
William Heise Regional Park	5 miles north of C79 at SR-79 crossing
Lake Cuyamaca	1.5 miles north of C79 at SR-79 crossing

Federal and State Recreation Areas and Trails

Federal and state recreation areas and trails located near or traversed by C79 include:

- **Cuyamaca Rancho State Park.** The existing C79 alignment traverses the western slopes of Cuyamaca Peak (the peak is located on state park lands) and briefly spans the Cuyamaca Mountains State Wilderness (approximately 16 existing poles and 1,800 feet of C79 distribution line is located in state wilderness). As proposed, C79 would be removed from the western slopes of Cuyamaca Peak and placed underground within Lookout Road, a paved road used by motorists, hikers, and cyclists/mountain bikers to access the peak (California Department of Parks and Recreation 2010). The new C79 underground alignment would travel east from the peak to an existing 12 kV pole located adjacent to SR-79 near the entrance to the Paso Picacho picnic area and campground.
- **California Riding and Hiking Trail.** The California Riding and Hiking Trail is aligned within Fern Flat Fire Road and Azalea Springs Fire Road on state park lands (SANGIS 2010). The fire roads are separated by Lookout Road, and the proposed underground alignment for C79 would be located within the Lookout Road ROW. Additional fire roads are located near Lookout Road and may be used by hikers and mountain bikers.
- **Paso Picacho Campground.** Located on state park lands, Paso Picahco campground offers 85 campsites and several rental cabins. In addition, popular hikes to Cuyamaca Peak and Stonewall Peak start from the campground which also offers day use parking and picnic facilities (California State Parks 2013b.

The existing overhead alignment of C79 within the CNF does not traverse existing wilderness however, lands traversed by C79 are subject to the land use zone reallocations of the CNF LMP Amendment. More specifically, previously designated Back Country Non-Motorized land use zones located adjacent to the King Creek Research Natural Area (RNA) (i.e., lands within the Sill Hill IRA) ~~would be~~were redesignated Recommended Wilderness by the LMP Amendment. Also, as stated in Section D.10.1.1, the Department of Parks and Recreation is in the process of preparing an updated General Plan for Cuyamaca Rancho State Park; however, the draft General Plan document is not yet available for review. As such, the future allocation of land use zones in the state park in the vicinity of the underground alignment of C79 along Lookout Road is not known at this time. According to the California Department of Parks and Recreation, the Cuyamaca Rancho State Park Preliminary General Plan and Draft EIR ~~will be~~was released for public review ~~in early~~ on August 21, 2014.The Final General Plan and EIR is anticipated to be available in spring 2015. ~~(California Department of Parks and Recreation 2013c).~~

Local Recreation Areas

Local recreation areas located near C79 include:

- **William Heise Park.** Located in Julian, the 929-acre William Heise Regional Park features 103 campsites, shower facilities, wilderness cabins, two youth areas and a playground and 10.75 miles of multi-use non-motorized trails (County of San Diego 2013e). The County of San Diego-operated park is accessible via SR-79 and Pine Hills Road.
- **Lake Cuyamaca.** The 110-acre Lake Cuyamaca offers a variety of recreational opportunities including fishing, hiking, boating, camping, wildlife viewing, duck hunting and picnicking and is located approximately 1.5 mile north of the eastern extent of C79 (Lake Cuyamaca 2013). The lake also features a small marina and restaurant and is accessible via SR-79.

C78

The Viejas Recreation Center is the to the C78 alignment and is located approximately 0.40 mile southwest of the western extent of existing distribution circuit alignment included in the proposed power line replacement projects. The existing distribution line alignment is also located approximately 0.5 mile north of Ma Tar Awa RV Camper Park (see Figure D.13-3 for location). The 133-acre Ma-Tar Awa RV Camper Park features a clubhouse, convenience store, and 99 RV hookups and campsites and is located on the Viejas Indian Reservation (Ma Tar Awa RV Camping Park 2013).

C157

Recreation areas and trails located near or traversed by C157 are depicted on Figure D.13-3, listed in Table D.13-7, and discussed in greater detail below.

Table D.13-7
Recreation Areas and Trails Located Near or Traversed by C157

Recreation Area/Trail	Distance and Orientation
Federal and State	
Pine Creek Wilderness	Traversed by C157 east of Camp Barrett
Hauser Wilderness	Traversed by C157 east of Skye Valley Road
Horsethief Trailhead	2.1 miles north of C157 at extension to Camp Barrett
Horsethief Canyon Trail	Traversed by C157 east of Camp Barrett at Skye Valley Road
Corral Canyon OHV Area and Campground	2.5 miles east of C157 eastern extent
Local	
Barrett Lake	Traversed by C157 east of Camp Barrett
Skye Valley Trail (existing), Barrett Lake Valley Trail (existing)	Traversed by C157 between Skye Valley Road and Camp Barrett

Federal and State Recreation Areas and Trails

Federal and state recreation areas and trails located near or traversed by C157 include:

- **Pine Creek Wilderness.** The existing C157 alignment traverses the southwestern corner of the Pine Creek Wilderness, and two support poles are located within the wilderness boundary. The portion of wilderness traversed by C157 is also crossed by Skye Valley Road/Forest Service Road 17S06 (Forest Service 2006).
- **Hauser Wilderness.** Near Skye Valley Road, the existing C157 alignment traverses the northwestern corner of the Hauser Wilderness, and seven support poles are located within the wilderness boundary. Wilderness near the C157 alignment consists of steep, chaparral covered terrain and a relatively narrow riparian canyon that drains to Barrett Lake (Forest Service 2006).
- **Horsethief Trailhead and Horsethief Canyon Trail.** At the extension of C157 to Camp Barrett, C157 is located approximately 2.1 miles south of the Horsethief Traihead. Located off of Japatul Lyons Valley Road, the trailhead and Horsethief Trail provide hiking and equestrian access into Horsethief Canyon and is a major entryway into the Pine Creek Wilderness (San Diego Horse Trails 2013).
- **Corral Canyon OHV Area and Campground.** Although the eastern extent of C157 is located approximately 2.5 miles west of the Corral Canyon OHV Area and Campground,

the areas are not publically accessible from the west via Skye Valley Road and Forest Service Road 17S06. The Forest Service Road is accessed controlled (several gates are located on the roadway), and the roadway is only used by residents of Skye Valley Ranch (Forest Service 2006).

Local Recreation Areas

Local recreation areas located near or traversed by C157 include:

- **Barrett Lake.** An approximate 700-foot segment of C157 traverses the upper reaches of Barrett Lake just east of Skye Valley Road (a portion of this span is located in the Pine Creek Wilderness). Fishing is permitted at Barrett Lake by the CDFW between May 1 and September 29 on a limited reservation basis (City of San Diego 2014).

The existing C157 alignment also traverses existing trails identified in the Jamul-Dulzura Community Trails and Pathways Plan including the Skye Valley Trail (existing) and the Barrett Lake Valley Trail (County of San Diego 2009g).

C442

Recreation areas and trails located near or traversed by C442 are depicted on Figure D.13-4, listed in Table D.13-8 and discussed in greater detail below.

Table D.13-8
Recreation Areas and Trails Located Near or Traversed by C442

Recreational Area/Trail	Distance and Orientation
Federal and State	
Noble Canyon Trailhead and National Recreation Trail	Southern extent of C442 is located approximately 950 feet west of the trailhead and trail
Pine Creek Trailhead	Southern extent of C442 is located approximately 1.1 miles northeast of the trailhead
Bear Valley OHV trailhead	Northern extent of C442 located approximately 150 feet west of trailhead
Corral Canyon OHV Area and Campground	3.2 miles southeast of C442 southern extent in Corte Madera Valley
Local	
Pine Valley Regional Park	North of I-8, southernmost extent of C442 is located approximately 1.7 miles northeast of the park
Pine Creek Road Pathway and the Phantom Trails (existing)	Traversed by C442 along Pine Creek Road

Federal and State Recreation Areas and Trails

Federal and state recreation areas and trails located near or traversed by C442 include:

- **Noble Canyon Trailhead and National Recreation Trail.** This 10-mile long multi-modal point-to-point trail provides connectivity to the PCT and the Laguna Mountain Recreation Area (Forest Service 2006). A small parking area for the trailhead is located off of Pine Creek Road and approximately 950 feet east of the southern extent of C442 north of I-8.
- **Pine Creek Trailhead.** The southern extent of C442 north of I-8 is located approximately 1.1 miles northeast of the Pine Creek Trailhead. The trailhead provides access to multiple trails including the Las Bancas Pine Creek Trail located north of I-8 and the Secret Canyon Trail located south of I-8 and within the Pine Creek Wilderness.
- **Bear Valley OHV Trailhead.** The Bear Valley OHV Trailhead and trail is located approximately 150 feet east of the segment of C442 located south of I-8. Open to OHV use, Bear Valley Road travels south across Forest Service lands and provides connectivity to the Four Corners staging area and the Corral Canyon OHV Area (Forest Service 2013b).
- **Corral Canyon OHV Area and Campground.** Managed by the Forest Service, the Corral Canyon OHV Area offers over 51 miles of trails and roads, and the campground features 20 sites with fire rings and a hand pump with potable water (Forest Service 2013b).

Local Recreation Areas

Local recreation areas located near or traversed by C442 include:

- **Pine Valley Regional Park.** Managed and operated by the County of San Diego, the 17-acre Pine Valley Regional Park is located north of I-8 and is accessible off Old Highway 80. Notable amenities at the day-use park include three picnic areas, basketball and tennis courts, ball fields, and a play area (County of San Diego 2013c).

In addition, along Pine Creek Road, C442 traverses the existing Pine Creek Road Pathway and the existing Phantom Trails identified in the Pine Valley Community Trails and Pathways Plan (County of San Diego 2009e). It should be noted that the alignment of the Phantom Trails on Forest Service lands is coincidental with the alignment of the Noble Canyon National Recreation Trail.

C440

Recreation areas and trails located near or traversed by C442 are depicted on Figure D.13-4, listed in Table D.13-9, and discussed in greater detail below.

Table D.13-9
Recreation Areas and Trails Located Near or Traversed by C440

Recreational Area/Trail	Distance and Orientation
Federal and State	
Laguna Mountain Recreation Area	The majority of C440 is located within Laguna Mountain Recreation Area
Laguna Mountain Visitor Center	C440 is located north and south of Sunrise Highway near the visitors center (several poles are located north of the visitor center's parking area)
Burnt Rancheria Campground	Located within 300 feet of C440 at Sunrise Highway/Mount Laguna Drive intersection
Laguna Campground	Traversed by C440
Desert View Interpretive Trail and Picnic Grounds	500 feet southwest of C440 at Sunrise Highway/Desert View Road
Little Laguna Lake	0.25 mile west of C440 in Laguna Campground
Big Laguna Lake	0.60 mile west of C440 in Laguna Campground
Lightning Ridge Trail	Traversed by C440 east of the Laguna Campground amphitheater
Big Laguna Trail	Traversed by C440 southeast of the Laguna Campground
Wooded Hill Group Campground and Nature Trail	200 feet north of C440 near Sunrise Highway/Wooded Hill Road
Pacific Crest National Scenic Trail	Traversed by C440 northeast of Sunrise Highway/Boiling Springs Road intersection
Local	
Al Bahr Shrine Camp	Traversed by C440
Pine Valley Regional Park	2 miles northwest of C440 as measured from the confluence of Sunrise Highway and Forest Service Road Drd 418660-2
Phantom Trails	Traversed by C440 on Forest Service lands located west of Sunrise Highway. Near Sunrise Highway, the Phantom Trails alignment coincides with Forest Service access Road Drd 418660-2.

Federal and State Recreation Areas and Trails

Federal and state recreation areas and trails located near or traversed by C440 include:

- **Laguna Mountain Recreation Area**. The majority of the C440 alignment is located in the Laguna Mountain Recreation Area. A federally designated recreation area located in close proximity to the San Diego metropolitan region, the Laguna Mountain Recreation Area offers a great diversity of recreational opportunities including camping, mountain biking, hiking, and fishing at the Little Laguna and Big Laguna Lakes. A number of campgrounds and trails are located in the Laguna Mountain Recreation Area and are discussed in detail below.

- **Laguna Mountain Visitor Center.** Operated by the Laguna Mountain Volunteer Association, the visitor center sells books, maps, and gifts, and a volunteer staff is available to answer questions regarding areas to hike and points of interest. The visitor center is open Friday afternoons, Saturday, and Sunday (Laguna Mountain Volunteer Association 2014). The Kwaaymii Cultural Interpretive Trail, a short scenic trail, can also be accessed via the visitor center parking area. Existing C440 poles are located east and west of Los Huecos Road near the visitors' center (C440 spans the Kwaaymii Cultural Interpretive Trail on three separate occasions).
- **Laguna Campground.** The Laguna Campground is located in a woodland and meadow landscape and offers 104 total sites (tent camping and RV camping is permitted) in 5 loops (Forest Service 2014d). Additional amenities include flush toilet and shower facilities. The campground is accessible via Sunrise Highway, and C440 traverses the Sunny Loop portion of the campground and the periphery of the Hillside and Shady loops. The Laguna Campground access road off Sunrise Highway also provides access to the five-site El Prado Group Campground. The Laguna Campground provides access to the Lightning Ridge Trail (located east of the campground amphitheater) and the Big Laguna Trail which passes through pines and meadows and provides connectivity to the Noble Canyon Trail. Additional recreational amenities are located north of the campground and include the Penny Pines Interpretive Site Trail, Indian Creek Trail, and the Pioneer Mall picnic area.
- **Wooded Hill Group Campground and Nature Trail.** Managed by the Forest Service and comprised of 1 group site capable of accommodating up to 110 persons (Forest Service 2014e), the Wooded Hill Group Campground is located approximately 0.85 miles southeast of the Red Roost Volunteer Activity Center. Accessible from the group campground, the short Wooded Hills Natural Trail includes the highest wooded point on Laguna Mountain (Forest Service 2014f). C440 spans Wooded Hill Road just north of Sunrise Highway.
- **Burnt Rancheria Campground.** Along Sunrise Highway, C440 passes in relative close proximity to the Burnt Rancheria campground (C440 does not traverse the campground and no poles are located in the campground). The campground is open from May to October, experiences light use and can accommodate both tent and RV camping (Forest Service 2014g). A total of 109 sites are available and the campground also offers trail access to the Desert View Interpretive Trail and the PCT.
- **Pacific Crest National Scenic Trail.** Several poles are located near the trail alignment near the Desert View Overlook and north of Boiling Springs Road; the trail alignment is spanned three times by C440 (SDG&E 2013).
- **Desert View Interpretive Trail and Picnic Grounds.** The Desert View Interpretive Trail is located east of Sunrise Highway and follows the PCT alignment along the eastern slopes

of Mount Laguna. The trail offers long views to the Anza-Borrego Desert, and the picnic grounds are located northeast of Los Heucos Road and are accessible via Sunrise Highway (trail access is available from the picnic grounds or the Burnt Rancheria campground) (Forest Service 2014h).

In addition to the recreation areas and trails identified above, the Pine Mountain Trail and Pioneer Mall picnic area are located in the Laguna Mountain Recreation Area and provide additional opportunities for recreation.

Local Recreation Areas

Local recreation areas located near or traversed by C442 include:

- **Al Bahr Shrine Camp.** A private group camp leased since 1921, use of the Al Bahr Shrine Camp is available to all Shriners, masons and other affiliated masonic bodies, their families and guests (Al Bahr Shriners 2014). The camp is able to accommodate RVs and tent campers, and also offers cabins and dormitories for families and small groups. The Al Bahr Shrine Camp is traversed by C440, and several existing poles are located within the camp boundaries.
- **Pine Valley Regional Park.** The nearest county recreational facility, Pine Valley Regional Park, is located approximately 1.5 miles northwest of the southernmost extent of C440 undergrounding along Sunrise Highway. Access to Pine Valley Regional Park is available off of Old Highway 80 via the I-8 Sunrise Highway exit.

Also, the existing overhead C440 alignment spans the Phantom Trails, a County of San Diego designated trail network that coincides with the alignment of Forest Service access road Drd418660-2 located west of Sunrise Highway (SANGIS 2010).

C449

Recreation areas and trails located near or traversed by C449 are depicted on Figure D.13-4, listed in Table D.13-10, and discussed in greater detail below.

Table D.13-10
Recreation Areas and Trails Located Near or Traversed by C449

Recreational Area/Trail	Distance and Orientation
Federal and State	
Pacific Crest National Scenic Trail	Traversed several times by C449 between Buckman Springs Road and I-8
Boulder Oaks Campground	Traversed by C449 west of Old Highway 80
Corral Canyon OHV Area and Campground	2.5 miles west of C449 at Camp Morena
Local	
Lake Morena County Park	Park boundary traversed by C449 along Morena Stokes Road
Lake Morena County Park Campground	1.5 miles west of southernmost extent of C449 at Buckman Springs Road/Oak Drive.
La Posta Creek/Old Highway 80 Pathway (proposed), the Buckman Springs Road Pathway (existing), the Morena Stokes Road North Trail (existing), and the Oak Drive Pathway (proposed)	Traversed by C449 between Camp Morena and Interstate 8 (trails and pathways are located on existing roads)

Federal and Recreation Areas and Trails

Federal and state recreation areas located near or traversed by C449 include:

- **Pacific Crest National Scenic Trail.** The PCT is spanned by C449 at several locations between Buckman Springs Road and I-8 (SDG&E2013).
- **Boulder Oaks Campground.** C449 spans the southern and northern campground loops and a single pole is located in the northern loop (SDG&E 2013).
- **Corral Canyon OHV Area and Campground.** While not spanned by C449, a segment of the C449 alignment is located adjacent to and near Morena Stokes Road. OHV enthusiasts and campers may access the Corral Canyon OHV Area and campground via Buckman Springs Road and Morena Stokes Road (Forest Service 2006).

Local Recreation Areas

Local recreation areas located near or traversed by C449 include:

- **Lake Morena County Park.** As it pertains to C449, the proposed t project includes the removal of existing wood poles and installation of new steel poles within and immediately adjacent to the northeastern portion of Lake Morena County Park. The southernmost extent of C440 is located approximately 1.5 miles east of the 86-site Lake Morena County Park Campground (County of San Diego 2013d), and in addition to developed camping

facilities, primitive camping is permitted in a designated area along the northern lake shoreline located south of Camp Morena (a facility that is part of Naval Base Coronado).

C449 also traverse several trails and pathways identified in the Campo/Lake Morena Community Trails and Pathways Plan including the La Posta Creek/Old Highway 80 Pathway (proposed), the Buckman Springs Road Pathway (existing), the Morena Stokes Road North Trail (existing), and the Oak Drive Pathway (proposed) (County of San Diego 2009f).

D.13.2 Applicable Regulations, Plans, and Standards

The following section presents a general description of plans, policies, ordinances, and regulations applicable and relevant to SDG&E's proposed project.

D.13.2.1 Federal Regulations

USDA Forest Service

Forest Service Strategic Plan

The Strategic Plan provides direction that guides the Forest Service in delivering its mission to "sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations" (Forest Service 2007). Key items of the FY 2007–2012 strategic plan (a current plan covering FY 2013 is not yet available for public review) determined to be applicable to SDG&E's proposed project and associated with wilderness and recreation are listed below:

- **Goal 4.** Sustain and Enhance Outdoor Recreation Opportunities.
  - **Objective 4.1.** Improve the quality and availability of outdoor recreation experience.

To support Goal 4, the Forest Service notes that the condition of the land, recreation facilities, and transportation infrastructure must be considered and specially designated protected areas must be maintained (Forest Service 2007).

Southern California National Forests LMP

As stated in Section D.10, Land Use, the LMP consists of three interrelated parts that work together to "facilitate the use of adaptive management and the development of the management activities" in order to move the National Forests towards their desired outcome (Forest Service 2005a). Part 1 of the LMP identifies existing management challenges, strategic goals, and desired conditions; Part 2 consists of the CNF LMP; and Part 3 provides design criteria/forest plan

standards and guidelines. The key items contained within Parts 1 through 3 of the Southern California National Forests LMP and applicable to wilderness and recreation are discussed below.

Part 1 Southern California National Forests Vision

While SDG&E's proposed project does not entail the provision of recreation uses, project components are located in the vicinity of existing recreation facilities on Forest Service lands. Further, the provision of recreation opportunities and meeting energy resource needs are goals and objectives discussed in the Forest Service Strategic Plan. Therefore, Forest Service goals and policies pertaining to the provision of managed recreation in a natural setting are applicable. As such, the following goals of the vision document (Forest Service 2005a) are applicable to SDG&E's proposed project:

- **Goal 3.1.** Provide for Public Use and Natural Resource Protection.
- **Goal 3.2.** Retain a Natural Evolving Character within Wilderness.

Part 2 Cleveland National Forest Strategy (Cleveland National Forest LMP)

In addition to designating land use zones, the Cleveland National Forest LMP provides direction for the management of designated (i.e., existing) and recommended wilderness. Four Congressionally designated wildernesses are located in the CNF: Agua Tibia Wilderness (Palomar Ranger District), Hauser Wilderness, Pine Creek Wilderness (Descanso Ranger District), and San Mateo Canyon Wilderness (Trabuco Ranger District). Federally designated wilderness located near the proposed power line replacement projects is located south of I-8 and includes Hauser Wilderness and Pine Creek Wilderness. Recommended Wilderness within the CNF includes Cutca Valley (located adjacent to the Agua Tibia Wilderness), Pine Creek (located adjacent to the Pine Creek Wilderness), and Hauser South (located adjacent to the Hauser Wilderness).

The Southern California National Forests LMP and Existing and Recommended Wilderness are discussed fully in Section D.10, Land Use. In addition, potential conflicts with LMP and wilderness designations as they relate to the MSUP and the proposed power line replacement projects are discussed in Section D.10.

<u>Forest-Specific Design Criteria</u>

Forest-Specific Design Criteria included in Part 2 of the Cleveland National Forest LMP (Forest Service 2005b) applicable to wilderness and recreation includes the following:

- **CNF S20.** Limits of Acceptable Change methodology will be used to ensure an acceptable state of solitude.

- **CNF S21.** Limits of Acceptable Change methodology will be used to mitigate increases in wilderness resource degradation.

The Limits of Acceptable Change (LAC) methodology was proposed in 1985 by the Forest Service Intermountain Forest and Range Experiment Station in Ogden, Utah, as a means of quantitative wilderness planning and management (Forest Service 1985). Under the LAC system, the amount of change to be allowed in wilderness is defined explicitly by quantitative standards, and the appropriate management activities needed to prevent further change are identified and management and monitoring procedures are established.

Appendix B, Program Strategies and Tactics, of Part 2 of the Southern California National Forests LMP describes detailed program strategies that the National Forests may implement to achieve desired conditions and goals. Strategies address species of concern management, prevention and control of invasive species, vegetation restoration, restoration of forest health, insect and disease management, watershed function and water management, and wilderness. Applicable wilderness-based strategies are listed below.

- **SD 1 Wilderness.** Protect and manage wilderness to improve the capability to sustain a desired range of benefits and values and so that changes in ecosystems are primarily a consequence of natural processes. Protect and manage the areas recommended for wilderness designation to maintain their wilderness values

Part 3 Design Standards

Design Standards contained in Part 3 of the LMP are not specifically applicable to wilderness and recreation, and therefore, they are not listed in this section.

Southern California National Forests LMP Amendment

In addition to revising land use zone allocations for select IRAs within the Angeles, Cleveland, Los Padres, and San Bernardino national forests, the Southern California National Forests LMP amendment also modifies existing LMP monitoring protocols pertaining to forest health, riparian condition, and biological resource condition. Under the land use zone reallocations ~~proposed~~ adopted by the 2014 LMP amendment, 80,000 acres of newly classified Recommended Wilderness ~~would be~~was distributed among four new recommended wilderness areas in the Southern California National Forests (Forest Service 2013c).

The Southern California National Forests LMP Amendment and Recommended Wilderness is discussed fully in Section D.10, Land Use, which also addresses potential conflicts with the LMP Amendment as it relates to the MSUP and the proposed power line replacement projects.

Wilderness Act of 1964

Potential conflicts with the Wilderness Act of 1964 as it relates to the MSUP and the proposed power line replacement projects are discussed in Section D.10, Land Use.

National Trails System Act

The National Trails System Act was established by Congress in 1968 "in order to provide for the ever-increasing outdoor recreation needs of an expanding population and in order to promote the preservation of, public access to, travel within, and enjoyment and appreciation of the open-air, outdoor areas and historic resources of the Nation" (16 U.S.C. 1241 et seq.). The act defined four categories of national trails: National Scenic Trails; National Historic Trails; National Recreation Trails; and connecting or side trails that provide additional points of public access to scenic, historic, and/or recreation trails. The Appalachian Trail and the Pacific Crest National Scenic Trail were designated as the initial components of the National Trails System. The PCT is administered by the Forest Service in partnership with the BLM, National Park Service, California State Parks, and the Pacific Crest Trail Association. Each agency and association is vital to ensure the effective management and protection the trail (Forest Service 2013d). In addition to the PCT, the 1.0-mile Inaja Memorial National Recreation Trail and the 10-mile Noble Canyon National Recreation Trail are located near power line replacement projects in the Palomar and Descanso ranger districts.

While National Scenic Trails and National Historic Trails may only be designated by an act of Congress, National Recreation Trails may be designated by the Secretary of the Interior or the Secretary of Agriculture in order to recognize "exemplary trails of local and regional significance" (National Recreation Trails 2014). Designation as a National Recreation Trail provides the support of the National Recreation Trails Program and offers a variety of benefits including promotion, technical assistance and access to funding opportunities available from program partners (National Recreation Trails 2014). Funding for trails available through the Federal Highway Administration and the U.S. Department of Transportation encourages states to steer available funds to projects on trails designated as National Recreation Trails (National Recreation Trails 2014).

Forest Service Manual 2300 – Recreation, Wilderness, and Related Resource Management

Chapter 2350, "Trail, River, and Similar Recreation Opportunities," of Forest Service Manual 2300, contains objectives and policies regarding the establishment and management of National Forest System trails including National Recreation Trails and connecting and side trails. Section 2553.5, "Administration of National Recreation Trails," contains general policies regarding National Recreation Trails and establishes criteria for trail designation. Uses other than outdoor

recreation including power transmission, livestock drives, and logging operations are allowed on trails provided they do not conflict with the nature and purposes of the trail. In addition, when allowing uses other than recreation, scenery management considerations must be incorporated into trail authorizations (Forest Service 2009b).

Bureau of Land Management

The South Coast RMP and the Draft RMP revision are the applicable planning documents for BLM lands in the project study area (TL 625, TL6293, and TL 629 briefly traverse BLM lands). The South Coast RMP does not identify recreation areas on public lands within the project area; however, recreation management objectives within the San Diego County Management Area include the provision of low-impact recreation opportunities through the provision of facilities and services (BLM 1994). An additional objective of the RMP is the acquisition of private inholdings in the Hauser Mountain area to consolidate public land ownership and establish a natural open space and wildlife "canyon" corridor to connect Otay Mountain, Tecate Peak, McAlmond Canyon, and Hauser Mountain (BLM 1994). The Draft RMP revision identifies the Hauser Mountain Wilderness Study Area which coincides with contiguous BLM lands in the Hauser Mountain area. San Diego County is divided into two recreation management areas by the BLM, and public lands in the vicinity of Hauser Mountain are located in the Border Mountains Special Recreation Management Area (SRMA) and the Hauser-Potrero distinct management zone. According to the Draft RMP revision, no recreational facilities have been developed in the SRMA, and the Hauser-Potrero zone receives very little recreation use due to limited access (BLM 2011).

In addition, Appendix N to the Draft RMP also contains a consideration of public lands within the planning area with identified wilderness characteristics. Per Section 201 of the Federal Land Policy and Management Act, lands outside of designated wilderness or wilderness study areas are required to be inventoried during the RMP process to determine if they possess wilderness characteristics as an evaluation of potential wilderness designation. According to the BLM, in order for an area to qualify as lands with wilderness characteristics, it must possess sufficient size, naturalness, and outstanding opportunities for solitude and primitive and unconfined recreation (BLM 2012). During the draft RMP process, three public land parcels located adjacent to the Hauser Mountain Wilderness Study Area were inventoried and were determined to have wilderness characteristics. One inventoried area, Wilderness Character Unit 7, is located north adjacent to the Hauser Mountain Wilderness Study Area and south of the TL6923 alignment. While TL 6923 would be located near lands with wilderness characteristics, it would not span these lands.

Comprehensive Management Plan for the Pacific Crest National Scenic Trail

The purpose of the Comprehensive Management Plan for the Pacific Crest National Scenic Trail is to provide overall guidance and objectives for development and management of the trail (Forest Service 1982). The comprehensive plan is intended to be general, and more specific planning is accomplished at the BLM, National Park Service, and National Forest level in regards to the specific issues and opportunities for portions of the trail located in those jurisdictions.

The Comprehensive Management Plan for the Pacific Crest National Scenic Trail is discussed in more detail in Section D.10, Land Use.

D.13.2.2 State Regulations

California Wilderness Preservation System

The California Wilderness Preservation System pertains to state-owned lands designated by the legislature as "wilderness areas" or portions of the state park system designated as "state wilderness" by the State Parks and Recreation Commission. The California Wilderness Preservation System is discussed in Section D.10, Land Use.

Cuyamaca Rancho State Park General Plan

The intent of the existing Cuyamaca Rancho State Park General Plan is to "guide the Department of Parks and Recreation in protection of the [park's] natural and cultural resources and in development of recreational facilities" (California State Parks 1986). The plan contains five elements, including the Land Use and Facilities Element which discusses recreational needs and trends in the state park and identifies recreational facilities in the surrounding area such as the Laguna Mountain Recreation Area and William Heise County Park. Further, within the park perspective discussion, the General Plan notes that use of the state park is particularly heavy on weekends and during the summer, and that the most well-defined recreation need is for additional areas for horse/people camping.

The California Department of Parks and Recreation is currently in the process of preparing an Environmental Impact Report to address potential impacts associated with changes that may be proposed to the state park in the Draft General Plan. The department is conducting a comprehensive update of the existing General Plan to reflect changing conditions and issues including alteration of the landscape resulting from the 2003 Cedar Fire (California Department of Parks and Recreation 2013c).

D.13.2.3 Regional Policies, Plans, and Regulations

Pursuant to Article 12, Section 8, of the California Constitution, SDG&E's proposed project is not subject to local plans, policies, or regulations. The CPUC and Forest Service have independent jurisdiction and approval authority for the project; the CPUC is the lead agency under California law and the Forest Service is the lead federal agency. However, state agencies such as the CPUC are required to consider local land use policies and regulations when making decisions. Therefore, local plans and policies are listed below to assist in determining local land use compatibility.

County of San Diego General Plan

Originally undertaken in 1988, the County Board of Supervisors adopted a new comprehensive General Plan on August 3, 2011. In addition to the Conservation and Open Space Element (Count of San Diego 2011a), which addresses the conservation, development, and use of natural resources (as well as the protection and preservation of open space and the provision of park and recreation resources) and the Mobility Element (County of San Diego 2011b), which addresses bicycle, pedestrian, and trails facilities including the County Trails Program, the General Plan includes subregional and community plans that contain policies specifically created to address the issues, characteristics, and visions of specific communities. Therefore, in addition to the Conservation and Open Space Element and the Mobility Element, the subregional/community plans applicable to lands traversed by SDG&E's proposed project would also be relevant to SDG&E's proposed project and are therefore discussed below.

San Diego County Trails Program's Community Trails Master Plan

Adopted in January 2005, the County Trails Program's Community Trails Master Plan guides the development of an interconnected regional and community trails and pathway system (County of San Diego 2009a). The Community Trails Master Plan is the implementing document for the County Trails Program and includes adopted trails and pathways plans for several communities throughout unincorporated San Diego County, including the communities of Alpine, Campo/Lake Morena, Descanso, Jamul-Dulzura, Pala/Pauma, Pine Valley, Potrero, and Valley Center. As discussed in Section D.13.1.1 for the various components of SDG&E's proposed project, several existing and proposed community trails and pathways located in the communities discussed above would be traversed by proposed power line replacement projects. As opposed to existing trails and pathways, proposed trails and pathways delineated in the various community trails and pathways plans depict corridors of general alignment that describes the general location of a future trail (County of San Diego 2009a. The specific alignment of the trail within the corridor will be identified at the time of actual acquisition, implementation and/or construction.

In addition to countywide policies in the Community Trails Master Plan, the community of Valley Center developed community-specific policies for their community trails and pathways plan (all other communities have adopted the countywide policies). However, policies included in the Valley Center Community Trails and Pathways Plan focus on design considerations for pathways adjacent to existing roads or new road construction, and therefore, the policies are not applicable to SDG&E's proposed project.

D.13.3 Environmental Effects

Indirect impacts to wilderness and recreation areas associated with changes to the existing visual landscape resulting from implementation of SDG&E's proposed project and the temporary generation of air quality pollutants and noise during construction and operation and maintenance activities are discussed elsewhere in this document. Please refer to Section D.2, Aesthetics and Visual Resources; Section D.3, Air Quality; and Section D.11, Noise, for a discussion of impacts to these issue areas.

D.13.3.1 Definition and Use of CEQA Significance Criteria/ Indicators under NEPA

The CEQA criteria and guidelines described as follows are also used as indicators of adverse effect under NEPA. Significance criteria, or thresholds, listed in Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) used to determine the significance of whether a project would have a significant recreation-related effect on the environment include if the project would:

a. Increase the use of existing neighborhood or 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 physical effect on the environment.

Criteria a) and b) above address questions related to increased use of recreation facilities and the construction and/or expansion of existing recreation facilities. However, SDG&E's proposed project would have no impact related to these issues for the following reasons:

- SDG&E's **proposed project does not induce population growth in the project area and does not involve a housing component.** While a temporary influx of construction workers would descend on the project area during construction, use of recreation facilities would be limited. In addition, SDG&E's proposed project would not result in a permanent increase in the local population which could in turn result in increased use of recreational facilities such that deterioration of those facilities would occur.
- SDG&E's **proposed project does not include the construction or expansion of recreational facilities.** New recreation facilities (or the expansion of existing facilities)

are not included in the MSUP or the PTC to construct the proposed power line replacement projects.

For purposes of this analysis, the recreation significance standards in Appendix G of the CEQA Guidelines listed above have been modified as follows to better address the available recreational resources in the project area and address the potential impacts of SDG&E's proposed project.

Construction-Related Impacts

- Construction activities would temporarily reduce access and visitation to recreation areas.

Operations and Maintenance Impacts

- Presence of a project component would permanently preclude recreational activities.
- Presence of a project component would result in increased, unauthorized access to specially designated or restricted areas.

D.13.3.2 Applicant Proposed Measures

No Applicant Proposed Measures (APMs) were proposed by SDG&E to reduce direct impacts to wilderness and recreation.

D.13.3.3 Direct and Indirect Effects

Impact REC-1: Reduce access and visitation to recreation areas due to construction activities

A temporary influx of construction workers and vehicles on roads in the study area and the linear nature of proposed power line replacement projects suggest that proposed construction activities would temporarily impair movement or access along roads near existing power lines and distribution circuits which could in turn temporarily reduce access and visitation to local recreation areas.

The following describes the wilderness and recreation areas likely to be temporarily impacted by reduced access and/or visitation during construction of the proposed power line replacement projects.

TL682

During construction, temporary work sites (primarily pole work areas and stringing sites) may fully or partially encroach on several roadways, including Valley Center Road, SR-76, Sengme Oaks Road, and Campground Road, and may result in traffic delays along these roadways. Traffic delays may in turn temporarily reduce access to recreation areas accessible via SR-76

including Hellhole Canyon Preserve, Palomar Mountain State Park (including associated camping, picnicking, hiking, and fishing areas), campgrounds managed by the Forest Service (Crestline Campground, Fry Creek Campground, Observatory Campground), Amago Sports Parks, La Jolla Indian Campground, San Luis Rey Picnic Area, and Lake Henshaw. However, while construction activities adjacent to or within roadways may temporarily hinder vehicular movement on SR-76, implementation of APM TRANS-01, APM TRANS-04, and APM TRANS-05 would minimize the severity of impacts associated with reduced access by conducting temporary lane closures during off-peak hours, coordinating lane closures with local jurisdictional agencies, and implementing a construction Traffic Control Plan. Also, as stated in Section B, Project Description, removal of existing wood poles and installation of replacement weathered steel poles via direct bury methods would take approximately 3 days at each pole location to complete, and conductor stringing would take approximately 3 hours to complete. Therefore, where pole work areas and stringing areas are located in close proximity to roads including Sengme Oaks Road and Campground Road, any restriction of access to or reduce visitation at nearby recreation areas would be limited and therefore not adverse under NEPA, and under CEQA, would be less than significant (Class III).

Lastly, where existing support poles are located in the boundary of a recreational area (two support poles are located in the boundary of the La Jolla Indian Campground), a 20–40 foot diameter work area around existing poles would be necessary to accommodate pole removal and installation activities. While construction activities are likely to be viewed as a nuisance by recreationists using the recreation area, the La Jolla Indian Campground is located adjacent to a major transportation corridor and poles are existing features in the campground. In addition, pole removal and installation activities would be brief and would not occupy campground sites or impede tubing opportunities in the San Luis Rey River. Implementation of Mitigation Measure (MM) MM LU-1 would also address potential adverse and significant impacts associated with reduced visitation during construction by providing advanced notification of construction activities to agencies with jurisdiction over local recreation areas/facilities and by posting notices of construction activities at public venues; therefore, impacts would be mitigated under NEPA and under CEQA, would be less than significant with mitigation (Class II).

While the PCT (more specifically, the Barrel Springs section of the trail located 2.5 miles north of the TL682 tie-in at Warner Substation) is not spanned by the TL682 alignment, several informal yet regularly used staging areas are located near Warner Springs and on Indian Flats Road. These staging areas are accessible via SR-76. Due to the presence of staging areas, the Warner Springs community is considered to be a PCT access point for hikers and other recreationists, and as such, construction activity along SR-76 may temporarily impact PCT access. Therefore, MM LU-1 would be implemented to address temporary access impacts to trail staging areas during construction. With implementation of MM LU-1, adverse and significant

impacts would be mitigated under NEPA and under CEQA, impacts would be less than significant with mitigation (Class II).

The SR-76 Pathway is a proposed route. Further, because public ROW for the trail has not yet been acquired by the County, the pathway is not considered to be an established trail. As such, no impacts to this resource are anticipated.

TL626

During construction, pole removal, and installation activities would occur within 100 feet of SR-79 where TL626 spans the roadway. At these pole locations, direct bury methods would be employed to installed weathered steel poles, and the required 20–40 foot diameter work areas would not encroach on the SR-79 travel lanes or ROW. Guard structures or bucket trucks would be used during conductor installation; however, the~~se~~ presence of these facilities would not require temporary lane closures or substantial traffic delays. Therefore, pole removal and installation activities are not anticipated to result in substantial traffic delays along SR-79 near Santa Ysabel (potential temporary effects on vehicular movement would be further reduced through implementation of APM TRANS-01, APM TRANS-04, and APM TRANS-05), and impacts associated with reduced access to or visitation of Cuyamaca Rancho State Park, the Santa Ysabel East and West Preserves, and the Inaja Memorial Picnic Area and National Recreation Trail would not be substantial, and therefore not adverse under NEPA and under CEQA, would be less than significant (Class III).

While TL626 support poles are located near the Inaja Memorial Picnic Area and National Recreational Trail, poles are not located within the picnic area or on the trail and would not hinder picnicking or hiking opportunities. Pole replacement activities would be concentrated around locations of existing poles along the TL626 alignment and associated access roads which are located down slope of the picnic area and trail; therefore, visitation to these areas during construction would not be significantly affected, and would not be adverse under NEPA. Under CEQA, reduced visitation to these areas is considered a less-than-significant impact (Class III).

TL626 also spans the California Riding and Hiking Trail and the Boulder Creek Pathway on several occasions along Boulder Creek Road and Burrell Way. Several existing poles are located within and near the Boulder Creek Road ROW and pole work areas would encroach on the road ROW and trail alignments. However, pole removal and installation activities at each pole location would be relatively brief and would not require temporary closure of Boulder Creek Road and/or trail facilities. In addition, adequate space would be afforded to trail-based recreationists to pass the pole work areas. Further, implementation of MM LU-1 would also reduce potential adverse and significant conflicts between trail-based recreationists and construction activities. Therefore, with implementation of MM LU-1, the temporary reduction in

visitation or use of the California Riding and Hiking Trail and the Boulder Creek Pathway near the Descanso Substation would be mitigated under NEPA, and under CEQA, would be less than significant with mitigation (Class II).

Construction activities along Boulder Creek Road may also result in temporary reduced access to other recreational amenities in the area. Both Cedar Creek Road (a green sticker OHV route) and the unofficial staging area used to access Three Sisters Waterfall are accessible via Boulder Creek Road. Construction activities and the presence of construction vehicles on Boulder Creek Road could temporarily impede access to these amenities through temporary lane closures and reduced travel speeds. Implementation of APM TRANS-01, APM TRANS-04, and APM TRANS-05 would minimize the severity of impacts associated with reduced/impeded access by restricting temporary lane closures, coordinating lane closures with local jurisdictional agencies, and implementing a construction Traffic Control Plan. In addition, implementation of MM LU-1 would also reduce potential adverse and significant conflicts that could arise between recreationists and construction activities by implementing a construction notification plan and informing the public of the location and duration of construction activities. Therefore, with implementation of applicable APMs and notification protocol (i.e., MM LU-1), impacts would be mitigated under NEPA, and under CEQA, would be less than significant with mitigation (Class II).

TL625

South of I-8, pole removal and replacement activities would be concentrated along Japatul Valley Road. Due to the proximity of the TL625 alignment to the road, several pole work areas and stringing sites would likely encroach upon the roadway ROW and could result in temporary traffic delays. In addition, an approximate 1.5-acre staging area is located off of Japatul Valley Road approximately 0.5 mile south of I-8, and therefore, the roadway could experience an influx of construction traffic during the approximate 21 months required to complete the entirety of TL625 construction activities. Temporary traffic delays along the road could temporarily impair access to wilderness and recreation sites in the area including the Pine Creek Wilderness via the Horsethief Trail, Loveland Reservoir, and several County of San Diego trails located near the Loveland Reservoir. It should be reiterated that construction activities would not require the temporary closure of any portion of the Pine Creek Wilderness, the Horsethief Trailhead and Trail, or publicly accessible fishing areas of Loveland Reservoir. Rather, construction activities occurring along Japatal Valley Road could simply hinder opportunities to access wilderness and recreation sites in a timely manner. However, implementation of a Traffic Control Plan (APM TRANS-04) and additional traffic control considerations (see Section D.14, Transportation and Traffic, for additional detail) would minimize the potential for adverse and significant conflicts between motorists and construction activities that would in turn reduce impacts associated with

impaired access to recreation areas. Therefore, this impact would be mitigated under NEPA, and under CEQA would be less than significant with mitigation (Class II).

West of the Barrett Tap, TL625 spans the California Riding and Hiking Trail and the main trail providing access to the publicly accessible northern and western shores of Loveland Reservoir. South of the Barrett Tap, the power line also spans several existing County of San Diego trails aligned along dirt roads that also support existing TL625 poles. East of Sequan Truck Trail, the California Riding and Hiking Trail is aligned along the access road for four existing support poles (approximately 20–40 feet in diameter) that would encroach on the trail alignment. However, as joint use of the access road for recreational and utility use comprises the baseline condition and because individual pole removal and replacement activities would proceed relatively quickly at each pole location (approximately 3 days of work at each pole location is required), any reduced access or visitation/use of trail facilities would not be particularly long or substantial. Further, existing poles along the TL625 alignment in the area are located on established pads/disturbed areas accessible by existing access roads and replacement poles would not be installed on trial alignments. Therefore, impacts would not be adverse under NEPA, and under CEQA, impacts would be less than significant (Class III).

TL629

Temporary traffic delays and recreational areas access impairment could result from pole removal and replacement activities occurring within the Old Highway 80 and Pine Creek Road ROW. Recreationists use Old Highway 80 and Pine Creek Road to access several recreation areas in the surrounding Descanso–Guatay–Pine Valley area, including the Pine Valley Trailhead (which provides access to the Pine Valley Wilderness), the Pine Creek Pathway, the Noble Canyon Trailhead, and the Pine Valley Regional Park. South of the Pine Valley area, pole work areas would be concentrated along Old Highway 80 near the alignment of the PCT (three poles work areas would encroach upon the trail alignment along Old Highway 80) and near the Forest Service-managed Boulder Oaks Campground. An existing support pole is located near the entryway to the northern loop of the campground, and the associated pole work area would encroach on the entryway. While pole work areas and stringing sites may encroach on the roadway ROW and cause slower travel speeds and possible temporary traffic delays, implementation of traffic APMs (APM TRANS-01, APM TRANS-04, and APM TRANS-05) and a construction notification plan (MM LU-1) would minimize the potential for prolonged use and access conflicts. Further, individual pole removal and replacement activities at each identified pole location would proceed relatively quickly (approximately 3 days of work at each pole location is required), and therefore, any reduced access or visitation/use of trail facilities would not be particularly long or substantial. Under NEPA, adverse impacts

would be mitigated, and under CEQA, significant impacts would be reduced to less than significant with mitigation (Class II).

TL6923

The existing alignment of TL6923 spans County of San Diego trails that coincide with the ROW of existing dirt access roads. These "trails" include the Manzanita to Lake Trail in Tumeric Way and the Barrett Lake Trail in Barrett Lake Road (both located near the Barrett Substation) and the Big Potrero Truck Trail and Big Potrero Spur Trail (both located south of Lake Morena County Park and near Hauser Canyon). The proximity of existing support poles to existing trails could entail pole work areas encroaching upon trail alignments; however, these instances would be limited to a single pole work area in the Big Potrero Truck Trail. In addition to supporting an existing trail alignment, Big Potrero Truck Trail provides access to the Hauser Wilderness and Hauser Creek Trail. As such, pole removal and replacement could temporarily affect access along Big Potrero Truck Trail, the Hauser Wilderness, and the Hauser Creek Truck Trail. As stated previously, the potential for prolonged access and visitation restrictions would be minimized due the nature and duration construction activities. More specifically, pole removal and replacement activities would be mobile and linear in nature and would take approximately 3 days to complete at each individual pole location. In addition, temporary detours around pole work areas could be provided in order to maintain access along access roads and trails. As such, conflicts arising between pole work areas and trail use would not be substantial along the TL6923 alignment, and therefore under NEPA would not be adverse. Under CEQA, impacts would be less than significant (Class III).

South of Hauser Canyon, TL6923 spans the PCT and several poles are located near the trail alignment. Due to the proximity of existing TL6923 poles to the PCT, several pole work areas and two stringing sites may encroach upon the trail alignment during pole removal and replacement activities. While existing support poles are visible from the trail and maintenance activities along TL6923 are assumed to occasionally occur, the presence of construction equipment and workers on/near the PCT would negatively affect the recreational experience. Further, the occasional nature of maintenance activities would suggest that section and through hikers on the PCT do not typically encounter power line work crews. Also, due to the proximity of pole locations to the trail, the required 20–40-foot pole replacement work areas could temporarily affect access along the PCT at pole Z972864. The potential for prolonged access restrictions along the PCT would be minimized due to the nature and short duration of construction activities at each pole location. Further, work areas would be located off the PCT to the extent possible and space would be provided for hikers and other recreationists to safely pass pole replacement work areas. In addition, MM LU-1 would be implemented to ensure that PCT hikers and other recreationists are notified of construction activities occurring near the

trail. Because trail access near pole Z972864 would be maintained and trail users would be notified of the location and duration of construction activities, potential adverse and significant conflicts arising between pole work areas and trail users would not be adverse or particularly long in duration. Therefore, under NEPA, impacts would be mitigated and under CEQA, impacts would be less than significant with mitigation (Class II).

C79

The underground alignment of C79 would entail trench work within SR-79 immediately south of the entrance to the state park~~Forest Service~~-managed Paso Picacho Picnic Area parking lot and Campgrounds. In addition to state park lands, SR-79 also provides access to Lake Cuyamaca, William Heise Regional Park, and several private RV camps and campgrounds near the regional park. The entirety of undergrounding activities along the new alignment within Lookout Road would take several ~~days~~ weeks to complete; however, work within SR-79 would proceed quickly (SR-79 is approximately 30 feet wide), and measures such as the installation of steel plates over trenches to allow for safe passage of vehicles would be implemented as part of the Traffic Control Plan (APM TRANS-05) to minimize the potential for substantial traffic delays. In addition, APM TRANS-01would be implemented to ensure that necessary lane closures occur during off-peak hours. Therefore, while access to state park and County recreation areas and trails could be temporarily reduced during construction of the C79 underground alignment, temporary closure of recreation areas would not be required, and traffic control measures would be implemented to ensure that access remains available. Therefore impacts would not be adverse under NEPA, and under CEQA, impacts would be less than significant (Class III).

The proposed underground alignment would cross the alignment of the California Riding and Hiking Trail at the intersection of Lookout Road and Azalea Spring Fire Road. The trail generally follows the alignment of Fern Flat Fire Road and Azalea Spring Fire Road and because trenches would be located in Lookout Road, temporary closure of the trail between West Mesa Loop Fire Road and Fern Flat Fire Road may be required to minimize the potential for adverse and significant conflicts between trail-based recreationists and construction activities. Construction activities may entail the temporary closure of Lookout Road to hikers and cyclists. Implementation of MM LU-1 would provide advanced notification of construction-related area closures and public access restrictions on Lookout Road; therefore any temporary restrictions to hikers and cyclists using Lookout Road would be mitigated under NEPA, and under CEQA would be less than significant with mitigation (Class II).

C78

Indirect access to the Ma Tar Awa RV Camper Park is available via SR-79, Riverside Drive, Viejas Grade Road, and Browns Road. Removal and relocation of C78 would occur along Viejas

Grade Road (which is approximately 25 feet wide) which would restrict access along this road. However; because a more direct access to the camper park off I-8 at Willows Road would remain available, construction activities would not substantially reduce access or visitation to recreation sites. Therefore impacts would not be adverse under NEPA, and under CEQA, impacts would be less than significant (Class III).

C157

While pole removal and replacement of the existing overhead C157 alignment would occur within federally designated wilderness, construction activities would be concentrated on the periphery of the Pine Creek Wilderness and Hauser Wilderness. In addition, given the steep terrain in the area and the lack of trailheads, staging or parking areas near the alignment and along Skye Valley Road and local Forest Service roads in the area, it is assumed that wilderness is not regularly accessed in the vicinity of the C157 alignment. There are no established trailheads into the Hauser Wilderness, and the closest trailhead providing access into the Pine Creek Wilderness—Horsethief Trailhead—is located approximately 0.60 mile north of the western extent of the C157 alignment. Therefore, construction activities would not reduce access to or visitation of the Pine Creek Wilderness and Hauser Wilderness, and impacts would not be adverse under NEPA, and would be less than significant (Class III) under CEQA.

C442

From the north via the Bear Valley Trail) is not anticipated. Construction vehicles would use Pine Valley Road to access the southern alignment of C442; however, construction staging would not occur at the Bear Valley OHV parking area located at the southern extent of Pine Valley Road, and direct access to the trailhead and trail would be maintained during construction. Therefore, impacts would not be adverse under NEPA, and would be less than significant (Class III) under CEQA.

C440

Underground trench work and impairment of traffic flow along Sunrise Highway (a new 8.4-mile underground segment of C440 would be installed along the highway) could hinder access to recreational facilities located in the Laguna Mountain Recreation Area including the Burnt Rancheria, Laguna and Wooded Hill campgrounds, the Desert View interpretive trail and picnic grounds, Little and Big Laguna lakes, numerous trails, and other recreation amenities (see discussion of C440 in Section D.13.1.2.2). In addition, because the PCT is accessible to hikers via the Desert View Trail, traffic delays on Sunrise Highway could also potentially reduce access to the PCT. Along Sunrise Highway, underground cables would be installed within narrow (i.e., 1.5-foot-wide by 1.5-foot-deep) duct banks, and construction would also entail the installation of

splice vaults along the new underground segment of C440. Despite the presence of construction equipment, vehicles, and personnel in the Sunrise Highway ROW, access to the Laguna Mountain Recreation Area would not be substantially reduced. Construction activities would not require the closure of both travel lanes of the highway, and implementation of traffic control measures per APM TRANS-01 and APM TRANS-05 would ensure that access to the recreation area would be maintained. Therefore, impacts associated with undergrounding along Sunrise Highway and reduced access and visitation to recreation areas would not be adverse under NEPA and under CEQA would be less than significant (Class III).

Wood-to-steel replacement of existing C440 poles is proposed along the Sunrise Highway and within the Laguna Mountain Recreation Area. The C440 alignment also spans the highway on multiple occasions; however, existing poles are generally set back a sufficient distance from the highway to ensure that pole work areas would not encroach on the highway travel lanes. Pole work areas may encroach upon the highway ROW, but with implementation of traffic control measures, substantial traffic delays are not anticipated, and significant impairment of access to the Burnt Rancheria campground, the Laguna campground, and other recreational amenities in the area is not anticipated. In addition, pole work areas would be located near campgrounds and trails, but they would not be located within the campgrounds and would not encroach on trail alignments. Therefore, existing camping and trail-based recreation opportunities would be maintained during construction. As such, reduced visitation to the recreational amenities in the Laguna Mountain Recreation Area due to pole removal and replacement activities in the area is not anticipated.

Lastly, west of the Sunrise Highway and outside of the Laguna Mountain Area, the existing C440 alignment spans the Phantom Trails, a system of County trails whose alignment coincides with that of Forest Service access road Drd418660-2. Since the existing alignment spans the Phantom Trails, pole removal work areas would encroach on the trail alignment and could result in temporary reduction in trail access. It should be noted that Drd418660-2 is managed by the Forest Service, and the County has no land use authority over the road. While pole work areas would encroach on access road Drd418660-2, they would not encompass the entire width of the road, and adequate space would be available for recreationists to safely pass work areas. Therefore, reduced access and visitation would not be adverse under NEPA, and under CEQA would be less than significant (Class III).

C449

While the existing alignment of C449 spans the PCT, existing poles are not located on the trail alignment. Therefore, because pole removal work areas would not encroach on the trail alignment, access would be maintained during construction, and reduced visitation is not anticipated. Existing poles would be removed and replaced near the Boulder Oaks Campground

(a new pole would be installed in the interior of the northern campground) but pole work areas would not encroach on existing campground sites, and activities would be of relatively short-duration at each individual pole location. In addition, pole work areas would not encroach upon campground access roads and would not result in the closure of individual sites or the entirety of the campground. Therefore, reduced access and visitation at the Boulder Oaks Campground resulting from construction activities would not be adverse under NEPA, and under CEQA would be less than significant (Class III).

Along Morena Stokes Road, the C449 alignment passes through the northeastern extent of Lake Morena County Park, and new replacement poles would generally be installed within the road ROW. Pole removal and replacement activities could encroach upon the roadway and temporary hinder access to the regional park campground located along the north shore of Lake Morena. However, pole work area encroachment on Morena Stokes Road would be limited, removal and replacement of poles would be a relatively brief process, and implementation of traffic control measures per APM TRANS-01 and APM TRANS-05 would enable access to be maintained during construction.

The Morena Stokes Road North Trail is aligned along Morena Stokes Road, and the Corral Canyon OHV Area is accessible via Morena Stokes Road. Limited encroachment on the road is anticipated during pole removal/replacement and may require the temporary closure of travel lanes. Implementation of a traffic control plan per APM TRANS-01 and APM TRANS-05, as well as a construction notification plan (MM LU-1) would mitigate adverse access restrictions impacts under NEPA. Under CEQA, significant impacts would be reduced to less than significant with mitigation (Class II).

Lastly, existing poles in the C449 alignment located near Buckman Springs Road would be removed near the Buckman Springs Road Pathway. Pole locations would be accessed via existing access roads or, where no ground access is available, by helicopter and would not encroach on the trail alignment. Therefore, because pole removal activities would not encroach on the Buckman Springs Road Pathway alignment, reduced access and visitation are not anticipated to occur.

Impact REC-2: Preclude recreational activities due to presence of a project component

Operations and maintenance of the proposed power line replacement projects along with other SDG&E electric facilities proposed to be covered under the MSUP would require routine and periodic equipment testing, pole brushing, and other related ongoing maintenance tasks, similar to those currently conducted by SDG&E. These activities would not increase in duration or intensity with implementation of SDG&E's proposed project in such a way as to preclude access or visitation to wilderness and recreation areas managed by the Forest Service

or those managed by other state and local agencies located in the vicinity of the CNF. Therefore, under NEPA, this impact would not be adverse, and under CEQA, this impact would be less than significant (Class III).

Impact REC-3: Result in increased, unauthorized access to specially designated or restricted areas

While SDG&E's proposed project would remove approximately 11.2 miles of exclusive use access roads within and outside the CNF and no new access roads are being proposed, project approval would allow for the continued use of approximately 45 miles of exclusive use access roads required to construct the proposed power line replacement projects and operate and maintain SDG&E electric facilities within and outside the CNF. Where existing exclusive use access roads need repair, a grader would be used to blade and smooth access roads, and materials may be imported to improve access as required.

In instances where SDG&E's electric facilities proposed to be covered under the MSUP are located near specially designated or restricted areas, for the purpose of resource protection, the continued presence of these access roads along with repair/improvements to existing access roads may result in increased, unauthorized access. Unauthorized access is often characterized by OHV recreationists who use new and/or improved roadways to access restricted areas. For example, existing access roads off of East Grade Road, Skye Valley Road, and Boulder Creek Road to pole locations along the TL682, C157, and C79 alignments may require some preparation to facilitate pole removal and replacement activities. If not properly managed, maintained access roads could result in increased unauthorized access to the Barker Valley IRA (TL682), the Pine Creek Wilderness and Hauser Wilderness (C157), and the King Creek RNA and Cuyamaca Peak (C79). While access to some of the existing exclusive use access roads are managed by a locked gate such as the TL682 access road off East Grade Road (i.e., Henshaw Road) and C79 access off Boulder Creek Road, access to other exclusive access roads are not currently managed by locked gate. Although the presence of gates should presumably inhibit unauthorized access, gates must be maintained and consistently locked by SDG&E personnel to be effective in deterring unauthorized use. Based on comments received during public scoping for the project, SDG&E-maintained gates in the CNF are sometimes left unlocked by personnel, and OHV recreationalists occasionally trespass onto utility access roads. Unauthorized public use of utility access roads can result in damage to sensitive natural resources (biological, cultural, and hydrological resources) and can affect the visual integrity. Under NEPA, this impact would be considered adverse, and under CEQA, this impact would be considered significant. Therefore, MM REC-1 and MM REC-2 are provided. Implementation of MM REC-1 and MM REC-2 would ensure that specially designated or restricted areas are protected from unauthorized access

and that existing access restrictions are maintained. Therefore, under NEPA, this impact would be mitigated, and under CEQA, impacts would be less than significant with mitigation (Class II).

MM REC-1 Installation of Gates and Appropriate Signage. To deter unauthorized access to specially designated or restricted areas via ~~improved power line replacement project access roads~~SDG&E access roads authorized by the MSUP, the project applicant shall ~~install new Forest Service-approved gates (or other barriers, such as pipe rails, where appropriate) at the convergence of the improved access road and the primary roadway of access~~submit a plan and schedule for gate (or other barriers, such as pipe rails, where appropriate) installation to the Forest Service for approval. Gates will meet Forest Service engineering standards, and designs will be approved by the Forest Service prior to installation. In addition, appropriate deterrence signage approved by the Forest Service shall be installed on gates to SDG&E access roads. Maintenance of gates and signage shall be the responsibility of the project applicant.

MM REC-2 Enforcement of Proper Gate Protocol. During construction and ongoing operations and maintenance activities, gates shall be locked immediately after ingress and egress has occurred. Should SDG&E or Forest Service staff observe increased disturbance along the right-of-way resulting from unauthorized access due to unlocked gates, SDG&E will be required to restore these areas and review gate protocols with personnel. Alternatively, the Forest Service may require the project applicant to cost-recover restoration activities (i.e., trail maintenance and restoration) associated with the unauthorized access and damage to resources, should those restoration activities be carried out by the Forest Service.

D.13.4 Forest Service Proposed Actions

D.13.4.1 TL626 Alternative Routes

Environmental Setting/Affected Environment

Options 1 through 4 for the Forest Service proposed actions for TL626 would relocate a segment of the line toward the east of the existing alignment. The farthest relocation would take place approximately 2 miles to the east of the existing alignment. As this area is in the same geographic region as SDG&E's proposed project, the environmental setting for Options 1 through 4 would be similar to that identified in Sections D.13.1 and D.13.2. Recreational resources located closest to Options 1 through 4 consist of Cedar Creek Road (an OHV green sticker route) and the Three Sisters Waterfall.

Option 5, which would relocate a portion of TL626 around the Inaja Picnic area, is located in the same geographic region as SDG&E's proposed project, and therefore, the environmental setting would be similar to that identified in Sections D.13.1 and D.13.2.

Options 1 and 2 SDG&E Proposed Overhead Alignments Through/Around Inaja and Cosmit Reservation Lands

Environmental Effects

Impacts REC-1 and REC-2: Options 1 and 2 would reroute a segment of TL626 to the east along a new undisturbed ROW approximately 5.5 miles (Option 1) or 5.6 miles (Option 2) in length (Figure B-4a). All other project components would be the same. No campgrounds, trails, or other established recreational facilities are located in the vicinity of Options 1 and 2; therefore, implementation of either of these options would not substantially alter the REC-1 and REC-2 impact conclusions identified in Section D.13.3.3. Similar to SDG&E's proposed project, implementation of APM TRANS-01, APM TRANS-04, and APM TRANS-05 would reduce the potential temporary effect on vehicular movement on roadways used during construction. Therefore, under NEPA, impacts would not be adverse, and under CEQA, impacts would be less than significant (Class III).

Impact REC-3: While Options 1 and 2 would avoid identified REC-3 impacts associated with TL626, as discussed in Section D.13.3.3, by removing existing access along TL626, they would also require construction of approximately 3.9 miles of new access roads to reach new pole locations, and therefore would increase impacts associated with unauthorized access (Impact REC-3) as discussed in Section D.13.3.3 for SDG&E's proposed project. Similar to SDG&E's proposed project, implementation of MM REC-1 and MM REC-2 would ensure that specially designated or restricted areas are protected from unauthorized access and that existing access restrictions are maintained. Therefore, under NEPA, this adverse impact would be mitigated, and under CEQA, significant impacts would be reduced to less than significant with mitigation (Class II).

Options 3 and 4 Partial Underground/Overhead Relocation in/along Boulder Creek Road

Environmental Effects

Impacts REC-1 and REC-2: Option 3 would consist of placing a segment of TL626 underground in Boulder Creek Road and overland as shown in Figure B-4b. Option 4 would place the alignment overhead along Boulder Creek Road and overland as shown in Figure B-4a. All other project components would remain the same. No campgrounds, trails, or other established recreational facilities are located in the vicinity of Options 3 and 4; therefore,

implementation of either of these options would not substantially alter the REC-1 and REC-2 impact conclusions identified in Section D.13.3.3. Similar to SDG&E's proposed project, implementation of APM TRANS-01, APM TRANS-04, and APM TRANS-05 would reduce the potential temporary effect on vehicular movement on roadways used during construction. Therefore, under NEPA impacts would not be adverse, and under CEQA, impacts would be less than significant (Class III).

Impact REC-3: While Options 3 and 4 would be primarily located along a public roadway, approximately 1 mile of new overhead ROW would be required between pole Z213680 and the northern terminus of the underground alignment on the periphery of the Pine Hills community (see Figure B-4b). Construction of a new access road along the new overhead ROW would likely be required to facilitate maintenance of this segment of new overhead line. MM REC-1 and MM REC-2 would be implemented to ensure that private lands and Forest Service lands in the area are protected from unauthorized access. Therefore, under NEPA, this adverse impact would be mitigated, and under CEQA, significant impacts would be reduced to less than significant with mitigation (Class II).

Option 5 Reroute and Undergrounding around Inaja Picnic Area

Environmental Effects

Impacts REC-1 and 2: Option 5 would reroute a less than 0.5-mile segment in close proximity to the existing TL626 alignment (Figure B-4c). All other project components would remain the same. Construction and operational impacts related to recreation would essentially be the same for the relocation of TL626 under Option 5 as described in Section D.13.3.3 for SDG&E's proposed project. However, pole replacement and undergrounding activities would occur closer to the Inaja National Recreation Trail and Inaja Memorial Picnic area under this option. Similar to SDG&E's proposed project, implementation of APM TRANS-01, APM TRANS-04, and APM TRANS-05 would reduce the potential temporary effect on vehicular movement on roadways used during construction activities in the vicinity of the Inaja picnic area. As Option 5 would be closer to the Inaja National Recreation Trail and Inaja Memorial Picnic area, implementation of MM LU-1 would reduce potential adverse and significant conflicts between trail-based recreationists and construction activities; therefore, impacts with regard to trail access would be mitigated under NEPA and under CEQA would be less than significant with mitigation (Class II).

Impact REC-3: Impact REC-3 would reflect impact findings similar to those discussed in Section D.13.3.3 for SDG&E's proposed project. Similar to SDG&E's proposed project, implementation of MM REC-1 and MM REC-2 would ensure that specially designated or restricted areas are protected from unauthorized access and that existing access restrictions

are maintained (Impact REC-3). Therefore, under NEPA, this adverse impact would be mitigated, and under CEQA, significant impacts would be reduced to less than significant with mitigation (Class II).

D.13.4.2 C157 Partial Relocation to Avoid Designated Wilderness

Option 1 SDG&E Proposed Alignment between Two Wilderness Areas

Option 2 City of San Diego Modified Alignment

Environmental Setting/Affected Environment

Sections D.13.1 and D.13.2 describe the existing recreation setting associated with SDG&E's proposed project. The Forest Service proposed action for C157 would be in the same geographic region as SDG&E's proposed project; therefore, the recreation setting would be the same as that identified in Sections D.13.1 and D.13.2. A portion of C157 traverses lands under the jurisdiction of the City of San Diego near Barrett Reservoir, as shown in Figure B-5a.

Environmental Effects

Impacts REC-1 and REC-2: Options 1 and 2 would reroute an approximately 2-mile segment of C157 to the south of the existing alignment approximately 0.25 mile along a new undisturbed ROW (Figure B-5a). All other project components would remain the same. As Options 1 and 2 occur essentially within the same area as SDG&E's proposed project, there would be no change to baseline condition associated with recreational uses; therefore, Impacts REC-1 and REC-2 would reflect the same impact findings as previously discussed in Section D.13.3.3 for SDG&E's proposed project. As discussed for SDG&E's proposed project, Impacts REC-1 and REC-2 would not be adverse under NEPA and under CEQA would be less than significant (Class III).

Impact REC-3: As Options 1 and 2 are located along public and private roadways and no new access would be required, no impacts resulting from unauthorized access (Impact REC-3) would occur.

D.13.4.3 C440 Mount Laguna Underground Alternative

Environmental Setting/Affected Environment

Sections D.13.1 and D.13.2 describe the existing recreation setting associated with C440. This alternative would consist of undergrounding an additional approximately 14.3 miles of C440 proposed for replacement within existing roadways in the Laguna Mountain Recreation Area.

As this area is in the same geographic region as SDG&E's proposed project, the recreation setting would be similar to that identified in Sections D.13.1 and D.13.2.

Environmental Effects

Impacts REC-1 and REC-2: Besides undergrounding C440 as proposed by the project, this alternative would consist of undergrounding an additional 14.3 miles of C440 within existing paved roadways in the Laguna Mountain Recreation Area. Construction activities would temporarily reduce access and visitation to recreation areas within the C440 study area as described in Section D.13.3.3. However, REC-1 and REC-2 impacts would be greater than those identified in Section D.13.3.3 for SDG&E's proposed project due to open trenching required for the undergrounding which would be more disruptive to access and visitation within the Laguna Mountain Recreation Area. As with SDG&E's proposed project, implementation of APM TRANS-01, APM TRANS-04, and APM TRANS-05, and MM LU-1 would reduce short-term and temporary potential adverse and significant conflicts between recreationists and construction activities within the Laguna Mountain Recreation Area. Therefore, this impact would be mitigated under NEPA and under CEQA would be less than significant with mitigation (Class II).

Impact REC-3: This alternative is located along public roadways, and no new access would be required; therefore, no impacts resulting from unauthorized access (Impact REC-3) would occur.

D.13.5 BIA Proposed Action

Environmental Setting/Affected Environment

Sections D.13.1 and D.13.2 describe the existing recreation setting associated with TL682. The BIA proposed action for TL682 would relocate poles and underground approximately 1,500 feet on Tribal lands. As this area is in the same geographic region as SDG&E's proposed project, the recreation setting would be similar to that identified in Sections D.13.1 and D.13.2.

Environmental Effects

Impacts REC-1 and REC-2: This alternative would consist of placing approximately 1,500 feet the TL682 underground and relocating poles on Tribal lands. All other project components would remain the same. Impacts REC-1 and REC-2 would be slightly greater than those identified in Section D.13.3.3 for SDG&E's proposed project due to open trenching required for the undergrounding which would temporarily reduce access and visitation to the La Jolla Indian Campground. However, because the modifications proposed to TL682 under this alternative would occur primarily along the existing ROW for TL682, there would not be a change to the baseline condition including the number of affected recreation facilities.

Therefore, as with SDG&E's proposed project, implementation of APM TRANS-01, APM TRANS-04, and APM TRANS-05, and MM LU-1 would reduce potential adverse and significant conflicts between recreationists and construction activities near the La Jolla Indian Campground. Therefore, this impact would be mitigated under NEPA and under CEQA would be less than significant with mitigation (Class II).

Impact REC-3: This alternative is located along public and private roadways, and no new access would be required; therefore, no impacts resulting from unauthorized access (Impact REC-3) would occur.

D.13.6 Additional Alternatives

D.13.6.1 Partial Removal of Overland Access Roads

Environmental Setting/Affected Environment

This alternative would be in the same study area as SDG&E's proposed project; therefore, the recreation setting would be the same as that identified in Sections D.13.1 and D.13.2.

Environmental Effects

Impacts REC-1 and REC-2: This alternative would remove up to ~~10~~11.5 miles of exclusive use access roads that are greater than 25% grade, particularly along TL626 (Boulder Creek) and TL625 (Barber Mountain/Carveacre). Recreation impacts would reflect similar findings as described in Impacts REC-1 and REC-2 discussed in Section D.13.3.3 for SDG&E's proposed project. Therefore, as with SDG&E's proposed project, impacts to access or visitation of recreation areas (Impact REC-1) and precluding access to recreation activity during operations and maintenance (Impact REC-2) for this alternative would not be adverse under NEPA. Under CEQA, the impacts would be less than significant (Class III).

Impact REC-3: While removal of certain segments of existing access roads would reduce identified REC-3 impacts as discussed in Section D.13.3.3, removal of certain segments of existing access roads would not change the conclusions discussed in Section D.13.3.3 regarding unauthorized use of access roads used for SDG&E's proposed project. As with SDG&E's proposed project, implementation of MM REC-1 and MM REC-2 would ensure that specially designated or restricted areas are protected from unauthorized access and that existing access restrictions are maintained. Therefore, under NEPA, this adverse impact would be mitigated, and under CEQA, significant impacts would be reduced to less than significant with mitigation (Class II).

D.13.6.2 Removal of TL626 from Service

Environmental Setting/Affected Environment

This alternative would remove TL626 from service and replace it with system upgrades; either with TL6931 upgrades or a TL625 loop-in as described below. In order to serve existing customers, segments of TL626 would also be converted from 69 kV to 12 kV The setting associated with the upgrades is described as follows:

a. Upgrade the existing 69 kV TL6931 from Crestwood Substation to the Boulevard Substation. The setting associated with this component is largely described in SDG&E's TL6931 Fire Hardening Project Proponent's Environmental Assessment (PEA) (SDG&E 2012). As described in SDG&E's PEA, the project site is not adjacent to or within the immediate vicinity of any recreational areas. The nearest regional recreation areas to the project site are located 2 to 6 miles to the east including the Carrizo Gorge Wilderness (2 miles), Anza–Borrego State Park (4 miles), and Jacumba Community Park (6 miles).
b. Loop-in TL625 into the Suncrest Substation (see Figure C-2). The setting associated with the new 3-mile TL625 loop-in is largely located within the CNF approximately 100 feet from the Sunrise Powerlink ROW between Japatul Road and Suncrest Substation. This area has been described in the Sunrise Powerlink Project Final EIR/EIS. As described in the Sunrise Powerlink EIR/EIS, the majority of the terrain associated along the proposed 3-mile TL625 loop-in consists of rugged and remote terrain. There are no designated campgrounds or recreational resources that would be spanned by or located within the immediate vicinity of the 3-mile loop-in.
c. Convert portions of TL626 from 69 kV to 12 kV within the same study area as SDG&E's proposed project. Therefore, the environmental setting would be the same as that identified in Sections D.13.1 and D.13.2.

Environmental Effects

Under this alternative, a 6-mile portion of TL6931 would be reconstructed, or a new 3-mile 69 kV loop-in would be developed along the Sunrise Powerlink, and segments of TL626 would be converted from 69 kV to 12 kV.

The Reconstruction of TL6931

Impacts REC-1 and REC-2: Reconstruction of TL6931 would consist of construction as well as operations and maintenance activities similar to that described for the project. Because no campgrounds or recreational resources are located within the immediate vicinity of TL6931, there would be no impacts to access or visitation of recreation areas (Impacts REC-1 and REC-

2); therefore, impacts would not be adverse under NEPA, and under CEQA the impacts would be less than significant (Class III).

