TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

EXISTING CONDITIONS

In connection with its request for a Permit to Construct (PTC) the five Cleveland National Forest (CNF) Power Line Replacement Projects (Proposed Projects), San Diego Gas & Electric Company (SDG&E) previously submitted the Preliminary Plan of Development and all associated technical reports to the California Public Utilities Commission (CPUC). These materials were prepared in the context of SDG&E's application to the United States (U.S.) Forest Service (USFS) for a Master Special Use Permit to continue to construct, operate, and maintain existing SDG&E facilities within the CNF. The following discussion provides additional information regarding the regulatory background and environmental setting for the 69 kilvolt (kV) power lines included in the PTC application. This information supplements the materials previously submitted to the CPUC and is intended to facilitate the CPUC's review of the Proposed Projects under the California Environmental Quality Act (CEQA).

1 AIR QUALITY

1.0 Regulatory Background

Federal

The 1970 federal Clean Air Act (CAA) established national ambient air quality standards (AAQS) for six pollutants: carbon monoxide (CO), ozone (O_3), inhalable particulate matter (PM_{10}), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. These six criteria pollutants are known to have adverse impacts on human health and the environment. To protect human health and the environment, the U.S. Environmental Protection Agency (EPA) has set primary and secondary maximum ambient thresholds. The primary thresholds were set to protect human health, particularly that of children and the elderly, as well as individuals in the population that suffer from chronic lung conditions (e.g., asthma and emphysema). The secondary standards were set to protect the natural environment and prevent further deterioration of animals, crops, vegetation, and buildings. The combined primary and secondary standards are termed the National AAQS (NAAQS).

The 1977 CAA required each state to develop and maintain a State Implementation Plan (SIP) for each criteria pollutant that exceeds AAQS. The SIP serves as a tool to reduce pollutants that are known to cause impacts that exceed the ambient thresholds and to achieve compliance with the NAAQS. In 1990, the CAA was amended to strengthen regulation of both stationary and mobile emission sources for the criteria pollutants.

In July 1997, the U.S. EPA developed new health-based NAAQS for O_3 and PM_{10}. However, these standards were not fully implemented until 2001, after the resolution of several lawsuits. The new federal O_3 standard of 0.080 parts per million (ppm), established in 1997, was based on a longer averaging period (8 hours versus 1 hour), recognizing that prolonged exposure to O_3 is more damaging. In March 2008, the U.S. EPA further lowered the 8-hour O_3 standard from 0.080 ppm to 0.075 ppm. The new federal particulate matter (PM) standard is based on finer particles (2.5 microns and smaller versus 10 microns and smaller), recognizing that finer particles may have a higher residence time in the lungs and contribute to greater respiratory illness. In February 2007, the NO_2 AAQS was amended to lower the existing 1-hour standard of 0.25 ppm to 0.18 ppm, not to be exceeded, and established a new annual standard of 0.030 ppm,

not to be exceeded. Table 1: State and Federal Ambient Air Quality Standards contains a list of the NAAQS and California AAQS (CAAQS).

State

The California CAA of 1988 requires air districts to develop and implement strategies to attain CAAQS. For some pollutants, the California standards are more stringent than the national standards. Regional air quality management districts were required to prepare an air quality plan specifying how federal and state standards would be met.

The CARB enforces the CAAQS and works with the state's Office of Environmental Health Hazard Assessment (OEHHA) in identifying TACs and enforcing rules related to TACs, including the Air Toxic Hot Spots Information and Assessment Act of 1987. Enacted to identify TAC hot spots where emissions from specific sources may expose individuals to an elevated risk of adverse health effects, the act requires that a business or other establishment identified as a significant source of toxic emissions provide the affected population with information about health risks posed by the emissions.

The CARB also regulates mobile emission sources in California, such as construction equipment, trucks, and automobiles, and oversees the air districts. Relevant programs related to oversight of mobile source emissions include the Off-Road and On-Road Mobile Sources Reduction programs, the Portable Equipment Registration Program (PERP), and the Airborne Toxic Control Measure for Diesel PM (DPM) from Portable Engines. The Mobile Sources Emission Reduction programs are aimed at reductions of nitrogen oxides (NO_x), volatile organic compounds (VOCs), CO, and PM_{10}. The CARB has also adopted specific control measures for the reduction of DPM from off-road (in-use) diesel vehicles (rated at 25 horsepower or higher) such as backhoes, bulldozers, and other earthmovers used in construction projects. Additional DPM control measures are also in place for heavy-duty on-road diesel trucks operated by public utilities and municipalities. The PERP and Airborne Toxic Control Measure for DPM (for portable engines) provide for state-wide registration and control of DPM from portable engines rated 50 horsepower and higher.

Local

The San Diego Air Pollution Control District (SDAPCD) is the primary agency responsible for planning, implementing, and enforcing federal and state ambient standards in San Diego County. Therefore, the plans, rules, and regulations presented as follows apply to all sources, including those associated with the Proposed Projects, in the jurisdiction of SDAPCD.

The SDAPCD's air quality plans collectively provide an overview of the region's air quality and air pollution sources and identify the pollution-control measures needed to expeditiously attain and maintain air quality standards. The District's air quality plans include the San Diego Regional Air Quality Strategy (RAQS), addressing state requirements, and the San Diego portion of the California SIP, addressing federal requirements.

Table 1: State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	California Standard	Federal Standard	
			Primary	Secondary
O_3	1 hour	0.09 ppm (180 micrograms per cubic meter [µg/m^3])	Not Applicable (N/A)	N/A
	8 hour	0.070 ppm (137 µg/m^3)	0.075 ppm (147 µg/m^3)	0.075 ppm (147 µg/m^3)
PM_{10}	24 hour	50 µg/m^3	150 µg/m^3	150 µg/m^3
	Annual arithmetic mean	20 µg/m^3	N/A	N/A
Fine particulate matter ($PM_{2.5}$)	24 hour	N/A	35 µg/m^3	35 µg/m^3
	Annual arithmetic mean	12 µg/m^3	15 µg/m^3	15 µg/m^3
CO	1 hour	20 ppm (23 milligrams per cubic meter [mg/m^3])	35 ppm (40 mg/m^3)	N/A
	8 hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	N/A
	8 hour (Lake Tahoe)	6 ppm (7 mg/m^3)	N/A	N/A
NO_2	1 hour	0.18 ppm (339 µg/m^3)	0.100 ppm (188 µg/m^3)	N/A
	Annual arithmetic mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	0.053 ppm (100 µg/m^3)
SO_2	1 hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)	N/A
	3 hour	N/A	N/A	0.5 ppm (1,300 µg /m^3)
	24 hour	0.04 ppm (105 µg/m^3)	N/A	N/A
Lead	30 day	1.5 µg/m^3	N/A	N/A
	Rolling 3 month	N/A	0.15 µg/m^3	0.15 µg/m^3
	Quarterly	N/A	1.5 µg/m^3	1.5 µg/m^3

Sources: California Air Resources Board (CARB), 2010

Table Notes:
1. California standards for O_3, CO (except Lake Tahoe), SO_2 (1 and 24 hour), NO_2, suspended PM— PM_{10}, $PM_{2.5}$, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than O_3, PM, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current federal policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25 degrees 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. Any equivalent procedure which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010). Note that the U.S. EPA standards are in units of parts per billion (ppb). California standards are in units of ppm. To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standards of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.
9. On June 9, 2010, the U.S. EPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The U.S. EPA also proposed a new automated Federal Reference Method (FRM) using ultraviolet technology, but will retain the older pararosaniline methods until the new FRM have adequately permeated State monitoring networks. The U.S. EPA also revoked both the existing 24-hour SO_2 standard of 0.14 ppm and the annual primary SO_2 standard of 0.030 ppm, effective August 23, 2010. The secondary SO_2 standard was not revised at that time; however, the secondary standard is undergoing a separate review by the U.S. EPA. Note that the new standard is in units of parts per billion. California standards are in units of ppm. To directly compare the new primary national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
8. The CARB has identified lead and vinyl chloride as "toxic air contaminants" (TACs) with no threshold level of exposure for adverse health effects established. These actions allow for implementation of control measures at levels below the ambient concentrations specified for these pollutants.
9. National lead standard, rolling 3-month average; final rule signed October 15, 2008.

Ozone Air Quality Management Plan

In 2007, the SDAPCD submitted a SIP to the U.S. EPA that outlined the combination of local, state, and federal actions and emission control regulations that would allow San Diego County to reach attainment status for the previously applicable 0.08 ppm federal 8-hour O_3 standard by 2009. As the current federal 8-hour O_3 standard is 0.075 ppm, the SDAPCD will have to submit an updated SIP to address the new, more stringent standard.

The SDAPCD maintains the RAQS, which acts as a road map demonstrating how the district will eventually meet the state O_3 AAQS. The RAQS details the measures and regulations that focus on managing and reducing O_3 precursors, such as NO_x and VOCs. The RAQS control measures concentrate on stationary sources that are under the SDAPCD's jurisdiction; however, all emission sources and control measures, including any under the jurisdiction of the CARB (e.g., on-road motor vehicles, off-road vehicles and equipment, and consumer products) and U.S. EPA (e.g., aircraft, ships, trains, and pre-empted off-road equipment) are included.

