

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 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.

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; 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

Table D.2-2
Distance Zones

Zone	Distance from Source	Characteristics
		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; 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 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
<i>TL682</i>					
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
<i>TL626</i>					
4	Inaja Memorial Trail (Forest Service lands)	High	High	Low to Moderate	High
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
<i>TL625</i>					
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	High	High	Low to	Moderate to

**Table D.2-4
Environmental Setting – Power Lines**

KOP	Location	Applicable SIO/ Visual Quality	Viewer Concern	Viewer Exposure	Viewer Sensitivity
	Lake Road (private lands)			Moderate	High
<i>TL629</i>					
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
<i>TL6923</i>					
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 residences 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 Glenclyff 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 oak 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 Figure 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
<i>C79</i>					
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
<i>C78</i>					
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
<i>C157</i>					
20	Skye Valley Road at the Pine Valley Creek Crossing (Forest Service lands)	Very High	High	Low	High
<i>C442</i>					
21	Bear Valley Trailhead (Forest Service lands)	High	Low	Low to Moderate	Moderate
<i>C440</i>					
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
<i>C449</i>					
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 (see 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 wood 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
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	

**Table D.2-6
Applicable Plans and Regulations by Project Component**

Project Component	Applicable Plans and Regulations ^{1,2}
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 traverse 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.

Part 1 Southern California National Forest Vision

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).

Part 2 Cleveland National Forest Strategy (Cleveland National Forest LMP)

In addition to scenic integrity objectives that establish management standards to describe the level of acceptable modification on lands within the CNF, place-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 LMP Amendment would not establish new land use zones within the CNF, it would increase 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 would be redesignated Recommended Wilderness as a result of the LMP amendment (Forest Service 2012). 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 ridgelines, 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 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. 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 proposed designs and mitigation measures to demonstrate their effectiveness 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 Glenciff 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

**Table D.2-9
Project Visibility from Designated Scenic Roadways in the Project Area**

Roadway	Scenic Designation	Visible Project Components	Visibility Summary
			near the Pine Valley border patrol checkpoint and Glenciff 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.
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.

**Table D.2-9
Project Visibility from Designated Scenic Roadways in the Project Area**

Roadway	Scenic Designation	Visible Project Components	Visibility Summary
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.
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 Glenciff Substation and Cameron Truck Trail. C440 support poles are visible from the highway near Glenciff 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 ridgelines. 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 difficult 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.

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
D.2 VISUAL RESOURCES**

**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.
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

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
D.2 VISUAL RESOURCES**

**Table D.2-10
Visual Contrast Rating Summary**

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
							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 seen in the landscape. As such, color contrasts would be moderate. Due to distance between the poles and the KOP, contrast in textures in the landscapes associated with TL626 would not be readily apparent. While they would not dominate the scene, skylined replacement poles

**Table D.2-10
Visual Contrast Rating Summary**

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
							would attract attention and affect natural-appearing character of the view.
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

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
D.2 VISUAL RESOURCES**

**Table D.2-10
Visual Contrast Rating Summary**

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
							such, overall increases in visual contrast attributed to wood-to-steel replacement of TL626 would be weak.
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

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
D.2 VISUAL RESOURCES**

**Table D.2-10
Visual Contrast Rating Summary**

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
							brown and green colors associated with exposed soils, 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 sky-lined 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.
10	Lyons Valley Road near	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-

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
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**Table D.2-10
Visual Contrast Rating Summary**

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
	Barrett Lake Road (private lands)						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. 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 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	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

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
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**Table D.2-10
Visual Contrast Rating Summary**

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
	(private lands)						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 (Forest Service lands)	TL629	Weak	Moderate	Moderate	Weak	While the taller form of replacement poles would produce slightly greater view blockage of the sky from KOP 13, the larger scale of replacement poles compared to existing poles would not be readily apparent. Existing poles are skylined and break the nearby ridgeline, and replacement poles would replicate this condition. The regular, vertical lines of replacement poles and horizontal/slightly angular lines of insulators and cross arms would be similar to existing poles. 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 darker, reddish-brown color of poles and occasional yellow bands of markers would create increased color contrast that would enhance the visibility of power and distribution line poles in the landscape. Where new poles are skylined, the reddish-brown color of poles would create a relatively

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
D.2 VISUAL RESOURCES**

**Table D.2-10
Visual Contrast Rating Summary**

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
							bold color contrast with the background sky. Elsewhere, where replacement poles viewed against the backdrop of the dark green color of chaparral vegetation, they 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).
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	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

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
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**Table D.2-10
Visual Contrast Rating Summary**

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
	Service lands)						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 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.

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**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.
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

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**Table D.2-10
Visual Contrast Rating Summary**

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
							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).
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.

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
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**Table D.2-10
Visual Contrast Rating Summary**

KOP	Location	Power Line Replacement Project	Form	Line	Color	Texture	Contrast Summary
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 would be relatively subtle and would produce weak color contrast. 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. 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 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.

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 adoption of the pending LMP Amendment) 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 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.

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 the Inaja Memorial National Recreation Trail scenic overlook. As a result of the reroute and removal of pole Z213739 from southerly foreground views at the scenic overlook, the quality of the view and the perceived intactness of the visual character of the landscape would be enhanced and therefore no impacts to scenic vistas 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 would remain visible from the scenic overlook and from KOP 4. 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. 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/alterd 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 follow 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 difficult 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.2-11 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.2-11 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 10.5 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:

- a. 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; 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.
- b. 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.
- 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.2.1 for this component.

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, 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 would span SR-94 (an eligible state scenic highway and a County scenic route) and would be visible from Old Highway 80. 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, 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. 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. While replacement poles would be slightly taller than existing poles, they would display a similar line, color, and 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).

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.2-11 presents the mitigation monitoring, compliance, and reporting program for visual resources for the power line replacement projects and alternatives.

**Table D.2-11
Mitigation Monitoring, Compliance, and Reporting – Visual Resources**

Mitigation Measure	MM VIS-1 Prepare and Implement a Scenery Conservation Plan. Within 1 year after license 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. 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 proposed designs and mitigation measures to demonstrate their effectiveness in reducing visual contrast and prominence as viewed from sensitive viewsheds.
<i>Location</i>	<i>SDG&E's Proposed Project:</i> TL625 (Z273002, Z272998, Z272997, Z272996, Z272995, Z272993, Z272992, Z272991, Z272990, Z272989, Z272980, Z272972, Z272971, Z272970, Z272969, Z272960, Z272934, 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, Z118037, Z118038, and Z118144); C440 (P-304, P-60, P-303, P-305, P-306, P40368, P109956, P40370) <i>Project Alternatives:</i> 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)
<i>Compliance Documentation^(a) and Consultation</i>	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 (replacement poles resemble existing poles to the extent feasible and do not dominate existing views)
<i>Timing</i>	a. Prior to project final design b. Final monitoring report for each power line replacement project
<i>Responsible Agency</i>	<i>SDG&E's Proposed Project:</i> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682), BIA and Campo Indian Tribe (TL629) <i>Forest Service Proposed Actions:</i> CPUC and Forest Service, BIA and Inaja and Cosmit

**Table D.2-11
Mitigation Monitoring, Compliance, and Reporting – Visual Resources**

	Tribe (TL626), City of San Diego (C157) <i>BIA Proposed Action:</i> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) <i>Removal of TL626 from Service:</i> CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	MM VIS-2 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.
<i>Location</i>	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).
<i>Compliance Documentation^(a) and Consultation</i>	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.
<i>Timing</i>	a. Contemporaneously with the Record of Decision.
<i>Responsible Agency</i>	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

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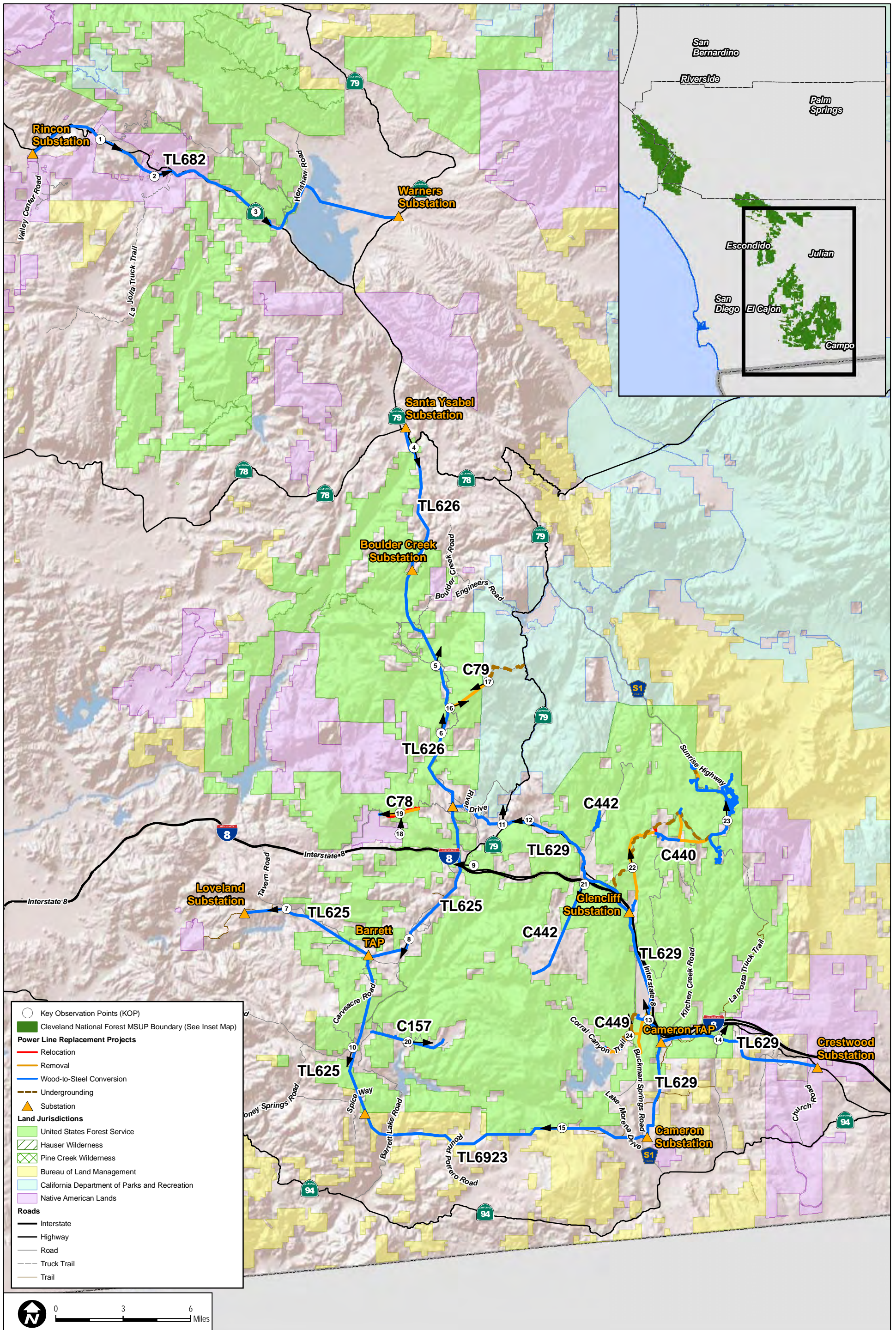
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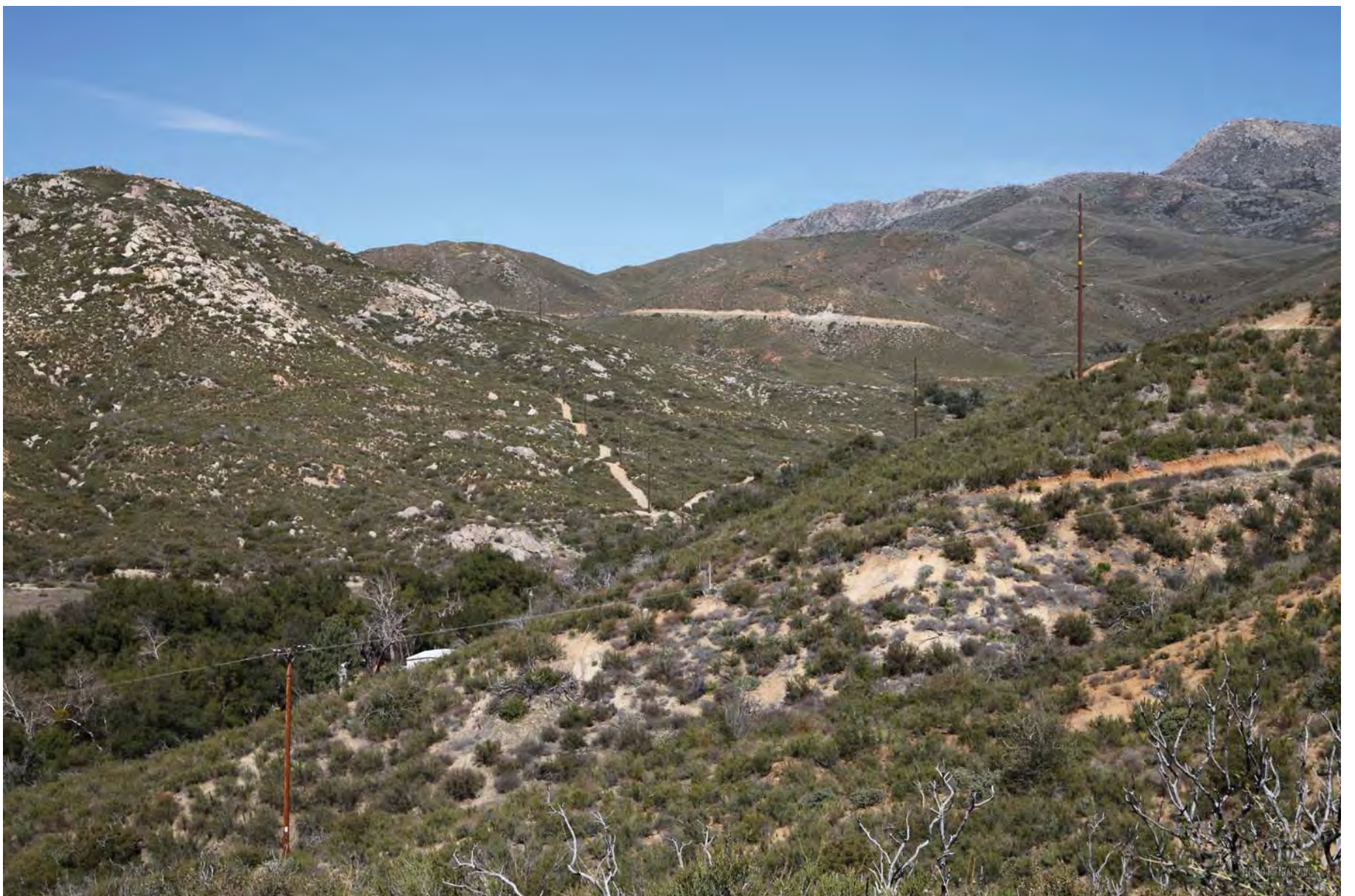


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D.3 Air Quality

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 (O₃), 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 (NO₂) 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 O₃ 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: O₃, NO₂, CO, sulfur dioxide (SO₂), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM₁₀), 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. O₃ 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. O₃ 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 O₃, 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 O₃ 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 O₃ 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.

Nitrogen Dioxide. Most NO₂, like O₃, is not directly emitted into the atmosphere but is formed by an atmospheric chemical reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO₂ are collectively referred to as NO_x and are major contributors to O₃ formation. High concentrations of NO₂ 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 NO₂ 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. SO₂ is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Main sources of SO₂ are coal and oil used in power plants and industries; as such, the highest levels of SO₂ are generally found near large industrial complexes. In recent years, SO₂ concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO₂ and limits on the sulfur content of fuels. SO₂ is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. SO₂ 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 O₃ 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 be 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 O₃, NO₂, CO, SO₂, PM₁₀, and PM_{2.5}. Although there are no ambient standards for VOCs or NO_x, they are important as precursors to O₃.

The SDAB is designated by EPA as an attainment (maintenance) area for the 1997 8-hour NAAQS for O₃ and as a marginal nonattainment area for the 2008 8-hour NAAQS for O₃. The SDAB was designated in attainment for all other criteria pollutants under the NAAQS with the exception of PM₁₀, 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 O₃ and particulate matter, PM₁₀ and PM_{2.5}, under the CAAQS. It is designated attainment for the CAAQS for CO, NO₂, SO₂, 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: aEPA 2013b; bCARB 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

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standard was exceeded in 2009; the state annual PM₁₀ standard was exceeded in 2008, 2009, and 2010; the state annual PM_{2.5} standard was exceeded in 2008; and the federal 24-hour PM_{2.5} 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 NO₂ 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

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} *
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 PM₁₀ 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 (PM₁₀). 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 O₃ protection, and enforcement provisions. NAAQS are established for "criteria pollutants" under the Clean Air Act, which are O₃, CO, NO₂, SO₂, PM₁₀, 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 O₃, NO₂, SO₂, PM₁₀, PM_{2.5}, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O₃, NO₂, SO₂, PM₁₀, 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 O₃, CO, SO₂ (1-hour and 24-hour), NO₂, PM₁₀, 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/m ³)	—	Same as Primary Standard
	8-hour	0.070 ppm (137 µg/m ³)	0.075 ppm (147 µg/m ³)	
CO	1-hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	—
	8-hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	
NO ₂ ⁶	1-hour	0.18 ppm (339 µg/m ³)	0.100 ppm (188 µg/m ³)	Same as Primary Standard
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)	
SO ₂ ⁷	1-hour	0.25 ppm (655 µg/m ³)	0.75 ppm (196 µg/m ³)	—
	3-hour	—	—	0.5 ppm (1300 µg/m ³)
	24-hour	0.04 ppm (105 µg/m ³)	0.14 ppm (for certain areas) ⁷	—
	Annual Arithmetic Mean	—	0.030 ppm (for certain areas) ⁷	—
PM ₁₀ ⁸	24-hour	50 µg/m ³	150 µg/m ³	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m ³	—	
PM _{2.5} ⁸	24-hour	—	35 µg/m ³	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m ³	12.0 µg/m ³	
Lead ^{9,10}	30-day Average	1.5 µg/m ³	—	—
	Calendar Quarter	—	1.5 µg/m ³ (for certain areas) ¹⁰	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 µg/m ³	

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}
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m ³)	—	—
Vinyl chloride ⁹	24-hour	0.01 ppm (26 µg/m ³)	—	—
Sulfates	24-hour	25 µg/m ³	—	—
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 (PM₁₀, 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 O₃, NO₂, SO₂, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O₃ 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 NO₂ and SO₂, 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 PM₁₀, 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 SO₂ 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 SO₂ 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/m³ to 12 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ 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/m³ 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, O₃ 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 PM₁₀, PM_{2.5}, and O₃ standards. The SDAB is also a federal O₃ 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 O₃. 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 O₃ standard by 2009 (SDAPCD 2007). In this plan, SDAPCD relies on the RAQS to demonstrate how the region will comply with the federal O₃ standard. The RAQS details how the region will manage and reduce O₃ 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 PM₁₀ 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 O₃ 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		
	<i>Pounds per Hour</i>	<i>Pounds per Day</i>	<i>Tons per Year</i>
Volatile Organic Compounds (VOC)	—	75	13.7
Oxides of Nitrogen (NO _x)	25	250	40

Table D.3-5
SDAPCD Air Quality Significance Thresholds

Pollutant	Total Emissions		
	<i>Pounds per Hour</i>	<i>Pounds per Day</i>	<i>Tons per Year</i>
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 O₃ precursors and PM₁₀, 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 O₃ and as a marginal nonattainment area for the 2008 8-hour NAAQS for O₃. 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 (O₃ precursor), NO_x (O₃ 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 (PM₁₀ 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; PM₁₀ = 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 PM₁₀. 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 O₃ 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 O₃ and as a marginal nonattainment area for the 2008 8-hour NAAQS for O₃, 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 PM₁₀, 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 NO_x, 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)
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)

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
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. 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. 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.3.4.2 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 2013); 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. 2012b), 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, 2014¹); 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 California* (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 communities³. 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 (CNDDDB) (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.4-15d provides vegetation communities that were observed along lines not part of the power line replacement projects to be covered under the MSUP. Table D.4-15d 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).