Impact REC-3: Removal of TL626 and associated access roads would avoid identified REC-3 impacts associated with TL626, as discussed in Section D.13.3.3. This alternative is located along public and private roadways, and no new access would be required; therefore, no impacts resulting from unauthorized access (Impact REC-3) would occur.

Development of the New 3-mile Loop-in of TL625

Impacts REC-1 and REC-2: Development of the new TL625 loop-in would consist of similar construction as well as operations and maintenance activities as that described for the project in areas of rugged terrain. As no campgrounds or recreational resources are located within the immediate vicinity of the TL625 loop-in, there would be no impacts to access or visitation of recreation areas (Impacts REC-1 and REC-2); therefore, impacts would not be adverse under NEPA, and under CEQA the impacts would be less than significant (Class III).

Impact REC-3: Removal of TL626 and associated access roads would avoid identified REC-3 impacts associated with TL626, as discussed in Section D.13.3.3. Due to the rugged terrain, helicopters would be used to construct as well as operate and maintain the proposed TL625 loop-in. Because no new access would be required, no impacts resulting from unauthorized access (Impact REC-3) would occur.

Convert Segments of TL626 from 69 kV to 12 kV

Impacts REC-1 and REC-2: Conversion of segments of TL626 to 12 kV would consist of similar construction as well as operations and maintenance activities as that described for the project. Therefore, Impacts REC-1 through REC-2 would reflect similar impact findings previously discussed in Section D.10.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, implementation of APM TRANS-01, APM TRANS-04, and APM TRANS-05 would reduce the potential temporary effect on vehicular movement on roadways used during construction. Therefore, under NEPA, impacts would not be adverse, and under CEQA, impacts would be less than significant (Class III).

Impact REC-3: While Impact REC-3 would reflect similar impact findings previously discussed in Section D.13.3.3 for SDG&E's proposed project, this impact would be reduced due to the removal of the remaining portion of TL626 and associated overland access. As with SDG&E's proposed project, implementation of MM REC-1 and MM REC-2 would be required to ensure that specially designated or restricted areas are protected from unauthorized access and that existing access restrictions are maintained. Therefore, under NEPA, this adverse impact would

be mitigated, and under CEQA, significant impacts would be reduced to less than significant with mitigation (Class II).

D.13.7 No Action Alternative

Environmental Effects

Impacts REC-1 through REC-3: Under the No Action Alternative, the MSUP would not be issued and SDG&E would be required to remove the existing electric lines and facilities on CNF-managed lands as well as develop additional power line upgrades elsewhere as described in Section C.1.4 of this EIR/EIS. While none of the facilities associated with SDG&E's proposed project would be constructed and removal of the electric lines and associated access roads within the CNF would avoid identified REC-3 impacts, as discussed in Section D.13.3.3, the development of additional power lines in conformance with California Independent System Operator (CAISO_ requirements and/or alternative means of delivering electrical service elsewhere would result in similar construction impacts (as REC-1 and REC-2 impacts), as described in Section D.13.3.

D.13.8 No Project Alternative

Environmental Effects

Impacts REC-1 through REC-3: Under the No Project Alternative, the proposed power line replacement projects would not be built, and the existing SDG&E electric facilities would remain. Therefore, none of the construction impacts described in Section D.13.3 would occur. Operation and maintenance of SDG&E electrical facilities would continue and include routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks and would be based on the requirements of the existing permits. These activities would not increase in duration, intensity, or frequency over existing conditions, and therefore, no impacts over existing conditions to recreation areas, facilities, and opportunities located near the various components would occur. The existing use of SDG&E's access roads for unauthorized access (Impact REC-3) would continue.

D.13.9 Mitigation Monitoring, Compliance, and Reporting

Table D.13-11 presents the mitigation monitoring, compliance, and reporting program for recreation for the power line replacement projects and alternatives.

Table D.13-11
Mitigation Monitoring, Compliance, and Reporting – Recreation

Mitigation Measure	**MM REC-1: Installation of Gates and Appropriate Signage.** To deter unauthorized access to specially designated or restricted areas via ~~improved power line replacement project access roads~~SDG&E access roads authorized by the MSUP, the project applicant shall ~~install new Forest Service-approved gates (or other barriers, such as pipe rails, where appropriate) at the convergence of the improved access road and the primary roadway of access~~submit a plan and schedule for gate (or other barriers, such as pipe rails, where appropriate) installation to the Forest Service for approval. Gates will meet Forest Service engineering standards, and designs will be approved by the Forest Service prior to installation. In addition, appropriate deterrence signage approved by the Forest Service shall be installed on gates to SDG&E access roads. Maintenance of gates and signage shall be the responsibility of the project applicant.
Location	Where determined necessary by Forest Service
Compliance Documentation[(a)] and Consultation	a. SDG&E to install gates and appropriate signage as identified by the Forest Service to deter unauthorized access (~~locations to be reasonable related to potential unauthorized access points~~ along ~~improved power line replacement access roads~~SDG&E access roads authorized by the MSUP). b. CPUC/Forest Service Monitor: Line item in compliance monitoring report
Timing	a. Prior to initiation of construction activities. b. Maintained during construction, operations and maintenance.
Responsible Agency	Forest Service
Mitigation Measure	**MM REC-2: Enforcement of Proper Gate Protocol.** During construction and ongoing operations and maintenance activities, gates shall be locked immediately after ingress and egress has occurred. Should SDG&E or Forest Service staff observe increased disturbance along the right-of-way resulting from unauthorized access due to unlocked gates, SDG&E will be required to restore these areas and review gate protocols with personnel. Alternatively, the Forest Service may require the project applicant to cost-recover restoration activities (i.e., trail maintenance and restoration) associated with the unauthorized access and damage to resources, should those restoration activities be carried out by the Forest Service.
Location	Along all exclusive use access roads with existing and new gates on Forest Service managed-lands.
Compliance Documentation[(a)] and Consultation	a. SDG&E will provide access and gate monitoring throughout construction, maintenance, and operations. SDG&E will notify the Forest Service of roadway damage or off-site disturbance suspected to be caused by unauthorized access and will provide the Forest Service with proposed restoration activities for damaged areas. The Forest Service may request additional restoration efforts specific to the damaged/disturbed area caused by unauthorized access if determined necessary. b. SDG&E will provide documentation of all pre- and post-restoration activities (with respect to this measure) to the Forest Service upon completion. c. Prior to operations, SDG&E will provide the Forest Service with a maintenance schedule in order to ensure gates and locks are kept in good working order/condition.
Timing	a. b. and c. Throughout construction, operations, and maintenance activities
Responsible Agency	Forest Service

[a] All compliance documentation and consultation records to be available for CPUC and Forest Service staff review upon request.

D.13.10 Residual Unavoidable Effects

Under NEPA, SDG&E's proposed project and alternatives would result in adverse but mitigated impacts. Mitigation measures presented in Section D.13.9 would mitigate all impacts. Under CEQA, implementation of mitigation measures presented in Section D.13.9 would mitigate all recreation impacts to less than significant. Therefore, no residual unavoidable effects would occur for SDG&E's proposed project or alternatives.

D.13.11 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

16 U.S.C. 1241–1249. National Trails System Act of 1968, as amended.

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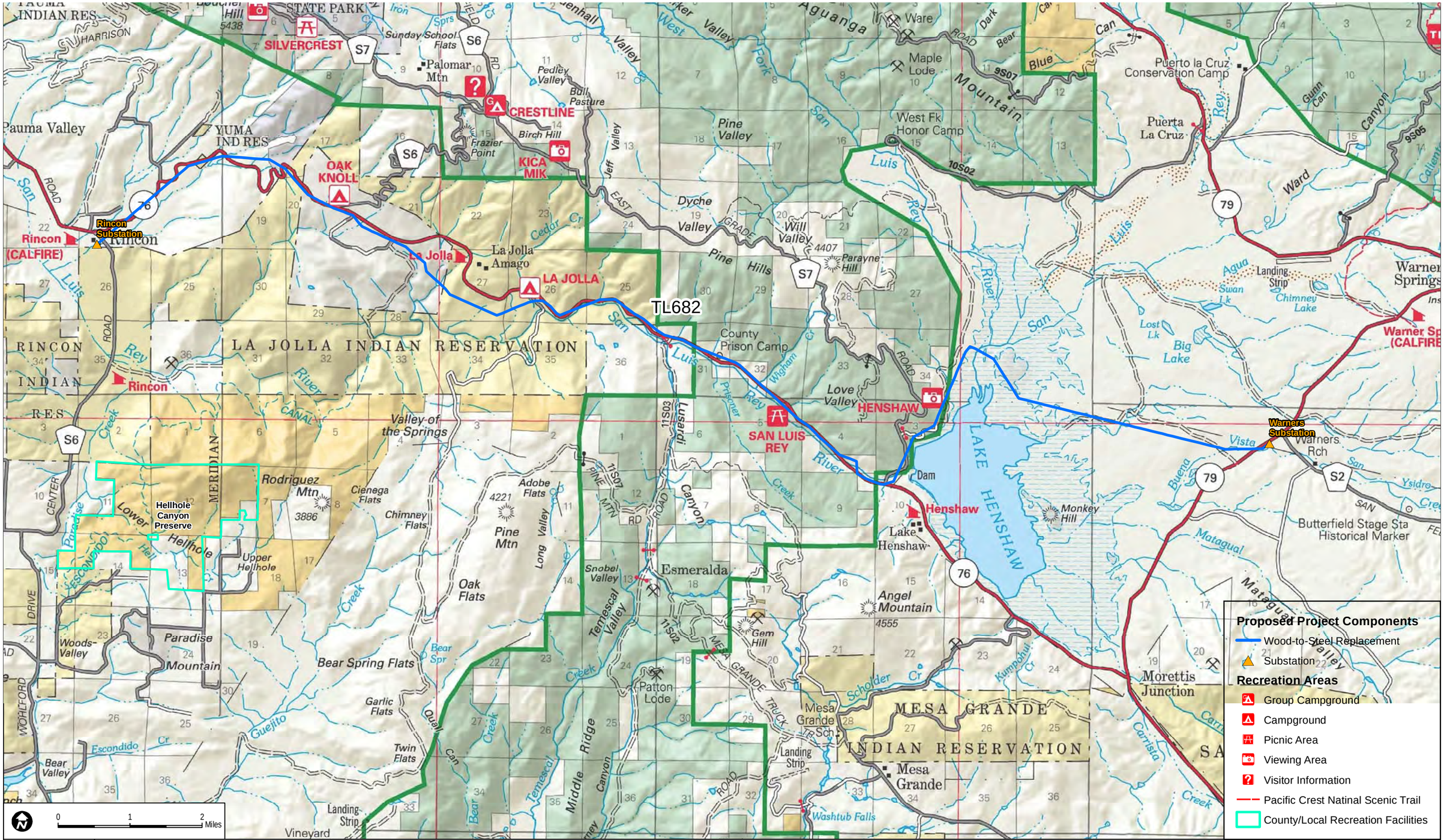

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SOURCE: SDG&E 2011; USGS 2010; SanGIS 2012; Bing Maps

FIGURE D.13-1

TL 682 - Recreation Areas and Facilities

MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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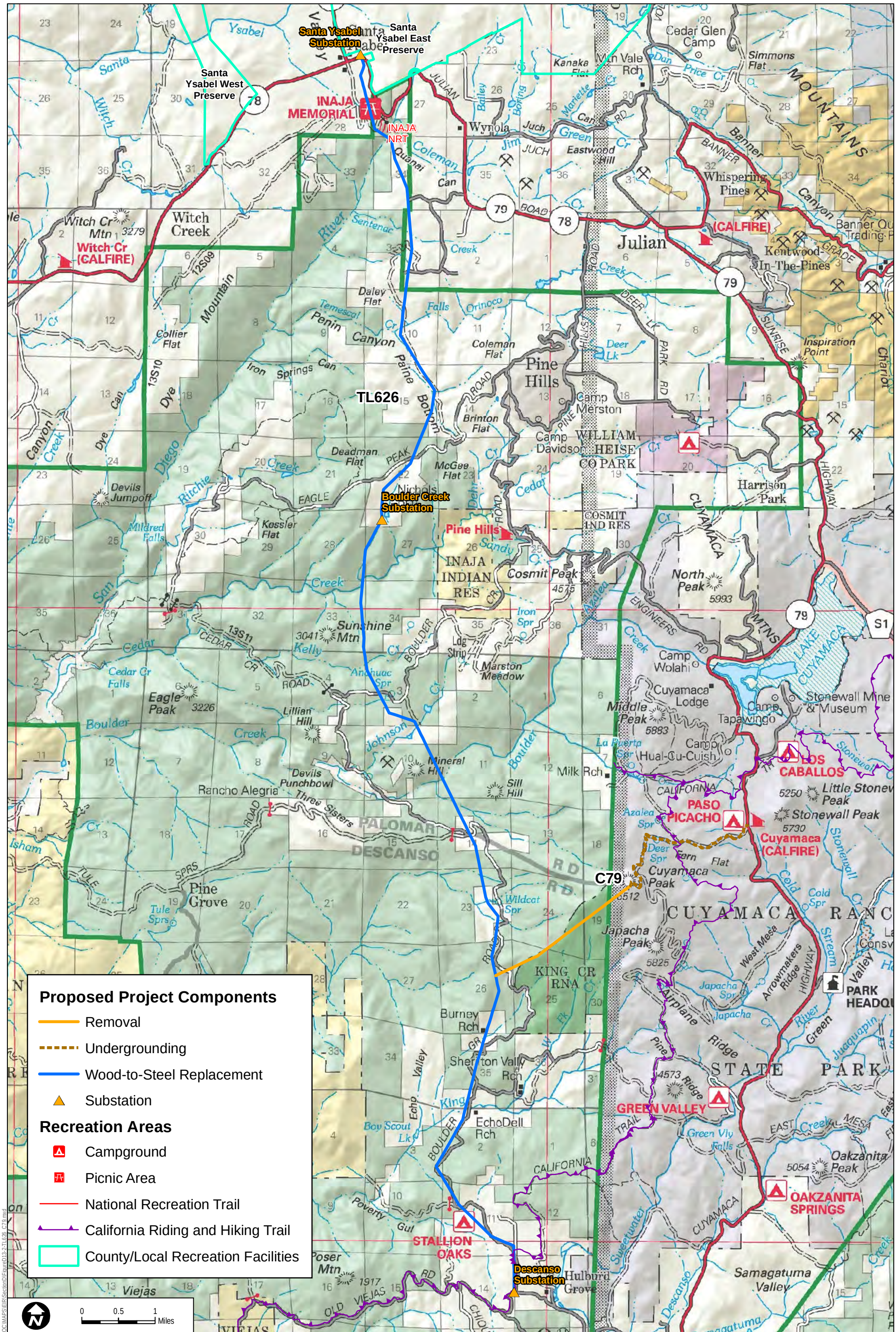

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SOURCE: SDG&E 2011; USGS 2010; SanGIS 2009; USFS 2006; Bing Maps

FIGURE D.13-2

TL626 and C79 - Recreation Areas and Facilities

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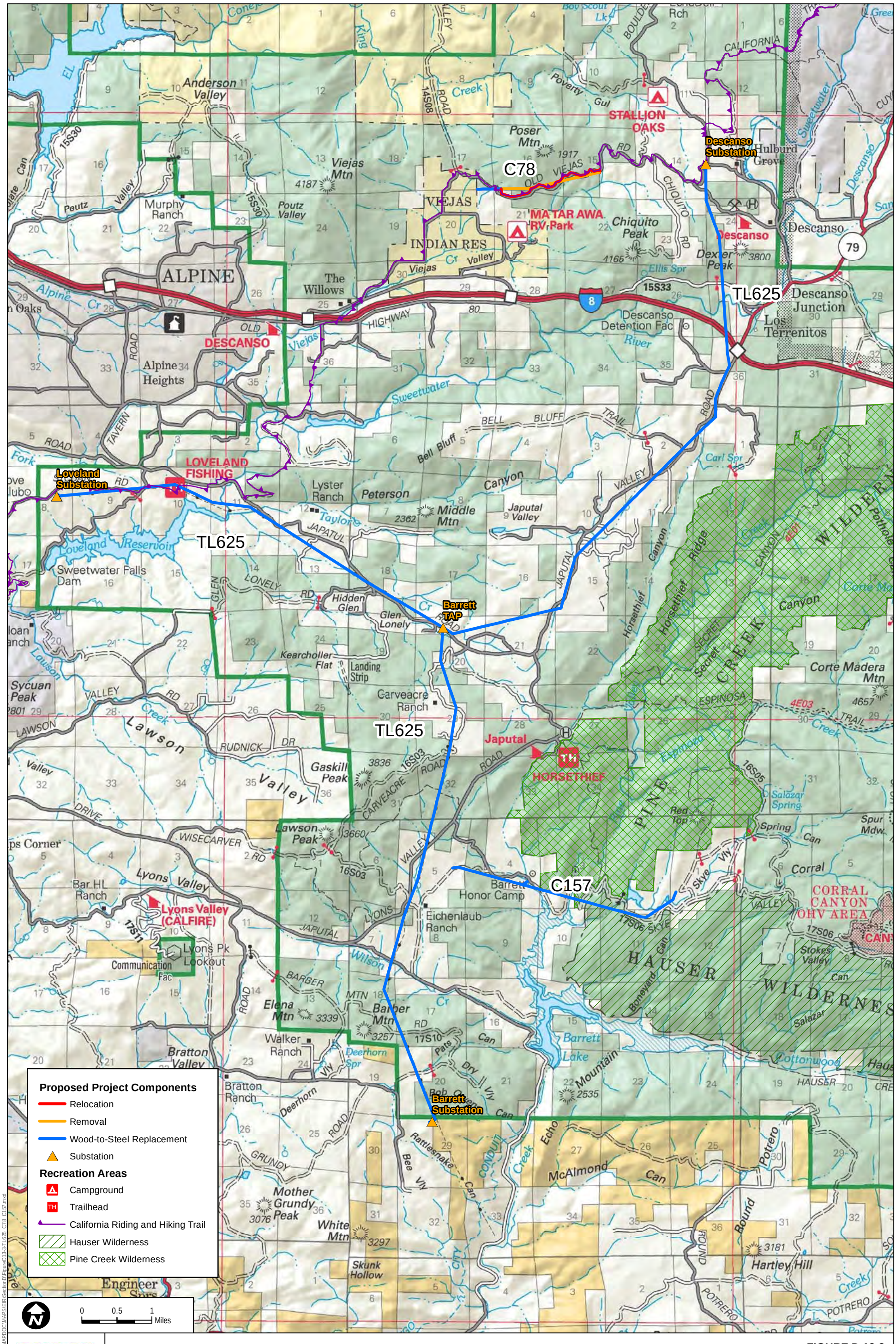

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SOURCE: SDG&E 2011; USGS; SanGIS 2009; Bing Maps

FIGURE D.13-3

TL625, C78, and C157 - Recreation Areas and Facilities

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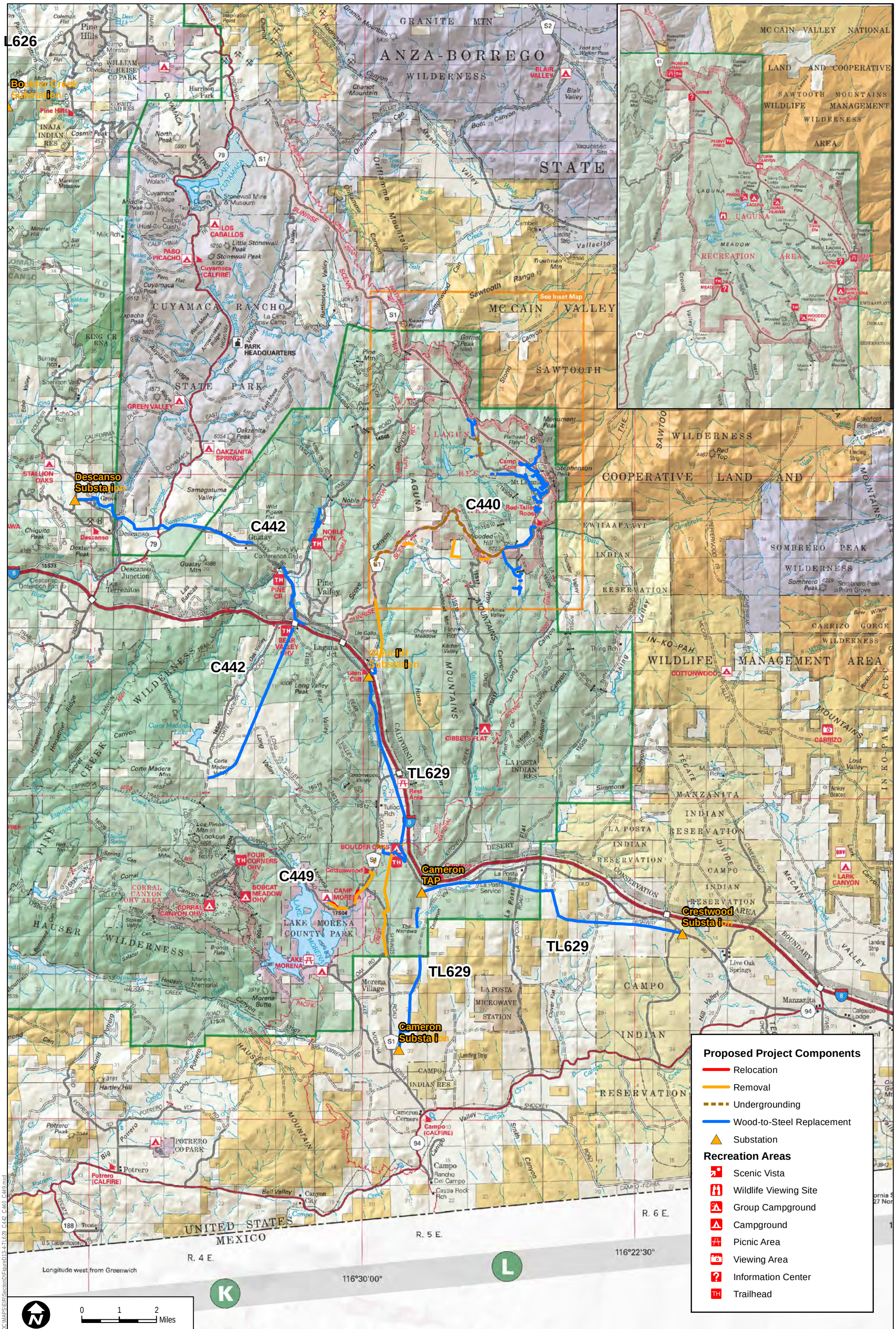

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SOURCE: SDG&E 2011; USGS; SanGIS 2009; USFS 2006; Bing Maps

FIGURE D.13-4

TL 629, C442, C440, C449 - Recreation Areas and Facilities

MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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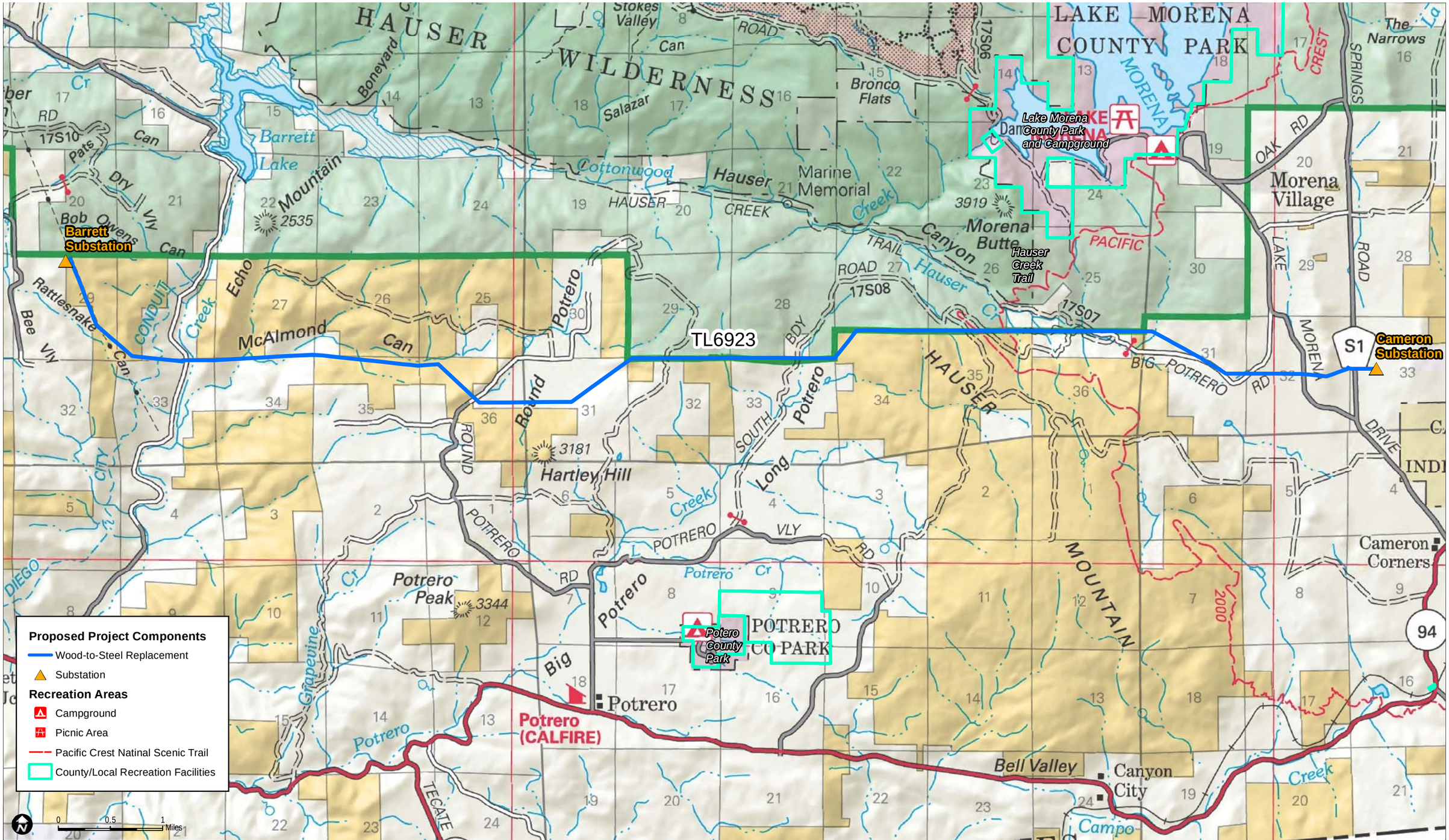

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SOURCE: SDG&E 2011; USGS; SanGIS 2012; USFS 2006; Bing Maps

FIGURE D.13-5

TL 6923 - Recreation Areas and Facilities

MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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D.14 Transportation and Traffic

This section addresses potential transportation and traffic impacts resulting from construction and operation of the proposed power line replacement projects along with the operation and maintenance activities proposed for authorization under the MSUP. Section D.14.1 provides a description of the existing environmental setting/affected environment, and the applicable regulatory framework related to transportation and traffic is introduced in Section D.14.2. An analysis of impacts/environmental effects of SDG&E's proposed project and discussion of mitigation are provided in Section D.14.3. The U.S. Forest Service (Forest Service) proposed action is described in Section D.14.4, and Section D.14.5 describes the Bureau of Indian Affairs (BIA) proposed action. Additional alternatives are discussed in Section D.14.6. Section D.14.7 discusses the No Action Alternative and Section D.14.8 describes the No Project Alternative. Section D.14.9 provides mitigation monitoring, compliance, and reporting information. Section D.14.10 addresses residual effects of the project, and Section D.14.11 lists the references cited in this section.

Aside from impacts to transportation and traffic (circulation, patterns, congestion, and traffic hazards) analyzed in this section, a number of additional transportation/access use-related topics are addressed elsewhere in this EIR/EIS. Erosion and water quality resource issues associated with SDG&E's exclusive use access roads to the project are described in Section D.9, Hydrology and Water Quality, and unauthorized access issues are addressed in Section D.13, Recreation. Potential hazards to aircraft traffic from SDG&E's proposed project are addressed in Section D.7, Public Health and Safety.

D.14.1 Environmental Setting/Affected Environment

The environmental setting includes the roadways, railways, and transit system (bus and bicycle) facilities that would be directly or indirectly affected by construction and operation of SDG&E's proposed project. The environmental setting for airports is provided in Section D.7, Public Health and Safety, of this EIR/EIS.

Methodology and Assumptions

Data for the transportation network were collected and analyzed from the following sources: highway maps; route alignment maps; and other maps from various reports and websites of the affected federal, state, and local agencies. Data regarding SDG&E's exclusive use access roads and traffic volume data were obtained from SDG&E's Plan of Development (SDG&E 2013a). Lane information was obtained from aerial photographs, local government agencies, public maps, and field reconnaissance.

Roadways have different classifications depending on their purpose and level of traffic:

- *Highway*: A main public road, especially one connecting towns and cities
- *Freeway*: A divided arterial highway with full control of access and with grade separation at intersections
- *State Route*: A roadway designated by state law as part of the Freeway and Expressway System of the California State Highway Code
- *Prime Arterial*: A main highway primarily for through traffic usually on a continuous route
- *Major Collector*: A four-lane facility, with a design speed of 25–35 miles per hour (mph) on a typical right-of-way (ROW) of 84 feet without bicycle lanes, or 96 feet with two 6-footwide bicycle lanes
- *Collector*: Streets that collect and distribute traffic to and from major highways and local streets. Collector streets also serve secondary traffic generators such as shopping and business centers, schools, parks, and high density or large-scale residential areas.

Typically, large cities, counties, and the California Department of Transportation (Caltrans) will collect traffic data on these larger roadways. Local and minor roads frequently have no data available because the level of traffic does not warrant data collection.

D.14.1.1 General Overview

As shown in Figures B-1 through B-7, the MSUP study area, including all of the proposed power line replacement projects, are located in close proximity to regional and local transportation facilities, including State Route 74 (SR-74) in southwestern Orange County, Interstate 8 (I-8) near Descanso, and several locations along SR-76, SR-78, and SR-79 in southeastern San Diego County. Local roads are not shown on the figures due to scale.

Roadway Network

Roads in the project area are maintained by several different government agencies. Freeways and highways are maintained by Caltrans. The majority of the local public rural roads are maintained by the County of San Diego. Some local roads are maintained by the local jurisdiction (County of San Diego 2014). A list of the existing roadways that are assumed to~~will~~ be used for access during construction and those that are spanned by the power line replacement projects, as well as number of lanes and levels of service (LOS) (for roadways that have this data), is ~~are~~ provided in Tables D.14-1 and D.14-2 below. Major public roadways are shown in Figures B-1 through B-7; several local roads are not shown on these figures due to scale. In addition to the roadways listed in the tables, there are numerous

unpaved and/or unimproved roads that would also be affected by SDG&E's proposed project; these are typically either Forest Service roads or roads that SDG&E and other utility companies use to access their ROWs (see discussion below on Forest Service Roads).

I-8, SR-76, SR-78, and SR-79 are the main regional roadways within the MSUP area. I-8 is the main east–west freeway in Imperial and San Diego counties. Within San Diego County, I-8 is a four-lane divided highway with a posted speed limit of 70 mph. SR-76 is a paved two-lane highway in north–central San Diego County providing access to Lake Henshaw. SR-78 is a paved two- to four-lane divided highway extending from Oceanside in San Diego County, continuing through Brawley in Imperial County, and terminating at the junction of I-10 at Blythe in Riverside County. SR-79 is a paved north–south two-lane highway traversing central San Diego County.

Table D.14-1
Public Access Roadways

Roadway	Classification	Number of Lanes	LOS
I-8	Expressway/Freeway	4 to 6	A–C
Old Highway 80	Arterial Rural	2	A–D
SR-94	Community Collector	2	A–C
SR-76	Minor Arterial	2	B
SR-78	Collector Urban	2	A–C
SR-79	Rural Minor Arterial	2	B
Barrett Lake Road	Collector Rural	2	A–C
Bell Bluff Truck Trail	Minor Rural	2	—
Big Potrero Truck Trail	Other Roadway[1]	1	—
Boulder Creek Road	Collector Rural	2	A–C
Buckman Springs Road	Collector Rural	2	A–C
Camino Tres Aves	Other Roadway	1	—
Cameron Truck Trail	Other Roadway	1	A–C
Campbell Ranch Road	Permanent Road Division(PRD)/ Municipal/ Private Road[2]	2	—
Carveacre Road	Minor Rural	2	—
Chris Lane	Other Roadway	1	—
Church Road	Other Roadway	1	—
Cinnamon Drive	Other Roadway	1	—
Calle El Potrero	Other Roadway	2	—
Corral Canyon Trail	Other Roadway	2	—
Corte Madera Road	Minor Rural	2	A–C
Deodar Trail	Minor Rural	2	—
Eagle Pass	Other Roadway	1	—
East Grade Road	Collector Rural	2	—
Guatay View Lane	Minor Rural	2	—
Hamilton Lane	Minor Urban	2	—

Table D.14-1
Public Access Roadways

Roadway	Classification	Number of Lanes	LOS
Hauser Creek Road	Other Roadway	1	—
Henshaw Road	Other Roadway	1	—
Hidden Glen Drive	Other Roadway	2	—
Hoskings Ranch Road	Other Roadway	1	—
Hulburd Grove Drive	Minor Rural	2	—
Illahee Drive	Other Roadway	1	—
Japatul Road	Collector Rural	2	A–C
Japatul Valley Road	Collector Rural	2	A–C
Kitchen Creek Road	Arterial Rural	2	A–C
La Jolla Truck Trail	Other Roadway	2	—
La Posta Circle	Other Roadway	1	—
La Posta Road	Collector Rural	2	A–C
La Posta Truck Trail	Other Roadway	1	—
Lake Morena Drive	Collector Rural	2	A–C
Larry Lane	Other Roadway	1	—
Lebanon Road	Minor Rural	2	—
Los Huecos Road	Minor Rural	2	—
Lyons Valley Road	Collector Rural	2	A–C
Maggio Drive	Other Roadway	1	—
Manzanita Lane	Minor Rural	2	—
Meadow Lane	Other Roadway	2	—
Merrigan Fire Road	Other Roadway	1	—
Miller Valley Road	Minor Rural	2	—
Mizpah Lane	PRD/Municipal/Private Road	1	—
Morris Ranch Road	PRD/Municipal/Private Road	1	—
Nature's Way	Other Roadway	1	—
Oak Drive	Collector Rural	2	A–C
Oak Grove Drive	Minor Rural	2	—
Old Buckman Springs Road	Minor Rural	2	—
Pine Creek Road	Minor Rural	2	A–C
Pine Valley Road	Minor Rural	2	A–C
Poomacha Road	Other Roadway	1	—
Red Hawk Ridge	Other Roadway	1	—
River Drive	Arterial Rural	2	—
Round Potrero Road	Collector Rural	2	—
Sengme Oaks Road	Other Roadway	1	—
Sequan Truck Trail	Collector Rural	2	—
Skye Valley Road	PRD/Municipal/Private Road	1	—
Spargur Road	Other Roadway	1	—
Spice Way	Other Roadway	1	—
Stagecoach Springs Road	Other Roadway	1	—

Table D.14-1
Public Access Roadways

Roadway	Classification	Number of Lanes	LOS
Sundance View Lane	Other Roadway	1	—
Sunrise Highway	Collector Rural	2	A–C
Tecate Cypress Trail	Other Roadway	1	—
Tribal Store Road	Other Roadway	1	—
Thyme Way	Other Roadway	1	—
Valley Center Road	Collector Urban	2	—
Via Arturo Road	Other Roadway	1	—
Viejas Boulevard	Other Roadway	2	—
Viejas Grade Road	Collector Rural	2	A–C
Wildwood Glen Lane	Minor Urban	2	—

Source: SDG&E 2013a.
Notes:
1 Other Roadway refers to roads that are not maintained by San Diego County, Caltrans, or private parties. As a result, no official classification or LOS information is available for these roads.
2 PRD/Municipal/Private Roads are county, municipal, and private roads that are not maintained by San Diego County. As a result, no official classification or LOS information is available for these roads.

Table D.14-2
Public Roadways Spanned by Existing and Proposed Project Alignments

69 kV Power Line	Roadway	Number of Times Spanned			Classification	Number of Lanes	LOS
		Within CNF	*Outside CNF*	*Total*			
TL625	Bell Bluff Truck Trail	0	1	1	Minor Rural	2	—
	Campbell Ranch Road	0	1	1	PRD/Municipal/ Private Road	2	—
	Carveacre Road	0	3	3	Minor Rural	2	—
	Cinnamon Drive	1	0	1	Other Roadway	1	—
	Eagle Pass	0	1	1	Other Roadway	1	—
	Hidden Glen Drive	1	0	1	Other Roadway	2	—
	I-8	1	0	1	Expressway/Freeway	4 to 6	A–C
	Illahee Drive	0	1	1	Other Roadway	1	—
	Japatul Road	1	3	4	Collector Rural	2	A–C
	Japatul Valley Road	0	6	6	Collector Rural	2	A–C
	Larry Lane	0	1	1	Other Roadway	1	—
	Lyons Valley Road	1	0	1	Collector Rural	2	A–C
	Red Hawk Ridge	0	1	1	Other Roadway	1	—
	Sequan Truck Trail	0	2	2	Collector Rural	2	—
	Spice Way	1	0	1	Other Roadway	1	—
	Thyme Way	1	0	1	Other Roadway	1	—
	Viejas Grade Road	0	1	1	Collector Rural	2	A–C
	Wildwood Glen Lane	1	0	1	Minor Urban	2	—

Table D.14-2
Public Roadways Spanned by Existing and Proposed Project Alignments

69 kV Power Line	Roadway	Number of Times Spanned			Classification	Number of Lanes	LOS
		Within CNF	*Outside CNF*	*Total*			
TL626	Boulder Creek Road	9	5	14	Collector Rural	2	A–C
	Daley Flat Road	0	1	1	Other Roadway	2	—
	Eagle Peak Road	1	0	1	Collector Rural	2	—
	Hoskings Ranch Road	0	1	1	Other Roadway	1	—
	Oak Grove Drive	0	1	1	Minor Rural	2	—
	SR-78	0	1	1	Collector Urban	2	A–C
	Sundance View Lane	0	1	1	Other Roadway	1	—
TL629	Boulder Creek Road	0	1	1	Collector Rural	2	A–C
	Buckman Springs Road	0	2	2	Collector Rural	2	A–C
	Camino Tres Aves	0	1	1	Other Roadway	1	—
	Cameron Truck Trail	2	2	4	Other Roadway	1	A–C
	Chris Lane	0	1	1	Other Roadway	1	—
	Church Road	0	1	1	Other Roadway	2	—
	Corte Madera Road	0	1	1	Minor Rural	2	A–C
	Deodar Trail	0	1	1	Minor Rural	2	—
	Guatay View Lane	0	1	1	Minor Rural	2	—
	Hamilton Lane	0	1	1	Minor Urban	2	—
TL6923	Barrett Lake Road	0	1	1	Collector Rural	2	A–C
	Big Potrero Truck Trail	1	1	2	Other Roadway	1	—
	Lake Morena Drive	0	1	1	Collector Rural	2	A–C
	Round Potrero Road	0	1	1	Collector Rural	2	—
C78	Red Oak Road	0	1	1	Other Roadway	2	—
	Via Arturo Road	3	0	3	Other Roadway	1	—
	Viejas Grade Road	3	1	4	Collector Rural	2	A–C
C79	Boulder Creek Road	1	0	1	Collector Rural	2	A–C
C157	Skye Valley Road	0	3	4	PRD/Municipal/Private Road	1	—
C440	Boiling Springs Road	4	0	4	Other Roadway	2	—
	El Centro Trail	8	0	8	Other Roadway	1	—
	El Centro Tract	1	0	1	Other Roadway	1	—
	Escondido Ravine Road	1	0	1	Other Roadway	1	—
	I-8	1	0	1	Expressway/Freeway	4 to 6	A–C
	Kitchen Creek Road	1	0	1	Arterial Rural	2	A–C
	Los Huecos Road	4	0	4	Minor Rural	2	—
	Morris Ranch Lane	0	7	7	Other Roadway	1	—
	Morris Ranch Road	1	0	1	PRD/Municipal/ Private Road	1	—
	Mount Laguna Drive	0	8	8	Minor Rural	2	—
C440	Piedra Tract	1	0	1	Other Roadway	1	—
	Old Highway 80	1	0	1	Arterial Rural	2	A–D

Table D.14-2
Public Roadways Spanned by Existing and Proposed Project Alignments

69 kV Power Line	Roadway	Number of Times Spanned			Classification	Number of Lanes	LOS
		Within CNF	*Outside CNF*	*Total*			
	Sunrise Highway	10	1	11	Collector Rural	2	A–C
C442	Pine Creek Road	11	0	11	Minor Rural	2	A–C
C449	Buckman Springs Road	3	0	3	Collector Rural	2	A–C
	Corral Canyon Trail	1	0	1	Other Roadway	2	—
	Oak Drive	2	0	2	Collector Rural	2	A–C
	Old Highway 80	1	0	1	Arterial Rural	2	A–D

Source: SDG&E 2013a

Forest Service Roads

SDG&E's proposed project would coincide with or cross numerous Forest Service roads, which are typically unpaved, and used for a wide range of activities, including operation and maintenance of CNF facilities and for the purposes of public recreation, such as off-highway vehicle use, and dispersed recreation (e.g., scenic opportunities, hiking, biking, camping. Operations and maintenance activities on Forest Service roads also includes activities supporting operating and maintaining numerous gas and electrical utility systems, water systems, and sewer systems, including maintaining the access roads to these utility systems.

As the population of neighboring communities increases, daily use of the CNF roads continues to increase. Many of the Forest Service roads within the CNF are in hazardous condition due to increased urban use, storm runoff damage, crossing needs at creeks, and insufficient funds to maintain them. To minimize risk, many CNF roads have been closed. However, as demand for road use increases, use is concentrated on the remaining network. There are hundreds of miles of undesignated roads within the CNF that require some form of active management (Forest Service 2005). The following table indicates the uses considered suitable based on the applicable CNF land use zone. Though several activities are described in the table as being permitted in designated areas only, all motorized uses are restricted to designated roads, trails and limited open areas and may be restricted or expanded further in order to achieve the desired condition for the land use zones. Vehicular traffic traveling cross-country or on non-designated routes is not allowed in any zone (Forest Service 2005). A map of the CNF LMP land use zones is available in Appendix C of the LMP.

Table D.14-3
Forest Service Policies Regarding Public Motorized and Non-Motorized Use of Public Lands

Land Use Zone:		DAI	BC	BCMUR	BCNM	CB	W
Activity or Use		*Developed Areas Interface*	*Back Country*	*Back Country Motorized Use Restricted*	*Back Country Non-motorized*	*Critical Biological*	*Wilderness*
Project Segments Crossing Land Use	TL682	X	X		X	X	
	TL625	X	X	X			
	TL626	X	X	X	X		
	TL629	X	X	X			
	TL6923			X			
	C78	X	X				
	C79		X		X	X	
	C157		X	X			X
	C440	X	X	X			
C442		X			X		
C449		X	X	X	X		
Public Motorized Use on Forest System Roads		Suitable	Suitable	Not Suitable	Not Suitable	Not Suitable	Not Suitable
Authorized Motorized Use		Suitable	Suitable	Suitable	*By Exception	*By Exception	*By Exception
Off-Highway Vehicle Use on Forest System Roads and Trails		Designated Roads and Trails	Designated Roads and Trails	Not Suitable	Not Suitable	Not Suitable	Not Suitable
Public Motorized Use off Forest System Roads and Trails		Suitable in Designated Open Areas	Suitable in Designated Open Areas	Not Suitable	Not Suitable	Not Suitable	Not Suitable
Mountain Bikes Forest System Roads and Trails		Unless Otherwise Restricted	Unless Otherwise Restricted	Unless Otherwise Restricted	Unless Otherwise Restricted	Unless Otherwise Restricted	Not Suitable

Source: Forest Service 2005
* By Exception = Conditions which are not generally compatible with the land use zone but may be appropriate under certain circumstances.

SDG&E Exclusive Use Roads

For decades SDG&E has regularly maintained a network of approximately 30 miles of existing access roads, spur roads, and turnarounds within the CNF to support and provide access to its existing 69-kilovolt (kV) power lines, as well as approximately 15.6 miles of access roads to support existing 12 kV distribution lines within the CNF. Based on recent updates to the Forest Service route inventory, SDG&E also used an additional 5.5 miles of road within the CNF in the past and either abandoned those roads or converted them to foot trails. SDG&E also regularly maintains a network of approximately 0.9 mile of existing access roads, spur roads, and turnarounds to support and provide access to the existing 69 kV power lines extending outside of

Forest Service-administered lands, as well as a network of approximately 0.7 mile of existing access roads, spur roads, and turnarounds to support and provide access to the existing 12 kV distribution lines extending outside of Forest Service-administered lands. The access roads provide connectivity between established local and regional roadways and electric line ROW areas. Spur roads provide access to pole locations and other equipment where facilities are located away from access road locations. Turnarounds are extended vehicle use areas that provide maneuverable space for work vehicles. These roads and turnarounds may contain paved, gravel, or unpaved earth surfaces (SDG&E 2013a).

Railway

SDG&E's proposed project does not intersect with any railway lines. The nearest rail station is the North County Transit District Sprinter Station in Escondido, approximately 15 miles west of SDG&E's proposed project (~~SanGIS 2013~~SDG&E 2012a).

Bus Facilities

San Diego Metropolitan Transit System provides limited bus service within SDG&E's proposed project area. Bus Routes 888 and 894 are spanned by existing 69 kV power lines along TL629 at points along Old Highway 80, I-8, and Buckman Springs Road in Descanso, Pine Valley, and Boulder Oaks. In addition, Bus Routes 891 and 892 provide limited service along SR-76 and SR-78, and thus along TL 682 and past the Warners Substation (SDMTS 2014).

Bicycle Facilities

According to the San Diego Association of Governments (SANDAG), there is limited designated bicycle infrastructure in the area of SDG&E's proposed project. A portion of Old Highway 80 in Pine Valley that follows the alignment of TL629 includes a striped lane for one-way bike travel. No other designated bicycle facilities exist in the vicinity of SDG&E's proposed project. However, SANDAG includes SR-76, SR-79, and SR-94 as other suggested routes where cyclists should use caution in choosing routes that are appropriate for their skill level and equipment (SANDAG 2014).

D.14.1.2 Environmental Setting for the Proposed Power Line Replacement Projects

Each of the power line replacement project segments are described individually below.

TL682

From the western terminus of TL682 at Rincon Substation to the western side of Lake Henshaw, TL682 generally follows a similar route as SR-76. The alignment of TL682 is not coincident with SR-76, but spans it at 15 locations. From the western side of Lake Henshaw to the eastern terminus of the alignment at Warners Substation, TL682 crosses undeveloped rural land. Other rural roadways spanned by the line are shown in Table D.14-2.

TL626

TL626 between Santa Ysabel Substation and Descanso Substation, except for its northern and southern ends, would primarily cross undeveloped open space in a relatively rural and road-less portion of the County. The northern tip of the alignment would cross SR-78; otherwise the line would cross rural roads and unpaved Forest Service roads and ROW access roads. Rural roadways spanned by the line are shown in Table D.14-2.

TL625

TL625 alignment consists of three branches connecting the Loveland, Descanso, and Barrett substations to the Barrett Tap. The major public roadway that would be crossed by TL625 would be I-8, which crosses the northern portion of the alignment. Temporary work sites are not located within I-8 itself but may possibly be located within its ROW. Other major roadways crossed by TL625 include Japatul Road, Japatul Valley Road, Lyons Valley Road, and Viejas Grade Road. Other minor and/or rural roadways spanned by the line are shown in Table D.14-2.

TL629

TL629 also consists of three branches connecting the Descanso Substation to the west, the Crestwood Substation to the east, and the Cameron Substation to the south to the Cameron TAP near Old Highway 80. Compared to the other power line segments, TL629 crosses more developed areas and rural communities, as a large portion of the line follows the general route of I-8. Major regional roadways crossed by the line include SR-79, I-8, Old Highway 80, Buckman Springs Road, La Posta Road, and Pine Valley Road. Other minor and/or rural roadways spanned by the line are shown in Table D.14-2.

TL6923

TL6923 is the southern-most power line replacement project, and connects the Cameron Substation to the Barrett Substation. The power line segment crosses a relatively undeveloped rural landscape where most roadway consist of unimproved dirt roads used to access the transmission ROW. The main roadways crossed by the alignment include Barrett Lake Road

and Lake Morena Drive. Other minor and/or rural roadways spanned by the line are shown in Table D.14-2.

C79

The western end of C79 begins along the central portion of TL626 and extends in a northeastern direction toward SR-79. The power line traverses a remote part of the County, crossing Boulder Creek Road at its western end, and several unnamed forest roads. The proposed realignment and undergrounding of the distribution line would occur from the east, starting at SR-79, following Lookout Road, which is a fire access road.

C78

The only public roads crossed by distribution line C78 are Viejas Grade Road, Via Arturo, and Red Oak Road; otherwise, the line crosses or parallels unpaved roads used for the purposes of maintaining the line. The proposed relocation of the line would be along and coincident with Viejas Grade Road.

C157

C157 follows the general route of Skye Valley Road, crossing it four times along the alignment. The distribution line also crosses several forest service roads, including one identified as NF-17504.

C442

C442 is made up of two non-contiguous sections of distribution line, one located south of I-8 in an undeveloped rural area, and one located north of I-8 generally following a similar route as Pine Creek Road. The northern segment crosses Pine Creek Road 11 times.

C440

This distribution line generally follows San Diego County S-1 (Sunrise Highway), but includes numerous spurs and tees that serve developed communities areas near Mount Laguna. Major roadways that would be crossed by this distribution segment include Old Highway 80, I-8, and the Sunrise Highway. Other minor and/or rural roadways spanned by the line are shown in Table D.14-2.

C449

This distribution line connects the Boulder Oaks area to the Morena Reservoir and Buckman Springs Road. Major Roadways that would be crossed by this distribution segment include Old Highway 80, Buckman Springs Road, and Morena Stokes Valley Road. Other minor and/or rural roadways spanned by the line are shown in Table D.14-2.

D.14.2 Applicable Regulations, Plans, and Standards

D.14.2.1 Federal Regulations

Cleveland National Forest Land Management Plan

The vision for the Cleveland National Forest (CNF), in terms of the road and trail system, is to provide transportation systems that are safe, affordable, and environmentally sound; respond to public needs; and are efficient to manage. The CNF seeks to provide public access for recreation, special uses, and fire protection activities, and support for forest-management objectives.

The CNF has established the following policies in its Land Management Plan (LMP) with respect to transportation:

Trans 1 – Transportation System:

Plan, design, construct, and maintain the road and trail system to meet those objectives established to implement the forest plan, to promote sustainable resource conditions, and to safely accommodate anticipated levels and types of use:

- Implement landscape scale transportation system analysis on a priority basis. Coordinate with state, county, local and regional government entities, municipalities, tribal governments, other agencies, and the public.
- Add unclassified roads and trails to the Forest Service transportation system when site-specific analysis determines there is a public need.
- Enhance user safety and offer adequate parking at popular destinations on high traffic passenger car roads, while also minimizing adverse resource effects.
- Using the priorities identified in the Roads Analysis Process (prepared October 10, 2003, and posted to the Reading Room May 2004) reduce the road maintenance backlog to provide safe, efficient routes for recreation traffic and the through-traveling public, and to safely accommodate fire protection equipment or other high clearance vehicles.

Trans 2 – Unnecessary Roads:

Reduce the number of unnecessary or redundant unclassified roads and trails and restore landscapes.

- Decommission roads and trails that have been determined to be unnecessary for conversion to either the road or trail system through site-specific analysis.
- Establish the level of restoration through project planning.

Trans 3 – Improve Trails

Develop an interconnected, shared-use trail network where compatible and support facilities complement local, regional, and national trails and open space, and also enhance day-use opportunities and access for the general public.

- Construct and maintain the trail network to levels commensurate with area objectives, sustainable resource conditions, user safety, and the type and level of use. Convert ecologically sustainable unclassified roads and trails, and other roads that meet the need for trail-based recreation.
- Manage the Pacific Crest National Scenic Trail to protect the trail experience, and to provide for the conservation and enjoyment of its nationally important scenic, historic, natural, and cultural qualities.
- Maintain and/or develop access points and connecting trails linked to the surrounding communities and to create opportunities for non-motorized trips of short duration.
- New trail construction projects will emphasize development of partnerships and cooperative agreements (such as the Adopt-a-Trail program) for construction, future maintenance, and reconstruction.

Trans 4 – Off-Highway Vehicle Opportunities

Provide off-highway vehicle opportunities on designated routes within the Wildomar and Coral Canyon off-highway vehicle areas, and on existing designated routes.

- Provide 4-Wheel Drive opportunities in the easy, more, and most difficult route categories.
- Consider providing opportunities for non-highway licensed vehicles on low maintenance standard roads when Traffic Studies have been completed and potential for user conflict is minimal.
- Consider developing remote driving networks as opportunities to accommodate this experience are identified.

D.14.2.2 State Laws and Regulations

California Public Utilities Commission

General Order 26-D regulates the minimum clearance requirements for railroads and street railroads. As stated in Section 14, "all electrical construction over, above, adjacent to, along or across railroads shall conform to the requirements specified in General Order 95" (CPUC 1948).

General Order 95, Rules for Overhead Electric Line Construction, establishes uniform requirements for overhead electrical line construction. According to General Order 95, Rule 36 (Section III, Table 1), the minimum allowable vertical clearance for supply cables, 22.5 kV–300 kV, for crossings above railroad tracks that transport freight cars is 34 feet (CPUC 2012). The minimum side clearance between an electrical transmission line pole, tower, or structure and the center line of the adjacent railroad track is 8 feet, 6 inches (CPUC 2012). In addition, Section XI states that poles or towers supporting crossing spans shall be located outside of the railroad companies ROW wherever practical (CPUC 2012). For urban and rural thoroughfares, the minimum allowable vertical clearance for supply cables, 22.5 kV–300 kV, is 30 feet (CPUC 2012).

Caltrans

SDG&E's proposed project would be located within Caltrans District 11. Caltrans requires that an encroachment permit be obtained prior to the initiation of any non-transportation activities (including utility construction) occurring within the ROW of the state highway system. Encroachment permits are obtained from the local Caltrans office (District 11). According to the Caltrans Encroachment Permit Application Guide, utility construction projects are not required to submit or prepare a Traffic Control and Detour Plan. However, traditional construction projects are required to prepare a Traffic Control and Detour Plan. Caltrans "Guidelines for Traffic Control Plans" are located in Section 2-205 of the Caltrans *Construction Manual* (Caltrans 2009, p. 2-2.3). The Caltrans *Construction Manual* also contains provisions for nighttime construction work within the state highway system ROW.

Caltrans also requires transportation permits for the movement of vehicles or loads exceeding the limitations on the size and weight contained in Division 15, Chapter 5, Article 1, Section 35551, of the California Vehicle Code (1983). Due to the possibility of heavy truck loads, SDG&E's proposed project would need to obtain transportation permits.

San Diego Association of Governments

Congestion Management Program

SANDAG is the designated congestion management agency for the San Diego region and is responsible for preparing the Regional Transportation Plan (RTP), of which the Congestion Management Plan (CMP) is an element used to monitor transportation system performance, develop programs to address near- and long-term congestion, and better integrate land use and transportation planning decisions. The CMP includes a requirement for enhanced CEQA review applicable to certain large developments that generate an equivalent of 2,400 average daily vehicle trips or 200 or more Peak Hour vehicle trips. These larger projects must complete a traffic analysis that identifies the project's impacts on CMP system roadways, their associated costs, and appropriate mitigation. Early project coordination with affected public agencies, the San Diego Metropolitan Transit System, and the North County Transit District, is required to ensure that the impacts of new development on CMP transit performance measures are identified.

D.14.2.3 Regional Policies, Plans, and Regulations

Pursuant to Article XII, Section 8, of the California Constitution, the CPUC has exclusive jurisdiction, in relation to local government, to regulate the design, siting, installation, operation, maintenance, and repair of electric facilities. SDG&E's proposed project is therefore not subject to local discretionary regulations. However, it is CPUC policy to consult with local agencies regarding its proposed actions, particularly if such actions would be in conflict with local policies. Therefore for disclosure purposes, this section lists the local plans and policies that address transportation- and traffic-related concerns.

San Diego County

Department of Public Works

San Diego County requires an encroachment permit for the placement of any structures on, over, or under county roads. Several roadways owned and maintained by the County would potentially be affected by project construction. Encroachment permits are issued by the Department of Public Works for the installation of any tower, pole, or structure of any kind within, over, or under a County road ROW.

In addition to encroachment permits, the County Department of Public Works would also require SDG&E's proposed project to obtain construction and traffic control permits. A construction permit is required prior to initiation of any work within the County ROW, and a traffic control

permit is typically required in concurrence with an encroachment and/or construction permit to ensure the safe travel of vehicles within a construction work zone.

County of San Diego General Plan Mobility Element

The County of San Diego's existing General Plan Mobility Element establishes goals and policies that address the safe and efficient operation, maintenance, and management of the transportation network. The Mobility Element provides a framework for a balanced transportation system that uses multiple modes of travel, including motor vehicles, public transportation, bicycles, pedestrians, and to a lesser extent, rail and air transportation. One of the goals of the Public Facility Element is to provide "[a] road network that provides adequate capacity to reasonably accommodate both planned land uses and regional traffic patterns, while supporting other General Plan goals such as providing environmental protections and enhancing community character" (County of San Diego 2009).

D.14.3 Environmental Effects

D.14.3.1 Definition and Use of CEQA Significance Criteria/Indicators under NEPA

The CEQA criteria and guidelines described below are also used as indicators of adverse effect under NEPA. The following transportation and traffic significance criteria were derived from previous environmental impacts assessments and from Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.). Under CEQA, project-related transportation and traffic impacts would be significant if the project would:

- 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?
- 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?
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- Result in inadequate emergency access?
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

D.14.3.2 Applicant Proposed Measures

SDG&E has proposed Applicant Proposed Measures (APMs) TRANS-01 through TRANS-07, which include measures to reduce traffic impacts during construction. These APMs would be implemented as part of SDG&E's proposed project and are described in Section B.7 of this EIR/EIS.

D.14.3.3 Direct and Indirect Effects

Impact TRANS-1: 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

Table D.14-4 lists the TRANS-1 impacts and classification of the impacts under CEQA identified for each of the proposed power line replacement projects. As summarized in Table D.14-4 and discussed below, overall, with implementation of the above-listed APMs, temporary impacts (TRANS-1) would not be adverse under NEPA, and under CEQA would be less than significant (Class III).

Table D.14-4
Transportation and Traffic Impacts Associated with SDG&E's Proposed Project

Project Component	Impact Area	Description of Impact	Significance Determination
TL682	Roadway Network	TL682 generally follows a similar route as SR-76, but is not coincident with SR-76, and spans it at 15 locations. Several other rural roadways spanned by the line are listed in Table D.14-2. Review of project plans and aerial photography indicate that temporary work sites (pole installation sites and stringing sites) and staging areas may fully or partially encroach on several roadways, including SR-76, Valley Center Road, Red Gate Road, and Poomacha Road. Since existing LOS on area roads is B, as shown on Table D.14-2, the temporary increase in traffic along area roadways during construction is not expected to result in adverse impacts on traffic flow. With implementation of APM TRANS-01 through APM TRANS-05, SDG&E would ensure that potential temporary impacts to LOS on area roadways due to construction work and project-related traffic on area roadways would be adequately addressed. Operations and maintenance of SDG&E's proposed project would not result in an increase in traffic trips along area roadways from current levels.	Not adverse under NEPA and less than significant (Class III) under CEQA.
	Bus Facilities	Since TL682 generally follows along SR-76, a portion of which serves bus route 892. Temporary impacts to bus service during construction are expected to be similar to those discussed above	Not adverse under NEPA and less than significant

Table D.14-4
Transportation and Traffic Impacts Associated with SDG&E's Proposed Project

Project Component	Impact Area	Description of Impact	Significance Determination
		for traffic in this area. With implementation of APM TRANS-01 through APM TRANS-05 SDG&E would ensure that potential temporary impacts to bus service along this route would be adequately addressed. Since operations and maintenance of SDG&E's proposed project would not result in an increase in traffic trips along area roadways from current levels, no impacts to bus service is expected during operations and maintenance of SDG&E's proposed project.	(Class III) under CEQA.
	Bikeways	Construction related work sites and staging areas may fully or partially encroach on TL682 or other area roadway shoulders, thereby, temporarily interfering with the cyclists' access in the area. The increase in trips along area roadways during construction may also temporarily interfere with cyclists' use of area roadways. Through implementation of APM TRANS-01, APM TRANS-02, and APM TRANS-05, SDG&E would ensure that potential temporary impacts to cyclists in the project area would be adequately addressed. No impacts to cyclists are expected during operations and maintenance of SDG&E's proposed project.	Not adverse under NEPA and less than significant (Class III) under CEQA.
TL626	Roadway Network	The northern tip of the TL626 alignment crosses SR-78; otherwise the line crosses rural roads and unpaved Forest Service roads and ROW access roads. Rural roadways spanned by the line are shown in Table D.14-2. Review of project plans and aerial photography indicate that temporary work sites (pole installation sites and stringing sites) may fully or partially encroach on several local roadways, including Boulder Creek Road, Burrell Way, and Oak Grove Drive. Since existing LOS on area roads are between A and C, as shown on Table D.14-2, the temporary increase in traffic along area roadways during construction is not expected to result in adverse impacts on traffic flow. With implementation of APM TRANS-01 through APM TRANS-05, SDG&E would ensure that potential temporary impacts to LOS on area roadways would be adequately addressed. Operations and maintenance of SDG&E's proposed project would not result in an increase in traffic trips along area roadways from current levels.	Not adverse under NEPA and less than significant (Class III) under CEQA.
	Bus Facilities	No bus routes intersect with the TL626 alignment. Therefore, SDG&E's proposed project along TL626 would not directly impact bus service. Since existing LOS on area roads are between A and C, as shown on Table D.14-2, the temporary increase in traffic along area roadways during construction is not expected to result in traffic delays that would adversely impact bus service. No impacts to bus service are expected during operations and maintenance of SDG&E's proposed project.	Not adverse under NEPA and less than significant (Class III) under CEQA.
	Bikeways	The northern tip of the TL626 alignment crosses SR-78; otherwise the line crosses rural roads and unpaved Forest Service roads and ROW access roads. Rural roadways spanned by the line are shown in Table D.14-2. Where SDG&E's proposed project would intersect	Not adverse under NEPA and less than significant (Class III) under CEQA.

Table D.14-4
Transportation and Traffic Impacts Associated with SDG&E's Proposed Project

Project Component	Impact Area	Description of Impact	Significance Determination
		with public roads in the area, temporary impacts to cyclists may occur. Additionally, the increase in trips along area roadways may also temporarily interfere with cyclists' use of area roadways during construction. Through implementation of APM TRANS-01, APM TRANS-02, and APM TRANS-05, SDG&E would ensure that potential temporary impacts to cyclists along this route would be adequately addressed. No impacts to cyclists are expected during operations and maintenance of SDG&E's proposed project.	
TL625	Roadway Network	The major public roadway that would be crossed by TL625 is I-8, along the northeastern portion of the alignment. Temporary work sites are not located within I-8 itself but may possibly be located within its ROW. Review of project plans and aerial photography indicate that temporary work sites (pole installation sites and stringing sites) may fully or partially encroach on several roadways, including Japatul Road, Carveacre Road, Spice Way, Tumeric Way, Japatul Valley Road, Wildwood Glen Lane, and Oak Grove Drive. Since existing LOS on area roads is between A and C, as shown on Table D.14-2, the temporary increase in traffic along area roadways during construction is not expected to result in adverse impacts on traffic flow. With implementation of APM TRANS-01 through APM TRANS-05, SDG&E would ensure that potential temporary impacts to LOS on area roadways due to construction work and project-related traffic on area roadways would be adequately addressed. Operations and maintenance of SDG&E's proposed project would not result in an increase in traffic trips along area roadways from current levels.	Not adverse under NEPA and less than significant (Class III) under CEQA.
	Bus Facilities	The TL625 alignment intersects with Bus Route 888 along I-8, however there are no pole locations in this area, and there are not expected to be any temporary work sites that would interfere with traffic flow along I-8. Therefore, SDG&E's proposed project along TL626 would not directly impact bus service. Since existing LOS on area roads are between A and C, as shown on Table D.14-2, the temporary increase in traffic along area roadways during construction is not expected to result in traffic delays that would adversely impact bus service. No impacts to bus service are expected during operations and maintenance of SDG&E's proposed project.	Not adverse under NEPA and less than significant (Class III) under CEQA.
	Bikeways	Rural roadways spanned by TL625 are shown in Table D.14-2. Where SDG&E's proposed project would intersect with public roads in the area, temporary impacts to cyclists may occur. Additionally, the increase in trips along area roadways may also temporarily interfere with cyclists' use of area roadways during construction. Through implementation of APM TRANS-01, APM TRANS-02, and APM TRANS-05, SDG&E would ensure that potential temporary impacts to cyclists along this route would be adequately addressed. No impacts to cyclists are expected during operations and maintenance of SDG&E's proposed project.	Not adverse under NEPA and less than significant (Class III) under CEQA.

Table D.14-4
Transportation and Traffic Impacts Associated with SDG&E's Proposed Project

Project Component	Impact Area	Description of Impact	Significance Determination
TL629	Roadway Network	Major regional roadways crossed by TL629 include SR-79, I-8, Old Highway 80, Buckman Springs Road, La Posta Road, and Pine Valley Road. Other minor and/or rural roadways spanned by the line are shown in Table D.14-2. Review of project plans and aerial photography indicate that temporary work sites (pole installation sites and stringing sites) may fully or partially encroach on several roadways, including Hulburd Grove Drive, Oak Grove Drive, River Drive, Viejos Boulevard, SR-79, Old Highway 80, Farley Flat Road, Hamilton Lane, Corte Madera Road, Pine Valley Road, Sunrise Highway, Cameron Truck Trail, Buckman Springs Road, La Posta Circle, and Stagecoach Springs Road. Since existing LOS on area roads is between A and D (along a portion of Old Highway 80) as shown on Table D.14-2, the temporary increase in traffic along area roadways during construction is not expected to result in adverse impacts on traffic flow. With implementation of APM TRANS-01 through APM TRANS-05, SDG&E would ensure that potential temporary impacts to LOS on area roadways due to construction work and project-related traffic on area roadways would be adequately addressed. Operations and maintenance of SDG&E's proposed project would not result in an increase in traffic trips along area roadways from current levels.	Not adverse under NEPA and less than significant (Class III) under CEQA.
	Bus Facilities	Bus Routes 888 and 894 are spanned by TL629 at points along Old Highway 80, I-8, and Buckman Springs Road in Descanso, Pine Valley, and Boulder Oaks. Temporary impacts to bus service during construction are expected to be similar to those discussed above for traffic in this area. With implementation of APM TRANS-01 through APM TRANS-05, SDG&E would ensure that potential temporary impacts to bus service along this route would be adequately addressed. Since operations and maintenance of SDG&E's proposed project would not result in an increase in traffic trips along area roadways from current levels, not impacts to bus service is expected during operations and maintenance of SDG&E's proposed project.	Not adverse under NEPA and less than significant (Class III) under CEQA.
	Bikeways	A portion of Old Highway 80 in Pine Valley that follows the alignment of TL629 includes a striped lane for one-way bike travel (SANDAG 2014). Where SDG&E's proposed project would intersect with this segment of Old Highway 80, as well as with other public roads in the area, temporary impacts to cyclists may occur. Additionally, the increase in trips along area roadways may also temporarily interfere with cyclists' use of area roadways during construction. Through implementation of APM TRANS-01, APM TRANS-02, and APM TRANS-05, SDG&E would ensure that potential temporary impacts to cyclists along this route would be adequately addressed. No impacts to cyclists are expected during operations and maintenance of SDG&E's proposed project.	Not adverse under NEPA and less than significant (Class III) under CEQA.

Table D.14-4
Transportation and Traffic Impacts Associated with SDG&E's Proposed Project

Project Component	Impact Area	Description of Impact	Significance Determination
TL6923	Roadway Network	The main roadways crossed by TL6923 include Barrett Lake Road and Lake Morena Drive. Other minor and/or rural roadways spanned by the line are shown in Table D.14-2. Review of project plans and aerial photography indicate that temporary work sites (pole installation sites and stringing sites) may fully or partially encroach on several roadways, including Tumeric Way, Lake Morena Drive, and Hauser Creek Road. Since existing LOS on area roads is between A and C, as shown on Table D.14-2, the temporary increase in traffic along area roadways during construction is not expected to result in adverse impacts on traffic flow. With implementation of APM TRANS-01 through APM TRANS-05, SDG&E would ensure that potential temporary impacts to LOS on area roadways due to construction work and project-related traffic on area roadways would be adequately addressed. Operations and maintenance of SDG&E's proposed project would not result in an increase in traffic trips along area roadways from current levels.	Not adverse under NEPA and less than significant (Class III) under CEQA.
	Bus Facilities	TL6923 does not intersect with any bus routes. SDG&E's proposed project would not result in impacts to bus routes in this area.	Not adverse under NEPA and no impact under CEQA.
	Bikeways	Where SDG&E's proposed project would intersect with public roads in the area, temporary impacts to cyclists may occur. Additionally, the increase in trips along area roadways may also temporarily interfere with cyclists' use of area roadways during construction. Through implementation of APM TRANS-01, APM TRANS-02, and APM TRANS-05, SDG&E would ensure that potential temporary impacts to cyclists along this route would be adequately addressed. No impacts to cyclists are expected during operations and maintenance of SDG&E's proposed project.	Not adverse under NEPA and less than significant (Class III) under CEQA.
C79	Roadway Network	The only public road that the existing C79 alignment spans is Boulder Creek Road near the eastern end of its alignment. The proposed new underground alignment follows Lookout Road, which is a fire access road and not a public road. Review of project plans and aerial photography indicate that temporary work sites (pole installation sites and stringing sites) may fully or partially encroach on Boulder Creek Road. Since existing LOS on this road is between A and C, as shown on Table D.14-2, the temporary encroachment along this roadway as well as an increase in traffic along other nearby roads during construction is not expected to result in adverse impacts on traffic flow. With implementation of APM TRANS-01 through APM TRANS-05, SDG&E would ensure that potential temporary impacts to LOS on area roadways due to construction work and project-related traffic on area roadways would be adequately addressed. Operations and maintenance of SDG&E's proposed project would not result in an increase in traffic trips along area roadways from current levels.	Not adverse under NEPA and less than significant (Class III) under CEQA.
	Bus Facilities	C79 does not intersect with any bus routes. SDG&E's proposed project would not result in impacts to bus routes in this area.	Not adverse under NEPA and no impact under CEQA.

Table D.14-4
Transportation and Traffic Impacts Associated with SDG&E's Proposed Project

Project Component	Impact Area	Description of Impact	Significance Determination
	Bikeways	Where SDG&E's proposed project would intersect with Boulder Creek Road, temporary impacts to cyclists may occur. Additionally, the increase in trips along area roadways may also temporarily interfere with cyclists' use of area roadways during construction. Through implementation of APM TRANS-01, APM TRANS-02, and APM TRANS-05 SDG&E would ensure that potential temporary impacts to cyclists along this route would be adequately addressed. No impacts to cyclists are expected during operations and maintenance of SDG&E's proposed project.	Not adverse under NEPA and less than significant (Class III) under CEQA.
C78	Roadway Network	The only public roads crossed by distribution line C78 are Viejas Grade Road, Via Arturo, and Red Oak Road; otherwise, the line crosses or parallels unpaved roads used for the purposes of maintaining the line. The proposed relocation of the line would be along and coincident with Viejas Grade Road and, at the eastern end of C79, Via Arturo Road. Review of project plans and aerial photography indicate that temporary work sites (pole installation sites and stringing sites) may fully or partially encroach on these roads. Since existing LOS on area roads is between A and C, as shown on Table D.14-2, the temporary increase in traffic along area roadways during construction is not expected to result in adverse impacts on traffic flow. With implementation of APM TRANS-01 through APM TRANS-05, SDG&E would ensure that potential temporary impacts to LOS on area roadways due to construction work and project-related traffic on area roadways would be adequately addressed. Operations and maintenance of SDG&E's proposed project would not result in an increase in traffic trips along area roadways from current levels.	Not adverse under NEPA and less than significant (Class III) under CEQA.
	Bus Facilities	C78 does not intersect with any bus routes. SDG&E's proposed project would not result in impacts to bus routes in this area.	Not adverse under NEPA and no impact under CEQA.
	Bikeways	Where SDG&E's proposed project would intersect with public roads in the area, temporary impacts to cyclists may occur. Additionally, the increase in trips along area roadways may also temporarily interfere with cyclists' use of area roadways during construction. Through implementation of APM TRANS-01, APM TRANS-02, and APM TRANS-05, SDG&E would ensure that potential temporary impacts to cyclists along this route would be adequately addressed. No impacts to cyclists are expected during operations and maintenance of the proposed project.	Not adverse under NEPA and less than significant (Class III) under CEQA.