Particulate Matter Air Quality Management Plan

The CAA does not require local districts to establish an air quality management plan for state PM_{10} nonattainment, but the SDAPCD has prepared a report entitled, Measures to Reduce PM in San Diego County. The SDAPCD is considering rulemaking for source category-specific PM control measures for emissions from residential wood combustion and from fugitive dust generated at construction sites and from unpaved roads.

San Diego Air Pollution Control District Regulation IV – Prohibitions, Rule 50 – Visible Emissions

This rule prohibits any activity that will create air contaminant emissions darker than 20 percent opacity for more than an aggregate of three minutes in any consecutive 60-minute time period.

San Diego Air Pollution Control District Regulation IV – Prohibitions, Rule 51 – Nuisance

This regulation prohibits any activity that will discharge air contaminants that cause or have a tendency to cause injury, detriment, nuisance, or annoyance to people and the public or damage to any business or property.

San Diego Air Pollution Control District Regulation IV – Prohibitions, Rule 55 – Fugitive Dust Control

This regulation prohibits any activity that will discharge visible dust emissions into the atmosphere beyond the property line bounding the activity for more than three minutes during any 60 minute period. This regulation also prohibits visible roadway dust due to track-out or carry-out.

San Diego Air Pollution Control District Rule XV – Federal Conformity

The federal conformity rule prohibits any federal actions that may be inconsistent with SDAPCD efforts to achieve attainment with the NAAQS.

1.1 Environmental Setting

Each of the Proposed Projects includes the reconstruction of an existing 69 kV power line. The environmental setting includes the current and on-going operation and maintenance of each of the 69 kV power lines in their existing locations.

Regional Climate and Meteorology

The Proposed Projects are located in San Diego County, which is located within the San Diego Air Basin and under the jurisdiction of the SDAPCD. Climate in the San Diego Air Basin is generally warm, with low annual rainfall that occurs mostly during the winter months. Climate plays an important role in the air quality of the San Diego Air Basin. When cool, moist air from the coast travels toward the higher elevations, a temperature inversion can occur. This inversion layer prevents polluted air from rising and dispersing. According to the SDAPCD, most air quality exceedances are recorded on the lower mountain slopes that experience an inversion layer.

A warm, dry Mediterranean climate prevails over the CNF, consisting of dry, hot summers and cool, moderately wet, mild winters. The average annual precipitation is approximately 15 to 35 inches. The climate of CNF, as with all of Southern California, is largely controlled by the strength and position of the Pacific High, which is a semi-permanent high pressure area located over the Pacific Ocean. This high-pressure area over the coast of California creates a repetitive pattern of frequent early morning cloudiness, hazy afternoon shine, clean daytime onshore breezes and little temperature change throughout the year. Throughout the summer, high levels of PM and ground-level O_3 exist in the region. The sunny climate, warm temperatures, and westerly winds cause O_3 to be transported from the coast of San Diego, which leads to generally high O_3 levels in region during the summer season.

Criteria Air Pollutants

O_3, particulate matter (PM_{10}, and $PM_{2.5}$), CO, NO_2, and SO_2 are all criteria air pollutants (CAPs) that are regulated in California. VOCs, also referred to as reactive organic gases (ROGs), are also regulated as precursors to the formation of O_3. These criteria pollutants and their effects on humans are discussed in the following sections.

Ozone

O_3 is a colorless gas that is not directly emitted as a pollutant, but is formed when hydrocarbons and NO_x react in the presence of sunlight. Low wind speeds or stagnant air mixed with warm temperatures typically provide optimum conditions for the formation of O_3. Because O_3 formation does not occur quickly, O_3 concentrations often peak downwind of the emission source. As a result, O_3 is of regional concern, impacting a larger area. When inhaled, O_3 irritates and damages the respiratory system.

Particulate Matter

PM—defined as particles suspended in a gas—is often a mixture of substances, including metals, nitrates, organic compounds, and complex mixtures such as diesel exhaust and soil. PM can be traced back to both man-made and natural sources. The most common sources of natural PM are dust and fires, while the most common man-made source is the combustion of fossil fuels.

PM causes irritation to the human respiratory system when inhaled. The extent of the health risks due to PM exposure can be determined by the size of the particles. The smaller the particles, the deeper they can be deposited in the lungs. PM is often grouped into two categories—inhalable PM less than 10 microns in diameter (PM_{10}) and fine PM less than 2.5 microns in diameter ($PM_{2.5}$).

Carbon Monoxide

CO is a colorless, odorless, and tasteless gas that is directly emitted as a by-product of combustion. CO concentrations tend to be localized to the source with the highest concentrations being associated with cold, stagnant weather conditions. CO is readily absorbed through the lungs into the blood, where it reduces the ability of the blood to carry oxygen.

Nitrogen Oxides

NO_x is a generic name for the group of highly reactive gases that contain nitrogen and oxygen in varying amounts. Many of the NO_x are colorless and odorless. However, one common pollutant, NO_2, along with particles in the air can often be seen as a reddish-brown layer over many urban areas.

NO_x form when fuel is burned at high temperatures. Typical manmade sources of NO_x include motor vehicles, fossil-fueled electricity generation utilities, and other industrial, commercial, and residential sources that burn fuels. NO_x can harm humans by affecting the respiratory system. Small particles can penetrate the sensitive parts of the lungs and can cause or worsen respiratory disease and can aggravate existing heart conditions.

As discussed previously, O_3 is formed when NO_x and VOCs react with sunlight.

Sulfur Oxides

Sulfur oxides (SO_x) are formed when sulfur-containing materials are processed or burned. SO_2 sources include industrial facilities—such as petroleum refineries and cement manufacturing and metal processing facilities—locomotives, large ships, and some non-road diesel equipment.

A wide variety of health and environmental impacts are associated with SO_2 because of the way it reacts with other substances in the air. People with asthma, children, the elderly, and people with heart or lung disease are particularly sensitive to SO_x emissions. When inhaled, these particles gather in the lungs and contribute to increased respiratory symptoms and disease, difficulty in breathing, and premature death.

Volatile Organic Compounds

VOCs (or ROGs) are a group of chemicals that react with NO_x and hydrocarbons in the presence of heat and sunlight to form O_3. Examples of VOCs include gasoline fumes and oil-based paints. This group of chemicals does not include CH_4 or other compounds determined by the U.S. EPA to have negligible photochemical reactivity.

Air Quality Designations

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

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

The current CAAQS, NAAQS, and SDAPCD attainment statuses are provided in Table 2: San Diego Air Pollution Control District Attainment Status. San Diego County is currently designated as a nonattainment area for the state and federal O_3 standards. In addition, San Diego County is currently designated as a nonattainment area for the state $PM_{2.5}$ and PM_{10} standards, but is designated as attainment/unclassified for the federal standards of $PM_{2.5}$ and PM_{10}.

Table 2: San Diego Air Pollution Control District Attainment Status

Criteria Air Pollutants	State	Federal
O_3 (8-hour)	Nonattainment	Nonattainment
$PM_{2.5}$	Nonattainment	Unclassified/Attainment[1]
PM_{10}	Nonattainment	Unclassified
CO	Attainment	Unclassified/Attainment
NO_2	Attainment	Unclassified/Attainment
SO_2	Attainment	Attainment
Sulfates	Attainment	N/A
Lead	Attainment	Attainment
Hydrogen Sulfide	Unclassified	N/A
Visibility Reducing Particle	Unclassified	N/A

Source: CARB, 2012
Table Note: 1. Any area that cannot be classified on the basis of available information is designated as Unclassified.

Toxic Air Contaminants

TACs are the listed toxic pollutants as established by California's OEHHA. Under AB 1807, the CARB is required to use certain criteria in prioritizing, identifying, and controlling air toxics. In selecting substances for review, the CARB must consider pollutants that may pose a threat to human health or cause or contribute to serious illnesses or death. For many TACs, no threshold level exists below which adverse health impacts may not be expected to occur. This contrasts with the CAPs, for which acceptable levels of exposure can be determined and for which the state and federal governments have set AAQS.

As mentioned previously, PM emissions generated by diesel combustion, or DPM, are of particular concern in California. In 1998, California's OEHHA completed a 10-year comprehensive human health assessment of diesel exhaust. The results of this assessment formed the basis for the CARB to formally identify DPM as a TAC that poses a threat to human health. Because no established AAQS exist for TACs, they are managed on a case-by-case basis, depending on the quantity and type of emissions and the proximity of potential receptors. DPM emissions result from a wide variety of sources, including on-road and off-road vehicles and stationary and portable internal combustion engines. In California, diesel internal combustion engines were estimated to generate 28,000 tons of PM emissions in 2000.

Table 3: Estimated Ambient Exposure to Diesel Particulate Matter in California presents estimated outdoor ambient DPM exposure based on more strict regulation and the associated potential inhalation cancer risks in a population of one million over a 70-year lifetime.

Table 3: Estimated Ambient Exposure to Diesel Particulate Matter in California

Year	Ambient Exposure Concentration and Potential Risk ($\mu g/m^3$)	Potential Inhalation Risk (excess cancers per million)
2000	1.8	540
2010	1.5	450
2020	1.2	360

Source: CARB, 2000

Ambient Air Quality

Violations of NAAQS and CAAQS for O_3, PM, and CO have occurred historically in the combined area of the Proposed Projects. The frequency of violations and current air quality conditions at the two monitoring sites nearest[1] to the Proposed Projects are summarized for O_3, PM_{10}, and $PM_{2.5}$ in Table 4: Recent Air Quality Concentrations and Table 5: Frequency of Air Quality Standard Violation. As shown in these tables, the air quality in the surrounding areas has been relatively stable from 2008 to 2011.