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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

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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.

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**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

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 fasciculatum*), 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 fasciculatum*), 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 retain 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 revegetation (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 addition, 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 2013, 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 CNDDDB 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.4-15a and D.14-15b 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, and TL625 (Chambers Group Inc. 2012a; CDFW 2014; Forest Service 2006b, 2013f) 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 4,000 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).

Variiegated Dudleya

Variiegated 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 vernal 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 gabbro 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 vernal 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.4-15a and D.4-15b 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 tetraococcus 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

⁴ See *Opuntia engelmannii* var. *engelmannii*.

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 CNDDDB 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.4-15a and D.4-15b 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 hammondi*) 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 Geronio 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 areas⁶: C440, C449, TL626, TL629, TL682, and TL6923 (Chambers Group Inc. 2012a; CDFW 2014; Forest Service 2006b).

California Legless Lizard

The California legless lizard (*Anniella pulchra*) 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

⁵ Designation given to full species.

⁶ Full species (*A. marmorata*) occurrences along TL629 and TL682 (CDFW 2014).

Calcarone 1999). In the CNF, suitable habitats may occur in sandy washes, north-facing slopes, 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 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 TL682⁸ (Chambers Group, 2012a); and C157, C440, C442, C449, C78, TL626, TL629, and TL6923 (Californiaherps.com 2014⁹).

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,

⁷ Designation given to full species.

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).

woodland, and arid desert habitat (CDFG 2008). This species has a high potential to occur along TL625 and TL6923¹⁰ (Chambers Group Inc. 2012a; Forest Service 2012); and C157, C440, C442, C449, C78, C79, TL626, TL682, and TL629 (Californiaherps.com 2014¹¹).

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).

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).

In the desert it is found on scrub flats with good cover (CDFG 2008). This species has a 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 hammondi*) 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 virgulata*) 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. Winter¹³). 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.

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, WLBC, 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. Winter¹⁴) 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 (Forest Service 2012; 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, WLBC, 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 hollow 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 WLBC. 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, WLBC, 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, savannas, 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). 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, WL BCC, 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, WLBC, 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 WLBC 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 WLBC. 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 (10°C to 24°C) 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 2014¹⁵; 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 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

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).

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. Roosts 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. 1990c¹⁶).

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 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

¹⁶ Habitat suitability for this species generally described using range maps provided by Zeiner et al. 1990c.

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 fuliginata*) 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 interspersed 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.4-15a through D.4-15c 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 fringe-pod, 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” 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 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/Borrogo 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 (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	Construction activities would temporarily impact 11.09 acres and permanently impact 0.04 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	Construction activities would temporarily impact 16.74 acres and permanently impact 0.06 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	Construction activities would temporarily impact 25.55 acres and permanently impact 0.08 acre of these vegetation communities.	Class II under CEQA and adverse under NEPA

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**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
TL629	Mixed oak woodland, southern riparian forest, oak savanna, southern mixed chaparral, chamise chaparral, Diegan coastal sage scrub, semi-desert chaparral, native grassland	Construction activities would temporarily impact 22.93 acres and permanently impact 0.10 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	Construction activities would temporarily impact 8.45 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 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 < 0.001 acre of these vegetation communities.	Class II under CEQA and adverse under NEPA
C157	Mixed oak woodland, southern riparian forest, southern mixed chaparral, semi-desert chaparral, native grassland	Construction activities would temporarily impact 0.67 acre and permanently impact < 0.01 acre of these vegetation communities.	Class II under CEQA and adverse under NEPA
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	Construction activities would temporarily impact 4.88 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	Construction activities would temporarily impact 1.09 acres and permanently impact < 0.01 acre of these vegetation communities.	Class II under CEQA and adverse under NEPA

A total of 16 vegetation communities 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, 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 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 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 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. 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 acres of 11 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 meadow, freshwater seep/open water, and native grassland.

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

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.

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).

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**Table D.4-5
Power Line Replacement Projects
Existing, Temporary, and Permanent Vegetation Impacts**

Native Vegetation Community	Existing (square feet/acres)	Temporary Impact1 (square feet/acres)	Permanent Impact2 (square feet/acres)	Total Impact (square feet/acres)
Chamise Chaparral	17,681,335 SF / 405.91 ac	476,776 SF / 10.95 ac	1,687 SF / 0.04 ac	478,463 SF / 10.98 ac
Diegan Coastal Sage Scrub	18,247,430 SF / 418.90 ac	313,614 SF / 7.20 ac	1,968 SF / 0.05 ac	315,582 SF / 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	22,772 SF / 0.52 ac	9 SF / < 0.01 ac	22,782 SF / 0.52 ac
Mixed Oak Woodland	23,944,877 SF / 549.70 ac	419,225 SF / 9.62 ac	2,129 SF / 0.05 ac	421,474 SF / 9.68 ac
Montane Forest	26,453,218 SF / 607.28 ac	157,856 SF / 3.62 ac	981 SF / 0.02 ac	158,908 SF / 3.65 ac
Montane Wet Meadow	4,221,945 SF / 96.92 ac	37,778 SF / 0.87 ac	201 SF / < 0.01 ac	38,099 SF / 0.87 ac
Native Grassland	5,385,386 SF / 123.63 ac	82,090 SF / 1.88 ac	335 SF / 0.01 ac	82,425 SF / 1.89 ac
Non-native Grassland	16,454,376 SF / 377.74 ac	553,921 SF / 12.72 ac	1,209 SF / 0.03 ac	555,131 SF / 12.74 ac
Oak Savanna	11,842,107 SF / 271.86 ac	307,214 SF / 7.05 ac	898 SF / 0.02 ac	308,150 SF / 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	262,121 SF / 6.02 ac	1,219 SF / 0.03 ac	263,541 SF / 6.05 ac
Southern Mixed Chaparral	101,951,081 SF / 2,340.47 ac	1,860,457 SF / 42.71 ac	6,267 SF / 0.14 ac	1,867,124 SF / 42.86 ac
Southern Riparian Forest	9,092,223 SF / 208.73 ac	136,121 SF / 3.12 ac	671 SF / 0.02 ac	136,792 SF / 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 Total	278,671,863 SF / 6,397.43 ac	7,171,344 SF / 164.63 ac	21,049 SF / 0.48 ac	7,193,617 SF / 165.14 ac

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).

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
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**Table D.4-6
Power Line Replacement Projects
Existing, Temporary, and Permanent Vegetation Impacts by TL/Circuit¹**

Vegetation Community by TL/Circuit	Permanent Impact ² (Acres)			Temporary Impact ³ (Acres)					Total Impact (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	
<i>TL682</i>									
Diegan Coastal Sage Scrub	-	0.01	-	-	-	0.55	-	1.16	1.72
Disturbed (Ruderal/Barren)	-	-	-	-	-	-	-	0.98	0.98
Mixed Oak Woodland	-	0.02	-	-	-	1.57	-	2.55	4.14
Non-native Grassland	-	0.02	-	-	-	2.47	-	6.58	9.07
Oak Savanna	-	< 0.001	-	-	-	0.03	-	-	0.03
Pastureland/Cultivated Agriculture	-	0.01	-	-	-	0.64	-	2.26	2.91
Southern Mixed Chaparral	-	0.01	-	-	-	1.52	-	2.99	4.52
Southern Riparian Forest	-	< 0.001	-	-	-	0.06	-	0.67	0.73
Urban and Developed/Ornamental Landscaping	-	< 0.01	-	-	-	0.44	-	0.77	1.21
<i>TL682 Total</i>	-	0.07	-	-	-	7.28	-	17.95	25.30
<i>TL626</i>									
Freshwater Seep/Open Water	-	-	-	-	0.03	< 0.01	-	0.45	0.48
Mixed Oak Woodland	-	0.01	-	-	-	0.90	-	1.34	2.25
Non-native Grassland	-	0.01	-	-	-	0.50	-	0.74	1.25
Oak Savanna	-	0.01	-	-	-	0.95	-	1.04	2.00
Southern Mixed Chaparral	-	0.04	-	-	-	4.07	-	6.22	10.33
Southern Riparian Forest	-	0.01	-	-	-	0.71	-	1.01	1.73
Urban and Developed/Ornamental Landscaping	-	0.01	-	-	-	0.48	-	0.97	1.46
<i>TL626 Total</i>	-	0.07	-	-	0.03	7.63	-	11.78	19.51
<i>TL625</i>									
Chamise Chaparral	-	0.01	-	-	0.07	0.78	-	5.04	5.90
Diegan Coastal Sage Scrub	< 0.01	0.02	-	0.06	0.03	0.75	-	1.63	2.49
Disturbed (Ruderal/Barren)	-	< 0.01	-	-	0.02	0.15	-	5.37	5.54
Mixed Oak Woodland	< 0.001	0.01	-	0.03	0.18	0.67	-	1.14	2.03
Native Grassland	-	< 0.01	-	-	0.03	0.06	-	0.49	0.58
Non-native Grassland	-	-	-	-	-	-	-	< 0.01	< 0.01
Oak Savanna	-	< 0.01	-	-	-	0.02	-	0.39	0.41
Pastureland/Cultivated Agriculture	-	< 0.01	-	-	-	0.21	-	9.27	9.48
Southern Mixed Chaparral	-	0.03	-	-	0.04	3.55	-	10.60	14.22

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
D.4 BIOLOGICAL RESOURCES**

**Table D.4-6
Power Line Replacement Projects
Existing, Temporary, and Permanent Vegetation Impacts by TL/Circuit¹**

Vegetation Community by TL/Circuit	Permanent Impact ² (Acres)			Temporary Impact ³ (Acres)					Total Impact (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	< 0.001	0.01	-	0.03	-	1.13	-	4.85	6.01
<i>TL625 Total</i>	<i>< 0.01</i>	<i>0.09</i>	<i>-</i>	<i>0.11</i>	<i>0.37</i>	<i>7.31</i>	<i>-</i>	<i>38.78</i>	<i>46.67</i>
<i>TL629</i>									
Chamise Chaparral	-	0.02	-	-	-	1.33	-	2.98	4.32
Diegan Coastal Sage Scrub	-	< 0.01	-	-	-	0.11	-	-	0.11
Disturbed (Ruderal/Barren)	-	0.01	-	-	-	0.22	-	1.03	1.25
Mixed Oak Woodland	-	0.01	-	-	-	0.46	-	0.29	0.75
Native Grassland	-	< 0.01	-	-	-	0.08	-	-	0.08
Non-native Grassland	-	< 0.01	-	-	-	0.25	-	1.73	1.99
Oak Savanna	-	0.01	-	-	-	0.98	-	3.34	4.34
Pastureland/Cultivated Agriculture	-	< 0.01	-	-	-	0.37	-	7.79	8.16
Semi-Desert Chaparral	-	0.03	-	-	-	1.56	-	4.34	5.92
Southern Mixed Chaparral	< 0.001	0.02	-	0.03	0.03	2.84	-	4.00	6.92
Southern Riparian Forest	-	0.01	-	-	-	0.57	-	-	0.58
Urban and Developed/Ornamental Landscaping	-	0.03	-	-	0.03	1.63	-	9.91	11.60
<i>TL629 Total</i>	<i>< 0.001</i>	<i>0.14</i>	<i>-</i>	<i>0.03</i>	<i>0.06</i>	<i>10.41</i>	<i>-</i>	<i>35.40</i>	<i>46.03</i>
<i>TL6923</i>									
Chamise Chaparral	-	< 0.01	-	-	-	0.55	-	-	0.56
Diegan Coastal Sage Scrub	-	0.02	-	-	-	1.12	-	1.56	2.70
Freshwater Seep/Open Water	-	< 0.001	-	-	-	0.03	-	-	0.03
Mixed Oak Woodland	-	< 0.001	-	-	-	0.03	-	-	0.03
Native Grassland	-	< 0.01	-	-	-	0.18	-	0.86	1.04
Non-native Grassland	-	< 0.01	-	-	-	0.15	-	-	0.15
Oak Savanna	-	< 0.001	-	-	-	0.05	-	-	0.05
Southern Mixed Chaparral	-	0.02	-	-	-	1.57	-	2.50	4.10
Urban and Developed/Ornamental Landscaping	-	< 0.01	-	-	-	0.18	-	0.77	0.95
<i>TL6923 Total</i>	<i>-</i>	<i>0.05</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>3.85</i>	<i>-</i>	<i>5.69</i>	<i>9.60</i>
<i>C79</i>									
Montane Forest	-	-	-	-	0.02	-	-	0.07	0.09

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
D.4 BIOLOGICAL RESOURCES**

**Table D.4-6
Power Line Replacement Projects
Existing, Temporary, and Permanent Vegetation Impacts by TL/Circuit¹**

Vegetation Community by TL/Circuit	Permanent Impact ² (Acres)			Temporary Impact ³ (Acres)					Total Impact (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	
Southern Mixed Chaparral	-	-	-	-	0.44	-	-	0.35	0.79
<i>C79 Total</i>	-	-	-	-	0.46	-	-	0.42	0.88
<i>C78</i>									
Diegan Coastal Sage Scrub	< 0.001	< 0.001	< 0.001	0.02	0.08	0.04	0.01	0.01	0.15
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
<i>C78 Total</i>	< 0.001	< 0.001	< 0.001	0.04	0.13	0.04	0.01	0.01	0.24
<i>C157</i>									
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
<i>C157 Total</i>	< 0.001	< 0.01	-	0.05	-	0.36	-	0.45	0.87
<i>C442</i>									
Diegan Coastal Sage Scrub	-	< 0.001	-	-	-	0.03	-	0.03	0.06
Disturbed (Ruderal/Barren)	-	-	-	-	-	-	-	0.27	0.27
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	0.22
Montane Forest	-	< 0.01	-	-	-	0.15	-	0.05	0.21
Southern Mixed Chaparral	< 0.001	< 0.01	-	0.06	-	0.43	-	0.07	0.56
Urban and Developed/Ornamental Landscaping	-	< 0.001	-	-	-	0.01	-	-	0.01
<i>C442 Total</i>	0.00	0.01	-	0.06	-	0.79	-	0.47	1.34
<i>C440</i>									
Chamise Chaparral	-	< 0.001	-	-	0.10	0.06	-	0.04	0.20
Diegan Coastal Sage Scrub	-	< 0.001	-	-	-	0.01	-	-	0.01
Disturbed (Ruderal/Barren)	< 0.001	< 0.001	-	0.01	-	0.01	-	0.47	0.50
Mixed Oak Woodland	-	-	-	-	0.01	-	-	-	0.01
Montane Forest	< 0.01	0.02	-	0.15	0.19	1.91	-	1.07	3.34

**Table D.4-6
Power Line Replacement Projects
Existing, Temporary, and Permanent Vegetation Impacts by TL/Circuit¹**

Vegetation Community by TL/Circuit	Permanent Impact ² (Acres)			Temporary Impact ³ (Acres)					Total Impact (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	
Montane Wet Meadow	< 0.001	< 0.01	-	0.09	0.04	0.37	-	0.37	0.87
Native Grassland	-	< 0.001	-	-	-	0.01	-	-	0.01
Non-native Grassland	< 0.001	< 0.001	-	0.01	-	0.06	-	0.01	0.08
Oak Savanna	-	< 0.001	-	-	-	0.01	-	-	0.01
Pastureland/Cultivated Agriculture	-	0.00	-	-	0.04	0.11	-	0.15	0.31
Southern Mixed Chaparral	-	< 0.001	-	-	0.27	0.04	-	0.12	0.43
Southern Riparian Forest	-	-	-	-	0.01	-	-	-	0.01
Urban and Developed/Ornamental Landscaping	-	< 0.01	-	-	-	0.20	-	0.14	0.34
<i>C440 Total</i>	<i>< 0.01</i>	<i>0.03</i>	<i>-</i>	<i>0.26</i>	<i>0.66</i>	<i>2.81</i>	<i>-</i>	<i>2.37</i>	<i>6.12</i>
<i>C449</i>									
Disturbed (Ruderal/Barren)	-	-	-	-	-	-	< 0.001	0.25	0.25
Mixed Oak Woodland	-	< 0.001	< 0.001	-	0.10	0.01	0.01	0.10	0.23
Non-native Grassland	-	-	-	-	0.01	-	-	-	0.01
Oak Savanna	-	-	-	-	0.16	-	-	0.07	0.23
Semi-Desert Chaparral	-	-	-	-	-	-	-	0.04	0.04
Southern Mixed Chaparral	< 0.001	< 0.001	< 0.001	0.02	0.33	0.06	0.07	0.05	0.54
Southern Riparian Forest	< 0.001	< 0.001	-	0.01	-	0.03	-	0.03	0.07
Urban and Developed/Ornamental Landscaping	-	-	-	-	0.03	-	-	0.09	0.12
<i>C449 Total</i>	<i>< 0.001</i>	<i>< 0.01</i>	<i>< 0.01</i>	<i>0.03</i>	<i>0.64</i>	<i>0.10</i>	<i>0.09</i>	<i>0.63</i>	<i>1.49</i>
Grand Total	0.01	0.47	< 0.01	0.58	2.34	40.58	0.10	113.96	158.04

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 Impacts

Permanent impacts to sensitive vegetation communities 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 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.

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. The limits of approved work spaces 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 biological¹⁸ monitor must be present at the construction sites during all ground-disturbing and vegetation-removal activities. The monitor shall survey the construction sites 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 temporary work areas not subject to long-term

¹⁸ 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.

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. Wherever possible, vegetation would be left in place to avoid excessive root damage to allow for natural recruitment 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, the temporary impact shall be considered a permanent impact and compensated accordingly (see MM BIO-5).

MM BIO-5 **Provide habitat compensation or restoration for permanent impacts to native vegetation communities.** Permanent impact to all native vegetation communities 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. 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 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). 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.

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
D.4 BIOLOGICAL RESOURCES**

**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)
<i>MSCP East County</i>			
<i>TL682</i>			
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	15.36
<i>TL682 Total</i>	<i>0.03</i>	<i>18.28</i>	<i>18.31</i>
<i>TL626</i>			
Riparian/Wetland Habitat and Transition Zone within FCA	< 0.01	0.71	0.71
RMS 2 - Land managed with Ecological Protection	-	0.26	0.26
RMS 3 - Land managed as Open Space	0.03	5.97	6.00
<i>TL626 Total</i>	<i>0.08</i>	<i>21.23</i>	<i>21.31</i>
<i>TL625</i>			
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	0.05	0.05
RMS 1 - Highest Level of Ecological Protection	0.01	0.77	0.77
RMS 2 - Land managed with Ecological Protection	< 0.01	0.82	0.82
RMS 3 - Land managed as Open Space	0.01	6.45	6.46
<i>TL625 Total</i>	<i>0.09</i>	<i>49.84</i>	<i>49.93</i>
<i>TL629</i>			
Riparian/Wetland Habitat and Transition Zone outside of FCA	< 0.01	0.72	0.72
Riparian/Wetland Habitat and Transition Zone within FCA	0.01	1.46	1.47
RMS 3 - Land managed as Open Space	0.03	6.62	6.65
<i>TL629 Total</i>	<i>0.17</i>	<i>50.54</i>	<i>50.71</i>
<i>TL6923</i>			
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

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
D.4 BIOLOGICAL RESOURCES**

**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)
RMS 2 - Land managed with Ecological Protection	0.01	0.64	0.64
RMS 3 - Land managed as Open Space	0.03	4.75	4.78
<i>TL6923 Total</i>	<i>0.06</i>	<i>9.60</i>	<i>9.65</i>
<i>C79</i>			
RMS 1 - Highest Level of Ecological Protection	-	0.46	0.46
RMS 2 - Land managed with Ecological Protection	-	0.19	0.19
RMS 3 - Land managed as Open Space	-	0.49	0.49
<i>C79 Total</i>	<i>-</i>	<i>1.15</i>	<i>1.15</i>
<i>C78</i>			
RMS 3 - Land managed as Open Space	< 0.01	0.34	0.34
<i>C78 Total</i>	<i>< 0.01</i>	<i>0.52</i>	<i>0.52</i>
<i>C157</i>			
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
<i>C157 Total</i>	<i>< 0.01</i>	<i>0.86</i>	<i>0.86</i>
<i>C442</i>			
Riparian/Wetland Habitat and Transition Zone within FCA	-	0.06	0.06
RMS 3 - Land managed as Open Space	0.00	0.24	0.25
<i>C442 Total</i>	<i>0.01</i>	<i>1.41</i>	<i>1.42</i>
<i>C440</i>			
RMS 3 - Land managed as Open Space	< 0.01	0.58	0.58
<i>C440 Total</i>	<i>0.03</i>	<i>6.67</i>	<i>6.70</i>
<i>C449</i>			
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)
RMS 3 - Land managed as Open Space	< 0.01	0.85	0.85
<i>C449 Total</i>	<i>0.00</i>	<i>1.71</i>	<i>1.71</i>
<i>MSCP East County Total</i>	<i>0.60</i>	<i>210.25</i>	<i>210.85</i>
<i>MSCP North County-</i>			
<i>TL682</i>			
Preserve Areas	< 0.01	0.09	0.09
<i>TL682/MSCP North County Total</i>	<i>0.05</i>	<i>13.39</i>	<i>13.44</i>
Grand Total	0.65	223.64	224.29

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 temporary impacts to sensitive vegetation communities located within Preserve areas at a ratio of 1:1 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). Therefore, SDG&E proposes to draw down a minimum of 448.58 acres¹⁹ of credit 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 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

¹⁹ 448.58 acres is based on SDG&E NCCP ratios; however, acreage could increase with application of Forest Service ratios.