Table D.14-4
Transportation and Traffic Impacts Associated with SDG&E's Proposed Project

Project Component	Impact Area	Description of Impact	Significance Determination
C157	Roadway Network	C157 follows the general route of Skye Valley Road, and currently crosses it four times along the alignment. Temporary work areas, stringing sites, and a staging area may partially encroach on Skye Valley Road and the Forest Service road. Since Skye Valley Road provides access to a limited number of properties and has very little traffic, the temporary increase in traffic along area roadways during construction is not expected to result in adverse impacts on traffic flow. With implementation of APM TRANS-01 through APM TRANS-05, SDG&E would ensure that potential temporary impacts to area roadways due to construction work and project-related traffic on area roadways would be adequately addressed. Operations and maintenance of SDG&E's proposed project would not result in an increase in traffic trips along area roadways from current levels.	Not adverse under NEPA and less than significant (Class III) under CEQA.
	Bus Facilities	C157 does not intersect with any bus routes. SDG&E's proposed project would not result in impacts to bus routes in this area.	Not adverse under NEPA and no impact under CEQA.
	Bikeways	Where SDG&E's proposed project would intersect with public roads in the area, temporary impacts to cyclists may occur. Additionally, the increase in trips along area roadways may also temporarily interfere with cyclists' use of area roadways during construction. Through implementation of APM TRANS-01, APM TRANS-02, and APM TRANS-05, SDG&E would ensure that potential temporary impacts to cyclists along this route would be adequately addressed. No impacts to cyclists are expected during operations and maintenance of SDG&E's proposed project.	Not adverse under NEPA and less than significant (Class III) under CEQA.
C442	Roadway Network	The northern segment of C442 generally follows Pine Creek Road. The southern segment of C442 is located in an undeveloped area, not near any public roadways. Temporary work sites (pole installation sites and stringing sites) may fully or partially encroach on Pine Creek Road and Los Pinos Road (southern tip of southern segment). Since existing LOS is between A and C, as shown on Table D.14-2, the temporary increase in traffic during construction is not expected to result in adverse impacts on traffic flow. With implementation of APM TRANS-01 through APM TRANS-05, SDG&E would ensure that potential temporary impacts to LOS on area roadways due to construction work and project-related traffic on area roadways would be adequately addressed. Operations and maintenance of SDG&E's proposed project would not result in an increase in traffic trips along area roadways from current levels.	Not adverse under NEPA and less than significant (Class III) under CEQA.
	Bus Facilities	C442 does not intersect with any bus routes. SDG&E's proposed project would not result in impacts to bus routes in this area.	Not adverse under NEPA and no impact under CEQA.
	Bikeways	Where SDG&E's proposed project would intersect with public roads in the area, temporary impacts to cyclists may occur. Additionally, the increase in trips along area roadways may also temporarily interfere with cyclists' use of area roadways during	Not adverse under NEPA and less than significant (Class III) under CEQA.

Table D.14-4
Transportation and Traffic Impacts Associated with SDG&E's Proposed Project

Project Component	Impact Area	Description of Impact	Significance Determination
		construction. Through implementation of APM TRANS-01, APM TRANS-02, and APM TRANS-05, SDG&E would ensure that potential temporary impacts to cyclists along this route would be adequately addressed. No impacts to cyclists are expected during operations and maintenance of SDG&E's proposed project.	
C440	Roadway Network	This distribution line generally follows San Diego County S-1 (Sunrise Highway), but includes numerous spurs and tees that serve developed communities areas near Mount Laguna. Major roadways that would be crossed by this distribution segment include Old Highway 80, I-8, and the Sunrise Highway. Other minor and/or rural roadways spanned by the line are shown in Table D.14-2. Temporary work sites (pole installation sites, stringing sites, trenching areas) associated with wood-to-steel conversion and undergrounding along C440 may fully or partially encroach on Sunrise Highway, Sheephead Mountain Road, Morris Ranch Road, Mount Laguna Drive, and Laguna Meadow Road. The major undergounding work for the segment would occur along the Sunrise Highway. Since existing LOS on area roads is between A and D (portions of Old Highway 80 are LOS D), as shown on Table D.14-2, the temporary increase in traffic along area roadways during construction is not expected to result in adverse impacts on traffic flow. With implementation of APM TRANS-01 through APM TRANS-05, SDG&E would ensure that potential temporary impacts to LOS on area roadways due to construction work and project-related traffic on area roadways would be adequately addressed. Operations and maintenance of SDG&E's proposed project would not result in an increase in traffic trips along area roadways from current levels.	Not adverse under NEPA and less than significant (Class III) under CEQA.
	Bus Facilities	The southern end of C440 intersects with bus route 888 along Old Highway 80 in Pine Valley. Temporary impacts to bus service during construction are expected to be similar to those discussed above for traffic in this area. With implementation of APM TRANS-01 through APM TRANS-05, SDG&E would ensure that potential temporary impacts to bus service along this route would be adequately addressed. Since operations and maintenance of SDG&E's proposed project would not result in an increase in traffic trips along area roadways from current levels, no impacts to bus service are expected during operations and maintenance of SDG&E's proposed project.	Not adverse under NEPA and less than significant (Class III) under CEQA.
	Bikeways	Where SDG&E's proposed project would intersect with public roads in the area, temporary impacts to cyclists may occur. Additionally, the increase in trips along area roadways may also temporarily interfere with cyclists' use of area roadways during construction. Through implementation of APM TRANS-01, APM TRANS-02, and APM TRANS-05SDG&E would ensure that	Not adverse under NEPA and less than significant (Class III) under CEQA.

Table D.14-4
Transportation and Traffic Impacts Associated with SDG&E's Proposed Project

Project Component	Impact Area	Description of Impact	Significance Determination
		potential temporary impacts to cyclists along this route would be adequately addressed. No impacts to cyclists are expected during operations and maintenance of SDG&E's proposed project.	
C449	Roadway Network	Major Roadways that are crossed by C449 include Old Highway 80, Buckman Springs Road, and Morena Stokes Valley Road. Other minor and/or rural roadways spanned by the line are shown in Table D.14-2. Temporary work sites (pole installation sites, stringing sites, and trenching) associated with wood-to-steel conversion and undergrounding along C449 may fully or partially encroach on Old Highway 80, Buckman Springs Road, and Corral Canyon Drive. Since existing LOS on area roads is between A and D (a portion of Old Highway 80 is LOS D), as shown on Table D.14-2, the temporary increase in traffic along area roadways during construction is not expected to result in adverse impacts on traffic flow. With implementation of APM TRANS-01 through APM TRANS-05, SDG&E would ensure that potential temporary impacts to LOS on area roadways due to construction work and project-related traffic on area roadways would be adequately addressed. Operations and maintenance of SDG&E's proposed project would not result in an increase in traffic trips along area roadways from current levels.	Not adverse under NEPA and less than significant (Class III) under CEQA.
	Bus Facilities	The northern end of the existing C449 intersects with bus route 888 along Old Highway 80 in Pine Valley. Temporary impacts to bus service during construction are expected to be similar to those discussed above for traffic in this area. With implementation of APM TRANS-01 through APM TRANS-05, SDG&E would ensure that potential temporary impacts to bus service along this route would be adequately addressed. Since operations and maintenance of SDG&E's proposed project would not result in an increase in traffic trips along area roadways from current levels, no impacts to bus service is expected during operations and maintenance of SDG&E's proposed project.	Not adverse under NEPA and less than significant (Class III) under CEQA.
	Bikeways	Where SDG&E's proposed project would intersect with public roads in the area, temporary impacts to cyclists may occur. Additionally, the increase in trips along area roadways may also temporarily interfere with cyclists' use of area roadways during construction. Through implementation of APM TRANS-01, APM TRANS-02, and APM TRANS-05, SDG&E would ensure that potential temporary impacts to cyclists along this route would be adequately addressed. No impacts to cyclists are expected during operations and maintenance of SDG&E's proposed project.	Not adverse under NEPA and less than significant (Class III) under CEQA.

Roadways

During construction activities, construction crew personnel vehicles, construction equipment, and trucks would be required to mobilize on local roadways and access roads for removal and replacement of alignment facilities.

Table D.14-1, Public Access Roadways, lists the roadways that the project's construction vehicles would use to access construction sites along the project alignment throughout the 5-year construction period. Table D.14-1 also lists the roadway classifications, number of lanes, and LOS of these area roadways. As shown on the table, the LOS of the roadways varies from A to C, depending on the roadway segment, with the exception of Old Highway 80, which has an LOS ranging from A to D. As discussed above, local and minor roads do not have LOS designations as the traffic volumes on these roads do not warrant data collection.

As discussed in Section B.5.3, during peak construction, a maximum of 38 crews working could be required at one time, resulting in between approximately 304 and 532 trips per day for construction crews and equipment/material deliveries during peak conditions across the 563,200-acre project area. However, the average number of crews working at one time would be 10, resulting in between 80 and 140 trips per day across the entire project area. Table B-7, Peak Construction Personnel, list the project component and the peak number of personnel expected during construction of that component. As shown in Table B-7, for certain project components, the number of personnel required during construction would be greater. The temporary increase along area roadways due to all construction-related traffic, as well as construction-related activities where individual pole sites are located adjacent to the roadway would temporarily affect traffic on local roadways. However, through implementation of APM TRANS-01 through APM TRANS-05, SDG&E would ensure that potential temporary impacts to LOS on area roadways would be addressed through the development and implementation of a Traffic Control Plan, as well as caution signs and flagmen used to regulate traffic where necessary, coordination with local jurisdictions, scheduling temporarily lane closures to occur during off-peak hours, and ensuring that emergency vehicle access would be maintained at all times and the impacts would not be adverse under NEPA and under CEQA would be less than significant (Class III).

Operation and maintenance of SDG&E's proposed project along with other SDG&E electric facilities proposed to be covered under the MSUP would require routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks similar to those currently conducted by SDG&E. These activities would resemble those currently administered by SDG&E and would not increase the number of vehicle trips or use of area roadways from those currently ongoing in such a way as to alter or adversely affect the current use or LOS of project area roadways. Therefore, impacts to area roadways from ongoing

operations and maintenance of the project facilities would not be adverse under NEPA and under CEQA impacts would be less than significant (Class III).

Railways

There are no railways within the project area; therefore, the project would not result in impacts to railway networks.

Bus Facilities

As discussed above, bus service provided by the San Diego Metropolitan Transit System is limited in the project area, but does follow along some roadways that the project alignment spans, such as SR-76, Old Highway 80, I-8, and Buchman Springs Road. Temporary impacts to bus service during construction are expected to be minimal with implementation of APM TRANS-01 through APM TRANS-05, which will ensure continued safe traffic flow along bus routes during peak-traffic times. A short discussion of impacts along each project segment is included in Table D.14-4. Once construction is complete, operations and maintenance activities along the project alignment would be similar to existing operations and maintenance activities, and are not expected to impact bus routes. Overall, impacts on bus routes during construction would not be adverse under NEPA, and would be less than significant (Class III) under CEQA. During operations and maintenance activities, impacts under NEPA would not be adverse, and under CEQA would be less than significant (Class III).

Bicycle Facilities

As discussed above, cyclists may use area roadways, including a portion of Old Highway 80 in Pine Valley, which is a designated bikeway, as well other area roadways that are not designated bikeways, including SR-76, SR-79, and SR-94. Construction-related work sites and staging areas may fully or partially encroach on roadway shoulders, thereby temporarily interfering with cyclists' access in the area. The temporary increase of traffic on area roadways during construction may also interfere with cyclists' use of area roadways. A short discussion of impacts along each project segment is included below in Table D.14-4. As discussed above, SDG&E will prepare a Traffic Control Plan and use caution signs and/or flagmen to regulate traffic where necessary and to maintain a safe transportation corridor during construction per APM TRANS-01, APM TRANS-02, and APM TRANS-05. Once construction is complete, operations and maintenance activities along the project alignment, including associated traffic trips from operations and maintenance staff and equipment vehicles, are not expected to increase from current trips associated with operations and maintenance of the existing SDG&E transmission infrastructure. Overall, impacts on cyclists' use of area roadways during construction would not be adverse under NEPA, and would be less than significant (Class III)

under CEQA. During operations and maintenance activities, impacts under NEPA would not be adverse, and under CEQA would be less than significant (Class III).

Impact TRANS-2: 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?

As stated above, SANDAG is the designated congestion management agency for the San Diego region and is responsible for preparing the RTP, of which the CMP is an element used to monitor transportation system performance, develop programs to address near- and long-term congestion, and better integrate land use and transportation planning decisions. The CMP includes a requirement for enhanced CEQA review applicable to certain large developments that generate an equivalent of 2,400 average daily vehicle trips or 200 or more Peak Hour vehicle trips. This requirement does not apply to SDG&E's proposed project since the project is not a large development project, and the project would not permanently generate 2,400 average daily trips or 200 or more Peak Hour vehicle trips. As discussed in Section B.5.3, during peak construction, a maximum of 38 crews working could be required at one time, resulting in between approximately 304 and 532 trips per day for construction crews and equipment/material deliveries during peak conditions across the 563,200-acre project area. However, the average number of crews working at one time would be 10, resulting in between 80 and 140 trips per day across the entire project area. Table B-7, Peak Construction Personnel, list the project component and the peak number of personnel expected during construction of that component. Once construction is complete, SDG&E's proposed project would not add any new trips to area roadways, since operations and maintenance related trips would continue to occur in the area as they do currently.

Additionally, as demonstrated above under Impact TRANS-1, no portion of the project would conflict with a LOS standard on area roadways such that a significant or adverse impact would occur. Though temporary work areas, stringing sites, and a staging area may partially encroach on area roadways, and cause a temporary increase in traffic on area roadways during construction, the project is not expected to result in adverse impacts on traffic flow. With implementation of APM TRANS-01 through APM TRANS-05 SDG&E would ensure that potential temporary impacts to area roadways due to construction work and project-related traffic on area roadways would not exceed significance thresholds; therefore, overall impacts are considered not adverse under NEPA and less than significant (Class III) under CEQA.

Impact TRANS-3: Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

SDG&E's proposed project would replace existing power lines and associated poles, and would result in a shift in the location of some of the power lines and poles. None of the poles would be moved to within a public roadway or closer to a public roadway such that the pole would create a hazard to traffic. The project does not include any changes to public roads, and therefore would not result in a hazard to the public associated with unsafe road design. The project is not considered to cause impacts associated with hazards due to road design or road features; therefore impacts under NEPA would not be adverse and under CEQA would be less than significant (Class III).

Impact TRANS-4: Result in inadequate emergency access?

As discussed previously, SDG&E's proposed project would require that temporary work areas, stringing sites, and a staging area may partially encroach on public roadways in the area, which could result in inadequate emergency access. However, through implementation of APM TRANS-03, SDG&E will ensure emergency vehicle access will be maintained at all times. Therefore, impacts to emergency access resulting from project construction would not be adverse under NEPA and less than significant under CEQA (Class III).

Impact TRANS-5: Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

Refer to the discussion above under Impact TRANS-1. With implementation of APM TRANS-01 through APM TRANS-05, SDG&E would ensure that potential temporary impacts to area roadways used by bus transit and cyclists due to construction work and project-related traffic on area roadways would be adequately addressed. Operations and maintenance of SDG&E's proposed project would not result in an increase in traffic trips along area roadways from current levels. Overall, with implementation of APM TRANS-01 through APM TRANS-05, impacts would not be adverse under NEPA, and would be less than significant under CEQA (Class III).

D.14.4 Forest Service Proposed Actions

D.14.4.1 TL626 Alternative Routes

Environmental Setting/Affected Environment

Each of the five Forest Service Proposed Action options would relocate a segment of the TL626. The farthest relocation would be approximately 2 miles east of the existing alignment. The primary roadway network needed to access all five options would be similar to SDG&E's proposed project; therefore, the environmental setting is assumed to be similar to that described in Sections D.14.1 and D.14.2 except where noted.

Options 1 and 2 SDG&E Proposed Overhead Alignments Through/Around Inaja and Cosmit Reservation Lands

Environmental Effects

Impacts TRANS-1 through TRANS 5: Options 1 and 2 would reroute a segment of TL626 to the east along a new undisturbed ROW approximately 5.5 miles (Option 1) and 5.6 miles (Option 2; Figure B-4a). These options would also require construction of approximately 3.9 miles of new access roads to reach new pole locations. All other project components would remain the same. Construction traffic impacts would be greater because of the increased number of road crossings. In addition to the roadways listed in Table D.14-2, Engineers Road, Penstemon Road, and Penstemon Lane would also be impacted. Further, the alignment would cross Boulder Creek Road four times, Engineers Road one time, and Eagle Peak Road one time. Traffic delays would be experienced on these roads as crossing work is completed. Numerous other small, unnamed roads would also be crossed with the potential for sporadic delays. Although temporary impacts to traffic would be greater than SDG&E's proposed project, with implementation of APM TRANS-01 through APM TRANS-07, which include measures to reduce traffic impacts during construction, Impacts TRANS 1 through TRANS 5 would be considered not adverse under NEPA and less than significant under CEQA (Class III).

Option 3 Partial Underground Relocation in Boulder Creek Road

Environmental Effects

Impacts TRANS-1 through TRANS-5: Options 3a and 3b would consist of placing a segment of TL626 underground in Boulder Creek Road as shown in Figure B-4b. The rerouted segment of Option 3a is approximately 11.4 miles long, and Option 3b is 6.25 miles long (each option includes an approximately 1-mile overland segment to interconnect back into the existing TL626 alignment). Temporary impacts to transportation and traffic associated with Options 3a and 3b would be greater than those described in Section D.14.3.3 for SDG&E's proposed project, as construction activities and equipment would occur within the Boulder Creek Roadway ROW, directly disrupting traffic for an extended time period along Boulder Creek Road.

As construction, operations, and maintenance would proceed in a similar fashion as that described for SDG&E's proposed project in areas proposed to be undergrounded, it is anticipated that with implementation of APM TRANS-01 through APM TRANS-05 and MM LU-4~~5~~, adverse and significant construction traffic Impacts TRANS-1 through TRANS-5 would be reduced through the development and implementation of a Traffic Control Plan and obtaining the required encroachment permit from the County of San Diego Department of

Public Works; therefore, impacts would be mitigated under NEPA and less than significant with mitigation under CEQA (Class II).

Option 4 Overhead Relocation along Boulder Creek Road

Environmental Effects

Impacts TRANS-1 through TRANS-5: Option 4 would consist of relocating a segment of TL626 overhead along Boulder Creek Road to the Pine Hills Fire Station (approximately 7.5 miles) and then merging with proposed Options 1 or 2 overland alignments for approximately 2.1 miles to interconnect with pole Z213680 (see Figure B-4a). All other project components would remain the same. Temporary impacts to transportation and traffic associated with Option 4 would be greater along Boulder Creek Road to those described in Section D.14.3.3 for SDG&E's proposed project. However, with implementation of APM TRANS-01 through APM TRANS-05, construction traffic impacts would be reduced through the development and implementation of a Traffic Control Plan; therefore, overall impacts are considered not adverse under NEPA and would be less than significant under CEQA (Class III).

Option 5 Reroute and Undergrounding around Inaja Picnic Area

Environmental Effects

Impacts TRANS-1 through TRANS-5: Option 5 would consist of relocating a portion of TL626 around the Inaja Picnic Area and as shown in Figure B-4c, would consist of approximately 2,100 feet of relocated overhead alignment along with a 400-foot underground segment located within an existing parking lot. All other project components would remain the same. Construction and operational impacts related to transportation and traffic would essentially be the same for the relocation of TL626 under Option 5 as described in Section D.14.3.3 for SDG&E's proposed project. As the Inaja Picnic area is located in the same area of SDG&E's proposed project, just south of SR-78 immediately east of the existing alignment for TL626, there would not be a substantial change to the baseline condition regarding the roadways that would be impacted during construction. The riser poles and the underground system associated with this option would affect access to parking for the Inaja Picnic Area during construction activities. ~~Therefore~~However, as with SDG&E's proposed project, with implementation of APM TRANS-01 through APM TRANS-07, Impacts TRANS-1 through TRANS-5 would ~~be~~ not be adverse under NEPA, and under CEQA, impacts would be less than significant (Class III).

D.14.4.2 C157 Partial Relocation to Avoid Designated Wilderness

Option 1 SDG&E Proposed Alignment between Two Wilderness Areas

Option 2 City of San Diego Modified Alignment

Environmental Setting/Affected Environment

Sections D.14.1 and D.14.2 describe the existing environmental setting associated with SDG&E's proposed project. The Forest Service Proposed Action for C157 would be in the same geographic region as SDG&E's proposed project; therefore, the transportation and traffic setting would be the same as that identified in Sections D.14.1 and D.14.2.

Environmental Effects

Impacts TRANS-1 through TRANS-5: Options 1 and 2 would reroute an approximately 2-mile segment of C157 to the south of the existing alignment approximately 0.25 mile along new undisturbed ROW (Figure B-5a). All other project components would remain the same. As the same roadway network and transportation facilities would be impacted with implementation of Options 1 and 2, there would not be a substantial change to the baseline condition with regards to public access roadways, railways, bus, air, or bikeway facilities; therefore, transportation and traffic impacts would reflect similar impact findings previously discussed in Section D.14.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, with implementation APM TRANS-01 through APM TRANS-05, construction traffic impacts and impacts to traffic flow, Impacts TRANS-1 through TRANS-5, would be reduced through the development and implementation of a Traffic Control Plan. Therefore, overall impacts are considered not adverse under NEPA and less than significant under CEQA (Class III).

D.14.4.3 C440 Mount Laguna Underground Alternative

Environmental Setting/Affected Environment

As this area is in the same geographic region as SDG&E's proposed project and would consist of undergrounding within existing paved road ROWs, the environmental setting is assumed to be similar to that identified in Sections D.14.1 and D.14.2.

Environmental Effects

Impacts TRANS-1 through TRANS-5: Besides undergrounding C440 as proposed by the project, this alternative would consist of undergrounding an additional 14.3 miles of C440 within existing paved roadways in the Laguna Mountain Recreation Area. Temporary

impacts to transportation and traffic as well as access would be greater along affected roadways in the Laguna Mountain Recreation area to those as described in Section D.14.3.3 for SDG&E's proposed project as construction activities and equipment would be within roadways. As construction, operations, and maintenance would proceed in a similar fashion as that described for SDG&E's proposed project in areas proposed to be undergrounded, it is anticipated that with implementation of APM TRANS-01 through APM TRANS-05 and MM LU-5, adverse and significant construction traffic Impacts TRANS-1 through TRANS-5 would be reduced through the development and implementation of a Traffic Control Plan and obtaining required encroachment permits from the County of San Diego Department of Public Works. Therefore, impacts would be mitigated under NEPA and less than significant with mitigation under CEQA (Class II).

D.14.5 BIA Proposed Action

Environmental Setting/Affected Environment

Sections D.14.1 and D.14.2 describe the existing environmental setting associated with TL682. The BIA Proposed Action for TL682 would relocate a portion of the line and underground approximately 1,500 feet on Tribal lands. As this area is in the same geographic region as SDG&E's proposed project, the transportation and traffic setting would be similar to that identified in Sections D.14.1 and D.14.2.

Environmental Effects

Impacts TRANS-1 through TRANS-5: Impacts TRANS-1 through TRANS-5 would reflect similar impact findings previously discussed in Section D.14.3.3 for SDG&E's proposed project. Although additional construction activity will be associated with open trenching for undergrounding a portion of TL682, this would not have an adverse impact on traffic as it will be short-term and generally within the TL682 corridor. As with SDG&E's proposed project, with implementation APM TRANS-01 through APM TRANS-05, construction traffic impacts and impacts to traffic flow, Impacts TRANS-1 through TRANS-5 would be reduced through the development and implementation of a Traffic Control Plan. Therefore, impacts are considered not adverse under NEPA and less than significant under CEQA (Class III).

D.14.6 Additional Alternatives

D.14.6.1 Partial Removal of Overland Access Roads

Environmental Setting/Affected Environment

This alternative would be in the same study area as the proposed TL626 alignment; therefore, the environmental setting would be the same as that identified in Sections D.14.1 and D.14.2.

Environmental Effects

Impacts TRANS-1 through TRANS-5: This alternative would remove up to ~~10~~11.5 miles of exclusive use access roads that are greater than 25% grade, particularly along TL626 (Boulder Creek) and TL625 (Barber Mountain/Carveacre). Impacts TRANS-1 through TRANS-5 would reflect similar impact findings previously discussed in Section D.14.3.3 for SDG&E's proposed project as road segments proposed to be removed under this alternative are used exclusively to access electrical facilities and are not part of the general roadway and circulation system. As with SDG&E's proposed project, with implementation APM TRANS-01 through APM TRANS-05, construction traffic impacts and impacts to traffic flow, Impact TRANS-1 through TRANS-5 would be reduced through the development and implementation of a Traffic Control Plan. Therefore, impacts are considered not adverse under NEPA and less than significant under CEQA (Class III).

D.14.6.2 Removal of TL626 from Service

Environmental Setting/Affected Environment

This alternative would remove TL626 from service and replace it with system upgrades; either with TL6931 upgrades or a TL625 loop-in as described below. In order to serve existing customers, segments of TL626 would also be converted from 69 kV to 12 kV. The setting associated with these upgrades is described as follows:

a. Upgrade the existing 69 kV TL6931 from the Crestwood Substation to the Boulevard Substation: The setting associated with this component is largely described in SDG&E's TL6931 Fire Hardening Project Proponent's Environmental Assessment (PEA) (SDG&E 2012b). As described in SDG&E's PEA, the existing ROW supports a 69 kV line. The public access roadways that would be used for this alternative include I-8, McCain Valley Road, Old Highway 80, and Highway 94. Roadways that would be spanned by this alignment include Live Oak Springs Road, Campo Road (Highway 94), Tierra Del Sol Road, Jewell Valley Road, and McCain Lane. In addition, as TL6931 is an existing power line, there are existing access roads or unimproved county roads that provide access to the alignment. There

are no airports or active rail lines in the immediate vicinity of the alignment. The nearest airport is located in Jacumba, 7 miles southeast, and the San Diego and Arizona Eastern (SD&A) Railway is approximately 3 miles south of the alignment, which is not an active line. One bus route, Route 888, provides daily bus service to Boulevard and Jacumba via Old Highway 80. The nearest transfer point is in Boulevard, located on Old Highway 80 near the intersections of Tierra del Sol Road and Jewel Valley Road. In addition, Old Highway 80 is a designated bike lane between west of the TL6931 alignment and Campo Road (Highway 94) and is a designated bike path between Campo Road and Boulevard.

b. Loop-in TL625 into the Suncrest Substation (see Figure C-2). The setting associated with the new 3-mile TL625 loop-in is largely located within the CNF approximately 100 feet from the Sunrise Powerlink ROW between Japatul Road and Suncrest Substation. This area has been described in the Sunrise Powerlink Project Final EIR/EIS. The proposed loop-in consists of rugged terrain with minimal access roads along the route. Roadways providing access to the area include I-8, Alpine Boulevard, Japatul Valley Road, Lyons Valley Road, and Japatul Road. In addition, the nearest airport is a privately owned airport: the On the Rocks Airport. This airport is not subject to the requirements of Federal Regulation Title 14 because it does not meet the definition of an airport under Section 77. The nearest public airport to the loop-in is Gillespie Field, which is located approximately 15 miles west. There are no active rail lines, bus routes, or designated bicycle paths in the immediate vicinity of the alignment.

c. Convert portions of TL626 within the same study area as SDG&E's proposed project; therefore, the environmental setting would be the same as that identified in Sections D.14.1 and D.14.2 for this component.

Environmental Effects

Under this alternative, a 6-mile portion of TL6931 would be reconstructed, or a new 3-mile 69 kV loop-in would be developed along the Sunrise Powerlink, and segments of TL626 would be converted from 69 kV to 12 kV.

The Reconstruction of TL6931

Impacts TRANS-1 through TRANS-5: Reconstruction of TL6931 would consist of construction as well as operations and maintenance activities similar to that described for the project. Construction traffic would result in a slight temporary increase to existing daily traffic, and construction activities may disrupt traffic at any of the five roadways that would be crossed by TL6931. Operations and maintenance would not necessitate any modification to existing public roadways. As with SDG&E's proposed project, with implementation of APM TRANS-01 through APM TRANS-05, construction traffic impacts and impacts to traffic flow, Impacts

TRANS-1 and TRANS-5 would be reduced through the development and implementation of a Traffic Control Plan. Therefore, impacts are considered not adverse under NEPA and less than significant under CEQA (Class III).

Development of the New 3-Mile Loop-in of TL625

Impacts TRANS-1 through TRANS-5: Development of the new TL625 loop-in would consist of construction as well as operations and maintenance activities similar to those described for the project in areas of rugged terrain.

Construction traffic would result in a slight temporary increase to existing daily traffic, and construction activities may disrupt traffic at any of the five roadways that provide access to TL625. Operations and maintenance would not necessitate any modification to existing public roadways. Since the proposed loop-in would be adjacent to the Sunrise Powerlink and would be shorter in height, no impacts to the On the Rocks Airport during operations and maintenance would occur as the loop-in would be adjacent to an existing transmission line corridor. As with SDG&E's proposed project, with implementation of APM TRANS-01 through APM TRANS-05, construction traffic impacts and impacts to traffic flow, Impacts TRANS-1 and TRANS-5 would be reduced through the development and implementation of a Traffic Control Plan. Therefore, impacts are considered not adverse under NEPA and less than significant under CEQA (Class III).

Convert Segments of TL626 from 69 kV to 12 kV

Impacts TRANS-1 through TRANS-5: Conversion of segments of TL626 to 12 kV would consist of construction as well as operations and maintenance activities similar to those described for the project; therefore, Impacts TRANS-1 through TRANS-5 would reflect similar impact findings previously discussed in Section D.14.3.3 for SDG&E's proposed project. As with SDG&E's proposed project, implementation of APM TRANS-01 through APM TRANS-05, and APM TRANS-07, impacts would not be adverse under NEPA, and under CEQA, would be less than significant (Class III).

D.14.7 No Action Alternative

Environmental Effects

Impacts TRANS-1 through TRANS-5: Under the No Action Alternative, the MSUP would not be issued, and SDG&E would be required to remove the existing electric lines and facilities on CNF-managed lands as well as develop additional transmission upgrades elsewhere as described in Section C.1.4 of this EIR/EIS. While none of the facilities associated with SDG&E's proposed

project would be constructed, removal of the electric lines and restoration activities within the CNF along with the development of additional transmission lines in conformance with CAISO requirements and/or alternatives means of delivering electrical service elsewhere would result in similar construction impacts as described in Section D.14.3; therefore, overall impacts to transportation and traffic would not be reduced. Similar to SDG&E's proposed project, impacts associated with temporary construction impacts to traffic due to removal and restoration of the project sites along with development of new electric lines elsewhere would be similar to SDG&E's proposed project and would not be adverse under NEPA. Under CEQA, impacts would be considered less than significant (Class III).

D.14.8 No Project Alternative

Environmental Effects

Impacts TRANS-1 through TRANS-5: Under the No Project Alternative, the proposed power line replacement projects would not be built, and the existing SDG&E electric facilities would remain. Therefore, none of the construction impacts described in Section D.14.3 would occur. Operations and maintenance of SDG&E electrical facilities would continue and include routine and periodic access road maintenance, equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks and would be based on the requirements of the existing permits. These activities would not increase in duration, intensity, or frequency over existing conditions, and therefore no impacts over existing conditions to roadways, railways, bus, or bicycle facilities would occur.

D.14.9 Mitigation Monitoring, Compliance, and Reporting

As described in Section D.14.3.2, SDG&E has proposed APMs TRANS-01 through TRANS-05,and APM TRANS-07, which include measures for temporary lane closures; provisions for emergency vehicle access at all times; use of caution signs and/or flagmen; coordination with local jurisdictions; development and implementation of a Traffic Control Plan; and use of existing access roads, which would be implemented as part of SDG&E's proposed project to reduce impacts related to transportation and traffic (see Section B.7 of this EIR/EIS). APM TRANS-06, coordination with FAA for flight traffic, is addressed in Section D.7, Public Health and Safety of this EIR/EIS.

D.14.10 Residual Unavoidable Effects

SDG&E's proposed project and alternatives would result in short-term impacts related to transportation and traffic during construction. APMs provided in Section D.14.3.3 would be

implemented to reduce these impacts to not adverse under NEPA and less than significant under CEQA and therefore no residual impacts would occur for SDG&E's proposed project or alternatives.

D.14.11 References

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D.15 Electromagnetic Fields

This section provides information regarding electromagnetic fields (EMFs) associated with electric utility lines and the associated potential effects of SDG&E's proposed project as they relate to public health and safety.

This section does not consider EMFs in the context of determination of environmental impacts because there is no agreement among scientists that EMFs create a health risk, and there are no federal or state standards limiting human exposure to EMFs from transmission lines in California. The following EMF information is presented to allow understanding of the issue by the public and decision makers.

D.15.1 Defining EMF

Electric fields and magnetic fields are distinct phenomena that occur both naturally and as a result of human activity across a broad spectrum. Naturally occurring electric and magnetic fields are caused by atmospheric conditions and Earth's geomagnetic field. The fields caused by human activity result from technological application of the electromagnetic spectrum for uses such as communications; appliances; and the generation, transmission, and local distribution of electricity. Electric and magnetic fields are vector quantities that have the properties of direction and amplitude (field strength).

Electric and magnetic fields of power lines have the additional property of frequency, which is determined by the rate at which electric and magnetic fields change their direction each second. The hertz (Hz) is the unit of frequency. For power lines in the United States, the frequency of change is 60 times per second, leading to the designation "60 Hz power."

Electric power flows across transmission systems from generating sources to serve electrical loads within the community. The power flowing over a transmission line is determined by the transmission line voltage and the current. The higher the voltage level of the transmission line, the lower the amount of current needed to deliver the same amount of power. For example, a 115,000-volt (115 kilovolt (kV)) transmission line with 200 amperes of current would transmit approximately 40,000 kilowatts (kW), whereas a 230 kV transmission line requires only 100 amperes of current to deliver the same 40,000 kW.

Electric Fields

Electric fields from power lines are created whenever the lines are energized, with the strength of the field dependent directly on the voltage of the line creating it. Electric field strength is typically described in units of kilovolt per meter (kV/m). Electric field strength attenuates (gets weaker)

rapidly as the distance from the source increases. Electric fields are reduced at many receptors because they are effectively shielded by most objects or materials such as trees or houses.

Unlike magnetic fields, which penetrate almost everything and are unaffected by buildings, trees, and other obstacles, electric fields are distorted by any object that is within the electric field, including the human body. Even trying to measure an electric field with electronic instruments is difficult because the devices themselves would alter the levels recorded. Determining an individual's exposure to electric fields requires the understanding of many variables, including the electric field itself, how effectively a person is grounded, and a person's body surface area within the electric field.

Electric fields in the vicinity of power lines can cause phenomena similar to the static electricity experienced on a dry winter day, or with clothing just removed from a clothes' dryer, and may result in nuisance electric discharges when touching long metal fences, pipelines, or large vehicles.

Magnetic Fields

Magnetic fields from power lines are created whenever current flows through power lines at any voltage. The strength of the field is directly dependent on the current in the line. Magnetic field strength is typically measured in milligauss (mG). Similar to electric field strength, magnetic field strength attenuates rapidly with distance from the source. Unlike electric fields, magnetic fields are not shielded by most objects or materials.

Comparison of Electric and Magnetic Fields

The nature of electric and magnetic fields can be illustrated by considering a household appliance. When the appliance is energized by being plugged into an outlet but not turned on so no current would be flowing through it, an electric field would be generated around the cord and appliance, but no magnetic field would be present. If the appliance is switched on, the electric field would still be present, and a magnetic field would be created. The electric field strength is directly related to the magnitude of the voltage from the outlet, and the magnetic field strength is directly related to the magnitude of the current flowing in the cord and appliance.

D.15.2 EMF Sources in the Proposed Project Area

EMF exposure to the public in developed areas varies over a range of field intensities and durations due to sources in the home and work environments, electric power distribution, and, infrequently, from proximity to transmission lines.

For undeveloped and natural areas such as the project area (see Section D.10, Land Use, for further description), EMFs greater than the very low natural background level are not present

except in the vicinity of the existing 500 kV Southwest Powerlink and as further described in Section D.15.4 near 69 kV power lines and local distribution circuits.

D.15.3 Scientific Background and Regulations Applicable to EMF

EMF Research

For more than 30 years, researchers have questioned the potential effects that EMFs from power lines have had on the environment. Early studies focused primarily on interactions with the electric fields from power lines. The subject of magnetic field interactions began to receive additional public attention in the 1980s as research levels increased. A substantial amount of research investigating both electric and magnetic fields has been conducted over the past several decades; however, much of the body of national and international research regarding EMFs and public health risks remains contradictory or inconclusive.

Extremely low frequency (ELF) fields are known to interact with tissues by inducing electric fields and currents. The electric currents induced by ELF fields commonly found in the environment are normally much lower than the strongest electric currents naturally occurring in the body, such as those that control the beating of the heart.

Research related to EMFs is easily grouped into three general categories: cellular level studies, animal and human experiments, and epidemiological studies. Epidemiological studies have provided mixed results, with some studies showing an apparent relationship between magnetic fields and health effects while other similar studies do not. Laboratory studies and studies investigating a possible mechanism for health effects (mechanistic studies) provide little or no evidence to support this link.

Since 1979, public interest and concern specifically regarding magnetic fields from power lines has increased. The origin of this increase in concern has generally been attributed to publication of the results of a single epidemiological study (Wertheimer and Leeper 1979). This study observed an association between the wiring configuration on electric power lines outside of homes in greater Denver, Colorado, and the incidence of childhood cancer. Since publication of the Wertheimer and Leeper (1979) study, many epidemiological, laboratory, and animal studies regarding EMFs have been conducted.

Research on ambient magnetic fields in homes and buildings in several western states found average magnetic field levels within rooms to be approximately 1 mG; in a room with appliances present, the measured values ranged from 9 to 20 mG (Severson et al. 1988; Silva et al. 1988). Immediately adjacent to appliances (within 12 inches), field values are much higher, as illustrated in Table D.15-1, Magnetic Field from Household Appliances. This table

indicates typical sources and levels of electric and magnetic field exposure the general public experiences from appliances.

Table D.15-1
Magnetic Field from Household Appliances

Appliance	Magnetic Field (mG)	
	12-inch Distance	*Maximum*
Electric range	3 to 30	100 to 1,200
Electric oven	2 to 25	10 to 50
Garbage disposal	10 to 20	850 to 1,250
Refrigerator	0.3 to 3	4 to 15
Clothes washer	2 to 30	10 to 400
Clothes dryer	1 to 3	3 to 80
Coffee maker	0.8 to 1	15 to 250
Toaster	0.6 to 8	70 to 150
Crockpot	0.8 to 1	15 to 80
Iron	1 to 3	90 to 300
Can opener	35 to 250	10,000 to 20,000
Mixer	6 to 100	500 to 7,000
Blender, popper, food processor	6 to 20	250 to 1,050
Vacuum cleaner	20 to 200	2,000 to 8,000
Portable heater	1 to 40	100 to 1,100
Fans/blowers	0.4 to 40	20 to 300
Hair dryer	1 to 70	60 to 20,000
Electric shaver	1 to 100	150 to 15,000
Color TV	9 to 20	150 to 500
Fluorescent fixture	2 to 40	140 to 2,000
Fluorescent desk lamp	6 to 20	400 to 3,500
Circular saws	10 to 250	2,000 to 10,000
Electric drill	25 to 35	4,000 to 8,000

Source: Gauger 1985.

Methods to Reduce EMFs

EMF levels from transmission lines can be reduced in three primary ways: shielding, field cancellation, or increasing the distance from the source. Shielding, which reduces exposure to electric fields, can be actively accomplished by placing trees or other physical barriers along the transmission line right-of-way (ROW). Shielding also results from existing structures the public may use or occupy along the line. Since electric fields can be blocked by most materials, shielding is effective for the electric fields but is not effective for magnetic fields.

Magnetic fields can be reduced either by cancellation or by increasing distance from the source. Cancellation is achieved in two ways. A transmission line circuit consists of three phases, requiring three separate wires (conductors) on a transmission tower. The configuration of these three conductors can reduce magnetic fields. First, when the configuration places the three conductors closer together, interference, or cancellation, of the fields from each wire is enhanced. This technique has practical limitations because of the potential for short circuits if the wires are placed too close together. There are also worker safety issues to consider if spacing is reduced. Second, in instances where there are two circuits (more than three phase wires), cancellation can be accomplished by arranging phase wires from the different circuits near each other. In underground lines, the three phases are typically much closer together than in overhead lines because the cables are insulated (coated). The distance between the source of fields and the public can be increased by either placing the wires higher above ground, burying underground cables deeper, or by increasing the width of the ROW. These methods can prove effective in reducing fields because the reduction of the field strength drops rapidly with distance.

Scientific Panel Reviews

Numerous panels of expert scientists have convened to review the data relevant to the question of whether exposure to power-frequency EMFs is associated with adverse health effects. These evaluations have been conducted in order to advise governmental agencies or professional standard-setting groups. On behalf of the CPUC, the California Department of Health Services (DHS) completed a comprehensive review of existing studies related to EMFs from power lines and potential health risks (Neutra et al. 2002). This risk evaluation was undertaken by three staff scientists with the DHS. Each of these scientists is identified in the review results as an epidemiologist, and their work took place from 2000 to 2002. The results of this review, "An Evaluation of the Possible Risks from Electric and Magnetic Fields (EMFs) From Power Lines, Internal Wiring, Electrical Occupations, and Appliances," were published in June 2002. The conclusions contained in the executive summary are provided as follows (Neutra et al. 2002):

- To one degree or another, all three of the DHS scientists are inclined to believe that EMFs can cause some degree of increased risk of childhood leukemia, adult brain cancer, Lou Gehrig's disease (Amyotrophic lateral sclerosis), and miscarriage.
- They strongly believe that EMFs do not increase the risk of birth defects or low birth weight.
- They strongly believe that EMFs are not universal carcinogens, since there are a number of cancer types that are not associated with EMF exposure.
- To one degree or another, they are inclined to believe that EMFs do not cause an increased risk of breast cancer, heart disease, Alzheimer's disease, depression, or symptoms attributed by some to sensitivity to EMFs. However, all three scientists had judgments that

were "close to the dividing line between believing and not believing" that EMFs cause some degree of increased risk of suicide.

- For adult leukemia, two of the scientists are "close to the dividing line between believing or not believing" and one was "prone to believe" that EMFs cause some degree of increased risk.

The report indicates that the DHS scientists are more inclined to believe that EMF exposure increased the risk of the listed health problems than the majority of the members of scientific committees that have previously convened to evaluate the scientific literature. With regard to why the DHS review's conclusions differ from those of other recent reviews, the report states:

> The three DHS scientists thought there were reasons why animal and test tube experiments might have failed to pick up a mechanism or a health problem; hence, the absence of much support from such animal and test tube studies did not reduce their confidence much or lead them to strongly distrust epidemiological evidence from statistical studies in human populations. They therefore had more faith in the quality of the epidemiological studies in human populations and hence gave more credence to them.

In addition to the uncertainty regarding the level of health risk posed by EMFs, individual studies and scientific panels have not been able to determine or reach consensus regarding what level of magnetic field exposure might constitute a health risk.

Policies, Standards, and Regulations

A number of counties, states, and local governments have adopted or considered regulations or policies related to EMF exposure. The reasons for these actions have been varied; in general, however, the actions can be attributed to addressing public reaction to and perception of EMFs as opposed to responding to the findings of any specific scientific research. Following is a brief summary of the guidelines and regulatory activity regarding EMFs.

International Guidelines

The International Radiation Protection Association, in cooperation with the World Health Organization, has published recommended guidelines for electric and magnetic field exposures. For the general public, the limits are 4.2 kV/m for electric fields and 833 mG for magnetic fields. These organizations have neither governmental authority nor recognized jurisdiction to enforce these guidelines. However, because they were developed by a broad base of scientists, these guidelines have been given merit and are considered by utilities and regulators when reviewing EMF levels from electric power lines.

National Guidelines

Although the U.S. Environmental Protection Agency (EPA) has conducted investigations into EMFs related to power lines and health risks, no national standards have been established. There have been a number of studies sponsored by the EPA, the Electric Power Research Institute, and other institutions. Several bills addressing EMFs have been introduced at the congressional level and have provided funding for research; however, no bill has been enacted that would regulate EMF levels.

The 1999 National Institute of Environmental Health Sciences report to Congress suggested that the evidence supporting EMF exposure as a health hazard was insufficient to warrant aggressive regulatory actions. The report suggested passive measures to educate the public and regulators on means aimed at reducing exposures. The report also suggested the power industry continue its practice of siting lines to reduce public exposure to EMFs and to explore ways to reduce the creation of magnetic fields around lines.

The American Conference of Governmental Industrial Hygienists is not a governmental regulatory agency; it is a professional organization that provides technical knowledge, advice, and guidance on occupational health and safety. In 1991 the ACGIH published the Occupational Threshold Limit Values for 60 Hz EMFs shown in Table D.15-2, Occupational Threshold Limit Values for 60 Hz EMFs. According to WHO, the vast majority of studies have been conducted on power-frequency (50 and 60 Hz) magnetic fields, and as stated previously, the results of these studies are inconclusive.

Table D.15-2
Occupational Threshold Limit Values for 60 Hz EMFs

Category	Electric Field (kV/m)	Magnetic Field (mG)
Occupational exposure should not exceed for longer than 2 hours	25	10,000
Exposure limit for workers	20	1,000
Prudence dictates the use of protective clothing	15	N/A

Note: mG (100 microtesla (μT)).

CPUC Guidelines

In 1991, the CPUC initiated an investigation into electric and magnetic fields associated with electric power facilities. This investigation explored the approach to potential mitigation measures for reducing public health impacts and possible development of policies, procedures, or regulations. Following input from interested parties, the CPUC implemented a decision (D.93-11-013) (CPUC 1993) which requires that utilities use “low cost or no-cost” mitigation measures for facilities requiring certification under General Order 131-D (CPUC 1995). The decision directed

the utilities to use a 4% benchmark for low-cost mitigation. This decision also implemented a number of EMF measurement, research, and education programs, and provided the direction that led to the preparation of the DHS study described previously. The CPUC did not adopt any specific numerical limits or regulation on EMF levels related to electric power facilities.

In Decision D.93-11-013, the CPUC addressed mitigation of EMFs of utility facilities and implemented the following recommendations (CPUC 1993):

- No-cost and low-cost steps to reduce EMF levels
- Workshops to develop EMF design guidelines
- Uniform residential and workplace programs
- Stakeholder and public involvement
- A 4-year education program
- A 4-year nonexperimental and administrative research program
- An authorization of federal experimental research conducted under the National Energy Policy Act of 1992.

In 2006, the CPUC affirmed the low-cost/no-cost policy to mitigate EMF exposure from new utility transmission and substation projects (CPUC 2006a). This decision also adopted rules and policies to improve utility design guidelines for reducing EMFs that were issued in a separate report (CPUC 2006b). The CPUC stated that "at this time we are unable to determine whether there is a significant scientifically verifiable relationship between EMF exposure and negative health consequences" (CPUC 2006a).

At this time, the CPUC has not implemented a general requirement that utilities include nonroutine mitigation measures or other mitigation measures that are based on numeric values of EMF exposure, and has not adopted any specific limits or regulations on EMF levels related to electric power facilities. The CPUC may determine mitigation measures on a project-by-project basis.

D.15.4 Consideration of Electric and Magnetic Fields—Proposed Action

The power line replacement projects proposed by SDG&E would replace five existing 69 kV power lines totaling approximately 114.8 miles and six existing 12 kV distribution lines totaling approximately 31.1 miles both on and off CNF lands. Replacement would primarily include fire hardening (wood-to-steel pole replacement), relocation, and undergrounding. The project would also result in an increase in the size of the existing conductors, which could accommodate for an increase in power conducted along the lines. However, no increase in power is planned for and

no substations within the project area would be modified as part of SDG&E's proposed project to accommodate for any increases in power along the new lines.

Once energized, the replacement power lines would generate EMFs, as do the existing ~~current~~ power lines. SDG&E's Detailed Field Management Plan (SDG&E 2012) for the subject project, prepared in compliance with CPUC General Order 131-D (CPUC 1995) and CPUC decisions 93-11-013 (CPUC 1993) and 06-01-042 (CPUC 2006a), provides ~~the~~ calculated edge-of-~~-~~ROW magnetic field profiles which include design measures to reduce magnetic fields. Table~~s~~ D.15-3 ~~and D.15-4~~ shows calculated changes in magnetic field values (in milligauss) resulting from increases in minimum sag height for single-circuit 69 kV power lines in the residential areas of the proposed project. Table D.15-4 shows the calculated milligauss values and anticipated reduction achieved by phasing circuits for the initial design and recommended ("low-cost") design for double-circuit 69 kV power lines. ~~magnetic field values (milligauss) and the percent change for increasing minimum sag height in residential zoned areas within SDG&E's proposed project scope, and for phasing circuits to reduce magnetic fields.~~ The magnetic field values were calculated at the edges-of-ROWs or edges-of-easement for all ~~transmission~~ proposed project power lines.

Table D.15-3
Increasing Sag Height within 12-~~-~~Foot-Wide to 100-Foot-Wide Easements

Single Circuit 69 kV Increase Sag Height for Field Reduction								
		Milligauss Values at Edge-of-Easement				*(%) Milligauss Reduction*		
MIN SAG HEIGHT		*30*	*33*	*34*	*37*	*33*	*34*	*37*
Easement Width	12 feet	6.23	5.20	4.91	3.74	16.5%	21.2%	40.0%
	20 feet	5.93	4.99	4.72	3.63	15.9%	20.4%	38.8%
	30 feet	5.37	4.59	4.36	3.42	14.5%	18.8%	36.3%
	50 feet	4.07	3.60	3.46	2.85	11.5%	15.0%	30.0%
	100 feet	1.86	1.76	1.72	1.57	5.4%	7.5%	15.6%

Source: SDG&E 2012.

Table D.15-4
Phasing Circuits to Reduce Magnetic Fields

Double Circuit 69 kV Phase Circuits to Reduce Magnetic Fields									
	TL625–TL6957 (50 feet Easement)			*TL626B–TL637 (30 feet Easement)*			*TL629–TL6958 (30feet Easement)*		
	ABC-ABC	*ABC-CBA*	*% Milligauss Reduction*	*ABC-CBA*	*ABC-ABC*	*% Milligauss Reduction*	*BCA-BCA*	*BCA-ACB*	*% Milligauss Reduction*
Left ROW	7.59	2.13	71.9%	11.38	3.46	69.6%	9.58	3.09	67.7%
Right ROW	7.59	2.13	71.9%	11.92	4.96	58.4%	9.58	3.09	67.7%

Source: SDGE 2012.

D.15.5 Summary Regarding EMF

After several decades of study regarding potential public health risks from exposure to ~~power line~~ EMF, research results remain inconclusive. Several national and international panels have conducted reviews of data from multiple studies and state that there is not sufficient evidence to conclude that EMF causes cancer or other adverse health effects. The information included in the preceding sections identifies existing EMF exposures within the community and provide specific information on the EMF levels estimated for SDG&E's proposed project. ~~Presently, t~~There are no applicable regulations related to EMF levels from power lines. However, the CPUC has implemented ~~a~~ decisions requiring utilities to incorporate "low cost" or "no cost" measures, where applicable, for managing EMF from power and transmission lines. SDG&E's proposed project incorporates low--cost and no--cost measures as described in Section D.15.4 as mitigation for magnetic fields consistent with CPUC Decisions D.93-11-013 and D.06-01-042 (see SDG&E 2012, "Appendix F: Detailed Magnetic Field Management Plan for the Cleveland National Forest (CNF) Power line Replacement Projects." October 11, 2012).

D.15.6 References

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E. COMPARISON OF ALTERNATIVES

This section presents a summary of the impact findings previously presented in the environmental analysis in Section D of this Environmental Impact Report/Environmental Impact Statement (EIR/EIS). The information is organized by alternative rather than by environmental resource category in order to facilitate an evaluation of the comparative merits of SDG&E's proposed project, the alternatives considered under the federal proposed action, and the additional alternatives evaluated in this EIR/EIS. This comparison is based on the assessment of environmental impacts identified in Section D.

This section is organized as follows:

- Section E.1 describes the regulatory requirements for the alternatives comparison.
- Sections E.2 through E.4 compare the alternatives using the CEQA format. E.2 presents a comparison of the proposed project with the federal proposed action and includes the No Action Alternative.
- Section E.3 presents a comparison of the proposed project with additional alternatives considered and includes the No Project Alternative.
- Section E.4 defines the overall environmentally superior alternative under the California Environmental Quality Act (CEQA).
- Section E.5 presents a comparative analysis of the alternatives as required by the National Environmental Policy Act (NEPA) regulations.
- Section E.6 defines the preferred alternative for the federal agencies as required under NEPA regulations.
- Section E.7 defines the environmentally preferable alternative that will promote the national environmental policy as expressed in NEPA's Section 101.

E.1 Regulatory Requirements for Alternatives Comparison

E.1.1 California Environmental Quality Act

Under CEQA, the alternatives analysis is required to include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed. If the environmentally superior

alternative is the No Project Alternative, CEQA requires identification of an environmentally superior alternative among the other alternatives (14 CCR 15126.6(e)(2)).

The comparison of alternatives is designed to satisfy the requirements of CEQA Guidelines, Section 15126.6(d), Evaluation of Alternatives (14 CCR 15000 et seq.). This comparison focuses on the significant adverse impacts of the proposed project as compared to the alternatives rather than on the beneficial impacts of any alternative above and beyond its ability to reduce or avoid significant effects of the proposed project. This is consistent with the constitutional requirement that there be "rough proportionality" between the impacts of the project and the measures identified to reduce or avoid those impacts (*Dolan v. City of Tigard*, 512 U.S. 374 (1994)), and the constitutional requirement that there be an essential nexus (i.e., connection) between a legitimate governmental interest and the measures identified to further that interest (*Nollan v. California Coastal Commission*, 483 U.S. 825 (1987)). These requirements are also set forth in CEQA Guidelines, Section 15126.4(a)(4).

Therefore, the environmental superiority of alternatives under CEQA is based on a comparison of significant impacts that would result from the proposed project and the alternatives identified in this EIR/EIS. Issue areas that are generally given more weight in comparing alternatives are those with long-term impacts (e.g., visual impacts and permanent loss of habitat or land use conflicts). Impacts associated with construction (i.e., temporary or short-term) that are mitigable to less-than-significant levels are considered less important. In keeping with the constitutional requirements discussed previously, the environmental superiority of alternatives does not consider whether the proposed project or an alternative would improve existing environmental conditions. These benefits, summarized in this section and in Sections D.2 through D.14 in this EIR/EIS, will be considered by the California Public Utilities Commission (CPUC) in its final decision about whether to approve the project as proposed or an alternative.

E.1.2 National Environmental Policy Act

Under Council on Environmental Quality regulations implementing NEPA, an EIS must present the environmental impacts of the proposal and the alternatives in comparative form, sharply defining the issues and providing a clear basis of choice among options (40 C.F.R. 1502.14). The regulations direct that an EIS "identify the agency's preferred alternative or alternatives, if one exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference" (40 CFR 1502.14(e)).

The "agency's preferred alternative" is the alternative which the agency believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors. The concept of the "agency's preferred alternative" is different from the "environmentally preferable alternative," although in some cases one alternative may be

both. It is identified so that agencies and the public can understand the lead agency's orientation (see CEQ 40 Most Asked Questions, Question 4a). The identification of a preferred alternative may take into consideration whether the proposed project or an alternative would improve existing environmental conditions and does not constitute a commitment or decision principle, and there is no requirement to select the preferred alternative in the Record of Decision. The identification of the preferred alternative may change between a draft EIS and final EIS. Various parts of separate alternatives that are analyzed in the draft can also be combined to develop a complete alternative in the final EIS as long as the reasons for doing so are explained.

Under the NEPA regulations, the Record of Decision must identify the environmentally preferred alternative. The environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA's Section 101. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources. Although not required, agencies are encouraged to identify the environmentally preferred alternative in the EIS (see CEQ 40 Most Asked Questions 6b).

E.2 CEQA Comparison of the Proposed Project with the Federal Proposed Action and the No Action Alternative

E.2.1 Description of Alternatives Considered under the Federal Proposed Action

In addition to the No Action Alternative, this EIR/EIS evaluates the Forest Service proposed action, which modifies SDG&E's proposed project along TL626, C157, and C440, and the BIA proposed action, which modifies SDG&E's proposed project along TL682, as described in Section B.3.2 and summarized below.

E.2.1.1 TL626 Alternative Routes

The Forest Service proposed action considers the following five options for relocating certain segments of TL626. All other project components would remain the same under these alternatives.

Option 1 SDG&E Proposed Overhead Alignment through Inaja and Cosmit Reservation Lands

As shown in Figure B-4a, Option 1 reroutes a portion of TL626 to the east on the Inaja and Cosmit Reservation Lands and would develop over 5.5 miles of new overhead electric utility right-of-way (ROW) and extend TL626 to approximately 20.6 miles in length compared to the reconstruction of 18.8 miles of the existing TL626 in place as proposed. Approximately 3.7 miles of the existing alignment and associated access roads would be restored.

Option 2 SDG&E Proposed Overhead Alignment around Inaja and Cosmit Reservation Lands

As shown in Figure B-4a, Option 2 reroutes a portion of TL626 to the east and around the Inaja and Cosmit Reservation Lands and would develop over 5.6 miles of new overhead electric utility ROW and extend TL626 to approximately 20.7 miles in length compared to the reconstruction of 18.8 miles of the existing TL626 in place as proposed. Approximately 3.7 miles of the existing alignment and associated access roads would be restored.

Option 3 Partial Underground Relocation in Boulder Creek Road

Options 3a and 3b would consist of placing a segment of TL626 underground in Boulder Creek Road as shown in Figure B-4b. Depending on the option, TL626 would be extended to 26.3 miles (Option 3a which undergrounds 11.4 miles and includes 1 mile of new overhead ROW) or 22.9 miles (Option 3b which undergrounds 6.3 miles and includes 1 mile of new overhead ROW) in length compared to the reconstruction of 18.8 miles of the existing TL626 in place as proposed. Approximately 4.9 miles and 3.2 miles for Options 3a and 3b, respectively, of the existing alignment and associated access roads would be restored.

Option 4 Overhead Relocation along Boulder Creek Road

Option 4 would consist of relocating a 7.5-mile segment of TL626 overhead along Boulder Creek Road to Pine Hills Fire Station where it would connect to Options 1 and 2 described above and continue overland for approximately 2.1 miles. As shown in Figure B-4a, the rerouted segment of Option 4 would develop approximately 9.6 miles of new overhead ROW and extend TL626 to 23.5 miles compared to the reconstruction of 18.8 miles of the existing TL626 in place as proposed. Approximately 4.9 miles of the existing alignment and associated access roads would be restored.

Option 5 Reroute and Undergrounding around Inaja Picnic Area

Option 5 would consist of relocating a portion of TL626 around the Inaja Memorial Picnic Area and as shown in Figure B-4c, would consist of approximately 2,100 feet of relocated overhead alignment along with a 400-foot underground segment located within an existing parking lot. The existing crossing and access road would be restored.

E.2.1.2 C157 Partial Relocation to Avoid Designated Wilderness

The Forest Service proposed action considers the following two options for relocating a segment of C157 to avoid designated wilderness areas. All other project components would remain the same under these alternatives.

Option 1 SDG&E Proposed Alignment between Two Wilderness Areas

Option 1 would reroute an approximately 2-mile segment of C157 to the south of the existing alignment approximately 0.25 mile along new undisturbed ROW (Figure B-5) extending C157 to 4.1 miles in length compared to the reconstruction of 3.5 miles of the existing C157 as proposed.

Option 2 City of San Diego Modified Alignment

Option 2 would reroute an approximately 2-mile segment of C157 to the south of the existing alignment approximately 0.25 mile along new undisturbed ROW (Figure B-5a). However, under Option 2, the segment of the line on City-owned property would be shifted to the north as shown in Figure B-5a. This option would extend C157 to 4.1 miles in length compared to the reconstruction of 3.5 miles of the existing C157 as proposed.

E.2.1.3 C440 Mount Laguna Underground Alternative

Besides undergrounding C440 as proposed by the project, this alternative includes undergrounding an additional 14.3 miles of C440 primarily within existing roadways in the Mount Laguna Recreation Area. All other project components would remain the same under this alternative.

E.2.1.4 BIA Proposed Action

This alternative would modify TL682 on Tribal lands by undergrounding a 1,500-foot segment of TL682 through the economic development zone located on the La Jolla Reservation along with relocation of certain poles.

E.2.1.5 No Action Alternative

Under the No Action Alternative, the Forest Service would not issue a Master Special Use Permit (MSUP) and San Diego Gas & Electric's (SDG&E's) existing permits to operate and maintain the electric system on National Forest Land would expire. The existing permits require SDG&E to remove the facilities upon expiration.

E.2.2 Comparison of Impacts for the Proposed Project with Federal Proposed Actions and No Action Alternative

A detailed analysis of environmental impacts and mitigation for all project alternatives is provided in Sections D.2 through D.14. A comparison of the environmental effects for the proposed project and the federal proposed action, including the No Action Alternative, is provided in Table E-1. Also see Section E.2.3, Overall Ranking of the Federal Proposed Action, Including the No Action Alternative.

E.2.3 Overall Ranking of the Federal Proposed Action, Including the No Action Alternative

As summarized in Table E-1, SDG&E's proposed project would have significant and unavoidable (Class I) impacts under CEQA in the following issue areas:

- Impact VIS-1: Scenic Vista impact associated withTL626 and the Inaja Scenic Overlook
- Impact AIR-1: short-term construction air emissions (VOC, NO_x, CO, and $PM_{2.5}$~~10~~ emissions)
- Impact HYD-4: erosion/water quality impacts associated with reauthorizing the use of exclusive use access roads with slopes greater than 25% in close proximity to surface waters.
- Impact LU-3: land use conflicts associated with C157 and the provisions of the Wilderness Act.

Impacts in the remaining 10 issue areas were either found under CEQA to be less than significant (Class III) and/or, following implementation of mitigation measures presented in this EIR/EIS, to be less than significant with mitigation implemented (Class II).

Table E-1
Comparison of Impacts for SDG&E's Proposed Project with Federal Proposed Actions

Proposed Project Impact	Federal Proposed Actions				
	TL626 Alternative Routes	*C157 Partial Relocation*	*BIA Proposed Action*	*C440 Mount Laguna Undergrounding*	*No Action Alternative*
Visual Resources (see Section D.2 for full analysis)					
• **VIS-1:** Scenic Vista (Class I TL626 (Inaja Scenic Overlook). All others III) • **VIS-2:** Scenic Highway (Class II C440 and all others III) • **VIS-3**: Visual Character (Class II limited poles only and all others III) • **VIS-4:** Glare/Light (Class III) • **VIS-5:**Scenic Integrity (Class II certain poles TL625, TL626, TL629, TL682, C440, C157and all others III)	**Options 1 through 4:** Similar to the proposed project, would have Class I impact from Inaja Scenic Overlook (VIS-1); Class III impacts to VIS-2 and VIS-4 and Class II impacts to VIS-5. Development of new overhead ROW where none currently exists would increase Impact VIS-3 Class II and III impacts to significant and unmitigable Class I. However, long-term views under Option 3 where relocation and undergrounding would occur would benefit the viewsheds by removing existing structures and placing them underground. **Option 5:** Would reduce Impact VIS-1 Class I impact associated with Inaja scenic Overlook to No Impact without creating additional impacts.	**Options 1 and 2**: Impacts would be nearly identical to those of the proposed project. Would reduce Impact VIS-5 Class II impacts associated with C157; however, impact levels would be similar to those identified for the proposed project.	Although undergrounding a portion of the transmission line would reduce and avoid some of the visual impacts, the overall impact levels would be similar to those identified for the proposed project.	While undergrounding a portion of the transmission line would reduce and avoid some of the visual impacts, the overall impact levels would be similar to those identified for the proposed project.	Although removing the electric lines from the National Forest would reduce and avoid some of the visual impacts, the overall impact levels would be greater when compared to the baseline due to the need to replace these lines in-kind within new ROWs outside the National Forest compared to reconstruction of the lines in place as proposed.

Table E-1
Comparison of Impacts for SDG&E's Proposed Project with Federal Proposed Actions

Proposed Project Impact	Federal Proposed Actions				
	TL626 Alternative Routes	*C157 Partial Relocation*	*BIA Proposed Action*	*C440 Mount Laguna Undergrounding*	*No Action Alternative*
Air Quality (see Section D.3 for full analysis) and Greenhouse Gas Emissions (see Section D.6 for full analysis)					
• **AIR-1**:Short-term construction-related VOC, NO_x, CO, and $PM_{2.5}$~~10~~ air emissions (Class I). Other short-term air quality impacts (toxic air contaminants) ~~would be~~ (Class III). • **AIR-2:** Long-term impacts ~~would be~~ (Class III)~~.~~ • **AIR-3:** General Conformity (federal) – not adverse • **AIR-4:** Conflict with Land Use Plans (No Impact) • **AIR-5:** Expose Sensitive Receptors (Class III) • **GHG-1 through GHG-3:** Result in GHG during construction and operations or Conflict with Applicable Plan (Class III)	**Options 1 through 5**: Although air emissions would be greater due to the increased disturbance area, the overall impact findings would be similar to those identified for the proposed project.	**Options 1 and 2:** Although air emissions would be greater due to the increased disturbance area, the overall impact findings would be similar to those identified for the proposed project.	Although air emissions would be greater due to the increased disturbance area, the overall impact findings would be similar to those identified for the proposed project.	Although air emissions would be greater due to the increased disturbance area, the overall impact findings would be similar to those identified for the proposed project.	While removing the electric lines from the National Forest would avoid some of the construction-related emissions and associated impacts, the overall air emissions and associated impacts would increase under this alternative due to the need to conduct restoration activities along with the replacement of these lines in-kind outside the National Forest compared to reconstruction of the lines in place as proposed.
Biological Resources (see Section D.4 for full analysis)					
• **BIO-1:** Vegetation Loss (Class II)	**Options 1 through 5:** Although removing TL626 from	**Options 1 and 2:** Would create additional significant	Although impacts to biological resources would	Although impacts to biological resources	While removing the electric lines from the

Table E-1
Comparison of Impacts for SDG&E's Proposed Project with Federal Proposed Actions

Proposed Project Impact	Federal Proposed Actions				
	TL626 Alternative Routes	*C157 Partial Relocation*	*BIA Proposed Action*	*C440 Mount Laguna Undergrounding*	*No Action Alternative*
• **BIO-2:** Loss of Preserve Areas (Class II) • **BIO-3:** Native Wildlife (Class III) • **BIO-4:** Jurisdictional Resources (Class II) • **BIO-5:** Invasive Species (Class II) • **BIO-6:** Sensitive Species (Class II) • **BIO-7:** Conflict with Adopted Plans (Class III) • **BIO-8:** Interfere with wildlife movement/corridors (Class III)	the Cedar Creek area would reduce some of the biological resource impacts, the overall impacts to biological resources would be greater due to increased ground disturbance required during construction when compared to the proposed project. However, with mitigation identified for the proposed project, the overall impact findings would be similar to those identified for the proposed project.	and adverse impacts to U.S. Fish and Wildlife Service (USFWS)-designated arroyo toad critical habitat (Impact BIO-6) requiring additional mitigation beyond that required for the project. Option 1 would also create additional significant effects under Impact BIO-7 due to conflicts with the City of San Diego conservation lands. Option 2 would avoid this impact.	be greater due to the increased disturbance area, the overall impact findings with mitigation identified for the proposed project would be similar to those identified for the proposed project.	would be greater due to the increased disturbance area, the overall impact findings with mitigation identified for the proposed project would be similar to those identified for the proposed project.	National Forest would avoid some of the biological resources impacts, the overall impacts to biological resources would increase under this alternative when compared to the baseline condition due to the anticipated increase in disturbance area required for restoration and replacement of these lines in-kind outside the National Forest compared to reconstruction of the lines in place as proposed.
Cultural and Paleontological Resources (see Section D.5 for full analysis)					
• **CUL-1:** Historical Resources (Class II) • **CUL-2:** Archaeological Resources (Class II) • **CUL-3:** Human Remains (Class III) • **CUL-4:** TCP (Class III) • **PALEO-1:** Unique	**Options 1 through 5:** While the overall impacts to cultural resources would be greater due to increased ground disturbance required during construction when compared to the proposed project, with mitigation identified for the proposed project, the overall	**Options 1 and 2:** Impacts would be similar to the proposed project.	Impacts would be similar to the proposed project.	While overall impacts to cultural resources would increase under this alternative due to open trenching and associated increased area of disturbance, with mitigation identified for the proposed project,	While removing the electric lines from the National Forest would avoid some of the archaeological impacts, the overall impacts to cultural resources would increase under this alternative due to the

Table E-1
Comparison of Impacts for SDG&E's Proposed Project with Federal Proposed Actions

Proposed Project Impact	Federal Proposed Actions				
	TL626 Alternative Routes	*C157 Partial Relocation*	*BIA Proposed Action*	*C440 Mount Laguna Undergrounding*	*No Action Alternative*
Paleontological Resource or Geologic Feature (Class III)	impact findings for CUL-1, 2, 3 and Paleo 1 would be similar to those identified for the proposed project. Impact CUL-4 under Options 1, 2, 4, and 5 would increase from Class III to Class II			the overall impact findings would be similar to those identified for the proposed project.	increased disturbance area required for restoration and replacement of these lines in-kind outside the National Forest compared to reconstruction of the lines in place as proposed.
Public Health and Safety (see Section D.7 for full analysis)					
• **PHS-1 through PHS-3:** Hazardous Materials Impacts During Construction (Class II) • **PHS-4:** Flight Operations/Aviation Hazards (Class II) • **PHS-5:** Emergency Response (Class III) • **PHS-6:** Structural Failure (Class II) • **PHS-7:** Shock Hazards (Class III)	**Options 1, 2 , 4, and 5:** Would create additional significant and adverse impacts to aviation hazards (Impact PHS-4) requiring additional mitigation beyond that required for the project. **Option 3:** While PHS-1 through PHS-3 and PHS-5 impacts would be greater due to trenching for underground installation, they would remain less than significant with mitigation identified for the project. Option 3 Impact PHS-4, PHS-6 and PHS-7 impacts would be	**Options 1 and 2:** Adverse mitigable impacts (Class II) would be similar to the proposed project.	Adverse mitigable impacts (Class II) would be similar to the proposed project.	While short-term PHS-1 and 2 impacts would be greater than the proposed project due to trenching for underground installation, these impacts would remain less than significant with mitigation. PHS-6 impacts would be reduced where the transmission line is undergrounded.	While removing the electric lines from the National Forest would avoid some of the public health and safety impacts, the overall impacts would be similar under this alternative due to the need to replace these lines in-kind outside the National Forest compared to reconstruction of the lines in place as proposed.