Sensitive Receptors

Some exposed population groups, including children, the elderly, and the ill, can be especially vulnerable to airborne chemicals and irritants. These groups are termed "sensitive receptors" There are no facilities that serve sensitive receptors within the vicinity of the Proposed Projects.

[1] The El Cajon monitoring station is located approximately 10 miles west of TL 625 at 1155 Redwood Ave in El Cajon. The San Diego monitoring station is located approximately 25 miles west of TL 625 at 5555 Overland Avenue in San Diego.

Table 4: Recent Air Quality Concentrations

Monitoring Site	Year	O_3, National Max 8-hour (ppm)	PM_{10}, National Max 24-hour ($\mu g/m^3$)	$PM_{2.5}$, National Max 24-hour ($\mu g/m^3$)
El Cajon	2011	0.086	37.0	38.7
	2010	0.078	41.0	27.7
	2009	0.082	55.0	56.5
	2008	0.093	40.2	30.7
San Diego	2011	0.086	47.0	29.9
	2010	0.073	33.0	18.7
	2009	0.082	50.0	25.1
	2008	0.093	41.0	27.2

Source: CARB, 2012

Table 5: Frequency of Air Quality Standard Violation

Monitoring Site	Year	Number of Days in Exceedance of Standard				
		State 1-Hour O_3	National 1-Hour O_3	State 24 Hour PM_{10}	National 24-Hour PM_{10}	National 24-Hour $PM_{2.5}$
El Cajon	2011	1	0	0	- -	1
	2010	1	0	0	0	0
	2009	2	0	6	0	3
	2008	3	0	0	0	0
San Diego	2011	1	0	0	0	0
	2010	2	0	0	0	0
	2009	2	0	0	0	0
	2008	4	0	0	0	- -

Note: Days over PM_{10} CAAQS are based on monitoring every sixth day.
Source: CARB, 2012

2 BIOLOGICAL RESOURCES

2.0 Regulatory Setting

Federal

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) protects plants and wildlife that are listed as endangered or threatened by the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA

Fisheries). The FESA prohibits take of endangered wildlife, where "take" is defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (16 U.S. Code [U.S.C.] Sections 1532(19), 1538). For plants, this statute governs removing, possessing, maliciously damaging, or destroying endangered plants on federal land and removing, cutting, digging-up, damaging, or destroying endangered plants on non-federal land in knowing violation of state law (16 U.S.C. Section 1538(c)).

Under Section 7 of the FESA, federal agencies are required to consult with the USFWS and/or NOAA Fisheries if their actions, including permit approvals or funding, could adversely affect a listed species (including plants) or its critical habitat. Through consultation and the issuance of a Biological Opinion, the USFWS and/or NOAA Fisheries may issue an incidental take statement, allowing take of the species that is incidental to another authorized activity, provided that the action is not likely to jeopardize the continued existence of the species. Section 10 of the FESA provides for issuance of incidental take permits to private parties with the development of a habitat conservation plan (HCP). The USFWS previously issued take authorization for the development, installation, maintenance, operation, and repair of SDG&E facilities in approving the SDG&E Subregional Natural Community Conservation Plan (NCCP) and the Low-Effect HCP for the Quino Checkerspot Butterfly (QCB).

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) recognizes international treaties between the U.S. and other countries that have been accorded to protect migratory birds and any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit.

The regulations governing migratory bird permits can be found in 50 Code of Federal Regulations (CFR) Part 13 (General Permit Procedures) and 50 CFR Part 21 (Migratory Bird Permits). The USFWS is responsible for enforcing the MBTA and has discretion to apply the MBTA in the context of electric and other energy facilities. The USFWS has worked with the Avian Power Line Interaction Committee (APLIC) to develop and release voluntary design guidelines to reduce avian electrocution and collision mortality associated with electric transmission facilities. These guidelines were released in 2005.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) was established in 1940 to protect bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) from any actions that may take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald or golden eagle, alive or dead, or any part, nest, or egg thereof. Under the BGEPA, take of an eagle is defined as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb." On September 11, 2009, the USFWS published a Final Eagle Permit Rule under the BGEPA authorizing limited issuance of permits to take bald and golden eagles where take is associated with, but not the purpose of otherwise lawful activities.

Clean Water Act

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

Substantial impacts to wetlands may require an Individual Permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions. For the Proposed Projects, this certification or waiver will need to be issued by the Regional Water Quality Control Board (RWQCB) for San Diego (Region 9) and the Colorado River (Region 7).

United States Forest Service Cleveland National Forest Land Management Plan

The revised USFS CNF Land Management Plan describes the strategic direction at the broad program-level for managing the land and its resources over the next 10 to 15 years. The purpose of the Land Management Plan is to outline the long-term vision and strategic management direction for each southern California national forest and to facilitate the development of management activities that will contribute toward the realization of the national forests' desired conditions. Part 1 of the forest plan describes several goals for management that directly relate to biological resources.

- Goal 2.1 – Reverse the trend of increasing loss of natural resource values due to invasive species.
- Goal 5.1 – Improve watershed conditions through cooperative management .
- Goal 5.2 – Improve riparian conditions.
- Goal 6.2 – Provide ecological conditions to sustain viable populations of native and desired nonnative species.

Part 2 of the CNF Land Management Plan details the policies that the USFS will implement in order to achieve these goals. The following policies pertain to biological resources:

AM 2 – Forest-wide Inventory is a CNF Land Management policy, which promotes developing and maintaining the capacity (processes and systems) to provide and analyze the scientific and technical information needed to address agency priorities, by engaging in the following actions:

- Conduct aerial and ground-based inventory of vegetation conditions.
- Conduct surveys within suitable and modeled habitat to determine the presence of threatened and endangered species.
- Survey the suitable habitat of federally listed and Region 5 sensitive species. Update all maps and databases as information is obtained.

- Survey wetlands, vernal pools, meadows, springs and stringer meadows for plant and wildlife species (e.g., spring snails, etc.)
- Identify and map all riparian areas.
- Conduct integrated inventories of ecologic functions (ecological unit inventory) at the scale appropriate to the need.
- Complete invasive nonnative plant and animal inventories based on regional protocol methods.

WL 1 – Threatened, Endangered, Proposed, Candidate, and Sensitive Species Management, is a strategy that manages habitat for listed species. The following actions will be taken in order to reach the goal of moving listed species toward recovery and de-listing:

- Implement priority conservation strategies including, habitat protection for listed species.

- Work with the USFWS and NOAA Fisheries to develop recovery plans for federally listed species. Implement USFS actions as recommended in recovery plans for federally listed species.

- Establish and maintain a working relationship with county and city planning agencies to ensure coordination on planning development projects adjacent to the national forest, as well as implementation of multi-species HCPs.

WL 2 – Management of Species of Concern is a CNF Land Management policy, which maintains and improves habitat for fish, wildlife, and plants. This includes those species with the designated as game species, harvest species, management indicator species, and watch list species.

IS 1 – Invasive Species Prevention and Control is a policy that prevents the introduction of new invaders, conducts early treatment of new infestations, and contains and controls established infestations by taking the following actions:

- Implement the Noxious Weed Management Strategy for the four southern California national forests.

- Limit ground disturbance to the minimum area necessary during project activities. Promote conditions to enhance the recovery of vegetation recovery in project planning, design, and implementation. Use native plant materials as needed to restore disturbed sites to prevent the introduction or reintroduction of invasive nonnative species. Conduct follow-up inspections of ground disturbing activities to monitor the effectiveness of restoration efforts in reducing or preventing the introduction or re-introduction of invasive non-native plants.

- Treatments may include herbicide application if approved through environmental analysis.

WAT 1 – Watershed Function is a policy providing the protection, maintenance and restoration of natural watershed functions including slope processes, surface water and groundwater flow and retention and riparian area sustainability, by the following actions:

- Maintain or restore soil properties and productivity to ensure ecosystem health (soil microbiota and vegetation growth), soil hydrologic function, and biological buffering capacity.

- Manage Riparian Conservation Areas (RCAs) to maintain or improve conditions for riparian dependent resources. RCAs include aquatic and terrestrial ecosystems and lands adjacent to perennial, intermittent, and ephemeral streams, as well as around meadows, lakes, reservoirs, ponds, wetlands, vernal pools, seeps, springs and other water bodies. Riparian dependent resources are those natural resources that owe their existence to the area, such as fish, amphibians, reptiles, fairy shrimp, aquatic invertebrates, plants, birds, mammals, soil, and water quality.

- Maintain natural stream channel conductivity, connectivity and function.

Design criteria which include standards that ensure the protection of resources are described in Part 3 of the CNF Land Management Plan. Specific standards that may apply to the Proposed Projects include:

- Protect known active and inactive raptor nest areas.

- Protect all spotted owl territories and maintain a limited operating period prohibiting activities within approximately .25 miles of a California spotted owl nest site.

- Linear structures such as utility corridors, will be designed and built to allow for fish and wildlife movement.