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. 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 not be adverse and under CEQA would be considered less than significant (Class III).

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 acres and permanently impact 0.05 acre of the 2,962²⁰ 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.²¹ Temporary water crossing impacts (approximately 3.7 acres) would occur due to work areas, including stringing sites along TL625 (3 sites), TL626 (3 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.

Table D.4-8
Power Line Replacement Projects
Temporary and Permanent Impacts to Riparian Conservation Areas

Line	Temporary Impact¹ (Acres)	Permanent Impact²(Acres)	Total Impacts (Acres)
TL682	0.5	< 0.1	0.5
TL626	0.7	0	0.7
TL625	0.5	0	0.5

²⁰ Acreage within SDG&E's project survey area (SDG&E 2013).

²¹ 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
Temporary and Permanent Impacts to Riparian Conservation Areas

Line	Temporary Impact ¹ (Acres)	Permanent Impact ² (Acres)	Total Impacts (Acres)
TL629	3.7	< 0.1	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	0.9	0	0.9
Total	8.8	< 0.1	8.8

Source: SDG&E 2013.

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).

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.

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 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 wildlife, 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

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	Significance Determination
TL682	Intermittent drainage, ephemeral drainage, meadows	Construction activities would temporarily impact 0.08 acre of ACOE 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

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
D.4 BIOLOGICAL RESOURCES**

**Table D.4-9
Power Line Replacement Projects BIO-4 Impacts**

Project Components (listed from North –South)	Sensitive Biological Resource¹	Description of Impact	Significance Determination
TL626	Ephemeral drainages, swales, meadows, artificial ponds,	Construction activities would temporarily impact 0.01 acre and permanently impact < 0.001 acre 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
TL625	Ephemeral drainages, meadow,	Construction activities would temporarily impact 0.07 acre to ACOE resources. No permanent impacts to ACOE 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.	Construction activities would temporarily impact 0.03 acre and permanently impact < 0.001 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
TL6923	Ephemeral drainages	Construction activities would temporarily impact 0.01 acre and permanently impact < 0.001 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
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 < 0.001 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
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

**Table D.4-9
Power Line Replacement Projects BIO-4 Impacts**

Project Components (listed from North –South)	Sensitive Biological Resource ¹	Description of Impact	Significance Determination
C442	Perennial drainages, ephemeral drainages	Construction activities would temporarily impact 0.001 acre to ACOE resources. No permanent impacts to ACOE 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 0.002 acre and permanently impact < 0.001 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 0.001 acre to ACOE resources. No permanent impacts to ACOE would occur. Temporary and/or permanent impacts would occur to CDFW/RWQCB resources (data not available).	Class II under CEQA and adverse under NEPA

¹ Jurisdictional resources further described in SDG&E (2013: 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).

As listed in Table D.4-9, power lines proposed to be replaced traverse jurisdictional resources. 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 2013, 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 or state jurisdiction. 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 temporary and permanent impacts to ACOE jurisdictional 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 2013, see Tables 19 and 33). However, data for known impacts are described below.

Table D.4-10
Temporary and Permanent Impacts to ACOE Jurisdictional Resources

Project Components (listed from North –South)	Temporary Impact (Square feet / Acre)	Permanent Impact (Square feet / Acre)	Total Impact (Square feet / Acre)
TL682	3479 SF / 0.080 ac	-	3479 SF / 0.080 ac
TL626	529 SF / 0.012 ac	1.23 SF / < 0.001 ac	530 SF / 0.012 ac
TL625	2838 SF / 0.065 ac	-	2838 SF / 0.065 ac
TL629	1328 SF / 0.030 ac	3.32 SF / < 0.001 ac	1331 SF / 0.031 ac
TL6923	611 SF / 0.014 ac	20 SF / < 0.001 ac	631 SF / 0.014 ac
C79	-	-	-
C78	9 SF / < 0.001 ac	-	9 SF / < 0.001 ac
C157	-	-	-
C442	25 SF / 0.001 ac	-	25 SF / 0.001 ac
C440	98 SF / 0.002 ac	1.93 SF / < 0.001 ac	99 SF / 0.002 ac
C449	42 SF / 0.001 ac	-	42 SF / 0.001 ac
Total	8958 SF / 0.206 ac	27 SF / < 0.001 ac	8985 SF / 0.206 ac

**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.

A total of 0.21 acre of temporary impacts to ACOE jurisdictional resources are anticipated to occur as a result of work in all lines except C79 and C157 (Table D.4-10). Temporary 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 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).

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 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 occur within ACOE jurisdictional resources, including wetland and riparian resources (Table D.4-10 and Table D.4-11). Access to the poles would occur off adjacent dirt roads. A total of approximately 26.8 square feet (< 0.001 acre) of potentially ACOE-jurisdictional waters of the United States would be permanently impacted during construction. 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 — 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, 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.** Jurisdictional mapping is required prior to construction. 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, a Clean Water Act Section 401 water quality certification, 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.

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 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.4-17, 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, 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 MM HYD-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. 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.

Increased human and vehicle activity in the project area during construction would have the potential to introduce 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, 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.4-12 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.4-15a through D.4-15c 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 spinyflower, San Diego button-celery, San Bernardino

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D.4 BIOLOGICAL RESOURCES**

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.4-12
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

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**Table D.4-12
Power Line Replacement Projects- BIO-6 Impacts**

Project Components (listed from North –South)	Sensitive Biological Resource	Description of Impact	Significance Determination
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
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

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**Table D.4-12
Power Line Replacement Projects- BIO-6 Impacts**

Project Components (listed from North –South)	Sensitive Biological Resource	Description of Impact	Significance Determination
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
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
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

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**Table D.4-12
Power Line Replacement Projects- BIO-6 Impacts**

Project Components (listed from North –South)	Sensitive Biological Resource	Description of Impact	Significance Determination
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
TL682, TL626, TL6923, C79	San Diego County alumroot	Construction activities would temporarily and/or permanently impact San Diego County alumroot	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

**Table D.4-12
Power Line Replacement Projects- BIO-6 Impacts**

Project Components (listed from North –South)	Sensitive Biological Resource	Description of Impact	Significance Determination
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
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

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**Table D.4-12
Power Line Replacement Projects- BIO-6 Impacts**

Project Components (listed from North –South)	Sensitive Biological Resource	Description of Impact	Significance Determination
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
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.4-12
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 fringe-pod, 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

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 fringedpod, 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 plants²², 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 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.

²² 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).

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.4-15a through D.4-15c 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 tetraococcus, which also may occur. All species and their status and habitat associations can be found in Appendix BIO-2. Additional plant species²³ 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 biologist²⁴ 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.4-13 describes the 36 blooming plant species that shall be surveyed, months they shall be surveyed (i.e., blooming periods), and the TL/circuits

²³ Some species described in Appendix BIO-6 are also described here to depict additional potential habitat locations.

²⁴ 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.

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 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.4-13. 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.

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
D.4 BIOLOGICAL RESOURCES**

**Table D.4-13
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.4-13
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

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.

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 months of permit issuance. 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.

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. No 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 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 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). 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, 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 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 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, 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.** 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.

MM BIO-17 **Conduct protocol surveys for Quino checkerspot, Hermes 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 historical surveys are adequate) in any area known to support the species.

Surveys shall be conducted by a qualified, permitted biologist 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 within 45 days of the completion of the survey. Surveys for Hermes copper shall follow County of San Diego Guidelines.²⁵ 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. Additional vegetation should also be considered potential habitat for Hermes copper if California buckwheat is within 15 feet of a mature spiny redberry shrub.

MM BIO-18 **Provide compensation for temporary and permanent impacts to Quino checkerspot, Hermes copper, and Laguna Mountains skipper butterfly habitat through conservation and/or restoration.** Temporary and

²⁵ County of San Diego (2010) Attachment C of the Report Format and Content Requirements – Biological Resources.

permanent impact to Quino checkerspot butterfly shall be compensated through a combination of habitat compensation and habitat restoration at a minimum of a 2:1 mitigation ratio for non-critical habitat and a minimum of a 3:1 mitigation ratio for critical habitat, or as required by the permitting agencies. 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. 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 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 the species. The applicant shall explore alternate tower locations, reduced road widths, reduced vegetation maintenance, and other design modifications, and it shall obtain agency approval of the final design through this area.

MM BIO-20 **Obtain and implement the terms of agency permit(s) with jurisdiction federal or state-listed species.** If federally listed wildlife species 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 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). 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.

When conducting work within designated critical habitat for the Quino checkerspot butterfly, SDG&E shall implement all applicable measures for this species defined in the SDG&E regional NCCP. 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. 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 known or potential LMS habitat are identified in the Biological Assessment
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. Chipping of vegetation shall not be allowed in known or potential LMS habitat. This includes access roads and/or the ROW within or adjacent to (within 10 meters) known or potential 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.
4. Vehicles or tracked equipment shall only be allowed on existing roads or trails when operating within or adjacent to LMS habitat. 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 Quino checkerspot, Hermes copper, and Laguna Mountains skipper butterfly construction shall occur outside of the flight season OR 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. 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.

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*, 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 acres (93.6 acres temporary, 0.4 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.

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 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 31²⁶).

As described in Section B, Project Description, a total of three fly yards within the CNF and nine 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 acres per fly yard—approximately 0.5 acre of total temporary disturbance within Forest Service-administered lands, and 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

²⁶ 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.

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 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 qualified²⁷ biologist in handling wildlife. These protocols also include a biological monitor on site to avoid and minimize impacts to biological resources.

²⁷ Qualified biologist defined as a biologist whose resume has been reviewed and approved by the CPUC and Forest Service.

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 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.4-14 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 CNDDDB and Forest Service data files (2013c, 2013f, 2006b).

Table D.4-14
Known Golden Eagle Nesting Locations by Line

Project Components	Golden Eagle Nesting Location Description (along with CNDDDB occurrence number, if applicable)
<i>Power Line Replacement Projects</i>	
TL682 ²⁸	<p><u>Along the western section</u></p> <ol style="list-style-type: none"> 1. Approx. 1.5 miles south of the line: In 1991 one adult female incubating eggs; additional three inactive nests seen within a mile down river of this location (No. 107). 2. Approx. 1.7 miles north of the line, known nestling location: Boucher Hill (Forest Service 2013f) <p><u>Along the central section</u></p> <ol style="list-style-type: none"> 3. Approx. 5.25 miles north of the line: Between 1900–1936, one nesting pair detected (No. 32). 4. Approx. 2.3 miles north of the line, known nestling location: Mendenhall Valley (Pine Valley)(Forest Service 2013f) 5. Approx. 0.5 miles north of the line, known nestling location: Pine Hills (Forest Service 2013f) 6. Approx. 5.9 miles south of the line, known nestling location: Middle Ridge/Pamo North (Forest Service 2013f) <p><u>Along the eastern section</u></p> <ol style="list-style-type: none"> 7. Approx. 1.7 miles north of the line, known nestling location: Honor Camp (Forest Service 2013f)
TL626	<p><u>Along the northern section</u></p> <ol style="list-style-type: none"> 1. Overlapping the line (0 miles of the line), known nestling location: Inaja (Upper San Diego River)(Forest Service 2013f) <p><u>Along the central section</u></p> <ol style="list-style-type: none"> 2. Approx. 3.0 miles west of line, known nestling location: Gower Mountain (Forest Service 2013f). Forest Service designates closure of this area (Gower Mountain) due to nesting activities: nests initiated and unsuccessful in 2010–2012; no activity in 2013 (Forest Service 2013e). 3. Approx. 1.5 miles west of line, known nestling location: Mildred Falls (Forest Service 2013f). 4. Approx. 1.5 miles west of line, known nestling location: Eagle Peak (Forest Service 2013f). <p>Two nests were documented to be near TL626, but specific locations are not provided (Forest Service 2006b, Table 1. <i>Raptors observed during field surveys</i>).</p>

²⁸ Additional known nesting locations greater than 5 miles south/north of the line includes Middle Ridge/Pamo North, Black Mountain, Pamo Gap, and Indian Flats (Chihuahua Valley)(Forest Service 2013f).

**Table D.4-14
Known Golden Eagle Nesting Locations by Line**

Project Components	Golden Eagle Nesting Location Description (along with CNDDDB occurrence number, if applicable)
TL625 ²⁹	<p><u>Along the western section</u></p> <ol style="list-style-type: none"> 1. Overlapping the line (0 miles of the line), known nestling location: Loveland Reservoir (Forest Service 2013f) 2. Approx. 1.3 miles north of line, known nestling location: Bell Bluff (Forest Service 2013f) <p><u>Along the southern section</u></p> <ol style="list-style-type: none"> 3. Approx. 0.4 miles west of line, known nestling location: Laws on Peak (Forest Service 2013f) 4. Approx. 2.0 miles west of line, known nestling location: Lyons Peak (Forest Service 2013f)
TL629	<p><u>Along the central section</u></p> <ol style="list-style-type: none"> 1. At the junction of C440 and TL629, approx. 0.25 mile west of TL629 known nestling location (No. 217; Forest Service 2013f - overlapping with line [Glenciff (Buckman Springs)]): One adult observed "incubating" in March 2010 – survey conducted by helicopter (No. 217); Forest Service designates closure of this area (Glenciff area) due to nesting activities: nests were initiated in 2008, 2009, and 2010; nests failed all 3 years; nest fledged one eglelet in 2011; nest failed in 2012 and 2013 (Forest Service 2013e). 2. Below C440, approximately 4.25 to 5 miles east of TL629 known nestling location (No. 218; Forest Service 2013f [Thing Valley]): 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	<p><u>Along the western section</u></p> <ol style="list-style-type: none"> 1. Approx. 0.9 mile north 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. Overlapping the line (0 miles of the line), known nestling location: Barrett/Echo Mountain (Forest Service 2013f) 4. Approx. 1.7 miles southwest of the TL625/TL6923 junction, a nest with nesting observed in 1991 (No. 102). 5. Along western section, approximately 4.5 miles south of line: one incubating female observed in 1991 (No. 99). 6. Approximately 6 miles southwest of the TL625/TL6923 junction, one adult female observed incubating egg in 1991 (No. 109). <p><u>Along the central-eastern section</u></p> <ol style="list-style-type: none"> 7. Approx. 1.4 miles north of line: one adult observed "incubating" in March 2010; one individual observed flying in area in 1992; nest with nestling observed in 1991; "one young fledged" in 1977 (No. 101). 8. Approx. 0.5 miles north of line, known nestling location: Hauser Canyon (Forest Service 2013f) 9. Approx. 0.3 miles north of line, known nestling location: Morena Butte (Forest Service 2013f)
C79	No additional nesting locations recorded. Eagle Peak, Mildred Falls, and Gower Mountain (described under TL626) between approx. 4.8 and 7.7 miles northwest of line. Garnet Peak (described under C440) approx. 6.2 miles southeast of the line.

²⁹ Additional known nesting locations greater than 5 miles south/north of the line includes Rock Mountain, Rock Mountain Alternate Site, El Cajon Mountain, and El Cajon Mountain West (Forest Service 2013f).

**Table D.4-14
Known Golden Eagle Nesting Locations by Line**

Project Components	Golden Eagle Nesting Location Description (along with CNDDDB occurrence number, if applicable)
	No additional nesting locations recorded. Bell Bluff and Loveland Reservoir (described under TL625) approx. 2.8 and 5.2 miles south of line, respectively.
C157	No additional nesting locations recorded. Corte Madera (described under C442) approx. 3 miles northeast of line. Laws on Peak and Lyons Peak (described under TL625) between approx. 0.9 and 3.2 miles west of the line. Barrett/Echo Mountain, Hauser Canyon, and Morena Butte (described under TL6923) between approx. 2.5 and 5 miles south/south-east of line. Bell Bluff and Loveland Reservoir (described under TL625) between approx. 5 and 5.3 miles northwest of line.
C442	<u>Along the southern section</u> 1. Approx. 511 feet southwest of the line, one known nesting location: Corte Madera (Forest Service 2013f)
C440	<u>Along the eastern section</u> 1. Approx. 2.6 miles north of the northern tip of line, two nests (one “active,” one “inactive”) reported in March 2010 (No. 219). 2. Approx. 1 mile north of line, one known nesting location: Garnet Peak (Forest Service 2013f). Possibly same as No. 219. Approx. 1.7 miles north east of the northern tip of line, nest site determined to be “active” in March 2010 – no additional information provided (No. 220). 3. Approx. 0.1 mile east of line, nest determined to be “active” in March 2010 – no additional data about nest provided (No. 221). 4. Approx. 2.8 miles southeast of line, two nests determined to be “active” by BLM on March 2010 – no additional information provided (No. 215); 5. Approx. 3.7 miles southeast of line, one adult female observed “incubating” and one adult male “perched nearby” in March 2010 (No. 214). 6. Overlapping the line (0 miles of the line), known nestling location: Monument Peak (Forest Service 2013f) 7. Overlapping the line (0 miles of the line), known nestling location: Stephens on Peak (Forest Service 2013f)
C449	No additional nesting locations recorded. Glenclyff (Buckman Springs) and Thing Valley (described under TL629) between approx. 3 and 5 miles north/northeast of line. Morena Butte and Hauser Canyon (described under TL6923) between 1.8 and 4 miles southwest of line. Corte Madera (described under C442) approx. 4.4 miles northwest of line.

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.** If construction activities, including but not limited to tree trimming, road maintenance (i.e., re-establishing of existing access roads), grading, or site disturbance, are to occur between March 1 and September 1 for non-listed birds and other seasons as defined below for other special-status species, 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.

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 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 (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 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.

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 bat³⁰, 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).

³⁰ Townsend's big-eared bat is a State Candidate species (i.e., proposed for listing under the California Endangered Species Act).

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). 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 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. No restrictions apply 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 appropriately³¹. 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).

³¹ 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.

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.4-15a through D.4-15c 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.4-12 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.4-15a through D.4-15d. 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.4-15a through D.4-15d 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.4-14, golden eagle nests occur within 5 miles of all 67 Forest Service Permit Holder number facilities listed in Table D.4-15c.³² 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.4-15c, 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 species if not applied appropriately.³³ 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

³² Databases searched for golden eagle information include CDFW CNDDDB and Forest Service data files (2013c, 2013f, 2006b).

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.