Table E-1
Comparison of Impacts for SDG&E's Proposed Project with Federal Proposed Actions

Proposed Project Impact	Federal Proposed Actions				
	TL626 Alternative Routes	*C157 Partial Relocation*	*BIA Proposed Action*	*C440 Mount Laguna Undergrounding*	*No Action Alternative*
	reduced under Option 3 where the transmission line is undergrounded.				
Fire and Fuels Management (see Section D.8 for full analysis)					
• **FF-1:** Construction, Operation and Maintenance Could Start a Wildfire (Class II) • **FF-2:** Presence of Transmission Lines Could Start a Fire (Class III) • **FF-3:** Reduced Firefighter Effectiveness (Class III) • **FF-4:** Introduction of Non-native Plants (Class II)	**Options 1, 2, 4, and 5:** Impact findings would be similar to the proposed project for Impacts FF-1 and FF-2. Would create additional significant and adverse impacts to aviation safety and therefore Impact FF-3 would require additional mitigation beyond that required for the project. **Option 3:** Impacts FF-2 and FF-3 would be reduced under Option 3 where the transmission line is undergrounded to no impact.	**Options 1 and 2:** Impact findings would be similar to the proposed project.	Impact findings would be similar to the proposed project.	Impacts FF-2 and FF-3 would be reduced to no impact where the transmission line is undergrounded, other impacts would be similar.	Impacts would be similar to the proposed project.
Hydrology and Water Quality (see Section D.9 for full analysis)					
• **HYD-1 and HYD-2**: Short-Term Construction Activities Would Degrade Water Resources (Class II) • **HYD-3:** Groundwater Supply (Class II)	**Options 1, 2, 4, and 5:** Impact findings for HYD-1, HYD-2, and HYD-3 would be similar to the proposed project. Options 1, 2, and 4 would reduce Class I HYD-4 impacts associated with access to TL626 to less	**Options 1 and 2:** Impact findings would be similar to the proposed project.	Impact findings would be similar to the proposed project.	While HYD-1 and 2 impacts would increase due to trenching activities, impact findings would remain Class II and similar to the proposed project.	While removing the electric lines from the National Forest would avoid HYD-4 Class I impacts associated with access roads, other impacts to hydrology

Table E-1
Comparison of Impacts for SDG&E's Proposed Project with Federal Proposed Actions

Proposed Project Impact	Federal Proposed Actions				
	TL626 Alternative Routes	*C157 Partial Relocation*	*BIA Proposed Action*	*C440 Mount Laguna Undergrounding*	*No Action Alternative*
• **HYD-4:** Access Roads (Class I and II) • **HYD-5:** Maintenance - Vegetation Management, Pesticide, and Herbicide Application (Class II)	than significant (Class II) - Option 5 would remain Class I. **Option 3:** While Option 3 would reduce Class I HYD-4 impacts associated with access to TL626, it would create additional significant and adverse impacts due to crossing numerous surface hydrological features (Impacts HYD-1 and HYD-2) and therefore require additional mitigation beyond that identified for the project.			HYD-3 would be similar to the proposed project. HYD-4 and 5 would be reduced from Class II to no impact.	and water quality would be similar to the proposed project due to the need to replace the existing lines in-kind outside the National Forest.
Land Use (see Section D.10 for full analysis)					
• **LU-1:**Temporary Disturbance Due to Construction (Class II) • **LU-2**:Divide an Established Community (No Impact) • **LU- 3:** Conflict with Applicable Land Use Plan: (C157 Class I), and TL626 and C442 (Class II) (all others Class III)	**Options 1 and 2** : Would not avoid all Impact LU-3 Class II impacts associated with TL626. Other impact findings (no impact, Class II, and Class III) would be greater due to development of new 5-mile (Options 1 and 2) ROW when compared to the reconstruction of TL626 in place. **Option 3 and 4:** Would increase temporary impacts due to increased disturbance.	**Options 1 and 2** : Would reduce Impact LU-3 Class I impacts associated with C157 to no impact. All other impacts would be nearly identical to those of the proposed project with the exception of Option 1, which would conflict with City of San Diego policies.	Impacts would be nearly identical to those of the proposed project; temporary impacts would be slightly greater due to the greater disturbance area required.	While LU-1 impacts would increase due to increased disturbance, with mitigation identified for the project, the impact finding would be similar to the proposed project.	Removing the electric lines from the National Forest would avoid LU-3 Class I impacts associated with TL626 and C157. All other land use impacts would be similar or greater to those identified for the proposed project due to the need to replace these lines in-kind outside the National Forest compared to

Table E-1
Comparison of Impacts for SDG&E's Proposed Project with Federal Proposed Actions

Proposed Project Impact	Federal Proposed Actions				
	TL626 Alternative Routes	*C157 Partial Relocation*	*BIA Proposed Action*	*C440 Mount Laguna Undergrounding*	*No Action Alternative*
	Would reduce long-term impact LU-3 Class II impacts associated with TL626. **Option 4:** While Option 4 would reduce Class II LU-3 impacts associated with TL626 Other impact findings (No Impact, Class II, and Class III) would be greater due to development of new 9-mile ROW when compared to the reconstruction of TL626 in place. **Option 5:** Impact findings would be similar to the proposed project.				reconstruction of the lines in place as proposed.
Noise (see Section D.11 for full analysis)					
• **NOI-1 and NOI-2:** Construction Noise (Class II) • **NOI-3 and NOI-4:** Corona Noise/Long-Term Impacts (Class III).	**Options 1 through 5:** While construction-related impacts would be greater due to increased ground disturbance required during construction when compared to the proposed project, with mitigation identified for the proposed project, the overall impact findings would be similar to those identified for	**Options 1 and 2:** Noise impact findings would be similar to the proposed project.	Noise impact findings would be similar to the proposed project.	While construction-related impacts would be greater due to increased ground disturbance required during construction when compared to the proposed project, with mitigation identified for the proposed project, the overall impact findings	While removing the electric lines from the National Forest would avoid some of the noise impacts, the overall impacts due to project-related noise would increase under this alternative due to the increased construction /disturbance area

Table E-1
Comparison of Impacts for SDG&E's Proposed Project with Federal Proposed Actions

Proposed Project Impact	Federal Proposed Actions				
	TL626 Alternative Routes	*C157 Partial Relocation*	*BIA Proposed Action*	*C440 Mount Laguna Undergrounding*	*No Action Alternative*
	the proposed project. Operations noise impacts would be marginally reduced under Option 3 where the transmission line is undergrounded, but would increase under Options 1, 2, and 4 due to the new and longer ROW affected.			would be similar to those identified for the proposed project. Operations noise impacts would be marginally reduced where the transmission line is undergrounded.	needed for restoration as well as for replacement of these lines in-kind outside the National Forest, compared to reconstruction of the lines in place as proposed.
Public Services and Utilities (see Section D.12 for full analysis)					
• **PSU-1:** Effects on facilities relating to the provision of Fire Protection, Water Supply, and Telecommunications - (Class II). • **PSU-2: and PSU-3:** Solid Waste Disposal Facilities and Disruption of Electrical Service (Class III).	**Options 1 through 5:** Impact findings would be similar to the proposed project.	**Options 1 and 2:** Impact findings would be similar to the proposed project.	Impact findings would be similar to the proposed project.	While impacts caused by possible disruptions would increase where the transmission line is undergrounded, impact findings would be similar to the proposed project.	Impacts would be similar to the proposed project.

Table E-1
Comparison of Impacts for SDG&E's Proposed Project with Federal Proposed Actions

Proposed Project Impact	Federal Proposed Actions				
	TL626 Alternative Routes	*C157 Partial Relocation*	*BIA Proposed Action*	*C440 Mount Laguna Undergrounding*	*No Action Alternative*
Recreation (see Section D.13 for full analysis)					
• **REC-1**: Reduce Access During Construction - Temporary construction impacts to access to recreation and wilderness areas would be adverse but mitigable (Class II - TL682, TL626, TL625, TL629, TL6923, C79, and C157; all others are Class III). • **REC-2:** Project Components Reduce Access to Recreation Areas (Class III) • **REC-3:** Unauthorized Access (Class II)	**Options 1 through 5**: Impact findings would be similar to those of the proposed project.	**Options 1 and 2:** Impact findings would be similar to those of the proposed project.	Impact findings would be similar to those of the proposed project.	While construction-related Impacts REC-1 and REC-2 would be greater due to increased ground disturbance required during construction when compared to the proposed project, with mitigation identified for the proposed project, the overall impact findings would be similar to those identified for the proposed project.	While removing the electric lines from the National Forest would avoid some of the recreation impacts, the overall impacts to recreation would be similar or greater to those identified for the proposed project due to the need to replace these lines in-kind outside the National Forest compared to reconstruction of the lines in place as proposed.
Transportation and Traffic (see Section D.14 for full analysis)					
• **TRANS-1 through TRANS-5:** Short-term construction activities would cause Class III impacts to traffic and roadways.	**Options 1, 2, 4, and 5:** Impact findings would be similar to those of the proposed project. **Option 3:** While construction-related impacts would be greater due to trenching within Boulder Creek Road when	**Options 1 and 2:** Class III impacts would be similar to the proposed project.	Class III impacts would be similar to the proposed project.	While construction-related impacts would be greater due to increased ground disturbance within existing roadways during construction, with APMs and mitigation identified for the proposed project,	Class III impacts would be similar to the proposed project.

Table E-1
Comparison of Impacts for SDG&E's Proposed Project with Federal Proposed Actions

Proposed Project Impact	Federal Proposed Actions				
	TL626 Alternative Routes	*C157 Partial Relocation*	*BIA Proposed Action*	*C440 Mount Laguna Undergrounding*	*No Action Alternative*
	compared to the proposed project, with APMs and mitigation identified for the proposed project, the overall impact findings would be similar to those identified for the proposed project.			the overall impact findings would be similar to those identified for the proposed project.	

Note: Impact conclusions noted in Table E-1 generally indicate whether the alternative increases, reduces, or would have similar impact level classifications, as defined in Section D.1 of this EIR/EIS, when compared to the proposed project. For example, while undergrounding a portion of a transmission line would reduce and avoid some of the visual impacts, the overall impact findings (i.e., determination that the impact is not adverse under NEPA and less than significant under CEQA (Class III)) would be similar to those identified for the proposed project. In areas where the alternative would change the requirement for mitigation and/or impact classification, the impact conclusion indicates whether the alternative increases or decreases impacts identified for the proposed project.

E.2.3.1 TL626 Alternative Routes

Options 1 and 2 SDG&E Proposed Overhead Alignments Through/Around Inaja and Cosmit Reservation Lands

Option 1 and 2 would relocate a portion of TL626 out of the Cedar Creek riparian area, which would reduce significant and unavoidable (Class I) impacts under CEQA due to erosion and water quality impacts in the Cedar Creek riparian area (Impact HYD-4). These impacts would be reduced to less than significant with mitigation under CEQA (Class II).

While relocating a segment of TL626 as proposed under Options 1 and 2 would avoid Class II conflicts with resource management standards identified in the Forest Service's Land Management Plan (LMP) for the Cedar Creek riparian area (Impact LU-3), these options, as summarized below and in Table E-1, would create additional impacts when compared to replacing TL626 in place as proposed due to the increased area of disturbance required along with the establishment of a new overhead ROW where none currently exists. Options 1 and 2 would extend TL626 to approximately 20.6 and 20.7 miles in length compared to the reconstruction of 18.8 miles of the existing TL626 in place as proposed and would develop over 5 miles of new overhead electric utility ROW in an undeveloped and undisturbed ROW. As summarized in Table E-1, when compared to the reconstruction of the existing TL626 in place as proposed by SDG&E, Options 1 and 2 would result in the following additional significant effects beyond those that would be caused by SDG&E's proposed project:

- **Impact VIS-3 (visual character).** As a result of placing new poles and power lines in an area where none currently exist, Impact VIS-3 would change from less than significant under CEQA (Class III) to significant and unavoidable (Class I) under CEQA. Mitigation Measure MM VIS-1 has been provided to minimize the visual prominence and contrast. However, due to the height of poles, open visibility of the new overhead ROW under Options 1 and 2, and proximity of residences, there are no effective screening methods available to reduce the significant visual contrast of the introduction of a new overhead 69-kilovolt (kV) transmission line ROW where none currently exists.
- **Impact CUL-4 (traditional cultural properties)**.As a result of placing new poles and power lines in an area where none currently exist, Impact CUL-4 would change from less than significant under CEQA (Class III) to less than significant with mitigation (Class II).
- **Impact PH-4 (aviation hazards).** As a result of placing new poles and power lines in an area where none currently exist, Impact PH-4 would require additional mitigation and therefore change from less than significant (Class III) to less than significant with mitigation under CEQA (Class II).

- **Impact FF-3 (reduced firefighter effectiveness).** As a result of placing new poles and power lines in an area where none currently exist, Impact FF-3 would require additional mitigation and therefore would change from less than significant to less than significant with mitigation under CEQA (Class II).
- **Impact LU-2 (divide an established community).** Due to placement of new overhead ROW where none currently exists on the periphery of the community of Pine Hills, Impact LU-2 would require additional mitigation and therefore change from less than significant (Class III) to less than significant with mitigation under CEQA (Class II).

Option 3 Partial Underground Relocation in Boulder Creek Road

Option 3 would relocate a portion of TL626 out of the Cedar Creek riparian area, which would reduce significant and unavoidable (Class I) impacts under CEQA due to erosion and water quality impacts in the Cedar Creek riparian area (Impact HYD-4). Relocating a segment of TL626 as proposed under Option 3 would also avoid Class II impacts associated with conflicts with resource management standards identified in the Forest Service's LMP for the Cedar Creek riparian area (Impact LU-3) and would also reduce long-term impacts due to extreme weather and fire hazards (Impacts PHS-1 through PHS-3). These long-term impacts would be reduced from less than significant with mitigation under CEQA (Class II) to less than significant under CEQA (Class III). This alternative would also remove the access road through Cedar Creek Gorge thereby reducing the Class II impacts associated with unauthorized access in this area of TL626 (Impact REC-3).

Option 3 would extend TL626 from 18.8 miles in length to approximately 26.3 (Option 3a) or to 22.9 (Option 3b) miles in length depending on the selected option compared to the reconstruction of 18.8 miles of the existing TL626 in place as proposed and would increase short-term construction impacts associated with trenching and boring activities over a 11.4-mile (Option 3a) to 6.3-mile (Option 3b) segment along with a new 1-mile overhead segment, which would increase the disturbance area when compared to the reconstruction of the existing TL626 in place as proposed. Because undergrounding within Boulder Creek Road would create a substantially larger disturbance area and would cross more hydrological features compared to reconstruction of TL626 in place as proposed by SDG&E, a substantial increase in water quality impacts would occur during short-term construction activities due to additional runoff, sedimentation, or erosion. Due to the number of creek crossings, impacts from installation of the underground electric line would be considered significant and would require additional mitigation beyond that identified for the proposed project. As summarized in Table E-1, when compared to the reconstruction of the existing TL626 in place as proposed by SDG&E, Option 3 would result in the following additional significant effects beyond those that would be caused by SDG&E's proposed project:

- **Impacts VIS-3 (character) and VIS-5 (scenic integrity).** The 1-mile overland component in undisturbed ROW would generally create noticeable contrast in form, line, color, and texture when viewed alongside existing natural elements in the landscape (e.g., trees, shrubs) and therefore would create an adverse impact to the existing visual character (Impact VIS-3) and scenic integrity (VIS-5). Mitigation Measure MM VIS-1 has been provided to minimize the visual prominence and contrast. However, due to the height of poles and establishment of a new overhead line across a sparsely developed landscape, Impacts VIS-3 and VIS-5 would be significant and unmitigable (Class I) as there are no effective screening methods available to reduce the significant visual contrast of the introduction of a new overhead 69-kilovolt (kV) transmission line ROW where none currently exists.
- **Impacts HYD-1 and HYD-2 (short-term construction activities could degrade water resources).** This alternative would require additional mitigation beyond that identified for the proposed project because undergrounding during construction within Boulder Creek Road would create a substantially larger disturbance area and would cross more hydrological features compared to reconstruction of TL626 in place as proposed. With additional mitigation, impacts can be mitigated and would be less than significant with mitigation (Class II) under CEQA.

Option 4 Overhead Relocation along Boulder Creek Road

Option 4 would relocate a portion of TL626 out of the Cedar Creek riparian area, which would reduce significant and unavoidable (Class I) impacts under CEQA due to erosion and water quality impacts in the Cedar Creek riparian area (Impact HYD-4). These impacts would be reduced to less than significant with mitigation under CEQA (Class II). Relocating a segment of TL626 as proposed under Option 4 would also avoid Class II impacts associated with conflicts with resource management standards identified in the Forest Service's LMP for the Cedar Creek riparian area (Impact LU-3). This alternative would also remove the access road through Cedar Creek Gorge thereby reducing the Class II impacts associated with unauthorized access in this area of TL626 (Impact REC-3).

While Option 4 would reduce identified effects associated with resource management standards identified in the Forest Service's LMP for the Cedar Creek riparian area, this alternative would create additional impacts when compared to replacing TL626 in place as proposed due to the increased area of disturbance required. Option 4 would extend TL626 to approximately 23.5 miles in length compared to the reconstruction of 18.8 miles of the existing TL626 in place and would develop approximately 7.5 miles of new overhead electric utility ROW along Boulder Creek Road and 2.1 miles of overland ROW in undeveloped areas where none currently exists. As summarized in Table E-1, when compared to the reconstruction of the existing TL626 in place as

proposed by SDG&E, Option 4 would result in the following additional significant effects beyond those that would be caused by SDG&E's proposed project:

- **Impact VIS-3 (visual character) and Impact VIS-5 (scenic integrity).** As a result of placing new poles and power lines in an area where none currently exist, Impact VIS-3 and VIS-5 would change from less than significant under CEQA (Class III) to significant and unavoidable (Class I) under CEQA. Mitigation Measure MM VIS-1 has been provided to minimize the visual prominence and contrast. However, due to the height of poles, open visibility of the new overhead ROW under Option 4 and proximity of residences, there are no effective screening methods available to reduce the significant visual contrast of the introduction of a new overhead 69 kV transmission line ROW where none currently exists.
- **Impact CUL-4 (traditional cultural properties).** As a result of placing new poles and power lines in an area where none currently exist, Impact CUL-4 would change from less than significant under CEQA (Class III) to less than significant with mitigation (Class II).
- **Impact PHS-4 (flight operations and aviation hazards).** As a result of placing new poles and power lines in an area where none currently exist, Impact PHS-4 would require additional mitigation and change from less than significant under CEQA (Class III) to less than significant with mitigation under CEQA (Class II).
- **Impact FF-3 (reduced firefighter effectiveness).** As a result of placing new poles and power lines in an area where none currently exist, Impact FF-3 would require additional mitigation and change from less than significant under CEQA (Class III) to less than significant with mitigation under CEQA (Class II).

Option 5 Reroute and Undergrounding around Inaja Picnic Area

Option 5 would reduce Impact VIS-1 (Scenic Vista) from significant and unavoidable (Class I) to less than significant (Class III) under CEQA and has the potential to reduce long-term direct collision-related impacts to golden eagles (*Aquila chrysaetos)* as the existing line crosses over the San Diego River gorge at higher elevations and is located within 1 mile of a historical golden eagle nest. As summarized in Table E-1, Option 5 would result in the following significant effects in addition to those that would be caused by SDG&E's proposed project:

- **Impact PH-4 (aviation hazards).** As a result of placing new poles and power lines in an area where none currently exist, Impact PHS-4 would require additional mitigation and change from less than significant (Class III) to less than significant with mitigation under CEQA (Class II).

- **Impact FF-3 (reduced firefighter effectiveness).** As a result of placing new poles and power lines in an area where none currently exist, Impact FF-3 would require additional mitigation and change from less than significant (Class III) to less than significant with mitigation under CEQA (Class II).

E.2.3.2 C157 Partial Relocation to Avoid Designated Wilderness

The relocation of C157 to avoid wilderness areas would reduce significant and unavoidable (Class I) impacts under CEQA to land use conflicts associated with the provisions of the Wilderness Act (Impact LU-3). This impact would be reduced to no impact through avoidance. As shown in Table E-1, both options would require a slight increase in area of disturbance when compared to the reconstruction of the existing C157 in place as proposed and, as summarized in Table E-1, would result in the following significant effects in addition to those that would be caused by SDG&E's proposed project:

Option 1 SDG&E Proposed Alignment between Two Wilderness Areas

- **Impact BIO-6 (arroyo toad critical habitat).** Option 1 would directly impact arroyo toad critical habitat and therefore would require additional mitigation and change from less than significant (Class III) to less than significant with mitigation under CEQA (Class II).
- **Impact BIO-7 (conflicts with San Diego City conservation lands):** can be mitigated by avoidance through selecting C157 Option 2.

Option 2 City of San Diego Modified Alignment

- **Impact BIO-6 (arroyo toad critical habitat).** Option 2 would directly impact arroyo toad critical habitat and therefore would require additional mitigation and change from less than significant (Class III) to less than significant with mitigation under CEQA (Class II).

E.2.3.3 C440 Mount Laguna Underground Alternative

This alternative would have greater short-term impacts due to the increased disturbance area required for construction when compared to reconstruction of the existing electric lines in place as proposed by the project. While undergrounding C440 within the Mount Laguna Recreation Area would avoid introducing elements (i.e., weathered steel poles) that would create noticeable deviations from the established visual character of the landscape, as discussed in Section D.2.3.3, C440 is not visible from designated scenic vistas (Impact VIS-1) and the alignment tends to be setback from the Sunrise Scenic Byway (Impact VIS-2) and therefore elements proposed by the

project would be difficult to detect in the landscape from key public viewpoints. Therefore, the determination that visual impacts (including Impact VIS-1 and VIS-–2) would be less than significant under CEQA (Class III) for SDG&E's proposed project would be similar under this alternative. Additional undergrounding of C440, as proposed under this alternative, would reduce long-term impacts due to the probability of wildfire during operations or interference with firefighting (impacts to FF-2 and 3) from less than significant with mitigation to no impact.

E.2.3.4 BIA Proposed Action

As shown in Table E-1, while this alternative would reduce visual, recreational, fire, public safety, and land use impacts, the impact findings would be similar when compared to the proposed project.

E.2.3.5 No Action Alternative

Under the No Action Alternative, SDG&E's proposed project would not be constructed. All environmental impacts associated with the construction and operation of the proposed project would be eliminated. SDG&E's existing permits to operate and maintain its facilities on National Forest lands would not be renewed and therefore per the existing permits, SDG&E would be required to remove its electric facilities from the visual landscape, and areas disturbed by construction and operation and maintenance of these facilities would be restored to their pre-project conditions. Restoring to the pre-project site conditions would entail recontouring, grading, stabilization of disturbed surfaces, seeding, and planting to restore the affected areas, which would generate short-term temporary impacts to the environment that were either found under CEQA to be less than significant (Class III), and/or following implementation of mitigation measures presented in this EIR/EIS to be less than significant with mitigation implemented (Class II).

In order that the decision makers can compare the impacts of approving the project with the impacts of not approving the project, the events or actions that would be reasonably expected to occur in the foreseeable future if the MSUP is not approved by the Forest Service must also be considered.

Removal of SDG&E electric facilities from the National Forest would materially reduce and/or eliminate the ability of SDG&E to provide power to the area now served by these facilities. To avoid these consequences, SDG&E would be required to implement additional transmission upgrades. It is reasonably expected that the existing 69 kV and 12 kV electric lines within the National Forest, removed under the No Action Alternative, would be replaced in-kind outside the National Forest on an as-needed basis and therefore are assumed for purposes of the analysis conducted in this EIR/EIS, to be part of the No Action Alterative. As summarized in Table E-1, impacts resulting from removal and replacement of electric facilities under the No Action alternative would (when compared to

reconstruction of the existing electric lines in place as proposed by the project), in most cases, be equal to or greater when compared to the proposed project due to the increased disturbance area required for both the restoration and removal of existing facilities combined with the construction of new in-kind facilities outside the National Forest.

E.3 Comparison of SDG&E's Proposed Project with Additional Alternatives

E.3.1 Additional Alternatives Considered

As described in Section C and summarized below, in addition to the No Project Alternative, the EIR/EIS evaluates the following additional alternatives to SDG&E's proposed project.

Partial Removal of Overland Access Roads

This alternative would remove up to ~~10~~11.5 miles of exclusive use access roads that are in general greater than 25% grade and in close proximity to creeks, particularly along TL626 (Boulder Creek) and TL625 (Barber Mountain/Carveacre).

Removal of TL626 from Service

Under this alternative, TL626 would be removed from service. SDG&E would implement the following system upgrades and changes in order to provide service lost due to the removal of TL626:

- Upgrade the existing 6-mile 69 kV TL6931 by fire hardening ~~and adding a circuit~~ from the Boulevard Substation to the Crestwood Substation. ~~or~~
- Modify existing TL625 by constructing a new 3-mile double circuit loop-in into the Suncrest Substation. The new double circuit 69 kV line would primarily cross National Forest ~~Service~~ System lands immediately adjacent to the 500 kV Sunrise Powerlink line. A new transformer and substation rack would be installed within the existing footprint of the Suncrest Substation to establish the new 69 kV source.
- In order to serve existing customers, a 6.8-mile section of TL626 that is co-located with C79 would be converted to a 12 kV fire hardened distribution line and at Boulder Creek Substation. ~~this~~ This alternative, for purposes of the analysis conducted in this EIR/EIS, would also convert a 6.5-mile section of TL626 from 69 kV to 12 kV distribution between the Santa Ysabel and Boulder Creek Substations. Note: as discussed in Section C, Alternatives, of this EIR/EIS, upon agreement with the existing customer at Boulder Creek Substation, SDG&E is free to provide an off-grid solution, thereby eliminating the need to convert a 6.5-mile section of TL626 from 69 kV to 12 kV distribution between the Santa Ysabel and Boulder Creek Substations. The off-grid solution for on-site use is

not subject to CPUC or Forest Service approval and is allowed by the County of San Diego upon approval of a building permit. A building permit from the County of San Diego is a ministerial action and not subject to CEQA or NEPA review.

No Project Alternative

Under the No Project Alternative, the proposed power line replacement projects would not be built, and the existing SDG&E electric facilities would remain. Operation and maintenance of SDG&E electrical facilities would continue and include routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks and would be based on the requirements of the existing permits.

E.3.2 CEQA Comparison of Impacts for SDG&E's Proposed Project with Additional Alternatives and the No Project Alternative

A detailed analysis of environmental impacts and mitigation for all project alternatives is provided in Sections D.2 through D.14. A comparison of the environmental effects for SDG&E's proposed project and additional alternatives considered is provided in Table E-2. See Section E.3.3, Overall Ranking of the Additional Alternatives, Including the No Project Alternative.

Table E-2
Comparison of Impacts for SDG&E's Proposed Project with Additional Alternatives

Proposed Project Impact	Additional Alternatives		
	Partial Removal of Overland Access Roads	*Removal of TL626 from Service*	*No Project Alternative*
Visual Resources (see Section D.2 for full analysis)			
• **VIS-1:** Scenic Vista (Class ITL626 (Inaja Scenic Overlook. All others III) • **VIS-2:** Scenic Highway (Class II C440 and all others III) • **VIS-3:** Visual Character (Class II limited poles only and all others III) • **VIS-4:** Glare/Light (Class III) • **VIS-5:**Scenic Integrity (Class II certain poles TL625, TL626, TL629, TL682, C440, C157and all others III)	While removal of certain segments of access roads would reduce and avoid some of the visual impacts identified for the proposed project, overall visual impacts findings would be identical to those of the proposed project.	Would reduce Class I impact of TL626 from the Inaja Scenic Overlook. All other impact findings would, in most cases, be similar or reduced when compared to the proposed project due to the removal of TL626 out of areas managed as having high value resource protection and replaced with facilities requiring a similar disturbance footprint within or immediately adjacent to existing overhead utility ROWs.	Would eliminate all identified impacts to visual resources associated with construction of the proposed power line replacement projects. The existing conditions, which include lands that are intermittently traversed by existing infrastructure (transmission and distribution towers, wires, and access roads) operated by SDG&E, would remain at these sites, and the ongoing conflicts with the Forest Service LMP High scenic integrity objectives would continue, and therefore the severity of impacts under existing conditions to visual resources would not change. It is anticipated that over time, individual wood poles could be replaced with steel poles during operations and maintenance (O&M) activities due to possible safety issues and therefore, long-term visual impacts over time are anticipated to be similar.
Air Quality (see Section D.3 for full analysis) and Greenhouse Gas Emissions (see Section D.6 for full analysis)			
• **AIR-1:** Short-term construction-related VOC, NO_x, CO, and $PM_{\cancel{10}2.5}$ air emissions (Class I), other short-term air quality impacts (toxic air contaminants; Class III).	Impact findings would be similar to the proposed project and would include adverse and unmitigable AIR-1 impacts (Class I).	Impact findings would be similar to the proposed project and would include adverse and unmitigable AIR-1 impacts (Class I).	Would eliminate all identified air emissions and associated air quality and GHG impacts associated with construction of the proposed power line replacement projects including Impact AIR-1 Class I impacts.

Table E-2
Comparison of Impacts for SDG&E's Proposed Project with Additional Alternatives

Proposed Project Impact	Additional Alternatives		
	Partial Removal of Overland Access Roads	*Removal of TL626 from Service*	*No Project Alternative*
• **AIR-2:** Long-term impacts (Class III). • **AIR-3:** General Conformity (federal) – not adverse • **AIR-4:** Conflict with Land Use Plans (No Impact) • **AIR-5:** Expose Sensitive Receptors (Class III) • **GHG-1 through GHG-3:** Result in GHG during construction and operations or Conflict with Applicable Plan (Class III)			
Biological Resources (see Section D.4 for full analysis)			
• **BIO-1:** Vegetation Loss (Class II) • **BIO-2:** Loss of Preserve Areas (Class II) • **BIO-3:** Native Wildlife (Class III) • **BIO-4:** Jurisdictional Resources (Class II) • **BIO-5:** Invasive Species (Class II) • **BIO-6:** Sensitive Species (Class II) • **BIO-7:** Conflict with Adopted Plans (Class III) • **BIO-8:** Interfere with wildlife movement/corridors (Class III)	Would reduce Impact BIO-4 Class II impacts to Class III. Other impact findings (Class II and III) would be nearly identical when compared to the proposed project.	Impact findings would, in most cases, be similar or reduced when compared to the proposed project due to the removal of TL626 out of areas managed as having high-value resource protection and replaced with facilities requiring a similar disturbance footprint within or immediately adjacent to existing overhead utility ROWs.	Would eliminate all identified impacts to biological resources associated with construction of the proposed power line replacement projects. The existing conditions, which include ongoing impacts to biological resources associated with erosion of steep access roads, fire hazards, and impacts to sensitive species and habitat due to ongoing operations and maintenance of existing infrastructure (transmission and distribution towers, wires, and access roads) operated by SDG&E, would continue and therefore the severity of impacts under existing conditions to biological resources would not change.

Table E-2
Comparison of Impacts for SDG&E's Proposed Project with Additional Alternatives

Proposed Project Impact	Additional Alternatives		
	Partial Removal of Overland Access Roads	*Removal of TL626 from Service*	*No Project Alternative*
Cultural and Paleontological Resources (see Section D.5 for full analysis)			
• **CUL-1:** Historical Resources (Class II) • **CUL-2:** Archaeological Resources (Class II) • **CUL-3:** Human Remains (Class III) • **CUL-4:** TCP (Class III) • **PALEO-1:** Unique Paleontological Resource or Geologic Feature (Class III)	Impact findings would be similar to the proposed project.	Impact findings would be nearly identical to those of the proposed project.	Would eliminate all identified impacts to cultural and paleontological resources associated with construction of the proposed power line replacement projects. * Operations and maintenance of SDG&E electrical facilities would continue and include routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks. While these activities represent a potential impact to cultural resources, these activities would not increase in duration, intensity, or frequency over existing conditions; therefore, no impacts over existing conditions to cultural resources would occur.
Public Health and Safety (see Section D.7 for full analysis)			
• **PHS-1 through PHS-3:** Hazardous materials impacts during construction (Class II). • **PHS-4:** Flight Operations/Aviation Hazards (Class II) • **PHS-5:** Emergency Response (Class III) • **PHS-6:** Structural Failure (Class II) • **PHS-7:** Shock Hazards (Class III)	May increase impacts to PHS-4 due to additional helicopter use; however, overall impact findings would be similar to the proposed project.	Impact findings would, in most cases, be similar when compared to the proposed project due to the removal of TL626 and replacement with facilities requiring a similar disturbance footprint within or immediately adjacent to existing overhead utility ROWs.	Would eliminate all identified impacts to public health and safety associated with construction of the proposed power line replacement projects. The ongoing public health and fire risks associated with structural failure Impact PHS-6 due to extreme weather conditions would continue as further discussed in Section D.8, Fire and Fuels.

Table E-2
Comparison of Impacts for SDG&E's Proposed Project with Additional Alternatives

Proposed Project Impact	Additional Alternatives		
	Partial Removal of Overland Access Roads	*Removal of TL626 from Service*	*No Project Alternative*
Fire and Fuels Management (see Section D.8 for full analysis)			
• **FF-1:** Construction, Operation, And Maintenance Could Start A Wildfire (Class II). • **FF-2:** Presence Of Transmission Lines Could Start a Fire (Class III). • **FF-3:** Reduced Firefighter Effectiveness (Class III). • **FF-4:** Introduction of Non-native Plants (Class II)	Impact findings would be similar to the proposed project.	Impact findings would, in most cases, be similar when compared to the proposed project due to the removal of TL626 out of high fire hazard areas and replaced with facilities requiring a similar disturbance footprint within or immediately adjacent to existing overhead utility ROWs.	Would eliminate Impact FF-1 associated with construction of the proposed power line replacement projects. The fire hardening of the existing electric lines as proposed would not occur and the fire hazards associated with the existing electric lines would remain and therefore the risks associated with starting a fire (Impact FF-2) would be higher.
Hydrology and Water Quality (see Section D.9 for full analysis)			
• **HYD-1 and HYD-2:** Short-term construction activities would degrade water resources (Class II). • **HYD-3:** Groundwater Supply (Class II) • **HYD-4:** Access Roads (Class I and II) • **HYD-5:** Maintenance - Vegetation Management, Pesticide, and Herbicide Application (Class II)	HYD-4 Class I impacts would be eliminated associated with access to TL626. Other impact findings would remain similar.	HYD-4 Class I impacts would be eliminated associated with access to TL626. Other impact findings would, in most cases, be similar when compared to the proposed project due to the removal of TL626 and replacement with facilities requiring a similar disturbance footprint within or immediately adjacent to existing overhead utility ROWs.	Would eliminate all identified hydrology and water quality impacts associated with construction of the proposed power line replacement projects. The existing erosion and gullying conditions in steep-slope areas along exclusive use access roads and within the SDG&E ROW would continue to be repaired as needed (seasonally) by SDG&E, typically by importing soil and filling in rutted areas and potholes. This would represent an ongoing degradation issue as excessive levels of sediment would continue to be carried by stormwater flows into waterways and locally increase turbidity levels in creeks (when flowing). Operation and maintenance activities would not increase in duration, intensity, or frequency over existing conditions;

Table E-2
Comparison of Impacts for SDG&E's Proposed Project with Additional Alternatives

Proposed Project Impact	Additional Alternatives		
	Partial Removal of Overland Access Roads	*Removal of TL626 from Service*	*No Project Alternative*
			therefore, the severity of impacts under existing conditions to hydrology and water quality would not change.
Land Use (see Section D.10 for full analysis)			
• **LU-1:**Temporary Disturbance Due to Construction (Class II) • **LU-2**:Divide an Established Community (No Impact) • **LU- 3:** Conflict with Applicable Land Use Plan: C157 (Class I), and TL626 and C442 (Class II), all others Class III	Would reduce Impact LU-3 Class II impacts associated with Cedar Creek riparian area and LMP amendment associated with access to TL626. All other impact findings would be nearly identical to those of the proposed project.	Would reduce Impact LU-3 Class II impacts associated with Cedar Creek riparian area and LMP Amendment to Class III. All other land use impact findings would, in most cases, be similar when compared to the proposed project due to the removal of TL626 and replacement with facilities requiring a similar disturbance footprint within or immediately adjacent to existing overhead electric utility ROWs.	Would eliminate all identified impacts to land use associated with construction of the proposed power line replacement projects. The ongoing land use conflicts with the Forest Service LMP associated with TL626 and C442 and conflicts with the Wilderness would continue, and therefore, no additional impacts over existing conditions to land use and planning would occur.
Noise (see Section D.11 for full analysis)			
• **NOI-1 and NOI-2:** Construction Noise (Class II) • **NOI-3 and NOI-4:** Corona Noise/Long-Term Impacts (Class III).	While long-term impacts may increase due to the potential increase in helicopter use required for operations and maintenance activities, impact findings would be similar to the proposed project.	Noise impact findings would, in most cases, be similar when compared to the proposed project due to the development of replacement facilities requiring a similar disturbance footprint within or immediately adjacent to existing overhead electric utility ROWs.	Would eliminate all identified noise impacts associated with construction of the proposed power line replacement projects.
Public Services and Utilities (see Section D.12 for full analysis)			
• **PSU-1:** Effects on Fire, Water Supply, and Telecommunications facilities (Class II). • **PSU-2: and PSU-3:** Solid Waste Disposal Facilities and Disruption of Electrical Service (Class III).	Impact findings would be similar to the proposed project.	While disruptions to customers served by TL626 would likely be greater, impact findings would be similar to the proposed project.	Would eliminate all identified impacts to public services and utilities associated with construction of the proposed power line replacement projects.

Table E-2
Comparison of Impacts for SDG&E's Proposed Project with Additional Alternatives

Proposed Project Impact	Additional Alternatives		
	Partial Removal of Overland Access Roads	*Removal of TL626 from Service*	*No Project Alternative*
Recreation (see Section D.13 for full analysis)			
• **REC-1:** Reduce Access During Construction (Class II). • **REC-2:** Project Components Reduce Access to Recreation Areas (Class III) • **REC-3:** Unauthorized Access (Class II)	Impact findings would be similar to those of the proposed project.	Removal of TL626 from a high resource protection area would reduce Class II impacts associated with unauthorized access (Rec-3) to Class III. Impact findings to REC-1 and REC-2 would be similar to those of the proposed project.	While the no project alternative would eliminate identified impacts to recreation associated with construction of the proposed power line replacement projects, operation and maintenance of SDG&E electrical facilities would continue and include the existing use of SDG&E's access roads, and therefore unauthorized access (Impact REC-3) would be similar to that identified for the proposed project.
Transportation and Traffic (see Section D.14 for full analysis)			
• **TRANS-1 through TRANS-5:** Short-term construction activities would cause Class III impacts to traffic and roadways.	Impact findings would be similar to the proposed project.	Impacts would be similar to those of the proposed project.	Would eliminate all identified traffic impacts associated with construction of the proposed power line replacement projects.

Note: Impact conclusions noted in Table E-2 generally indicate whether the alternative increases, reduces, or would have similar impact level classifications, as defined in Section D.1 of this EIR/EIS, when compared to the proposed project. For example, while undergrounding a portion of a transmission line would reduce and avoid some of the visual impacts, the overall impact findings (i.e., determination that the impact is not adverse under NEPA and less than significant under CEQA (Class III)) would be similar to those identified for the proposed project. In areas where the alternative would change the requirement for mitigation and/or impact classification, the impact conclusion indicates whether the alternative increases or decreases impacts identified for the proposed project.

E.3.3 Overall Ranking of the Additional Alternatives, Including the No Project Alternative under CEQA

As summarized in Table E-2 and Section E.2.3, SDG&E's proposed project would have significant and unavoidable (Class I) impacts under CEQA in the following issue areas: Impact VIS-1, Impact AIR-1, Impact HYD-4, and Impact LU-3.

Impacts in the remaining 10 issue areas under CEQA were either found to be less than significant (Class III) and/or following implementation of mitigation measures presented in this EIR/EIS to be less than significant with mitigation implemented (Class II).

E.3.3.1 Partial Removal of Overland Access Roads

This alternative would remove and not reauthorize the use of up to 10.5 miles of exclusive use access roads that exceed 25% slope for appreciable distances in close proximity to creeks. All other project components would be the same. The partial removal of steep access roads, as proposed under this alternative, would reduce significant and unavoidable (Class I) impacts under CEQA to erosion and water quality (Impact HYD-4) associated with existing access roads in excess of 25% slope. This impact would be reduced to less than significant with mitigation under CEQA (Class II). As summarized in Table E-2, impact findings to other issue areas would be similar when compared to the proposed project.

E.3.3.2 Removal of TL626 from Service

This alternative would remove TL626 from the view of the Inaja scenic overlook and out of the Cedar Creek riparian area, which would reduce significant and unavoidable (Class I) impacts under CEQA to scenic vistas associated with TL626 (Impact VIS-1) and erosion and water quality impacts in the Cedar Creek riparian area (Impact HYD-4). These impacts would be reduced to less than significant with mitigation under CEQA (Class II).

Removal of TL626 would also avoid Class II impacts associated with conflicts with resource management standards identified in the Forest Service's LMP for the Cedar Creek riparian area and avoid Class II impacts associated with unauthorized access (Impact REC-3).

As summarized in Table E-2 and discussed below, impacts to other issue areas would, in most cases, be similar or reduced when compared to the proposed project. The proposed project includes fire hardening of TL626, which is approximately 18.8 miles in length. Facilities proposed under this alternative would require a similar or reduced disturbance footprint within and/or adjacent to existing overhead electric utility ROWs. This alternative would convert approximately 13 miles of TL626 from 69 kV to 12 kV to serve existing customers and

depending on the selected option, this alternative would require either the reconstruction of 6 miles of existing TL6931 or the development of a new 3-mile 69 kV ROW immediately adjacent to the 500 kV Sunrise Powerlink line.

Reconstruction of TL6931

Reconstruction of 6 miles of TL6931 would consist of construction activities similar to that described for the project. Due to the nature of the existing TL6931 alignment, there would not be a substantial change to the baseline condition including the presence of sensitive environmental resources that could be impacted by construction and operations impacts, and therefore as summarized in Table E-2, impacts would reflect similar impact findings previously discussed for the proposed project.

Development of the New 3-Mile Loop-in of TL625

Development of the new 3-mile TL625 loop-in would consist of similar construction as well as operations and maintenance activities as that described for the project in areas of rugged terrain where no overland access is available or proposed. New construction to loop ~~TL629~~ TL625 into the Suncrest Substation would occur primarily on National Forest ~~Service~~ System lands within 100 feet of the existing 500 kV Sunrise Powerlink line, consistent with Cleveland National Forest (CNF) LMP direction to co-locate facilities, and would occur within suitable land use zones. Therefore, due to the existing undeveloped nature of the proposed alignment, there would not be a substantial change to the baseline condition, including the presence of sensitive environmental resources that could be impacted by construction and operation impacts, and therefore as summarized in Table E-2, impacts would reflect similar impact findings previously discussed for the proposed project.

Convert Portions of TL626 from 69 kV to 12 kV

The conversion of two segments of TL626 to 12 kV would consist of similar construction as well as operations and maintenance activities, and as summarized in Table E-2, impacts would reflect similar impact findings previously discussed for the proposed project. The segment of TL626 proposed for fire hardening within the Cedar Creek riparian area would be removed and corresponding impacts (as discussed above) would be eliminated.

E.3.3.3 No Project Alternative

Under the No Project Alternative, the proposed power line replacement projects would not be built and the existing SDG&E electric facilities would remain; therefore, none of the temporary and permanent construction impacts described in Sections D.2 through D.14 would occur.

Operation and maintenance of SDG&E electrical facilities would continue and include routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks and would be based on the requirements of the existing permits. While these activities represent a potential impact to existing natural resources and applicable plans as summarized in Table E-2, these activities would not increase in duration, intensity, or frequency over existing conditions; therefore, no impacts over existing conditions would occur.

Additionally, the benefits associated with the reduction in the risk of power line-related wildfire as well as reliability improvements of power delivery to the unincorporated communities of Descanso, Campo, Pauma Valley, Santa Ysabel, Warner Springs, and other surrounding communities would not be developed, and the removal of over 11 miles of access roads and undergrounding of 13 miles of electric lines as proposed would not be implemented.

E.4 CEQA Environmentally Superior Alternative

CEQA requires that the environmentally superior alternative be selected from a range of reasonable alternatives that could feasibly attain the basic objectives of the project. As previously discussed in Section E.1.1, the environmental superiority of alternatives does not consider whether SDG&E's proposed project or an alternative would improve existing environmental conditions and does not consider the beneficial impacts of any alternative above and beyond its ability to reduce or avoid significant effects of the proposed project. Therefore, based on the analysis presented in Sections D.2 through D.14 and comparison of alternatives presented in Sections E.2 and E.3 of this EIR/EIS, the environmentally superior alternative was determined under CEQA to be the No Project Alternative. Under the No Project Alternative, the proposed project would not be constructed. All environmental impacts associated with the construction and operation of the proposed project would be eliminated and existing environmental conditions would be unaffected and the associated benefits described in Section E.3.3.3 would not occur.

Under the No Project Alternative the Forest Service would manage the existing facilities under their existing permits which may be problematic due to ongoing baseline conditions as summarized in Table E-2 associated with the operations and maintenance of SDG&E's facilities in certain areas (particularly along TL626 and along C157)) not meeting resource management standards as determined by the LMP.

CEQA Guidelines, Section 15126, subd. (d)(2) further stipulates that "if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." Sections E.4.1 and E.4.2 identify the components of the various alternatives considered that, if implemented as a complete project, would form the environmentally superior alternative as defined in Section E.4.3 other than the No Project Alternative.

E.4.1 Consideration of the Federal Proposed Action

As discussed in Section E.2, the federal proposed action modifies SDG&E's proposed project along four project alignments, including TL626, C157, C440, and TL682 (the BIA proposed action).

Forest Service Proposed Action for TL626: While Options 1, 2, 3, and 4 would relocate a portion of TL626 out of the Cedar Creek undeveloped area and would also avoid conflicting with resource management standards identified in the Forest Service's LMP for the Cedar Creek riparian area, additional significant effects beyond those that would be caused by the project as proposed by SDG&E would occur as described in Section E.2.3.1. In terms of comparing the number of adverse environmental effects created versus reduced or eliminated, as summarized in Section E.2.3.1 and in Table E-1, Options 1 through 4 as proposed by the Forest Service for TL626 are not preferred over SDG&E's proposed reconstruction of TL626 in place.

Option 5, which relocates a segment of TL626 around the Inaja Memorial Picnic Area, would reduce under CEQA Impact VIS-1 (Scenic Vista) from significant and unavoidable (Class I) to less than significant (Class III) and has the potential to reduce long-term direct collision-related impacts to golden eagles. As described in Section E.2.3.1, Option 5 would also result in additional significant effects beyond those that would be caused by the project as proposed. In terms of comparing the number of adverse environmental effects created versus reduced or eliminated, as summarized in Section E.2.3.1 and in Table E-1, Option 5 as proposed by the Forest Service for TL626 would be environmentally superior to SDG&E's proposed reconstruction of TL626 in place.

Forest Service Proposed Action for C157: Relocation of C157 (Options 1 and 2) would eliminate the significant and unavoidable (Class I) impacts under CEQA to land use conflicts associated with the provisions of the Wilderness Act. While additional significant effects beyond those that would be caused by SDG&E's proposed project were identified to arroyo toad critical habitat and to City of San Diego conservation lands, these impacts can be mitigated by selecting Option 2, City of San Diego Modified Alignment, and by implementation of new mitigation measures as described in Section D.4, Biological Resources. In terms of comparing the number of adverse environmental effects created versus reduced or eliminated, as summarized in Section E.2.3.2 and in Table E-1, relocation of C157 Option 2, City of San Diego Modified Alignment, would be environmentally superior to SDG&E's proposed reconstruction of C157 in place.

Forest Service Proposed Action for C440 Underground: While this alternative would underground additional portions of C440 within the Mount Laguna Recreation Area beyond SDG&E's proposed project and would thereby reduce long-term impacts due to fire hazards and visual impacts, the impact findings as described in Section E.2.3.3 would be similar to those

described for SDG&E's proposed project. In addition, this alternative would have greater short-term impacts due to the increased disturbance area required for construction when compared to reconstruction of the existing electric lines in place as proposed by the project. In terms of comparing the number of adverse environmental effects created versus reduced or eliminated, as summarized in Section E.2.3.3 and in Table E-1, further undergrounding as proposed by the Forest Service for C440 is not preferred over SDG&E's proposed reconstruction of C440, which includes undergrounding as well as overhead reconstruction in place.

BIA Proposed Action for TL682: This alternative would relocate a portion of TL682 (within the La Jolla Reservation). While this alternative would reduce visual, recreational, fire, public safety, and land use impacts, the impact findings as described in Section E.2.3.4 and in Table E-1 would be similar when compared to the proposed project and therefore this alternative would rank equally with SDG&E's proposed reconstruction of TL682 in place.

E.4.2 Consideration of the Additional Alternatives

Partial Removal of Overland Access Roads: This alternative would remove access road segments in excess of 25% slope along TL626, TL625, TL629, and C442. As discussed in Section D.9.3.3, it has been determined that there is no way to feasibly avoid substantial long-term effects on erosion and sedimentation (Impact HYD-4) without decommissioning (removing) or realigning these road segments as proposed under this alternative. This alternative would therefore reduce HYD-4 impacts that were determined under CEQA to be significant and unavoidable (Class I) to less than significant with mitigation (Class II), without creating additional impacts. In terms of comparing the number of adverse environmental effects created versus reduced or eliminated, as summarized in Section E.3.3.1 and in Table E-2, removing overland access roads in excess of 25% as described in this alternative would be environmentally superior to SDG&E's proposed project, which would re-authorize under the MSUP the use of road segments in excess of 25% slope within sensitive watersheds.

Removal of TL626 from service: This alternative would remove TL626 out of areas managed by the Forest Service as having high-value resource protection and would replace TL626 with facilities requiring a similar or reduced disturbance footprint within existing overhead electric utility ROWs and when compared to SDG&E's proposed project would under CEQA reduce significant and unavoidable (Class I) impacts in the following issue areas: Impact VIS-1 (Scenic Vista) associated with the TL626 and the Inaja Scenic Overlook and erosion and water quality impacts in the Cedar Creek riparian area (Impact HYD-4).

Removal of TL626 as proposed under this alternative would also avoid conflicts with the LMP amendment (Impact LU-3) determined to be Class II while not substantially increasing impacts to other issue areas considered as described in Section E.3.3.2. In terms of comparing the number

of adverse environmental effects created versus reduced or eliminated, as summarized in Section E.3.3.2 and Table E-2, removing TL626 from service as described in this alternative would be environmentally superior to SDG&E's proposed project.

E.4.3 Environmentally Superior Alternative

Overall, based on the analysis for each alternative presented in Sections D.2 through D.14, and as summarized in this section, the environmentally superior alternative is shown in Figure E-1 and defined in Table E-3.

Table E-3
Environmentally Superior Alternative

Alternative	Jurisdiction
Power Line Replacement Projects	
SDG&E's proposed power line replacement projects: TL682, TL625, TL629, TL6923, C79, C78, C442, C440, C449.	CPUC, FS, BLM, ~~and~~ BIA, and CSP to consider.
Relocation of C157 out of wilderness (Option 2 City of San Diego Modified Alignment)	CPUC and FS to consider
Removal of TL626 and replacement with electric facilities within existing electric utility ROWs* • Reconstruction of TL6931 • Conversion of 13 miles of TL626 to 12 kV	CPUC, FS, and BIA (Campo Reservation) to consider
MSUP	
Partial Removal of Overland Access Roads	FS to consider reduction of existing exclusive use access roads on National Forest lands.

Notes:
1 Reconstruction of TL6931 compared to developing the TL625 loop-in along the Sunrise Powerlink would rank similarly in terms of number of adverse impacts created vs reduced or eliminated. Reconstruction of TL6931 ranks higher due to the extensive work completed for TL6931, which provides a knowledge base that reduces the risk of impacting environmental resources (Sources: SDG&E 2012, TL6931 PEA)
BIA = Bureau of Indian Affairs, BLM = Bureau of Land Management, CPUC = California Public Utilities Commission, CSP = California State Parks, FS = Forest Service.

While the environmentally superior alternative would reduce the proposed reconstruction of existing power lines by approximately 5 miles, it would still under CEQA result in the following unmitigable (Class I) impacts:

- **Air Quality:** Short-term construction VOC, NO_x, CO, and $PM_{2.5}$ ~~dust~~ emissions. All feasible measures would be implemented to reduce emissions (APMs AIR-01 through AIR-05); however, VOC, NO_x, CO, and $PM_{2.5}$ emissions would remain above the thresholds and therefore would be considered significant and unavoidable under CEQA (Class I).

The environmentally superior alternative, specifically the relocation of C157, would under CEQA avoid the significant and unavoidable (Class I) impact to land use conflicts (Impact LU-3) associated with the provisions of the Wilderness Act. This impact under CEQA would be reduced to less than significant (Class III) through avoidance.

Without substantially increasing impacts to other issue areas, the environmentally superior alternative would, also under CEQA, avoid significant and unavoidable (Class I) impacts to the Inaja Scenic Overlook (Impact VIS-1) by removing TL626 from service, reduce impacts due to erosion and water quality impacts in the Cedar Creek riparian area (Impact HYD-4 associated with TL626) to less than significant with mitigation (Class II), and reduce significant land use impacts (Class II) LU-3 impacts associated with TL626 conflicts with the Forest Service LMP amendment to no impact.

E.5 Comparison of the Alternatives under NEPA

This section is structured in two parts. The first part compares the options that are present in the federal proposed action for TL626 (five options) and C157 (two options), and in the TL626 replacement alternative proposed by SDG&E (two options). The federal preferred option for each line segment is then carried forward into the second part of this section to compare to the remaining alternatives.

E.5.1 Comparison of Federal Proposed Action and TL626 Replacement Options

E.5.1.1 Federal Proposed Action for TL626

The Forest Service proposed action included five options for TL626. The reroute around Inaja Fire Memorial Site is the same for all five options. The key features of the options for TL626 are summarized in Table E-4. The environmental effects of the options are summarized by resource area in Table E-5.

Table E-4
Summary of Federal Proposed Action for TL626 Options

Key Feature	TL626 Option 1	TL626 Option 2	TL626 Option 3a	TL626 Option 3b	TL626 Option 4
	Overhead option through Inaja and Cosmit Reservation	*Overhead option around Inaja and Cosmit Reservation*	*Underground relocation in Boulder Creek Road (11.4 miles UG) with northern 1 miles OH.*	*Partial underground relocation in Boulder Creek Road (6.3 miles UG) with northern 1 mile OH.*	*Overhead relocation along Boulder Creek Road*
Miles of OH TL on federal[1] lands	3.2	2.3	.5	.5	6.2
Miles of OH TL on Private land	4.9	5.9	0.8	.8	4.6
Miles of UG TL on federal lands	0	0	5.7	3.1	0
Miles of UG TL on Private land	0	0	4.9	3.2	0
Miles of exclusive use road on federal land	2.2	2.0	1.0	1.0	1.0
Miles of exclusive use roads on private land	9	9	—[2]	—[2]	—[2]

Notes:
1 Federal lands include any National Forest System lands managed by the Forest Service, Public Lands managed by the BLM, or reservation lands managed in trust by the BIA.
2 Data unavailable during preparation of EIR/EIS

Table E-5
Comparison of Environmental Effects of Federal Proposed Action for TL626 Replacement Options

Impact	TL626 Option 1	TL626 Option 2	TL626 Option 3a	TL626 Option 3b	TL626 Option 4
	Overhead option through Inaja and Cosmit Reservation	*Overhead option around Inaja and Cosmit Reservation*	*Underground relocation in Boulder Creek Road (11.4 miles UG) with northern 1 mile miles OH.*	*Partial underground relocation in Boulder Creek Road (6.3 miles UG) with northern 1 mile OH.*	*Overhead relocation along Boulder Creek Road*
Visual Resources (see Section D.2 for full analysis)					
VIS-1 and VIS-2: Scenic Vista/Scenic Highway	Views from the Inaja Scenic Overlook would be adverse and unmitigable (VIS-1). Views to overhead segments from scenic highways would be partially screened by existing vegetation and topography and pole replacement activities would not substantially affect existing scenic resources; therefore, impacts would not be adverse (VIS-2).	Views from the Inaja Scenic Overlook would be adverse and unmitigable (VIS-1). Views to overhead segments from scenic highways would be partially screened by existing vegetation and topography and pole replacement activities would not substantially affect existing scenic resources; therefore, impacts would not be adverse (VIS-2).	Views from the Inaja Scenic Overlook would be adverse and unmitigable (VIS-1). The majority of the line would be underground therefore would not be visible. Views to the 1-mile overhead segment would not be visible from scenic highways and views to TL626 from SR-79 and SR-78 would be partially screened by existing vegetation and topography. In addition, pole replacement activities would not substantially affect existing scenic resources. Therefore, impacts would not be adverse (VIS-2).	Views from the Inaja Scenic Overlook would be adverse and unmitigable (VIS-1). The majority of the line would be underground, therefore would not be visible. Views to the 1-mile overhead segment would not be visible from scenic highways and views to TL626 from SR-79 and SR-78 would be partially screened by existing vegetation and topography. In addition, pole replacement activities would not substantially affect existing scenic resources. Therefore, impacts would not be adverse (VIS-2).	Views from the Inaja Scenic Overlook would be adverse and unmitigable (VIS-1). Views to overhead segments from scenic highways would be partially screened by existing vegetation and topography and pole replacement activities would not substantially affect existing scenic resources. Therefore, impacts would not be adverse (VIS-2).
VIS-3: Visual Character	Establishment of new ROW and overhead alignment where none currently exists would be adverse and unmitigable.	Establishment of new ROW and overhead alignment where none currently exists would be adverse and unmitigable.	Establishment of new 1-mile ROW and overhead alignment where none currently exists would be adverse and unmitigable.	Establishment of new 1-mile ROW and overhead alignment where none currently exists would be adverse and unmitigable.	Establishment of new ROW and overhead alignment where none currently exists would be adverse and unmitigable.

Table E-5
Comparison of Environmental Effects of Federal Proposed Action for TL626 Replacement Options

Impact	TL626 Option 1	TL626 Option 2	TL626 Option 3a	TL626 Option 3b	TL626 Option 4
	Overhead option through Inaja and Cosmit Reservation	*Overhead option around Inaja and Cosmit Reservation*	*Underground relocation in Boulder Creek Road (11.4 miles UG) with northern 1 mile miles OH.*	*Partial underground relocation in Boulder Creek Road (6.3 miles UG) with northern 1 mile OH.*	*Overhead relocation along Boulder Creek Road*
VIS-4: Glare/Light	Nighttime construction may occur but is not adverse with implementation of APMs. Pole structures would be a weathered patina and with APMs requiring use of non-specular conductors, glare effects would not be adverse.	Nighttime construction may occur but is not adverse with implementation of APMs. Pole structures would be a weathered patina and with APMs requiring use of non-specular conductors, glare effects would not be adverse.	Nighttime construction may occur but is not adverse with implementation of APMs.	Nighttime construction may occur but is not adverse with implementation of APMs.	Nighttime construction may occur but is not adverse with implementation of APMs. Pole structures would be a weathered patina and with APMs requiring use of non-specular conductors, glare effects would not be adverse.
VIS-5: Scenic Integrity	Inconsistent with the established High scenic integrity objective of the CNF LMP. With required mitigation, inconsistencies with the High scenic integrity objective would be allowed and conflicts with the CNF LMP would be addressed as required by the National Forest Management Act.	Inconsistent with the established High scenic integrity objective of the CNF LMP. With required mitigation, inconsistencies with the High scenic integrity objective would be allowed and conflicts with the CNF LMP would be addressed as required by the National Forest Management Act.	Inconsistent with the established High scenic integrity objective of the CNF LMP. With required mitigation, inconsistencies with the High scenic integrity objective would be allowed and conflicts with the CNF LMP would be addressed as required by the National Forest Management Act.	Inconsistent with the established High scenic integrity objective of the CNF LMP. With required mitigation, inconsistencies with the High scenic integrity objective would be allowed and conflicts with the CNF LMP would be addressed as required by the National Forest Management Act.	Inconsistent with the established High scenic integrity objective of the CNF LMP. With required mitigation, inconsistencies with the High scenic integrity objective would be allowed and conflicts with the CNF LMP would be addressed as required by the National Forest Management Act.
Air Quality (see Section D.3 for full analysis)					
AIR-1: Short-term construction-related air quality impacts	Short-term construction-related VOC, NO_x, CO, and $PM_{2.5}$ air emissions would exceed daily thresholds	Short-term construction-related VOC, NO_x, CO, and $PM_{2.5}$ air emissions would exceed daily thresholds and	Short-term construction-related VOC, NO_x, CO, and $PM_{2.5}$ air emissions would exceed daily thresholds	Short-term construction-related VOC, NO_x, CO, and $PM_{2.5}$ air emissions would exceed daily thresholds	Short-term construction-related VOC, NO_x, CO, and $PM_{2.5}$ air emissions would exceed daily thresholds

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Impact	TL626 Option 1	TL626 Option 2	TL626 Option 3a	TL626 Option 3b	TL626 Option 4
	Overhead option through Inaja and Cosmit Reservation	*Overhead option around Inaja and Cosmit Reservation*	*Underground relocation in Boulder Creek Road (11.4 miles UG) with northern 1 mile miles OH.*	*Partial underground relocation in Boulder Creek Road (6.3 miles UG) with northern 1 mile OH.*	*Overhead relocation along Boulder Creek Road*
	and remain adverse with mitigation; other short-term air quality impacts would not be adverse with the required mitigation.	remain adverse with mitigation; other short-term air quality impacts would not be adverse with the required mitigation.	and remain adverse with mitigation; other short-term air quality impacts would not be adverse with the required mitigation.	and remain adverse with mitigation; other short-term air quality impacts would not be adverse with the required mitigation.	and remain adverse with mitigation; other short-term air quality impacts would not be adverse with the required mitigation.
AIR-2: Long-term emission impacts	Long-term emission impacts would not be adverse.	Long-term emission impacts would not be adverse.	Long-term emission impacts would not be adverse.	Long-term emission impacts would not be adverse.	Long-term emission impacts would not be adverse.
AIR-3: General Conformity	Emissions would be below de minimus thresholds.	Emissions would be below de minimus thresholds.	Emissions would be below de minimus thresholds.	Emissions would be below de minimus thresholds.	Emissions would be below de minimus thresholds.
AIR-4: Conflict with Land Use Plans	There would be no conflict with or obstruction of implementation of the applicable air quality plan; therefore, no impacts would occur.	There would be no conflict with or obstruction of implementation of the applicable air quality plan; therefore, no impacts would occur.	There would be no conflict with or obstruction of implementation of the applicable air quality plan; therefore, no impacts would occur.	There would be no conflict with or obstruction of implementation of the applicable air quality plan; therefore, no impacts would occur.	There would be no conflict with or obstruction of implementation of the applicable air quality plan; therefore, no impacts would occur.
AIR-5: Expose Sensitive Receptors	During construction and operation substantial pollutant concentrations would not be adverse as activities would not occur in any one place for an extended period of time.	During construction and operation substantial pollutant concentrations would not be adverse as activities would not occur in any one place for an extended period of time.	During construction and operation substantial pollutant concentrations would not be adverse as activities would not occur in any one place for an extended period of time.	During construction and operation substantial pollutant concentrations would not be adverse as activities would not occur in any one place for an extended period of time.	During construction and operation substantial pollutant concentrations would not be adverse as activities would not occur in any one place for an extended period of time.
Biological Resources (see Section D.4 for full analysis)					
BIO-1: Vegetation Loss	Construction of new ROW would result in 9 acres of temporary impacts and 23 acres of permanent	The new ROW is partially located in Forest Service-suitable modeled habitat for Laguna Mountains skipper	Trenching activities in roadway would have minimal direct effects on vegetation communities.	Trenching activities in roadway would have minimal direct effects on vegetation communities.	Construction of a new ROW would result in temporary and permanent vegetation loss along

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Impact	TL626 Option 1	TL626 Option 2	TL626 Option 3a	TL626 Option 3b	TL626 Option 4
	Overhead option through Inaja and Cosmit Reservation	*Overhead option around Inaja and Cosmit Reservation*	*Underground relocation in Boulder Creek Road (11.4 miles UG) with northern 1 mile miles OH.*	*Partial underground relocation in Boulder Creek Road (6.3 miles UG) with northern 1 mile OH.*	*Overhead relocation along Boulder Creek Road*
	impacts. The additional impacts would result from construction of new access roads and helicopter landing areas used during construction and operations. Impacts would not be adverse with the required mitigation.	and San Bernardino bluegrass. Construction of new ROW would result in 9 acres of temporary impacts and 28 acres of permanent impacts. The additional impacts would result from construction of new access roads and helicopter landing areas used during construction and operations. Impacts would not be adverse with the required mitigation.	Direct and indirect impacts would not be adverse with the required mitigation.	Direct and indirect impacts would not be adverse with the required mitigation.	Boulder Creek Road. Impacts would not be adverse with the required mitigation.
BIO-2: Loss of Preserve Areas	Impacts to Forest Service Resource Conservation Areas (RCAs) and riparian areas would be reduced; however, temporary and permanent impacts from erosion, sedimentation, fire risk, use of herbicides and/or introduction of non-native seeds to native communities would result from ground disturbance and operations and maintenance personnel	Impacts to Forest Service RCAs and riparian areas would be reduced; however, temporary and permanent impacts from erosion, sedimentation, fire risk, use of herbicides and/or introduction of non-native seeds to native communities would result from ground disturbance and operations and maintenance personnel and equipment in the new ROW. Impacts would not be	Impacts to Forest Service RCAs and riparian areas would be reduced; however, temporary and permanent impacts from erosion, sedimentation, fire risk, use of herbicides and/or introduction of non-native seeds to native communities would result from ground disturbance and operations and maintenance personnel and equipment in the new	Impacts to Forest Service RCAs and riparian areas would be reduced; however, temporary and permanent impacts from erosion, sedimentation, fire risk, use of herbicides and/or introduction of non-native seeds to native communities would result from ground disturbance and operations and maintenance personnel and equipment in the new	Impacts to Forest Service RCAs and riparian areas would be reduced; however, temporary and permanent impacts from erosion, sedimentation, fire risk, use of herbicides and/or introduction of non-native seeds to native communities would result from ground disturbance and operations and maintenance personnel and equipment in the new

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Impact	TL626 Option 1	TL626 Option 2	TL626 Option 3a	TL626 Option 3b	TL626 Option 4
	Overhead option through Inaja and Cosmit Reservation	*Overhead option around Inaja and Cosmit Reservation*	*Underground relocation in Boulder Creek Road (11.4 miles UG) with northern 1 mile miles OH.*	*Partial underground relocation in Boulder Creek Road (6.3 miles UG) with northern 1 mile OH.*	*Overhead relocation along Boulder Creek Road*
	and equipment in the new ROW. Impacts would not be adverse with the required mitigation.	adverse with the required mitigation.	ROW. Impacts would not be adverse with the required mitigation.	ROW. Impacts would not be adverse with the required mitigation.	ROW. Impacts would not be adverse with the required mitigation.
BIO-3: Native Wildlife	Although wildlife would be temporarily displaced or may avoid the area immediately surrounding the construction, construction-related disturbance to and/or mortality of wildlife, except where such disturbance or mortality affects special-status species, would not be adverse.	Although wildlife would be temporarily displaced or may avoid the area immediately surrounding the construction, construction-related disturbance to and/or mortality of wildlife, except where such disturbance or mortality affects special-status species, would not be adverse.	Although wildlife would be temporarily displaced or may avoid the area immediately surrounding the construction, construction-related disturbance to and/or mortality of wildlife, except where such disturbance or mortality affects special-status species, would not be adverse.	Although wildlife would be temporarily displaced or may avoid the area immediately surrounding the construction, construction-related disturbance to and/or mortality of wildlife, except where such disturbance or mortality affects special-status species, would not be adverse.	Although wildlife would be temporarily displaced or may avoid the area immediately surrounding the construction, construction-related disturbance to and/or mortality of wildlife, except where such disturbance or mortality affects special-status species, would not be adverse.
BIO-4: Jurisdictional Resources	Temporary and permanent impacts to jurisdictional waters and wetlands would be greater than assessed for SDG&E's proposed project; impacts would be adverse. Impacts would not be adverse with the required mitigation.	Temporary and permanent impacts to jurisdictional waters and wetlands would be greater than assessed for SDG&E's proposed project; impacts would be adverse. Impacts would not be adverse with the required mitigation.	Temporary and permanent impacts to jurisdictional waters and wetlands would be adverse. Impacts would not be adverse with the required mitigation.	Temporary impacts to jurisdictional waters and wetlands would be greater and permanent impacts would occur; impacts would be adverse. Impacts would not be adverse with the required mitigation.	Temporary and permanent impacts to jurisdictional waters and wetlands would be adverse. Impacts would not be adverse with the required mitigation.
BIO-5: Invasive Species	Temporary and permanent impacts would occur due to the potential for	Temporary and permanent impacts would occur due to the potential for introduction	Temporary and permanent impacts would occur due to the potential for	Temporary and permanent impacts would occur due to the potential for	Temporary and permanent impacts would occur due to the potential for

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	Overhead option through Inaja and Cosmit Reservation	*Overhead option around Inaja and Cosmit Reservation*	*Underground relocation in Boulder Creek Road (11.4 miles UG) with northern 1 mile miles OH.*	*Partial underground relocation in Boulder Creek Road (6.3 miles UG) with northern 1 mile OH.*	*Overhead relocation along Boulder Creek Road*
	introduction of invasive, non-native, and noxious plant species where ground disturbance in new ROW occurs. Impacts would not be adverse with the required mitigation.	of invasive, non-native, and noxious plant species where ground disturbance in new ROW occurs. Impacts would not be adverse with the required mitigation.	introduction of invasive, non-native, and noxious plant species where ground disturbance in new ROW occurs. Impacts would not be adverse with the required mitigation.	introduction of invasive, non-native, and noxious plant species where ground disturbance in new ROW occurs. Impacts would not be adverse with the required mitigation.	introduction of invasive, non-native, and noxious plant species where ground disturbance in new ROW occurs. Impacts would not be adverse with the required mitigation.
BIO-6: Candidate, Sensitive, or Special-Status Species	Temporary and permanent impacts to candidate, sensitive, or special-status species would not be adverse with the required mitigation.	Temporary and permanent impacts to candidate, sensitive, or special-status species would not be adverse with the required mitigation.	Temporary and permanent impacts to candidate, sensitive, or special-status species would not be adverse with the required mitigation.	Temporary and permanent impacts to candidate, sensitive, or special-status species would not be adverse with the required mitigation.	Temporary and permanent impacts to candidate, sensitive, or special-status species would not be adverse with the required mitigation.
BIO-7: Conflict with HCP, NCCP, or other Conservation Plan	There would be no conflict with any provisions of an adopted HCP, NCCP, or other approved conservation plan; therefore, impacts are not adverse.	There would be no conflict with any provisions of an adopted HCP, NCCP, or other approved conservation plan; therefore, impacts are not adverse.	There would be no conflict with any provisions of an adopted HCP, NCCP, or other approved conservation plan; therefore, impacts are not adverse.	There would be no conflict with any provisions of an adopted HCP, NCCP, or other approved conservation plan; therefore, impacts are not adverse.	There would be no conflict with any provisions of an adopted HCP, NCCP, or other approved conservation plan; therefore, impacts are not adverse.
BIO-8: Interfere with Wildlife Movement/ Corridors	No new barriers that would impede the local or regional movement of wildlife would be constructed; therefore, impacts are not adverse.	No new barriers that would impede the local or regional movement of wildlife would be constructed; therefore, impacts are not adverse.	No new barriers that would impede the local or regional movement of wildlife would be constructed; therefore, impacts are not adverse.	No new barriers that would impede the local or regional movement of wildlife would be constructed; therefore, impacts are not adverse.	No new barriers that would impede the local or regional movement of wildlife would be constructed; therefore, impacts are not adverse.

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Impact	TL626 Option 1	TL626 Option 2	TL626 Option 3a	TL626 Option 3b	TL626 Option 4
	Overhead option through Inaja and Cosmit Reservation	*Overhead option around Inaja and Cosmit Reservation*	*Underground relocation in Boulder Creek Road (11.4 miles UG) with northern 1 mile miles OH.*	*Partial underground relocation in Boulder Creek Road (6.3 miles UG) with northern 1 mile OH.*	*Overhead relocation along Boulder Creek Road*
Cultural and Paleontological Resources (see Section D.5 for full analysis)					
CUL-1: Historical Resources; CUL-2: Archaeological Resources; CUL-3: Human Remains; **CUL-4:** Traditional Cultural Properties; PALEO-1: Unique Paleontological Resource or Geologic Feature	New poles would be located near Pine Hills Fire Station (a National Register of Historic Places (NRHP)-eligible building). Overall, impacts would be adverse but mitigated through avoidance in project siting or through implementation of APMs and mitigation measures.	New poles would be located near Pine Hills Fire Station (an NHRP- eligible building). Overall, impacts would be adverse but mitigated through avoidance in project siting or through implementation of APMs and mitigation measures.	Impacts would be adverse but mitigated through avoidance in project siting or through implementation of APMs and mitigation measures.	Impacts would be adverse but mitigated through avoidance in project siting or through implementation of APMs and mitigation measures.	New poles would be located near Pine Hills Fire Station (a National Register eligible building). Overall, impacts would be adverse but mitigated through avoidance in project siting or through implementation of APMs and mitigation measures.
Greenhouse Gases (see Section D.6 for full analysis)					
GHG-1 and GHG-2: Increase GHG emissions	Temporary increase in GHG emissions would be below GHG threshold. Construction and operation impacts would not be adverse.	Temporary increase in GHG emissions would be below GHG threshold. Construction and operation impacts would not be adverse.	Temporary increase in GHG emissions would be below GHG threshold. Construction and operation impacts would not be adverse.	Temporary increase in GHG emissions would be below GHG threshold. Construction and operation impacts would not be adverse.	Temporary increase in GHG emissions would be below GHG threshold. Construction and operation impacts would not be adverse.
GHG-3: Conflict with applicable plan or GHG adopted regulations	As construction activities would not meet or exceed the Climate Action Plan (CAP) screening criteria, impacts would not be adverse	As construction activities would not meet or exceed the CAP screening criteria, impacts would not be adverse	As construction activities would not meet or exceed the CAP screening criteria, impacts would not be adverse	As construction activities would not meet or exceed the CAP screening criteria, impacts would not be adverse	As construction activities would not meet or exceed the CAP screening criteria, impacts would not be adverse
Public Health and Safety (see Section D.7 for full analysis)					
PHS-1 through PHS-3: Hazardous	Use of petroleum products and herbicides as well as	Use of petroleum products and herbicides as well as	Use of petroleum products and herbicides, and the	Use of petroleum products and herbicides, and the	Use of petroleum products and herbicides as well as

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	Overhead option through Inaja and Cosmit Reservation	*Overhead option around Inaja and Cosmit Reservation*	*Underground relocation in Boulder Creek Road (11.4 miles UG) with northern 1 mile miles OH.*	*Partial underground relocation in Boulder Creek Road (6.3 miles UG) with northern 1 mile OH.*	*Overhead relocation along Boulder Creek Road*
Materials Impacts During Construction	the potential for accidental spills during construction, operations, and maintenance would not be adverse with the required mitigation.	the potential for accidental spills during construction, operations, and maintenance would not be adverse with the required mitigation.	potential for accidental spills, during construction, operations, and maintenance, as well as the potential to encounter contaminated soils during trenching activities would not be adverse with the required mitigation.	potential for accidental spills, during construction, operations, and maintenance, as well as the potential to encounter contaminated soils during trenching activities would not be adverse with the required mitigation	the potential for accidental spills during construction, operations, and maintenance would not be adverse with the required mitigation.
PHS-4: Flight Operations/Aviation Hazards	Temporary use of helicopters to place poles may result in adverse impacts. Impacts would not be adverse with the required mitigation. In addition, as poles are within a new ROW, this alternative requires additional mitigation beyond that identified for SDG&E's project.	Temporary use of helicopters to place poles may result in adverse impacts. Impacts would not be adverse with the required mitigation. In addition, as poles are within a new ROW, this alternative requires additional mitigation beyond that identified for SDG&E's project.	Underground – no impact. The 1-mile OH portion could create aviation hazards. Impacts would not be adverse with the required mitigation.	Underground – no impact. The 1-mile OH portion could create aviation hazards. Impacts would not be adverse with the required mitigation.	Temporary use of helicopters to place poles may result in adverse impacts. Impacts would not be adverse with the required mitigation. In addition, as poles are within a new ROW, this alternative requires additional mitigation beyond that identified for SDG&E's project.
PHS-5: Emergency Response	Emergency access would remain available during construction. Indirect effects would result from construction vehicles using roadways to access pole construction sites. Impacts would not be adverse with implementation of APMs.	Emergency access would remain available during construction. Indirect effects would result from construction vehicles using roadways to access pole construction sites. Impacts would not be adverse with implementation of APMs.	Emergency access would remain available during construction. Adverse effects would result from trenching activities along Boulder Creek Road. Impacts would not be adverse with implementation of APMs.	Emergency access would remain available during construction. Adverse effects would result from trenching activities along Boulder Creek Road. Impacts would not be adverse with implementation of APMs.	Emergency access would remain available during construction. Indirect effects would result from construction vehicles using roadways to access pole construction sites. Impacts would not be adverse with implementation of APMs.