- Avoid activities that result in removal, crushing, burying, burning, or mowing of host plants within critical and occupied habitat for threatened, endangered, and proposed butterfly species; unless guided differently by a species-specific consultation.

- When designing new projects in riparian areas, apply the Five-Step Project Screening Process for RCAs as described in the CNF Land Management Plan's Appendix E - Five-Step Project Screening Process for RCAs.

State

California Endangered Species Act

The California Endangered Species Act (CESA), adopted in 1984, generally parallels the main provisions of the FESA. Section 2080 of the Fish and Game Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the Fish and Game Code as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The CESA allows for take incidental to otherwise lawful projects.

Natural Community Conservation Planning Act

The Natural Community Conservation Planning Act (NCCPA) provides for a voluntary, alternative approach to obtaining exemption from the CESA prohibition on take by establishing a process to allow for comprehensive, regional multi-species planning. The NCCP program has provided the framework for innovative efforts by the State of California, local governments, and private interests to plan for the protection of regional biodiversity and the ecosystems upon which it depends. CDFG is authorized under Fish and Game Code Section 2835 to issue permits which authorize the take of any species, whether or not it is listed as an endangered, threatened, or candidate species under state law, where the conservation and management of the species is provided for in an NCCP approved by the CDFG. In 1995, the CDFG issued a Take Authorization under the NCCPA to SDG&E for the development, installation, maintenance, operation and repair of SDG&E facilities including those encompassed by the Proposed Projects.

Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the CESA and the FESA. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, including fish, amphibians, reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the CESA and/or the FESA. Fully protected species may not be taken or possessed at any time (Fish and Game Code Section 4700).

Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (California Fish and Game Code Sections 1900–1913) was created with the intent to "preserve, protect, and enhance rare and endangered plants in this State." The NPPA is administered by the CDFG. The Fish and Game Commission has the authority to designate native plants as "endangered" or "rare" and to protect them from take.

Fish and Game Code Section 1600

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

Porter-Cologne Water Quality Control Act

The intent of the Porter-Cologne Water Quality Control Act, Water Code Section 13000 *et seq.*, is to protect water quality and the beneficial uses of water, and applies to both surface and ground water. Under this law, the State Water Resources Control Board (SWRCB) develops statewide water quality plans, and the RWQCBs develop basin plans, which identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of both statewide and basin plans. Waters regulated under the Act, referred to as "waters of the state," include isolated waters that are no longer

regulated by the USACE. Any person discharging, or proposing to discharge, waste to waters of the state must file a Report of Waste Discharge and receive either waste discharge requirements (WDRs) or a waiver to WDRs before beginning the discharge.

Fish and Game Code Sections 3503, 3513, and 3800

The State of California has incorporated the protection of birds of prey in Sections 3503, 3513, and 3800 of the California Fish and Game Code.

Local

Pursuant to Article XII, Section 8, of the California Constitution, the CPUC has exclusive jurisdiction, in relation to local government, to regulate the design, siting, installation, operation, maintenance, and repair of electric transmission facilities. The Proposed Projects are therefore not subject to local discretionary regulations; the following information is provided for informational purposes only to assist with CEQA review.

San Diego County General Plan

The following policies do not apply to the Proposed Projects but are provided for informational purposes.

- *Policy 5: San Diego County shall encourage the use of native plant species in review of landscaping and erosion control plans for public and private projects.*
- *Policy 6: If a project is determined to have significant adverse impacts on plants or wildlife, an acceptable mitigating measure may be voluntary donation of land or monies for acquisition of land of comparable value to wildlife.*
- *Policy 9: When significant adverse habitat modification is unavoidable, San Diego County will encourage project designers to provide mitigating measures in their design to protect existing habitat.*
- *Policy 16: The County will regulate major land-clearing projects to minimize significant soil erosion; destruction of archaeological, historic, and scientific resources; and endangered species of plants and animals.*

Existing and Proposed Plans

San Diego Gas & Electric Company Subregional Natural Community Conservation Plan

Under Section 10(a) of the FESA, SDG&E developed this comprehensive multiple species and habitat NCCP to effectively preserve and enhance covered sensitive species and their native habitats during operation, maintenance, and expansion of its electric and natural gas transmission system (16 U.S.C. Section 1539). In addition, this NCCP also is a permit issued pursuant to Fish and Game Code Section 2081 with an implementation agreement with the CDFG for the

management and conservation of multiple species and their associated habitats as established according to the CESA and the state's NCCP Act.[2]

The purpose of the Subregional NCCP is to allow SDG&E to develop, install, maintain, operate, and repair facilities necessary to provide energy services to customers living within SDG&E's service area while implementing a long-term agreement among SDG&E, the USFWS, and the CDFG for the preservation and conservation of sensitive species and their habitat. The NCCP addresses potential impacts to species and habitat associated with SDG&E's ongoing installation, use, maintenance, and repair of its gas and electric systems, and typical expansion to those systems. The Proposed Projects include fire hardening activities for existing 69 kV power lines. Therefore, construction activities of the Proposed Projects are covered by the NCCP. Further, once the Proposed Projects are each completed, SDG&E will continue to implement the NCCP for maintenance and operational activities associated with the Proposed Projects. As discussed in the following sections, NCCP protocols will be implemented in order to avoid and minimize impacts to special-status plant and wildlife species and natural vegetation communities. The NCCP list of covered special-status species does not include all of the special-status species that have a potential to occur in the combined area of the Proposed Projects; however, the NCCP protocols will be applied to protect all special-status species during construction of the Proposed Projects.

San Diego Gas & Electric Company's Low-Effect Habitat Conservation Plan for the Quino Checkerspot Butterfly

SDG&E prepared a Low-Effect HCP to minimize and mitigate the effects of its activities on the federally endangered QCB and to obtain incidental take authorization for QCB from the USFWS. The HCP addresses potential impact to the QCB from the use, maintenance, and repair of existing gas and electric facilities and allows for typical expansions to those systems. Other than maintenance of existing access roads, SDG&E activities include, without limitation, all current and future actions arising out of, or in any way connected with, the siting, design, installation, construction, use, maintenance, operation, repair, and removal of facilities within SDG&E's service territory. Pole and tower replacement is one example of these covered activities.

The HCP emphasizes protection of habitat through impact avoidance and use of operational protocols designed to avoid or minimize impacts to the QCB. The HCP was prepared in consultation with the USFWS to fulfill the requirements of Section 10(a)(1)(B) permit application for the aforementioned proposed activities.

Bureau of Land Management East San Diego County Resource Management Plan and Final Environmental Impact Statement

A new Resource Management Plan (RMP) and Environmental Impact Statement for the Eastern San Diego County Planning Area were prepared in November 2007 by the Bureau of Land Management (BLM). The Eastern San Diego County Planning Area spans a portion of the eastern escarpment of the Peninsular Mountain Ranges. The Planning Area is bordered by the

[2] California Fish and Game Code sections 2081(b) and (c) allow the CDFG to issue an incidental take permit for a state-listed threatened and endangered species only if specific criteria are met. (*See also* Title 14 California Code of Regulations [CCR] Section 783.4(a),(b).)

San Diego-Riverside County border to the north, the U.S.-Mexico border to the south, the San Diego-Imperial County border to the east, and the Western San Diego County Planning Area to the west. The main goal of the RMP is to provide guidance in the management of lands and resources administrated by the El Centro Field Office in eastern San Diego County to achieve the following:

- address conflicts between motorized/mechanized, and non-motorized/non-mechanized recreationists;
- protect sensitive natural and cultural resources from impacts due to recreational use, livestock grazing, and other land uses;
- provide guidance for renewable energy development; and
- address other planning issues raised during the scoping process.

Portions of tie line TL6923 and portions of TL629 that are located east of Highway 8 are located within the planning area associated with the RMP.

San Diego County Draft East County Multiple Species Conservation Program Plan

The Multiple Species Conservation Program (MSCP) is a comprehensive habitat conservation planning program for southwestern San Diego County. The purpose of the MSCP is to preserve a network of habitat and open space while protecting biodiversity and enhancing the region's quality of life. The MSCP provides an economic benefit by reducing constraints on future development and decreasing the costs of compliance with federal and state laws protecting biological resources. The MSCP Plan was developed cooperatively by participating jurisdictions and special districts in partnership with the wildlife agencies, property owners, and representatives of the development industry and environmental groups. The MSCP Plan was designed to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time.

The Proposed Projects are not located within the current boundaries of the MSCP; however, the majority of the Proposed Projects' areas will fall within the proposed planning area of the San Diego County Draft East County MSCP Plan. San Diego County only has land use authority over private parcels, therefore lands administered by state, federal, and tribal governments and city and water district lands have been excluded from the Draft East County MSCP Plan area. This subarea plan of the current MSCP is not expected to be finalized until 2013 or later.

San Diego County North County Multiple Species Conservation Program Plan

The North County MSCP Plan is one of several large habitat conservation planning efforts in San Diego County. The North County MSCP Plan is the second of three parts of San Diego County's MSCP. An objective of the San Diego County MSCP is to conserve a connected system of biologically viable habitat lands in a manner that maximizes the protection of sensitive species and precludes the need for future listings of species as threatened or endangered. The North County MSCP Plan will expand the San Diego County MSCP into the northwestern unincorporated areas of the County. Implementation of this comprehensive conservation plan is intended to protect biodiversity while providing economic benefits. The plan is designed to create an efficient and economical framework for complying with state and federal endangered species laws while accommodating future growth in the region.