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)

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	PAGA	Gander's Butterwort
SWPT	Southwestern Pond Turtle	RICA	Moreno Currant
SDHL	San Diego (Coast) Horned Lizard	SIHA	Hammitt's Claycress
CALL	California Legless Lizard	STCA4	Southern jewelflower
BOWH	Orange-throated Whiptail	SYDE	San Bernardino Aster
SDRN	San Diego Ring-necked Snake	TEDI	Parry's Tetracoccus
RDRA	Red Diamondback Rattlesnake	THCAS	Velvety False Lupine
ROBO	Coastal Rosy Boa	THLAR2	Rigid Fringepod
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 ³⁴	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

³⁴ No USDA Plant Symbol.

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**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
D.4 BIOLOGICAL RESOURCES**

Table D.4-15a 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	Glenciff-Boulevard/Substation	TL629	O	N	O**	S	N	N	N	N	N	N	N	N	N	N
4186-20	Guatay-Pine Valley Line	TL629	O**	N	N	N	N	N	N	N	O**	N	N	N	N	N

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
D.4 BIOLOGICAL RESOURCES**

Table D.4-15a 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
4186-21	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
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

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Table D.4-15a 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
4186-40	O'Meara-Warners Line	C212	O**	N	N	N	N	O**	N	N	N	N	N	N	N	N
4186-42	Pine Valley Glenciff 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	Steffire 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 (Glenciff Substation)	TL629	O	N	N	N	N	N	N	N	N	N	N	N	N	N
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	Cuyapaibe Line	C440	N	N	N	N	S	N	N	N	N	N	N	N	N	N

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
D.4 BIOLOGICAL RESOURCES**

Table D.4-15a 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
4186-64	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	Glenciff Station Line	C440	O	N	N	N	N	N	N	N	N	N	N	N	N	N
4186-68	Glenciff 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.4-15b 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	CHPAP ^{2,3}	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	THLAR 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	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	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	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	N	S	N	N	N	N	S	N	N	N
4186-06	Boulder Creek Line	TL626	N	O**	N	O**	O**	N	N	N	S	N	N	N	N	N	O**	N	N	N	N	N	S	N	N	N	N	N	N	N	N	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	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	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	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	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	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	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	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	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	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	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	N
4186-19	Glenciff-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	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	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	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	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	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	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	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	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	N	O	N	N	O	N	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	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	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	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	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	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	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	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	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	N
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	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	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	N
4186-42	Pine Valley Glenciff 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	N	O**	N	N	O**	N

Table D.4-15b 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	CHPAP ^{2,3}	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	THLAR ²	
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	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	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	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	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	N
4186-49	State Camp #40 Line	C73	N	S	O**	N	N	S	N	N	N	N	N	N	N	S	N	N	N	N	N	S	N	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	N	S	S	N	S	S
4186-51	Steffire 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	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	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	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	N
4186-59	Power Plant Substation (Glenclyff 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	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	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	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	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	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	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	N	S	S	N	N	S
4186-67	Glenclyff 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	N	S	S	N	N	S
4186-68	Glenclyff 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	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	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	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	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	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	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	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	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	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 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 CNDDDB (2014), Forest Service (2012, 2013f, 2013h), SDG&E (2012), and USFWS (2014).

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
D.4 BIOLOGICAL RESOURCES**

Table D.4-15c Sensitive Wildlife Species – Regional Forester’s List

Forest Service Permit Holder Facility	Forest Service Facility Name	PLRP / Other Line	LBSA	ARCH	CSOW ¹	GRV 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

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D.4 BIOLOGICAL RESOURCES**

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Forest Service Permit Holder Facility	Forest Service Facility Name	PLRP / Other Line	LBSA	ARCH	CSOW ¹	GRV 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	Glenclyff-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

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
D.4 BIOLOGICAL RESOURCES**

Table D.4-15c Sensitive Wildlife Species – Regional Forester’s List

Forest Service Permit Holder Facility	Forest Service Facility Name	PLRP / Other Line	LBSA	ARCH	CSOW ¹	GRV 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 Glenciff 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

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
D.4 BIOLOGICAL RESOURCES**

Table D.4-15c Sensitive Wildlife Species – Regional Forester’s List

Forest Service Permit Holder Facility	Forest Service Facility Name	PLRP / Other Line	LBSA	ARCH	CSOW ¹	GRV 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	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	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	N	O
4186-47	Skye Valley Line	C157	S	N	N	N	S	S	S	O	S	S	S	S	S	S	N	S	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	S
4186-49	State Camp #40 Line	C73	N	N	N	N	S	S	S	O	S	S	S	S	S	S	N	S	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	N
4186-51	Steffire Line	C237	S	N	N	N	S	S	S	N	S	S	S	S	S	S	N	N	N	N
4186-52	Sunrise Line	C440	S	N	O**	N	S	S	S	S	S	S	S	S	S	S	O**	S	S	N
4186-53	Sutherland Dam Line	C237	S	N	N	N	S	S	S	S	O**	S	S	S	S	S	N	S	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	S
4186-59	Power Plant Substation (Glenciff Substation)	TL629	S	N	N	S	S	S	S	S	S	S	S	S	S	S	N	S	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	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	N

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
D.4 BIOLOGICAL RESOURCES**

Table D.4-15c Sensitive Wildlife Species – Regional Forester’s List

Forest Service Permit Holder Facility	Forest Service Facility Name	PLRP / Other Line	LBSA	ARCH	CSOW ¹	GRV 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	Glenclyff Station Line	C440	S	N	N	N	S	S	S	S	S	S	S	S	S	S	N	S	N
4186-68	Glenclyff 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

Table D.4-15c 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 CNDDDB (2014), Forest Service (2012, 2013f, 2013h), SDG&E (2012), and USFWS (2014).

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
D.4 BIOLOGICAL RESOURCES**

Table D.4-15d 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	Glenciff-Boulevard/Substation	TL629	X			X	X			
4186-20	Guatay-Pine Valley Line	TL629	X							
4186-21	Japatul-Barrett Line (and access road)	TL625	X							

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Table D.4-15d 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
4186-22	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 Glenclyff Line	TL629	X							
4186-43	Pine Valley Tract Line	C442	X				X			
4186-44	Rincon Borrego (Easement) Line	TL682	X				X			

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Table D.4-15d 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
4186-45	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	Steffre 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 (Glenciff Substation)	TL629				X	X			
4186-60	Scove Canyon Road Line	C440	X							
4186-62	Camp Ole Line	C440						X		
4186-63	Cuyapaipa 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							
4186-67	Glenciff Station Line	C440				X	X			
4186-68	Glenciff Trailer Pads Line	C441*				X	X			
4186-70	Japatul Station Line	C73	X							

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
D.4 BIOLOGICAL RESOURCES**

Table D.4-15d 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
4186-71	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			

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 8.76 acres of RCAs during construction, and would permanently impact approximately 0.05 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 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 2013, 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 2013, 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 2013, 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 acres³⁵ 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.4-16. A total of approximately 9 acres (Options 1 and 2) of temporary impacts and

³⁵ 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 impact 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.4-16
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, 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 acres³⁶ 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 acres³⁷ 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).

³⁶ 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.

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.

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 acres³⁸ 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).

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,

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.

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-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-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)³⁹ 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;

³⁹ 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 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.
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 2:1⁴⁰. 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 emergency⁴¹, 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 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.

⁴⁰ Per Robert Hawkins (pers. comm. 2014)

⁴¹ Emergencies are described in SDG&E 1995 (Section 2.2) and SDG&E 2013 (Attachment C).

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. 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-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).

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. 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-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.

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.

Reconstruction of TL6931

Impacts BIO-1 through BIO-6: 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 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-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-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.4-17 presents the mitigation monitoring, compliance, and reporting program for biological resources for the power line replacement projects and alternatives.

**Table D.4-17
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-5. The limits of approved work spaces 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).
<i>Location</i>	All areas disturbed by construction activities for SDG&E's proposed project and all alternatives.
<i>Compliance Documentation^(a) and Consultation</i>	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
<i>Timing</i>	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
<i>Responsible Agency</i>	<u>SDG&E's Proposed Project</u> : CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629) <u>Forest Service Proposed Actions</u> : CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) <u>BIA Proposed Action</u> : CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) <u>Partial Removal of Overland Access Roads</u> : Forest Service <u>Removal of TL626 from Service</u> : 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.
<i>Location</i>	All areas disturbed by construction activities for <u>SDG&E's</u> proposed project and all alternatives.
<i>Compliance Documentation^(a) and Consultation</i>	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.4-17
Mitigation Monitoring, Compliance, and Reporting – Biological Resources**

<i>Timing</i>	a. b. and c. Prior to and during construction
<i>Responsible Agency</i>	<u>SDG&E's Proposed Project</u> : CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629) <u>Forest Service Proposed Actions</u> : CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) <u>BIA Proposed Action</u> : CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) <u>Partial Removal of Overland Access Roads</u> : Forest Service <u>Removal of TL626 from Service</u> : 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 ground-disturbing and vegetation-removal activities. The monitor shall survey the construction sites 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.
<i>Location</i>	All areas disturbed by construction activities for <u>SDG&E's</u> proposed project and all alternatives.
<i>Compliance Documentation^(a) and Consultation</i>	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
<i>Timing</i>	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
<i>Responsible Agency</i>	<u>SDG&E's Proposed Project</u> : CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629) <u>Forest Service Proposed Actions</u> : CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) <u>BIA Proposed Action</u> : CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) <u>Partial Removal of Overland Access Roads</u> : Forest Service <u>Removal of TL626 from Service</u> : 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 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

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	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. Wherever possible, vegetation would be left in place to avoid excessive root damage to allow for natural recruitment 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, the temporary impact shall be considered a permanent impact and compensated accordingly (see MM BIO-5).
<i>Location</i>	All areas disturbed by construction activities for <u>SDG&E's</u> proposed project and all alternatives.
<i>Compliance Documentation^(a) and Consultation</i>	<ul style="list-style-type: none"> 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
<i>Timing</i>	<ul style="list-style-type: none"> 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
<i>Responsible Agency</i>	<p><u>SDG&E's Proposed Project</u>: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)</p> <p><u>Forest Service Proposed Actions</u>: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157)</p> <p><u>BIA Proposed Action</u>: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682)</p> <p><u>Partial Removal of Overland Access Roads</u>: Forest Service</p> <p><u>Removal of TL626 from Service</u>: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)</p>
Mitigation Measure	<p>MM BIO-5 Provide habitat compensation or restoration for permanent impacts to native vegetation communities. Permanent impact to all native vegetation communities 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. 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</p>

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	<p>compensation must be completed within 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.</p>
<i>Location</i>	On the project/alternative site or to-be-identified mitigation parcels
<i>Compliance Documentation^(a) and Consultation</i>	<p>a. Documentation that habitat compensation and/or habitat restoration has been identified</p> <p>b. Documentation of long-term management of restored habitat, if applicable</p> <p>c. Documentation of consultation with permitting agencies</p> <p>d. CPUC/Forest Service monitor: Line item in compliance monitoring reports</p>
<i>Timing</i>	<p>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.</p> <p>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)</p> <p>c. Within 2 weeks of coordination with permitting agencies</p> <p>d. During construction</p>
<i>Responsible Agency</i>	<p><u>SDG&E's Proposed Project</u>: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)</p> <p><u>Forest Service Proposed Actions</u>: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157)</p> <p><u>BIA Proposed Action</u>: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682)</p> <p><u>Partial Removal of Overland Access Roads</u>: Forest Service</p> <p><u>Removal of TL626 from Service</u>: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)</p>
Mitigation Measure	<p>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.</p>
<i>Location</i>	All areas disturbed by construction activities for <u>SDG&E's</u> proposed project and all alternatives.
<i>Compliance Documentation^(a) and Consultation</i>	<p>See fire plan requirements under MM FF-1 and MM FF-2</p> <p>a. Implement fire prevention best management practices</p> <p>b. Provide evidence of coordination with applicable fire authorities</p> <p>c. CPUC/Forest Service monitor: Line item in compliance monitoring reports</p>
<i>Timing</i>	a. b. and c. Prior to and during project construction
<i>Responsible Agency</i>	<p><u>SDG&E's Proposed Project</u>: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)</p> <p><u>Forest Service Proposed Actions</u>: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157)</p>

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	<p><i>BIA Proposed Action:</i> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) <i>Partial Removal of Overland Access Roads:</i> Forest Service <i>Removal of TL626 from Service:</i> CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)</p>
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.
<i>Location</i>	All areas disturbed by construction activities for <i>SDG&E's</i> proposed project and all alternatives.
<i>Compliance Documentation^(a) and Consultation</i>	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
<i>Timing</i>	a. and b. Prior to and during project construction
<i>Responsible Agency</i>	<i>SDG&E's Proposed Project:</i> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629) <i>Forest Service Proposed Actions:</i> CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) <i>BIA Proposed Action:</i> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) <i>Partial Removal of Overland Access Roads:</i> Forest Service <i>Removal of TL626 from Service:</i> 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.4-12). 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.
<i>Location</i>	All areas disturbed by construction activities for <i>SDG&E's</i> proposed project and all alternatives.
<i>Compliance Documentation^(a) and Consultation</i>	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
<i>Timing</i>	a. b. and c. At least 2 weeks prior to application d. Prior to and during construction
<i>Responsible Agency</i>	<i>SDG&E's Proposed Project:</i> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629) <i>Forest Service Proposed Actions:</i> CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) <i>BIA Proposed Action:</i> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) <i>Partial Removal of Overland Access Roads:</i> Forest Service <i>Removal of TL626 from Service:</i> 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

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	<p>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:</p> <ul style="list-style-type: none"> ▪ 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: <ul style="list-style-type: none"> • 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	<p>a. Prepare BE/BA b. Forest Service approval</p> <p>Forest Service/SDG&E responsible for additional compliance related to actual individual BE/BAs.</p>
Timing	<p>a. Prior to operation and maintenance activities as described b. Forest Service Reviews, comments, coordinates with SDG&E</p> <p>Prior to construction</p>
Responsible Agency	<p><i>SDG&E's Proposed Project:</i> Forest Service <i>Forest Service Proposed Actions:</i> Forest Service <i>BIA Proposed Action:</i> Forest Service <i>Partial Removal of Overland Access Roads:</i> Forest Service <i>Removal of TL626 from Service:</i> Forest Service <i>Applicable MSUP Lines:</i> Forest Service</p>
Mitigation Measure	<p>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.</p>
<i>Location</i>	All areas disturbed by construction activities for SDG&E's proposed project and all alternatives.
<i>Compliance Documentation^(a) and Consultation</i>	<p>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</p>
<i>Timing</i>	<p>a. b. and c. Prior to notice to proceed d. Prior to and during construction</p>
<i>Responsible Agency</i>	<i>SDG&E's Proposed Project and all Alternatives:</i> Forest Service

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Mitigation Measure	MM BIO-10 Limit temporary and permanent impacts to jurisdictional features to the minimum necessary. Jurisdictional mapping is required prior to construction. 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, a Clean Water Act Section 401 water quality certification, 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.
<i>Location</i>	All areas disturbed by construction activities for SDG&E's proposed project and all alternatives.
<i>Compliance Documentation^(e) and Consultation</i>	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
<i>Timing</i>	a. b. and c. Prior to notice to proceed d. Prior to and during construction
<i>Responsible Agency</i>	<u>SDG&E's Proposed Project:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629) <u>Forest Service Proposed Actions:</u> CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) <u>BIA Proposed Action:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) <u>Partial Removal of Overland Access Roads:</u> Forest Service <u>Removal of TL626 from Service:</u> 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). 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

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	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.
<i>Location</i>	Identified habitat creation and/or restoration areas in the project/alternative site or at off-site mitigation parcel(s)
<i>Compliance Documentation^(a) and Consultation</i>	<ul style="list-style-type: none"> 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
<i>Timing</i>	<ul style="list-style-type: none"> a. Prior to and during construction b. and c. Prior to notice to proceed d. Prior to and during construction
<i>Responsible Agency</i>	<p><u>SDG&E's Proposed Project:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)</p> <p><u>Forest Service Proposed Actions:</u> CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157)</p> <p><u>BIA Proposed Action:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682)</p> <p><u>Partial Removal of Overland Access Roads:</u> Forest Service</p> <p><u>Removal of TL626 from Service:</u> CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)</p>
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.
<i>Location</i>	All drainage crossing in the project area or alternative site areas.
<i>Compliance Documentation^(a) and Consultation</i>	<ul style="list-style-type: none"> a. Incorporate measure in final engineering design b. CPUC/Forest Service monitor: Line item in compliance monitoring reports
<i>Timing</i>	<ul style="list-style-type: none"> a. Prior to issuance of notice to proceed b. Prior to and during construction
<i>Responsible Agency</i>	<p><u>SDG&E's Proposed Project:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)</p> <p><u>Forest Service Proposed Actions:</u> CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157)</p> <p><u>BIA Proposed Action:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682)</p> <p><u>Partial Removal of Overland Access Roads:</u> Forest Service</p> <p><u>Removal of TL626 from Service:</u> CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)</p>
Mitigation Measure	<p>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.</p> <p>Table D.4-13 in EIR/EIS describes the 35 blooming plant species that shall be surveyed, months they shall be surveyed (i.e., blooming periods), and the</p>

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	<p>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).</p> <p>Of the 35 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.4-13. 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).</p> <p>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.</p> <p>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.</p> <p>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.</p>
<i>Location</i>	All areas not previously surveyed for special status plants for <u>SDG&E's</u> proposed project (Chambers Group 2012b see Table 2) and all alternatives.
<i>Compliance Documentation^(e) and Consultation</i>	<ul style="list-style-type: none"> a. Biologist qualifications (resumes; approved by CPUC and Forest Service) b. Survey report c. CPUC/Forest Service monitor: Line item in compliance monitoring reports
<i>Timing</i>	<ul style="list-style-type: none"> a. At least 2 weeks prior to surveys b. Prior to issuance of a notice to proceed c. Prior to and during construction
<i>Responsible Agency</i>	<p><u>SDG&E's Proposed Project</u>: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)</p> <p><u>Forest Service Proposed Actions</u>: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157)</p> <p><u>BIA Proposed Action</u>: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682)</p> <p><u>Partial Removal of Overland Access Roads</u>: Forest Service</p> <p><u>Removal of TL626 from Service</u>: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)</p>

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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.
<i>Location</i>	All areas disturbed by construction activities for <u>SDG&E's</u> proposed project and all alternatives.
<i>Compliance Documentation^(a) and Consultation</i>	<ul style="list-style-type: none"> 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
<i>Timing</i>	<ul style="list-style-type: none"> 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 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
<i>Responsible Agency</i>	<p><u>SDG&E's Proposed Project:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)</p> <p><u>Forest Service Proposed Actions:</u> CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157)</p> <p><u>BIA Proposed Action:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682)</p> <p><u>Partial Removal of Overland Access Roads:</u> Forest Service</p> <p><u>Removal of TL626 from Service:</u> CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)</p>
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 18 months of permit issuance. 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

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	salvage and relocation is not possible to the satisfaction of the Forest Service, off-site land preservation shall be required.
<i>Location</i>	All areas disturbed by construction activities for <u>SDG&E's</u> proposed project and all alternatives.
<i>Compliance Documentation^(a) and Consultation</i>	<ul style="list-style-type: none"> 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
<i>Timing</i>	<ul style="list-style-type: none"> a. and b. Prior to construction c. No later than 18 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
<i>Responsible Agency</i>	<p><u>SDG&E's Proposed Project:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)</p> <p><u>Forest Service Proposed Actions:</u> CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157)</p> <p><u>BIA Proposed Action:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682)</p> <p><u>Partial Removal of Overland Access Roads:</u> Forest Service</p> <p><u>Removal of TL626 from Service:</u> CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)</p>
Mitigation Measure	<p>MM BIO-16 Install fencing or flagging around identified special-status butterfly host 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 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.</p>
<i>Location</i>	All areas disturbed by construction activities for SDG&E's proposed project and all alternatives.
<i>Compliance Documentation^(a) and Consultation</i>	<ul style="list-style-type: none"> 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
<i>Timing</i>	<ul style="list-style-type: none"> 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 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
<i>Responsible Agency</i>	<p><u>SDG&E's Proposed Project:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)</p> <p><u>Forest Service Proposed Actions:</u> CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157)</p> <p><u>BIA Proposed Action:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682)</p> <p><u>Partial Removal of Overland Access Roads:</u> Forest Service</p> <p><u>Removal of TL626 from Service:</u> CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)</p>

**Table D.4-17
Mitigation Monitoring, Compliance, and Reporting – Biological Resources**

Mitigation Measure	<p>MM BIO-17 Conduct protocol surveys for Quino checkerspot, Hermes 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 historical surveys are adequate) in any area known to support the species.</p> <p>Surveys shall be conducted by a qualified, permitted biologist 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 within 45 days of the completion of the survey. Surveys for Hermes copper shall follow County of San Diego Guidelines.⁴² 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. Additional vegetation should also be considered potential habitat for Hermes copper if California buckwheat is within 15 feet of a mature spiny redberry shrub.</p>
<i>Location</i>	Suitable habitat for Quino checkerspot butterfly, Laguna Mountains skipper, and Hermes copper butterfly of project/alternatives area
<i>Compliance Documentation^(a) and Consultation</i>	<ul style="list-style-type: none"> 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
<i>Timing</i>	<ul style="list-style-type: none"> a. At least 2 weeks prior to surveys b. Within 1 year of the initiation of 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
<i>Responsible Agency</i>	<p><u>SDG&E's Proposed Project:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)</p> <p><u>Forest Service Proposed Actions:</u> CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157)</p> <p><u>BIA Proposed Action:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682)</p> <p><u>Partial Removal of Overland Access Roads:</u> Forest Service</p> <p><u>Removal of TL626 from Service:</u> CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)</p>

⁴² County of San Diego (2010) Attachment C of the Report Format and Content Requirements – Biological Resources.