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Impact	TL626 Option 1	TL626 Option 2	TL626 Option 3a	TL626 Option 3b	TL626 Option 4
	Overhead option through Inaja and Cosmit Reservation	*Overhead option around Inaja and Cosmit Reservation*	*Underground relocation in Boulder Creek Road (11.4 miles UG) with northern 1 mile miles OH.*	*Partial underground relocation in Boulder Creek Road (6.3 miles UG) with northern 1 mile OH.*	*Overhead relocation along Boulder Creek Road*
PHS-6: Structural Failure	Potential adverse effects of extreme weather and seismic activity would be mitigated by the conservative nature of the specifications in CPUC's General Order (GO) 95 and mitigation requiring geotechnical investigation. Impacts would not be adverse with the required mitigation.	Potential adverse effects of extreme weather and seismic activity would be mitigated by the conservative nature of the specifications in CPUC's GO 95 and mitigation requiring geotechnical investigation. Impacts would not be adverse with the required mitigation.	Underground – no impact. As the majority of the line is underground, there is minimal risk of structure failure. Potential adverse effects of extreme weather and seismic activity for the 1-mile aboveground portion would be mitigated by the conservative nature of the specifications in CPUC's GO 95 and mitigation requiring geotechnical investigation. Impacts would not be adverse with the required mitigation.	Underground – no impact. As the majority of the line is underground, there is minimal risk of structure failure In addition, potential adverse effects of extreme weather and seismic activity for the 1-mile aboveground portion would be mitigated by the conservative nature of the specifications in CPUC's GO 95 and mitigation requiring geotechnical investigation. Impacts would not be adverse with the required mitigation.	Potential adverse effects of extreme weather and seismic activity would be mitigated by the conservative nature of the specifications in CPUC's GO 95 and mitigation requiring geotechnical investigation. Impacts would not be adverse with the required mitigation.
PHS-7: Shock Hazards	Based on the conservative nature of the specifications in CPUC's GO 95, operation and maintenance would not pose an adverse safety hazard.	Based on the conservative nature of the specifications in CPUC's GO 95, operation and maintenance would not pose an adverse safety hazard.	As the majority of the line is underground, there is minimal risk of shock hazard. In addition, based on the conservative nature of the specifications in CPUC's GO 95, operation and maintenance would not pose an adverse safety hazard.	As the majority of the line is underground, there is minimal risk of shock hazard. In addition, based on the conservative nature of the specifications in CPUC's GO 95, operation and maintenance would not pose an adverse safety hazard.	Based on the conservative nature of the specifications in CPUC's GO 95, operation and maintenance would not pose an adverse safety hazard.

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	Overhead option through Inaja and Cosmit Reservation	*Overhead option around Inaja and Cosmit Reservation*	*Underground relocation in Boulder Creek Road (11.4 miles UG) with northern 1 mile miles OH.*	*Partial underground relocation in Boulder Creek Road (6.3 miles UG) with northern 1 mile OH.*	*Overhead relocation along Boulder Creek Road*
Fire and Fuels Management (see Section D.8 for full analysis)					
FF-1: Construction, Operation and Maintenance Could Start a Wildfire	Potential to ignite a wildfire due to new electric facilities and increased human activity is adverse. Mitigation and APMs would reduce risk of wildfire, but not eliminate the risk.	Potential to ignite a wildfire due to new electric facilities and increased human activity is adverse. Mitigation and APMs would reduce risk of wildfire, but not eliminate the risk.	Potential to ignite a wildfire due to increased human activity is adverse. Mitigation and APMs would reduce risk of wildfire, but not eliminate the risk.	Potential to ignite a wildfire due to increased human activity is adverse. Mitigation and APMs would reduce risk of wildfire, but not eliminate the risk.	Potential to ignite a wildfire due to new electric facilities and increased human activity is adverse. Mitigation and APMs would reduce risk of wildfire, but not eliminate the risk.
FF-2: Presence of Transmission Lines Could Start a Fire	Potential to ignite a wildfire due to new electric facilities is adverse. Mitigation and APMs would reduce risk of wildfire, but not eliminate the risk.	Potential to ignite a wildfire due to new electric facilities is adverse. Mitigation and APMs would reduce risk of wildfire, but not eliminate the risk.	Underground - no impact. For 1-mile overhead portion, potential to ignite a wildfire due to new electric facilities is adverse. Mitigation and APMs would reduce risk of wildfire, but not eliminate the risk.	Underground - no impact. For 1-mile overhead portion, potential to ignite a wildfire due to new electric facilities is adverse. Mitigation and APMs would reduce risk of wildfire, but not eliminate the risk.	Potential to ignite a wildfire due to new electric facilities is adverse. Mitigation and APMs would reduce risk of wildfire, but not eliminate the risk.
FF-3: Reduced Firefighter Effectiveness	New poles and lines would create an obstacle during aerial firefighting. This impact would not be adverse with the required mitigation.	New poles and lines would create an obstacle during aerial firefighting. This impact would not be adverse with the required mitigation.	Underground - no impact. However, the new poles and lines for the 1-mile overhead portion would create an obstacle during aerial firefighting. This impact would not be adverse with the required mitigation.	Underground - no impact. However, the new poles and lines for the 1-mile overhead portion would create an obstacle during aerial firefighting. This impact would not be adverse with the required mitigation.	New poles and lines would create an obstacle during aerial firefighting. This impact would not be adverse with the required mitigation.
FF-4: Introduction of Non-native Plants	Construction of new ROW and access roads would remove vegetation and	Construction of new ROW and access roads would remove vegetation and	Ground disturbance due to trenching would introduce non-native plants. Impact	Ground disturbance due to trenching would introduce non-native plants. Impact	Construction of new ROW along Boulder Creek Road would remove vegetation

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	disturb soils, increasing potential for non-native plant establishment. Impact to fire behavior would not be adverse with the required mitigation.	disturb soils, increasing potential for non-native plant establishment. Impact to fire behavior would not be adverse with the required mitigation.	would not be adverse with the required mitigation.	would not be adverse with the required mitigation.	and disturb soils, increasing potential for non-native plant establishment. Impact to fire behavior would not be adverse with the required mitigation.
Hydrology and Water Quality (see Section D.9 for full analysis)					
HYD-1 and HYD-2: Short-Term Construction Activities Would Degrade Water Resources	During short-term construction of new ROW and access roads water quality impacts would occur due to runoff, sedimentation, or erosion. Impacts would not be adverse with the required mitigation.	During short-term construction of new ROW and access roads water quality impacts would occur due to runoff, sedimentation, or erosion. Impacts would not be adverse with the required mitigation.	Undergrounding would cross numerous new surface hydrological features; therefore, impacts would not be adverse with the required mitigation. This alternative requires additional mitigation beyond that identified for SDG&E's project.	Undergrounding would cross numerous new surface hydrological features therefore; impacts would not be adverse with the required mitigation. This alternative requires additional mitigation beyond that identified for SDG&E's project.	During short-term construction water quality impacts would occur due to runoff, sedimentation, or erosion. Impacts would not be adverse with the required mitigation.
HYD-3: Groundwater Supply	Use of groundwater in this groundwater-dependent region would not be adverse with the required mitigation.	Use of groundwater in this groundwater-dependent region would not be adverse with the required mitigation.	Use of groundwater in this groundwater-dependent region would not be adverse with the required mitigation.	Use of groundwater in this groundwater-dependent region would not be adverse with the required mitigation.	Use of groundwater in this groundwater-dependent region would not be adverse with the required mitigation.
HYD-4: Access Roads	Construction and long-term maintenance activities along new access roads could result in periodic sediment delivery into	Construction and long-term maintenance activities along new access roads could result in periodic sediment delivery into receiving	New access road is required for 1-mile overhead segment. Construction and long-term maintenance activities	New access road is required for 1-mile overhead segment. Construction and long-term maintenance activities	Construction and long-term maintenance activities along access roads could result in periodic sediment delivery into receiving

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Impact	TL626 Option 1	TL626 Option 2	TL626 Option 3a	TL626 Option 3b	TL626 Option 4
	Overhead option through Inaja and Cosmit Reservation	*Overhead option around Inaja and Cosmit Reservation*	*Underground relocation in Boulder Creek Road (11.4 miles UG) with northern 1 mile miles OH.*	*Partial underground relocation in Boulder Creek Road (6.3 miles UG) with northern 1 mile OH.*	*Overhead relocation along Boulder Creek Road*
	receiving waters. Impacts would not be adverse with the required mitigation. (Reduces Cedar Creek riparian area unavoidable adverse impacts associated with TL626.)	waters. Impacts would not be adverse with the required mitigation. (Reduces Cedar Creek riparian area unavoidable adverse impacts associated with TL626.)	along new access road could result in periodic sediment delivery into receiving waters. Impacts would not be adverse with the required mitigation. (Reduces Cedar Creek riparian area unavoidable adverse impacts associated with TL626.)	along new access road could result in periodic sediment delivery into receiving waters. Impacts would not be adverse with the required mitigation. (Reduces Cedar Creek riparian area unavoidable adverse impacts associated with TL626.)	waters. Impacts would not be adverse with the required mitigation. (Reduces Cedar Creek riparian area unavoidable adverse impacts associated with TL626.)
HYD-5: Maintenance - Vegetation Management, Pesticide, and Herbicide Application	Impacts as a result of vegetation management and chemical applications would not be adverse with the required mitigation.	Impacts as a result of vegetation management and chemical applications would not be adverse with the required mitigation.	Impacts as a result of vegetation management and chemical applications would not be adverse with the required mitigation.	Impacts as a result of vegetation management and chemical applications would not be adverse with the required mitigation.	Impacts as a result of vegetation management and chemical applications would not be adverse with the required mitigation.
Land Use (see Section D.10 for full analysis)					
LU-1: Temporary Disturbance Due to Construction	Development of new, longer ROW for alignment and access roads would affect sensitive receptors. Impacts would not be adverse with the required mitigation.	Development of new, longer ROW for alignment and access roads would affect sensitive receptors. Impacts would not be adverse with the required mitigation.	Temporary trenching activities in Boulder Creek Road would affect sensitive receptors. Impacts would not be adverse with the required mitigation.	Temporary trenching activities in Boulder Creek Road would affect sensitive receptors. Impacts would not be adverse with the required mitigation.	Development of new longer ROW for alignment would affect sensitive receptors. Impacts would not be adverse with the required mitigation.
LU-2: Divide an Established Community	New ROW along the periphery of the community of Pine Hills indirectly affects the quality, access,	New ROW along the periphery of the community of Pine Hills indirectly affects the quality, access, and	While undergrounding would not divide an established community, residences would be	While, undergrounding would not divide an established community, residences would be	New ROW along the periphery of the community of Pine Hills indirectly affects the quality, access,

Table E-5
Comparison of Environmental Effects of Federal Proposed Action for TL626 Replacement Options

Impact	TL626 Option 1	TL626 Option 2	TL626 Option 3a	TL626 Option 3b	TL626 Option 4
	Overhead option through Inaja and Cosmit Reservation	*Overhead option around Inaja and Cosmit Reservation*	*Underground relocation in Boulder Creek Road (11.4 miles UG) with northern 1 mile miles OH.*	*Partial underground relocation in Boulder Creek Road (6.3 miles UG) with northern 1 mile OH.*	*Overhead relocation along Boulder Creek Road*
	and functionality of residential land uses. Also, new property owners (Forest Service and private land owners) would be affected. Impacts would not be adverse with the required mitigation. This alternative requires additional mitigation beyond that identified for SDG&E's project.	functionality of residential land uses. Impacts would not be adverse with the required mitigation. This alternative requires additional mitigation beyond that identified for SDG&E's project.	subject to potential indirect impacts to the quality, access, and functionality of residential land uses associated with visual quality, noise, and public health and safety impacts because of development of a new overhead ROW. Impacts would not be adverse with the required mitigation.	subject to potential indirect impacts to the quality, access, and functionality of residential land uses associated with visual quality, noise, and public health and safety impacts because of development of a new overhead ROW. Impacts would not be adverse with the required mitigation.	and functionality of residential land uses. Impacts would not be adverse with the required mitigation. This alternative requires additional mitigation beyond that identified for SDG&E's project.
LU- 3: Conflict with Applicable Land Use Plan	Development of the new ROW avoids conflicts with the ~~forthcoming~~ adopted Land Management Plan (LMP) Amendment but would be inconsistent with established land use zones of the existing CNF LMP. Conflicts with the CNF LMP would be addressed as required by the National Forest Management Act and resolved under NEPA with the required LMP Amendment/mitigation.	Development of the new ROW avoids conflicts with the ~~forthcoming~~ adopted LMP Amendment but would be inconsistent with established land use zones of the existing CNF LMP. Conflicts with the CNF LMP would be addressed as required by the National Forest Management Act and resolved under NEPA with the required LMP Amendment/mitigation.	Development of the new ROW avoids conflicts with the established land use zones of the existing CNF LMP and the ~~forthcoming~~ adopted LMP Amendment. An encroachment permit from San Diego County would be required due to undergrounding in Boulder Creek Road. Land use conflicts would be addressed and resolved with required mitigation. This alternative requires additional mitigation	Development of the new ROW avoids conflicts with the established land use zones of the existing CNF LMP and the ~~forthcoming~~ adopted LMP Amendment. An encroachment permit from San Diego County would be required due to undergrounding in Boulder Creek Road. Land use conflicts would be addressed and resolved with required mitigation. This alternative requires additional mitigation	Development of the new ROW avoids conflicts with the established land use zones of the existing CNF LMP and the ~~forthcoming~~ adopted LMP Amendment. An encroachment permit from San Diego County, and new ROW from private property owners and the Inaja and Cosmit Reservation would be required due to undergrounding in Boulder Creek Road. Land use conflicts would be

Table E-5
Comparison of Environmental Effects of Federal Proposed Action for TL626 Replacement Options

Impact	TL626 Option 1	TL626 Option 2	TL626 Option 3a	TL626 Option 3b	TL626 Option 4
	Overhead option through Inaja and Cosmit Reservation	*Overhead option around Inaja and Cosmit Reservation*	*Underground relocation in Boulder Creek Road (11.4 miles UG) with northern 1 mile miles OH.*	*Partial underground relocation in Boulder Creek Road (6.3 miles UG) with northern 1 mile OH.*	*Overhead relocation along Boulder Creek Road*
			beyond that identified for SDG&E's project.	beyond that identified for SDG&E's project.	addressed and resolved with required mitigation. This alternative requires additional mitigation beyond that identified for SDG&E's project.
Noise (see Section D.11 for full analysis)					
NOI-1 and NOI-2: Construction Noise and Vibration	Development of new longer ROW for alignment and access roads would affect sensitive noise receptors. Impacts would not be adverse with the required mitigation.	Development of new longer ROW for alignment and access roads would affect sensitive noise receptors. Impacts would not be adverse with the required mitigation.	Temporary trenching activities in Boulder Creek Road would affect sensitive noise receptors. Impacts would not be adverse with the required mitigation.	Temporary trenching activities in Boulder Creek Road would affect sensitive noise receptors. Impacts would not be adverse with the required mitigation.	Development of new longer ROW for alignment would affect sensitive noise receptors. Impacts would not be adverse with the required mitigation.
NOI-3: Corona Noise	Corona noise level below the San Diego County threshold; therefore, impacts would not be adverse.	Corona noise level below the San Diego County threshold; therefore, impacts would not be adverse.	Majority of alignment would be underground; therefore, no impact.	Majority of alignment would be underground; therefore, no impact.	Corona noise level below the San Diego County threshold; therefore, impacts would not be adverse.
NOI-4: Long-Term Impacts	Sensitive noise receptors may experience periodic, but temporary, noise increase due to routine inspections. Impacts would not be adverse.	Sensitive noise receptors may experience periodic, but temporary, noise increase due to routine inspections. Impacts would not be adverse.	Majority of alignment would be underground; therefore, no impact.	Majority of alignment would be underground; therefore, no impact.	Sensitive noise receptors may experience periodic, but temporary, noise increase due to routine inspections. Impacts would not be adverse.
Public Services and Utilities (see Section D.12 for full analysis)					
PSU-1: Effects on Fire, Municipal Water	There would be no new demand for increased fire	There would be no new demand for increased fire	There would be no new demand for increased fire	There would be no new demand for increased fire	There would be no new demand for increased fire

Table E-5
Comparison of Environmental Effects of Federal Proposed Action for TL626 Replacement Options

Impact	TL626 Option 1	TL626 Option 2	TL626 Option 3a	TL626 Option 3b	TL626 Option 4
	Overhead option through Inaja and Cosmit Reservation	*Overhead option around Inaja and Cosmit Reservation*	*Underground relocation in Boulder Creek Road (11.4 miles UG) with northern 1 mile miles OH.*	*Partial underground relocation in Boulder Creek Road (6.3 miles UG) with northern 1 mile OH.*	*Overhead relocation along Boulder Creek Road*
Supply and Telecommunications	protection facilities with implementation of required fire hazard mitigation. Water use would increase from SDG&E's proposed project due to greater disturbance area. Impacts would not be adverse with the required mitigation. No impact to AT&T telecommunication facilities.	protection facilities with implementation of required fire hazard mitigation. Water use would increase from SDG&E's proposed project due to greater disturbance area. Impacts would not be adverse with the required mitigation. No impact to AT&T telecommunication facilities.	protection facilities with implementation of required fire hazard mitigation. Water use would increase from SDG&E's proposed project due to greater disturbance area. Impacts would not be adverse with the required mitigation. No impact to AT&T telecommunication facilities.	protection facilities with implementation of required fire hazard mitigation. Water use would increase from SDG&E's proposed project due to greater disturbance area. Impacts would not be adverse with the required mitigation. No impact to AT&T telecommunication facilities.	protection facilities with implementation of required fire hazard mitigation. Water use would increase from SDG&E's proposed project due to greater disturbance area. Impacts would not be adverse with the required mitigation. No impact to AT&T telecommunication facilities.
PSU-2: Solid Waste Disposal Facilities	Construction and operation would not have an adverse impact on solid waste disposal facilities.	Construction and operation would not have an adverse impact on solid waste disposal facilities.	Construction and operation would not have an adverse impact on solid waste disposal facilities.	Construction and operation would not have an adverse impact on solid waste disposal facilities.	Construction and operation would not have an adverse impact on solid waste disposal facilities.
PSU-3: Disruption of Electrical Service.	Electric transfers would be phased in accordance with California Independent System Operator (CAISO) requirements in order to reduce the potential for electric service interruptions during construction. Impacts would not be adverse.	Electric transfers would be phased in accordance with CAISO requirements in order to reduce the potential for electric service interruptions during construction. Impacts would not be adverse.	Electric transfers would be phased in accordance with CAISO requirements in order to reduce the potential for electric service interruptions during construction. Impacts would not be adverse.	Electric transfers would be phased in accordance with CAISO requirements in order to reduce the potential for electric service interruptions during construction. Impacts would not be adverse.	Electric transfers would be phased in accordance with CAISO requirements in order to reduce the potential for electric service interruptions during construction. Impacts would not be adverse.

Table E-5
Comparison of Environmental Effects of Federal Proposed Action for TL626 Replacement Options

Impact	TL626 Option 1	TL626 Option 2	TL626 Option 3a	TL626 Option 3b	TL626 Option 4
	Overhead option through Inaja and Cosmit Reservation	*Overhead option around Inaja and Cosmit Reservation*	*Underground relocation in Boulder Creek Road (11.4 miles UG) with northern 1 mile miles OH.*	*Partial underground relocation in Boulder Creek Road (6.3 miles UG) with northern 1 mile OH.*	*Overhead relocation along Boulder Creek Road*
Recreation (see Section D.13 for full analysis)					
REC-1: Reduce Access During Construction	Temporary impacts during construction to access to recreation and wilderness areas; however, with implementation of proposed APMs, impacts are not adverse.	Temporary impacts during construction to access to recreation and wilderness areas; however, with implementation of proposed APMs, impacts are not adverse.	Located primarily along Boulder Creek Road and not within recreation and wilderness areas. With implementation of proposed APMs, impacts are not adverse.	Located primarily along Boulder Creek Road and not within recreation and wilderness areas. With implementation of proposed APMs, impacts are not adverse.	Primarily along Boulder Creek Road and not within recreation and wilderness areas. With implementation of proposed APMs, impacts are not adverse.
REC-2: Project Components Reduce Access to Recreation Areas	Project components would not preclude access to recreation and wilderness areas. Therefore, impacts would not be adverse.	Project components would not preclude access to recreation and wilderness areas. Therefore, impacts would not be adverse.	Project components would not preclude access to recreation and wilderness areas. Therefore, impacts would not be adverse.	Project components would not preclude access to recreation and wilderness areas. Therefore, impacts would not be adverse.	Project components would not preclude access to recreation and wilderness areas. Therefore, impacts would not be adverse.
REC-3: Unauthorized Access	Construction of new access roads would not be adverse with the required mitigation.	Construction of new access roads would not be adverse with the required mitigation.	Primarily located along a public roadway; however, new access road would be required along the 1 mile of new overhead ROW. Construction of new access roads would not be adverse with the required mitigation.	Primarily located along a public roadway; however, new access road would be required along the 1 mile of new overhead ROW. Construction of new roads would not be adverse with the required mitigation.	Primarily located along a public roadway; however, new access road would be required along the 1 mile of new overhead ROW. Construction of new roads would not be adverse with the required mitigation.

Table E-5
Comparison of Environmental Effects of Federal Proposed Action for TL626 Replacement Options

Impact	TL626 Option 1	TL626 Option 2	TL626 Option 3a	TL626 Option 3b	TL626 Option 4
	Overhead option through Inaja and Cosmit Reservation	*Overhead option around Inaja and Cosmit Reservation*	*Underground relocation in Boulder Creek Road (11.4 miles UG) with northern 1 mile miles OH.*	*Partial underground relocation in Boulder Creek Road (6.3 miles UG) with northern 1 mile OH.*	*Overhead relocation along Boulder Creek Road*
Transportation and Traffic (see Section D.14 for full analysis)					
TRANS-1 through TRANS 5: Short-term Construction Activities to Transportation Facilities, Traffic, and Roadways	Construction would potentially cause delays on surrounding circulation system; however, with implementation of proposed APMs, impacts are not adverse. Additional roadways that would be used under this alternative include Engineers Road, Penstemon Road, and Penstemon Lane.	Construction would potentially cause delays on surrounding circulation system; however, with implementation of proposed APMs, impacts are not adverse. Additional roadways that would be used under this alternative include Engineers Road, Penstemon Road, and Penstemon Lane.	Construction would potentially cause delays on surrounding circulation system; however, with implementation of proposed APMs and the required mitigation, impacts are not adverse. Traffic would be disrupted during construction and trenching activities for an extended time period along Boulder Creek Road.	Construction would potentially cause delays on surrounding circulation system; however, with implementation of proposed APMs and the required mitigation, impacts are not adverse. Traffic would be disrupted during construction and trenching activities for an extended time period along Boulder Creek Road.	Construction would potentially cause delays on surrounding circulation system; however, with implementation of proposed APMs, impacts are not adverse.

The federal preferred option among the TL626 options is Option 3a, Underground relocation in Boulder Creek road, including Option 5, reroute around Inaja Fire Memorial Site.

E.5.1.2 TL626 Replacement Alternatives Proposed by SDG&E

The TL626 replacement alternative has two options as proposed by SDG&E. The key features are summarized in Table E-6, and the environmental effects are summarized in Table E-7. In order to serve existing customers, a 6.8-mile section of TL626 that is co-located with C79 would be converted to a 12 kV fire hardened distribution line and at Boulder Creek Substation. This alternative, for purposes of the analysis conducted in this EIR/EIS, would also convert a 6.5-mile section of TL626 from 69 kV to 12 kV distribution between the Santa Ysabel and Boulder Creek Substations. As discussed in Section C, Alternatives, upon agreement with the existing customer at Boulder Creek Substation, SDG&E is free to provide an off-grid solution, thereby eliminating the need to convert a 6.5-mile section of TL626 from 69 kV to 12 kV distribution between the Santa Ysabel and Boulder Creek Substations.~~The conversion of TL626 from a 69 kV to a 12 kV would be the same under both options, as would the off-grid solution proposed for the Boulder Creek substation.~~

Table E-6
Summary of TL626 Replacement Alternatives Proposed by SDG&E

Key Feature	Option 1 (TL6931)	Option 2 (TL625 Loop-in)
Description	*~~Add double circuit to~~Fire harden TL6931 from Crestwood to Boulevard*	*Construct new double-circuit loop from TL625 to Suncrest Substation adjacent to the Sunrise Powerlink*
Mile of OH TL on federal[1] lands	0.9	2.9
Miles of OH TL on Private land	5.1	0.1
Miles of exclusive use road on federal land	0.9 (estimated)	0
Miles of exclusive use roads on private land	1.6 (estimated)	0

Note:
[1] Federal lands include any National Forest System lands managed by the Forest Service, Public Lands managed by the BLM, or reservation lands managed in trust by the BIA.

Table E-7
Comparison of Environmental Effects of
TL626 Replacement Alternatives Proposed by SDG&E

Impact	Option 1 (TL6931)	Option 2 (TL625 Loop-in)
Visual (see Section D.2 for full analysis)		
VIS-1 and VIS-2: Scenic Vista/Scenic Highway	Avoids adverse and unavoidable impacts to the Inaja Scenic Overlook. There are no recognized scenic vistas within the viewshed of the 6-mile segment. Due to the presence of existing transmission and distribution facilities in the area and because of the screening effect	Avoids adverse and unavoidable impacts to the Inaja Scenic Overlook. The new 3-mile alignment would be adjacent to Sunrise Powerlink; therefore, impacts to a scenic vista would not be adverse (VIS-1).

Table E-7
Comparison of Environmental Effects of
TL626 Replacement Alternatives Proposed by SDG&E

Impact	Option 1 (TL6931)	Option 2 (TL625 Loop-in)
	of intervening vegetation and topography, the reconstruction of TL6931 would not substantially affect views from scenic highways. Therefore, VIS-1 and VIS-2 impacts would not be adverse.	The alignment would be visible from Japatul Road, a local two-lane road included in the County of San Diego Scenic Highway System. Impacts would not be adverse with the required mitigation.
VIS-3: Visual Character	Visual contrast of slightly taller poles would not be adverse with the required mitigation	The new 3-mile alignment would be adjacent to Sunrise Powerlink. The introduction of approximately 100-foot-tall, narrow, reddish-brown steel poles alongside existing steel lattice towers would likely create noticeable form, line, and color contrast. Impacts would not be adverse with the required mitigation.
VIS-4: Glare/ Light	Nighttime construction may occur but is not adverse with implementation of APMs. Pole structures would be a weathered patina, and with APMs requiring use of non-specular conductors, glare effects would not be adverse.	Nighttime construction may occur but is not adverse with implementation of APMs. Pole structures would be a weathered patina, and with APMs requiring use of non-specular conductors, glare effects would not be adverse.
VIS-5: Scenic Integrity	The 6-mile segment of TL6931 traverses tribal and private lands. As such, the segment would not be subject to the scenery management system of the Forest Service or the visual resource management system of the BLM. Therefore, VIS-5 impacts would not be adverse.	The new 3-mile alignment would be managed according to High scenic integrity objectives. The alignment would be installed adjacent to Sunrise Powerlink; however, weathered steel poles would display a different form, line, and color than steel lattice towers and deviations in scale would be noticeable. Conflicts with the CNF LMP scenic integrity objectives would be addressed as required by the National Forest Management Act and resolved under NEPA with the required LMP Amendment/mitigation.
Air Quality (see Section D.3 for full analysis)		
AIR-1: Short-term Construction-Related Air Quality Impacts	Short-term construction-related VOC, NO_x, CO, and $PM_{2.5}$ air emissions would exceed daily thresholds and remain adverse with mitigation; other short-term air quality impacts would not be adverse with the required mitigation.	Short-term construction-related VOC, NO_x, CO, and $PM_{2.5}$ air emissions would exceed daily thresholds and remain adverse with mitigation; other short-term air quality impacts would not be adverse with the required mitigation.
AIR-2: Long-term Emission Impacts	Long-term emission impacts would not be adverse.	Long-term emission impacts would not be adverse.
AIR-3: General Conformity	Emissions would be below de minimus thresholds.	Emissions would be below de minimus thresholds.
AIR-4: Conflict with Land Use Plans	There would be no conflict with or obstruction of implementation of the applicable air quality plan; therefore, no impacts would occur.	There would be no conflict with or obstruction of implementation of the applicable air quality plan; therefore, no impacts would occur.
AIR-5: Expose Sensitive Receptors	During construction and operation substantial pollutant concentrations would not be adverse as activities would not occur in any one place for an extended period of time.	During construction and operation substantial pollutant concentrations would not be adverse as activities would not occur in any one place for an extended period of time.

Table E-7
Comparison of Environmental Effects of
TL626 Replacement Alternatives Proposed by SDG&E

Impact	Option 1 (TL6931)	Option 2 (TL625 Loop-in)
Biological Resources (see Section D.4 for full analysis)		
BIO-1: Vegetation Loss	Construction would result in temporary and permanent vegetation loss. Impacts would not be adverse with the required mitigation.	Construction would result in temporary and permanent vegetation loss. Impacts would not be adverse with the required mitigation.
BIO-2: Loss of Preserve Areas	Impacts to Forest Service RCAs and riparian areas would be reduced; however, temporary and permanent impacts from erosion, sedimentation, fire risk, use of herbicides and/or introduction of non-native seeds to native communities would result from ground disturbance and operations and maintenance personnel and equipment. Impacts would not be adverse with the required mitigation.	Impacts to Forest Service RCAs and riparian areas would be reduced; however, temporary and permanent impacts from erosion, sedimentation, fire risk, use of herbicides and/or introduction of non-native seeds to native communities would result from ground disturbance and operations and maintenance personnel and equipment in the new ROW. Impacts would not be adverse with the required mitigation.
BIO-3: Native Wildlife	Construction-related impacts of this alternative on wildlife disturbance and direct mortality would not be adverse.	Construction-related impacts of this alternative on wildlife disturbance and direct mortality would not be adverse.
BIO-4: Jurisdictional Resources	Temporary and permanent impacts to jurisdictional waters and wetlands would be adverse. Impact would not be adverse with the required mitigation.	Temporary and permanent impacts to jurisdictional waters and wetlands would be adverse. Impact would not be adverse with the required mitigation.
BIO-5: Invasive Species	Temporary and permanent impacts would occur due to the potential for introduction of invasive, non-native, and noxious plant species where ground disturbance in new ROW occurs. Impact would not be adverse with the required mitigation.	Temporary and permanent impacts would occur due to the potential for introduction of invasive, non-native, and noxious plant species where ground disturbance in new ROW occurs. Impact would not be adverse with the required mitigation.
BIO-6: Candidate, Sensitive, or Special-Status Species	Temporary and permanent impacts to candidate, sensitive, or special-status species would not be adverse with the required mitigation.	Temporary and permanent impacts to candidate, sensitive, or special-status species would not be adverse with the required mitigation.
BIO-7: Conflict with Adopted Plans	There would be no conflict with any provisions of an adopted HCP, NCCP, or other approved conservation plan; therefore, impacts are not adverse.	There would be no conflict with any provisions of an adopted HCP, NCCP, or other approved conservation plan; therefore, impacts are not adverse.
BIO-8: Interfere with wildlife movement/ corridors	No new barriers that would impede the local or regional movement of wildlife would be constructed; therefore, impacts are not adverse.	No new barriers that would impede the local or regional movement of wildlife would be constructed; therefore, impacts are not adverse.

Table E-7
Comparison of Environmental Effects of
TL626 Replacement Alternatives Proposed by SDG&E

Impact	Option 1 (TL6931)	Option 2 (TL625 Loop-in)
Cultural and Paleontological Resources (see Section D.5 for full analysis)		
CUL-1: Historical Resources; **CUL-2**: Archaeological Resources; **CUL-3**: Human Remains; **CUL-4:** Traditional Cultural Properties; **PALEO-1**: Unique Paleontological Resource or Geologic Feature	Impacts would be adverse but mitigated through avoidance in project siting or through implementation of APMs and mitigation measures.	Impacts would be adverse but mitigated through avoidance in project siting or through implementation of APMs and mitigation measures.
Greenhouse Gases (see Section D.6 for full analysis)		
GHG-1 and GHG-2: Increase GHG Emissions	Temporary increase in GHG emissions would be below GHG threshold. Construction and operation impacts would not be adverse.	Temporary increase in GHG emissions would be below GHG threshold. Construction and operation impacts would not be adverse.
GHG-3: Conflict with Applicable Plan or GHG Adopted Regulations	As construction activities would not meet or exceed the CAP screening criteria, impacts would not be adverse	As construction activities would not meet or exceed the CAP screening criteria, impacts would not be adverse
Public Health and Safety (see Section D.7 for full analysis)		
PHS-1 through PHS-3: Hazardous Materials Impacts During Construction	Use of petroleum products and herbicides as well as the potential for accidental spills during construction, operations, and maintenance would not be adverse with the required mitigation.	Use of petroleum products and herbicides as well as the potential for accidental spills during construction, operations, and maintenance would not be adverse with the required mitigation.
PHS-4: Flight Operations/ Aviation Hazards	Temporary use of helicopters to place poles would occur, but impacts would not be adverse with the required mitigation.	Temporary use of helicopters to place poles would occur, but impacts would not be adverse with the required mitigation.
PHS-5: Emergency Response	Emergency access would remain available during construction. Indirect effects would result from construction vehicles using roadways to access pole construction sites. Impacts would not be adverse with the implementation of APMs.	Emergency access would remain available during construction. Indirect effects would result from construction vehicles using roadways to access pole construction sites. Impacts would not be adverse with implementation of APMs.

Table E-7
Comparison of Environmental Effects of
TL626 Replacement Alternatives Proposed by SDG&E

Impact	Option 1 (TL6931)	Option 2 (TL625 Loop-in)
PHS-6: Structural Failure	Potential adverse effects of extreme weather and seismic activity would be mitigated by the conservative nature of the specifications in CPUC's GO 95 and mitigation requiring geotechnical investigation. Impacts would not be adverse with the required mitigation.	Potential adverse effects of extreme weather and seismic activity would be mitigated by the conservative nature of the specifications in CPUC's GO 95 and mitigation requiring geotechnical investigation. Impacts would not be adverse with the required mitigation.
PHS-7: Shock Hazards	Based on the conservative nature of the specifications in CPUC's GO 95, operation and maintenance would not pose an adverse safety hazard.	Based on the conservative nature of the specifications in CPUC's GO 95, operation and maintenance would not pose an adverse safety hazard.
Fire and Fuels Management (see Section D.8 for full analysis)		
FF-1: Construction, Operation and Maintenance Could Start a Wildfire; **FF-2:** Presence of Transmission Lines Could Start a Fire	The potential to ignite a wildfire exists with the presence of electrical facilities which is adverse. Mitigation and APMs would reduce risk of wildfire, but not eliminate the risk.	The potential to ignite a wildfire exists with the presence of electrical facilities which is adverse. Mitigation and APMs would reduce risk of wildfire, but not eliminate the risk.
FF-3: Reduced Firefighter Effectiveness	As this ROW would be essentially the same as currently exists, impacts would not be adverse.	Although the alignment would be adjacent to the Sunrise Powerlink, the new poles and lines would create an obstacle in a new location to be avoided during aerial firefighting. Impacts would not be adverse with the required mitigation.
FF-4: Introduction of Non-native Plants	Construction would remove vegetation and disturb soils, increasing potential for non-native plant establishment. Impacts to fire behavior would not be adverse with the required mitigation.	Construction of new ROW would remove vegetation and disturb soils, increasing potential for non-native plant establishment. Impacts to fire behavior would not be adverse with the required mitigation.
Hydrology and Water Quality (see Section D.9 for full analysis)		
HYD-1 and HYD-2: Short-Term Construction Activities Would Degrade Water Resources	During short-term construction, water quality impacts would occur due to runoff, sedimentation, or erosion. Impacts would not be adverse with the required mitigation.	During short-term construction, water quality impacts would occur due to runoff, sedimentation, or erosion. Impacts would not be adverse with the required mitigation.
HYD-3: Groundwater Supply	Use of groundwater in this groundwater dependent region would not be adverse with the required mitigation.	Use of groundwater in this groundwater dependent region would not be adverse with the required mitigation.

Table E-7
Comparison of Environmental Effects of
TL626 Replacement Alternatives Proposed by SDG&E

Impact	Option 1 (TL6931)	Option 2 (TL625 Loop-in)
HYD-4: Access Roads	No new access roads are proposed. The area is within a predominately flat to gently sloping terrain; therefore, impacts of accelerated erosion and rills due to steep access roads are not adverse. (Reduces Cedar Creek riparian area unavoidable adverse impacts associated with TL626 only. All other project alignments with steep access roads – C79, C442, CTL625, and TL629 – remain adverse and unavoidable).	Due to rugged terrain, helicopters will be used during construction and operations; therefore, no impact to roads would occur. (Reduces Cedar Creek riparian area unavoidable adverse impacts associated with TL626 only. All other project alignments with steep access roads – C79, C442, CTL625, and TL629 – remain adverse and unavoidable).
HYD-5: Maintenance - Vegetation Management, Pesticide, and Herbicide Application	Impacts as a result of vegetation management and chemical applications would not be adverse with the required mitigation.	Impacts as a result of vegetation management and chemical applications would not be adverse with the required mitigation.
Land Use (see Section D.10 for full analysis)		
LU-1: Temporary Disturbance Due to Construction	Sensitive receptors would be exposed to temporary construction activities. Impacts would not be adverse with the required mitigation.	Development of new ROW would affect sensitive receptors. Impacts would not be adverse with the required mitigation.
LU-2: Divide an Established Community	As the existing ROW divides an established community, the replacement of poles would not further divide the community; therefore, no impact would occur.	As the alignment would be adjacent to the Sunrise Powerlink, the new alignment would not further divide an established community; therefore, no impact would occur.
LU-3: Conflict with Applicable Land Use Plan	The alignment is consistent with relevant policies in the San Diego County General Plan, the Mountain Empire Subregional Plan and Boulevard Subregional Planning Area plans, such as maintaining unobstructed access to power lines, review by SDG&E of encroachments to facilities or alteration of drainage patterns; and the use of existing ROWs for development of new transmission lines. Therefore, this impact would not be adverse.	As the alignment would be adjacent to the Sunrise Powerlink, it is consistent with CNF LMP direction to co-locate facilities within established corridors. In addition, the TL625 loop-in would traverse the development area interface (DAI) and back country motorized use restricted (BCMUR) land use zones of the CNF LMP. Developed facilities are considered suitable uses in the DAI land use zone and are suitable by exception in the BCMUR land use zone. Due to the proximity of the Sunrise Powerlink, conflicts with the established land use zones of the CNF LMP would not be anticipated to occur.
Noise (see Section D.11 for full analysis)		
NOI-1 and NOI-2: Construction Noise and Vibration	Construction activities would affect approximately 20 sensitive noise receptors within 200 feet of existing ROW. Impacts would not be adverse with the required mitigation.	Construction activities, including helicopter use for installation of alignment, would affect sensitive noise receptors (500 feet from new alignment). Impacts would not be adverse with the required mitigation.
NOI-3: Corona Noise	Corona noise level below the San Diego County threshold; therefore, impacts would not be adverse.	Corona noise level below the San Diego County threshold; therefore, impacts would not be adverse.

Table E-7
Comparison of Environmental Effects of
TL626 Replacement Alternatives Proposed by SDG&E

Impact	Option 1 (TL6931)	Option 2 (TL625 Loop-in)
NOI-4: Long-Term Impacts	Sensitive noise receptors may experience periodic, but temporary, noise increase due to routine inspections. Impacts would not be adverse.	Sensitive noise receptors may experience periodic, but temporary, noise increase due to routine helicopter inspections. Impacts would not be adverse.
Public Services and Utilities (see Section D.12 for full analysis)		
PSU-1: Effects on Fire, Municipal Water Supply and Telecommunications.	There would be no new demand for increased fire protection facilities with implementation of required fire hazard mitigation. Similar amounts of water would be required as SDG&E's proposed project. AT&T and SDG&E would be required to coordinate co-location of telecommunications services. Impacts would not be adverse with the required mitigation.	There would be no new demand for increased fire protection facilities with implementation of required fire hazard mitigation. Similar amounts of water would be required as SDG&E's proposed project and AT&T and SDG&E would be required to coordinate co-location of telecommunications services. Impacts would not be adverse with the required mitigation.
PSU-2: Solid Waste Disposal Facilities	Construction and operation would not have an adverse impact on solid waste disposal facilities.	Construction and operation would not have an adverse impact on solid waste disposal facilities
PSU-3: Disruption of Electrical Service.	Electric transfers would be phased in accordance with CAISO requirements in order to reduce the potential for electric service interruptions during construction. Impacts would not be adverse.	Electric transfers would be phased in accordance with CAISO requirements in order to reduce the potential for electric service interruptions during construction. Impacts would not be adverse.
Recreation (see Section D.13 for full analysis)		
REC-1 and REC-2: Reduce Access During Construction and Presence of Project Components	No campgrounds or recreational resources are located within the immediate vicinity; therefore, impacts due to a reduction to access or visitation of recreation areas, and precluding access to recreation areas would not be adverse.	No campgrounds or recreational resources are located within the immediate vicinity; therefore, impacts due to a reduction to access or visitation of recreation areas, and precluding access to recreation areas would not be adverse.
REC-3: Unauthorized Access (Class II)	Removal of TL626 and associated access roads would avoid identified unauthorized access impacts associated with TL626. The TL6931 alignment is located along public and private roadways, and no new access would be required; therefore, no impacts would occur.	Removal of TL626 and associated access roads would avoid identified unauthorized access impacts associated with TL626. Due to rugged terrain of the TL625 Loop-in alignment and no new access roads proposed, no impacts would occur.
Transportation and Traffic (see Section D.14 for full analysis)		
TRANS-1 through TRANS 5: Short-term Construction Activities to Transportation Facilities, Traffic and Roadways.	Construction would potentially cause delays on surrounding circulation system; however, with implementation of proposed APMs impacts are not adverse. Roadways that would be used under this alternative are McCain Valley Road, Old Highway 80, and Highway 94. Roadways that would be spanned by this alignment include Live Oak Springs Road, Campo Road (Highway 94), Tierra Del Sol Road, Jewell Valley Road, and McCain Lane.	Construction would potentially cause delays on surrounding circulation system; however, with implementation of proposed APMs impacts are not adverse. Roadways that would be used under this alternative include I-8, Alpine Boulevard, Japatul Valley Road, Lyons Valley Road, and Japatul Road. In addition, the nearest airport is a privately owned airport: the On the Rocks Airport – no impact would occur to the airport as the alignment is adjacent to the existing Sunrise Powerlink.

The federal preferred option among the TL626 replacement alternatives proposed by SDG&E is Option 1, ~~upgrade of~~fire hardening of TL6931, combined with the off-grid solution for the Boulder Creek substation. If the off-grid solutions is not feasible, the 6.5-mile section of TL626 between the Santa Ysabel and Boulder Creek Substations will be converted from 69 kV to 12 kV using the TL626 Option 5 re-route around the Inaja Memorial.~~.~~

E.5.1.3 C157 Reroute Options

Forest Service Proposed Action

The Forest Service Proposed Action for C157 reroute has two options. The key features are summarized in Table E-8, and the environmental effects are summarized in Table E-9.

Table E-8
Summary of Forest Service Proposed Action for C157 Reroute Options

Key Feature	Option 1	Option 2
	Reroute approximately 2 miles of overhead to the south between Pine Creek and Hauser Wilderness areas	*Similar to Option 1, however, portion of overhead on City-owned property near Barrett Lake would be aligned closer to Skye Valley Road.*
Mile of OH C on federal1 lands	1.1	1.1
Miles of OH C on Private land	City Land: 0.9	City Land: 0.8

Note:
[1] Federal lands include any National Forest System lands managed by the Forest Service, Public Lands managed by the BLM, or reservation lands managed in trust by the BIA.

Table E-9
Comparison of Environmental Effects of C157 Reroute Options

Impact No.	Option 1 (Forest Service Route)	Option 2 (City of San Diego Route)
Visual (see Section D.2 for full analysis)		
VIS-1 and VIS-2: Scenic Vista/Scenic Highway	The realigned/altered route would not be visible from a scenic vista or eligible or designated scenic roadways. Therefore, impacts would not be adverse.	The realigned/altered route would not be visible from a scenic vista or eligible or designated scenic roadways. Therefore, impacts would not be adverse.
VIS-3: Visual Character	Relatively weak visual contrast as viewed from Skye Valley Road and KOP 20; therefore, impacts would not be adverse.	Relatively weak visual contrast as viewed from Skye Valley Road and KOP 20; therefore, impacts would not be adverse.
VIS-4: Glare/ Light	There would be no nighttime construction; therefore, no nighttime lighting impacts would occur. Pole structures would be a weathered patina and with APMs requiring use of non-specular conductors, glare effects would not be adverse.	There would be no nighttime construction; therefore, no nighttime lighting impacts would occur. Pole structures would be a weathered patina and with APMs requiring use of non-specular conductors, glare effects would not be adverse.

Table E-9
Comparison of Environmental Effects of C157 Reroute Options

Impact No.	Option 1 (Forest Service Route)	Option 2 (City of San Diego Route)
VIS-5: Scenic Integrity	The relocated segment would avoid CNF lands managed according to Very High scenic integrity objectives (Pine Creek Wilderness and Hauser Wilderness). This segment would be located on lands managed by the Forest Service according to High scenic integrity objectives. With the required LMP Amendment/mitigation, conflicts with the High scenic integrity objective of the CNF LMP would be allowed and resolved as required by the National Forest Management Act.	The relocated segment would avoid CNF lands managed according to Very High scenic integrity objectives (Pine Creek Wilderness and Hauser Wilderness). This segment would be located on lands managed by the Forest Service according to high scenic integrity objectives. With the required LMP Amendment/mitigation, conflicts with the High scenic integrity objective of the CNF LMP would be allowed and resolved as required by the National Forest Management Act.
Air Quality (see Section D.3 for full analysis)		
AIR-1: Short-term Construction-Related Air Quality Impacts	Short-term construction-related VOC, NO_x, CO, and $PM_{2.5}$ air emissions would exceed daily thresholds and remain adverse with mitigation; other short-term air quality impacts would not be adverse with the required mitigation.	Short-term construction-related VOC, NO_x, CO, and $PM_{2.5}$ air emissions would exceed daily thresholds and remain adverse with mitigation; other short-term air quality impacts would not be adverse with the required mitigation.
AIR-2: Long-term Emission Impacts	Long-term emission impacts would not be adverse.	Long-term emission impacts would not be adverse.
AIR-3: General Conformity	Emissions would be below de minimus thresholds.	Emissions would be below de minimus thresholds.
AIR-4: Conflict with Land Use Plans	There would be no conflict with or obstruction of implementation of the applicable air quality plan; therefore, no impacts would occur.	There would be no conflict with or obstruction of implementation of the applicable air quality plan; therefore, no impacts would occur.
AIR-5: Expose Sensitive Receptors	During construction and operation, substantial pollutant concentrations would not be adverse as activities would not occur in any one place for an extended period of time.	During construction and operation, substantial pollutant concentrations would not be adverse as activities would not occur in any one place for an extended period of time.
Biological Resources (see Section D.4 for full analysis)		
BIO-1: Vegetation Loss	Construction would result in 1.07 acres of temporary impacts and 0.01 acre of permanent impacts. Impacts would not be adverse with the required mitigation.	Slight less temporary and permanent impacts than Option 1 due to reduced aerial and ground footprint. Impacts would not be adverse with the required mitigation.
BIO-2: Loss of Preserve Areas	Temporary and permanent impacts from erosion, sedimentation, fire risk, use of herbicides and/or introduction of non-native seeds to native communities would result from ground disturbance and operations and maintenance personnel and equipment. Impacts would not be adverse with the required mitigation.	Temporary and permanent impacts from erosion, sedimentation, fire risk, use of herbicides and/or introduction of non-native seeds to native communities would result from ground disturbance and operations and maintenance personnel and equipment. Impacts would not be adverse with the required mitigation.
BIO-3: Native Wildlife	Construction-related impacts of this alternative on wildlife disturbance and direct mortality would not be adverse.	Construction-related impacts of this alternative on wildlife disturbance and direct mortality would not be adverse.
BIO-4: Jurisdictional Resources	Temporary and permanent impacts to jurisdictional waters and wetlands would be adverse. Impacts would not be adverse with the required mitigation.	Temporary and permanent impacts to jurisdictional waters and wetlands would be adverse. Impacts would not be adverse with the required mitigation.

Table E-9
Comparison of Environmental Effects of C157 Reroute Options

Impact No.	Option 1 (Forest Service Route)	Option 2 (City of San Diego Route)
BIO-5: Invasive Species	Temporary and permanent impacts would occur due to the potential for introduction of invasive, non-native, and noxious plant species where ground disturbance in new ROW occurs. Impacts would not be adverse with the required mitigation.	Temporary and permanent impacts would occur due to the potential for introduction of invasive, non-native, and noxious plant species where ground disturbance in new ROW occurs. Impacts would not be adverse with the required mitigation.
BIO-6: Candidate, Sensitive, or Special-Status Species	Two poles are located within USFWS-designated arroyo toad critical habitat resulting in approximately 0.14 acre of temporary impacts and less than 0.01 acre of permanent impacts to USFWS arroyo toad critical habitat. Impacts would not be adverse with the required mitigation.	Two poles are located within USFWS-designated arroyo toad critical habitat resulting in approximately 0.14 acre of temporary impacts and less than 0.01 acre of permanent impacts to USFWS arroyo toad critical habitat. Impacts would not be adverse with the required mitigation.
BIO-7: Conflict with Adopted Plans	Conflicts with the City of San Diego draft City Public Utilities Department's Land Management Plan, which designates this area as the highest priority for conservation. Therefore, a conflict with the suitability of uses within a designated conservation area exists. This would not be adverse with the selection of Option 2.	There would be no conflict with any provisions of an adopted HCP, NCCP, or other approved conservation plan; therefore, impacts are not adverse.
BIO-8: Interfere with Wildlife Movement/ Corridors	No new barriers that would impede the local or regional movement of wildlife would be constructed; therefore, impacts are not adverse.	No new barriers that would impede the local or regional movement of wildlife would be constructed; therefore, impacts are not adverse.
Cultural and Paleontological Resources (see Section D.5 for full analysis)		
CUL-1: Historical Resources; **CUL-2:** Archaeological Resources; **CUL-3:** Human Remains; **CUL-4:** Traditional Cultural Properties; **PALEO-1:** Unique Paleontological Resource or Geologic Feature	Impacts would be adverse but mitigated through avoidance in project siting or through implementation of APMs and mitigation measures.	Impacts would be adverse but mitigated through avoidance in project siting or through implementation of APMs and mitigation measures.
Greenhouse Gases (see Section D.6 for full analysis)		
GHG-1 and GHG-2: Increase GHG emissions	Temporary increase in GHG emissions would be below GHG threshold. Construction and operation impacts would not be adverse.	Temporary increase in GHG emissions would be below GHG threshold. Construction and operation impacts would not be adverse.
GHG-3: Conflict with applicable plan or GHG adopted regulations	As construction activities would not meet or exceed the CAP screening criteria, impacts would not be adverse.	As construction activities would not meet or exceed the CAP screening criteria, impacts would not be adverse.

Table E-9
Comparison of Environmental Effects of C157 Reroute Options

Impact No.	Option 1 (Forest Service Route)	Option 2 (City of San Diego Route)
Public Health and Safety (see Section D.7 for full analysis)		
PHS-1 through PHS-3: Hazardous Materials Impacts During Construction	Use of petroleum products and herbicides as well as the potential for accidental spills during construction, operations, and maintenance would not be adverse with the required mitigation.	Use of petroleum products and herbicides as well as the potential for accidental spills during construction, operations, and maintenance would not be adverse with the required mitigation.
PHS-4: Flight Operations/Aviation Hazards	Temporary use of helicopters to place poles would occur, but impacts would not be adverse with the required mitigation. In addition, as an approximately 2-mile segment is within a new ROW, this alternative requires additional mitigation beyond that identified for SDG&E's project.	Temporary use of helicopters to place poles would occur, but impacts would not be adverse with the required mitigation. In addition, as an approximately 2-mile segment is within a new ROW, this alternative requires additional mitigation beyond that identified for SDG&E's project.
PHS-5: Emergency Response	Emergency access would remain available during construction. Indirect effects would result from construction vehicles using roadways to access pole construction sites. Impacts would not be adverse with implementation of APMs.	Emergency access would remain available during construction. Indirect effects would result from construction vehicles using roadways to access pole construction sites. Impacts would not be adverse with implementation of APMs.
PHS-6: Structural Failure	Potential adverse effects of extreme weather and seismic activity would be mitigated by the conservative nature of the specifications in CPUC's GO 95 and mitigation requiring geotechnical investigation. Impacts would not be adverse with the required mitigation.	Potential adverse effects of extreme weather and seismic activity would be mitigated by the conservative nature of the specifications in CPUC's GO 95 and mitigation requiring geotechnical investigation. Impacts would not be adverse with the required mitigation.
PHS-7: Shock Hazards	Based on the conservative nature of the specifications in CPUC's GO 95, operation and maintenance would not pose an adverse safety hazard.	Based on the conservative nature of the specifications in CPUC's GO 95, operation and maintenance would not pose an adverse safety hazard.
Fire and Fuels Management (see Section D.8 for full analysis)		
FF-1: Construction, Operation and Maintenance Could Start a Wildfire; **FF-2:** Presence of Transmission Lines Could Start a Fire	The potential to ignite a wildfire exists with the presence of electrical facilities which is adverse. Mitigation and APMs would reduce risk of wildfire, but not eliminate the risk.	The potential to ignite a wildfire exists with the presence of electrical facilities which is adverse. Mitigation and APMs would reduce risk of wildfire, but not eliminate the risk.
FF-3: Reduced Firefighter Effectiveness	Although this ROW would be located in essentially the same vicinity as currently exists, the new poles and lines would create an obstacle in a new location to be avoided during aerial firefighting, but would remove the existing obstacle. Impacts would not be adverse with the required mitigation.	Although this ROW would be located in essentially the same vicinity as currently exists, the new poles and lines would create an obstacle in a new location to be avoided during aerial firefighting, but would remove the existing obstacle. Impacts would not be adverse with the required mitigation.

Table E-9
Comparison of Environmental Effects of C157 Reroute Options

Impact No.	Option 1 (Forest Service Route)	Option 2 (City of San Diego Route)
FF-4: Introduction of Non-native Plants	Construction would remove vegetation and disturb soils, increasing potential for non-native plant establishment. Impact to fire behavior would not be adverse with the required mitigation.	Construction of new ROW would remove vegetation and disturb soils, increasing potential for non-native plant establishment. Impact to fire behavior would not be adverse with the required mitigation.
Hydrology and Water Quality (see Section D.9 for full analysis)		
HYD-1 and HYD-2: Short-term Construction Activities Would Degrade Water Resources	During short-term construction, water quality impacts would occur due to runoff, sedimentation, or erosion. Impacts would not be adverse with the required mitigation.	During short-term construction, water quality impacts would occur due to runoff, sedimentation, or erosion. Impacts would not be adverse with the required mitigation.
HYD-3: Groundwater Supply	Use of groundwater in this groundwater-dependent region would not be adverse with the required mitigation.	Use of groundwater in this groundwater-dependent region would not be adverse with the required mitigation.
HYD-4: Access Roads	No exclusive use access roads are along the alignment; therefore, no impacts would occur for this portion of SDG&E proposed project.	No exclusive use access roads are along the alignment; therefore, no impacts would occur for this portion of SDG&E proposed project.
HYD-5: Maintenance - Vegetation Management, Pesticide, and Herbicide Application	Impacts as a result of vegetation management and chemical applications would not be adverse with the required mitigation.	Impacts as a result of vegetation management and chemical applications would not be adverse with the required mitigation.
Land Use (see Section D.10 for full analysis)		
LU-1: Temporary Disturbance Due to Construction	Sensitive receptors would be exposed to temporary construction activities. Impacts would not be adverse with the required mitigation.	Sensitive receptors would be exposed to temporary construction activities. Impacts would not be adverse with the required mitigation.
LU-2: Divide an Established Community	The shift in the alignment approximately 0.25 mile south from the existing alignment would not divide an established community, and no impact would occur.	The shift in the alignment approximately 0.25 mile south from the existing alignment would not divide an established community, and no impact would occur.
LU- 3: Conflict with Applicable Land Use Plan	The alignment would comply with the provisions of the Wilderness Act of 1964 (avoids the adverse impact of SDG&E's proposed project) and would avoid the Existing Wilderness land use zone of the CNF LMP. However, it would be relocated within an area that the City of San Diego has ranked as highest priority for conservation in the draft City Public Utilities Department's LMP. A conflict with the City's conservation area is an adverse impact. This conflict would not be adverse with the selection of Option 2.	The alignment would comply with the provisions of the Wilderness Act of 1964 (avoids the adverse impact of SDG&E's proposed project) and would avoid the Existing Wilderness land use zone of the CNF LMP. It also avoids impacts to the City's draft LMP. Impacts would not be adverse.

Table E-9
Comparison of Environmental Effects of C157 Reroute Options

Impact No.	Option 1 (Forest Service Route)	Option 2 (City of San Diego Route)
Noise (see Section D.11 for full analysis)		
NOI-1 and NOI-2: Construction Noise and Vibration	Development of this alignment would affect a minimal number of sensitive noise receptors. Impacts would not be adverse with the required mitigation.	Development of this alignment would affect a minimal number of sensitive noise receptors. Impacts would not be adverse with the required mitigation.
NOI-3: Corona Noise	Corona noise level below the San Diego County threshold; therefore, impacts would not be adverse.	Corona noise level below the San Diego County threshold; therefore, impacts would not be adverse.
NOI-4: Long-term Impacts	Sensitive noise receptors may experience periodic, but temporary, noise increase due to routine inspections. Impacts would not be adverse.	Sensitive noise receptors may experience periodic, but temporary, noise increase due to routine helicopter inspections. Impacts would not be adverse.
Public Services and Utilities (see Section D.12 for full analysis)		
PSU-1: Effects on Fire, Municipal Water Supply and Tele-communications	There would be no new demand for increased fire protection facilities with implementation of required fire hazard mitigation. Similar amounts of water would be required as SDG&E's proposed project. AT&T and SDG&E would be required to coordinate co-location of telecommunications services. Impacts would not be adverse with the required mitigation.	There would be no new demand for increased fire protection facilities with implementation of required fire hazard mitigation. Similar amounts of water would be required as SDG&E's proposed project and AT&T and SDG&E would be required to coordinate co-location of telecommunications services. Impacts would not be adverse with the required mitigation.
PSU-2: Solid Waste Disposal Facilities	Construction and operation would not have an adverse impact on solid waste disposal facilities.	Construction and operation would not have an adverse impact on solid waste disposal facilities.
PSU-3: Disruption of Electrical Service	Electric transfers would be phased in accordance with CAISO requirements in order to reduce the potential for electric service interruptions during construction. Impacts would not be adverse.	Electric transfers would be phased in accordance with CAISO requirements in order to reduce the potential for electric service interruptions during construction. Impacts would not be adverse.
Recreation (see Section D.13 for full analysis)		
REC-1: Reduce Access During Construction	There are no established trailheads or parking areas in the vicinity in order to access the wilderness areas; therefore, no reduction to access or visitation of recreation areas would occur.	There are no established trailheads or parking areas in the vicinity in order to access the wilderness areas; therefore, no reduction to access or visitation of recreation areas would occur.
REC-2: Project Components Reduce Access to Recreation Areas	Project components would not preclude access to recreation and wilderness areas. Therefore, impacts would not be adverse.	Project components would not preclude access to recreation and wilderness areas. Therefore, impacts would not be adverse.
REC-3: Unauthorized Access (Class II)	The alignment is located along public and private roadways, and no new access would be required; therefore, no adverse impacts resulting from unauthorized access would occur.	The alignment is located along public and private roadways, and no new access would be required; therefore, no adverse impacts resulting from unauthorized access would occur.

Table E-9
Comparison of Environmental Effects of C157 Reroute Options

Impact No.	Option 1 (Forest Service Route)	Option 2 (City of San Diego Route)
Transportation and Traffic (see Section D.14 for full analysis)		
TRANS-1 through TRANS 5: Short-term Construction Activities to Transportation Facilities, Traffic, and Roadways	Construction would potentially cause delays on surrounding circulation system; however, with implementation of proposed APMs, impacts are not adverse.	Construction would potentially cause delays on surrounding circulation system; however, with implementation of proposed APMs, impacts are not adverse.

The federal preferred option among the C157 Reroute Options is Option 2, the City of San Diego route.

E.5.2 NEPA Comparison of Alternatives

The key features of the alternatives are summarized in Table E-10. The environmental effects of the alternatives are summarized by resource area in Table E-11.

Table E-10
Key Features of the Alternatives

Key Feature	Proposed Project	Federal Proposed Action	Partial Removal of Overland Access Roads	TL626 ~~Replacement~~Removal from Service	No Project
	The project as proposed by SDG&E in their MSUP/PTC application.	*The federal proposed action using the preferred options.*	*The proposed project without access on steeper roads.*	*The federal preferred option for ~~replacement~~ the removal of TL626 ~~(describe)~~from service is to fire harden TL 6931, with the off-grid solution for Boulder Creek Substation*	*No change in existing facilities, existing permits issued on annual basis (does not preclude individual pole replacements under O&M).*
Mile of OH electric lines on federal[1] lands	95.5	80.1	95.9	82.6	100.6
Miles of OH electric lines on Private land[2]	Water Districts: 9.6 Private: 64.6 State: 1.5 City/County/School: 4.3	Water Districts: 9.6 Private: 65.1 State: 1.5 City/County/School: 4.3	Water Districts: 9.6 Private: 63.1 State: 1.5 City/County/School: 4.3	Water Districts: 9.6 Private: 59.4 State: 1.3 City/County/School: 4.0	Water Districts: 9.6 Private: 64.6 State: 1.5 City/County/School: 4.3
Mile of UG electric lines on federal lands	12	30.5	12.0	12.3	3.4
Miles of UG electric lines on Private land[2]	Private: 5.5 State: 2.8 School: 0.07	Private: 12.7 State: 2.8 School: 0.07	Private: 5.5 State: 2.8 School: 0.07	Private: 5.5 State: 2.8 School: 0.07	Private: 0 State: 0 School: 0
Miles of exclusive use road on NFS land	34.4	32.2	~~23~~22.9	~~28.4~~28.4	47.5

Note:
1 Federal lands include any National Forest System lands managed by the Forest Service, Public Lands managed by the BLM, or reservation lands managed in trust by the BIA and includes distribution and transmission lines included in the MSUP and PTC.
2 This category includes the circuits that are part of the PTC application

Table E-11
Summary of Environmental Effects of the Alternatives

Impact	Proposed Project	Federal Proposed Action	Partial Removal of Overland Access Roads	TL626 Removal from Service~~Replacement~~	No Action	No Project
	The project as proposed by SDG&E in their MSUP/PTC application.	*The federal proposed action using the TL626 options 3a and 5, C157 Option 2, and undergrounding of C440 within the Mt. Laguna Recreation Area.*	*The proposed project without access on steeper roads.*	*The federal preferred option for ~~replacement~~ removing~~of~~ TL626 from service using the TL6931 ~~upgrade~~ fire hardening and Boulder Creek off-grid solution.*	*No permits issued for CNF-managed lands. SDG&E required to remove the existing electric lines and facilities on CNF-managed lands and develop additional electrical service upgrades elsewhere*	*No change in existing facilities, existing permits issued on annual basis (does not preclude individual pole replacements under O&M).*
Visual (see Section D.2 for full analysis)						
VIS-1: Scenic Vista	Impacts to the Inaja scenic overlook by the TL626 upgrades would be adverse and unavoidable. Views from the Henshaw Scenic Vista would not be adverse adversely impacted.	Impacts to the Inaja scenic overlook by the TL626 upgrades would be enhanced by relocating the line further up-river. Views from the Henshaw Scenic Vista would not be adversely impacted.	Impacts to the Inaja scenic overlook by the TL626 upgrades would be adverse and unavoidable. Views from the Henshaw Scenic Vista would not be adversely impacted	Impacts to the Inaja scenic overlook by the TL626 ~~replacement~~ removal would be enhanced by removing the line from the area. Views from the Henshaw Scenic Vista would not be adversely impacted	Following restoration activities, impacts on CNF-managed lands would be reduced with removal of facilities; however, development of additional power lines in conformance with CAISO requirements and/or alternative means of delivering electrical service elsewhere could have potential adverse effects.	Impacts resulting from SDG&E's proposed project would not occur. However, the existing impacts to the Inaja scenic overlook and lands traversed by existing infrastructure (transmission and distribution towers, wires, and access roads) would remain.
VIS-2: Scenic Highway	Impacts related to C440 would not be adverse with required mitigation. Views to all other overhead segments	Undergrounding C440 within the Laguna Mountain Recreation Area would enhance the	Views from project area scenic highways are not visible to the overland access roads to be removed.	Impacts related to C440 would not be adverse with required mitigation. Views to all other overhead segments	See No Action VIS-1	See No Project VIS-1

Table E-11
Summary of Environmental Effects of the Alternatives

Impact	Proposed Project	Federal Proposed Action	Partial Removal of Overland Access Roads	TL626 Removal from Service~~Replacement~~	No Action	No Project
	The project as proposed by SDG&E in their MSUP/PTC application.	*The federal proposed action using the TL626 options 3a and 5, C157 Option 2, and undergrounding of C440 within the Mt. Laguna Recreation Area.*	*The proposed project without access on steeper roads.*	*The federal preferred option for ~~replacement~~ removing~~of~~ TL626 from service using the TL6931 ~~upgrade~~ fire hardening and Boulder Creek off-grid solution.*	*No permits issued for CNF-managed lands. SDG&E required to remove the existing electric lines and facilities on CNF-managed lands and develop additional electrical service upgrades elsewhere*	*No change in existing facilities, existing permits issued on annual basis (does not preclude individual pole replacements under O&M).*
	would be screened by existing vegetation and topography; therefore, impacts would not be adverse.	overall scenic quality of the area, including views from the scenic highway.	Views to all other overhead segments would be screened by existing vegetation and topography; therefore, impacts would not be adverse.	would be screened by existing vegetation and topography; therefore, impacts would not be adverse		
VIS-3: Visual Character	Noticeable visual contrast between replacement and existing poles would occur at a limited number of locations (see Table D.2-10). Impacts at these locations would not be adverse with the required mitigation. All other locations would not be adverse (see Table D.2-10).	Noticeable visual contrast between replacement and existing poles would occur at a limited number of locations (see Table D.2-10). Impacts at these locations would not be adverse with the required mitigation. Other locations would not be adverse (see Table D.2-10). Visual	Removal of certain segments of access roads would reduce and avoid visual character impacts. Impacts would not be adverse.	Noticeable visual contrast between replacement and existing poles would be eliminated for areas associated with TL626. The remaining impacts would be similar to SDG&E's proposed action (see Table D.2-10).	See No Action VIS-1	See No Project VIS-1

Table E-11
Summary of Environmental Effects of the Alternatives

Impact	Proposed Project	Federal Proposed Action	Partial Removal of Overland Access Roads	TL626 Removal from Service~~Replacement~~	No Action	No Project
	The project as proposed by SDG&E in their MSUP/PTC application.	*The federal proposed action using the TL626 options 3a and 5, C157 Option 2, and undergrounding of C440 within the Mt. Laguna Recreation Area.*	*The proposed project without access on steeper roads.*	*The federal preferred option for ~~replacement~~ removing~~of~~ TL626 from service using the TL6931 ~~upgrade~~ fire hardening and Boulder Creek off-grid solution.*	*No permits issued for CNF-managed lands. SDG&E required to remove the existing electric lines and facilities on CNF-managed lands and develop additional electrical service upgrades elsewhere*	*No change in existing facilities, existing permits issued on annual basis (does not preclude individual pole replacements under O&M).*
		character within the La Jolla Reservation would be enhanced.				
VIS-4: Glare/ Light	Nighttime construction may occur but is not adverse with implementation of APMs. Pole structures would be a weathered patina and with APMs requiring use of non-specular conductors, glare effects would not be adverse.	Nighttime construction may occur but is not adverse with implementation of APMs. Pole structures would be a weathered patina and with APMs requiring use of non-specular conductors, glare effects would not be adverse.	No impact due to road removal. Overall project effects would remain the same as SDG&E's proposed project (not adverse).	Nighttime construction may occur but is not adverse with implementation of APMs. Pole structures would be a weathered patina and with APMs requiring use of non-specular conductors, glare effects would not be adverse.	See No Action VIS-1	See No Project VIS-1
VIS-5: Scenic Integrity	Portions of TL626 and C157 would not be consistent with the CNF LMP, and would require a project specific plan	Portions of TL626 and C157 would not be consistent with the CNF LMP, and would require a project	No impact due to road removal. However, overall project effects would remain the same as SDG&E's	Portions of C157 would not be consistent with the CNF LMP, and would require a project specific plan amendment.	See No Action VIS-1	See No Project VIS-1

Table E-11
Summary of Environmental Effects of the Alternatives

Impact	Proposed Project	Federal Proposed Action	Partial Removal of Overland Access Roads	TL626 Removal from Service~~Replacement~~	No Action	No Project
	The project as proposed by SDG&E in their MSUP/PTC application.	*The federal proposed action using the TL626 options 3a and 5, C157 Option 2, and undergrounding of C440 within the Mt. Laguna Recreation Area.*	*The proposed project without access on steeper roads.*	*The federal preferred option for ~~replacement~~ removing~~of~~ TL626 from service using the TL6931 ~~upgrade~~ fire hardening and Boulder Creek off-grid solution.*	*No permits issued for CNF-managed lands. SDG&E required to remove the existing electric lines and facilities on CNF-managed lands and develop additional electrical service upgrades elsewhere*	*No change in existing facilities, existing permits issued on annual basis (does not preclude individual pole replacements under O&M).*
	amendment. All other alignments would be consistent. Portions of TL625, TL629, and TL6923 on BLM lands are in VRM Class III – effects would not be adverse.	specific plan amendment. All other alignments would be consistent. Portions of TL625, TL629, and TL6923 on BLM lands are in VRM Class III – effects would not be adverse	proposed project.	Conflicts with the LMP around the Inaja memorial would be eliminated by replacement of the line. All other alignments would be consistent. Portions of TL625, TL629, and TL6923 on BLM lands are in VRM Class III – effects would not be adverse		
Air Quality (see Section D.3 for full analysis)						
AIR-1: Short-term Construction-Related Air Quality Impacts	Short-term construction-related VOC, NO_x, CO, and $PM_{2.5}$ air emissions would exceed daily thresholds and remain adverse with mitigation; other short-term air quality impacts would not be adverse with the	Short-term construction-related VOC, NO_x, CO, and $PM_{2.5}$ air emissions would exceed daily thresholds and remain adverse with mitigation; other short-term air quality	Short-term construction-related VOC, NO_x, CO, and $PM_{2.5}$ air emissions would exceed daily thresholds and remain adverse with mitigation; other short-term air quality impacts	Short-term construction-related VOC, NO_x, CO, and $PM_{2.5}$ air emissions would exceed daily thresholds and remain adverse with mitigation; other short-term air quality impacts would not be adverse with the	Removing the electric lines from the National Forest would avoid some of the construction-related emissions and associated impacts; however, with restoration activities and replacement of these in-kind facilities elsewhere,	Would eliminate all identified air emissions and associated air quality impacts associated with construction of SDG&E's proposed project including

Table E-11
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	The project as proposed by SDG&E in their MSUP/PTC application.	*The federal proposed action using the TL626 options 3a and 5, C157 Option 2, and undergrounding of C440 within the Mt. Laguna Recreation Area.*	*The proposed project without access on steeper roads.*	*The federal preferred option for ~~replacement~~ removing~~of~~ TL626 from service using the TL6931 ~~upgrade~~ fire hardening and Boulder Creek off-grid solution.*	*No permits issued for CNF-managed lands. SDG&E required to remove the existing electric lines and facilities on CNF-managed lands and develop additional electrical service upgrades elsewhere*	*No change in existing facilities, existing permits issued on annual basis (does not preclude individual pole replacements under O&M).*
	required mitigation.	impacts would not be adverse with the required mitigation.	would not be adverse with the required mitigation.	required mitigation.	short-term construction-related VOC, NO_x, CO, and $PM_{2.5}$ air emissions would exceed daily thresholds and remain adverse with mitigation; other short-term air quality impacts would not be adverse with the required mitigation.	Impact AIR-1 Class I impacts. However, the existing conditions, including routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks would continue based on the requirements of the existing permits.
AIR-2: Long-term Emission Impacts	Long-term emission impacts would not be adverse.	Long-term emission impacts would not be adverse.	Long-term emission impacts would not be adverse.	Long-term emission impacts would not be adverse.	Long-term emission impacts would not be adverse.	See No Project AIR-1

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	The project as proposed by SDG&E in their MSUP/PTC application.	*The federal proposed action using the TL626 options 3a and 5, C157 Option 2, and undergrounding of C440 within the Mt. Laguna Recreation Area.*	*The proposed project without access on steeper roads.*	*The federal preferred option for ~~replacement~~ removing~~of~~ TL626 from service using the TL6931 ~~upgrade~~ fire hardening and Boulder Creek off-grid solution.*	*No permits issued for CNF-managed lands. SDG&E required to remove the existing electric lines and facilities on CNF-managed lands and develop additional electrical service upgrades elsewhere*	*No change in existing facilities, existing permits issued on annual basis (does not preclude individual pole replacements under O&M).*
AIR-3: General Conformity	Emissions would be below de minimus thresholds.	Emissions would be below de minimus thresholds	Emissions would be below de minimus thresholds.	Emissions would be below de minimus thresholds	Emissions would be below de minimus thresholds.	See No Project AIR-1
AIR-4: Conflict with Land Use Plans	There would be no conflict with or obstruction of implementation of the applicable air quality plan; therefore, no impacts would occur.	There would be no conflict with or obstruction of implementation of the applicable air quality plan; therefore, no impacts would occur.	There would be no conflict with or obstruction of implementation of the applicable air quality plan; therefore, no impacts would occur.	There would be no conflict with or obstruction of implementation of the applicable air quality plan; therefore, no impacts would occur.	There would be no conflict with or obstruction of implementation of the applicable air quality plan; therefore, no impacts would occur.	See No Project AIR-1
AIR-5: Expose Sensitive Receptors	During construction and operation substantial pollutant concentrations would not be adverse as activities would not occur in any one place for an extended period of time.	During construction and operation substantial pollutant concentrations would not be adverse as activities would not occur in any one place for an extended period of time.	Since in remote areas, there would be no adverse impact to sensitive receptors during road removal activities.	During construction and operation substantial pollutant concentrations would not be adverse as activities would not occur in any one place for an extended period of time.	During construction activities and operation of in-kind replacement facilities outside the National Forest, substantial pollutant concentrations would not be adverse as activities would not occur in any one place for an extended period of time	See No Project AIR-1

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Biological Resources (see Section D.4 for full analysis)						
BIO-1: Vegetation Loss	Construction would temporarily impact 11 sensitive vegetation communities (157.6 acres) and permanently impact 9 sensitive vegetation communities (0.6 acre; see table D.4-6). Impacts would not be adverse with the required mitigation.	Construction would temporarily impact 11 sensitive vegetation communities (157.6 acres) and permanently impact 9 sensitive vegetation communities (0.6 acre; see table D.4-6). Implementing Option 3a for TL626 and restoring the existing TL626 alignment will result in a net gain in vegetative cover. Impacts would not be adverse with the required mitigation.	Minimal vegetation loss would occur during grading activities as access roads to be removed are existing. Impacts would not be adverse with the required mitigation. Long-term impacts would be beneficial as removed access roads would be restored to their natural habitat.	Replacing TL626 by upgrading TL6931 will result in a net gain of vegetation cover when the existing TL626 alignment is restored. All other impacts will be similar to SDG&E's proposed action.	Removal of the electric lines and restoration activities within the National Forest along with the development of in-kind replacement facilities in conformance with CAISO requirements and/or alternative means of delivering electrical service elsewhere would increase the overall biological resource impacts as it is anticipated that construction of replacement facilities would require new ROW resulting in a greater disturbance area. Impacts would not be adverse with the required mitigation.	Impacts resulting from SDG&E's proposed project would not occur. However, the existing conditions, including routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks would continue based on the requirements of the existing permits.