The North County MSCP Plan is being prepared as a multiple species HCP pursuant to section 10(a)(1)(B) of the federal ESA, as well as an NCCP under the California Natural Community Conservation Planning Act. One area of the Proposed Project, the western portion of TL682, falls within the proposed planning area of the North County MSCP Plan area. The plan area is focused on unincorporated areas within San Diego County's land use jurisdiction. The plan area excludes tribal lands, USFS lands, and most water district lands. The North County MCSP Plan underwent a public review in 2009. The plan is currently being revised and is not yet in place.

2.1 Environmental Setting

Each of the Proposed Projects is the reconstruction of an existing 69 kV power line. The environmental setting includes the current and on-going operation and maintenance of each of the 69 kV power lines in their existing locations.

The Proposed Projects are located in the central portion of San Diego County, California, in and around the CNF. The overall boundary of the Proposed Projects is 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. The Proposed Projects include activities planned for portions of five 69 kV power lines that traverse or are near the CNF. The five Proposed Projects pass through several eco-regions, including southern mountains, southern foothills, central foothills, and the central valley regions of San Diego County.

The Proposed Projects are situated from approximately 1,500 feet to over 5,500 feet above mean sea level (MSL). All habitats and vegetation communities that are located within the combined areas of the Proposed Projects are described in the *Biological Technical Report for the SDG&E Company Electric Safety and Reliability Plan Project*, prepared by Chambers Group, 2012.

Sensitive Vegetation Communities

Sensitive vegetation communities include riparian habitat or other sensitive natural communities identified in policies, regulations or designated by the CDFG or USFWS. The combined area of the Proposed Projects contains southern riparian forest that is considered sensitive by the CDFG. Additionally, southern interior cypress forest, which is also considered sensitive by the CDFG occurs within 5 miles of the Proposed Projects. However, no impacts to this vegetation community are anticipated. Freshwater seep, which is a sensitive natural community as defined by the USACE and RWQCB, exists in the combined area of the Proposed Projects. USFS-identified RCAs also occur within the combined area of the Proposed Projects. Sensitive vegetation communities were identified and included for consideration during project design to avoid impacts to these areas, where possible. Vegetation community impacts in acres are listed in Section 10.1 Biology of the POD and impacts to RCAs are described in further detail in Section 10.4 Hydrology of the POD.

3 CULTURAL RESOURCES

3.0 Regulatory Background

The following federal, state, and local regulations and policies pertaining to cultural and paleontological resources may be relevant to the Proposed Projects.

Federal

National Historic Preservation Act

The National Historic Preservation Act requires federal agencies to consider the effects of their undertakings on historic properties. Historic properties are cultural resources, such as archaeological sites, historic built environment features, or Native American sites, that are listed on or determined to be eligible for listing on the National Register of Historic Places (NRHP). The governing regulation found in Section 106 of the 36 CFR Part 800 requires the lead federal agency to consult with the State Historic Preservation Officer regarding potential impacts to historic properties.

American Indian Religious Freedom Act of 1978

The American Indian Religious Freedom Act establishes a federal policy of respect for, and protection of, Native American religious practices. It also contains provisions that allow limited access to Native American religious sites.

Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act (NAGPRA) provides for the repatriation of certain items from the federal government and certain museums to the native groups to which they once belonged. The act defines cultural items, sacred objects, and objects of cultural patrimony, and establishes a means for determining ownership of these items. The provisions for repatriation only apply to items found on federal lands.

Executive Orders 13007 and 13084

Executive Order 13007 requires federal agencies with land management responsibilities to allow access to and use of Native American sacred sites on public lands and to avoid adversely affecting these sites. Executive Order 13084 reaffirms the government-to-government relationship between the federal government and recognized Native American Indian tribes, and requires federal agencies to establish procedures for consultation with tribes. These executive orders only apply to projects that are federal undertakings or have federal involvement.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979 applies to projects that are located on public lands and Native American lands. The purpose of this act is "the protection of archaeological resources and sites which are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals having collections of archaeological resources and data which were obtained before the date of the enactment of this act."

USFS Cleveland National Forest Land and Resource Management Plan

The USFS CNF 2005 Land and RMP contains goals to protect cultural resources within the CNF as well as program strategies to help achieve those goals. The following goals and program strategies may be relevant to the Proposed Projects:

- HER 1 – Heritage Resource Protection. Protect heritage resources for cultural and scientific value and public benefit:

    - Document known significant and cultural properties to identify any activity that does or has the potential to adversely affect the site, or that does not complement the site. Develop measures to mitigate the adverse effects or impacts.

    - Use partnerships to implement site management plans for heritage resource sites, focusing on those sites with recognized significance or that are at risk from public or land use effects.

    - Evaluate historic sites from appropriate management. Develop site management plans for noteworthy heritage resources.

- HER 3 – Forest-wide Heritage Inventory. Increase knowledge of the occurrence, distribution, and diversity of site types for heritage resources on the national forest.

State

California Register of Historical Resources

The California Register of Historical Resources (CRHR) is a public listing of specific properties that are to be protected from substantial adverse change. Any resource eligible for listing in the CRHR must also be considered under CEQA.

A historical resource may be listed on the CRHR if it meets one or more of the following criteria:

- It is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the U.S.
- It is associated with the lives of persons important to local, California, or national history.
- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic value.
- It has yielded or has the potential to yield information important in the prehistory or history of the local area, California, or the nation.

Automatic listings include properties listed on the NRHP, determined eligible either by the Keeper of the National Register or through a consensus determination on a project review, or State Historical Landmarks from number 770 onward. In addition, Points of Historical Interest nominated from January 1998 onward are to be jointly listed as Points of Historical Interest, as well as in the CRHR. Landmarks prior to number 770 and Points of Historical Interest may be listed through an action of the State Historical Resources Commission.

Resources listed on a local historic register or deemed significant in a historical resources survey, as provided under PRC Section 5024.1(g), are presumed to be historically or culturally significant unless the preponderance of evidence demonstrates that they are not. A resource that is not listed on or determined to be ineligible for listing in the CRHR, not included in a local register of historical resources, or not deemed significant in a historical resources survey may, nonetheless, be historically significant (PRC Section 21084.1 and Section 21098.1).

Native American Graves Protection and Repatriation Act of 2001, California Health and Safety Code

Broad provisions for the protection of Native American cultural resources are contained in the California Health and Safety Code (H&SC), Division 7, Part 2, Chapter 5 (Sections 8010 through 8030). Specifically, the NAGPRA established a state policy to ensure that California Native American human remains and cultural items are treated with respect and dignity. The NAGPRA also provides the mechanism for disclosure and return of human remains and cultural items held by publicly funded agencies and museums in California. Likewise, the NAGPRA outlines the process that California Native American tribes who are not recognized by the federal government may follow to file claims for human remains and cultural items held by agencies or in museums.

California Public Resources Code

Several provisions of the PRC govern archaeological finds in terms of human remains and any other related object of archaeological or historical interest or value. Procedures are detailed under PRC Section 5097.9 through 5097.996 for actions to be taken whenever Native American remains are discovered. Furthermore, H&SC Section 7050.5 states that any person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in Section 5097.99 of the PRC. Any person removing any human remains without authority of law or written permission of the person or persons having the right to control the remains under PRC Section 7100 has committed a public offense that is punishable by imprisonment.

Paleontological resources are protected under CEQA and are considered limited, non-renewable resources of scientific, cultural, and educational value. CEQA and PRC Section 5097, *et seq*., govern the preservation and protection of these resources.

Local

Pursuant to Article XII, Section 8, of the California Constitution, the CPUC has exclusive jurisdiction, in relation to local government, to regulate the design, siting, installation, operation, maintenance, and repair of electric transmission facilities. The Proposed Projects are therefore not subject to local discretionary regulations. No local regulations are relevant to the Proposed Projects for the purposes of evaluation under the CEQA Checklist.

3.1 Environmental Setting

Each of the Proposed Projects is the reconstruction of an existing 69 kV power line. The environmental setting includes the current and on-going operation and maintenance of each of the 69 kV power lines in their existing locations. The following sections describe the cultural and paleontological setting of the Proposed Projects.

Ethnographic Overview

The combined Area of Potential Effects (APE) for the Proposed Projects is located within the traditional aboriginal territory of the Yuman-speaking Diegueño or Kumeyaay (Ipai-Tipai).[3] These include the Kumeyaay, the Kamia, and groups living in northern Baja California. In general, the Kumeyaay ranged from the coast through the Peninsular Ranges, and the Kamia resided in Imperial Valley and on the Colorado River during historic times. Descendants of the Late Prehistoric people, the ethnohistoric Ipai-Tipai/Kumeyaay, had a society organized around patrilineal residence groups, with hereditary positions of political and ceremonial importance. Permanent villages and campsites were located in oak woodland valleys and catchment basins in the coastal zone, the western foothills, the Peninsular Range and, to a lesser extent, in the desert further east. Resource extraction and processing sites were clustered in an optimal manner around the settlements. Temporary camps and other gathering sites were located in more distant areas. Seasonal movements were within communally owned village territories and were directly related to the changing availability of critical resources. Additional information regarding the history, society, and culture of ethnic groups within the areas of the Proposed Projects is contained within the Cultural Resources Technical Report.