**Table D.4-17
Mitigation Monitoring, Compliance, and Reporting – Biological Resources**

Mitigation Measure	MM BIO-18 Provide compensation for temporary and permanent impacts to Quino checkerspot, Hermes copper, and Laguna Mountains skipper butterfly habitat through conservation and/or restoration. Temporary and permanent impact to Quino checkerspot butterfly shall be compensated through a combination of habitat compensation and habitat restoration at a minimum of a 2:1 mitigation ratio for non-critical habitat and a minimum of a 3:1 mitigation ratio for critical habitat, or as required by the permitting agencies. 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. 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.
<i>Location</i>	On the project/alternative site or on to-be-identified mitigation parcels
<i>Compliance Documentation^(e) and Consultation</i>	<ul style="list-style-type: none"> 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
<i>Timing</i>	<ul style="list-style-type: none"> 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
<i>Responsible Agency</i>	<p><u>SDG&E's Proposed Project:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)</p> <p><u>Forest Service Proposed Actions:</u> CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157)</p> <p><u>BIA Proposed Action:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682)</p> <p><u>Partial Removal of Overland Access Roads:</u> Forest Service</p> <p><u>Removal of TL626 from Service:</u> CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)</p>
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 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 the species. The applicant shall explore alternate tower locations, reduced road widths, reduced vegetation maintenance, and other design modifications, and it shall obtain agency approval of the final design through this area.

**Table D.4-17
Mitigation Monitoring, Compliance, and Reporting – Biological Resources**

<i>Location</i>	Occupied Quino checkerspot, Laguna Mountains skipper, or Hermes copper butterfly habitat along the project/alternatives area
<i>Compliance Documentation^(a) and Consultation</i>	a. Final design review and approval (design maximizes avoidance of critical habitat) b. CPUC/Forest Service monitor: Line item in compliance monitoring reports
<i>Timing</i>	a. and b. Prior to notice to proceed
<i>Responsible Agency</i>	<i>SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)</i> <i>Forest Service Proposed Actions: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157)</i> <i>BIA Proposed Action: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682)</i> <i>Partial Removal of Overland Access Roads: Forest Service</i> <i>Removal of TL626 from Service: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)</i>
Mitigation Measure	<p>MM BIO-20 Obtain and implement the terms of agency permit(s) with jurisdiction federal or state-listed species. If federally listed wildlife species 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 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). 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.</p> <p>When conducting work within designated critical habitat for the Quino checkerspot butterfly, SDG&E shall implement all applicable measures for this species defined in the SDG&E regional NCCP. 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:</p> <ol style="list-style-type: none"> 1. 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 known or potential LMS habitat are identified in the Biological Assessment 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. Chipping of vegetation shall not be allowed in known or potential LMS habitat. This includes access roads and/or the ROW within or adjacent to (within 10 meters) known or potential 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. 4. Vehicles or tracked equipment shall only be allowed on existing roads or trails when operating within or adjacent to LMS habitat. 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.

**Table D.4-17
Mitigation Monitoring, Compliance, and Reporting – Biological Resources**

<i>Location</i>	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.
<i>Compliance Documentation^(a) and Consultation</i>	a. Documentation of permit compliance b. CPUC/Forest Service monitor: Line item in compliance monitoring reports
<i>Timing</i>	a. Prior to notice to proceed b. Prior to and during construction
<i>Responsible Agency</i>	<u>SDG&E's Proposed Project:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629) <u>Forest Service Proposed Actions:</u> CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) <u>BIA Proposed Action:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) <u>Partial Removal of Overland Access Roads:</u> Forest Service <u>Removal of TL626 from Service:</u> 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 Quino checkerspot, Hermes copper, and Laguna Mountains skipper butterfly construction shall occur outside of the flight season OR 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. 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.
<i>Location</i>	All operations and maintenance areas of the project/alternative site
<i>Compliance Documentation^(a) and Consultation</i>	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
<i>Timing</i>	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
<i>Responsible Agency</i>	<u>SDG&E's Proposed Project:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629) <u>Forest Service Proposed Actions:</u> CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) <u>BIA Proposed Action:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) <u>Partial Removal of Overland Access Roads:</u> Forest Service <u>Removal of TL626 from Service:</u> CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)

**Table D.4-17
Mitigation Monitoring, Compliance, and Reporting – Biological Resources**

<i>Mitigation Measure</i>	<p>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.</p> <p>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.</p>
<i>Location</i>	All areas disturbed by construction activities for SDG&E's proposed project and all alternatives.
<i>Compliance Documentation^(a) and Consultation</i>	<p>a. Biologist qualifications (resumes; approved by CPUC and Forest Service)</p> <p>b. Conduct field monitoring</p> <p>c. Weekly summary report of monitoring activities as defined in measure d and e.</p> <p>d and e. CPUC/Forest Service monitor: Line item in compliance monitoring reports</p>
<i>Timing</i>	<p>a. At least 2 weeks prior to construction</p> <p>b. and c. During construction</p>
<i>Responsible Agency</i>	<p><u>SDG&E's Proposed Project:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)</p> <p><u>Forest Service Proposed Actions:</u> CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157)</p> <p><u>BIA Proposed Action:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682)</p> <p><u>Partial Removal of Overland Access Roads:</u> Forest Service</p> <p><u>Removal of TL626 from Service:</u> CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)</p>
<i>Mitigation Measure</i>	<p>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.</p>
<i>Location</i>	All construction areas for SDG&E's proposed project and all alternatives.
<i>Compliance Documentation^(a) and</i>	<p>a. Implement open hole covering procedures</p> <p>b. Documentation that covering requirements in BIO-23 have been incorporated into</p>

**Master Special Use Permit and Permit to Construct Power Line Replacement Projects
D.4 BIOLOGICAL RESOURCES**

**Table D.4-17
Mitigation Monitoring, Compliance, and Reporting – Biological Resources**

<i>Consultation</i>	<p>construction contracts</p> <p>c. Documentation that notification and handling procedures are utilized for wildlife found in open holes</p> <p>d. CPUC monitor: Line item in monitoring report.</p>
<i>Timing</i>	a - d. During construction
<i>Responsible Agency</i>	<p><u>SDG&E's Proposed Project</u>: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)</p> <p><u>Forest Service Proposed Actions</u>: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157)</p> <p><u>BIA Proposed Action</u>: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682)</p> <p><u>Partial Removal of Overland Access Roads</u>: Forest Service</p> <p><u>Removal of TL626 from Service</u>: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)</p>
<i>Mitigation Measure</i>	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.
<i>Location</i>	All construction areas for SDG&E's proposed project and all alternatives.
<i>Compliance Documentation^(a) and Consultation</i>	<p>a. Documentation and verification of enforcement mechanisms</p> <p>b. CPUC/Forest Service monitor: Line item in compliance monitoring reports</p>
<i>Timing</i>	<p>a. Prior to and during construction</p> <p>b. During construction</p>
<i>Responsible Agency</i>	<p><u>SDG&E's Proposed Project</u>: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)</p> <p><u>Forest Service Proposed Actions</u>: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157)</p> <p><u>BIA Proposed Action</u>: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682)</p> <p><u>Partial Removal of Overland Access Roads</u>: Forest Service</p> <p><u>Removal of TL626 from Service</u>: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)</p>
<i>Mitigation Measure</i>	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.
<i>Location</i>	All construction areas adjacent to native vegetation for SDG&E's proposed project and all alternatives.
<i>Compliance Documentation^(a) and Consultation</i>	<p>a. Documentation of night lighting specifications</p> <p>b. CPUC/Forest Service monitor: Line item in compliance monitoring reports</p>
<i>Timing</i>	<p>a. Prior to night time construction activities</p> <p>b. During construction</p>
<i>Responsible Agency</i>	<p><u>SDG&E's Proposed Project</u>: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)</p> <p><u>Forest Service Proposed Actions</u>: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157)</p> <p><u>BIA Proposed Action</u>: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682)</p>

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Mitigation Monitoring, Compliance, and Reporting – Biological Resources**

	<i>Partial Removal of Overland Access Roads:</i> Forest Service <i>Removal of TL626 from Service:</i> CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
<i>Mitigation Measure</i>	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.
<i>Location</i>	All construction areas for SDG&E's proposed project and all alternatives.
<i>Compliance Documentation^(a) and Consultation</i>	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
<i>Timing</i>	a. Prior to construction b. and c. During construction
<i>Responsible Agency</i>	<i>SDG&E's Proposed Project:</i> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629) <i>Forest Service Proposed Actions:</i> CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) <i>BIA Proposed Action:</i> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) <i>Partial Removal of Overland Access Roads:</i> Forest Service <i>Removal of TL626 from Service:</i> CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
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.
<i>Location</i>	All construction areas for SDG&E's proposed project and all alternatives.
<i>Compliance Documentation^(a) and Consultation</i>	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
<i>Timing</i>	a. Prior to construction b. and c. During construction
<i>Responsible Agency</i>	<i>SDG&E's Proposed Project:</i> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629) <i>Forest Service Proposed Actions:</i> CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157) <i>BIA Proposed Action:</i> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) <i>Partial Removal of Overland Access Roads:</i> Forest Service <i>Removal of TL626 from Service:</i> CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	MM BIO-28 Conduct pre-construction nesting bird surveys. If construction activities, including but not limited to tree trimming, road maintenance (i.e., re-establishing of existing access roads), grading, or site disturbance, are to occur between March 1 and September 1 for non-listed birds and other seasons as defined below for other special-status species, 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,

**Table D.4-17
Mitigation Monitoring, Compliance, and Reporting – Biological Resources**

	<p>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.</p> <p>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.</p> <p>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.</p> <p>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).</p>
<i>Location</i>	In and around any construction activity in the project/alternative area (100 feet for passerine birds and 300 feet for raptors)

**Table D.4-17
Mitigation Monitoring, Compliance, and Reporting – Biological Resources**

<i>Compliance Documentation^(a) and Consultation</i>	<ul style="list-style-type: none"> a. Biologist qualifications (resumes; approved by CPUC and Forest Service) b. Conduct nesting bird survey c. Document survey efforts in daily log and report to CPUC/Forest Service at the end of each week. d. 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)) e. CPUC/Forest Service to review and approve/deny decreases in buffer space
<i>Timing</i>	<ul style="list-style-type: none"> a. Prior to construction b. Survey no more than 72 hours prior to construction c. Prior to construction d. During construction e. Prior to or during construction
<i>Responsible Agency</i>	<p><u>SDG&E's Proposed Project:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)</p> <p><u>Forest Service Proposed Actions:</u> CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157)</p> <p><u>BIA Proposed Action:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682)</p> <p><u>Partial Removal of Overland Access Roads:</u> Forest Service</p> <p><u>Removal of TL626 from Service:</u> CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)</p>
Mitigation Measure	<p>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.</p> <p>If the CPUC-approved biologist observes an active nest (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.</p>
<i>Location</i>	In project/alternative areas considered for blasting
<i>Compliance Documentation^(a) and Consultation</i>	<p>See blasting requirements under MM PSU-3.</p> <ul style="list-style-type: none"> a. Site-specific nesting bird survey (as part of Plan) and communicate results to CPUC/Forest Service b. Biologist qualifications (resumes; approved by CPUC and Forest Service) c. Documentation of postponing construction activities with respect to active nests (if applicable) d. CPUC monitor: Line item in compliance monitoring report

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<i>Timing</i>	<ul style="list-style-type: none"> a. Prior to blasting activities b. Prior to blasting activities/Prior to construction c. Prior to construction d. During construction
<i>Responsible Agency</i>	<p><u>SDG&E's Proposed Project</u>: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)</p> <p><u>Forest Service Proposed Actions</u>: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157)</p> <p><u>BIA Proposed Action</u>: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682)</p> <p><u>Partial Removal of Overland Access Roads</u>: Forest Service</p> <p><u>Removal of TL626 from Service</u>: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)</p>
<i>Mitigation Measure</i>	<p>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). 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 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. No restrictions apply outside of the pupping season.</p>
<i>Location</i>	In historically occupied sites and current suitable habitat within 500 feet of all project lines.
<i>Compliance Documentation^(a) and Consultation</i>	<ul style="list-style-type: none"> a. Biologist qualifications (resumes; approved by CPUC and Forest Service) b. CDFW notification if species maternity roosts present
<i>Timing</i>	<ul style="list-style-type: none"> c. Prior to construction
<i>Responsible Agency</i>	<p><u>SDG&E's Proposed Project</u>: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)</p> <p><u>Forest Service Proposed Actions</u>: CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157)</p> <p><u>BIA Proposed Action</u>: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682)</p> <p><u>Partial Removal of Overland Access Roads</u>: Forest Service</p> <p><u>Removal of TL626 from Service</u>: CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)</p>
<i>Mitigation Measure</i>	<p>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</p>

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	<p>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.</p> <p>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.</p>
<i>Location</i>	In areas previously not accessible to SKR surveys for proposed project and all alternatives.
<i>Compliance Documentation^(a) and Consultation</i>	<ul style="list-style-type: none"> 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
<i>Timing</i>	<ul style="list-style-type: none"> a. At least 2 weeks prior to construction b. At least 2 weeks prior to construction c. Prior to construction d. Prior to construction e. Prior to construction f. During construction
<i>Responsible Agency</i>	<p><u>SDG&E's Proposed Project:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)</p> <p><u>Forest Service Proposed Actions:</u> CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157)</p> <p><u>BIA Proposed Action:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682)</p> <p><u>Partial Removal of Overland Access Roads:</u> Forest Service</p> <p><u>Removal of TL626 from Service:</u> CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)</p>
Mitigation Measure	<p>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.</p>

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<i>Location</i>	All construction work areas for SDG&E's proposed project and all alternatives.
<i>Compliance Documentation^(a) and Consultation</i>	Also see procedural requirements for pesticide and herbicide applications under MM HYD-5 a. Documentation of professional applicator training of special-status wildlife species
<i>Timing</i>	a. Prior to pesticide application
<i>Responsible Agency</i>	<u>SDG&E's Proposed Project: CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682); BIA and Campo Indian Tribe (TL629)</u> <u>Forest Service Proposed Actions:</u> CPUC and Forest Service, BIA and Inaja and Cosmit Tribe (TL626), City of San Diego (C157), City of San Diego (C157) <u>BIA Proposed Action:</u> CPUC and Forest Service, BIA and La Jolla Indian Tribe (TL682) <u>Partial Removal of Overland Access Roads:</u> Forest Service <u>Removal of TL626 from Service:</u> CPUC and Forest Service, BIA and Campo Indian Tribe (TL6931)
Mitigation Measure	<p>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)⁴³ 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:</p> <ol style="list-style-type: none"> 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: <ol style="list-style-type: none"> 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.

⁴³ 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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	<ol style="list-style-type: none">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 biologist⁴⁴ 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.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
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⁴⁴ Authorized biologist is a biologist whose resume has been reviewed and approved by the Forest Service and CPUC.

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	<p>vegetation, soil, and other habitat features and the proximity to human activities. Clearance surveys shall occur on a daily basis in the work area.</p> <p>13. The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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 2:1⁴⁵. In addition, a Forest Service consultation will be conducted to verify limited operating periods for arroyo toad are defined.</p> <p>The applicant shall restrict work to daylight hours, except during an emergency⁴⁶, 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.</p>
<i>Location</i>	Arroyo toad designated critical habitat area along Forest Service Proposed Action C157 Options 1 and 2.
<i>Compliance Documentation^(e) and Consultation</i>	<p>a. Implement measure as defined</p> <p>b. Biologist qualifications (resumes; approved by CPUC and Forest Service)</p> <p>c. Survey summary report</p> <p>d. Documentation of monitoring plan and consultation with the USFWS, if required</p> <p>e. Maps showing the proposed flagging or fencing areas</p> <p>f. Brief report of monitoring activities</p> <p>g. CPUC monitor: Line item in compliance monitoring report</p>

⁴⁵ Per Robert Hawkins (pers. comm. 2014)

⁴⁶ Emergencies are described in SDG&E 1995 (Section 2.2) and SDG&E 2013 (Attachment C).

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<i>Timing</i>	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
<i>Responsible Agency</i>	<u>Forest Service Proposed Action C157 Options 1 and 2</u> : 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.

D.4.11 References

14 CCR 783–786.6. Regulations for Implementation of the California Endangered Species Act.

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

16 U.S.C. 661 – 667e. Fish and Wildlife Coordination Act (FWCA).

16 U.S.C. 668a–668d. Bald and Golden Eagle Protection Act (BGEPA), as amended.

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.

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

42 U.S.C. 4321–4370f. National Environmental Policy Act of 1969, as amended.

43 U.S.C. 1701–1782. Federal Land and Management Act of 1976, as amended.

60 FR 10694–10715. Final rule: “Endangered and Threatened Wildlife and Plants; Final Rule Determining Endangered Status for the Southwestern Willow Flycatcher.” February 27, 1995.

67 FR 18356–18395. Final rule: “Endangered and Threatened Wildlife and Plants; Final Rule Determining Designation of Critical Habitat for the Quino Checkerspot Butterfly (*Euphydras editha quino*).” April 15, 2002

70 FR 19562–19633. Final rule: “ Endangered and Threatened Wildlife and Plants; Final Rule Determining Designation of Critical Habitat for the Arroyo Toad (*Bufo californicus*); Final rule.” April 13, 2005.

70 FR 73699–73717. Proposed rule: “Designation of Critical Habitat for the Laguna Mountains Skipper: Proposed Rule.” December 13, 2005.

71 FR 74592–74615. Final Rule: “Final Rule Designation of Critical Habitat for the Laguna Mountains Skipper (*Pyrgus ruralis lagunae*).” December 12, 2006.

72 FR 72010 72213. Final rule: “Revised Designation of Critical Habitat for the Coastal California Gnatcatcher (*Polioptila californica californica*).” December 19, 2007.

73 FR 47706–47767. Final rule: “Designation of Critical Habitat for *Poa atropurpurea* (San Bernardino bluegrass) and *Taraxacum californicum* (California taraxacum).” August 14, 2008.

74 FR 28776–28862. Final rule: “Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Quino Checkerspot Butterfly (*Euphydryas editha quino*).” June 17, 2009.

74 FR 46836–46879. Final rule: “Eagle Permits; Take Necessary To Protect Interests in Particular Localities.” September 11, 2009

76 FR 7245–7467. Proposed rule: “Revised Critical Habitat for the Arroyo Toad (*Anaxyrus californicus*).” February 9, 2011

73 FR 50454-50496. Final rule: “Designation of Critical Habitat for *Acanthomintha ilicifolia* (San Diego thornmint).” August 26, 2008.