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BIO-2: Loss of Preserve Areas	Construction would temporarily impact 223.6 acres and permanently impact 0.7 acres (see Table D.4-7). Impacts would not be adverse as SDG&E is proposing work within an existing ROW. Construction would temporarily impact 8.8 acres and permanently impact <0.1 Forest Service RCA's (see Table D.4-8). Impacts would not be adverse with the required mitigation.	Impacts would be similar to SDG&E's proposed action, and not adverse with mitigation.	Construction would temporarily impact RCAs along these roads. Once access roads are restored impacts would be reduced. Impacts would not be adverse with the required mitigation.	Impacts would be similar to SDG&E's proposed action, and not adverse with mitigation.	See No Action BIO-1	See No Project BIO-1.
BIO-3: Native Wildlife	Although wildlife would be temporarily displaced or may avoid the area	Although wildlife would be temporarily displaced or may	Although wildlife would be temporarily displaced or may avoid	Although wildlife would be temporarily displaced or may avoid the area	See No Action BIO-1	See No Project BIO-1.

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	immediately surrounding the construction, construction-related disturbance to and/or mortality of wildlife, except where such disturbance or mortality affects special-status species, would not be adverse.	avoid the area immediately surrounding the construction, construction-related disturbance to and/or mortality of wildlife, except where such disturbance or mortality affects special-status species, would not be adverse	the area immediately surrounding the construction, construction-related disturbance to and/or mortality of wildlife, except where such disturbance or mortality affects special-status species, would not be adverse.	immediately surrounding the construction, construction-related disturbance to and/or mortality of wildlife, except where such disturbance or mortality affects special-status species, would not be adverse		
BIO-4: Jurisdictional Resources	Temporary and permanent impacts to jurisdictional waters and wetlands would occur (see Tables D.4-9 through D.4-11). Impacts would not be adverse with the	Temporary and permanent impacts to jurisdictional waters and wetlands would occur (see Tables D.4-9 through D.4-11). For Option 3a, temporary impacts are greater	Temporary impacts to jurisdictional waters and wetlands would not be adverse with the required mitigation. Following road removal, impacts to wetlands in these areas would not	Temporary and permanent impacts to jurisdictional waters and wetlands would occur (see Tables D.4-9 through D.4-11). Impacts would not be adverse with the required mitigation.	See No Action BIO-1	See No Project BIO-1.

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	required mitigation.	due to an increased potential to impact hydrological features. Impacts would not be adverse with the required mitigation.	be adverse.			
BIO-5: Invasive Species	Temporary and permanent impacts would occur due to the potential for introduction of invasive, non-native, and noxious plant species where ground disturbance occurs. Impacts would not be adverse with the required mitigation.	Temporary and permanent impacts would occur due to the potential for introduction of invasive, non-native, and noxious plant species where ground disturbance occurs. Impacts would not be adverse with the required mitigation.	Temporary and permanent impacts would occur due to the potential for introduction of invasive, non-native, and noxious plant species where ground disturbance in new ROW occurs. Impacts would not be adverse with the required mitigation.	Temporary and permanent impacts would occur due to the potential for introduction of invasive, non-native, and noxious plant species where ground disturbance occurs. Impacts would not be adverse with the required mitigation.	See No Action BIO-1	See No Project BIO-1.
BIO-6: Candidate, Sensitive, and	Temporary and permanent impacts to candidate, sensitive, or	Temporary and permanent impacts to candidate, sensitive, or	Temporary and permanent impacts to candidate, sensitive, or	Temporary and permanent impacts to candidate, sensitive, or	See No Action BIO-1	See No Project BIO-1.

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Special-Status Species	special-status species (see Table D.4-12) would not be adverse with the required mitigation.	special-status species would occur (see Table D.4-12). Implementing TL626 Option 5 may potentially reduce long-term direct collision-related impacts to golden eagles. Additionally, no biological impacts are expected as a result of Option 5 (as activities would occur in an existing parking lot). Implementing C157 Option 2 would impact arroyo toad critical habitat. Impacts would not be adverse with the required mitigation.	special-status species would not be adverse with the required mitigation.	special-status species (see Table D.4-12) would not be adverse with the required mitigation.		

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BIO-7: Conflict with Adopted Plans	There would be no conflict with any provisions of an adopted HCP, NCCP, or other approved conservation plan; therefore, impacts would not be adverse.	There would be no conflict with any provisions of an adopted HCP, NCCP, or other approved conservation plan; therefore, impacts would not be adverse	There would be no conflict with any provisions of an adopted HCP, NCCP, or other approved conservation plan; therefore, impacts would not be adverse.	There would be no conflict with any provisions of an adopted HCP, NCCP, or other approved conservation plan; therefore, impacts would not be adverse	See No Action BIO-1	See No Project BIO-1.
BIO-8: Interfere with wildlife movement/corridors	No new barriers that would impede the local or regional movement of wildlife would be constructed; therefore, impacts would not be adverse.	No new barriers that would impede the local or regional movement of wildlife would be constructed; therefore, impacts would not be adverse	No new barriers that would impede the local or regional movement of wildlife would be constructed; therefore, impacts would not be adverse.	No new barriers that would impede the local or regional movement of wildlife would be constructed; therefore, impacts would not be adverse	See No Action BIO-1	See No Project BIO-1.

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Cultural and Paleontological Resources (see Section D.5 for full analysis)						
CUL-1: Historical Resources; **CUL-2:** Archaeological Resources; CUL-3: Human Remains; **CUL-4:** Traditional Cultural Properties; **PALEO-1:** Unique Paleontological Resource or Geologic Feature	Impacts would not be adverse with mitigation, primarily through avoidance in project siting or through implementation of APMs mitigation measures, and implementation of the Programmatic Agreement on federal lands.	Impacts would not be adverse with mitigation, primarily through avoidance in project siting or through implementation of APMs mitigation measures, and implementation of the Programmatic Agreement on federal lands.	Impacts would not be adverse with mitigation, primarily through avoidance in project siting or through implementation of APMs mitigation measures, and implementation of the Programmatic Agreement on federal lands.	Impacts would not be adverse with mitigation, primarily through avoidance in project siting or through implementation of APMs mitigation measures, and implementation of the Programmatic Agreement on federal lands.	Removal of the electric lines and restoration activities within the National Forest along with the development of in-kind replacement facilities in conformance with CAISO requirements and/or alternative means of delivering electrical service elsewhere would increase the overall cultural resource impacts as it is anticipated that construction of replacement facilities would require new ROW resulting in a greater disturbance area. Impacts would not be adverse with the required mitigation.	Impacts resulting from SDG&E's proposed project would not occur. However, the existing conditions, including routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks would continue based on the requirements of the existing permits.

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Greenhouse Gases (see Section D.6 for full analysis)						
GHG-1 and GHG-2: Increase GHG Emissions	Temporary increase in GHG emissions would be below GHG threshold. Construction and operation impacts would not be adverse.	Temporary increase in GHG emissions would be below GHG threshold. Construction and operation impacts would not be adverse	Temporary increase in GHG emissions would be below GHG threshold. Construction and maintenance impacts would not be adverse.	Temporary increase in GHG emissions would be below GHG threshold. Construction and operation impacts would not be adverse	Construction (removal, restoration, and replacement of in-kind facilities) and operation impacts of replacement in-kind facilities would not be adverse.	Would eliminate all identified GHG impacts associated with construction of SDG&E's proposed project.
GHG-3: Conflict with Applicable Plan or GHG Adopted Regulations	As construction activities would not meet or exceed the CAP screening criteria, impacts would not be adverse.	As construction activities would not meet or exceed the CAP screening criteria, impacts would not be adverse.	No impact.	As construction activities would not meet or exceed the CAP screening criteria, impacts would not be adverse.	Construction activities for removal, restoration, and replacement of in-kind facilities would not meet or exceed the CAP screening criteria; therefore, impacts would not be adverse.	No impact.

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Public Health and Safety (see Section D.7 for full analysis)						
PHS-1 through PHS-3: Hazardous Materials Impacts During Construction	Use of petroleum products and herbicides as well as the potential for accidental spills during construction, operations, and maintenance would not be adverse with the required mitigation.	Use of petroleum products and herbicides as well as the potential for accidental spills during construction, operations, and maintenance would not be adverse with the required mitigation.	Use of petroleum products and herbicides, and the potential for accidental spills during construction and maintenance would not be adverse with the required mitigation.	Use of petroleum products and herbicides as well as the potential for accidental spills during construction, operations, and maintenance would not be adverse with the required mitigation.	Use of petroleum products and herbicides as well as the potential for accidental spills during construction, operations, and maintenance would not be adverse with the required mitigation.	Impacts resulting from SDG&E's proposed project would not occur. However, the existing conditions, including routine and periodic equipment testing, pole brushing, herbicide application, and other related ongoing maintenance tasks would continue based on the requirements of the existing permits.
PHS-4: Flight Operations/Aviation Hazards	Temporary use of helicopters to place poles may result in adverse impacts.	Temporary use of helicopters to place poles may result in adverse impacts.	Helicopter use could increase during construction and operations in the areas	Temporary use of helicopters to place poles may result in adverse impacts. Impacts would	Temporary use of helicopters to remove poles within the National Forest and replace poles	Impacts resulting from SDG&E's proposed project would not occur.

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	Impacts would not be adverse with the required mitigation.	Impacts would not be adverse with the required mitigation.	where access roads have been removed. Impacts would not be adverse with the required mitigation.	not be adverse with the required mitigation.	elsewhere may result in adverse impacts. Impacts would not be adverse with the required mitigation.	However, the existing conditions, including helicopter inspections, would continue based on the requirements of the existing permits.
PHS-5: Emergency Response	Emergency access would remain available during construction. Indirect effects would result from construction vehicles using roadways to access pole construction sites. Impacts would not be adverse with implementation of APMs.	Emergency access would remain available during construction. Indirect effects would result from construction vehicles using roadways to access pole construction sites. Impacts would not be adverse with implementation of APMs.	Since access roads are in remote areas, there would be no impact to emergency access. For remainder of project, emergency access would remain available during construction. Indirect effects would result from construction vehicles using roadways to access	Emergency access would remain available during construction. Indirect effects would result from construction vehicles using roadways to access pole construction sites. Impacts would not be adverse with implementation of APMs.	Emergency access would remain available during construction. Indirect effects would result from construction vehicles using roadways to access facilities during removal and restoration activities as well as construction of facilities outside the National Forest Impacts would not be adverse with implementation of APMs.	Impacts resulting from SDG&E's proposed project would not occur.

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			pole construction sites. Impacts would not be adverse with implementation of APMs.			
PHS-6: Structural Failure	Potential adverse effects of extreme weather and seismic activity would be mitigated by the conservative nature of the specifications in CPUC's GO 95 and mitigation requiring geotechnical investigation. Impacts would not be adverse with the required mitigation.	Potential adverse effects of extreme weather and seismic activity would be mitigated by the conservative nature of the specifications in CPUC's GO 95 and mitigation requiring geotechnical investigation. Impacts would not be adverse with the required mitigation.	Potential adverse effects of extreme weather and seismic activity would remain for the power and distribution lines under this alternative. Impacts would not be adverse with the required mitigation.	Potential adverse effects of extreme weather and seismic activity would be mitigated by the conservative nature of the specifications in CPUC's GO 95 and mitigation requiring geotechnical investigation. Impacts would not be adverse with the required mitigation.	Following pole removal on CNF-managed lands, there would be no impact. For in-kind replacement facilities outside the National Forest, potential adverse effects of extreme weather and seismic activity would be mitigated by the conservative nature of the specifications in CPUC's GO 95 and mitigation requiring geotechnical investigation. Impacts would not be adverse with the required mitigation.	Impacts resulting from SDG&E's proposed project would not occur. However, the existing conditions, including pole inspections and replacements on an individual basis, would continue based on the requirements of the existing permits.

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PHS-7: Shock Hazards	Based on the conservative nature of the specifications in CPUC's GO 95, operation and maintenance would not pose an adverse safety hazard.	Based on the conservative nature of the specifications in CPUC's GO 95, operation and maintenance would not pose an adverse safety hazard.	Potential adverse effects would remain for the power and distribution lines; however, based on the conservative nature of the specifications in CPUC's GO 95, operation and maintenance would not pose an adverse safety hazard.	Based on the conservative nature of the specifications in CPUC's GO 95, operation and maintenance would not pose an adverse safety hazard.	Following pole removal on CNF-managed lands there would be no impact. For in-kind replacement facilities outside the National Forest, the potential exists; however, based on the conservative nature of the specifications in CPUC's GO 95, operation and maintenance would not pose an adverse safety hazard.	Impacts resulting from construction of SDG&E's proposed project would not occur.
Fire and Fuels Management (see Section D.8 for full analysis)						
FF-1: Construction, Operation, and Maintenance Could Start a Wildfire	Potential to ignite a wildfire due to increased human activity is adverse. Mitigation and APMs would reduce risk of wildfire, but not eliminate the risk.	Potential to ignite a wildfire due to increased human activity is adverse. Mitigation and APMs would reduce risk of wildfire, but not	Potential to ignite a wildfire due to increased human activity is adverse. Mitigation and APMs would reduce risk of wildfire, but not	Potential to ignite a wildfire due to increased human activity is adverse. Mitigation and APMs would reduce risk of wildfire, but not eliminate the risk.	Following pole removal on CNF-managed lands, impacts would not be adverse. During construction on CNF-managed lands and for in-kind replacement facilities	Impacts resulting from construction of SDG&E's proposed project would not occur. However, the existing conditions, including hazards

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		eliminate the risk.	eliminate the risk.		outside the National Forest, the potential to ignite a wildfire due to increased human activity is adverse. Mitigation and APMs would reduce risk of wildfire, but not eliminate the risk.	associated with operation and maintenance activities would remain. Therefore, the risks associated with starting a fire would remain.
FF-2: Presence of Transmission Lines Could Start a Fire	The design features would reduce the risk associated with a portion of the power line replacement projects' existing electrical system but not reduce the risk for the circuits that are part of the MSUP and not part of the power line replacement projects. Overall risk reduction	The design features would reduce the risk associated with a portion of the power line replacement projects' existing electrical system but not reduce the risk for the circuits that are part of the MSUP and not part of the power line replacement projects. Overall risk	Potential adverse effects would remain for the power and distribution lines. The overall risk would not be eliminated.	The design features and overall reduction of circuit mileage would reduce the risk associated with a portion of the power line replacement projects' existing electrical system but not reduce the risk for the circuits that are part of the MSUP and not part of the power line replacement projects. Overall risk reduction depends on	Following pole removal on CNF-managed lands, there would be no impact. For in-kind replacement facilities outside the National Forest, the potential to ignite a wildfire due the presence of electric facilities is adverse. Mitigation and APMs would reduce risk of wildfire, but not eliminate the risk.	The fire hardening of the existing electric lines as proposed would not occur, and the fire hazards associated with the existing electric lines would remain; therefore, the risks associated with starting a fire would remain.

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	depends on successful implementation of vegetation management and power line maintenance requirements as required by GO 95 and PRC 4293. The risk is not fully eliminated for the remaining overhead circuits. Approximately 12 miles of distribution line would be underground, eliminating the risk associated with overhead lines.	reduction depends on successful implementation of vegetation management and power line maintenance requirements as required by GO 95 and PRC 4293. The risk is not fully eliminated for the remaining overhead circuits. Approximately 30 miles of distribution line would be underground, eliminating the risk associated with overhead lines.		successful implementation of vegetation management and power line maintenance requirements as required by GO 95 and PRC 4293. The risk is not fully eliminated for the remaining overhead circuits. Approximately 12 miles of distribution line would be underground, eliminating the risk associated with overhead lines.		

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FF-3: Reduced Firefighter Effectiveness	Facilities are existing; therefore, no new obstacles would be created during aerial firefighting. This impact would not be adverse.	Although some new obstacles would be created as part of this alternative, the net reduction due to undergrounding would reduce conflicts during aerial firefighting, enhancing firefighter effectiveness.	As the power and distribution lines would remain as part of the project, no new obstacles would be created during aerial firefighting. This impact would not be adverse.	The replacement facilities are existing; therefore, no new obstacles would be created during aerial firefighting. There would be a net reduction of aerial hazards associated with removing TL626, enhancing firefighter effectiveness.	Following pole removal on CNF-managed lands, there would be no impact. For in-kind replacement facilities outside the National Forest, new poles and lines would create an obstacle during aerial firefighting. This impact would not be adverse with the required mitigation.	Impacts resulting from construction of SDG&E's proposed project would not occur. However, existing conditions would continue based on the requirements of the existing permits.
FF-4: Introduction of Non-native Plants	Construction would remove vegetation and disturb soils, increasing potential for non-native plant establishment. Impact to fire behavior would not be adverse with the required mitigation.	Construction would remove vegetation and disturb soils, increasing potential for non-native plant establishment. Impact to fire behavior would not be adverse with the required	Impacts would not be adverse with the required mitigation for restored access roads.	Construction would remove vegetation and disturb soils, increasing potential for non-native plant establishment. Impact to fire behavior would not be adverse with the required mitigation	Following pole removal on CNF-managed lands there would be no impact. For in-kind replacement facilities outside the National Forest, construction would remove vegetation and disturb soils, increasing	Impacts resulting from construction of SDG&E's proposed project would not occur. However, existing conditions would continue based on the requirements of the

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		mitigation			potential for non-native plant establishment. Impact to fire behavior would not be adverse with the required mitigation.	existing permits.
Hydrology and Water Quality (see Section D.9 for full analysis)						
HYD-1 and HYD-2: Short-term Construction Activities Would Degrade Water Resources	During short-term construction, water quality impacts would occur due to runoff, sedimentation, or erosion. Impacts would not be adverse with the required mitigation.	During short-term construction, water quality impacts would occur due to runoff, sedimentation, or erosion. Impacts would not be adverse with the required mitigation.	During short-term construction, water quality impacts would occur due to runoff, sedimentation, or erosion. Impacts would not be adverse with the required mitigation.	During short-term construction, water quality impacts would occur due to runoff, sedimentation, or erosion. Impacts would not be adverse with the required mitigation.	During pole removal and construction of in-kind replacement facilities outside the National Forest, short-term construction water quality impacts would occur due to runoff, sedimentation, or erosion. Impacts would not be adverse with the required mitigation.	Impacts resulting from construction of SDG&E's proposed project would not occur.

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HYD-3: Groundwater Supply	Use of groundwater in this groundwater-dependent region would not be adverse with the required mitigation.	Use of groundwater in this groundwater-dependent region would not be adverse with the required mitigation.	Use of groundwater in this groundwater-dependent region would not be adverse with the required mitigation.	Use of groundwater in this groundwater-dependent region would not be adverse with the required mitigation.	Use of groundwater in this groundwater-dependent region would not be adverse with the required mitigation.	Impacts resulting from construction of SDG&E's proposed project would not occur.
HYD-4: Access Roads	Access road segments associated with C79, C442, TL625, TL626, and TL629 would be unavoidable and adverse. Construction and long-term maintenance activities along all other access roads could result in periodic sediment delivery into receiving waters; however, impacts would not be adverse with the	Access road segments associated with C79, C442, TL625, and TL629 would be unavoidable and adverse. Construction and long-term maintenance activities along all other access roads could result in periodic sediment delivery into receiving waters; however,	Removal of the affected access roads along C79, C442, TL625, TL626, and TL629 reduces the adverse and unavoidable impacts along these roads to not adverse with the required mitigation.	Access road segments associated with C79, C442, TL625, and TL629 would be unavoidable and adverse. Construction and long-term maintenance activities along all other access roads could result in periodic sediment delivery into receiving waters; however, impacts would not be adverse with the required mitigation.	Following removal of facilities and restoration activities on CNF-managed lands, roads that have been experiencing erosion would be restored to conditions acceptable to the Forest Service; therefore, impacts would not be adverse. For in-kind replacement facilities outside the National Forest, construction and long-term maintenance	Impacts resulting from construction of SDG&E's proposed project would not occur. However, the existing erosion and gullying conditions in steep-slope areas and within the SDG&E ROW would continue resulting in an ongoing degradation issue. Operation and maintenance

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	required mitigation.	impacts would not be adverse with the required mitigation.			activities along all other access roads could result in periodic sediment delivery into receiving waters; however, impacts would not be adverse with the required mitigation.	activities would continue based on the requirements of the existing permits; therefore, the severity of impacts under existing conditions to hydrology and water quality would not change.
HYD-5: Maintenance - Vegetation Management, Pesticide, and Herbicide Application	Impacts as a result of vegetation management and chemical applications would not be adverse with the required mitigation.	Impacts as a result of vegetation management and chemical applications would not be adverse with the required mitigation.	Impacts as a result of vegetation management and chemical applications would not be adverse with the required mitigation.	Impacts as a result of vegetation management and chemical applications would not be adverse with the required mitigation.	Impacts as a result of vegetation management and chemical applications during removal and restoration, and replacement of in-kind facilities would not be adverse with the required mitigation.	Impacts resulting from construction of SDG&E's proposed project would not occur. However, the existing conditions, including routine and periodic pole brushing, herbicide application, and

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						other related ongoing maintenance tasks would continue based on the requirements of the existing permits.
Land Use (see Section D.10 for full analysis)						
LU-1: Temporary Disturbance Due to Construction	Construction would affect sensitive receptors. Impacts would not be adverse with the required mitigation.	Construction would affect sensitive receptors. Impacts would not be adverse with the required mitigation.	Since in remote areas, there would be no adverse impact to sensitive receptors during construction activities near the access roads; however, all other project construction would remain. Therefore, impacts would not be adverse with the required mitigation.	Construction would affect sensitive receptors. Impacts would not be adverse with the required mitigation.	Temporary construction during removal of facilities and restoration activities on CNF-managed lands and in-kind replacement facilities outside the National Forest would affect sensitive receptors. Impacts would not be adverse with the required mitigation.	Impacts resulting from construction of SDG&E's proposed project would not occur.

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LU-2: Divide an Established Community	No impact.	No Impact	No impact.	No Impact	There would be no impact with removal of facilities and restoration activities on CNF-managed lands. However, development of in-kind replacement facilities outside the National Forest could have an adverse impact.	Impacts resulting from construction of SDG&E's proposed project would not occur.
LU- 3: Conflict with Applicable Land Use Plan	C157 is located within the boundaries of the federally designated Pine Creek Wilderness and the Hauser Wilderness; therefore, conflicts to designated wilderness lands are adverse and unavoidable. Portions of TL626 conflict with the CNF LMP visual, land	A portion of TL626 conflicts with the CNF LMP visual standards, but the conflict with riparian standards is eliminated. C442 conflicts with CNF land use zoning. The C 157 conflict with designated wilderness is	Reduces impacts associated with Cedar Creek riparian area and LMP amendment associated with access to TL626. All other impact findings would be nearly identical to those of the proposed project.	The replacement options for TL626 have no conflicts with applicable land use plans. The remaining circuits are the same as SDG&E's proposed action.	Impacts would not be adverse with removal of facilities and restoration activities on CNF-managed lands. However, development of in-kind replacement facilities outside the National Forest could have an adverse impact.	C157 is located within the boundaries of the federally designated Pine Creek Wilderness and the Hauser Wilderness; therefore, conflicts to designated wilderness lands would remain adverse and

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	use zones, and riparian standards, and C442 conflicts with CNF land use zoning.	eliminated.				unavoidable.
Noise (see Section D.11 for full analysis)						
NOI-1 and NOI-2: Construction Noise and Vibration	Construction would affect sensitive noise receptors. General equipment impacts would not be adverse with the required mitigation. Noise generated by helicopter use during construction that affects sensitive receptors would be a short-term adverse impact.	Construction would affect sensitive noise receptors. General equipment impacts would not be adverse with the required mitigation. Noise generated by helicopter use during construction that affects sensitive receptors would be a short-term adverse impact.	Noise generated by helicopter use during construction that affects sensitive receptors would be a short-term adverse impact.	Construction would affect sensitive noise receptors. General equipment impacts would not be adverse with the required mitigation. Noise generated by helicopter use during construction that affects sensitive receptors would be a short-term adverse impact.	Construction during removal of facilities and restoration activities on CNF-managed lands and construction of in-kind replacement facilities outside the National Forest would affect sensitive noise receptors. Impacts would not be adverse with the required mitigation.	Impacts resulting from construction of SDG&E's proposed project would not occur.

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NOI-3: Corona Noise	Corona noise level is below the San Diego County threshold; therefore, impacts would not be adverse.	Corona noise level is below the San Diego County threshold; therefore, impacts would not be adverse.	Corona noise level is below the San Diego County threshold; therefore, impacts would not be adverse.	Corona noise level is below the San Diego County threshold; therefore, impacts would not be adverse.	Following pole removal on CNF-managed lands, there would be no impact. However, development of in-kind replacement facilities outside the National Forest could have an adverse impact.	Impacts resulting from construction of SDG&E's proposed project would not occur. However, existing conditions would continue based on the requirements of the existing permits.
NOI-4: Long-term Impacts	Sensitive noise receptors may experience periodic, but temporary, noise increases due to routine inspections. Impact would not be adverse.	Sensitive noise receptors may experience periodic, but temporary, noise increases due to routine inspections. Impact would not be adverse.	Helicopter use may increase during operations and maintenance to the power and distribution lines with removal of access roads. Short-term disturbance to sensitive receptors caused by noise generated by helicopter use is a short-term adverse impact.	Sensitive noise receptors may experience periodic, but temporary, noise increases due to routine inspections. Impact would not be adverse.	Following pole removal on CNF-managed lands, there would be no impact. Sensitive noise receptors near in-kind replacement facilities outside the National Forest may experience periodic, but temporary, noise increase due to routine inspections. Impacts would not be adverse.	See No Project NOI-3.

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Public Services and Utilities (see Section D.12 for full analysis)						
PSU-1: Effects on Fire, Municipal Water Supply and Telecommunications	There would be no new demand for increased fire protection facilities with implementation of required fire hazard mitigation. Construction would require substantial amounts of water. In addition, AT&T facilities would require co-location onto new facilities. Impacts would not be adverse with the required mitigation.	There would be no new demand for increased fire protection facilities with implementation of required fire hazard mitigation. Construction would require substantial amounts of water. In addition, AT&T facilities would require co-location onto new facilities. Impacts would not be adverse with the required mitigation.	There would be no new demand for increased fire protection facilities with implementation of required fire hazard mitigation. Impacts to water use would not be adverse with the required mitigation. . In addition, AT&T facilities would require co-location onto new facilities. Impacts would not be adverse with the required mitigation.	There would be no new demand for increased fire protection facilities with implementation of required fire hazard mitigation. Construction would require substantial amounts of water. In addition, AT&T facilities would require co-location onto new facilities. Impacts would not be adverse with the required mitigation.	Removal/restoration activities and construction of in-kind replacement facilities outside the National Forest would require substantial amounts of water. In addition, communication facilities would be required to be co-located onto new facilities. Impacts would not be adverse with the required mitigation.	Impacts resulting from construction of SDG&E's proposed project would not occur.

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PSU-2: Solid Waste Disposal Facilities	Construction and operation would not have an adverse impact on solid waste disposal facilities.	Construction and operation would not have an adverse impact on solid waste disposal facilities.	As the power and distribution lines would remain as part of the project, construction and operation would not have an adverse impact on solid waste disposal facilities.	Construction and operation would not have an adverse impact on solid waste disposal facilities.	Removal of facilities and restoration activities and construction and operation of in-kind replacement facilities outside the National Forest would not have an adverse impact on solid waste disposal facilities.	Impacts resulting from construction of SDG&E's proposed project would not occur.
PSU-3: Disruption of Electrical Service.	Electric transfers would be phased in accordance with CAISO requirements in order to reduce the potential for electric service interruptions during construction. Impacts would not be adverse.	Electric transfers would be phased in accordance with CAISO requirements in order to reduce the potential for electric service interruptions during construction. Impacts would not be adverse.	As the power and distribution lines would remain as part of the project, impacts would be as the same as SDG&E's proposed project.	Electric transfers would be phased in accordance with CAISO requirements in order to reduce the potential for electric service interruptions during construction. Impacts would not be adverse.	Following pole removal on CNF-managed lands, there would be no impact. Electric transfers for in-kind replacement facilities outside the National Forest would be phased in accordance with CAISO requirements during construction. Impacts would not be adverse.	Impacts resulting from construction of SDG&E's proposed project would not occur.

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Recreation (see Section D.13 for full analysis)						
REC-1: Reduce Access to Recreation Areas During Construction	Temporary impacts during construction to access to recreation and wilderness areas would not be adverse with the required mitigation.	Temporary impacts during construction to access to recreation and wilderness areas would not be adverse with the required mitigation.	Temporary impacts during construction to access to recreation and wilderness areas would not be adverse.	Temporary impacts during construction to access to recreation and wilderness areas would not be adverse with the required mitigation.	Temporary impacts to access to recreation and wilderness areas during removal and restoration activities and construction of in-kind replacement facilities outside the National Forest would not be adverse with the required mitigation.	Impacts resulting from construction of SDG&E's proposed project would not occur.
REC-2: Project Components Reduce Access to Recreation Areas	Project components would not preclude access to recreation and wilderness areas. Therefore, impacts would not be adverse.	Project components would not preclude access to recreation and wilderness areas. Therefore, impacts would not be adverse.	Project components would not preclude access to recreation and wilderness areas. Therefore, impacts would not be adverse.	Project components would not preclude access to recreation and wilderness areas. Therefore, impacts would not be adverse.	Removal of facilities within the National Forest and in-kind replacement facilities outside the National Forest would not preclude access to recreation areas within the National Forest. Therefore, impacts would not be adverse.	Impacts resulting from construction of SDG&E's proposed project would not occur.

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REC-3: Unauthorized Access	Unauthorized access on project access roads would not be adverse with the required mitigation.	Unauthorized access on project access roads would not be adverse with the required mitigation	Up to 10.5 miles of exclusive use access roads would be removed; however, removal of certain segments of existing access roads would not reduce all potential impacts of unauthorized access. Impacts would not be adverse with the required mitigation.	Unauthorized access on project access roads would not be adverse with the required mitigation	Unauthorized access on project access roads during removal and restoration activities would not be adverse with the required mitigation. Following removal and restoration activities, impacts would be minimized.	Impacts resulting from construction of SDG&E's proposed project would not occur. However, existing conditions would continue based on the requirements of the existing permits.

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Summary of Environmental Effects of the Alternatives

Impact	Proposed Project	Federal Proposed Action	Partial Removal of Overland Access Roads	TL626 Removal from Service~~Replacement~~	No Action	No Project
	The project as proposed by SDG&E in their MSUP/PTC application.	*The federal proposed action using the TL626 options 3a and 5, C157 Option 2, and undergrounding of C440 within the Mt. Laguna Recreation Area.*	*The proposed project without access on steeper roads.*	*The federal preferred option for ~~replacement~~ removing~~of~~ TL626 from service using the TL6931 ~~upgrade~~ fire hardening and Boulder Creek off-grid solution.*	*No permits issued for CNF-managed lands. SDG&E required to remove the existing electric lines and facilities on CNF-managed lands and develop additional electrical service upgrades elsewhere*	*No change in existing facilities, existing permits issued on annual basis (does not preclude individual pole replacements under O&M).*
Transportation and Traffic (see Section D.14 for full analysis)						
TRANS-1 through TRANS 5: Short-term Construction Activities to Transportation Facilities, Traffic and Roadways	Construction would potentially cause delays on surrounding circulation system; however, with implementation of proposed APMs impacts are not adverse.	Construction would potentially cause delays on surrounding circulation system; however, with implementation of proposed APMs impacts are not adverse.	Although the exclusive use access roads are in remote areas, construction of other project components would potentially cause delays on surrounding circulation system; however, with implementation of proposed APMs impacts are not adverse.	Construction would potentially cause delays on surrounding circulation system; however, with implementation of proposed APMs impacts are not adverse.	Construction during removal and restoration activities as well as construction of in-kind replacement facilities outside the National Forest would potentially cause delays on surrounding circulation system; however, with implementation of proposed APMs impacts are not adverse.	Impacts resulting from construction of SDG&E's proposed project would not occur.

As shown in Table E-11, the alternatives differ in how they address impacts related to visual and biological resources, powerline related wildfire hazards, water quality, and plan consistency. The following discussion highlights those differences.

Visual resources: The federal proposed action has the least impact on visual resources. The reduction of impacts compared to SDG&E's proposed action and the other alternatives is accomplished by relocating portions of TL626 away from sensitive areas including the Inaja Memorial Trail, relocating C157 outside of designated wilderness, placing more of C440 underground in existing roads within the Laguna Recreation Area, and placing sections of TL682 underground through the La Jolla reservation.

Biological resources: While most impacts are similar between alternatives, the TL626 ~~replacement~~ removal from service option that utilizes the existing TL6931 right-of-way would result in a net gain in vegetation cover and associated wildlife habitat when the existing TL626 alignment and access roads are restored.

Powerline related wildfire hazards: All alternatives have similar impacts related to the risk of construction related wildfires, with the risk reduced through implementation of fire prevention plans. The federal proposed action has the greatest reduction in wildfire risk related to overhead powerlines by placing more powerlines underground when compared to the other alternatives. The federal proposed action also has the greatest reduction of aerial hazards for the same reason. The TL626 replacement option that ~~upgrades~~ fire hardens TL6931 and uses the off-grid solution for the Boulder Creek substation also reduces the risk of powerline related wildfire by reducing the total mileage of overhead lines.

Water quality: All alternatives incorporate measures to reduce the construction related effects to water quality and to reduce the impact of alternatives on groundwater. While several of the alternatives reduce chronic water quality impacts by reducing and restoring steep access roads near streams, the partial removal of overland access roads alternative results in the greatest reduction of impacts.

Plan Consistency: The federal proposed action is the alternative that is the most consistent with land management and other plans. Relocating TL626 reduces conflicts with CNF LMP standards for riparian areas, land use zones, and visual resources. Relocating C157 out of designated wilderness avoids both a statutory conflict and a conflict with the CNF LMP. Placing TL682 underground through a section of the La Jolla Reservation better respond to the economic development plans of the La Jolla Band of the Luiseno Indians. All the alternatives share conflicts with the CNF LMP visual standards for a portion of C157, and conflicts with the land use zoning for a section of C442.

E.6 Federal Preferred Alternative

As described earlier in this chapter, the federal preferred alternative is the alternative which the federal agencies believe would fulfill their statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors. There is no requirement for the federal agencies to select the preferred alternative in the Record of Decision, and the identification of the federal preferred alternative may change between a draft EIS and final EIS. Identifying the federal preferred alternative in the draft helps identify the agencies' initial thinking and serves to focus public review of the analysis. Identification of the federal preferred alternative is required in the final EIS.

Although the Forest Service is the lead federal agency, all three federal agencies (the FS, BLM, and BIA) have independent authority within their areas of jurisdiction. Given that independent authority, and the interrelated nature of the action, the federal preferred alternative was developed jointly between the three federal agencies.

The federal preferred alternative is a composite of three alternatives, as shown in Figure E-1. The federal proposed action is the basis of the preferred alternative; however the TL626 relocation option has been replaced by the TL626 removal from service Option 1 (the ~~upgrade~~ fire hardening of~~to~~ TL6931), combined with the off-grid solution for the Boulder Creek substation.~~.~~ The federal preferred alternative also incorporates the portions of the partial removal of overland access roads alternative applicable to TL625, C442, and TL629, and section of TL626 colocated with C79 across Boulder Creek.~~.~~ The following sections highlight the key features of the federal preferred alternative.

TL626

The federal preferred alternative would ~~replace~~ remove TL626 by upgrading and hardening TL6931 from a single circuit wood pole 69 kV line to a double circuit steel pole 69 kV line. All upgrades to TL6931 would be done within the existing right-of-way. In addition, the customer load serviced by the Boulder Creek substation would be replaced with an off-grid system installed by SDG&E if feasible. If the off-grid solutions is not feasible, the 6.5-mile section of TL626 between the Santa Ysabel and Boulder Creek Substations will be converted from 69 kV to 12 kV using the TL626 Option 5 re-route around the Inaja Memorial.~~.~~ The existing TL626 would be removed, and a portion of the line would be converted to a steel pole 12 kV line to continue to serve the customers supported by C79. Approximately one mile of steep access road associated with the converted section would be conditionally authorized pending the analysis described in Section C.4.1. The FS has jurisdiction over the sections of C79 on NFS lands, and the BIA has jurisdiction over the section of TL6931 on the Campo Indian Reservation.

TL682

The federal preferred alternative would place an approximately 1,500 foot section of this line underground through the economic development area of the La Jolla Indian Reservation, with the remaining sections of TL682 remaining overhead as proposed by SDG&E. Both the FS and BIA have jurisdiction over portions of TL682.

TL629, TL625, and TL6923

In addition to the fire hardening proposed by SDG&E, the BLM would issue or renew ROW grants for the portions of the lines that are on public lands under BLM jurisdiction. Portions of the steep access roads that exceed 25% would ~~not~~ be conditionally authorized for TL625 and TL629 pending the analysis described in Section C.4.1. ~~, and access~~ Access would be ~~by~~ primarily by helicopter or foot for the removed road segments. Both the FS and BLM have jurisd~~d~~iction over portions of these three transmission lines.

C157

The federal preferred alternative would relocate C157 out of the designated wilderness using option 2 as proposed by the City of San Diego. The FS has jurisdiction over the sections of the line on NFS lands.

C440

The federal preferred alternative includes undergrounding of the circuit within the designated Laguna Recreation Area in addition to the undergrounding along the Sunrise Highway proposed by SDG&E. The FS has jurisdiction over the portions of C440 on NFS lands.

C442

Under the federal preferred alternative, in addition to the work proposed by SDG&E, portions of the steep access roads that exceed 25% would ~~not~~ be conditionally authorized, pending the analysis described in Section C.4.1. ~~and a~~Access would be ~~by~~ primarily by helicopter or foot for the removed road segments. The FS has jurisdiction over the sections of this distribution line on NFS lands.

The remaining electric lines are treated in the same manner as described in SDG&E's proposed action. The preferred alternative also adopts the SDG&E's APM's and the additional mitigation measures identified in this Draft EIR/EIS.

E.7 Environmentally Preferable Alternative

Under NEPA, the environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA's Section 101. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources.

In many cases the no action alternative is identified as the environmentally preferable alternative, particularly when the action being considered involves new construction. In this case, however, the federal agencies have determined that the environmentally preferred alternative is the Federal Preferred Alternative as described above. This alternative would improve scenic quality, reduce impacts to vegetation and associated habitat, reduce fire risk associated with overhead powerlines, reduce watershed and water quality impacts, and better meet the resource goals identified in local, federal, and tribal plans by reducing the total miles of overhead power line, placing powerlines underground, relocating a power line from wilderness, and removing excessively steep roads from sensitive watersheds.

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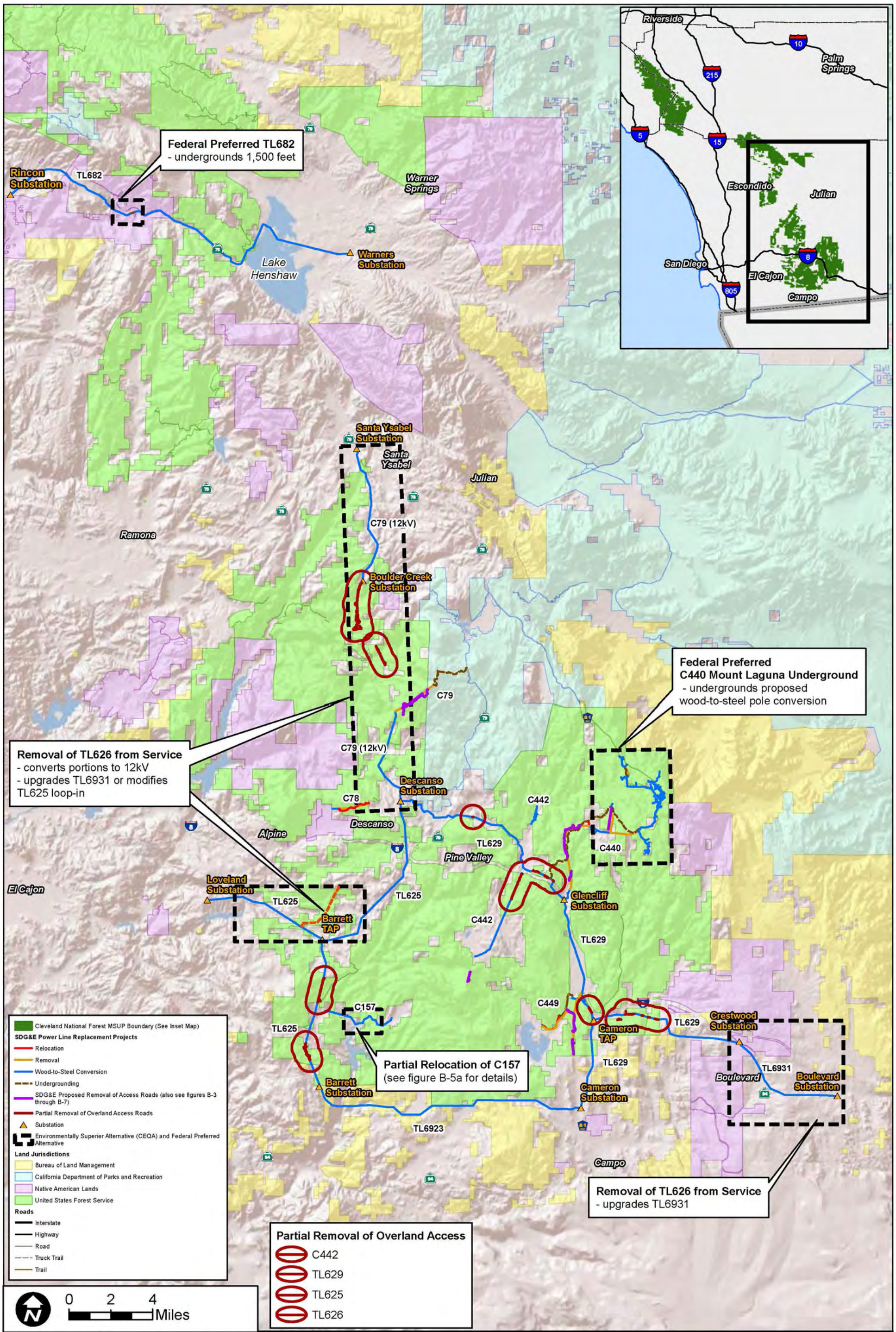

SOURCE: SDG&E 2011; SanGIS 2012; Bing Maps

Figure E-1

Environmentally Superior Alternative (CEQA) and Federal Preferred Alternative (NEPA) - NEW

7014

MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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F. CUMULATIVE SCENARIO AND IMPACTS

F.1 Introduction and Methodology

Both the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) require an analysis of cumulative impacts as part of the evaluation and analysis of potential impacts. NEPA defines a cumulative impact as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR 1508.7). Under CEQA, an environmental impact report (EIR) must discuss cumulative impacts of a project if the project's incremental effects are significant when viewed in connection with the effects of past projects, current projects, and probable future projects (14 CCR 15130(a) and 15065(a)(3)). When this occurs, the project's impacts should be identified as "cumulatively considerable."

The environmental effects of past actions, including existing electric facilities within and outside the Cleveland National Forest (CNF) proposed to be covered under the Master Special Use Permit (MSUP), form the basis for the affected environment. To accommodate the NEPA requirement to consider the effects of past actions as well, the existing condition of the project area will be used as a proxy for the collective total of projects and activities. Other potentially related past, present, and future projects were researched at the federal, state, and local level and are described in Section F.2.

The following analysis quantifies each potential cumulative impact as it relates to SDG&E's proposed Power Line Replacement Projects wherever sufficient information is available to make informed and sound judgments regarding such analysis. Where quantification is not feasible, the analysis provides a qualitative analysis of cumulative effects. The area considered in the cumulative analysis varies by resource topic depending upon the potential for interaction or inter-relationships among these actions and SDG&E's proposed project and its alternatives.

F.2 Applicable Cumulative Projects and Projections

The cumulative impact analysis utilizes the project list approach pursuant to 14 CCR 15130(b)(1)(A). Table F-1, Existing Projects and Electric Facilities Considered in the Cumulative Impact Analysis, and Table F-2, Cumulative Scenario – Reasonably Foreseeable Approved and Pending Projects, provide information regarding approved and currently pending projects for the cumulative scenario. Figure F-1, Cumulative Projects Map, shows the general geographic location of these projects.

The Bureau of Land Management (BLM), U.S. Fish and Wildlife Service (USFWS), California Energy Commission (CEC), and California Department of Fish and Wildlife (CDFW) are conducting transmission planning through the Desert Renewable Energy Conservation Plan (DRECP) in all or a

portion of Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino, and San Diego Counties, covering approximately 22,585,000 acres. The DRECP is a comprehensive plan that provides for renewable energy and transmission development projects and for the conservation of sensitive species and ecosystems in California's Mojave and Colorado/Sonoran Deserts. However, the DRECP is considered beyond the scope of this EIR/EIS cumulative project analysis in consideration of SDG&E's proposed project required under CEQA and NEPA, as no specific routes are planned at this time and no project applications have been filed.

Table F-1
Existing Projects and Electric Facilities Considered in the Cumulative Impact Analysis

Existing Projects, Including Transmission Lines and Renewable Projects	
SUNRISE POWERLINK: Development of a 150-mile transmission line that traverses 1,239.14 acres in southeastern San Diego County, including the southern boundary of the project study area. Project construction was completed in June 2012. Map ID T1 (see Figure F-1).	OCOTILLO WIND ENERGY FACLITY- CACA 51552: Development of 112 wind turbines and ancillary facilities on 10,151 acres of public lands near the town of Ocotillo, Imperial County, California. Bureau of Land Management (BLM) issued a right-of-way (ROW) grant on May 11, 2012, for up to 315 megawatts (MW) wind energy project.
SOL ORCHARD RAMONA: MUP 11-029; Major Use Permit for the construction and operation of a photovoltaic solar farm consisting of approximately 46 acres of the 110-acre site with a production capacity of 7.5 MW. Located at 1650 Warnock Drive in the Ramona Community Plan area, within unincorporated San Diego County. Approved on February 6, 2013. Map ID S17 (Figure F-1)	BOULEVARD BORDER PATROL STATION: 31-acre site located north of I-8, on the east side of Ribbonwood Road. The building includes administrative and training/educational facilities for 200 agents, including, a firing range, an equestrian facility, canine area, helipad, and vehicle maintenance buildings. Environmental documentation completed in February 2012. Project construction was completed in January 2013. Map ID F8 (see Figure F-1).
Existing SDG&E Power Lines	
TL625	TL637
TL626	TL682
TL629	TL6923
Existing SDG&E Distribution Lines	
C67	C358
C73	C440
C78	C441
C79	C442
C157	C449
C212	C524
C214	C970
C220	C973
C236	C1166
C237	C1458
C240	—
Existing SDG&E Appurtenant Facilities	
Exclusive use access roads	Glencliff Substation

Sources: SDG&E 2013; CPUC and BLM 2010; SanGIS 2014.

Table F-2
Cumulative Scenario – Reasonably Foreseeable Approved and Pending Projects

Project	Project Location	Status	Map ID
Wind Energy Projects			
ENERGIA SIERRA JUAREZ (ESJ) WIND PROJECT I: Development of 400 MW of wind generation. Phase I (just north of the town of La Rumorosa in Mexico) is proposed to generate approximately 100 MW of energy with 45 to 52 turbines. Point of interconnection proposed with the East County (ECO) Substation.-(CAISO 2010).	Northern Baja California, Mexico; in the Sierra Juárez mountains north of the town of La Rumorosa.	Final Interconnection Study completed. Draft Interconnection Agreement (IA) provided for review (Queue No. 159a). The project would be built in multiple phases. Construction anticipated to be completed in 2014.	W1 (does not show on figure)
A. BRUCCI LLC ADMINISTRATIVE PERMIT AG CLEARING, AD 10-035: Agricultural clearing for MET Tower	3055 La Posta Circle, Pine Valley.	Approved November 16, 2010.	W2
WIND MEASUREMENT TOWERS: The Descanso Ranger District proposes to authorize temporary wind measurement towers. The towers would be approximately 160 feet high and testing would be 3 years or less in duration.	Cleveland National Forest, Descanso Ranger District, San Diego County. North side of I-8, LEGAL - T 16 S, R 5 E, Sections 1, 2, and 13.	U.S. Forest Service issued a permit in February 2010 for three towers in the area of La Posta Valley and Fred Canyon Road.	W3
TULE WIND FARM: 12,239 acres of public lands, 186 MW; 67 wind turbines on BLM and County jurisdiction lands and 20 turbines on Indian Trust Lands (Ewiiaapaayp Indian Reservation). The project would deliver power through the project substation via a 138-kilovolt (kV) transmission line to run south to an interconnection with the proposed San Diego Gas & Electric (SDG&E) Rebuilt Boulevard Substation.	Mountain Empire; North of Interstate (I-) 8, Highway 94, and Old Highway 80.	BLM approved December 19, 2011; County Board of Supervisors approved August 8, 2012. BLM Geotechnical Investigation notice to proceed issued September 17, 2012. U.S. Department of the Interior, through the Bureau of Indian Affairs in a Record of Decision, approved a lease application of up to 20 wind turbines for the portion of the Tule Wind Energy Project within the Ewiiaapaayp Indian Reservation in December 2013.	W4
NATIONAL QUARRIES, CACA 050635: Wind testing site. 4,435 acres.	North of I-8, east of Sunrise Highway in southeastern San Diego County.	Memorandum of Understanding signed. Application complete April 22, 2009, Wind testing stage (Type II).	W5

Table F-2
Cumulative Scenario – Reasonably Foreseeable Approved and Pending Projects

Project	Project Location	Status	Map ID
Solar Energy Projects			
IMPERIAL VALLEY SOLAR - SOLAR TWO, CACA 047740: Development of up to 750 MW of energy on 6,140 acres of BLM-administered public lands and on 360 acres of private lands.	North of I-8 in southwestern Imperial County.	Application for Certification filed with California Energy Commission June 30, 2008. Application for Certification/Plan of Development (POD) determined adequate under minimal criteria. Notice of Intent published October 17, 2008. The Final EIS published July 2010.	S1 (does not show on figure)
JACUMBA SOLAR FARM, MAJOR PRE-APP 11-023.	Southeast San Diego County, Jacumba, south of I-8: APNs 661-041-02,-03; 661-080-01,-04,-08.	Pre-application meeting was held on January 12, 2012.	S2
AMONIX JACUMBA CPV SOLAR: MPA-11-014; 80-acre solar power generation station.	About 0.25 mile west of Jacumba between Historic Rt. 80 and I-8. 659-060-22-00.	Major pre-application meeting held in 2011.	S3
TIERRA DEL SOL SOLAR FARM: MUP 12-010; Major Use Permit for the construction and operation of a 60 MW solar energy system on an approximately 420-acre site with gen-tie to Boulevard Substation.	Within the Boulevard Community Plan area of the Unincorporated County of San Diego, adjacent to the U.S.–Mexico border: APN 658-120-03-00, 658-090-31-00, 658-090-55-00, 658-120-02-00, 658-090-54-00.	In process. Draft EIR made available January 2, 2014.	S4
SOITEC SOLAR – LOS ROBLES; alternative site for solar on 1,490 acres.	East of Tiera del Sol Road	In process. Draft EIR made available January 2, 2014.	S5
FOX SOLAR PROJECT: MPA 13-012; Major Pre-Application for a proposed solar photovoltaic development on 173 acres.	East of intersection of Highway 94 and Tierra Del Sol Road: APNs 610-062-20, 21,46,47,48, 612-040-03, 53, 57, 59 & 612-041-01.	Pre-application meeting was held on August 30, 2013.	S6

Table F-2
Cumulative Scenario – Reasonably Foreseeable Approved and Pending Projects

Project	Project Location	Status	Map ID
SOITEC SOLAR – LanEast and LanWest Solar Farms.	Between Old Highway 80 and I-8 in Boulevard	In process. Programmatic Draft EIR made available January 2, 2014.	S7
CHAPMAN RANCH SOLAR PROJECT; 50-acre solar project planned by Solar Electric Solutions LLC on 133-acre site.	McCain Valley Road and Rocky Knoll Road north of I-8; APN 612-030-15.	Project proposed to County of San Diego mid-2013.	S8
RUGGED SOLAR: MUP-12-007; Major Use Permit for the construction and operation of an 80 MW solar energy system on an approximately 765-acre site.	Within the Boulevard Community Plan area of the unincorporated County of San Diego, north of I-8: APN 611-060-04-00.	In process. Draft EIR made available January 2, 2014.	S9
SILVERADO POWER, Major Pre-application 11-009: Proposal for a 58 MW photovoltaic /solar generation plant on 350 acres of the 734-acre site. Tie-line proposed to connect with the existing SDG&E Barrett–Cameron Transmission Line. The approximately 0.25-mile-long tie-line would include 3 overhead conductor lines on 55-foot-high wood poles. The project may also require construction of a substation.	South central San Diego County, north of Highway 94, in the vicinity of TL6923: APNs 602-170-02,604-050-01,604-090-01.	Pre-application meeting was held on July 19, 2011. County reviewed redesign of solar project on November 15, 2011. Pending.	S10
ECOPLEXUS-BUCKMAN SPRINGS SOLAR & VIEJAS BOULEVARD SOLAR PROJECT: MPA-13-007; a proposed 30-acre solar panel project in the Descanso and Pine Valley areas.	Along Viejas Boulevard in Descanso and along Buckman Springs in Pine Valley.	Pre-application meeting was held in August 2013.	S11
SOL ORCHARD VALLEY CENTER: MUP 11-027; Major Use Permit for the construction and operation of a solar energy project consisting of 47.5 acres of photovoltaic panels on a 53.8-acre site.	15155 Vesper Road in the Valley Center Community Plan area, within unincorporated San Diego County	Approved on October 31, 2012.	S12
CALICO RANCH SOLAR: AD-13-046; Administrative Permit for a 1 MW solar photovoltaic generation facility. The project will connect to an existing SDG&E electric distribution line that runs along Calico Ranch Road and may involve up to three new utility poles.	Along Calico Ranch Road in the Julian Community Planning area, within unincorporated San Diego County, APN 248-170-16-00.	In process of receiving permits as of March 2014.	S13
SOLAR ENERGY PROJECT: MPA 13-009; Major Pre-Application for four photovoltaic facilities to be located on SDG&E-owned properties in Pala Pauma, Ramona, Sweetwater and Valley Center communities.	Pala Pauma, Ramona, Sweetwater, and Valley Center communities	Pre-application meeting was held July 25, 2013.	S14

Table F-2
Cumulative Scenario – Reasonably Foreseeable Approved and Pending Projects

Project	Project Location	Status	Map ID
NLP VALLEY CENTER SOLAR: MUP 13-019; 7 MW solar farm project on 79 acres.	29471 Cole Grade Road and Via Valencia 188-120-09-00.	Application received by the County of San Diego on October 1, 2013. Under review.	S15
OCOTILLO WELLS SOLAR: MUP 12-004; Major Use Permit for the construction and operation of a 339-acre solar energy system on a 440-acre site. The project would also include the construction of an approximately 13,500-square-foot substation, a 5,000-gallon water storage tank, and an approximately 1,040-square-foot storage building/control room. The proposed private substation would be located in the northeast corner of the site, adjacent to the 92 kV "R-Line." The solar array is proposed to be connected to the "R-line" with an interconnection agreement with Imperial Irrigation District (IID).	Within the Desert Subregional Plan Area in the Ocotillo Wells area of the Unincorporated County of San Diego, adjacent to Imperial County.	Appealed to the Board of Supervisors on January 28, 2014.	S16
Transmission and Utility Projects			
ENERGIA SIERRA JUAREZ U.S. TRANSMISSION, MUP: 230 kV double circuit power lines leading to SDG&E ECO Substation near the Mexican border.	Near SDG&E ECO Substation.	Approved by County of San Diego Board of Supervisors August 8, 2012. Estimated completion is Fall 2014.	T2
ECO SUBSTATION: ECO Substation, Rebuilt Boulevard Substation, and 13.3-mile 138 kV line between Rebuilt Boulevard Substation and ECO Substation.	Near Jacumba and Boulevard in southeastern San Diego County.	Notice to proceed for construction issued February 1, 2013. Estimated completion is Fall 2014.	T3
SAN DIEGO GAS & ELECTRIC TIE-LINE (TL) 6914 WOOD-TO-STEEL PROJECT: Improve reliability of the 12-mile TL6914 69 kV power line by replacing approximately 137 wood power and distribution line structures with weatherized steel pole structures.	Twelve miles spanning the Communities of Lakeside, Dehesa, Granite Hills, and Alpine within San Diego County.	SDG&E submitted an advice letter to the California Public Utilities Commission (CPUC) in December 2012 that was approved by CPUC June 2014.	T4
SAN DIEGO GAS & ELECTRIC TL637 WOOD-TO-STEEL PROJECT: Project includes the fire hardening of approximately 14 miles of the existing 69 kV wood pole power line (TL637) between the Creelman and Santa Ysabel Substations, replacing the existing 69 kV wood pole structures with new weathering steel poles.	Central portion of San Diego County near Ramona and Santa Ysabel. Located on private and public lands including National Forest and BLM.	Approved February 2014. Under construction— estimated completion date November 2014.	T5

Table F-2
Cumulative Scenario – Reasonably Foreseeable Approved and Pending Projects

Project	Project Location	Status	Map ID
AT&T MASTER PERMIT RENEWAL FOR TELEPHONE LINES: Renewal of AT&T's authorizations on the CNF, one master permit with 135 amendments, one 50-year ROWs, one telephone booth, and one access on private road to telephone facilities.	Trabuco, Palomar, and Descanso ranger districts.	AT&T is working with Forest Service on application.	Not shown on map
Development Projects (Federal)			
GOLDEN ACORN CASINO AND TRAVEL CENTER: State Clearinghouse (SCH) No. 2007071097: 33-acre expansion consisting of 150-room hotel, 900-space parking garage, surface parking, RV park, casino expansion, bowling alley, arcade, offices, retail, restaurants/food service, wind turbines, and water and wastewater improvements in three phases.	South of I-8 at Crestwood.	Draft off-reservation Environmental Evaluation complete. Public review ended August 2007. Project yet to be built, timeframe unknown.	F1
KITCHEN CREEK HELITANKER BASE PROJECT: CNF proposes to construct a Type 1 helibase at Kitchen Creek above the Cameron Fire Station. The helibase would be approximately 8 acres.	In the Kitchen Creek area approximately 1 mile north of the Cameron Fire Station	Decision signed April 11, 2012. Under construction. Estimated completion is ~~December 2014~~early summer 2015.	F2
LAKE MORENA COMMUNITY DEFENSE PROJECT: Create and maintain defensible space on National Forest ~~Service~~ System lands in the vicinity of Lake Morena Village.	On National Forest ~~Service~~ System lands adjacent to Lake Morena Village.	Environmental scoping period closed April 17, 2013. Final decision notice signed January 9, 2015.	F3
DESCANSO DISTRICT UNAUTHORIZED ROUTE DECOMMISSIONING 2014: Through this project, several unauthorized routes would first be ripped using an excavator to loosen compacted soil, reduce erosion, and enable vegetation to become established. Then, metal barriers would be installed to prevent their further use.	The project centers on two general locations: the east side of I-8 at the Buckman Springs Road exit and the upper loop of Long Valley Road, southwest of I-8 in the same vicinity	Decision memo signed January 31, 2014, can implement within 45 days of notice.	F4
LAGUNA WATER SYSTEM IMPROVEMENT: Installation of a new electrical drop and service, water and control line distribution to a new reservoir site, the installation of a new 100,000-gallon reservoir and water distribution line extension to connect to the existing Laguna water system	Mount Laguna Recreation Area	Environmental review in process March 2014. Decision signed March 2015.	F5

Table F-2
Cumulative Scenario – Reasonably Foreseeable Approved and Pending Projects

Project	Project Location	Status	Map ID
VIEJAS HOTEL SOUTH TOWER: Expansion of a six-story hotel at Viejas Casino. The existing office space will be demolished and replaced with additional gaming space, a kitchen in the basement, ballroom, pre-function terrace, meeting rooms, bar, retail, and pool area. The proposed project would add approximately 16,500 square feet of gaming area in the new development.	5000 Willows Road, south of Viejas Creek in the Community of Alpine.	Notice of Preparation of a Draft Tribal EIR filed January 23, 2014.	F6
CEDAR CREEK FALLS VISITOR USE MANAGEMENT: The project authorizes a visitor use permit and other measures to address issues of public safety, resource impacts, and overcrowding in the vicinity of Cedar Creek Falls. It also includes the renewal of the current closure order for the cliffs surrounding the falls and a prohibition of alcohol for the area.	The project covers the greater Cedar Creek Falls area, including the trailheads for the San Diego River Gorge Trail and Eagle Peak Road.	Implemented in April 2014	F7
Infrastructure Projects (State)			
CALTRANS DIST.11 State Route (SR-) 94: Operational Improvement Project: Operational improvements along the 18-mile rural segment of SR-94, from Melody Road to SR-188, near the Tecate POE. Improvements include adjusting curves, creating passing lanes, widening lanes, and adding turn pockets.	18-mile rural segment of SR-94, from Melody Road to SR-188, near the Tecate POE.	The project has been suspended due to funding and resource constraints and will be re-evaluated as funds become available.	I1
Residential Development Projects (County)			
STAR RANCH: TM 5459; subdivide 2,160.1 acres into 460 single-family residential lots, commercial uses, equestrian facility, helipad, water treatment facility, and wastewater treatment facility. (Residential)	South of Big Potrero and west of Buckman Springs Road.	Final Draft EIR submitted March 27, 2013.	R1
FREEDOM RANCH: MUP 74-011W1; Expand existing facilities from 50 beds to 125 in four phases. (Alcohol/Drug Treatment and Recovery Facility)	1777 Buckman Springs Rd, Campo, CA 91906; APN 607-110-55-00	Under review by the County of San Diego Planning and Development Services as of March 10, 2014.	R2
HOSKING'S RANCH: TM 4121; Proposed 24 units on 40 acres each on a 1,800-acre property. (Residential)	Southwest corner of Pine Hills Road and SR-78/79. The property extends to the west to Daley Road.	Under environmental review as of March 2014.	R3

Table F-2
Cumulative Scenario – Reasonably Foreseeable Approved and Pending Projects

Project	Project Location	Status	Map ID
SHADOW RUN RANCH: TM 5223; major subdivisions of 263 acres into 45 residential lots and three open space lots. (Residential)	NW corner of the intersection of HWY 76 and Adams Drive APN: 111-070-12-00	Under review by the County of San Diego Planning and Development Services as of March 10, 2014.	R4
CAMPUS PARK WEST: GPA, SPA, TM, REZ, STP; Max 566 residential lots, 150,000 square feet General Commercial, 8 acres Office Professional Use, 10 acres Highway Commercial, 23 acres open space (includes a 4-acre park). (Residential, Office, Commercial, Open Space)	3135 S OLD HIGHWAY 395, FALLBROOK California 92028	Draft EIR submitted to County of San Diego in August 2013.	R5 (does not show on figure)
WARNER RANCH/MEADOWOOD: GPA. SP, REZ, TM, MUP, AD; development of approximately 513.6 acres, including 780 residential units (556 single-family detached and 224 multi-family and attached town homes), approximately 10.8 acres of proposed private community parks, 5.5 acres of landscape areas, an 8.0-acre Public Active Recreational Park, and 344.2 acres of on-site preserved biological open space. Site will include a fire station, a wastewater treatment plant, and frontage improvements on SR-76. (Residential)	APN 110-021-09-00; approximately 5 miles east of I-15 on Pala Road (SR-76) and west of Pala Temecula Road.	Under review by the County of San Diego Planning and Development Services as of March 10, 2014.	R6 (Does not show on figure)
Other Infrastructure and Facility Projects (County)			
BOULEVARD FIRE STATION: Project would replace existing fire station along Highway 94. The fire station would be 8,496 square feet including an apparatus bay, and would have a total footprint of disturbance of approximately 30,000 square feet of the 17.5-acre parcel. The site would include water tank facilities that would be filled infrequently as well as roadway improvements along its northern boundary and roadway access improvements to Manzanita Dulce. (Fire Station)	Ribbonwood Road and Manzanita Dulce; APN 612-020-47-00.	Mitigated Negative Declaration received December 6, 2011; under review by County of San Diego Planning and Development Services staff as of March 5, 2014.	O1
RIBBONWOOD ROAD SIGHTLINE IMPROVEMENT: Approximately 270-foot improvement to sightline on a horizontal curve. (Public Facilities and Utilities)	North of I-8 along Ribbonwood Road approximately 0.25 mile south of Opalocka Road, near Boulevard.	Estimated completion date spring 2013.	O2
ROUGH ACRES FOUNDATION CAMPGROUND FACILITY; MUP-12-021; Major Use Permit for a campground/conference center. (wellness center and campground facility)	2750 McCain Valley Road, Boulevard	Second major pre-app meeting held December 12, 2011; Draft EIR in process.	O3

Table F-2
Cumulative Scenario – Reasonably Foreseeable Approved and Pending Projects

Project	Project Location	Status	Map ID
BUCKMAN SPRINGS AND OAK DRIVE REALIGNMENT: This project will reconfigure 2,000 linear feet of the Oak Drive at Buckman Springs intersection from a "Y" to a "T." (Capital Improvement)	Buckman Springs Road and Oak Drive in the Community of Campo.	Project currently under development. Construction planned for 2015–2016, estimated completion date to be determined.	O4
BUCKMAN SPRINGS ROAD BRIDGE: Construct a new 450-foot bridge over Cottonwood Creek. (Public Facilities and Utilities)	Southwest of I-8, between Morena Stokes Valley Road and Pacific Crest Trail, Campo.	Estimated completion date spring 2016.	O5
OLD HIGHWAY 80/PINE CREEK RD INTERSECTION IMPROVEMENTS: This project will realign the intersection approach angle of Pine Creek Road with Old Highway 80 while stabilizing the adjacent slope. (Capital Improvement)	Pine Creek Road and Old Highway 80, in the Community of Pine Valley.	Project currently under development. Estimated completion date to be determined.	O6
DESCANSO PATHWAY PROJECT: A 0.3-mile pathway project along Viejas Boulevard between River Drive and Manzanita Lane. (Capital Improvement)	Viejas Boulevard between River Drive and Manzanita Lane, in the Community of Descanso.	Estimated completion in 2015.	O7
COLE GRADE ROAD UTILITY UNDERGROUNDING: This project will convert existing overhead utility lines to underground and the removal of utility poles along Cole Grade Road. (Capital Improvement)	10,000 feet along Cole Grade Road in the Community of Valley Center.	Estimated construction start 2016 with estimated completion by summer 2017.	O8
COLE GRADE ROAD RECONSTRUCTION: This project will widen 2.5 miles of Cole Grade Road from Horse Creek Trail to the Valley Center High School.	Cole Grade Road from Horse Creek Trail to Pauma Heights Road in the Community of Valley Center.	Estimated construction start 2015 with estimated completion by summer 2017.	O9

Note: Information provided in Table F-2, Cumulative Scenario – Reasonably Foreseeable Approved and Pending Projects was gathered through scoping, Internet searches, planning, programmatic, and project environmental documents, discussions with resource experts, comment letters from interested parties, and consultations with planning agencies and personnel.

F.3 Cumulative Impact Analysis

F.3.1 Introduction

This section presents the analysis of the potential for SDG&E's proposed project and alternatives to create cumulatively considerable effects when the impacts of projects listed in Tables F-1 and F-2 are considered together with the impacts of the proposed project and alternatives. Sections are presented in the same order in which they appear in Section D Environmental Analysis of this EIR/EIS.

F.3.2 Visual Resources

Geographic Extent

Cumulative impacts to visual resources would occur where construction activities and project components occupy the same field of view as other built facilities or impacted landscapes. The cumulative study area for visual resources includes the viewshed in which the project components, alternatives considered and cumulative projects are visible.

Cumulative Visual Impact Analysis

SDG&E's Proposed Project

To the extent that SDG&E's proposed project would be temporarily visible during construction along with one or more of the cumulative projects, adverse cumulative impacts may occur from construction equipment, vehicles, materials, staging areas, and personnel. During construction, implementation of Applicant Proposed Measures (APMs) APM-VIS-01 and APM-VIS-02 would reduce visual impacts by requiring the restoration of all work areas to near pre-construction conditions (when construction has been completed) and by screening construction storage and staging areas from close-range views with opaque fencing (where practical). With implementation of APM-VIS-01 and APM-VIS-02, short-term and temporary construction impacts associated with SDG&E's proposed power line replacement projects would not be significant and would not result in a cumulatively considerable impact to existing visual character and quality of the site and surroundings (Impact VIS-3). Further, no significant impacts were identified for light and glare impacts (Impact VIS-4).