Historic Overview

Prehistoric Background

Archaeological investigations in southern California have demonstrated that a diverse range of human occupation extended over the past 12,000 to 10,000 years, until the time of contact with Europeans. The prehistory of western San Diego County can be divided into three temporal periods—Paleoindian, Archaic, and Late Prehistoric—as described in the following sections.

Paleoindian Period

The Paleoindian period in San Diego County is considered to have emerged during the terminal Pleistocene and to have continued into the early Holocene, beginning approximately 10,000 years before present (B.P.) and ending sometime between 8,500 and 7,500 B.P. Archaeologists have used a variety of terms over the years for Paleoindian assemblages in the southern California region. The term San Dieguito refers to the earliest artifact assemblages in San Diego County due to the discovery of several lithic scatter sites that were discovered on the San Dieguito plateau of San Diego County. Key attributes of the San Dieguito sites included distinct scrapers and scraper planes, bifacial knives, rare crescentics, and occasional hand stones and milling stones. These sites were situated on terraces and ridge tops, lacked subsurface material and middens, and were interpreted as evidence of a hunting-focused culture.

Archaic Period

In the San Diego region, the Archaic period extends from 7,500 B.P. (possibly as early as 8500 B.P.) to sometime between 1,300 and 800 B.P. Archaic collections along the coast generally contain large quantities of ground stone items, flaked cobble tools and cores, and occasionally massive quantities of marine shell. Historically, a major distinction has been made between shell midden Archaic sites near the coast and non-shell midden Archaic sites further inland. Coastal

[3] A unique APE exists for each of the five Proposed Projects, but these have been combined for the purposes of this discussion to facilitate CEQA review.

Archaic sites (often termed the La Jolla complex) have been characterized by shell middens, flaked cobble tools, basin milling stones, hand stones, and flexed burials, while inland sites in northern San Diego County are often termed the Pauma complex, lacking the shell middens and burials.

The sites of the Pauma complex were set on hills overlooking drainages, and associated with Holocene sediments. They are considered distinct from coastal Archaic sites due to their lack of shell middens and burials. Given the presence of grinding stones in the sites, the economy at these locations was thought to be oriented toward seed-gathering. Milling stones were claimed to be more frequent in the Pauma complex sites, while scraping, planing, and hammer/chopper tools were thought to be more common along the coast. The Pauma complex could represent an inland, possibly seasonal, adaptation of the coastal Archaic (La Jolla complex).

Another alternative hypothesis combines the inland (Pauma complex) and coastal (La Jolla complex) into a lifestyle generally centered around a gathering and processing economy, whether inland, along drainages, or along the coast, and occupying large, centralized habitation sites. Another explanation is that large Archaic sites are simply reoccupied regularly for similar purposes over a long period of time, components of a highly flexible and generalized economy, able to utilize resources from both inland and coastal environments.

Late Prehistoric Period

By 2,000 B.P., a pre-ceramic Yuman culture came from the Colorado River area and merged with the local La Jolla culture. The sites from this period demonstrate a shift from spear-throwers (also known as atlatls) and darts to bow-and-arrow hunting technology as well as a shift in obsidian sources from the Mojave Desert during the Archaic period to the Colorado Desert during the Late Prehistoric period.

The Late Prehistoric period in San Diego County from 1,000 to 300 B.P. is characterized by sites with flaked projectile points, cremation burials, the introduction of ceramics, and an emphasis on inland plant food collection, processing, and storage, especially of acorns. Inland villages were established along major waterways and within the current area of the CNF, and permanent milling stations were established in mountainous areas, which were seasonally occupied to harvest acorns and nuts. Several coastal or near-coastal village sites were occupied.

Although the Yuman populations utilized the same ecological area as the La Jolla, each relied on slightly different subsistence and settlement modes. In both economies, however, gathered seed foods were important.

Historic Background

European contact with San Diego began in 1542, with the arrival of Juan Rodriguez Cabrillo. However, intensive interactions and contacts with interior areas, including the current area of the CNF, only came after the establishment of the Spanish presidio and mission of San Diego in 1769. During the Spanish period, explorations into eastern San Diego County and the mission culture may have begun to impact aboriginal culture within the areas of the Proposed Projects.

By 1860, most of the land in San Diego consisted of farmland and ranches. Settlement of the area primarily occurred following the Homestead Act in 1862 and the Timber Culture Act in

1873. The discovery of gold near Julian in 1869 attracted many miners to settle within the CNF. In the subsequent decades, small farming communities were established throughout San Diego County. The transcontinental railroad reached southern California in 1885, resulting in an unprecedented real estate boom for the city and county of San Diego. Settlers poured into San Diego and the population of San Diego increased by 700 percent from a total population of 5,000 in 1885 to 40,000 in 1889. Population continued to expand during the 20th century, approaching two million by the year 2,000. Most of the growth experienced was concentrated in the coastal areas and adjacent inland valleys.

During the 20th century, road and rail transportation routes were established that linked urban San Diego with regions of the country further east. Limited amounts of development for farming and grazing occurred in the inland valleys and mining in the Peninsular Ranges began. In addition, areas began to be set aside for resource protection or recreational use, such as portions of the CNF and Cuyamaca Rancho State Park. Portions of the Peninsular Ranges were also designated as wilderness areas during this time. In 1908, President Roosevelt officially designated an approximately two-million-acre area of inland San Diego County as the CNF. During the next 17 years, certain areas were returned to public entry, forming the current approximately 424,000-acre extent of the CNF.

Cultural Resources in the Areas of the Proposed Projects

The results of the records search and field surveys indicate that a total of approximately 110 cultural sites—1 historic site and 109 archaeological sites—are located either partially or completely within the combined APE for the Proposed Projects. The Cultural Resources Technical Report lists poles by 69 kV power line that are located within areas of high sensitivity for buried cultural deposits. Each of the Proposed Projects contains poles located within areas of high sensitivity for buried cultural deposits.

Historic Resources

One historic resource, Old Highway 80, passes through the area of TL629 and is bordered by portions of TL629 from approximately Pine Valley in the west to the Campo Indian Reservation in the east. This approximately 7.3-mile-long segment of Old Highway 80 was part of the original U.S. Highway 80, commissioned in 1926 as the first coast-to-coast route surfaced with all-weather materials available for public automotive travel. U.S. Highway 80 was decommissioned in 1964 in favor of the newly completed Interstate (I-) 8. Approximately 49.8 acres of this historic resource is located within the APE for TL629. Approximately 39 existing TL629 wood 69 kV power line poles are located along Old Highway 80 but are outside the historic resource itself. During field surveys along this portion of TL629 in 2010, an historical highway marker likely associated with Old Highway 80 was found but was later determined to be ineligible for NRHP or CRHR listing. Old Highway 80 was recorded and assessed as eligible for the NRHP in 2000.

Archaeological Resources

A total of approximately 109 previously recorded archaeological sites are located within the combined APE for the Proposed Projects. A summary of archaeological sites and their acreage within the combined APE is provided in Table 6: Archaeological Sites within the Areas of

Potential Effect. In addition, a summary of NRHP/CRHR eligibility status and number of existing poles within the boundaries of archaeological sites in the APE are provided in Table 7: Register Eligibility of Archaeological Sites. There are no known NRHP- or CRHR-eligible archaeological sites located within the combined APE for the Proposed Projects. Approximately 20 of the 109 archaeological sites have been determined to be not eligible for listing on the NRHP and CRHR, and the remaining 89 have not been evaluated. The majority of the archaeological sites located within the APE average less than one acre in size. The archaeological sites that are greater than one acre in average size are generally prehistoric habitation sites.

The majority of the archaeological sites located within the combined APE for the Proposed Projects consist of prehistoric bedrock milling sites characterized by basins and slicks and associated mortars, hand-held stones, and other materials. These milling sites average approximately 0.7 acre in size and are found along all five of the Proposed Projects. The majority of the remaining sites consist of prehistoric habitations and refuse or artifact scatters, which were used by prehistoric tribes to process grain for human consumption. The refuse scatters primarily include remnants from tool-making activities, which left behind stone chips, flakes, cores, hard cobble, projectile points, hand stones, and scrapers. The artifact scatters, by contrast, predominantly include ceramics, pottery, and an incised fired clay effigy resembling a whale. Other noteworthy findings in the APE include a potential prehistoric village site with associated rock shelters, walls, bedrock mortars, pottery, and prehistoric art, including two red pictographs and a faint pictograph panel within a rock room.

The total acreage of archaeological sites located within the combined APE for the Proposed Projects is approximately 82 acres. Within the combined APE, approximately 35 archaeological sites have one or more existing wood 69 kV power poles located within their boundaries. There are a total of approximately 53 existing wood 69 kV power poles located within these archaeological sites; a single site may contain multiple existing wood 69 kV power poles within its boundary.

Paleontological Resources

The Proposed Projects are generally located along the Peninsular Ranges, crossing a series of mountain ranges and alluvial valleys before descending toward the western foothills in southern San Diego County. The majority of the subsurface geology located in the core of the Peninsular Ranges are plutonic igneous rocks of the Peninsular Ranges Batholith; however, Mesozoic and likely Paleozoic pre-batholithic metavolcanic and metasedimentary rocks as well as some Cenozoic volcanic rocks can also be found. A thin layer of Cenozoic sedimentary rocks underlies portions of the Peninsular Ranges, often as Pleistocene (approximately one million years old) and younger Holocene (less than 10,000 years old) alluvium.