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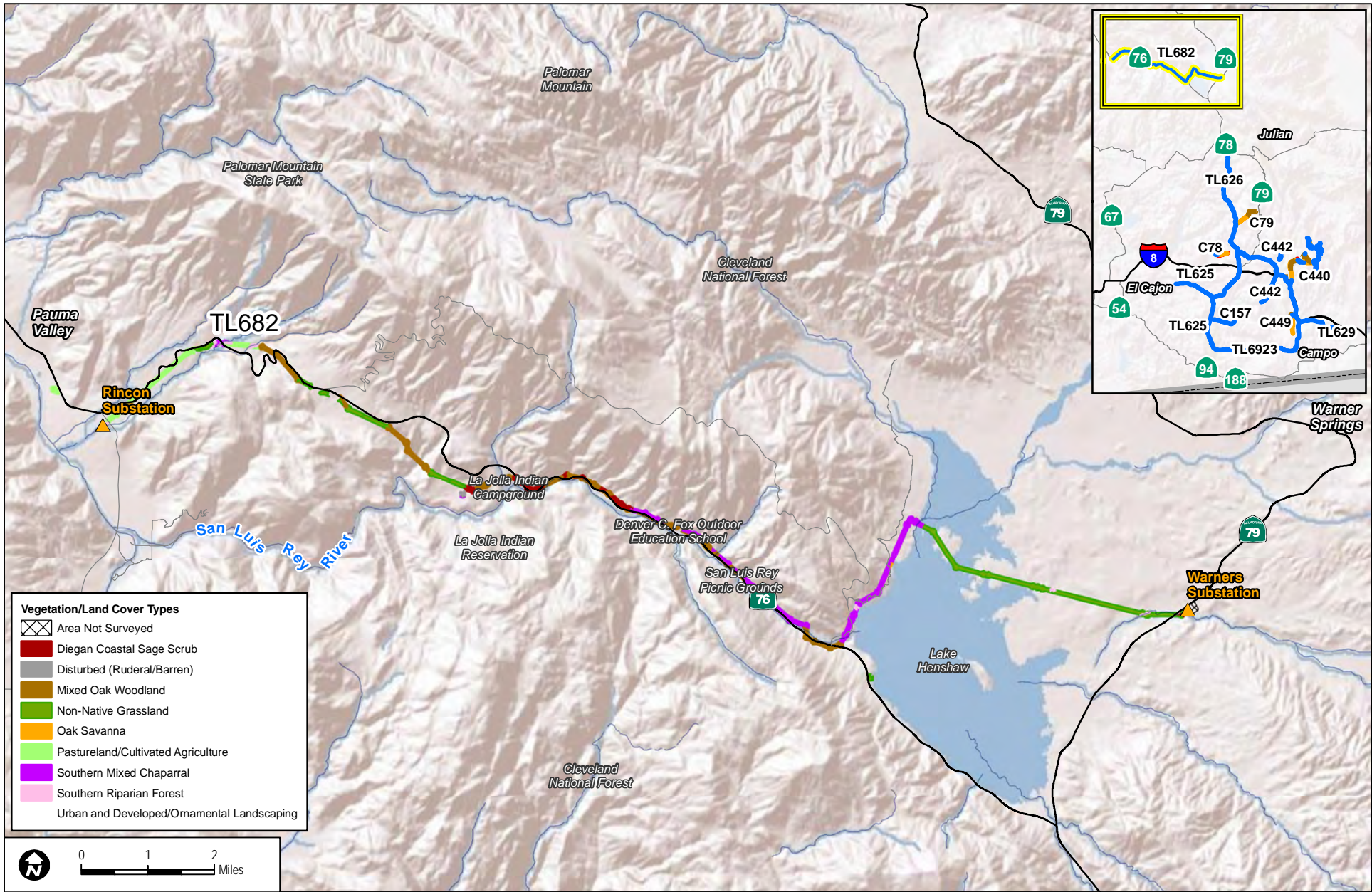
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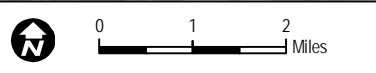
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Vegetation/Land Cover Types

- Area Not Surveyed
- Diegan Coastal Sage Scrub
- Disturbed (Ruderal/Barren)
- Mixed Oak Woodland
- Non-Native Grassland
- Oak Savanna
- Pastureland/Cultivated Agriculture
- Southern Mixed Chaparral
- Southern Riparian Forest
- Urban and Developed/Ornamental Landscaping



DUDEK

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

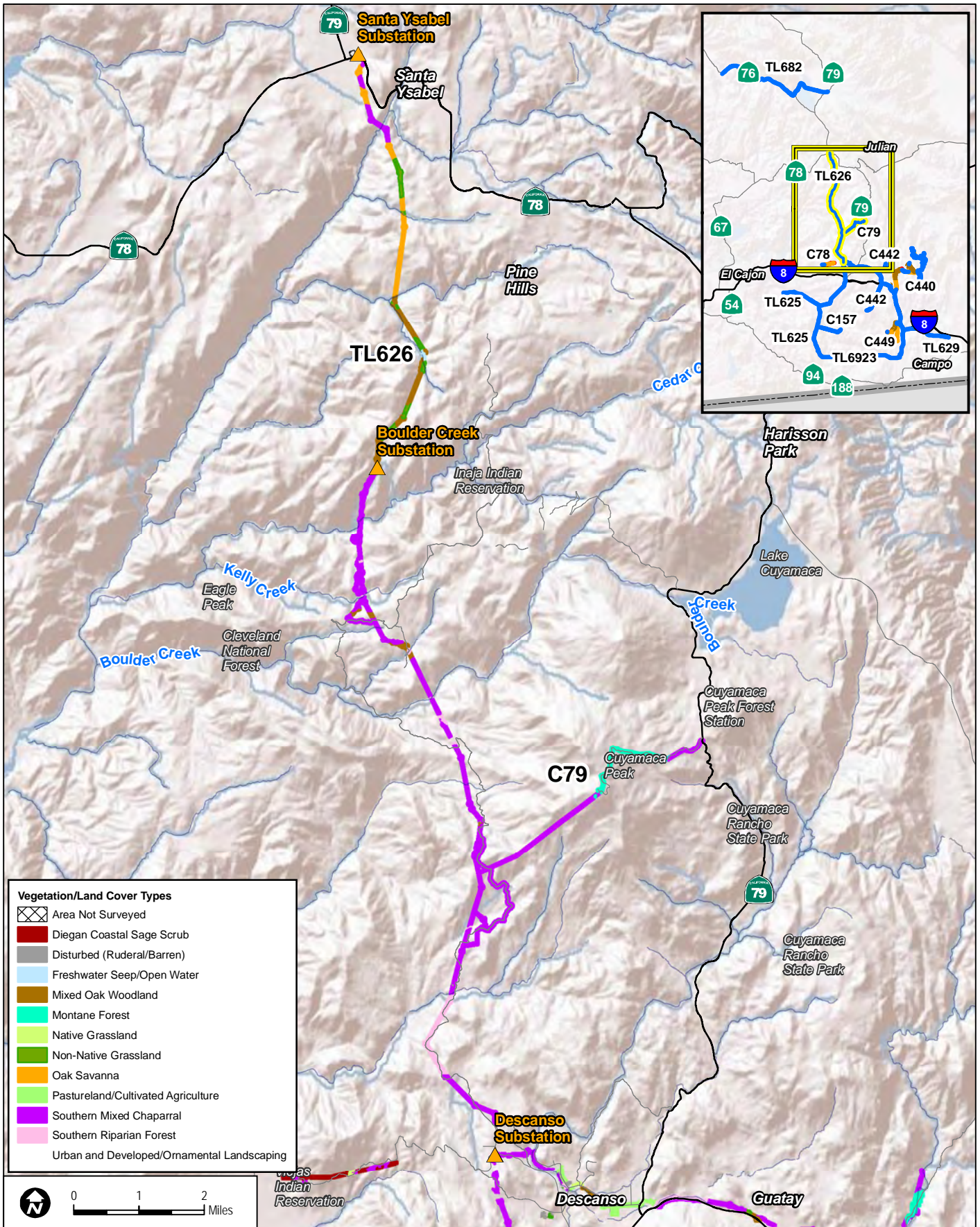
FIGURE D.4-1a

TL682 Vegetation Overview Map

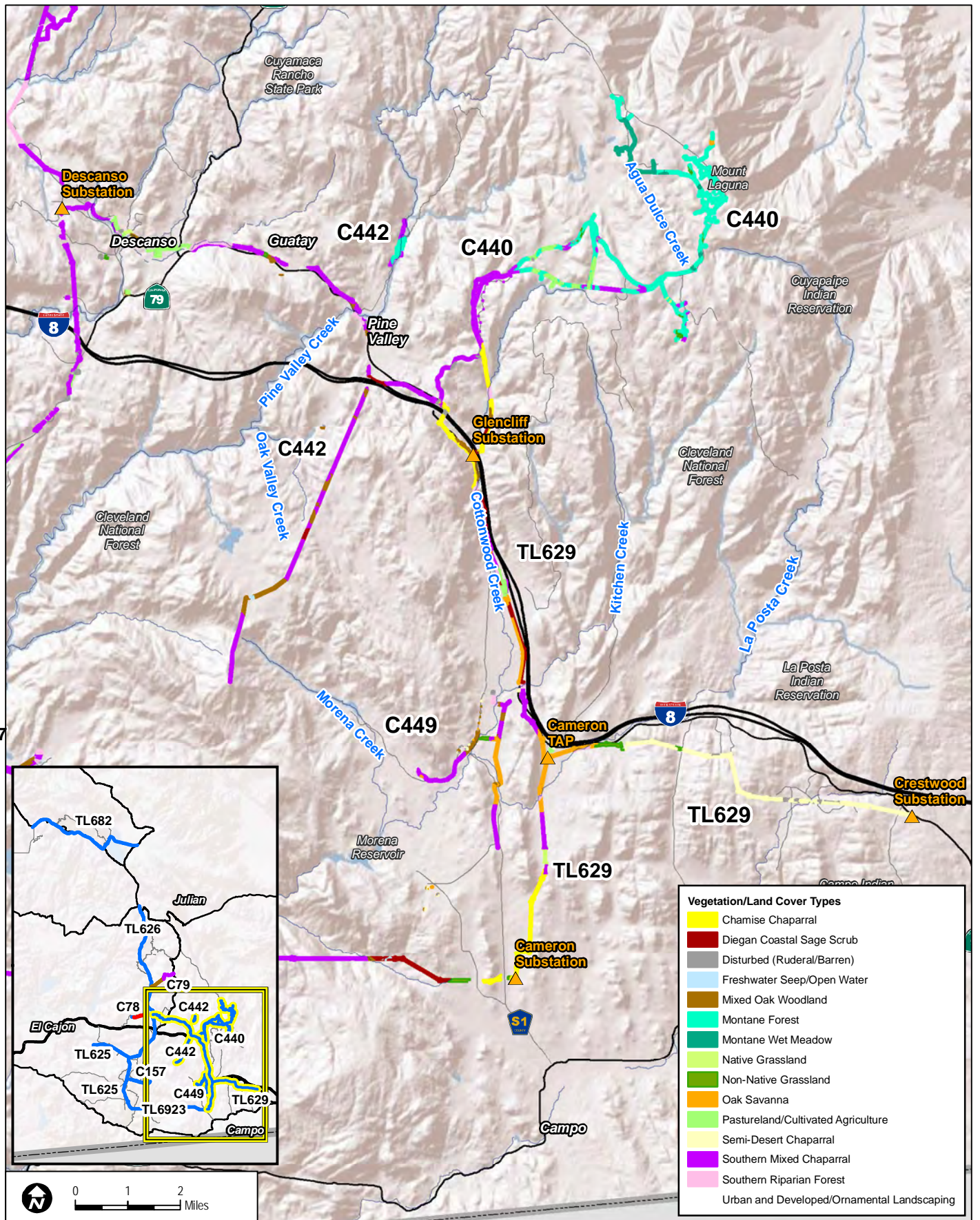
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SOURCE: SDG&E 2011, 2012; USGS; SanGIS 2012; Bing Maps