While replacement poles would generally be installed at the same location as existing poles within existing power line and distribution circuit corridors, adverse and significant visual impacts (Impacts VIS-1 through VIS-5 were identified for certain individual replacement poles of SDG&E's proposed project. The installation of taller and wider weathered steel replacement poles featuring yellow high voltage marking bands where relatively thin wood poles are

currently located would result in greater view obstruction and blockage at particular scenic vistas. Taller and wider poles would also create bolder vertical forms and lines in the landscape. Yellow high voltage marking bands would typically be viewed against the backdrop of dark green to brown chaparral vegetation and the resulting color contrast would be noticeable to viewers. In addition, marker balls used in accordance with FAA guidelines would present a noticeable contrast and would detract from the overall quality of views. Further, the overhead portions of C440 near Crouch Valley would impact views from the Sunrise Scenic Byway (Impact VIS-2). As discussed in Section D.2, Visual Resources, the form, line, color and texture of certain replacement poles would create particularly noticeable contrast in the landscape and depending on location, certain replacement poles would be viewed as prominent features. In addition to existing SDG&E electric facilities proposed to be included in the MSUP, existing projects, such as the Sunrise Powerlink and, the build-out of approved projects including the Tule Wind, solar renewable energy projects, transmission/substation projects such as the ECO Substation Project and major development projects (see Table F-2 for complete list of cumulative projects) would contribute to the ongoing change in the existing visual character and ongoing degradation of scenic resources and views in the project area. Implementation of MM VIS-1 would entail specific design measures for individual replacement poles that would reduce the anticipated contrast in form and line and modify the location of poles in efforts to reduce their visual prominence. While MM VIS-1 would reduce the anticipated contrast of individual replacement poles visible from the scenic overlook and from identified key observation points, SDG&E's proposed project would occur across a wide geographic area and specific design measures would not be employed for each individual replacement pole. As a result, implementation of MM VIS-1 as proposed in the Section D.2 would not eliminate the power line replacement projects' contribution to ongoing visual change and contrast. While SDG&E's proposed project would contribute to cumulative impacts to scenic vistas (Impact VIS-1), scenic highways (Sunrise Scenic Byway; Impact VIS-2), existing visual character and quality (Impact VIS-3) and Scenic integrity objectives (Forest Service), the incremental change proposed by the project would reflect that of the existing poles and therefore would not result in a cumulatively considerable impact to the existing visual character and quality of the site and surroundings.

Forest Service Proposed Actions

TL626 Alternative Routes, Options 1 through 4: Because Options 1 through 4 would be visible from the Inaja National Recreational Trail Scenic Overlook, Options1 through 4 would result in similar cumulative effects to scenic vistas (Impact VIS-1) as SDG&E's proposed project. While Options 1 through 4 would avoid adverse and significant visual impacts (Impacts VIS-1 through VIS-5) for certain individual replacement poles of SDG&E's proposed project; the cumulative effects to existing visual character and quality (Impact VIS-3) associated with relocating TL626 overhead under Options 1, 2, and 4 (Option 3 develops a 1-mile segment

overhead) would be greater than those described for SDG&E's proposed project. As proposed, Options 1, 2, and 4 would develop a new overhead 69 kV ROW in undeveloped areas (Option 3 develops a 1-mile segment overhead) and would install weathered steel poles with an estimated maximum height of 120 feet and 69 kV lines within a primarily undeveloped/sparsely developed rural landscape consisting of a forested low ridge and valley landscape dominated by mixed oak woodland. New poles would generally create noticeable contrast in form, line, color, and texture when viewed alongside existing natural elements in the landscape (e.g., trees, shrubs). In addition, the establishment of a new ROW and overhead power line alignment across undeveloped or sparsely developed rural lands would create a new, linear pattern in the natural-appearing landscape where none are currently visible. The establishment of a new ROW would have a greater effect on the existing visual character of the landscape than the replacement of existing poles within existing corridors, and therefore would result in a significant cumulative impact to visual character and quality (Impact VIS-3).

TL626 Alternative Routes, Option 5: Under Option 5, the TL626 poles, conductors, marker balls, and support cables that impair the view from the National Recreation Trail would be relocated around the Inaja Picnic Area to restore the view. Therefore, Option 5 would reduce the long-term cumulative visual effects to scenic vistas (Impact VIS-1) and visual character and quality (Impact VIS-3) as described for SDG&E's proposed project.

Partial Relocation of C157: The cumulative effects associated with partially relocating C157 overhead as proposed under Options 1 and 2 would be similar to those described for SDG&E's proposed project because the 1.1 mile rerouted segment is in the same vicinity (0.25 mile south) of the existing location.

C440 Mount Laguna Underground Alternative: The cumulative effects associated with this alternative, which would underground C440 within existing roads, would reduce the long-term cumulative visual effects described for SDG&E's proposed project.

BIA Proposed Action

The cumulative effects associated with modifying TL682 on Tribal lands would avoid some of the visual impacts described for SDG&E's proposed project; however the cumulative effect to visual resources would be similar to those described for SDG&E's proposed project because the modifications proposed for TL682 are in the same project vicinity.

Additional Alternatives

Partial Removal of Overland Access Roads: While access roads themselves contribute contrasting lines and colors to the landscape and removal of steep (over 25% slope) access roads

proposed under this alternative would reduce visible color, line, and texture contrast in the landscape, the primary conflict between scenery and visual resource management objectives would occur as a result of pole removal and replacement activities. Therefore, the cumulative effects associated with this alternative would be similar to those described for SDG&E's proposed project because the modifications proposed are in the same project vicinity.

Removal of TL626 from Service: While visual effects associated with replacement facilities would be similar to those described for SDG&E's proposed project as replacement facilities would be developed within existing electric utility ROWs similar to SDG&E's proposed reconstruction of existing poles, these impacts are considered to be less than significant and not adverse. Removal of TL626 would avoid adverse and significant visual impacts (Impacts VIS-1 through VIS-5) for certain individual replacement poles of SDG&E's proposed project and therefore overall cumulative impacts would be reduced under this alternative.

No Action Alternative

While none of the facilities associated with SDG&E's proposed project would be constructed and removal of the electric lines and restoration activities within the CNF would reduce some of the visual impacts including ongoing conflicts with the Forest Service LMP High scenic integrity objectives, the cumulative effects associated with the No Action Alternative would be greater to those described for SDG&E's proposed project as SDG&E would be required to develop new overhead 69 kV and 12 kV ROWs elsewhere in areas outside the National Forest where none currently exist, as opposed to reconstruction in place as proposed.

No Project Alternative

Under the No Project Alternative, SDG&E's proposed power line replacement projects would not be implemented and the existing conditions would remain. Given that the project would not be built, no new visual impact would occur. However, over the long-term it is anticipated that SDG&E would replace individual wood poles with steel poles during operations and maintenance activities due to possible reliability and safety issues. Therefore, over time impacts to visual resources would be similar to SDG&E's proposed power line replacement projects.

F.3.3 Air Quality

Geographic Extent

The primary air quality impacts of SDG&E's proposed project would occur during construction, since the operational impacts would generally be identical to those currently

being conducted by SDG&E. Therefore, the geographic extent for the analysis of cumulative impacts related to air quality includes the San Diego Air Basin (SDAB).

Cumulative Air Quality Impact Analysis

SDG&E's Proposed Project

As evaluated in Section D.3, construction of SDG&E's proposed project would result in a temporary addition of pollutants to the local airshed caused by soil disturbance, fugitive dust emissions, and combustion pollutants from on-site construction equipment, as well as from off-site trucks and helicopters hauling construction materials (Impacts AIR-1 through Impact AIR-5). Estimated construction emissions resulting from SDG&E's proposed project are expected to remain below the daily significance thresholds for criteria air pollutants for sulfur oxides (SO_x) and particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}). However, construction-related emissions would exceed the volatile organic compound (VOC), carbon monoxide (CO), oxides of nitrogen (NO_x), and particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$) thresholds, and SDG&E's proposed project would result in a significant impact to air quality (Impact AIR-1). APMs AIR-01 through AIR-05 would be implemented to reduce emissions; however, VOC, NO_x, CO, and $PM_{2.5}$ emissions would remain above the thresholds after implementation of applicable APMs. Over the estimated 4-year construction period, project construction activities could occur concurrent with several reasonably foreseeable projects, including the Tule Wind Farm and Soitec Solar renewable energy projects, associated transmission/substation projects, and major development projects as described in Table F-2. Each of these projects would have construction-related emissions that would contribute to the cumulative air quality impacts. In addition, ongoing development within the SDAB would also contribute to cumulative air quality impacts. The SDG&E proposed project's significant and unavoidable emissions, combined with these cumulative projects, would result in a significant adverse short-term cumulative air quality impact. The SDG&E proposed project's contribution to this significant impact would be cumulatively considerable.

As discussed in Section D.3 and Section G of this EIR/EIS, the project would not induce population and or employment growth exceeding the growth estimates included in the local air quality management plans and would not include a permanent stationary source of air pollution and therefore would not conflict with an applicable air quality attainment plan. SDG&E's proposed project would not result in a net increase in operational emissions due to the nature of the project as a reconstruction, fire hardening effort of existing facilities, and therefore the project would not contribute in a cumulatively considerable manner to long-term cumulative air quality impacts.

Forest Service Proposed Actions

TL626 Alternative Routes, Options 1 through 5: The cumulative effects associated with relocating TL626 as proposed under Options 1 through 5 would be greater than those described for SDG&E's proposed project as these alternatives would create a greater disturbance area and therefore greater air emissions than reconstruction of TL626 in place as proposed by SDG&E.

Partial Relocation of C157: The cumulative effects associated with partially relocating C157 overhead as proposed under Options 1 and 2 would be similar to those described for SDG&E's proposed project as length of the alignment and construction activities would be similar. In addition, the Options 1 and 2 are in the same geographic region.

C440 Mount Laguna Underground Alternative: The cumulative effects would be greater than those described for SDG&E's proposed project as this alternative would create a greater disturbance area due to trenching activities to underground the 12kV lines and therefore greater air emissions than reconstruction overhead and in place as proposed.

BIA Proposed Action

The cumulative effects associated with modifying TL682 on Tribal lands would be greater than those described for SDG&E's proposed project due to the increased disturbance area required for trenching activities to underground a portion of the 69kV line.

Additional Alternatives

Partial Removal of Overland Access Roads: The cumulative effects associated with this alternative, which would remove steep (over 25% slope) access roads, would be greater than those described for SDG&E's proposed project due to the need for additional grading activities required to decommission the steep access roads.

Removal of TL626 from Service: The cumulative effects associated with this alternative would reflect impact findings described for SDG&E's proposed project as removed facilities would be replaced with facilities requiring a similar disturbance footprint within existing electric utility ROWs where no new access would be required.

No Action Alternative

The cumulative effects associated with the No Action Alternative would be greater than those described for SDG&E's proposed project as the overall air emissions would increase due to the need to conduct restoration activities along with development of new overhead 69

kV and 12 kV ROWs elsewhere in areas outside the National Forest as opposed to reconstruction in place as proposed.

No Project Alternative

Under the No Project Alternative, SDG&E's proposed power line replacement projects would not be implemented and the existing conditions would remain due to ongoing operations and maintenance activities. Given that the project would not be built, no construction air emissions would occur.

F.3.4 Biological Resources

Geographic Extent

The geographic extent for the analysis of cumulative impacts associated with biological resources includes the vicinity of all reasonably foreseeable cumulative projects and extends throughout southeastern San Diego County, as shown in Figure F-1.

Cumulative Biological Resources Impact Analysis

SDG&E's Proposed Project

As described in Section D.4 (Impacts BIO-1 through BIO-8), SDG&E's proposed project would result in approximately 0.5 acre of permanent and ~~157~~152.6 acres of temporary impacts to ~~11~~ 13 native and non-native ~~sensitive~~ vegetation communities and land cover types (see Tables D.4-4 and D.4-7), along with associated impacts to special-status plant and wildlife species. Specifically, SDG&E's proposed project would temporarily impact 66.9 acres of 13 "natural" areas (i.e.~~,~~, native and non-native vegetation communities) and would temporarily impact 85.7 acres of disturbed (ruderal/barren), pastureland/cultivated agriculture, and urban and developed/ornamental landscaping land cover types. Implementation of APMs that include compliance with relevant Operational Protocols from the SDG&E Subregional Natural Community Conservation Plan (NCCP), along with implementation of APMs and mitigation measures provided in Section D.4, would mitigate impacts to biological resources under NEPA and under CEQA impacts would be less than significant with mitigation (Class II).

SDG&E's proposed project, along with the wind energy, solar energy, transmission and utility, and development projects listed in Table F-2 and shown in Figure F-1 have the potential to impact over 27,000 acres that include some of the same sensitive biological resources as impacted by the project. Some site-specific impacts could be mitigated through avoidance of sensitive habitats and species, restoration and compliance with applicable federal, state, local, and county laws associated with protection of biological resources, as described in Section D.4.

However, even with project-specific mitigation, sensitive biological resources will be lost as a result of the incremental impacts of the related projects in conjunction with SDG&E's proposed project. As described in Section D.4, SDG&E is involved in a project-specific mitigation and subregional mitigation program though its subregional NCCP that implements the regional biological conservation goals of the NCCP Act of 1991. Continued participation by SDG&E in its subregional NCCP, along with implementation of APMs and mitigation measures presented in Section D.4, would ensure that the project's temporary impact of approximately ~~157.6~~66.9 acres and permanent impact of 0.5 acre to sensitive native and non-native vegetation communities and land cover types and associated sensitive resources would be mitigated and would not contribute in a cumulatively considerable manner to biological resource impacts.

Forest Service Proposed Actions

TL626 Alternative Routes, Options 1 through 5: While these options would avoid adverse and significant biological impacts (Impacts BIO-1 through BIO-8), associated with reconstruction of TL626 as proposed, the cumulative effects associated with relocating TL626 as proposed under Options 1, 2, 4, and 5 would be greater than those described for SDG&E's proposed project as these alternatives would create a greater disturbance area and therefore greater biological resource impacts than reconstruction of TL626 in place as proposed. As further described in Section D.4 Biological Resources, there is a greater potential that biological resources would be impacted under Options 1, 2, 4, and 5 as the facilities would be located in new undisturbed ROW, causing greater temporary and permanent impacts to habitat, plant and wildlife species (including special-status species) and their habitats and linkages or movement corridors. In addition, temporary and permanent impacts to jurisdictional waters would potentially be greater under Options 1 and 2. However, as with SDG&E's proposed project, continued participation by SDG&E in its subregional NCCP, along with implementation of APMs and mitigation measures presented in Section D.4, temporary and permanent impacts would be mitigated and therefore, impacts to biological resources would not be cumulatively considerable.

Cumulative effects associated with Option 3 would be less than those described for SDG&E's proposed project as this alternative would place a portion of TL626 in Bounder Creek Road thereby avoiding direct impacts to vegetation communities, suitable habitat for plant and wildlife species (including special-status species), and habitat linkages/movement corridors that would have otherwise been impacted. In addition, there will be a reduction of direct collision-related impacts to avian and bat species through the elimination of approximately 4.9 miles (Option 3a) and 3.2 miles (Option 3b) of transmission towers and associated lines. Trenching activities within the roadway could have the same potential to indirectly impact biological resources as reconstruction of TL626 in place as proposed. Additionally, temporary impacts to jurisdictional resources (Impact BIO-4) under Option 3 would be greater than that assessed in Section D.4.3.3

for SDG&E's proposed project due to an increased potential to impact hydrological features (undergrounding alignment crosses between 5 and 10 hydrological features). Permanent adverse impacts that are anticipated to occur as a result of this alternative include pole construction along a 1-mile undisturbed ROW where the alternatives would reconnect with the TL626 alignment. As stated above, as with SDG&E's proposed project, continued participation by SDG&E in its subregional NCCP, along with implementation of APMs and mitigation measures presented in Section D.4, temporary and permanent impacts would be mitigated and therefore impacts to biological resources would not be cumulatively considerable.

Partial Relocation of C157: The cumulative effects associated with partially relocating C157 overhead as proposed under Options 1 and 2 would be similar to those described for SDG&E's proposed project. As further described in Section D.4 Biological Resources, temporary and permanent impacts to vegetation communities would be similar to SDG&E's proposed project and Option 2 would result in slightly less direct and indirect permanent and temporary impacts than Option 1through a reduced aerial and ground footprint. Options 1 and 2 have two poles located within USFWS-designated arroyo toad critical habitat resulting in approximately 0.14 acres of temporary and 0.01 acre of permanent impacts to critical habitat. Other project components would remain the same. However, continued participation by SDG&E in its subregional NCCP, along with implementation of APMs and mitigation measures presented in Section D.4, temporary and permanent impacts would be mitigated and therefore, impacts to biological resources would not be cumulatively considerable.

C440: Mount Laguna Underground Alternative: The cumulative effects would be greater than those described for SDG&E's proposed project as this alternative would create a greater disturbance area due to trenching activities to underground the 12 kV lines and therefore greater impacts to biological resources than reconstruction overhead and in place as proposed. However, continued participation by SDG&E in its subregional NCCP, along with implementation of APMs and mitigation measures presented in Section D.4, temporary and permanent impacts would be mitigated and therefore, impacts to biological resources would not be cumulatively considerable.

BIA Proposed Action

The cumulative effects associated with modifying TL682 on Tribal lands would be greater due to the increased disturbance area required for trenching activities to underground a portion of the 69kV line compared to the reconstruction of TL682 in place as proposed by the project. However, continued participation by SDG&E in its subregional NCCP, along with implementation of APMs and mitigation measures presented in Section D.4, temporary and

permanent adverse and significant impacts would be mitigated to less than significant and therefore, impacts to biological resources would not be cumulatively considerable.

Additional Alternatives

Partial Removal of Overland Access Roads: The cumulative effects associated with this alternative, which would remove steep (over 25% slope) access roads would reduce the cumulative effects to sensitive riparian habitats due to erosion and sedimentation described for SDG&E's proposed project. This alternative would not create additional cumulative biological resource impacts than those described for SDG&E's proposed project.

Removal of TL626 from Service: The cumulative effects to biological resources associated with removing TL626 would be reduced as TL626 would be removed from areas managed as having high resource potential and replaced with facilities within existing electric utility ROWs that have not been identified as having high resource potential. This alternative would not create additional cumulative biological impacts than those described for SDG&E's proposed project.

No Action Alternative

The cumulative effects associated with the No Action Alternative would be similar to those described for SDG&E's proposed project. While restoration would occur where facilities are to be removed, similar offsetting impacts to biological resources would occur due to the need to develop new in-kind overhead 69 kV and 12 kV ROWs elsewhere in areas outside the National Forest as opposed to reconstruction in place as proposed.

No Project Alternative

Under the No Project Alternative, SDG&E's proposed power line replacement projects would not be implemented and the existing conditions would remain due to ongoing operations and maintenance activities. Given that the project would not be built, no construction impacts to biological resources would occur.

F.3.5 Cultural and Paleontological Resources

Geographic Extent

The geographic scope for the analysis of cumulative impacts on cultural and paleontological resources is the central and eastern sections of San Diego County, as shown in Figure F-1. These areas include the relatively undeveloped portions of the territories occupied by ancestral Luiseno and Kumeyaay Native Americans, and those rural areas outside of the historically developed urban population centers in San Diego.

Cumulative Cultural and Paleontological Resources Impact Analysis

SDG&E's Proposed Project

As described in Section D.5 (Impacts CUL-1 through CUL-4 and PALEO-1), SDG&E's proposed project would not contribute to the potential loss of known significant cultural or paleontological resources. As described in Table F-2, and shown in Figure F-1, there are a number of wind energy, solar energy, transmission and utility, and development projects that have the potential to impact over 27,000 acres within the same geographic extent as SDG&E's proposed project and therefore are capable of collectively contributing, along with SDG&E's proposed project, to impacts on prehistoric resources associated with Kumeyaay lifestyles. This is considered a significant cumulative impact. Applicable laws and regulations, as discussed in Section D.5.2, provide for the identification and mitigation of adverse effects under NEPA and significant impacts under CEQA, whether through preservation of significant resources through avoidance where feasible, or mitigation of adverse effects and significant impacts specific to each resource that cannot otherwise be avoided by project redesign. SDG&E's proposed project with APMs GEN-04 along with CULT-01 through CULT-09 and implementation of mitigation measures MM CUL-1 through CUL-4 provided in Section D.5 is expected to successfully avoid adverse effects and significant impacts to cultural and paleontological resources if present (Impacts CUL-1 through CUL-4, and PALEO-1). Under the Option 4 alternative, adverse and significant visual impacts to the Pine Hills fire station buildings that are eligible for listing in the National Register cannot be avoided or mitigated. However, the Pine Hills fire station buildings do not comprise a unique historical district and visual impacts through construction of poles and overhead lines are specific to these resources and therefore would not contribute in a cumulatively considerable manner to cultural resource impacts.

Forest Service Proposed Action s

TL626 Alternative Routes, Options 1 through 5: The cumulative effects associated with relocating TL626 as proposed under Options 1 through 5 would be greater than those described for SDG&E's proposed project as these alternatives would create a greater disturbance area and therefore greater potential to impact cultural resources than reconstruction of TL626 in place as proposed. However, with compliance with federal laws and implementation of SDG&E's APMs and mitigation measures presented in Section D.5, adverse and significant impacts to cultural and paleontological impacts would be mitigated to less than significant and therefore, impacts would not be cumulatively considerable.

Partial Relocation of C157: The cumulative effects associated with partially relocating C157 overhead as proposed under Options 1 and 2 would be similar to those described for SDG&E's proposed project.

C440 Mount Laguna Underground Alternative: The cumulative effects would be greater than those described for SDG&E's proposed project as this alternative would create a greater disturbance area due to trenching activities to underground the 12 kV lines and therefore greater potential to impact cultural resources than reconstruction overhead and in place as proposed However, with compliance with federal laws and implementation of SDG&E's APMs and mitigation measures presented in Section D.5, adverse and significant impacts would be mitigated to less than significant and therefore, impacts would not be cumulatively considerable.

BIA Proposed Action

The cumulative effects associated with modifying TL682 on Tribal lands would be greater due to the increased disturbance area required compared to the reconstruction of TL682 in place as proposed by SDG&E's project. However, with compliance with federal laws and implementation of SDG&E's APMs and mitigation measures presented in Section D.5, adverse and significant impacts would be mitigated to less than significant and therefore, impacts would not be cumulatively considerable.

Additional Alternatives

Partial Removal of Overland Access Roads: The cumulative effects associated with this alternative, which would remove steep (over 25% slope) access roads would reduce the cumulative effects to cultural resources caused by overland access as described for SDG&E's proposed project. Once this alternative is constructed, ongoing grading during maintenance activities would be eliminated, thereby reducing the potential to affect cultural and paleontological resources.

Removal of TL626 from Service: The cumulative effects associated with removing TL626 would be similar to those described for SDG&E's proposed project as the disturbance area and associated cultural resource impacts would be similar to SDG&E's proposed reconstruction of existing poles.

No Action Alternative

The cumulative effects associated with the No Action Alternative would be greater than those described for SDG&E's proposed project as the overall potential to impact cultural resources would increase due to the need to conduct restoration activities along with development of new overhead 69 kV and 12 kV ROWs elsewhere in areas outside the National Forest, as opposed to reconstruction in place as proposed.

No Project Alternative

Under the No Project Alternative, SDG&E's proposed power line replacement projects would not be implemented and the existing conditions would remain due to ongoing operations and

maintenance activities. Given that the project would not be built, no construction impacts to cultural resources would occur.

F.3.6 Greenhouse Gases

Geographic Extent

In theory, the geographic extent of the cumulative contributions to greenhouse gases (GHGs) and climate change is worldwide. However, lead agencies are only able to regulate GHG emissions within their respective jurisdictions; therefore, the geographic extent is primarily contingent upon the area over which lead agencies have authority. As such, the geographic extent for the purposes of SDG&E's proposed project is limited to the affected SDAB.

Cumulative Greenhouse Gas Impact Analysis

SDG&E's Proposed Project

As discussed in Section D.6 (Impacts GHG-1 through GHG-3), the construction-related GHG emissions will be less than the County of San Diego and South Coast Air Quality Management District's (SCAQMD's) threshold of 10,000 metric tons of carbon dioxide equivalent per year (MTCO2E/yr) for SDG&E's proposed project. Therefore, the impact of the project's GHG emissions during construction would not be considered adverse under NEPA, and under CEQA would be less than significant (Class III).

Construction-related GHG emissions would contribute to a global accumulation of emissions, and are not a temporary addition to the local air basin . Therefore, the extent to which these reasonably foreseeable cumulative projects and SDG&E's proposed project would result in significant cumulative impacts does not depend on their proximity or time schedules. As such, generation of these emissions would result in a significant and unavoidable cumulative impact to climate change. The project's temporary and short-term contribution to GHG during construction activities would not exceed the significance threshold and over the long-term would not result in a net increase in operational emissions and therefore the project would not contribute in a cumulatively considerable manner to long-term cumulative GHG impacts.

Forest Service Proposed Actions

TL626 Alternative Routes, Options 1 through 5: The cumulative effects associated with relocating TL626 as proposed under Options 1 through 5 would be greater than those described for SDG&E's proposed project as these alternatives would create a greater disturbance area and therefore greater GHG emissions than reconstruction of TL626 in place as proposed.

Partial Relocation of C157: The cumulative effects associated with relocating C157 overhead as proposed under Options 1 and 2 would require similar construction activities and therefore would be similar to those described for SDG&E's proposed project.

C440 Mount Laguna Underground Alternative: The cumulative effects would be greater than those described for SDG&E's proposed project as this alternative would create a greater disturbance area due to trenching activities to underground the 12 kV lines and therefore greater GHG emissions than reconstruction overhead and in place as proposed.

BIA Proposed Action

The cumulative effects associated with modifying TL682 on Tribal lands would be greater due to the increased area of disturbance and associated increase in GHG emissions to those described for SDG&E's proposed project.

Additional Alternatives

Partial Removal of Overland Access Roads: The cumulative effects associated with this alternative, which would remove steep (over 25% slope) access roads would be similar to the cumulative effects described for SDG&E's proposed project.

Removal of TL626 from Service: The cumulative effects associated with this alternative would reflect the cumulative impact findings described for SDG&E's proposed project as removed facilities would be replaced with facilities requiring a similar disturbance footprint within existing electric utility ROWs where no new access would be required and therefore associated GHG emissions would be similar to those associated with the proposed reconstruction of existing poles.

No Action Alternative

The cumulative effects associated with the No Action Alternative would be greater than those described for SDG&E's proposed project as the overall GHG emissions would increase due to the need to conduct restoration activities along with development of new overhead 69 kV and 12 kV ROWs elsewhere in areas outside the National Forest as opposed to reconstruction in place as proposed.

No Project Alternative

Under the No Project Alternative, SDG&E's proposed power line replacement projects would not be implemented and the existing conditions would remain due to ongoing operations and maintenance activities. GHG emissions resulting from project construction would not occur.

F.3.7 Public Health and Safety

Geographic Extent

The cumulative study area for public health and safety would primarily focus on the immediate vicinity of SDG&E's proposed project and alternatives. Risks related to public health and safety are typically localized in nature since they tend to be related to on-site existing hazardous conditions and/or hazards caused by SDG&E's proposed project's construction or operation. See Section F.3.7 regarding fire risks.

Cumulative Public Health and Safety Impact Analysis

SDG&E's Proposed Project

As discussed in Section D.7 (Impacts PHS-1 through PHS-3), petroleum products, such as vehicle equipment fuel, and other solvents would be transported, stored, and used during construction and operation of the project. Herbicides may be used prior to construction activities and during operation of the project to clear and maintain vegetation along the alignment. To minimize impacts associated with the routine transport, use, or disposal of hazardous materials, including potential impacts to any nearby schools, Mitigation Measures (MM) MM PHS-1 and MM PHS-2 are provided to ensure agency oversight of the handling of hazardous material during construction and implementation of best management practices (BMPs) would occur. With implementation of MM PHS-1 and MM PHS-2, impacts due to potential hazardous substance spills during construction would be mitigated under NEPA and under CEQA would be less than significant (Class II). Wind energy, solar energy, transmission and utility, and development projects with the potential to contribute to cumulatively significant public health and safety impacts would also be required to comply with all applicable laws and regulations governing the safe handling and storage of hazardous materials used during construction activities. Compliance with applicable regulations, along with MM PHS-1 and MM PHS-2, would ensure that SDG&E's proposed project would not contribute in a cumulatively considerable manner to public safety impacts.

SDG&E's proposed project would require occasional, short-term helicopter support during construction, operations, and maintenance (Impact PHS-4). Temporary use of helicopters is not expected to interfere with air traffic patterns. However, if helicopters are used for the installation or removal of structures, MM PHS-5 and MM PHS-6 will apply and would ensure that helicopter use follows all safety procedures in compliance with Federal Aviation Administration (FAA) regulations. With implementation of these measures, impacts to air traffic patterns and air safety due to the use of helicopters would be mitigated under NEPA and less than significant with mitigation under CEQA (Class II). Wind energy, solar energy, transmission and utility, and development projects listed in Table F-2, would also require the use of helicopters during

construction and therefore have the potential to create a cumulatively significant impact. These projects would also need to comply with FAA regulations. Compliance with FAA safety regulations, along with MM PHS-5 and MM PHS-6, would ensure that the project would not contribute in a cumulatively considerable manner to public safety impacts due to helicopter use.

Based on the conservative nature of the specification in CPUC's General Order 95, operations and maintenance of SDG&E's proposed power line replacement projects along with all facilities proposed to be covered under the MSUP would not pose a significant safety hazard due to structural failure precipitated by extreme weather (e.g., high winds, lighting) and therefore would not contribute to public safety impacts.

Forest Service Proposed Actions

TL626 Alternative Routes, Options 1 through 5: The cumulative effects associated with relocating TL626 overhead as proposed under Options 1, 2, 4and 5 would be similar to those described for SDG&E's proposed project. Option 3 would reduce cumulative effects associated with structural failure due to extreme wind loading by undergrounding a segment of TL626 versus overhead reconstruction of TL626 in place as proposed by SDG&E.

Partial Relocation of C157: The cumulative effects associated with relocating C157 overhead as proposed under Options 1 and 2 would be similar to those described for SDG&E's proposed project.

C440 Mount Laguna Underground Alternative: This alternative would reduce cumulative effects associated with structural failure due to undergrounding versus overhead reconstruction of C440 in place as proposed. All other cumulative effects would be similar to those described for SDG&E's proposed project.

BIA Proposed Action

The cumulative effects associated with modifying TL682 on Tribal lands would be similar to those described for SDG&E's proposed project.

Additional Alternatives

Partial Removal of Overland Access Roads: The cumulative public health and safety effects associated with this alternative, which would remove steep (over 25% slope) access roads would be similar to the cumulative effects described for SDG&E's proposed project.

Removal of TL626 from Service: While the cumulative effects associated with removing TL626 would be similar to those described for SDG&E's proposed project, this alternative would

reduce impact findings described for SDG&E's proposed project regarding structural failure due to extreme wind loading by replacing with facilities within existing electric utility ROWs where wind loading conditions are less severe.

No Action Alternative

The cumulative effects associated with the No Action Alternative would be similar to those described for SDG&E's proposed project. While facilities are to be removed, similar offsetting impacts due to public safety issues would occur due to the need to develop new in-kind overhead 69 kV and 12 kV ROWs elsewhere in areas outside the National Forest as opposed to reconstruction in place as proposed.

No Project Alternative

Under the No Project Alternative, the proposed power line replacement projects would not be implemented and the existing conditions would remain due to ongoing operations and maintenance activities. The incremental reduction in cumulative hazards due to structural failure resulting from the proposed wood-to-steel pole reconstruction would not occur. Given that the project would not be built, other potential hazards due to construction activities would not occur.

F.3.8 Fire and Fuels Management

Geographic Extent

The geographic extent for the analysis of SDG&E's proposed project and alternatives includes up to several miles beyond the project's immediate footprint within and immediately adjacent to the Cleveland National Forest, as shown in Figure F-1.

Cumulative Fire and Fuels Management Impact Analysis

SDG&E's Proposed Project

As discussed in Section D.8 (Impact FF-1), petroleum products, such as vehicle equipment fuel, and other solvents would be transported, stored, and used during construction which would provide ignition sources during construction. To minimize the probability of igniting a wildfire during construction, Mitigation Measures (MM) FF-1 is provided to ensure agency oversight in developing and implementing a fire prevention plan. With implementation of MM FF-1 potential fire hazards during construction would be mitigated under NEPA and under CEQA would be less than significant (Class II). Construction of wind energy, solar energy, transmission and utility, and development projects listed in Table F-2 have the potential to contribute to cumulatively significant wildfire hazards. These projects would also be required to develop fire prevention

plans. Compliance with MM FF-1 would ensure that SDG&E's proposed project would not contribute in a cumulatively considerable manner to wildfire hazards during construction. While operation of SDG&E's proposed project along with existing projects listed in Table F-1, such as the Sunrise Powerlink, and those foreseeable wind energy, solar energy and transmission and utility projects listed in Table F-2 would represent a continued increase in ignition sources capable of starting wildfires, SDG&E's proposed project would be implemented to fire harden certain existing electrical transmission facilities. Project design would include fire hardening techniques, including replacing wood poles with steel poles designed to withstand extreme wind loading, increasing conductor spacing to maximize line clearances, and installing longer polymer insulators. As discussed in Section D.8.3.3 (Impacts FF-1 through FF-4), design components of SDG&E's proposed project would reduce the long-term fire risk from the power line system. Additionally, SDG&E's proposed project will implement APMs HAZ-01 through HAZ-06, MMs FF-1 and FF-2, and BIO-4 to further mitigate the increased probability of igniting a wildfire due to construction or maintenance activities or due to the introduction of non-native plant species. With implementation of the APMs, MM FF-1 and MM FF-2, and BIO-4, fire safety within and immediately adjacent to the Cleveland National Forest would improve with project implementation and therefore would not contribute in a cumulatively considerable manner to fire hazards.

Forest Service Proposed Actions

TL626 Alternative Routes, Options 1 through 5: The cumulative effects associated with relocating TL626 overhead as proposed under Options 1, 2, 4and 5 would be similar to those described for SDG&E's proposed project. Option 3 would reduce cumulative fire hazard effects for a segment of TL626 due to undergrounding versus overhead reconstruction of TL626 in place as proposed.

Partial Relocation of C157: The cumulative effects associated with relocating C157 overhead as proposed under Options 1 and 2 would be similar to those described for SDG&E's proposed project.

C440 Mount Laguna Underground Alternative: The cumulative effects would be less than those described for SDG&E's proposed project as this alternative would underground C440 versus overhead reconstruction of C440 in place as proposed.

BIA Proposed Action

The cumulative effects associated with modifying TL682 on Tribal lands would be similar to those described for SDG&E's proposed project.

Additional Alternatives

Partial Removal of Overland Access Roads: The cumulative effects associated with this alternative, which would remove steep (over 25% slope) access roads would be similar to the cumulative effects described for SDG&E's proposed project.

Removal of TL626 from Service: The cumulative effects associated with removing TL626 would be similar to those described for SDG&E's proposed project as facilities that would be implemented to replace TL626 would be similar in scope and placed within existing electric utility ROWs.

No Action Alternative

The cumulative effects associated with the No Action Alternative would be similar to those described for SDG&E's proposed project. While facilities are to be removed, similar offsetting impacts due to fire hazards would occur because of the need to develop new in-kind overhead 69 kV and 12 kV ROWs elsewhere in areas outside the National Forest as opposed to reconstruction in place as proposed.

No Project Alternative

Under the No Project Alternative, the proposed power line replacement projects would not be implemented and the existing fire hazards associated with SDG&E existing facilities would remain. The incremental reduction in cumulative fire hazard impacts resulting from the project would not occur.

F.3.9 Hydrology and Water Quality

Geographic Extent

The cumulative study area for potential impacts to water resources includes the San Juan Watershed, the Santa Margarita Watershed, the San Luis Rey Watershed, the San Dieguito Watershed, the San Diego Watershed, the Sweetwater Watershed, the Otay Watershed, and the Tijuana Watershed (refer to Figure D.9-2). Water quality management in this area is governed by the Colorado River Regional Water Quality Control Board (RWQCB) and San Diego County.

Cumulative Hydrology and Water Quality Impact Analysis

SDG&E's Proposed Project

SDG&E's proposed project, along with the wind energy, solar energy, transmission and utility, and development projects listed in Table F-2 and shown in Figure F-1 have the potential to impact over 27,000 acres, which would contribute to water quality impacts in the cumulative impacts study area. Erosion and pollutants generated from construction of all of these projects would result in significant cumulative water quality impacts in situations where construction of projects in the cumulative scenario were to occur concurrently and within the same watershed. As discussed in Section D.9 (Impacts HYD-1, HYD-2, HYD-4 and HYD-5), at the individual project level, hydrologic impacts can be mitigated to a less-than-significant level by incorporating APMs HYD-01 through HYD-11 and Mitigation Measures (MM) HYD-1 and MM HYD-~~0~~3 through MM HYD-7~~8~~, which would ensure that SDG&E's proposed project would comply with federal, state, and local water pollution control laws and that operations and maintenance measures to prevent erosion and sedimentation are implemented. SDG&E would prepare a Stormwater Pollution Prevention Plan (SWPPP) to comply with the National Pollutant Discharge Elimination System (NPDES) General Construction Activity Stormwater Permit, which requires implementation of best management practices. In accordance with applicable regulations, the other cumulative projects would also be required to be constructed using similar methods as SDG&E's proposed project, and would implement similar design features and measures to reduce hydrologic impacts. Therefore, with implementation of APMs and mitigation measures identified for SDG&E's proposed project and similar construction practices anticipated for the other cumulative projects, the project's contribution to significant cumulative impacts to water quality would be reduced to a level that would not be cumulatively considerable.

The analysis in Section D.9 identified several specific segments of SDG&E proposed project as adverse and unavoidable under NEPA, and significant and unavoidable (Class I) under CEQA, due to ongoing erosion problems associated with SDG&E exclusive use access roads (Impact HYD-4). Due to uncertainty around the effectiveness of Mitigation Measure HYD-4 (Access Road Condition Evaluation and Repair Design Report) in reducing erosion and sedimentation impacts along particularly steep sections of access roads serving C79, C442, TL625, TL626, and TL629, the impacts were determined to be significant and adverse. These impacts, being localized in nature rather than substantial at the watershed level, are not compounded by the potential impacts of other projects in the cumulative scenario due to timing and geography. As shown in Figure F-1, there are no projects in the immediate vicinity or affecting the same stream sections as the locations discussed under Impact HYD-4 in Section D.9.3.3. Furthermore, the APMs and Mitigation Measures discussed above are

adequate in substantially reducing hydrology and water quality impacts at the watershed level. Therefore the localized Class I impacts discussed under Impact HYD-4 would not be cumulatively considerable.

The volumes of water required for construction of reasonably foreseeable cumulative projects is not known; however, construction of these projects in conjunction with SDG&E's proposed project would increase the need for water in the project area (Impact HYD-3). For example, construction of the Tule Wind, Sol Orchard, and Soitec Solar projects, combined with transmission/substation projects such as the ECO Substation project and other local development projects listed in Table F-2, would all require a constant water source during construction. Water would either be provided by individual groundwater wells or by local water purveyors/agencies. Concurrent construction of SDG&E's proposed project (which would require 5 to 10 million gallons of water per year over an approximate 5-year period) and all reasonably foreseeable cumulative project in the study area could stress the ability of local water purveyors to deliver water and may impact groundwater supplies which would be considered cumulatively significant. Impacts to water supply resulting from the project (Impact HYD-3) would be temporary and reduced by implementing MM HYD-~~0~~2a and MM HYD-~~0~~2b, which would ensure that the identification of sufficient water supply has been provided prior to construction and that water for project construction needs would not impact groundwater resources. Therefore, with implementation of APMs and mitigation measures identified for SDG&E's proposed project, combined with similar construction practices anticipated for the other cumulative projects, the project's contribution to cumulative impacts to water supply would be less than cumulatively considerable.

As discussed in Section D.9, the relatively small amount of water used for operations and maintenance following construction of the project would not affect area water supplies and therefore would be less than significant.

Forest Service Proposed Actions

TL626 Alternative Routes, Options 1 through 5: The cumulative effects associated with construction activities (Impacts HYD-1 through HYD-5) for relocating TL626 as proposed under Options 1 through 5 would be reduced. Even though the relocation would result in a longer access road, the line would be rebuilt in far more moderate terrain with a limited number of stream crossings compared to SDG&E's proposed project. Option 3 would not require new access roads or repair of access roads, eliminating the potential for associated erosion impacts. Because the alternative routes for TL626 as proposed under Options 1 through 4 avoid the steep canyon the potential for cumulative impacts is reduced compared to those cumulative effects of the proposed project. The APMs and mitigation measures would be equally effective at

substantially reducing severity/class of the cumulative impacts. Cumulative effects associated with water supply impact (HYD-3) would be similar to those described for the proposed project.

Partial Relocation of C157: The cumulative effects associated with relocating C157 overhead as proposed under Options 1 and 2 would be similar to those described for the proposed project because the analysis of cumulative impacts to hydrology and water quality is unaffected by the partial relocation. There are no SDG&E exclusive use access roads are along the C157 alignment and implementation of APM HYD-01 through APM HYD-10 and MM HYD-1 would likewise mitigate adverse cumulative effects associated with short-term construction activities.

C440 Mount Laguna Underground Alternative: The cumulative effects would be greater than those described for the proposed project as this alternative would create a greater disturbance area due to trenching activities to underground the 12 kV lines and therefore greater short-term impacts to water resources than reconstruction overhead and in place as proposed. All other cumulative effects associated with the C440 underground alternative would be similar to those described for the proposed project as no new access roads or repair of access roads would be required along C440, and implementation of APM HYD-01 through APM HYD-10 and MM HYD-1 would likewise mitigate adverse cumulative effects associated with short-term construction activities.

BIA Proposed Action

The cumulative effects associated with modifying TL682 on Tribal lands would be similar to those described for SDG&E's proposed project.

Additional Alternatives

Partial Removal of Overland Access Roads: This alternative would reduce cumulative effects to water quality by removing up to 11~~0~~.5 miles of steep (25% slope) access roads that are causing water quality impacts in the watershed (Impact HYD-4). Short term effects (Impacts HYD-1 through HYD-3) would differ slightly from that discussed for SDG&Es proposed project, because it would include removal of access roads following construction. Implementation of APM HYD-01 through APM HYD-10 and MM HYD-1 would be equally effective at mitigate adverse effects associated with short-term construction activities under this alternative. The severity and extent of Impact HYD-5 would be slightly reduced because 10.5 fewer miles of access road would require maintenance.

Removal of TL626 from Service: The short-term construction related cumulative effects associated with removing TL626 would be similar to those described for SDG&E's proposed project as the disturbance area and associated hydrologic impacts would be similar to the

proposed reconstruction of existing poles. The long-term cumulative effects would be reduced with the removal of facilities and access roads associated with TL626 within steep slopes and designated riparian conservation areas and replaced in areas that are less steep and not designated as having high resource value.

No Action Alternative

The cumulative effects associated with the No Action Alternative would be reduced compared to those described for SDG&E's proposed project. Restoration would occur where facilities are to be removed, including excessively steeply-aligned access roads, which are the source of substantial adverse impacts associated with erosion/sedimentation. Although other facilities would need to be constructed to develop new in-kind overhead 69 kV and 12 kV ROWs elsewhere in areas outside the National Forest, these occur in areas that are less steep, likely less sensitive, and would be subject to modern design standards associated with construction of new facilities.

No Project Alternative

Under the No Project Alternative, SDG&E's proposed power line replacement projects would not be implemented and the existing conditions would remain due to ongoing operations and maintenance activities. While hydrologic resource impacts resulting from the construction activities would not occur, continued erosion and water quality impacts would occur, particularly alongTL626 within the Cedar Creek riparian area and TL625 in the area of Barber Mountain.

F.3.10 Land Use

Geographic Extent

As discussed in Section D.10, Land Use, the majority of the potential land use impacts of SDG&E's proposed project would occur during construction with few lasting operational impacts. Because the construction-related impacts of SDG&E's proposed project would be temporary and localized to the project alignment, staging areas and helicopter fly yards, they would only have the potential to combine with similar impacts of the other projects if they occur at the same time and in close proximity and therefore the cumulative study area for land use primarily focuses on the immediate vicinity of SDG&E's proposed project and alternatives.

Cumulative Land Use Impact Analysis

SDG&E's Proposed Project

As indicated in Section D.10.3.3 (Impact LU-1), while temporary land use disruptions associated with construction of SDG&E's proposed Power Line Replacement Projects could be adverse,

such impacts would only apply to those residences and other sensitive land uses less than 1,000 feet from the proposed route and construction activities. For residences and other sensitive land uses within 1,000 feet of temporary construction activities, project impacts associated with disruptions during project construction would be mitigated and less than significant with implementation of MM LU-1. Since the majority of the wind energy, solar energy, transmission and utility, and development projects listed in Table F-2 and shown in Figure F-1 would not occur within 1,000 feet of SDG&E's proposed project, it is anticipated that project construction disruptions with mitigation would not combine with those related to other cumulative projects and therefore not be cumulatively considerable.

While past actions, including existing electrical facilities such as the Sunrise Powerlink and existing power lines and circuits within and outside the Cleveland National Forest, combined with the build-out of wind energy, solar energy, transmission and utility, and development projects listed in Table F-2 and shown in Figure F-1 have and/or will continue to disrupt surrounding land uses during construction and operations, SDG&E's proposed project would not result in a cumulatively considerable impact to the existing land use character and quality of the site and surroundings. As discussed in Section D.10 (Impact LU-2), the project is located entirely within existing SDG&E ROW or underground in area roads and is essentially a reconstruction project of existing electric utility lines. Therefore, SDG&E's proposed project would not entail the establishment of new ROW or the construction/installation of new barriers or obstacles that could physically divide an established community. As such, SDG&E's proposed project would not contribute to permanent land use impacts and temporary disruptions during construction would not be cumulatively considerable.

Segments of the SDG&E proposed project for TL626 and C442 traverse Forest Service lands zoned Back Country Non-Motorized. Because these power and distribution line segments are accompanied by access roads, they are considered ~~to~~ Developed Facilities and are thus not suitable uses within the Back Country Non-Motorized land use zone. In addition, as proposed by SDG&E, C157 would be reconstructed in place and as a result, would continue to traverse Congressionally-designated wilderness. Also, SDG&E's proposed project for TL626 traverses Forest Service lands designated ~~proposed~~ as Recommend Wilderness in the LMP Amendment. The continued operation of non-suitable uses within established land use zones of the LMP and the continued presence of C157 in designated wilderness represent conflicts with land use plans and policies (Impact LU-3) and as such, MM LU-2 has been provided. With the exception of the Sunrise Powerlink, other projects considered in this analysis (see Table F-2) are located outside of the CNF and are not anticipated to be located within designated wilderness. Similar to MM LU-2 that would address LMP conflicts with SDG&E's proposed project, a project-specific LMP Amendment was enacted by the Forest Service for the Sunrise Powerlink in order to accommodate the transmission line in the National Forest. Because the LMP conflict was

addressed by a project-specific LMP amendment and because the majority of cumulative projects considered in this analysis are located outside of the National Forest, conflicts between SDG&E's proposed project and established land use zones of the LMP and the Wilderness Act would not be cumulatively considerable.

Forest Service Proposed Actions

TL626 Alternative Routes, Options 1 through 4: The cumulative LU-1 and LU-2 effects associated with relocating TL626 overhead as proposed under Options 1, 2 and 4 would be greater than those described for SDG&E's proposed project. These alternatives would entail the development of a new overhead 69 kV ROW in undeveloped areas as opposed to reconstruction in place. LU-1 and LU-2 effects would however be localized and mitigated with implementation of MM-LU-1 and MM-LU-4 and as a result would not be cumulative considerable. While the majority of Options 3a and 3b would be installed underground within Boulder Creek Road, both would entail the developed of a new overhead ROW across private, County of San Diego lands located in the rural residential community of Pine Hills. As a result, temporary disruptions to land uses near project components (Impact LU-1) and physical division of an established community (Impact LU-2) would be greater than those described for SDG&E's proposed project. Due to the rural and largely undeveloped character of lands in the vicinity of Boulder Creek Road, trenching associated with Options 3a and 3b would result in similar or slightly greater LU-1 impacts than SDG&E's proposed project however, these temporary effects would be localized to surrounding land uses, would be mitigated with implementation of MM LU-1 and MM-LU-2 and would not be cumulatively considerable.

Options 1 and 2 would result in similar existing LMP land use zone conflicts as SDG&E's proposed project but would avoid lands zoned Recommended Wilderness by the forthcoming LMP Amendment. By relocating the identified segment of TL626 to Boulder Creek Road, Options 3a and 3b would avoid Forest Service lands designated Back Country Non-Motorized by the existing CNF LMP and lands that would be designated Recommended Wilderness by the forthcoming LMP Amendment. While Options 1 through 4 would result in fewer conflicts with land use plans (Impact LU-3) when compared to SDG&E's proposed project, potential conflicts would be mitigated by MM LU-2. In addition, the cumulative projects considered in this analysis are generally located outside of the CNF. Therefore, the LU-3 impacts of the TL626 Alternatives (Options 1 through 4) would be localized to the CNF and with the exception of the Sunrise Powerlink, would not combine with other potential plan conflicts associated with cumulative development to result in a cumulative considerable effect. Because a project-specific LMP Amendment was enacted by the Forest Service to accommodate the Sunrise Powerlink, this analysis does not consider the presence of the transmission line to be a permanent land use plan conflict. As such, LMP conflicts associated with SDG&E's proposed project would be mitigated

with implementation of MM LU-2 and would not combine with LMP conflicts concerning the Sunrise Powerlink that were address by a project-specific LMP Amendment. Therefore, a cumulative LU-3 impact would not occur as a result of implementation of Options 1-4.

TL626 Alternative Routes, Option 5: While Option 5 would reduce visual impacts at the Inaja Memorial National Recreation Trail scenic overlook, construction activities would be carried out in a similar fashion and manner as SDG&E's proposed project. In addition, Option 5 would remain within 1,000 feet of the Inaja Memorial Picnic Area and National Recreation Trail and as a result, would create similar LU-1 impacts SDG&E's proposed project. Temporary LU-1 impacts would be localized to the Option 5 alignment and as such, would not combine with the effects of identified cumulative development elsewhere in the study area to create a cumulatively considerable impact. Option 5 would entail the establishment of a new underground and overhead ROW however; the overhead alignment would generally follow SR-79 and would traverse the undeveloped chaparral-covered terrain of the San Diego River canyon. Because Option 5 would not traverse or displace established communities or residences and because mitigation would be implemented for the remaining sections of TL626, temporary and permanent disruption of land uses (Impact LU-2) would be less than significant. Furthermore, with implementation of mitigation, localized and temporary disruptions to established land uses would be mitigated and would not be cumulatively considerable. Lastly, similar to SDG&E's proposed project, the overhead and underground segments of Option 5 would traverse the Developed Area Interface and Back Country Non-Motorized land uses zones. The establishment of Option 5 would likely entail the construction of access road across Back Country Non-Motorized zoned lands located north of pole Z213737. As such, a short segment of Option 5 would be considered a Developed Facility, would conflict with the LMP and MM LU-2 would be implemented. Similar to all other TL626 alternatives, conflicts between Option 5 and the LMP would be limited to CNF and would not combine to create a cumulatively considerable effect in the CNF or in the cumulative study area.

Partial Relocation of C157: Options 1 and 2 would relocate C157 generally within the same ROW and shifted slightly to avoid designated wilderness. Therefore, the Partial Relocation of C157 would reduce the long-term cumulative LU-3 effects associated with wilderness conflicts by removing a non-suitable use from designated wilderness without creating additional land use impacts.

C440 Mount Laguna Underground Alternative: The cumulative LU-1 and LU-2 effects associated with this alternative which would underground C440 within existing roads would be similar to those described for SDG&E's proposed project as construction, operations and maintenance would proceed in similar fashion as that described for the proposed project. In addition, within the boundary of the Laguna Mountain Recreation Area, both SDG&E's proposed project for C440 and this alternative would be installed on Forest Service lands zoned

Developed Area Interface and would be considered suitable uses/activities. Therefore, both SDG&E's proposed project for C440 and this alternative would comply with the established land use zones of the LMP and cumulative LU-3 impacts would be similar.

BIA Proposed Action

The cumulative effects associated with modifying TL682 on Tribal lands would be similar to those described for SDG&E's proposed project.

Additional Alternatives

Partial Removal of Overland Access Roads: The cumulative effects associated with this alternative which would remove steep (over 25 %) slope access roads would reduce the long-term cumulative effects associated with conflicts with the CNF Land Management Plan (LMP).

Removal of TL626 from Service: The cumulative effects associated with removing TL626 and replacing with facilities that are generally located within existing electric utility ROWs would avoid conflicts with the CNF LMP and therefore would reduce the long-term cumulative effects associated with conflicts to recommended wilderness without creating additional land use impacts.

No Action Alternative

Under the No Action Alternative, the MSUP would not be issued, and SDG&E would be required to remove the existing electric lines and facilities on Forest Service lands, thereby eliminating identified land use conflicts (Impact LU-3) with established land use zones, as discussed in Section D.10.3.3. While LMP land use zone conflicts would be avoided under the No Action Alternative, the cumulative effects associated with the No Action Alternative would be similar or greater than those described for SDG&E's proposed project. SDG&E would be required to develop additional transmission upgrades elsewhere outside the National Forest as opposed to reconstruction in place as proposed. Depending on the location of upgrades, conflicts with established County and/or local jurisdiction land use zones may occur under the No Action Alternative.

No Project Alternative

Under the No Project Alternative, SDG&E's proposed power line replacement projects would not be implemented and the existing conditions would remain due to operations and maintenance activities. While new land use impacts resulting from the project would not occur, ongoing conflicts associated with TL626 and C442 and established land use zones of the Forest Service LMP and conflicts between C157 and provisions of the Wilderness Act would continue.

F.3.11 Noise

Geographic Extent

The geographic extent for the analysis of cumulative impacts related to noise is generally limited to areas within approximately one-quarter mile of SDG&E's proposed Power Line Replacement Projects routes and project components. This area is defined as the geographic extent of the cumulative noise impact area because noise impacts would generally be localized, mainly within approximately 500 feet from any noise source; however, it is possible that noise from different sources such as helicopters within one-quarter mile of each other could combine to create a significant impact to receptors at any point between the projects. At distances greater than one-quarter mile, construction noise would be briefly audible and steady construction noise from SDG&E's proposed power line replacement projects would generally dissipate into quiet background noise levels. The baseline for assessing cumulative noise impacts includes the noise sources associated with other existing projects in the immediate vicinity of SDG&E's proposed power line replacement projects and the existing and future sensitive receptors near project-related activities or noise sources.

Cumulative Noise Impact Analysis

SDG&E's Proposed Project

Potential adverse noise impacts during construction of SDG&E's proposed project would be localized and would occur intermittently for varying periods of time throughout the construction period. Short-term impacts from SDG&E's proposed project's construction noise (Impacts NOI-1 and NOI-2) would be mitigated through implementation of MM NOI-41 through MM NOI-04 as described in Section D.11, which would require that SDG&E employ short term noise reducing measures when in close proximity to a sensitive receptor; prepare and distribute a public notice prior to helicopter use; prepare and implement a blasting plan should blasting be necessary; and provide advance notice to nearby sensitive receptors should construction activities be required at night (and provide temporary relocation if necessary).

As listed in Table F-2 some of the wind energy, solar energy, transmission and utility, and development projects may be constructed within the same general time frame as SDG&E's e proposed project and, as shown in Figure F-1, some of them, including a number of solar renewable projects, are within one-quarter mile of SDG&E's proposed project. Some, including the Tule Wind and ECO substation may also use helicopters during construction. Should construction schedules overlap, construction noise from these projects would be considered cumulatively significant. These projects would also be required to comply with County noise standards and reduce temporary construction noise to within acceptable levels.

Therefore, with implementation of APMs NOI-01 through NOI-10 and MM NOI-01 through MM NOI-04, and compliance with County noise standards, SDG&E's proposed project's contribution to significant cumulative impacts due to construction noise would not be cumulatively considerable.

Operations and maintenance activities (Impacts NOI-3 and NOI-4) are not expected to be above daytime ambient noise levels in the project area and/or in excess of standards in the local noise ordinances for adjacent properties. Operations and maintenance activities would resemble those currently administered by SDG&E and would not increase above noise levels under existing conditions. Therefore, in the absence of impacts, incremental accumulation of long-term noise effects due to SDG&E's proposed project would not occur.

Forest Service Proposed Actions

TL626 Alternative Routes, Options 1 through 5: The construction-related cumulative effects associated with relocating TL626 as proposed under Options 1 through 4 would be greater than those described for SDG&E's proposed project. These alternatives would develop a new and longer ROW along with new access roads that would have a greater potential to affect sensitive receptors compared to reconstruction of TL626 in place as proposed. The long-term cumulative noise impacts associated with Options 1, 2, and 4 would also be greater than those described for SDG&E's proposed project as these alternatives would develop a new overhead 69kV ROW in undeveloped areas where no related noise impacts currently exist, increasing the ambient noise levels than currently exist in these areas, as opposed to reconstruction in place as proposed. As with SDG&E's proposed project, should construction schedules with cumulative projects overlap, construction noise from these projects would be considered cumulatively significant (Impacts NOI-1 and NOI-2). With implementation of APMs NOI-01 through NOI-10 and MM NOI-01 through MM NOI-04, and compliance with County noise standards, Options 1, 2, and 4 contribution to significant cumulative impacts due to construction noise would not be cumulatively considerable.

The cumulative effects associated with Option 5 would be similar to those described for SDG&E's proposed project. This is due to the undeveloped nature in the vicinity of the affected portion of TL626 under Option 5.

Partial Relocation of C157: The cumulative effects associated with relocating C157 overhead as proposed under Options 1 and 2 would be similar to those described for SDG&E's proposed project because the 1.1-mile rerouted segment is in the same vicinity (0.25 mile south) of the existing location.

C440 Mount Laguna Underground Alternative: The cumulative effects would be greater than those described for SDG&E's proposed project as trenching activities within paved roadways required under this alternative would have a greater potential to affect sensitive receptors resulting in greater short-term noise impacts than reconstruction overhead and in place as proposed. As with SDG&E's proposed project, should construction schedules with cumulative projects overlap, construction noise from these projects would be considered cumulatively significant (Impacts NOI-1 and NOI-2). With implementation of APMs NOI-01 through NOI-10 and MM NOI-01 through MM NOI-04, and compliance with County noise standards, Options 1, 2, and 4 contribution to significant cumulative impacts due to construction noise would not be cumulatively considerable.

BIA Proposed Action

The cumulative effects associated with modifying TL682 on Tribal lands would be similar to those described for SDG&E's proposed project.

Additional Alternatives

Partial Removal of Overland Access Roads: The short-term cumulative effects associated with removing access to certain areas would be similar to those described for SDG&E's proposed project. However; the long –term noise impacts would marginally increase due to the anticipated increase use in helicopters required under this alternative.

Removal of TL626 from Service: The cumulative effects associated with removing TL626 would be similar to those described for SDG&E's proposed project as the presence of sensitive noise receptors that could be exposed to noise impacts during construction and operations, under this alternative would be similar to SDG&E's proposed reconstruction of existing poles.

No Action Alternative

The cumulative effects associated with the No Action Alternative would be similar than those described for SDG&E's proposed project as similar construction noise levels would occur with removal of the existing facilities as well as restoration activities along with development of new overhead 69 kV and 12 kV ROWs elsewhere in areas outside the National Forest.

No Project Alternative

Under the No Project Alternative, SDG&E's proposed power line replacement projects would not be implemented and the existing noise conditions would remain with ongoing operations and maintenance activities. Noise impacts resulting from the project construction would not occur.

F.3.12 Public Services and Utilities

Geographic Extent

The geographic extent for the analysis of cumulative impacts associated with public services and utilities consists of the area within southeastern San Diego County as shown in Figure F-1. This geographic extent is appropriate because certain public services and utilities provided by local jurisdictions or districts within this area may be affected by both SDG&E's proposed project and those projects listed in Tables F-1 and F-2.

Cumulative Public Services and Utilities Impact Analysis

SDG&E's Proposed Project

SDG&E's proposed Project would not result in an increase in population and would not place demands on public services or utilities beyond those currently required during operations and maintenance and therefore would not contribute to long-term cumulative demand on public services. Construction of SDG&E's proposed Power Line Replacement Projects would result in an incremental demand regarding water usage and public services systems such as fire protection (discussed separately under fire and hydrology) and may disrupt telecommunication utility service (Impacts PSU-1 and PSU-2).

Construction of projects listed in Table F-2 in conjunction with SDG&E's proposed project would increase the need for water in the project area. Water would either be supplied by individual groundwater wells or by local water purveyors/agencies, and if supplied by local groundwater wells would be considered cumulatively significant. With implementation of MM HYD-2a, which requires written documentation and commitments of the project's construction water supplies and MM HYD-2b, which ensure that no adverse impacts to groundwater (Impact PSU-1) would occur due to project construction, SDG&E's proposed project's contribution to temporary demand for water would not be cumulatively considerable.

The construction of all reasonably foreseeable projects in the cumulative analysis (specifically those projects proposing ground disturbances) could result in disruptions to existing telecommunication utility systems which would be considered cumulatively significant. However, as required by California Government Code Section Code Section 4216(a)(1), each individual project proposing excavation would be required to contact Underground Service Alert which would require potentially affected utility providers to mark their utilities (thus minimizing the potential for conflicts to arise during construction). SDG&E's proposed project will also be required to implement MM PSU-1, which requires that SDG&E coordinate the replacement of power lines with AT&T to ensure that telecommunications services are not interrupted.

Therefore, with mitigation, SDG&E's proposed project's contribution to cumulative impacts due to disruptions to existing utilities (Impact PSU-3) would not be cumulatively considerable.

Forest Service Proposed Action s

TL626 Alternative Routes, Options 1 through 5: The construction-related cumulative effects to water supply, public services and telecommunications associated with relocating TL626 as proposed under Options 1 through 5 would be similar to those described for SDG&E's proposed project.

Partial Relocation of C157: The cumulative effects associated with relocating C157 overhead as proposed under Options 1 and 2 would be similar to those described for SDG&E's proposed project.

C440 Mount Laguna Underground Alternative: The cumulative effects to water supply, public services and telecommunications associated with this alternative would be similar to those described for SDG&E's proposed project.

BIA Proposed Action

The cumulative effects associated with modifying TL682 on Tribal lands would be similar to those described for SDG&E's proposed project.

Additional Alternatives

Partial Removal of Overland Access Roads: The cumulative effects to public services associated with removing access to certain areas would be similar to those described for SDG&E's proposed project.

Removal of TL626 from Service: The cumulative effects associated with removing TL626 would be similar to those described for SDG&E's proposed project as the public services affected by constructing replacement facilities proposed under this alternative would be similar to those for the proposed reconstruction of existing poles.

No Action Alternative

The cumulative effects associated with the No Action Alternative would be greater than those described for SDG&E's proposed project as the potential to impact existing utilities would increase due to the development of new overhead 69 kV and 12 kV ROWs elsewhere in areas outside the National Forest as opposed to reconstruction in place as proposed.

No Project Alternative

Under the No Project Alternative, SDG&E's proposed power line replacement projects would not be implemented and the existing conditions would remain due to operations and maintenance activities. Public service and utility impacts resulting from the project would not occur. Given that the project would not be built, no construction impacts to public services or utilities would occur.

F.3.13 Recreation

Geographic Extent

The geographic extent for the analysis of cumulative impacts associated with recreation includes the wilderness areas, dispersed areas, and recreation facilities within and outside of the Cleveland National Forest; Inaja Memorial Picnic Area and National Recreation Trail; Cuyamaca Rancho State Park; California Riding and Hiking Trail, Tribal recreation areas; and County designated open space areas that would be traversed by or adjacent to SDG&E's proposed Power Line Replacement Projects. These areas consider both direct and indirect impacts to wilderness and recreation activities, and this geographic scope is appropriate as it considers the effects of other projects within this region on the resources impacted by SDG&E's proposed power line replacement projects.

Cumulative Recreation Impact Analysis

SDG&E's Proposed Project

Due to the temporary influx of construction workers and vehicles on roads in the study area and the linear nature of proposed project, the proposed construction activities may temporarily impair movement or access along roads near existing power lines and distribution circuits which could in turn temporarily reduce access and visitation to local recreation areas (Impacts REC-1 and REC-2). However, while construction activities adjacent to or within roadways may temporarily hinder vehicular movement on area roadways used to access recreation areas, implementation of APMs TRANS-01, TRANS-04 and TRANS-05 would minimize the severity of impacts associated with reduced access by coordinating lane closures with local jurisdictional agencies and by implementing a construction Traffic Control Plan. While construction activities are likely to be viewed as an inconvenience by those using the recreation areas, the poles are existing features in or near such facilities and therefore the reconstruction as proposed would not preclude and or affect the use of recreation areas on a long-term basis.

In instances where SDG&E's electric facilities proposed to be covered under the MSUP are located near special designation areas such as the Barker Valley IRA (located west of East Grade

Road near the TL682 alignment), Pine Creek Wilderness and Hauser Wilderness (both traversed by C157) and the King Creek RNA (currently traversed by C79), both the continued presence of power and distribution line poles and if applicable, maintained access roads and construction activities may possibly result in increased, unauthorized access (Impact REC-3). MM REC-01 is provided to ensure that gates (or other barriers where appropriate) and signage are installed at access roads or at other possible points of access to special designation areas to deter unauthorized use. In addition, MM REC-2 is provided to ensure that proper gate protocol is followed during construction and ongoing operations and maintenance activities and that cost-appropriate restoration activities are carried out where increased unauthorized disturbance is observed by SDG&E or Forest Service Staff. With implementation of MM REC-1 and REC-2, impacts associated with increased unauthorized access would be mitigated.

While past actions, including existing electrical facilities such as the Sunrise Powerlink and existing power lines and circuits within and outside the Cleveland National Forest, combined with the build-out of wind energy, solar energy, transmission and utility, and development projects listed in Table F-2 and shown in Figure F-1 would continue to affect recreational resources within and outside the Cleveland National Forest, SDG&E's proposed project with mitigation MM REC-01 and MM REC-02 would not result in a cumulatively considerable impact to recreational resources as the project is located entirely within SDG&E ROW or underground in area roads and is essentially a reconstruction project of existing electric utility lines.

Forest Service Proposed Actions

TL626 Alternative Routes, Options 1 through 5: The cumulative impacts to recreation would be reduced due to removal of a portion of TL626 from high value recreational and resource area without creating additional impacts to recreational use.

Partial Relocation of C157: The cumulative impacts associated with relocating C157 overhead as proposed under Options 1 and 2 would be reduced due to the removal of C157 from designated wilderness.

C440 Mount Laguna Underground Alternative: The cumulative effects due to short-term disruption to access recreational areas would increase due to trenching activities within paved roadways in order to underground the 12 kV lines. All other impacts to recreation would be similar to those described for SDG&E's proposed project.

BIA Proposed Action

The cumulative effects associated with modifying TL682 on Tribal lands would be similar to those described for SDG&E's proposed project.

Additional Alternatives

Partial Removal of Overland Access Roads: The cumulative impacts to recreation associated with removing ~~approximately 2 miles of~~ existing access roads used exclusively to access SDG&E facilities would be similar to those described for SDG&E's proposed project.

Removal of TL626 from Service: The cumulative impacts to recreation would be reduced due to removal of a portion of TL626 from high value recreational and resource area without creating additional impacts to recreational resources.

No Action Alternative

Under the No Action Alternative, existing electric lines would be removed from the National Forest and SDG&E would be required to develop new overhead 69 kV and 12 kV ROWs elsewhere in areas outside the National Forest. Conceivably, some of the existing electric lines located near transportation corridors could be relocated to follow existing local roads, highways and interstates however, given the uncertainty regarding the location of new overhead ROW, relocated lines may traverse private property and/or non -Forest Service public lands that provide recreational opportunities. Therefore, while removing the electric lines from the National Forest would reduce some of the identified impacts to recreational resources located in the National Forest, relocated lines may affect recreational resources elsewhere in the County. For purposes of this analysis, the cumulative effects associated with the No Action Alternative would be similar to those described for SDG&E's proposed project due to the uncertainty regarding the location of new overhead alignments and the potential for conflicts with recreational resources.

No Project Alternative

Under the No Project Alternative, SDG&E's proposed power line replacement projects would not be implemented and the existing conditions would remain due to ongoing operations and maintenance activities. Given that the project would not be built, no cumulative impacts or benefits to the recreation resource would occur.

F.3.14 Transportation and Traffic

Geographic Extent

Upon completion, SDG&E's proposed project would have little transportation or traffic associated with it other than for routine inspection and maintenance activities and operations. Therefore, the only opportunity for cumulatively significant transportation and/or traffic impacts to occur would be during the approximate five-year construction period. Construction-related traffic impacts would mostly result from temporary lane interruptions that would occur

within the immediate vicinity of SDG&E's proposed Power Line Replacement Projects. Therefore, the geographic extent for the analysis of cumulative traffic and transportation impacts is defined as the area up to 3 miles from SDG&E's proposed Power Line Replacement Projects and including numerous regional and local transportation facilities including I-8, SR76, SR 78, SR 79, and Old Highway 80. This scope is appropriate because traffic impacts caused by SDG&E's proposed Power Line Replacement Projects would be limited and would be of short duration and based on the project impact analysis presented in Section D.14, would not cause substantial delays or traffic congestion.

Cumulative Transportation and Traffic Impact Analysis

SDG&E's Proposed Project

As discussed in Section D.14 (Impact TRANS-1 through Impact TRANS-5), Transportation and Traffic, construction of SDG&E's proposed project would contribute to short-term impacts to traffic circulation on local roadways. While peak construction would generate approximately 304 and 532 trips per day for construction crews and equipment/material deliveries this traffic would be spread out across the 563,200-acre project area. The average number of crews working at one time at any given location would be 10, resulting in between 80 and 140 trips per day. As discussed in Section D.14, short-term impacts to project area roads can be reduced to a less–than-significant level by incorporating APM TRANS-01 through APM TRANS-05, which include measures such as scheduling lane closures during off-peak traffic hours, and development and implementation of a Traffic Control Plan. As listed in Table F-2, some of the wind energy, solar energy, transmission and utility, and development projects may be constructed within the same general time frame as SDG&E's proposed project. Should construction schedules overlap, construction traffic from these projects would be considered cumulatively significant. It is anticipated that short-term construction traffic due to these other projects can be mitigated by implementing measures similar to those identified for SDG&E's proposed project. These measures would ensure that access would be maintained to individual properties and businesses, that emergency access would not be restricted, and that congestion and delay of traffic resulting from ongoing development are not substantially increased and would be of a short-term nature. Therefore by incorporating APM TRANS-01 through APM TRANS-05, SDG&E's proposed project's contribution to cumulative impacts due to construction traffic would not be cumulatively considerable.

The operation of SDG&E's proposed project would generate minimal traffic only required for routine patrolling and maintenance; therefore, the project would not contribute to long-term cumulative impacts to traffic.

Forest Service Proposed Actions

TL626 Alternative Routes, Options 1 through 5: The construction-related cumulative effects associated with relocating TL626 as proposed under Options 1, 2, and 5 would be similar to those described for SDG&E's proposed project. Under Options 3 and 4, the cumulative effects would be greater than those described for SDG&E's proposed project as this alternative would create a greater disruption to roadways due to proposed undergrounding in Boulder Creek Road rather than overhead reconstruction as proposed.

Partial Relocation of C157: The cumulative effects associated with relocating C157 overhead as proposed under Options 1 and 2 would be similar to those described for SDG&E's proposed project.

C440 Mount Laguna Underground Alternative: The cumulative effects would be greater than those described for SDG&E's proposed project as this alternative would create a greater disruption to roadways due to proposed undergrounding in area roads than overhead reconstruction overhead as proposed.

BIA Proposed Action

The cumulative effects associated with modifying TL682 on Tribal lands would be similar to those described for SDG&E's proposed project.

Additional Alternatives

Partial Removal of Overland Access Roads: The cumulative effects to short-term traffic impacts associated with removing ~~approximately two miles of~~ existing access roads used exclusively to access SDG&E facilities would be similar to those described for SDG&E's proposed project.

Removal of TL626 from Service: The cumulative effects associated with removing TL626 would be similar to those described for SDG&E's proposed project as the disturbance area and associated short-term and long-term impacts would be similar to the proposed reconstruction of existing poles.

No Action Alternative

The cumulative effects associated with the No Action Alternative would be greater than those described for SDG&E's proposed project as the overall traffic levels would increase due to the need to develop new overhead 69 kV and 12 kV ROWs elsewhere in areas outside the National Forest as opposed to reconstruction in place as proposed.

No Project Alternative

Under the No Project Alternative, SDG&E's proposed power line replacement projects would not be implemented and the existing conditions would remain due to ongoing operations and maintenance activities. Given that the project would not be built, no construction traffic impacts would occur.