The resource potential of the geologic formations in the combined area of the Proposed Projects has been evaluated in accordance with the Potential Fossil Yield Classification (PFYC) guidelines set forth by the BLM. The paleontological resource potential for each of the Proposed Projects is identified in Table 8: Paleontological Resource Potential in the Combined Area of the Proposed Projects.

Table 6: Archaeological Sites within the Areas of Potential Effect

69 kV Power Line	Description	Average Site Acres within APE	Register Eligibility	
			Not Eligible	Not Evaluated
TL625	Prehistoric Artifact Scatter	0.9	0	2
	Prehistoric Bedrock Milling	0.8	0	5
	Prehistoric Habitation	3.3	0	2
	Prehistoric Habitation and Historical Machinery	6.3	0	1
	Prehistoric Rock Alignment and Artifact Scatter	0.3	0	2
	Other Archaeological	1.8	1	3
TL626	Prehistoric Artifact Scatter	0.1	0	2
	Prehistoric Bedrock Milling	1.0	0	10
	Prehistoric Habitation	0.3	0	1
	Historical Lumber Mill	0.1	0	1
	Historical Refuse Scatter	0.1	0	1
	Prehistoric Isolate (Groundstone)	<0.1	1	0
TL629	Prehistoric Artifact Scatter	0.7	0	2
	Prehistoric Bedrock Milling	0.7	0	9
	Prehistoric Habitation	0.6	0	1
	Historical Refuse Scatter	0.1	0	1
	Historical Cairn	1.2	0	1
	Historical Highway Marker/ Prehistoric Isolate (Groundstone)	0.0	1	0
	Prehistoric Habitation and Historical Foundation	6.4	0	1
	Prehistoric Habitation and Historical Refuse	1.9	0	1
	Prehistoric Habitation	24.2	0	1
	Other Archaeological	0.1	7	6

69 kV Power Line	Description	Average Site Acres within APE	Register Eligibility	
			Not Eligible	Not Evaluated
TL682	Prehistoric Bedrock Milling	0.8	0	11
	Historical Bottle Scatter	<0.1	0	1
	Historical Isolate (colorless glass bottle)	<0.1	1	0
	Historical Isolate (Owens Illinois bottle and a cone-top beer can)	<0.1	1	0
	Historical Isolate (Owens Illinois bottle base)	<0.1	1	0
	Historical Isolate (Owens Illinois olive jar)	<0.1	1	0
	Historical Isolate (Owens Illinois pint base and a church key can)	<0.1	1	0
	Historical Isolate (Roma Wine Company green glass base)	<0.1	1	0
	Historical Trash Scatter	<0.2	0	1
	Historical Trash Scatter; Historical Road	0.1	0	1
	Historical Water Basins	0.4	0	1
	Prehistoric Bedrock Milling and Prehistoric Pictographs	0.2	0	1
	Prehistoric Bedrock Milling; Historic Isolate (Bottle)	0.3	0	1
	Prehistoric Bedrock Milling; Prehistoric Pictographs	1.5	0	1
	Prehistoric Isolate (Ceramic Sherd)	<0.1	1	0
	Prehistoric Isolate (Lithic Flake)	<0.1	1	0
	Prehistoric Isolate (Quartz Flake)	<0.1	1	0
	Prehistoric Isolate (Two Ceramic Sherds)	<0.1	1	0
	Prehistoric Lithic Scatter	<0.1	0	1

69 kV Power Line	Description	Average Site Acres within APE	Register Eligibility	
			Not Eligible	Not Evaluated
TL6923	Prehistoric Artifact Scatter	1.1	0	1
	Prehistoric Bedrock Milling	0.2	0	11
	Prehistoric Lithic Scatter	0.2	0	1
	Historical Flume	0.3	0	1
	Historical Rock Wall	0.1	0	1
	Prehistoric Ceramic Scatter	<0.1	0	1
	Other Archaeological	1.0	0	1
Total			**20**	**89**

Source: ASM Affiliates, Incorporated (ASM), 2012

Table 7: Register Eligibility of Archaeological Sites

Line	Site Description	NRHP/CRHR Status	Total Site Acres within APE	Existing Poles within Site Boundary
TL625	Prehistoric Rock Alignment and Artifact Scatter	Not Evaluated	0.1	1
	Prehistoric Habitation and Historical Machinery	Not Evaluated	6.3	4
	Prehistoric Habitation	Not Evaluated	2.6	1
	Prehistoric Habitation	Not Evaluated	4.0	3
	Prehistoric Bedrock Milling	Not Evaluated	0.1	1
	Prehistoric Bedrock Milling	Not Evaluated	0.2	1
	Prehistoric Bedrock Milling	Not Evaluated	3.3	2
	Prehistoric Artifact Scatter	Not Evaluated	1.0	1
	Other Archaeological	Not Eligible	<0.1	1
	Other Archaeological	Not Evaluated	0.9	1
	Other Archaeological	Not Evaluated	5.8	3
TL625 Total			**24.3**	**19**
TL626	Prehistoric Bedrock Milling	Not Evaluated	0.9	1
	Prehistoric Bedrock Milling	Not Evaluated	1.5	1
	Prehistoric Bedrock Milling	Not Evaluated	1.7	1
	Prehistoric Bedrock Milling	Not Evaluated	1.8	2
	Prehistoric Bedrock Milling	Not Evaluated	2.7	2
TL626 Total			**8.6**	**7**

Line	Site Description	NRHP/CRHR Status	Total Site Acres within APE	Existing Poles within Site Boundary
TL629	Prehistoric Habitation and Historical Refuse	Not Evaluated	1.9	2
	Prehistoric Habitation and Historical Foundation	Not Evaluated	6.4	3
	Prehistoric Habitation	Not Evaluated	24.2	3
	Prehistoric Bedrock Milling	Not Evaluated	0.3	1
	Prehistoric Bedrock Milling	Not Evaluated	0.7	2
	Prehistoric Bedrock Milling	Not Evaluated	0.9	1
	Prehistoric Bedrock Milling	Not Evaluated	1.0	1
	Prehistoric Bedrock Milling	Not Evaluated	1.9	1
	Prehistoric Artifact Scatter	Not Evaluated	1.3	1
	Other Archaeological	Not Evaluated	0.4	1
	Historical Cairn	Not Evaluated	1.2	1
TL629 Total			**40.1**	**17**
TL682	Prehistoric Bedrock Milling; Prehistoric Pictographs	Not Evaluated	1.5	1
	Prehistoric Bedrock Milling	Not Evaluated	0.1	1
	Prehistoric Bedrock Milling	Not Evaluated	0.4	1
	Prehistoric Bedrock Milling	Not Evaluated	0.7	1
	Prehistoric Bedrock Milling	Not Evaluated	2.4	2
	Prehistoric Bedrock Milling	Not Evaluated	3.2	2
TL682 Total			**8.4**	**8**

Line	Site Description	NRHP/CRHR Status	Total Site Acres within APE	Existing Poles within Site Boundary
TL6923	Prehistoric Bedrock Milling	Not Evaluated	0.2	1
	Prehistoric Bedrock Milling	Not Evaluated	0.4	1
TL6923 Total			**0.5**	**2**
Combined Total for Proposed Projects			**81.9**	**53**

Source: ASM, 2012

Table 8: Paleontological Resource Potential in the Combined Area of the Proposed Projects

Line	Potential Fossil Yield Classification Ranking				
	Class 1 – Very Low (Number of Poles)	Class 2 – Low (Number of Poles)	Class 3 – Moderate or Unknown (Number of Poles)	Class 4 – High (Number of Poles)	Class 5 – Very High (Number of Poles)
TL625	13	0	0	0	0
	248	4	11	0	0
TL626	1	0	0	0	0
	267	0	12	0	0
TL629	2	0	0	0	0
	306	122	9	0	0
TL682	161	56	42	0	0
TL6923	131	6	0	0	0
Total	**1,138**	**188**	**74**	**0**	**0**

Source: Deméré, *et al*., 2012

The underlying geologic formations and rock units located along the alignment of each Proposed Project has been assigned a PFYC rank, primarily based upon underlying geologic age and historical encounters with fossils in similar geologic formations and localities.

A higher PFYC rank indicates a higher potential fossil yield, according to the following five classes:

- **Class 1 – Very Low:** Geologic units with very low yield potential are those that are not likely to contain fossil remains. The majority of the geologic rock units underlying the existing ROW included in the Proposed Projects are assigned a PFYC of Class 1, consisting of plutonic igneous rocks of the Peninsular Ranges Batholith and related contact metamorphic rocks.

- **Class 2 – Low:** Geologic units with low yield potential are those that are not likely to contain vertebrate fossils or scientifically significant non-vertebrate fossils. Rock units assigned a PFYC of Class 2 occur in several areas along the existing ROWs included in the Proposed Projects and primarily consist of Holocene younger alluvium.