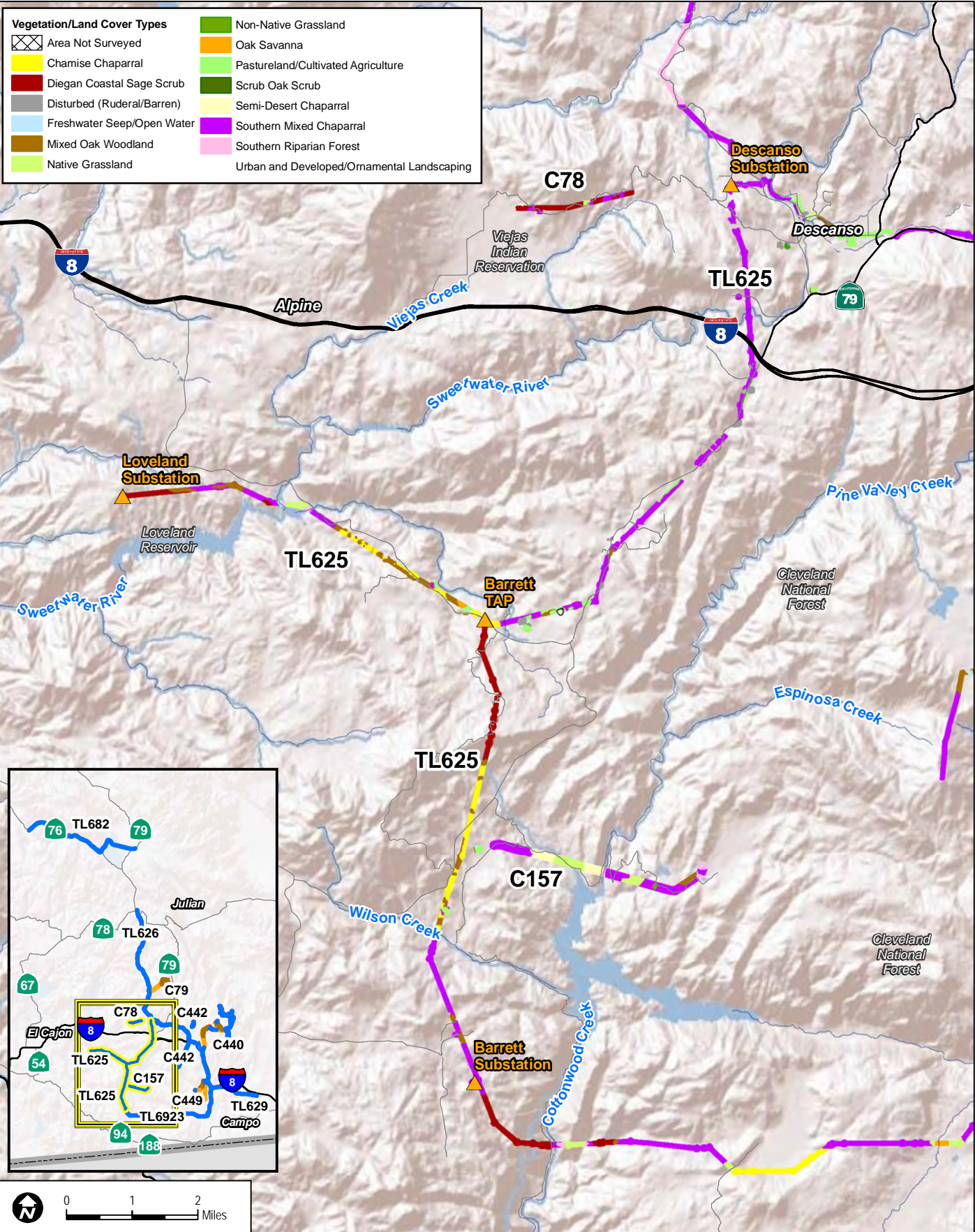
FIGURE D.4-1c

TL629, C440, C442, C449 Vegetation Overview Map

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

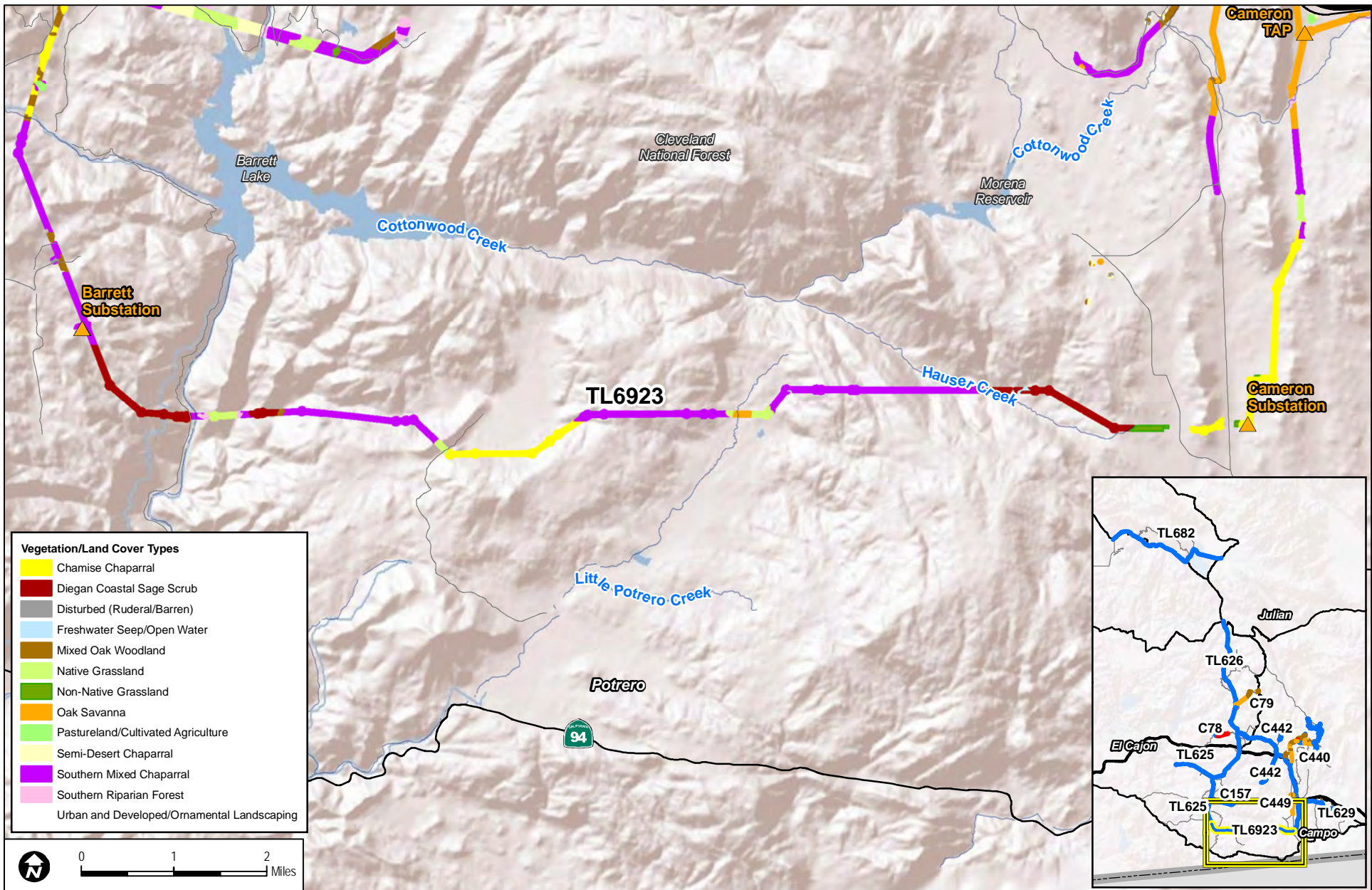
FIGURE D.4-1d

TL625, C78, C157 Vegetation Overview Map

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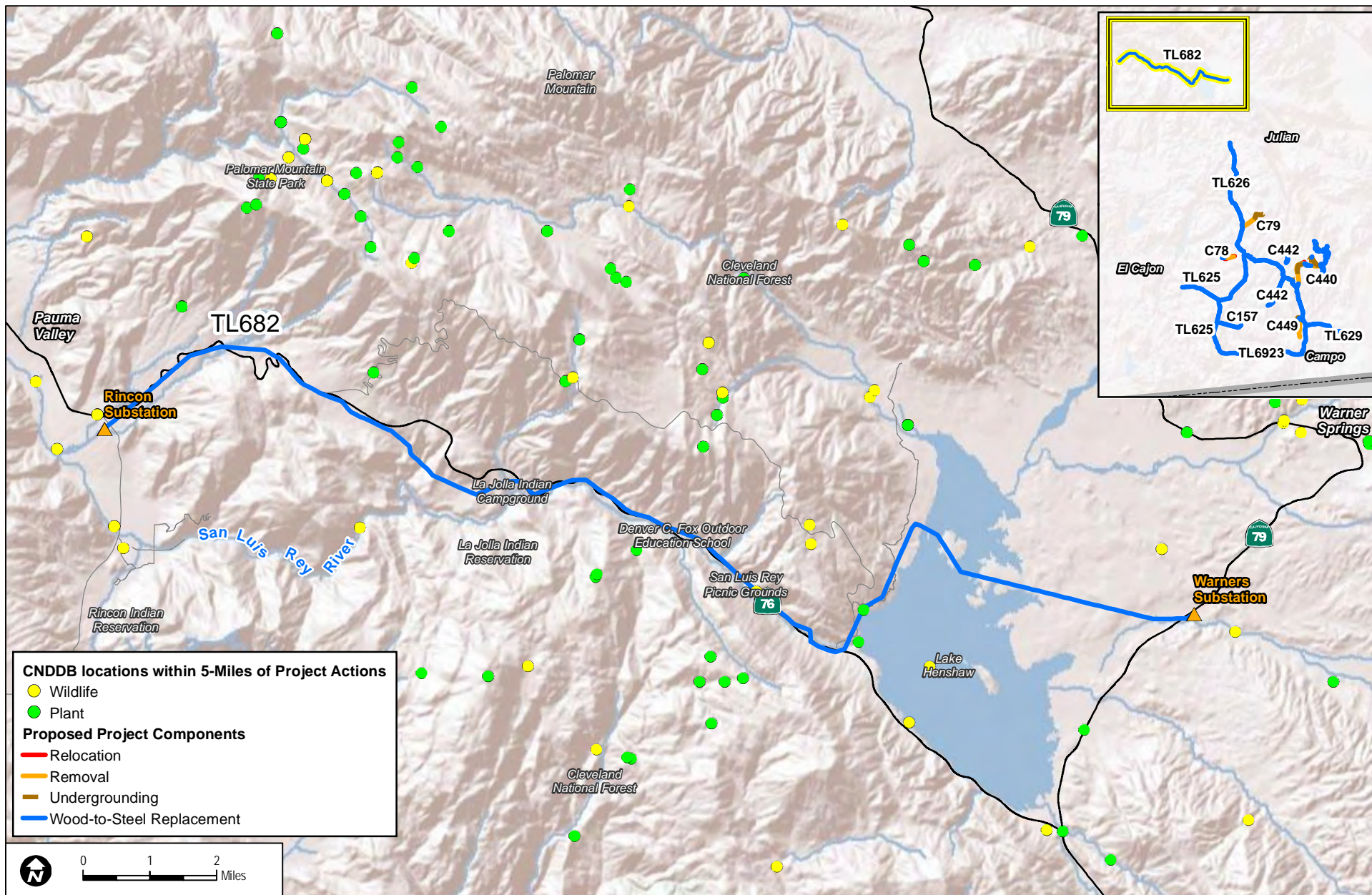
SOURCE: SDG&E 2011, 2012; USGS; SanGIS 2012; Bing Maps

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FIGURE D.4-1e
TL6923 Vegetation Overview Map

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CNDDB locations within 5-Miles of Project Actions

- Wildlife
- Plant

Proposed Project Components

- Relocation
- Removal
- Undergrounding
- Wood-to-Steel Replacement



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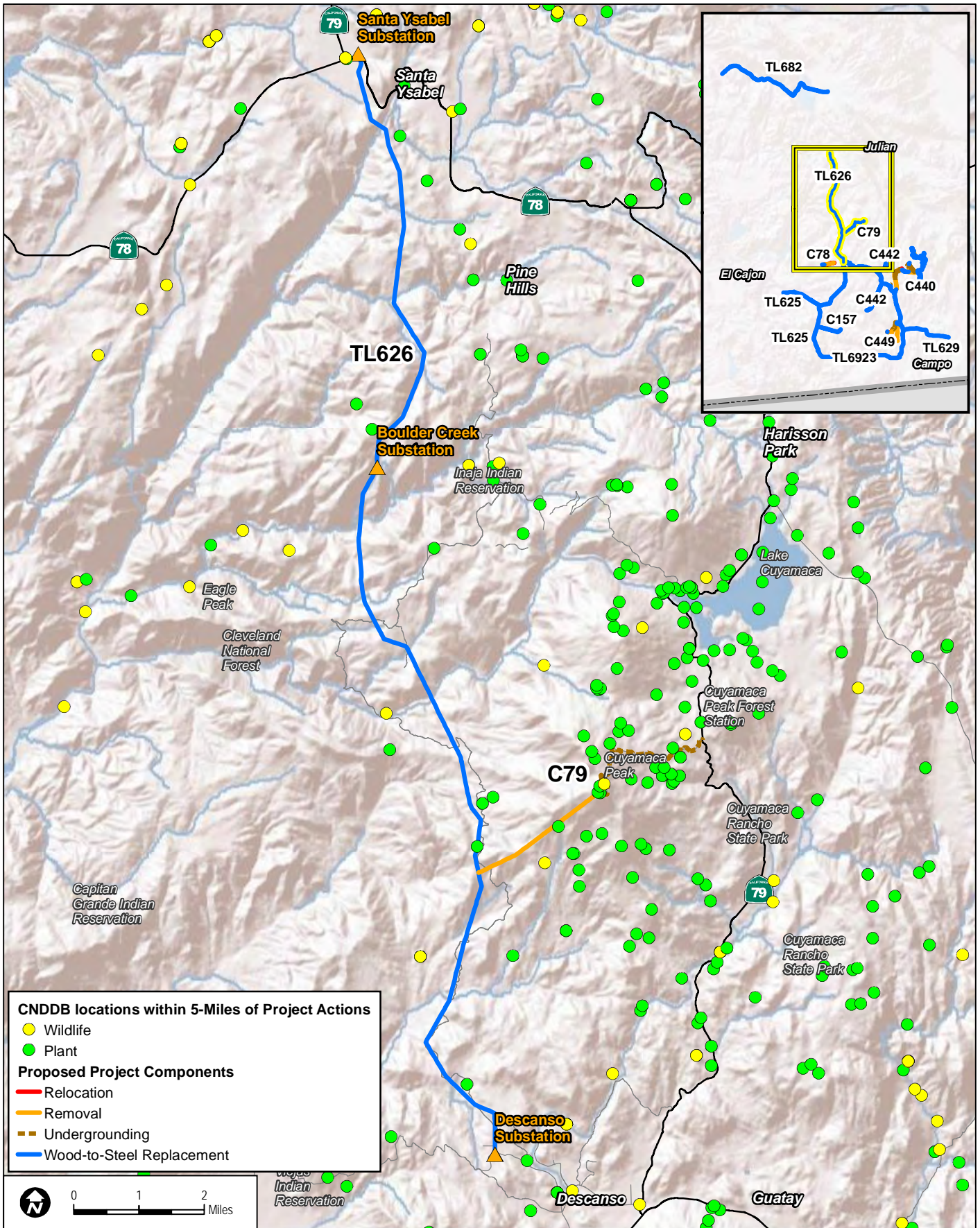
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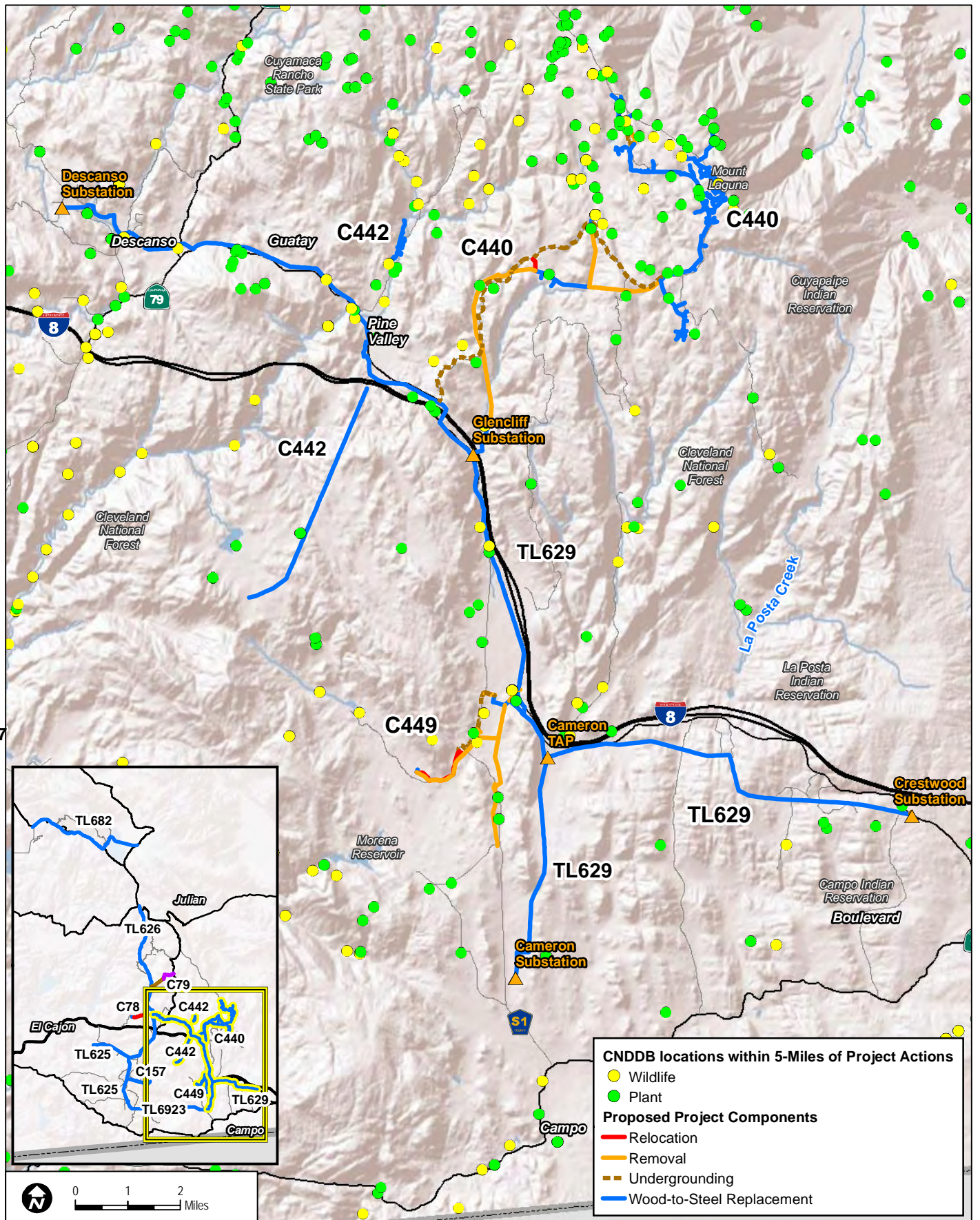
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FIGURE D.4-2a
TL682 CNDDB Overview Map

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

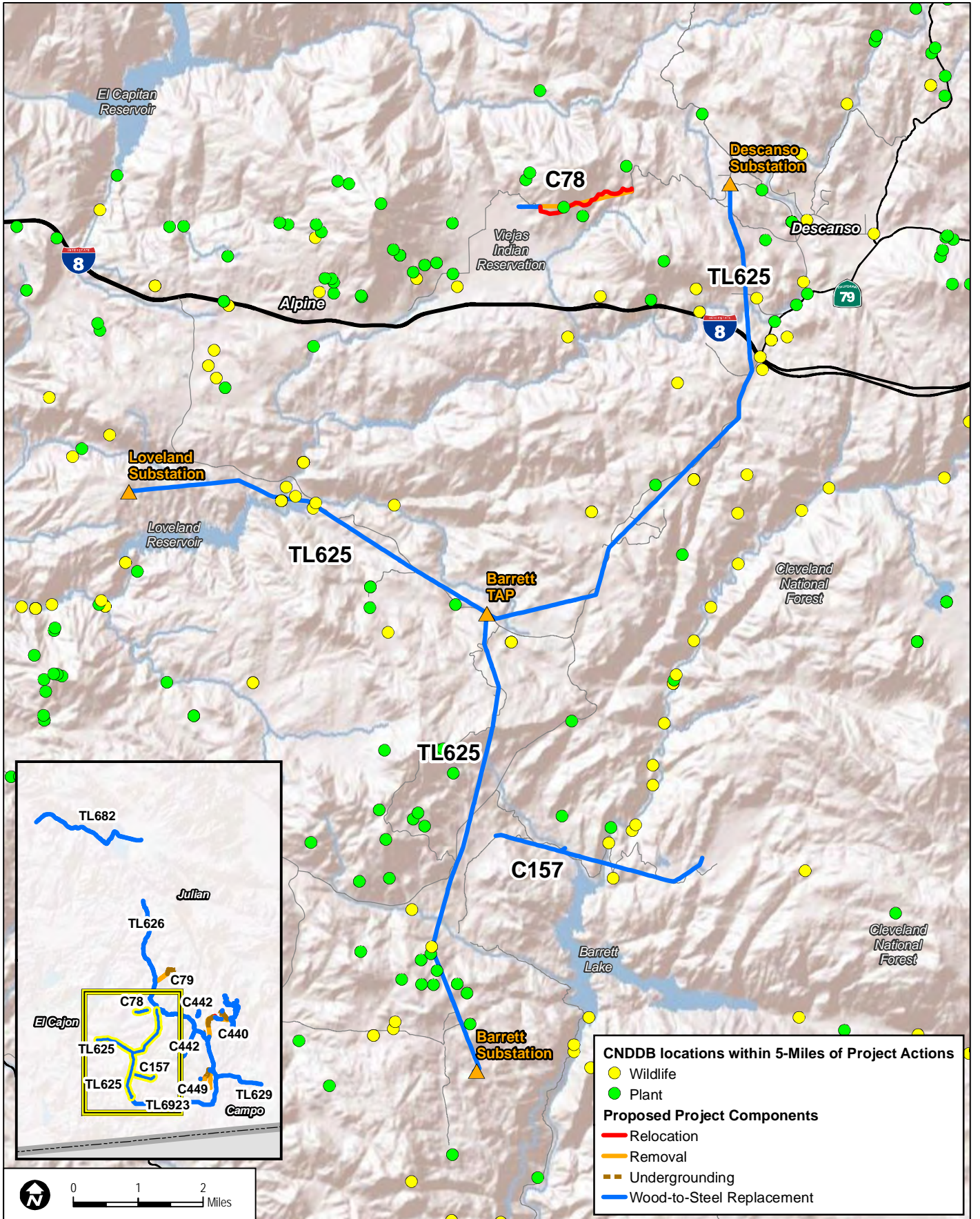
FIGURE D.4-2c

TL629, C440, C442, C449 CNDDB Overview Map

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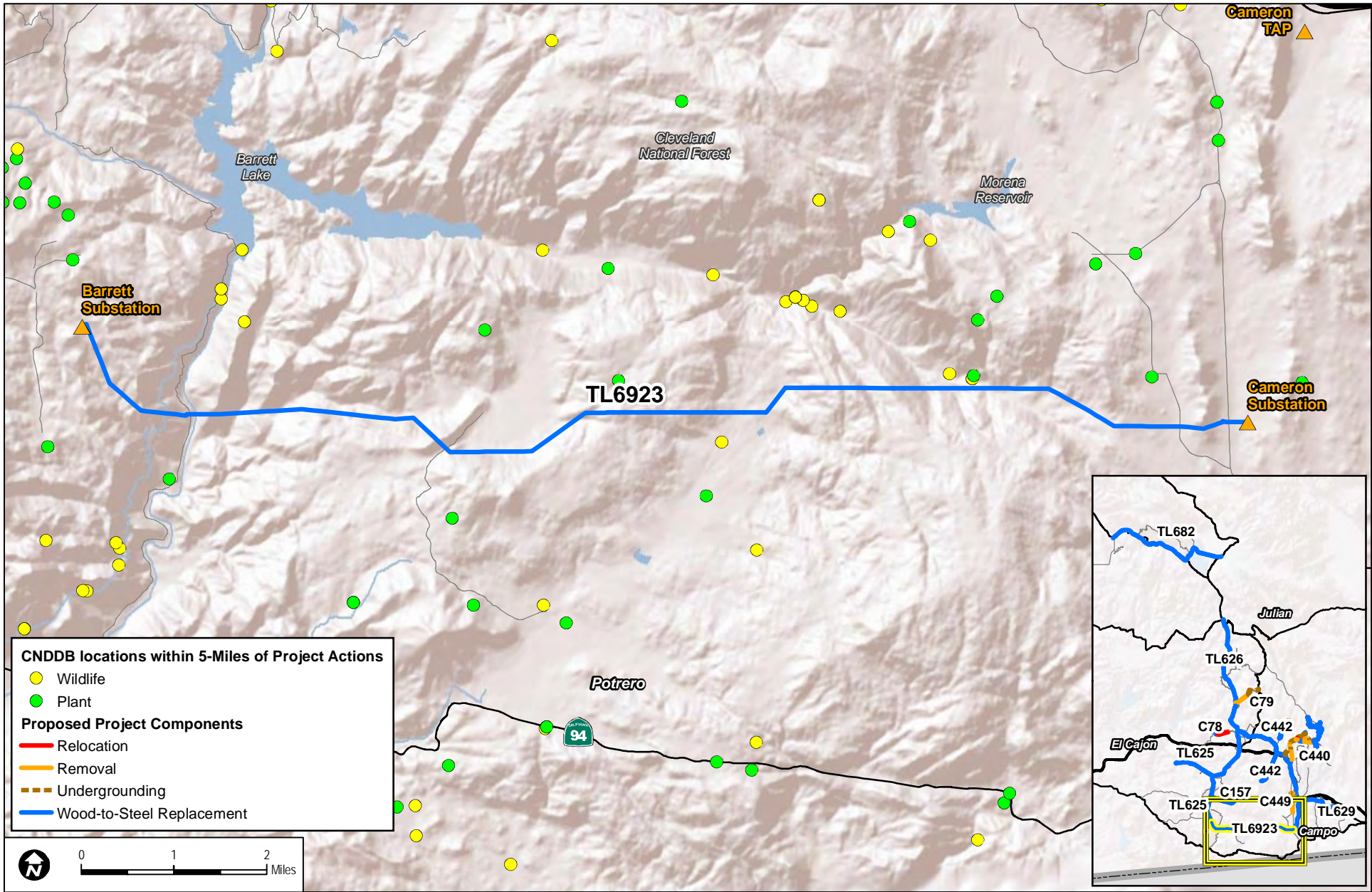
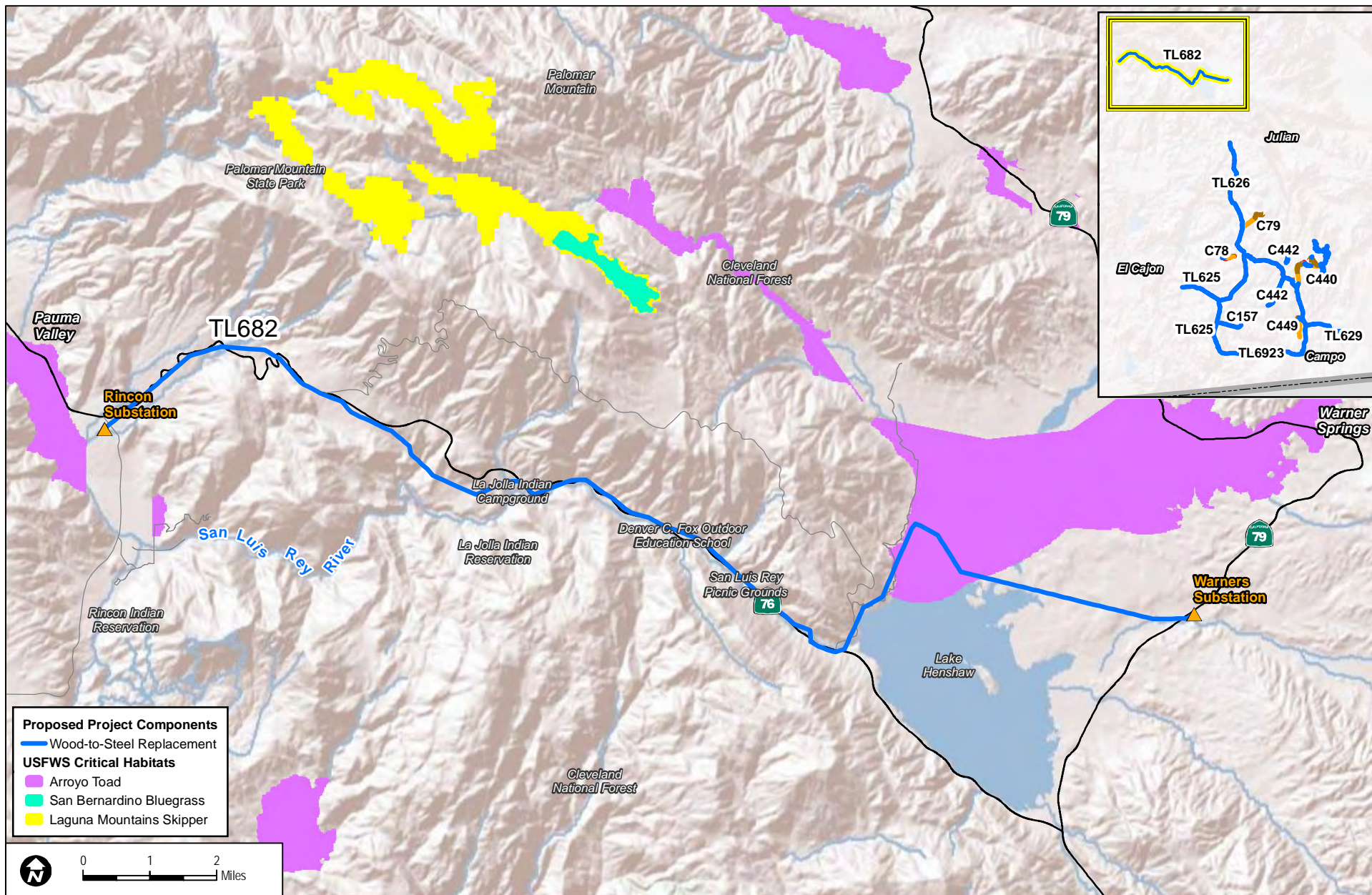
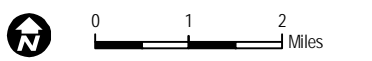