F.4 References

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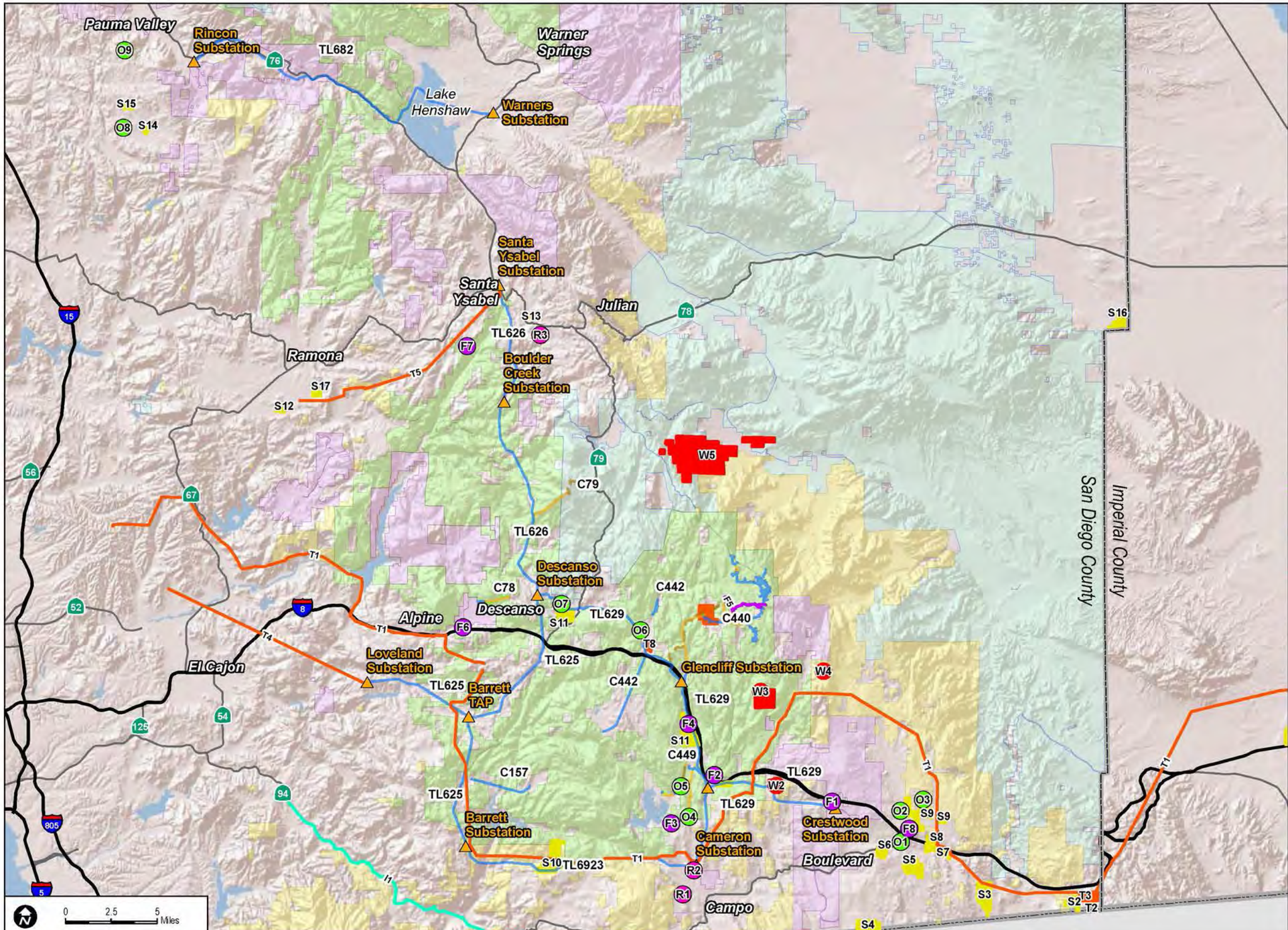

Cumulative Projects

- W: Wind Energy Projects
- S: Solar Energy Projects
- T: Transmission Energy Projects
- F: Development Projects (Federal)
- I: Infrastructure Projects (State)
- R: Residential Development Projects (County)
- O: Other Infrastructure and Facility Projects (County)

Power Line Replacement Projects

- Relocation
- Removal
- Wood-to-Steel Conversion
- Undergrounding
- Substation

Land Jurisdictions

- United States Forest Service
- Bureau of Land Management
- California Department of Parks and Recreation
- Native American Lands

Project Numbers are Listed in EIS Tables F-1 & F-2

DUDEK

7014

SOURCE: SDG&E 2009, 2011, 2013; SanGIS 2009, 2012, 2013; CPUC/BLM 2011; County of San Diego 2014; USFS 2014; Bing Maps
(Note: Project T4 is Conceptual)

FIGURE F-1
Cumulative Projects Map

MASTER SPECIAL USE PERMIT AND PERMIT TO CONSTRUCT POWER LINE REPLACEMENT PROJECTS

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G. REQUIRED CEQA/NEPA TOPICS

Section G includes discussions of topics required by the California Environmental Quality Act (CEQA) and/or National Environmental Policy Act (NEPA), including growth-inducing effects (Section G.1), irreversible and irretrievable commitment of resources and environmental changes (Section G.2), adverse unavoidable impacts (Class I) identified in Sections D.2 through D.14 (Section G.3), the relationship between short-term uses of the environment and the maintenance and enhancement of long-term productivity (Section G.4), effects found not to be significant (G.5), and compliance with applicable federal environmental regulations and policies (Section G.6). Section G.7 lists the references cited in this section.

G.1 Growth-Inducing Effects

CEQA and NEPA require a discussion of the ways in which a proposed project could be an inducement to growth. CEQA Guidelines Section 15126.2(d) identifies a project to be growth-inducing if it fosters economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. For purposes of CEQA, a project that accommodates growth (i.e., by removing an obstacle to growth) is considered growth-inducing. The Council on Environmental Quality NEPA Regulations also require that an EIS discuss the growth-inducing impacts of a project (40 CFR 1508.8(b)): "Indirect effects may include growth- inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems."

Typically, the growth-inducing potential of a project would be considered adverse if it fosters growth or a concentration of population above what is assumed in local and regional land use plans, or in projections made by regional planning authorities. Adverse growth impacts could also occur if a project provides infrastructure or service capacity to accommodate growth levels beyond those permitted by local or regional plans and policies.

SDG&E's proposed power line replacement projects and the alternatives evaluated in this EIR/EIS would fire harden certain electric facilities in and around the Cleveland National Forest (CNF). Fire hardening requires replacement of and upgrades to facilities whether proposed by SDG&E or in alternatives to the project. Such replacements and upgrades would also improve the reliability of power delivery to surrounding communities. Potential growth-inducing impacts could thus arise in two ways:

1. Growth caused by direct and indirect employment.
2. Growth related to reconstruction of SDG&E's existing 69-kilovolt (kV) electric system in and around the CNF.

G.1.1 Growth Caused by Direct and Indirect Employment

The construction and operation of SDG&E's proposed power line replacement projects, including alternatives considered, would not affect the employment patterns in the study area. The proposed power line replacement projects would take approximately 5 years to construct and employ up to approximately 100 workers per day working in different locations at different times across a large area. Local highways provide good access to SDG&E's proposed project area, as the longest commute for construction workers is approximately 60 miles (generally a 1-hour drive) between downtown San Diego and the Santa Ysabel area. Therefore, the majority of construction workers are anticipated to come from the San Diego County area. Outside contractors may also be used who would commute from outside San Diego County and stay in existing hotels during construction. There is an adequate supply of hotels and inns in the project area that could be temporarily utilized by the out-of-town personnel, and therefore project construction would not increase demand for housing, induce population growth, or be considered growth-inducing.

Operations and maintenance of SDG&E's proposed power line replacement projects along with the other SDG&E electric facilities proposed to be covered under the MSUP would require routine and ongoing maintenance tasks similar to those currently administered by SDG&E. These activities would not increase in duration, intensity, or frequency in such a way as to create long-term employment opportunities, and therefore, would not result in a permanent increase to the local population, increase demand for housing, or be considered growth-inducing.

G.1.2 Growth Related to Reconstruction of SDG&E's Existing 69 kV Electric System in and around the CNF

SDG&E's proposed power line replacement projects, including the alternatives considered, would fire harden certain existing electric facilities in and around the CNF consistent with California Public Utility Commission (CPUC) policy and CPUC General Order 95 strategies to reduce fire hazards associated with overhead power lines. SDG&E's proposed project would also improve the reliability of power delivery to surrounding communities.

Reconstruction of existing electric facilities would include replacement of the existing wood poles with steel poles and replacement of existing conductors on existing 69 kV lines with new 69 kV conductor. Approximately 5.7 miles of existing 69 kV line would also be converted from single-circuit to double-circuit segments. Replacement of existing conductors and conversion of certain segments from single-circuit to double-circuit as proposed would increase the capacity of the existing system to move energy. Alternatives that consider the removal of existing facilities would also require upgrades (in order to replace electricity lost by removing such facilities) and would also increase the capacity of the system similar to SDG&E's proposed project.

The potential for SDG&E's proposed project (or alternatives to the proposed project) to be growth inducing depends on the extent to which the proposed new conductors would increase capacity of the existing system and whether this increased capacity would accommodate growth by removing an obstacle to growth, particularly concerning the development of additional renewable generation projects (solar/wind) in the project study area. To address this issue, it is important to consider the electric system's existing capacity to move electric energy within the project's service area. It is also important to consider any potential increase in capacity in the context of other growth-related constraints.

Capacity to Move Electricity

The proposed project would replace existing conductors on five 69 kV lines, which were originally installed decades ago with the smallest SDG&E standard conductors currently used for new and reconstructed facilities of the 69 kV system. These new conductors are stronger, more resistant to heat, and heavier than existing conductors are. This allows the new conductors to fulfill the primary purpose of the power line replacement projects to increase fire safety and service reliability and provide additional fire hardening, as discussed in Section D.8, Fire and Fuels Management, of this EIR/EIS. These new conductors will also result in a fourfold increase in the conductor's ability to move energy as compared to the existing conductors. The increased capacity of the proposed new conductors and double-circuit components to move energy depends also on equipment at the line terminals.

Potential to Facilitate Future Growth in Local Renewable Generation Projects

The proposed power line replacement projects would increase capacity to move electricity, thereby removing a possible obstacle to growth of new local renewable generation projects. However, none of the modifications proposed as part of the proposed project, in and of themselves would allow interconnections of a new local renewable generation project. At this time, there are no foreseeable future local renewable generations projects that could be built based solely on the completion of proposed power line replacement projects or alternatives. As discussed in Section F, Cumulative Scenario and Impacts, of this EIR/EIS, there are 19 renewable energy projects (see Table F-2) proposed in the project area. Such projects are not dependent on the capacity of the proposed new conductors and double-circuit components, but rather on whether the California Independent System Operator (CAISO) completes the required generation interconnection process for any particular generation project. New generation projects must first complete the CAISO generator interconnection process as specified by the CAISO's FERC Tariff and Business Process Manual. The CAISO interconnection process requires detailed studies of any proposed generator projects' effect on the power line system, including whether or not a proposed generator can connect reliably and safely to the system. Whether these

renewable energy projects, and potential future generation projects, move forward is also dependent on local land use decisions and other necessary approvals and environmental review.

In light of the uncertainty surrounding CAISO interconnection requirements and the outcome of local land use decisions, specific and detailed predictions about whether new generation project(s) would occur with or without SDG&E's proposed project is speculative and beyond the scope of this analysis.

Growth Related to Provision of Additional Capacity to move Energy

As discussed in Section A.3, Project Objectives, SDG&E's proposed project is important to reduce fire risk and improve the reliability of power delivery to surrounding communities in and around the CNF. This project, including alternatives considered, would not directly induce growth in any predictable or defined location as a result of additional capacity to move energy. SDG&E's proposed project, if approved, would continue to deliver reliable electric power similar to that which SDG&E currently provides.

Conclusion

The increased capacity provided by SDG&E's proposed project power line replacement projects would remove an obstacle to growth of new local renewable generation projects, and would therefore be considered growth-inducing under CEQA. It would be speculative, however, to draw any conclusion regarding specific growth that might occur since the proposed project, including alternatives considered, would not in and of themselves allow interconnections of new renewable generation projects. The construction and operation of SDG&E's proposed power line replacement projects would not result in a permanent increase to the local population, increase demand for housing, or be considered growth inducing from a community growth perspective. As discussed in Section A.3, Project Objectives, SDG&E's proposed project is important to reduce fire risk consistent with CPUC's policy and General Order 95 and improve the reliability of power delivery to surrounding communities in and around the CNF.

G.2 Irreversible and Irretrievable Commitment of Resources and Environmental Changes

CEQA Guidelines (Section 15126.2(c)) require that an EIR identify significant irreversible environmental changes that would be caused by a proposed project. Changes may include use of nonrenewable resources or provision of access to previously inaccessible areas, as well as project accidents that could change the environment in the long term. NEPA regulations also require that an EIS analysis include a discussion of the potential irreversible and irretrievable commitments

of environmental resources as a consequence of the approval and implementation of SDG&E's proposed project (40 CFR 1502.16).

G.2.1 Possible Impacts to Nonrenewable Resources

Construction-Related Resources

Development of SDG&E's proposed project would require a permanent commitment of natural resources resulting from the direct consumption of fossil fuels, construction materials, the manufacture of new equipment that largely cannot be recycled at the end of the project's useful lifetime, and energy required for the production of materials. Further, the project proposes no uniquely hazardous uses, and its operation would not be expected to cause environmental accidents that would affect other areas. In addition, the project area is located within a seismically active region and would be exposed to ground shaking during a seismic event; however, compliance with GO 95 and applicable geotechnical design standards reduce potential adverse and significant impacts to not adverse under NEPA and less than significant under CEQA (Class III).

Biological Resources

Construction of the replacement poles, conductors and transmission lines, and undergrounding improvements would necessitate the permanent loss of 0.5 acre of 9 sensitive vegetation communities including chamise chaparral, Diegan coastal sage scrub, mixed oak woodland, montane forest, native grassland, oak savanna, semi-desert chaparral, southern mixed chaparral, and southern riparian forest (see Section D.4, Biological Resources). With the implementation of the mitigation measures provided in this EIR/EIS, adverse and significant impacts to these sensitive vegetation communities would be mitigated under NEPA and under CEQA are considered less than significant with mitigation (Class II).

Cultural Resources

This project has the potential to impact nonrenewable historic and archaeological sites, traditional cultural properties, or areas containing paleontological resources due to construction, operation, temporary staging sites, and conductor pull sites (see Section D.5, Cultural and Paleontological Resources). With implementation of mitigation measures incorporated into this EIS/EIR, potential adverse and significant impacts to historic, prehistoric, human remains, and paleontological resources would be mitigated under NEPA and under CEQA would be less than significant with mitigation (Class II).

Visual Resources

The replacement of existing 69 kV and 12 kV wood poles over approximately 145.9 miles with weathered steel poles, that are on average 12 feet higher, would slightly alter the visual landscape and character of the site and surrounding area. Relocation and undergrounding would remove approximately 15.2 miles of existing 12 kV overhead and replace/relocate some portions (approximately 13 miles) with new underground lines. Affected viewers would include motorists and travelers along Interstate 8 (I-8), Old Highway 80, State Route (SR-) 76, SR-78, SR-79, and SR-94, among other various roadways in the unincorporated portions of the County of San Diego; as well as residents in the communities of Cuyamaca, Descanso, Guatay, Pine Valley, Mount Laguna, Fallbrook, Jamul, Dulzura, Julian, Tecate, Potrero, Boulevard, Campo/Lake Morena, Jacumba, Santa Ysabel, Warner Springs, Palomar Mountain, Pala/Pauma Valley, Potrero and dispersed rural residential areas along local roads; and recreationists visiting public lands including the Pacific Crest National Scenic Trail.

Changes to visual settings would vary, depending on the quality and character of existing views, viewing conditions, and distances to SDG&E's proposed project facilities. Overall, many views would remain similar to the existing conditions, as the wood-to-steel replacement of existing distribution circuits would produce weak visual contrast in the landscape as the form, line, and color of replacement poles would appear visually similar to existing wood poles. Views in areas where relocation and undergrounding would occur would benefit the view sheds by removing existing structures and placing them underground (see Section D.2, Visual Resources).

G.2.2 Proposed Alternatives

Forest Service Proposed Actions

TL626 Alternative Routes, Options 1 through 5: Options 1 through 4 would relocate portions of TL626 to the east in new undisturbed right-of-way (ROW). While Options 1 through 4 would reduce identified effects associated with resource management standards identified in the Forest Service's Land Management Plan (LMP) for the Cedar Creek riparian area, the long-term commitment of natural resources in general due to the introduction of a new overhead 69 kV power line ROW where none currently exists as proposed under Options 1, 2, and 4 would be greater than those described for SDG&E's proposed project. Long-term views under Option 3 where relocation and undergrounding would occur would benefit the view sheds by removing existing structures and placing them underground.

The commitment of natural resources associated with Option 5, which relocates a segment of TL626 around the Inaja Memorial Picnic Area, would be similar to those described for SDG&E's proposed project and would reduce long-term impacts to visual resources.

Partial Relocation of C157: The commitment of natural resources associated with partially relocating C157 overhead as proposed under Options 1 and 2 would be similar to those described for SDG&E's proposed project.

C440 Mount Laguna Underground Alternative: The short-term commitment of natural resources would be greater than those described for SDG&E's proposed project as this alternative would create a greater disturbance area and therefore greater construction-related impacts to air quality than reconstruction overhead and in place as proposed. Views in areas where undergrounding would occur would benefit the view sheds compared to SDG&E's proposed project by removing existing structures and placing them underground.

BIA Proposed Action

The BIA proposed action places approximately 1,500 feet of TL682 underground through the economic development zone in the La Jolla Reservation. The commitment of natural resources associated with modifying TL682 on Tribal lands would be slightly greater due to the increased disturbance area to those described for SDG&E's proposed project.

BLM Proposed Action

In addition to the power line replacement work included in SDG&E's proposed project, the BLM would be issuing new or renewed ROW grants for the transmission lines on public lands administered by the BLM. This includes portions of SDG&E's power line replacement project for TL629, 625, and 6923, as described in Table B-2. The ROW grants would be issued under the authority of Title V of the Federal Land Policy and Management Act of 1976. The ROW grants would authorize the ongoing operation and maintenance of the transmission lines.

Additional Alternatives

Partial Removal of Overland Access Roads: The commitment of natural resources associated with this alternative, which would remove steep (over 25% slope) access roads, would reduce the commitment of natural resources to sensitive riparian habitats described for SDG&E's proposed project.

Removal of TL626 from Service: The commitment of natural resources associated with removing TL626 would be reduced as TL626 would be removed from areas managed as having high resource potential and replaced with facilities within existing electric utility ROWs that have not been identified as having high resource potential.

G.3 Adverse Environmental Effects That Cannot be Avoided

Table G-1, Summary of Proposed Project Adverse and Unavoidable Impacts, lists the adverse environmental effects (Class I Impacts) of SDG&E's proposed project and alternatives that cannot be avoided or reduced with mitigation. Note that under each alternative in Table G-1, the adverse and unavoidable impacts under NEPA and significant and unavoidable impacts under CEQA (Class I) are specific to the segment/component of that particular alternative addressed.

G.4 Short-Term Use Versus Long-Term Productivity of the Environment

NEPA requires consideration of the relationship between short-term uses of the environment and long-term productivity associated with SDG&E's proposed project (42 U.S.C. Section 4332(C)(iv)). This involves the consideration of whether SDG&E's proposed project, including alternatives considered, would sacrifice a resource value that might benefit the environment in the long-term for some short-term value to the applicant or the public. The proposed power line replacement projects, including the alternatives considered, do not involve short-term uses, outside of necessary temporary impacts that would occur within the 5-year construction period. Some flora and fauna specimens in the area would be lost along with some visual quality from the replacement of wood-to steel poles and associated transmission and distribution infrastructure. However this loss would be offset by the improved reliability of power delivery to surrounding communities and the reduction of fire risk through fire hardening of the electric facilities in and around the CNF in the long term. Therefore, there would be no permanent loss of the overall productivity of the environment from SDG&E's proposed project.

G.5 Effects Not Found To Be Significant

CEQA Guidelines Section 15128 requires a brief discussion of the various possible significant effects of a project that were determined not to be significant and were therefore not discussed in the EIR. As discussed in Section A, Introduction, and Section I, Public Participation, of this EIR/EIS, a Notice of Preparation (NOP) and Notice of Intent (NOI) were prepared for SDG&E's proposed project and sent out for public comment as part of the scoping process to determine issues to be addressed in the EIR/EIS. Those areas which did not generate concerns and were found through the scoping process not to have possible significant effects are treated in this section. In addition, these effects were also determined to not be significant issues, per the Forest Service Handbook FSH-1909.15-2012-3 Section 12.41 (40 CFR 1500.4).

Table G-1
Summary of Proposed Project and Alternatives Adverse and Unavoidable Impacts (Class I)

Impact No. *Section*	General Impact Discussion	Project-Specific Impact Discussion	Power Line Replacement Projects	Forest Service Proposed Actions								BIA Proposed Action	Additional Alternatives		No Action Alternative	No Project Alternative
				TL626 Alternative Routes Option 1	*TL626 Alternative Routes Option 2*	*TL626 Alternative Routes Option 3*	*TL626 Alternative Routes Option 4*	*TL626 Alternative Routes Option 5*	*C157 Partial Relocation to Avoid Designated Wilderness Option 1*	*C157 Partial Relocation to Avoid Designated Wilderness Option 2*	*C440 Mount Laguna Underground Alternative*		*Partial Removal of Overland Access Roads*	*Removal of TL626 from Service*		
VIS-1 *D.2*	Constructing new poles would create a noticeable contrast in form, line, color, and texture when viewed alongside existing natural elements in the landscape (i.e., trees, shrubs, etc.). In addition, the establishment of a new ROW and overhead power line alignment across undeveloped or sparsely developed rural lands would create a new, linear pattern in the natural-appearing landscape where none are currently visible.	Impacts to a scenic vista (Impact VIS-1) at the Inaja Scenic overlook (TL626) would remain adverse under NEPA and under CEQA would be considered significant and unavoidable (Class I). Even with implementation of Mitigation Measure MM VIS-1, due to greater spatial presence due to increased height and width of the poles, there are no effective screening methods available to reduce the significant visual effect from the Inaja Memorial National Recreational Trail scenic overlook.	X	X	X	X	X									X
AIR-1 *D.3*	Construction would generate dust and exhaust emissions of criteria pollutants and toxic air contaminants.	Impacts would remain adverse under NEPA and under CEQA would be considered significant and unavoidable (Class I) such that volatile organic compounds (VOCs), NOx, CO, and PM2.5 emissions would remain above the thresholds after implementation of applicable Applicant Proposed Measures (APMs).	X	X	X	X	X	X	X	X	X	X	X	X	X	
HYD-4 *D.9*	Ongoing operation and use of exclusive use access roads greater than 25% slope would result in existing erosion, gullying, and sedimentation impacts to continue.	Impacts would remain adverse under NEPA and under CEQA would be considered significant and unavoidable (Class I) without decommissioning (removing) or realigning these road segments.	X					X								X

Table G-1
Summary of Proposed Project and Alternatives Adverse and Unavoidable Impacts (Class I)

Impact No. *Section*	General Impact Discussion	Project-Specific Impact Discussion	Power Line Replacement Projects	Forest Service Proposed Actions								BIA Proposed Action	Additional Alternatives		No Action Alternative	No Project Alternative
				TL626 Alternative Routes Option 1	*TL626 Alternative Routes Option 2*	*TL626 Alternative Routes Option 3*	*TL626 Alternative Routes Option 4*	*TL626 Alternative Routes Option 5*	*C157 Partial Relocation to Avoid Designated Wilderness Option 1*	*C157 Partial Relocation to Avoid Designated Wilderness Option 2*	*C440 Mount Laguna Underground Alternative*		*Partial Removal of Overland Access Roads*	*Removal of TL626 from Service*		
LU-3 *D.10*	The project - C157 - would conflict with applicable laws of an agency with jurisdiction over the project.	Feasible mitigation to avoid conflicts with the provisions of the Wilderness Act is not available; therefore, SDG&E's proposed project for wood-to-steel replacement of C157 would result in adverse and unavoidable impacts under NEPA and under CEQA would be considered significant and unavoidable (Class I).	X													X

Agriculture and Forestry Resources: SDG&E's proposed project and alternatives considered would not have a significant effect upon agriculture and forestry resources, as no land use changes are proposed with the replacement and fire hardening of the existing transmission and distribution lines. SDG&E's proposed project would not convert existing agriculture or forestry lands to non-agricultural or non-forest uses.

Population and Housing: SDG&E's proposed project and alternatives considered would not result in population growth in the area because no new homes or businesses are proposed, and no new infrastructure related to population growth is proposed. In addition, no new housing is needed because non-local construction workers would use available temporary housing throughout San Diego County. Further, the workers would be in the area only during construction and are not expected to become permanent residents.

Public Services and Utilities: SDG&E's proposed project and alternatives considered would not result in population growth as no new homes or businesses are proposed, and no new infrastructure related to population growth is proposed. Therefore, no new demand would be placed on police, library, schools, and hospital services in the project area. In addition, there would be no demand for new wastewater infrastructure.

Socioeconomics/Environmental Justice: No people or housing would be displaced as a part of SDG&E's proposed project or alternatives considered. After the completion of construction, the electric lines would be operated and maintained by SDG&E at existing staffing levels. No additional staff would be necessary to maintain the electric lines (SDG&E 2013). Due to the reasons mentioned above, there would be no change to population or significant impacts on local employment, property values, and tax revenues benefiting public agencies. Additionally SDG&E's proposed project would not create disproportionately high or adverse effects on minority or low-income populations as the construction footprint is minimal and replacement in nature, while operations and maintenance would remain status quo.

G.6 Compliance with Applicable Federal Environmental Regulations and Policies

Table G-2 lists applicable Federal Environmental Regulations and Policies, brief descriptions of how these are addressed, and where in the document a full discussion can be found.

Table G-2
Compliance with Applicable Federal Environmental Regulation and Policies

Federal Environmental Regulation or Policy	Brief Discussion	EIR/EIS Section of Detailed Discussion
Federal Land Policy and Management Act (FLPMA), 43 U.S.C. 1701 et seq.	The project would be in compliance with NEPA and relevant aspects of the Federal Land Policy and Management Act.	All sections of the EIR/EIS
Endangered Species Act (16 U.S.C. 1531–1534)	SDG&E's proposed project is subject to a U.S. Forest Service permit; therefore, a Section 7 federal nexus with the U.S. Fish and Wildlife Service (USFWS) would occur if the project may affect endangered or threatened species or designated critical habitat. Specifically, there are proposed permanent impacts to 0.01 acre of Quino checkerspot butterfly (*Euphydryas editha quino*) critical habitat as designated by the USFWS.	D.4 Biological Resources
Migratory Bird Treaty Act and Executive Order 13186	Construction of SDG&E's proposed project could result in the removal of vegetation potentially supporting nesting birds protected by the Migratory Bird Treaty Act. Direct and indirect impacts to nesting birds resulting from SDG&E's proposed project would be adverse, but mitigated.	D.4 Biological Resources
Bald Eagle Protection Act (16 U.S.C. 668a–668d)	Construction of SDG&E's proposed project could result in the removal of vegetation potentially supporting nesting birds protected by the Bald Eagle Protection Act. Direct and indirect impacts to nesting birds resulting from SDG&E's proposed project would be adverse, but mitigated.	D.4 Biological Resources
Fish and Wildlife Coordination Act	Active coordination with the U.S. Fish and Wildlife Service agency would occur throughout the lifespan of SDG&E's proposed project.	D.4 Biological Resources
Clean Air Act, as amended (42 U.S.C. 7401 et seq.)	Construction of the project components would not be subject to general conformity because the construction emissions would not exceed the de minimis thresholds for VOC, NO_x, and CO. Operation of the project components would not be subject to general conformity because the federal agencies would not have ongoing practical control of their operation.	D.3 Air Quality and D.7 Public Health and Safety
Clean Water Act, as amended (33 U.S.C. 1251 et seq.)	The project would be in compliance with the Clean Water Act. The project will obtain all applicable Clean Water Act permits and/or certifications prior to construction.	D.4 Biological Resources, and D.9 Hydrology and Water Quality
Executive Order 11990 – Protection of Wetlands	Impacts to wetlands are avoided to the greatest extent possible. Unavoidable impacts would be mitigated.	D.2 Biological Resources
National Historic Preservation Act	The project will avoid to the extent possible and mitigate any unavoidable impacts to cultural resources.	D.5 Cultural and Paleontological Resources
Resource Conservation and Recovery Act, or Solid Waste Disposal Act (42 U.S.C. 6901 et seq.	SDG&E's proposed project would be in compliance with hazardous materials and non-hazardous solid waste management as outlined in the Resource Conservation and Recovery Act and the Solid Waste Disposal Act.	D.7 Public Health and Safety

Table G-2
Compliance with Applicable Federal Environmental Regulation and Policies

Federal Environmental Regulation or Policy	Brief Discussion	EIR/EIS Section of Detailed Discussion
Comprehensive Environmental Response, Compensation, and Liability Act, as amended (42 U.S.C. 9601 et seq.)	SDG&E's proposed project would be in compliance with the guidelines and requirements as set forth in the Comprehensive Environmental Response, Compensation, and Liability Act.	D.7 Public Health and Safety
Toxic Substances Control Act, as amended (15 U.S.C. 2601 et seq.)	SDG&E's proposed project would be in compliance with the guidelines and requirements as set forth in Toxic Substances Control Act.	D.7 Public Health and Safety
Federal Energy Regulatory Commission (FERC)	SDG&E's proposed project would be in compliance with the FERC's guidelines and requirements.	D.8 Fires and Fuels
Federal Wildland Fire Management Policy	SDG&E's proposed project includes APMs which would reduce impacts related to wildland fires.	D.8 Fires and Fuels
National Fire Plan	SDG&E's proposed project would be in compliance with the National Fire Plan requirements with the development and implementation of a Construction Fire Prevention/ Protection Plan and an Operations and Maintenance Fire Prevention/Protection Plan.	D.8 Fires and Fuels
National Forest Management Act and USDA Forest Service Management Plans	SDG&E's proposed project would be in compliance with the established CNF Land Management and Fire Management Plans with the exception of C157, that is currently located in an area designated wilderness by the Wilderness Act of ~~1962~~ 1964 and the Southern California National Forests LMP. ~~Pending approval and~~With the adoption of the Southern California National Forests LMP Amendment in October 2014, SDG&E's proposed project for TL626 would entail the installation of a non-conforming activity or use in the Recommended Wilderness zone and overland access roads within areas designated as Back Country Non-Motorized, which would conflict with the suitability of uses within the recommended wilderness land use zone as established in the LMP.	D.8 Fires and Fuels D.10 Land Use and Planning
Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended (7 U.S.C. 136 et seq.)	SDG&E's proposed project would be in compliance with the guidelines and requirements as set forth by FIFRA.	D.9 Hydrology and Water Quality
Safe Drinking Water Act (SDWA), as amended (42 U.S.C 300f et seq.)	SDG&E's proposed project would be in compliance with the guidelines and requirements as set forth by SDWA.	D.9 Hydrology and Water Quality
Wilderness Act of 1964	Under SDG&E's proposed project, C157 would not be in compliance with the Wilderness Act.	D.10 Land Use
Executive Order 13112 – Invasive Species	Construction and operation and maintenance of SDG&E's proposed project could result in the introduction of invasive, non-native or noxious plant species. Direct and indirect impacts resulting from SDG&E's proposed project would be adverse, but mitigated.	D.4 Biological Resources D.8 Fire and Fuels Management

G.7 References

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

40 CFR 1500–1518. Protection of Environment. Chapter V: Council on Environmental Quality.

SDG&E (San Diego Gas & Electric). 2013. *SDG&E Revised Plan of Development. San Diego Gas & Electric Company, Master Special Use Permit, Cleveland National Forest, Orange and San Diego Counties, California*. April l, 2013. Accessed March 2014. Prepared by Insignia Environmental. http://www.cpuc.ca.gov/environment/info/dudek/CNF/POD2/CNF%20Revised%20POD%20(04-19-13S).pdf.

H. MITIGATION MONITORING, COMPLIANCE, AND REPORTING PROGRAM

This section outlines the mitigation monitoring, compliance, and reporting program (MMCRP) to ensure effective implementation of the Applicant Proposed Measures (APMs) and mitigation measures required by the CPUC and the Forest Service for the Master Special Use Permit and Permit to Construct (MSUP/PTC) power line replacement projects (proposed project), as well as for all project alternatives. An MMCRP table for San Diego Gas & Electric's (SG&E's) proposed project and project alternatives is provided at the end of each issue area in Section D (Sections D.2 through D.14), listing each mitigation measure and outlines procedures for successful implementation.

This section provides the recommended framework for effective implementation of the MMCRP by the CEQA lead agency—the CPUC, the NEPA lead agency—the Forest Service, and other responsible/cooperating agencies. Responsible/cooperating agencies include the California State Parks Department, the Bureau of Land Management, and the Bureau of Indian Affairs (BIA); these agencies may choose to use the MMCRP for their permitting processes.

This MMCRP will be finalized and further, project construction-related details will be added to the MMCRP, if the CPUC and Forest Service approve the project.

H.1 Regulatory Background

H.1.1 California Public Utilities Commission

The California Public Utilities Code confers authority upon the CPUC to regulate the terms of service and the safety, practices, and equipment of utilities subject to its jurisdiction. It is the standard practice of the CPUC, pursuant to its statutory responsibility to protect the environment, to require that mitigation measures stipulated as conditions of approval are implemented properly, monitored, and reported. In 1989, this requirement was codified statewide as Section 21081.6 of the California Public Resources Code (PRC). PRC Section 21081.6 requires a public agency to adopt an MMCRP when it approves a project that is subject to preparation of an EIR and where the EIR for the project identifies significant adverse environmental effects. CEQA Guidelines Section 15097 (14 CCR 15000 et seq.) was added in 1999 to further clarify agency requirements for mitigation monitoring or reporting.

The purpose of an MMCRP is to ensure that measures adopted to mitigate or avoid significant impacts of a project are implemented. The CPUC views the MMCRP as a working guide to facilitate not only the implementation of mitigation measures by the project proponent, but also the monitoring, compliance, and reporting activities of the CPUC and any monitors it may designate.

The CPUC will address its responsibility under PRC 21081.6 when it takes action on SDG&E's application for a PTC and operate the proposed power line replacement projects. If the CPUC approves the application, it will also adopt an MMCRP that includes the mitigation measures ultimately made a condition of approval by the CPUC.

H.1.2 Federal Agencies

The Forest Service is the federal lead agency for preparation of this EIR/EIS, in compliance with the requirements of NEPA, the Council on Environmental Quality (CEQ) regulation for implementing NEPA (40 Code of Federal Regulations (CFR) 1500 et seq.), and the Forest Service NEPA Handbook (FSH 1909.15) in the evaluation of SDG&E's proposed power line replacement projects.

The Forest Service and Bureau of Land Management (BLM) issue permits and right-of-way (ROW) grants under the authority of Title V of the Federal Land Policy and Management Act (FLPMA) (43 U.S.C. 1701 et seq.) and BIA issues them under the Act of February 5, 1948, 25 U.S.C. 323 (PL 407). The general terms and conditions for ROWs issued pursuant to FLPMA Section 505~~, and~~ include measures to minimize damage and otherwise protect the environment; require compliance with air and water quality standards; and require compliance with state standards for public health and safety, environmental protection, and siting, construction, operation, and maintenance of ROWs for similar purposes if those standards are more stringent than applicable federal standards (43 U.S.C. 1765(a)).

The environmental effects analysis in the EIR/EIS identifies impacts and mitigation measures to reduce/eliminate impacts. Each federal agency is responsible for adopting applicable mitigation measures in their Record of Decision for the project. Each agency would be responsible for monitoring implementation of mitigation measures described in their decision through the administration of the permit or ROW grant. The additional mitigation measures identified in the mitigation monitoring program tables presented at the end of each issue area section (Sections D.2 through D.14) of this EIR/EIS will primarily be enforced by the other agencies, and will provide additional protection to public land resources.

H.1.3 Responsible Agencies

Responsible agencies, including the California State Parks Department, will also be responsible for ensuring that mitigation measures are implemented on lands managed by those agencies. Because portions of the projects will occur on lands under the jurisdiction of the California State Parks Department, it will be responsible for ensuring mitigation compliance on its lands.

H.2 Roles and Responsibilities

This section outlines roles and responsibilities specific to the MMCRP. Further, more specific details regarding project roles will be included in the Final MMCRP.

H.2.1 Lead Agency Project Manager and Compliance Managers and Monitors

Under the CPUC contract, the CPUC project manager will assign monitoring and reporting responsibilities to a third-party contractor as described below and will oversee the work of the third-party contractor through review of status reports. The CPUC and federal agency project managers will be notified of non-compliance situations and may suggest measures to help resolve the issue(s). All requests for minor project refinements will be submitted to the CPUC and federal agency project managers for review and approval as needed.

The CPUC will assign monitoring and reporting responsibilities to a third-party contractor that reports to the CPUC project manager. The third-party contractor designated by the CPUC will assign a compliance manager (CPUC compliance manager) as the designated point of contact. The CPUC compliance manager will report to the CPUC project managers. The CPUC compliance manager will consult with the CPUC project managers to determine the appropriate level of inspection frequency, and will also oversee one or more compliance monitors, the on-the-ground personnel responsible for observing and reporting compliance with the terms and conditions of the CPUC PTC. The number of compliance monitors and frequency of site inspections will depend on the number of concurrent construction activities and their locations. The CPUC compliance manager will be an integral part of the project team and will stay apprised of construction activities, schedule changes, and construction progress. The compliance monitors and compliance manager will document compliance through daily site inspection forms, the use of a table tracking APMs and mitigation measures, and monthly reports to the CPUC and federal agency project managers.

H.2.2 Construction Personnel

SDG&E Construction Management Teams

SDG&Es construction management teams would oversee, manage, and coordinate with the construction contractor to ensure overall project construction is completed as required by the project conditions and contract, and within the schedule. The construction management teams ensure that APMs and mitigation requirements are implemented and that work stoppages are appropriately communicated and coordinated.

Construction Contractor

The construction contractors would provide daily construction work schedules and would describe the number, types, and activities of the construction scheduled to occur to ensure adequate monitoring resources are provided. The construction contractors would also report deviations from compliance and spills (e.g., fuel or water) to the compliance monitors.

The construction contractors would have significant responsibilities for compliance with the environmental requirements of the project. The contractors would be responsible for incorporating all project environmental requirements into daily construction activities.

Key environmental responsibilities for contractors include, but are not limited to:

- Verifying that all construction workers attend the project environmental training program prior to beginning work
- Reviewing and understanding the environmental requirements
- Implementing environmental protection requirements and conditions during construction and maintaining compliance with project requirements.

H.2.3 Monitoring

As the lead agency under CEQA, the CPUC is required to monitor the project to ensure that the APMs and mitigation measures are implemented. The CPUC would have primary responsibility for ensuring full compliance with the provisions of the monitoring program. The compliance monitors, under the supervision of the CPUC compliance manager, would monitor construction activities in the project areas on a regular basis, particularly when construction activities have the potential to impact a sensitive resource.

SDG&E may elect to have one or more full-time environmental monitors on site on a daily basis to coordinate specialty monitors (such as biologists and archeologists), assist construction crews with interpreting APMs and mitigation measures, and help correct compliance problems in a timely manner. Environmental monitors would also provide environmental training through the Worker Environmental Awareness Program.

H.2.4 Enforcement

The CPUC, Forest Service, and responsible/cooperating agencies are responsible for enforcing the procedures adopted for monitoring through the CPUC and federal agency compliance monitors operating under the supervision of the respective compliance manager. The compliance monitors would note problems with monitoring, notify designated project members, and report the problems to the CPUC, Forest Service, and/or the responsible/cooperating agency project manager.

The CPUC, Forest Service, and responsible/cooperating agencies have the authority to halt any construction activity associated with the project if the activity is determined to be a deviation from the approved project, adopted mitigation measures, or APMs.

H.2.5 Mitigation Compliance

SDG&E is responsible for successfully implementing all the adopted mitigation measures and APMs listed in the MMCRP. SDG&E shall inform the CPUC and their monitors in writing of any mitigation measures that are not or cannot be successfully implemented. The CPUC, in coordination with the monitors, will assess whether alternative mitigation is appropriate and specify to SDG&E any required subsequent actions.

SDG&E shall inform the CPUC, Forest Service, and/or the responsible/cooperating agencies in writing of any mitigation measures that are not or cannot be successfully implemented. In coordination with their monitors, the CPUC, Forest Service, and/or the responsible/cooperating agencies will assess whether alternative mitigation is appropriate and specify to SDG&E any required subsequent actions.

H.3 Communication

Communication is a critical component of a successful environmental compliance program. In order to avoid project delays and possible work stoppages, environmental and construction representatives would need to interact regularly and maintain professional, responsive communications at all times. Similarly, representatives of SDG&E would need to coordinate closely with the compliance monitors to address and resolve issues in a timely manner. A communication protocol to accurately disseminate information regarding on-going surveys and mitigation measures, construction activities, contractors, and planned or upcoming work to all levels of the project would be established as part of the Final MMRCP prior to the commencement of construction.

H.3.1 Environmental Compliance Report

The CPUC third-party compliance manager will prepare and distribute environmental compliance reports on a regular basis to the CPUC and federal agencies in order to document the status of APMs and mitigation measures and observations from the field. The third-party compliance manager will also utilize reports prepared by SDG&E that document compliance levels when reporting to CPUC and the federal agencies. The environmental compliance reports will be a tool to keep all parties informed of construction progress and schedule changes. The frequency of the environmental compliance reports will be determined by the CPUC and federal agencies and outlined in the Final MMCRP.

H.3.2 Coordination with Other Agencies

Several local, state, and federal agencies have jurisdiction over portions of the land in the project area. In addition, some APMs and mitigation measures were derived from specific agency input. SDDG&E would be responsible for contacting agencies and immediately notifying them of compliance issues within their jurisdiction. The CPUC compliance manager may request copies of email correspondences, phone logs, or other documentation between SDG&E and agencies to avoid direct involvement of compliance monitors. However, if an issue regarding compliance with an APM, mitigation measure, or permit requirement under the jurisdiction of an agency remains unresolved, the CPUC/Forest Service compliance monitors may elect to contact the agency to discuss resolution.

H.4 Minor Project Refinements

This section describes the CPUC's process for staff approval of minor project refinements (refinements) that may be necessary due to changes resulting after SDG&E's final engineering of project elements. Approval of minor project refinements would only be granted by the CPUC if the refinements achieve or exceed the level of environmental protection approved in the Final EIR/EIS, are consistent with CEQA requirements, and comply with the intent of the mitigation measures in the Final EIR/EIS. Requests for project modifications that do not fall within the authority delegated to staff must be sought by a Petition for Modification.

H.4.1 Minor Project Refinements Request Process

Requests for CPUC staff approval of a refinement must be made in writing and should include the following:

- A detailed description of the proposed refinement or refinements, including an explanation of why the refinements are necessary;
- Identification of the APMs, mitigation measures, project parameter, or other project stipulation for which the refinements are being requested, and a reference to the approved documents;
- Photos, maps, and other supporting documentation illustrating the difference between the existing conditions in the project area, the approved project, and the proposed refinements;
- The potential impacts of the proposed refinements, including a discussion of each environmental issue area that could be affected by the refinements with accompanying verification that there would be no increase in significant impacts on resources affected by the project and no new significant impacts, after application of previously adopted mitigation;

- Whether the refinements conflict with any APMs or mitigation measures;
- Whether the refinements conflict with any applicable guideline, ordinance, code, rule, regulation, order, decision, statute, or policy;
- Water/wetland/stormwater-related resource information if the refinements would result in any additional land disturbance, road distance, or width changes to jurisdictional delineation of waters, or changes to water protection best management practices; and
- The date of expected construction at the refinements site area.

The CPUC project managers may request additional information, agency consultations, or a site visit in order to process the request.

H.4.2 Requirements for Staff Approval of Minor Refinements

To be approved by staff, refinements must meet all of the following fixed standards. Refinements must not:

- Be outside the geographic boundary of the study area utilized in the environmental document;
- Create a new significant impact or a substantial increase in the severity of a previously identified significant impact, based on the thresholds used in the environmental document;
- Trigger additional permit requirements[1];Conflict with any APMs or mitigation measures or any applicable guideline, ordinance, code, rule, regulation, order, decision, statute, or policy; or
- Require new conditions for approval, without which the refinements would result in a new significant impact or a substantial increase in the severity of a previously identified significant impact.

Examples of refinements that may be approved by staff after final engineering include, but are not limited to:

- Adding a temporary extra work area (no more than 60 days of use) or substituting a work area, including lay-down and staging, for another work area that is as suitable as or more suitable than the originally proposed work area. The temporary extra work area or substitute work area must be located in a disturbed area with no sensitive resources or

[1] For example: grading, disposal, water discharge, dredging, a Clean Water Act Section 404 permit or a California Fish and Game Code Section 1602 Lake or Streambed Alteration Agreement.

sensitive land uses adjacent to the proposed area, must not create any permanent impacts, and must be restored to either its initial condition[2] or an improved condition.[3]

- Adjusting the alignment of a project within the study area that was utilized in the original environmental analysis to avoid unanticipated impacts related to cultural artifacts, buried utility infrastructure, hazardous and toxic substances, and other land use impacts including effects on homeowners, so long as the adjustment does not create a new significant impact or a substantial increase in the severity of a previously identified significant impact.
- Adjusting the alignment of a project within the study area that was utilized in the original environmental analysis to avoid or adapt to conditions on the ground that vary from the conditions that existed at the time of the original environmental analysis, so long as the adjustment does not create a new significant impact or a substantial increase in the severity of a previously identified significant impact.

H.5 Mitigation Monitoring Program Table

Mitigation monitoring program tables are presented at the end of each issue area section (Sections D.2 through D.14). These tables, along with the full text of the mitigation measures themselves, will form the basis for implementation of the MMCRP.

These MMCRP tables are the core document for environmental requirements on the project and will be the primary guideline for determining compliance with the MMCRP. If SDG&E's proposed project is approved by the CPUC and the federal agencies, CPUC and federal agency staff will compile the Final MMCRP based on this table and the final project conditions. A complied copy of the MMCRP tables will be part of the Final MMCRP and should be kept with each crew working on the project, and all supervisory staff working on the project should be familiar with its contents. CPUC and federal agency staff would use the approved MMCRP tables to accurately track the status of APMs and mitigation measures, and will also be used by SDG&E's environmental monitors, compliance monitors, project managers, supervisory staff, and other members of the project team.

H.5.1 Effectiveness Review

The CPUC and the federal agencies may conduct a comprehensive review of conditions that are not effectively mitigating impacts at any time it deems appropriate, including as a result of

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2 The initial condition of the area is the condition prior to its use as a work area.

3 For example, trash has been cleaned up that was originally on the site or the site is replanted with native vegetation.

the Dispute Resolution procedure outlined in subsection H.7. If the CPUC and the federal agencies determine that, based on the review, any conditions are not adequately mitigating significant environmental impacts caused by the project, the CPUC and federal agencies may impose additional reasonable conditions to effectively mitigate these impacts. These reviews will be conducted in a manner consistent with the CPUC's rules and practices and federal agency procedures.

H.6 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

40 CFR 1500–1518. Protection of Environment; Chapter V: Council on Environmental Quality.

43 CFR 2800–2809.10. Rights-of-Way Under the Federal Land Policy Management Act, as amended.

43 U.S.C. 1701–1782. Federal Land Policy and Management Act (FLMPA) of 1976, as amended. Public Law 94-579.

California Public Resources Code, Sections 21000–21177. California Environmental Quality Act, as amended.

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I. PUBLIC PARTICIPATION

The scoping process and public participation program for the Master Special Use Permit and Permit to Construct (MSUP/PTC) power line replacement projects are described in this section. To collect agency and public input for the environmental review process associated with the project, the California Public Utilities Commission (CPUC) and U.S. Forest Service (Forest Service) administered a public notice and participation program. Although the public participation~~scoping~~ requirements of the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) differ slightly, the requirements are intended to initiate the public scoping process for the environmental impact report/environmental impact statement (EIR/EIS) preparation; provide information about the power line replacement projects; and solicit information (comments from affected public agencies, governmental representatives, tribal representatives, and the public) that will be helpful in the environmental review process.

I.1 Public Scoping Process – Draft EIR/EIS

The Draft EIR/EIS scoping process consisted of seven elements, each of which is described in more detail subsequently in this section:

1. Publication of a Notice of Preparation (NOP) and Notice of Intent (NOI) of a joint EIR/EIS, which included a joint CPUC and Forest Service Notice of Public Scoping Meeting seeking comments from the public and affected public agencies, as required by CEQA and NEPA.
2. Public scoping meetings and meetings with agencies (October 22 and 23, 2013)
3. Summary of scoping comments in a comprehensive Scoping Report (January 16, 2014)
4. Publication of a public notice of supplemental scoping to provide the public and affected public agencies with an additional opportunity to comment on the topics and alternatives that should be addressed in the environmental document (January 21, 2014)
5. Supplemental scoping meeting and meeting with cooperating and responsible agencies (February 19, 2014)
6. Agency consultation
7. Tribal Consultation.

The scoping process provides an opportunity for governmental agencies and the public to provide comments on the issues and scope of the Draft EIR/EIS. Written comments received during the scoping process become part of the public record and were~~are~~ reviewed and considered by the CPUC and Forest Service in preparing the Draft EIR/EIS.

I.1.1 Notice of Preparation/Notice of Intent

The CPUC issued the NOP, prepared jointly with the Forest Service, of an EIR/EIS for the proposed power line replacement projects along with the operations and maintenance activities proposed for authorization under the MSUP on September 23, 2013. The NOP was distributed to the State Clearinghouse; federal, state, regional, and local governmental and public agencies; elected officials of areas affected by the proposed project; and the general public.

Notices were sent to 1,279 stakeholders, including 108 to federal, state, and local agencies (including 15 copies to the State Clearinghouse and 7 to local libraries); 92 to local organizations/stakeholders (including 17 to local planning groups); 1,045 to the general distribution list of all those identified as property owners within a 300-foot radius of the Proposed Power Line Replacement Projects including the Forest Service Proposed Action TL626 Study Corridor and individuals requesting to be notified of the project; and 34 Native American groups and tribes. In addition, a total of 26 notices were sent via e-mail to agencies and persons requesting to be notified via email. Specifically the following 17 local planning groups were sent a public notice:

- Alpine Community Planning Group
- Bonsall Community Sponsor Group
- Borrego Springs Community Sponsor Group
- Boulevard Community Planning Group
- Crest/Dehesa/Granite Hills/Harbison Canyon Community Planning Group
- Cuyamaca Community Sponsor Group
- Campo/Lake Moreno Community Group
- Descanso Community Planning Group
- Fallbrook Community Planning Group
- Jacumba Community Sponsor Group
- Jamul/Dulzura Community Planning Group
- Julian Community Planning Group
- Pala-Pauma Community Sponsor Group
- Pine Valley Community Sponsor Group
- Potrero Community Planning Group
- Ramona Community Planning Group
- Valley Center Community Planning Group.

The following seven libraries received copies of the NOP and public notice:

- Descanso Branch Library
- Alpine Branch Library
- Campo-Morena Village Branch Library
- Julian Branch Library
- Pine Valley Branch Library
- Ramona Branch Library
- San Diego Public Library.

In addition, the legal notice was published in the San Diego *Union Tribune* (UT) as well as the North County edition of the UT on September 23, 2013; in the *Julian News* on September 25, 2013, and in the *Alpine Sun* on September 26, 2013. The 45-day public scoping period extended from the date of NOP issuance to November 7, 2013, as required by CEQA.

The Forest Service published the NOI to prepare an EIS for the proposed project on September 23, 2013, in the Federal Register (78 FR 58270). The comment period for the NOI ended on November 7, 2013.

The NOP, NOI, and public notice were also made available to the public on the CPUC's website for the proposed project at: http://www.cpuc.ca.gov/environment/info/dudek/CNF/CNF.htm.

I.1.2 Public Scoping Meetings

The CPUC and the Forest Service conducted two initial public scoping meetings: one on October 22, 2013, starting at 5:00 p.m. at the Julian Elementary School (1704 Cape Horn, Julian, California, 92036), and the second on October 23, 2013, at 5:00 p.m. at the Alpine Community Center (1830 Alpine Boulevard, Alpine, California 91901). In addition, a supplemental scoping meeting was held February 19, 2014, staring at 5:00 p.m. at the Alpine Community Center. These public scoping meetings were conducted to gather comments from the public regarding the scope of the EIR/EIS and for alternatives and potential mitigation measures to be considered.

Approximately 20 and 30 persons, including representatives from local planning groups, organizations, and private citizens, attended the two scoping meetings held on October 22 and 23, 2013, in Julian and Alpine, respectively, and 22 persons attended the meeting held February 19, 2014.

I.1.3 Scoping Report

In January 2014, a comprehensive Scoping Report was published summarizing concerns received from the public and various agencies, which also included copies of comment letters received. In total, 102 letters were received: 41 from federal, state, and local agencies and organizations; 60 from individuals; and 1 from the Pala Tribal Historic Preservation Office. Comments received are included in Appendix E of the project Scoping Report.

The Scoping Report was posted on the CPUC website on January 16, 2014, at: http://www.cpuc.ca.gov/environment/info/dudek/CNF/CNF.htm

In addition, the following seven libraries received copies of the Scoping Report:

- Descanso Branch Library
- Alpine Branch Library
- Campo-Morena Village Branch Library
- Julian Branch Library
- Pine Valley Branch Library
- Ramona Branch Library
- San Diego Public Library.

The following summarizes the scoping comments received from federal, state, and local agencies; local planning groups; private and public organizations; and the general public. The Scoping Report is based on written comments received during the NOP/NOI public scoping period and from the project scoping meetings held in Julian on October 22, 2013, and Alpine on October 23, 2013. A number of environmental concerns were raised during the public scoping process, which focused on the project's potential effects in several environmental categories. In addition, several alternatives for the project were provided through the public scoping period. Specific topics raised during the public scoping process are summarized below.

Project Description

A commenter noted that the EIR/EIS should clearly define the purpose and need in context of the electric power system reliability, fire risk reduction, power line undergrounding, and power line relocation. Comments on the requirements for increased pole size were noted, requesting the regulations requiring this for fire safety purposes. Another commenter had specific concerns regarding the location of C78 and why the alignment has changed from the original straight alignment. Commenters were concerned with the nature of the construction phase regarding temporary power shutdowns, in addition to requesting the inclusion of a construction phasing plan limiting hours of operation and duration of construction. Additionally, it was noted that reconductoring was done in the past, and explanation as to why new reconductoring is occurring was requested. Concern over the 'whole of the action' and connected actions (i.e., TL637 pole replacement) were expressed. It was also recommended that future appurtenant facilities and smart-grid facilities have their own environmental review when proposed in the future.

Multiple commenters also raised concerns about increased wattage, amperage, and capacity. Commenters stated that larger conductors would lead to increased capacity, as well as double circuits versus single would be growth-inducing as they increase capacity, not reliability. A commenter was concerned that more capacity would lead to more energy projects.

Commenters noted that temperature increases of up to 40% are possible with the new proposed conductor size, and request the current stated amperage carrying capacity of TL626, current

wattage, and proposed capacity to which SDGE is upgrading. Concerns that increased capacity would lead to additional energy projects were also expressed.

Project Alternatives

Commenters expressed the need for the environmental analysis to include a full and comprehensive range of alternatives that reduce identified impacts. Suggestions from commenters regarding specific alternatives included distributed generation (DG); undergrounding electric lines; alternative transmission routes; alternative sites and configurations; alternative pole designs regarding materials and height; increased vegetation management and equipment inspections versus replacement; removal of various lines; and alternative technologies, including solar, that achieve a majority of project objectives.

Human Environment Issues

Public and agency comments raised concerns regarding the potential impacts of the proposed project on the human environment, most often expressing concerns with the following key issues:

- Visual and aesthetic impacts of the aboveground transmission lines, poles, and associated access roadway gates to the area's scenic integrity and dark skies
- Increased risk of wildfire hazards due to new transmission lines, and additional circuits and size of conductors
- Conflict with the rural community character and the designated recreational, wilderness land uses, preserves and parklands, as well as proposed Land Management Plan in the project area
- Potential to physically divide an established community, and conflicts with applicable San Diego County land use plans and goals within these plans
- Construction and operations noise due to helicopter noise during construction and maintenance activities and emergency generators. In addition, commenters requested a technical noise study, and that public noticing be based on noise analysis
- Potential health effects associated with electromagnetic fields (EMFs) and potential public safety concerns due to potential for stray voltage, lighting risk, and hazardous wood pole disposal, as well as concerns for maintenance workers in steep slope areas.

Additional human environment concerns expressed include how the proposed power line replacement projects could impact Tribal Lands, as well as effects on cultural and historic resources, and low-income communities.

Natural Environment Issues

The key natural environment concern expressed was how the project would affect the biological resources in the area. Issues raised by the public and responsible agencies included potential direct, indirect, and cumulative impacts on both plant and wildlife special-status species known to occur in the region. Other natural environmental concerns dealt with air quality, hydrology, steep slopes and erosion, and impacts related to wind effects.

Cumulative Projects and Impacts

Commenters indicated that the environmental analysis should provide context for understanding the magnitude of project-related impacts by cumulatively considering the environmental effects of other proposed energy projects in the region. In addition, commenters requested an explanation about the relevancy of the Renewable Energy Transmission Initiative to the proposed project.

Mitigation Measures/Monitoring

Commenters expressed the project should include a mitigation and monitoring plan, with a clearly defined monitoring program which includes timing and success criteria. Additional aspects to mitigation and monitoring concern include avoidance measures, bird mortality monitoring, and sparking mitigation in terms of separation.

Design/Operation and Maintenance

The public and agencies made comments regarding design aspects of the project, as well as operations and maintenance concerns. Design-related comments were pointed at inclusion of cameras, details of lighting arresters, and design and implementation guidelines for gates within the MSUP areas. Commenters suggested the need for invasive species control and implementation and enforcement of Best Management Practices. Additionally, concerns regarding access roads were raised.

EIR/EIS Administrative and Permitting Issues

Commenters indicated that the project should have an additional scoping period, and a Supplemental Scoping Period was granted from January 21, 2014 through March 7, 2014. Permits and agreements regarding the Clean Water Act and the Rivers and Harbors Act, Encroachment Permits and SDG&E agency agreements were noted by commenters as needing to be enforced.

Refer to the Scoping Report for NOP comment letters received and written comments provided during the scoping meetings.

I.1.4 Supplemental Public Notification/Meeting

A supplemental public scoping period was provided to the public as an additional opportunity to comment on the topics and alternatives that should be included in the Draft EIR/EIS. The supplemental scoping period was opened from January 21, 2014, to March 7, 2014. A supplemental scoping meeting for the proposed power line replacement projects was held February 19, 2014, from 5:00 p.m. to 7:00 p.m. at the Alpine Community Center, located at 1830 Alpine Boulevard, Alpine, California 91901. Approximately 20 persons, including representatives from local planning groups, organizations, and private citizens, attended the supplemental scoping meeting.

Table I-1 summarizes additional issues raised during the supplemental scoping period. In March 2014, the supplemental comment letters received were posted on the public website at: http://www.cpuc.ca.gov/environment/info/dudek/CNF/CNF_Supplemental_Scoping_Comments.htm.

Table I-1
Summary of Additional Issues Raised During Supplemental Scoping

Environmental Issue Area/ EIR/EIS Section	Potential Issues or Impacts
Aesthetics/Visual Resources Section D.2	• Yellow striping on new steel poles and use of reflective conductors could affect the visual character of the project area. • Lighting on taller steel poles and use of colored balls on conductors, if required, could affect the visual character of the project area.
Biological Resources Section D.4	• Lighting if used on steel poles could affect wildlife in project area. • Heavy equipment could damage root systems of older trees along alignment. • Project construction could exceed take acreage allotted in the 1995 SDG&E Natural Community Conversation Plan (NCCP).
Hazards, Hazardous Materials Section D.7 (Public Health)	• Wind speeds exceed rating of pole/conductors. • Harmonic rocking of lines during high winds could lead to failure/fire risk.
Fire D.8 (Fire and Fuels Management)	• Doubling circuits on certain transmission lines can increase fire risk. • Constructing power lines in areas designated as wilderness could increase fire risk.
Electromagnetic Fields Section D.15	• Potential public health risks due to EMF.
Alternatives	• Non-wire alternative using micro-grids in town centers such as Boulevard and off-grid system. • Like-for-like alternative: use of conductors of the same or similar capacity to the conductors in use now. • Evaluate removal of TL626 from system. • Forest Service Proposed Action for C157 should follow road alignment near Barrett Lake. • Electric lines should be removed from private property in Mount Laguna community.

I.2 Public Review Draft EIR/EIS

The Draft EIR/EIS was released for a 60 day public review and comment period on September 5, 2014. The public review and comment period ended November 4, 2014. The Notice of Availability of the Draft EIR/EIS and the date of the public meeting were published concurrently with distribution of the Draft EIR/EIS. The Environmental Protection Agency also published their Notice of Availability on September 5, 2014.

The Draft EIR/EIS was made available via the Internet and was also distributed to responsible agencies and interested parties who requested to be included on the mailing list during and after the public scoping period. A public information meeting on the Draft EIR/EIS was held at the Alpine Community Center on October 1, 2014. Thirty-five (35) people and organizations participated in the public comment process by providing email or postal letters. The CPUC and Forest Service have reviewed all comments and made changes to the EIR/EIS, as appropriate. Responses to comments are provided in Volume 2 of this Final EIR/EIS.

The specific issues raised during the Draft EIR/EIS review process are summarized below according to the following major themes:

- Project description/growth inducement
- Alternatives
- Human environment issues
- Natural environment issues
- Cumulative impacts.

Project Description/Growth Inducement. Commenters expressed concern regarding adequacy of the project description, specifically regarding the proposed conductors to be used. Concerns were expressed that the proposed power line replacement projects would result in additional renewable energy development not addressed in the EIR/EIS.

Several commenters expressed concern that wind speeds exceed the rating of pole/conductors causing potential impacts to fire risk and public safety. Commenters state that poles as proposed per the SDG&E application are designed to withstand winds of up to 85 miles per hour (mph); however, winds exceeding 100 mph have been recorded in this area of San Diego County and wind speeds are even higher in the canyons, due to the funneling of the wind.

Further, several commenters expressed concern regarding the cost of the project in terms of long term fire protection verses undergrounding the proposed project power and distribution lines as part of this project. Suggestions and costs for issuing a bond for undergrounding were provided.

Commenters expressed concern that SDG&E would require larger rights-of-way than currently exist for implementation of the pole replacement project on private lands.

Alternatives. Several commenters expressed concern that they would no longer be connected to the electric grid with implementation of the Removal of TL626 from Service Alternative (Environmentally Superior Alternative/Environmentally Preferable Alternative) and that this would affect their property values.

Commenters also suggested that the Environmentally Superior Alternative/Environmentally Preferable Alternative include undergrounding for the TL626 Removal from Service Alternative options (TL6931 and TL629 loop-in as well as the 12-kilovolt (kV) line (C79)). Further, undergrounding was suggested for TL682 as well as C78 near Descanso along Viejas Grade Road. A couple commenters suggested removal of C78 from Cleveland National Forest lands.

A new alternative route was suggested for the Removal of TL626 from Service Alternative along Bell Bluff Road; the commenters indicated that SDG&E already has an easement in this area and no new right-of-way would be required. The preference would be to underground the 69 kV in this alignment.

Human Environment Issues. Commenters raised concerns regarding the potential impacts of SDG&E's proposed project on the human environment, expressing concerns with EMF. In addition, the public raised concerns about fire safety with regard to the transmission lines, indicating the lines should be underground to ensure fire safety.

Natural Environment Issues. Commenters raised concerns with the potential impacts that SDG&E's proposed project would have on biological resources, particularly with regard to the golden eagle (*Aquila chrysaetos*), bald eagle (*Haliaeetus leucocephalus*), and bats. Comments were also raised regarding water quantity and quality (specifically stating that no local groundwater should be used), visual impacts related to scenic integrity (undergrounding power lines due to scenic highway designations), and climate change. Further, commenters raised concerns regarding sacred cultural and archaeological Kumeyaay ancestral sites within the project area and the Section 106 consultation process.

Cumulative Impacts. Commenters noted that the EIR/EIS should include projects throughout Imperial County (renewable energy projects on public and private lands), as well as regional planning projects being considered such as the Desert Renewable Energy Conservation Plan and

transmission planning projects being considered by the Imperial Irrigation District and the California Independent System Operator in its cumulative analysis.

In addition, the public made comments regarding design aspects of the project, as well as operations and maintenance concerns. Design-related comments were pointed at inclusion of cameras and design and implementation guidelines for gates within the MSUP areas. The operations and maintenance concern expressed was related to the use of pesticides and herbicides for vegetation management.

These areas of concern are analyzed in the appropriate sections of the Final EIR/EIS. Responses to these concerns raised during public review of the Draft EIR/EIS are provided in Volume 2 of the Final EIR/EIS.

I.3 Agency Consultation

During public scoping, the CPUC and Forest Service staff and the EIR/EIS project team met with federal cooperating and state responsible agencies on August 28, 2013, to introduce SDG&E's proposed project and discuss each agencies' decision-making process. An additional meeting took place on February 19, 2014, to discuss the status of the environmental document and project alternatives. On March 5, 2014, CPUC and Forest Service staff and the EIR/EIS project team met with the City of San Diego to discuss the Forest Service Proposed Action.

In November 2014, after release of the Draft EIR/EIS, the CPUC and Forest Service staff and the EIR/EIS project team met with the California Department of Parks and Recreation to discuss their concerns regarding C79, as expressed in their comment letter on the Draft EIR/EIS, dated November 3, 2014.

In January and February 2015, CPUC and Forest Service staff and the EIR/EIS project team met with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife to discuss their concerns regarding nesting birds, avian protection, and the relationship of SDG&E's NCCP with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Action, as raised in their comment letter regarding the Draft EIR/EIS, dated November 4, 2014.

I.4 Tribal Consultation

Federal agencies regularly conduct formal consultation with tribal governments about ongoing activities and specific projects as part of their government-to-government consultation responsibilities, in accordance with the requirements of Section 106 of the National Historic

Preservation Act (NHPA). During the early planning stages of this analysis (March 2013), the Forest Service conducted informal consultation with the Inaja-Cosmit Band of Indians and the Bureau of Indian Affairs (BIA) to discuss TL626 relocation options that have the potential to have direct effects on reservation lands. The Forest Service also invited the four tribal governments with reservation lands that would potentially be directly affected by SDG&E's proposed project (Viejas, Barona, Campo, and Inaja) and the BIA to become cooperating agencies in April 2013. The Forest Service, in conjunction with the BIA, also conducted informal consultation with tribal leaders for the Campo Kumeyaay Nation in May and October 2014 to discuss SDG&E's proposal to upgrade TL6931 in order to replace TL626.

Upon distribution of the Draft EIR/EIS for the proposed project, tribes were invited by the Forest Service, on behalf of the cooperating federal agencies, to initiate formal consultation on the proposed project with the intent of engaging in meaningful consultation with tribes regarding concerns or comments they may have about the proposed project, and taking those into consideration in the decision-making process. In conjunction with the government-to-government consultation process, federally recognized tribes in the project area have been, and will continue to be, included in all project notifications, as appropriate.

I.5 After Final EIR/EIS Completion

After the Final EIR/EIS is completed, the CPUC will make a final decision for the MSUP-PTC Power Line Replacement Projects. See Section ~~J.3~~I.6~~,~~ for information regarding the Forest Service's Objection Period and decision-making process.

Cooperating and responsible agencies, including the BIA, BLM, and California State Parks (CSP) may also use the EIR/EIS for their permitting processes. Following certification of the EIR/EIS by the CPUC, the CSP could choose to either rely on the CPUC/Forest Service environmental document to meet their CEQA requirements for its discretionary action under CEQA in their consideration of issuing permits for the portion of C79 that is within their jurisdiction, or amend, supplement, and/or prepare additional documentation to meet their environmental compliance needs. Since portions of the project will occur on lands under the jurisdiction of the BIA, BLM, and CSP, they may choose to use the EIR/EIS for consideration of their required discretionary actions, as will responsible resource agencies.

I.6 Forest Service Objection Process

The Forest Service MSUP project will be subject to the pre-decisional administrative review process pursuant to 36 CFR 218, Subparts A and B. This review process, commonly referred to as the Forest Service "Objection Process," will only apply to the Forest Service actions. Under the objection process, individuals and entities who have submitted timely, specific written

comments regarding a proposed project or activity that is subject to the 36 CFR 218 regulations during any designated opportunity for public comment (such as the comment period for the Draft EIR/EIS) may file an objection.

The Objection Period will open when the Forest Service issues the Final EIR/EIS, a Draft Record of Decision, and publishes a legal notice of the opportunity to object. Objections must be filed within 45 days of the legal notice to be considered. It is the objector's responsibility to ensure timely filing of any objections. When there is a question about timely submission of comments, timeliness shall be determined as follows: (1) written comments must be postmarked by the U.S. Postal Service, emailed, faxed, or otherwise submitted (for example, express delivery service) by 11:59 p.m. in the Pacific time zone on the 60th calendar day following publication of the Notice of Availability (NOA) in the Federal Register; (2) hand-delivered comments must be submitted at the Draft EIR/EIS public informational meeting. Issued raised in the objection must be based on previously submitted timely, specific written comments regarding the proposed project unless based on new information arising after designated opportunities. The Objection Process is described in more detail in the Draft Record of Decision.

I.~~2~~7 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

40 CFR 1500–1518. Protection of Environment; Chapter V: Council on Environmental Quality.

California Public Resources Code, Sections 21000–21177. California Environmental Quality Act, as amended.

J. DISTRIBUTION OF THE ~~D~~EIR/~~D~~EIS

J.1 Distribution of the Draft EIR/EIS

~~The~~ NEPA regulations require the lead agency to list agencies, organizations, and persons to whom the Draft EIR/EIS~~is~~ document is sent. The lead agency is required to circulate the entire statement, unless in cases where the statement is unusually long, the agency may circulate the summary instead. The entire statement is required to be sent to:

- Federal a~~A~~gencies with jurisdiction by law or special expertise, t~~T~~ribal g~~G~~overnments, and any appropriate f~~F~~ederal, s~~S~~tate, or local agency authorized to develop and enforce environmental standards. The Forest Service maintains a list of federal agencies, and provides either a notice of where the document may be found on the web, a copy of the document on disk, or a printed copy depending on the agencies' preference.
- The applicant, in this case SDG&E.
- Any person, organization, or agency requesting the entire ~~environmental impact statement~~EIS.

The required distribution list is included in Appendix J-1.

The document and associated appendix material is ~~will be~~ available on the web on the project's webpage (http://www.cpuc.ca.gov/environment/info/dudek/CNF/CNF.htm) and paper copies are ~~will be~~ available at the following local libraries:

- Descanso Branch Library
- Alpine Branch Library
- Campo-Morena Village Branch Library
- Julian Branch Library
- Pine Valley Branch Library
- Ramona Branch Library
- San Diego Public Library.

The summary was ~~will~~ also ~~be~~ distributed to the project mailing list, which includes any organization or person that provided comments during both scoping periods, or that signed in during any of the public meetings. Copies of the Draft EIR/EIS are available in print or ~~on disk~~electronically by request.

J.1.1 Opportunity to Comment

The lead agencies ~~are~~ provided~~ing~~ a 60-day comment period for the Draft EIR/EIS. Comments were accepted~~may be submitted~~ in a variety of ways: (1) by U.S. mail as described below, (2) by electronic mail (email) according to the details below, or (3) by attending and handing in written comments at the Draft EIR/EIS public informational meeting.

By Mail: If you send comments by U.S. mail, please use first-class postage and be sure to include your name and a return address. Please send written comments on the scope and content of the EIR/EIS to:

Lisa Orsaba, California Public Utilities Commission
Will Metz, Forest Supervisor, Cleveland National Forest
c/o Dudek
605 Third Street
Encinitas, California 92024

By Electronic Mail: Email communications are welcome; however, please remember to include your name and return address in the email message. Email messages should be sent to CNFMSUP@dudek.com, with a subject line "SDG&E Master Permit EIR/EIS."

J.2 Public Meetings

An informational meeting~~s~~ was ~~will be~~held during the comment period. This~~ese~~ meeting~~s~~ was ~~are~~ designed to answer questions about the document or the comment process. Written comments were accepted~~may be submitted~~ at the meeting, but oral comments were~~will~~ not ~~be~~recorded at the meeting. Information about the meeting location and time was~~is~~ provided in the Notice of Availability distributed by the CPUC for the EIR/EIS.

J.3 Distribution of the Final EIR/EIS

The Final EIR/EIS was distributed to the individuals that received the Draft EIR/EIS (see Section J.1), along with any individual, organization, or agency that provided comments on the Draft EIR/EIS. The Final EIR/EIS distribution list with deliverable details is provided in Appendix J-2. The Final EIR/EIS is also available online (http://www.cpuc.ca.gov/environment/info/dudek/CNF/CNF.htm) and hard copies are available at the local libraries listed in Section J.1.

K. REPORT PREPARATION

K.1 List of Preparers

A team of technical and administrative personnel led by Dudek prepared this document under the direction of the California Public Utilities Commission (CPUC) and U.S. Forest Service (Forest Service). The Forest Service also consulted with their interdisciplinary team (IDT) from the Trabuco, Palomar, and Descanso Ranger Districts during the development of this Environmental Impact Report/Environmental Impact Statement (EIR/EIS). Though individuals have primary responsibility for preparing sections of the EIR/EIS, the document is an interdisciplinary team effort. To ensure quality control, an internal review of the document occurs throughout preparation. Specialists at the Forest Service also review the analysis and supply information, as well as provide document preparation oversight. Contributions by individual preparers may be subject to revision by other Forest Service specialists and management during internal review. Table K-1 presents the list of the primary report preparers followed by those that also assisted in preparing the resource section.

Table K-1
List of Preparers

Name	Job Title	Primary Responsibility
California Public Utilities Commission (CPUC)—EIR Lead Agency		
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