FIGURE D.4-2e
TL6923 CNDDB Overview Map

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- Proposed Project Components**
- Wood-to-Steel Replacement
- USFWS Critical Habitats**
- Arroyo Toad
 - San Bernardino Bluegrass
 - Laguna Mountains Skipper



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SOURCE: SDG&E 2011, 2012; USGS; SanGIS 2012; USFWS

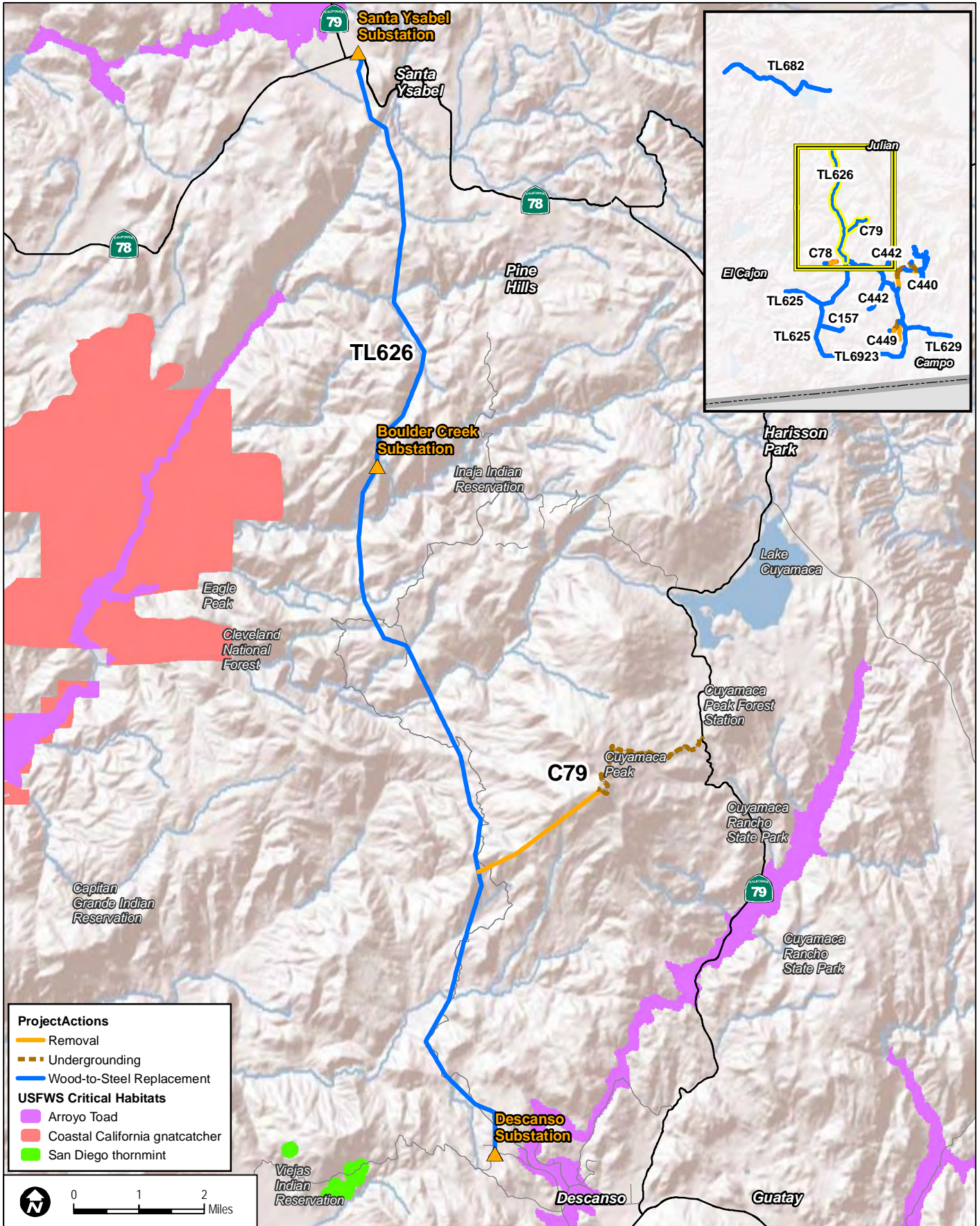
FIGURE D.4-3a

TL682 USFS/USFWS Critical Habitat Overview Map

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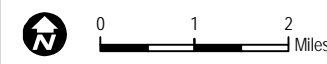


Project Actions

- Removal
- - - Undergrounding
- Wood-to-Steel Replacement

USFWS Critical Habitats

- Arroyo Toad
- Coastal California gnatcatcher
- San Diego thornmint



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SOURCE: SDG&E 2011, 2012; USGS; SanGIS 2012; USFWS

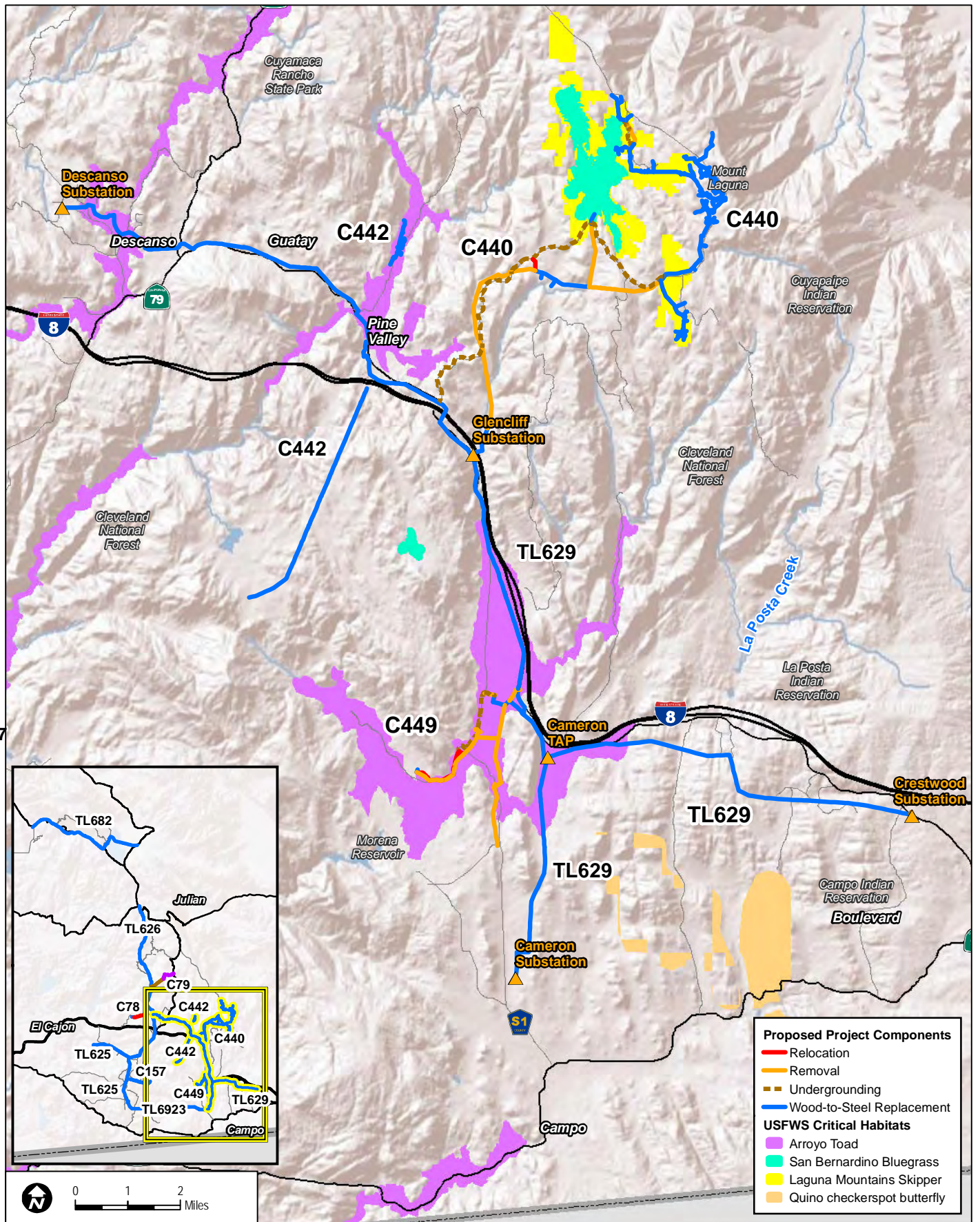
FIGURE D.4-3b

TL626, C79 USFS/USFWS Critical Habitat Overview Map

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- Proposed Project Components**
- Relocation
 - Removal
 - Undergrounding
 - Wood-to-Steel Replacement
- USFS Critical Habitats**
- Arroyo Toad
 - San Bernardino Bluegrass
 - Laguna Mountains Skipper
 - Quino checkerspot butterfly

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SOURCE: SDG&E 2011, 2012; USGS; SanGIS 2012; USFWS

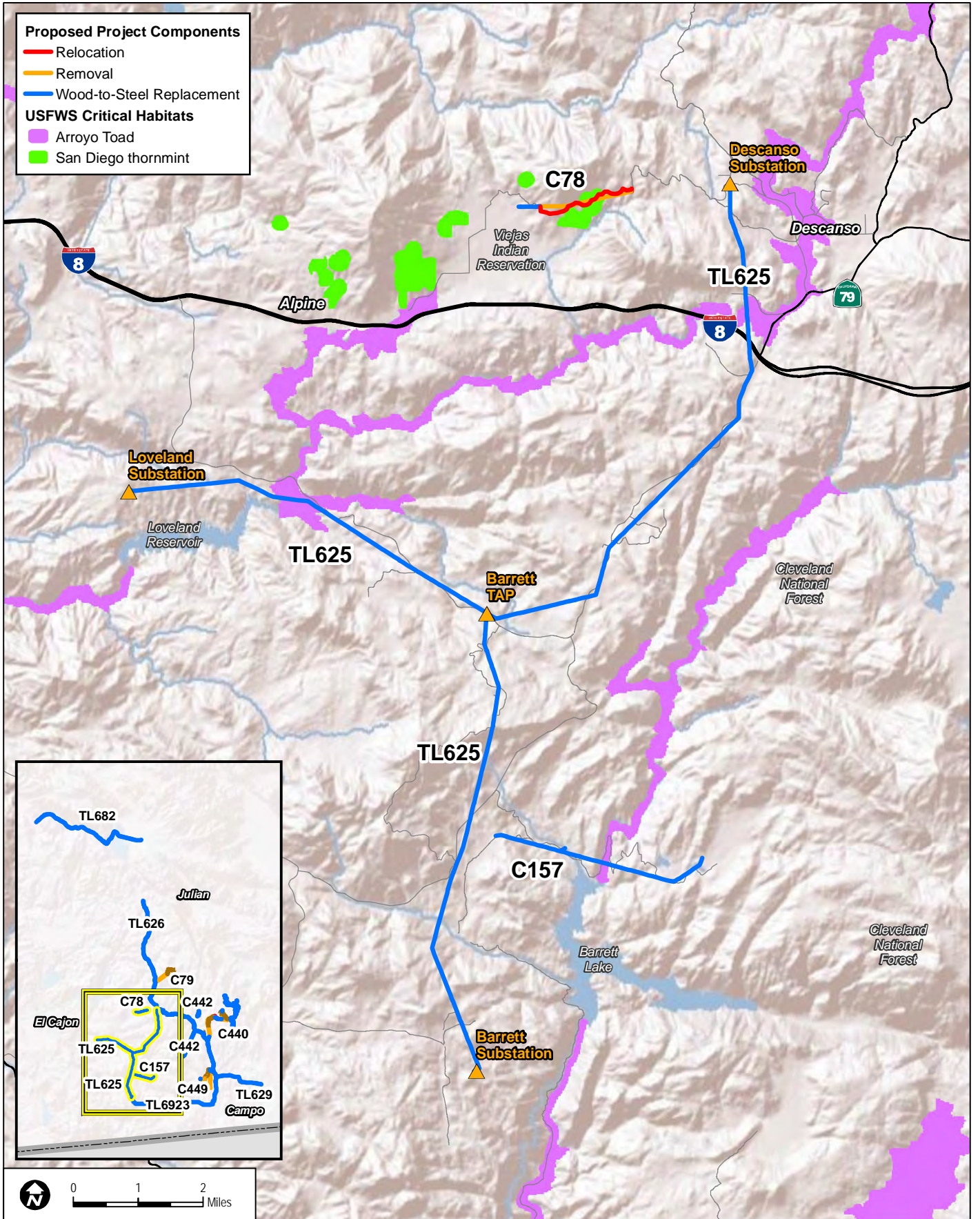
FIGURE D.4-3c

TL629, C440, C442, C449 USFS/USFWS Critical Habitat Overview Map

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SOURCE: SDG&E 2011, 2012; USGS; SanGIS 2012; USFWS

FIGURE D.4-3d

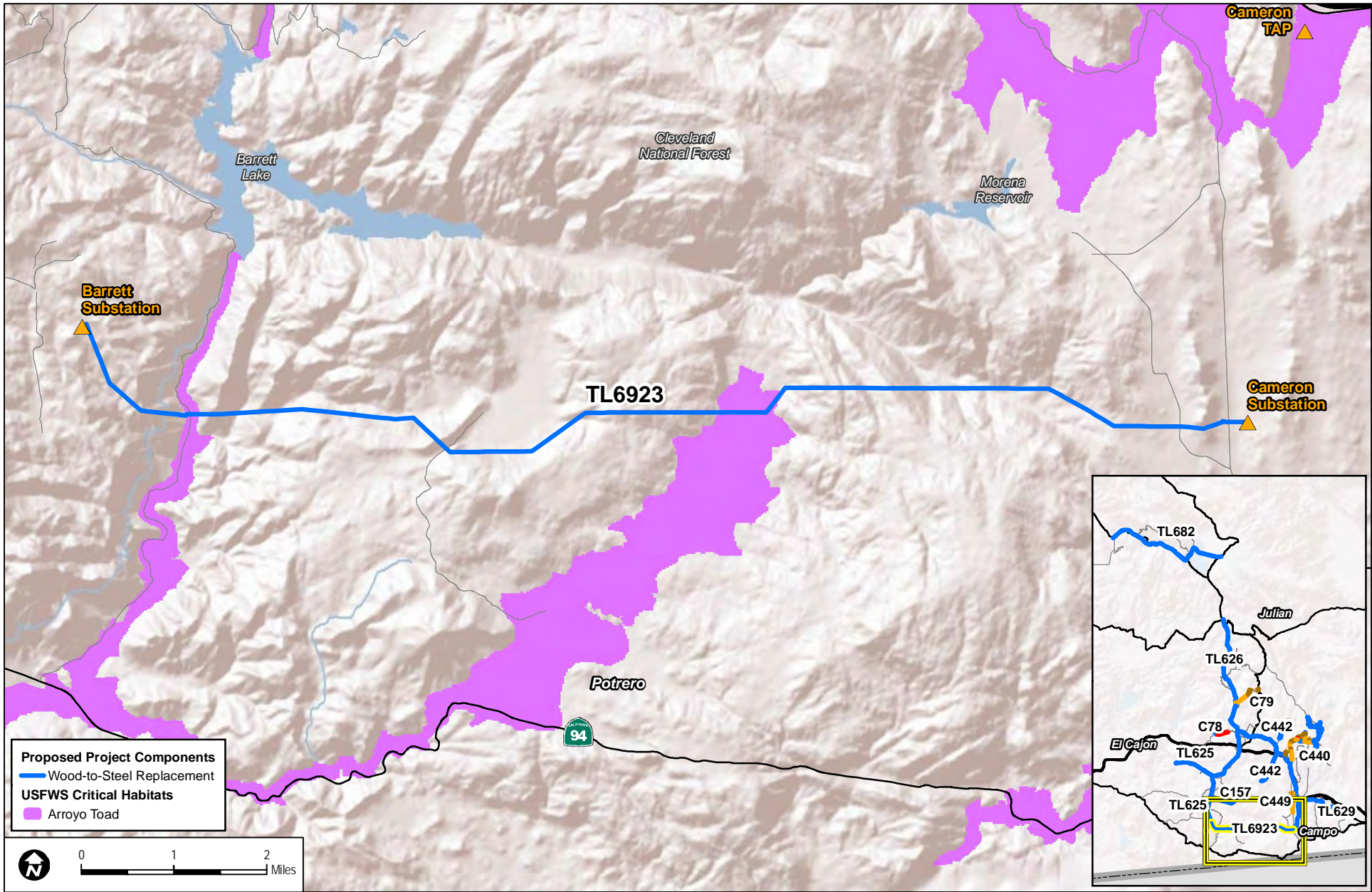
TL625, C78, C157 USFS/USFWS Critical Habitat Overview Map

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SOURCE: SDG&E 2011, 2012; USGS; SanGIS 2012; USFWS

FIGURE D.4-3e

TL6923 USFS/USFWS Critical Habitat Overview Map

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