- **Class 3 – Moderate or Unknown:** Geologic units with moderate or unknown yield potential are sedimentary deposits in which fossil discoveries vary in significance, abundance, and predictable occurrence (moderate), or sedimentary units of unproven or unknown fossil potential. Rock units assigned a PFYC of Class 3 only occur in a few areas along the existing ROWs included in the Proposed Projects and consist of Pleistocene non-marine deposits attributable to the Pauba Formation, Quaternary river

terrace deposits, and fanglomerates of Pleistocene and possibly Tertiary age, as well as Triassic-aged metasedimentary rocks of the Julian Schist.

- **Class 4 – High:** Geologic units with high yield potential are those that contain a high occurrence of significant fossils that have been documented, but which may vary in occurrence or predictability. There are no geologic rock units assigned a PFYC of Class 4 within the existing ROWs included in the Proposed Projects.

- **Class 5 – Very High:** Geologic units with very high yield potential are those that consistently and predictably produce vertebrate or scientifically significant non-vertebrate fossils. No geologic rock units within the ROWs of the Proposed Projects are assigned a PFYC of Class 5.

The majority of existing poles included in the Proposed Projects (approximately 1,129) are located on PFYC Class 1 geologic units, with approximately 188 poles located in areas of PFYC Class 2 units and approximately 74 located in areas classified as PFYC Class 3. There are no PFYC Class 4 or 5 geologic units located within the Proposed Projects' ROWs. No known fossils have been recorded within 0.5 mile of any of the Proposed Projects.

The Cultural Resources Technical Report lists those 69 kV power line poles that are located within areas of high sensitivity for buried fossil deposits. TL682 is the only Proposed Project that contains poles located within areas of high sensitivity for buried fossil deposits.

Human Remains

No recorded Native American or other human remains were identified within the combined APE for the Proposed Projects during records searches or pedestrian surveys.

4 HYDROLOGY AND WATER QUALITY

The following sections describe the regulatory and environmental settings pertaining to hydrology and water quality for the Proposed Projects.

4.0 Regulatory Background

The following federal, state, and local regulations and policies pertaining to hydrology and water quality may be relevant to the Proposed Projects.

Federal

Clean Water Act

The CWA (33 U.S.C. Section 1251 *et seq*.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the U.S. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point source discharges to surface water.

CWA Section 208

Under Section 208 of the CWA, the SWRCB is required to designate management agencies to implement provisions of water quality management plans. On August 16, 1979, the SWRCB designated the USFS as the Water Quality Management Agency (WQMA) for all activities on national forest system lands in California. The Pacific Southwest Region of the USFS prepared a handbook titled *Water Quality Management for National Forest System Lands in California, Best Management Practices*, which describes current USFS practices and procedures for protection of water resources. Implementation of the practices and procedures meet the USFS's obligations as a designated WQMA.

The best management practices (BMPs) presented in the handbook are divided into eight categories, including timber management, road and building site construction, mining, recreation, vegetation management, fire suppression and fuels management, watershed management, and range management. Although the handbook clarifies that BMPs described under one category may also have applicability in other areas, BMPs most relevant to the Proposed Projects are associated with road and building site construction, vegetation management, and fire suppression and fuels management. USFS is currently in the process of updating BMPs regarding non-point source pollution that may occur as a result of road management activities on USFS lands in the Pacific Southwest Region. Activities associated with road management include travel route planning, design, construction, operation, maintenance, reconstruction, storage, and decommissioning. The BMPs are to be applied as needed to prevent adverse impacts of road management activities on water, aquatic, and riparian resources to the extent possible. BMPs range from suggested practices to prohibitions, as required by USFS directives, and cover specific categories such as assessing damaged roads after storms, wet weather operations standards, and BMP monitoring.

CWA Section 303 and 304

Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the U.S. (33 U.S.C. Section 1313). Section 304(a) requires the U.S. EPA to publish water quality criteria that accurately reflect the latest scientific knowledge on the kinds and extent of effects that pollutants in water may have on human health and welfare (33 U.S.C. Section 1314(a)). Where multiple uses exist, water quality standards must protect the most sensitive use. Water quality standards are typically numeric, although narrative criteria based on biomonitoring methods may be employed when numerical standards cannot be established or when they are needed to supplement numerical standards.

Section 303(c)(2)(b) of the CWA requires states to adopt numerical water quality standards for toxic pollutants for which the U.S. EPA has published water quality criteria and that could reasonably be expected to interfere with designated uses in a waterbody.

Under Section 303(d) of the CWA, states, territories, and authorized tribes are required to develop a list of waterways (or segments thereof) with poor water quality. Waters on the list do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. The law requires that these jurisdictions establish priority rankings for waters on the list and develop action plans, including the identification of Total Maximum Daily Loads for associated pollutants, to improve water

quality. Four waterbodies within the Proposed Project area have been classified as 303(d) waters; these are described in more detail in the Surface Water Quality section of this document.

CWA Section 401

Under Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity that may result in any discharge into navigable waters must provide the licensing or permitting agency with a certification that the discharge will comply with the applicable CWA provisions (33 U.S.C. Section 1341). If a federal permit is required, such as a USACE permit for dredge and fill discharges, the project proponent must also obtain a Water Quality Certification from the RWQCB.

CWA Section 402

The National Pollutant Discharge Elimination System (NPDES) permit program was established in 1972 to control discharges of pollutants from defined point sources (33 U.S.C. Section 1342). The program originally focused on industrial-process wastewater and publically owned treatment works. In 1987, Section 402 of the CWA was amended to include requirements for five separate categories of stormwater discharges, known as Phase I facilities. Phase I facilities include:

- Facilities already covered by an NPDES permit for stormwater
- Facilities that engage in industrial activities
- Large municipal separate storm drain systems that serve more than 250,000 people
- Medium municipal separate storm drain systems that serve between 100,000 and 250,000 people
- Facilities that are considered significant contributors of pollutants to waters of the U.S.

The U.S. EPA issued a final rule for Phase II discharges in August 1995. Phase II stormwater discharges include light industrial facilities, small construction sites (less than 5 acres), and small municipalities (less than 100,000 population).

In California, NPDES permitting authority is delegated to the SWRCB and administered by the nine RWQCBs. Under Section 402 of the CWA, projects that will disturb one acre or more of soil are required to obtain coverage under the SWRCB's General Permit for Stormwater Discharges Associated with Construction Activity (Water Quality Order 99-08-DWQ). On August 19, 1999, the SWRCB reissued the General Permit and later that year amended the permit to apply to sites as small as one acre. On September 2, 2009, the SWRCB adopted Order No. 2009-0009-DWQ (General Permit), which reissued the Order 99-08-DWQ for projects disturbing one or more acre of land, or that are part of a common plan of development or sale that disturbs more than one acre of land. The new permit became effective July 1, 2010. All existing dischargers and new dischargers are required to obtain coverage under the new permit by submitting Permit Registration Documents, including a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must include:

- Identification of pollutant sources and non-stormwater discharges associated with construction activity

- Specifications for BMPs that will be implemented during project construction to minimize the potential for accidental releases and runoff from the construction areas, including temporary construction yards, stringing sites, and helicopter landing zones

- Stabilization BMPs to reduce or eliminate pollutants once construction is complete

- A plan for sampling and analysis of pollutants

CWA Section 404

Section 404 of the CWA prohibits the discharge of dredge or fill material into waters of the U.S. without a permit from the USACE. The definition of waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR Section 328.3(b)). The U.S. EPA has veto authority over USACE's administration of the Section 404 program and may override a USACE decision with respect to permitting.

Certain impacts to waters of the U.S. require an Individual Permit; however, many projects, including utility line and substation construction, can obtain coverage under the USACE's Nationwide Permit program. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions. For each of the Proposed Projects, this certification or waiver would need to be issued by the San Diego RWQCB.

Rivers and Harbors Appropriation Act Section 10

Section 10 of the Rivers and Harbors Appropriation Act of 1899 (33 U.S.C. Section 401, *et seq.*) makes it unlawful to obstruct or alter a navigable river or other navigable water of the U.S. Construction, excavation, or deposition of materials in, over, or under such waters, or any work that would affect the course, location, condition, or capacity of those waters requires a Section 10 permit and approval from the USACE. There are no navigable waters within the combined area of the Proposed Projects.

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) is responsible for determining flood elevations and floodplain boundaries based on USACE studies. The FEMA is also responsible for distributing the Flood Insurance Rate Maps used in the National Flood Insurance Program (NFIP). These maps identify the locations of special flood hazard areas, including 100-year floodplains. The FEMA allows non-residential development in the floodplain; however, construction activities are restricted within flood hazard areas, depending on the potential for flooding within each area. Federal regulations governing development in a floodplain are set forth in 44 CFR Part 60, enabling the FEMA to require municipalities that participate in the NFIP to adopt certain flood hazard reduction standards for construction and development in 100-year floodplains.

United States Forest Service Cleveland National Forest Land Management Plan

The Soil, Water, and Air Program of the USFS CNF Land Management Plan encompasses all activities associated with the management of water quality and supply, soil productivity and stability, air quality management, hazardous materials mitigation, and geologic and paleontologic resource management on national forest lands. National Forest managers are required to emphasize management of groundwater and surface water resources to benefit ecosystem health and national forest administrative needs on their respective forests. The following policies pertain to surface and groundwater hydrology and water quality:

AM 2 – Forest-wide Inventory is a CNF Land Management policy, which promotes developing and maintaining the capacity (processes and systems) to provide and analyze the scientific and technical information needed to address agency priorities, by engaging in the following actions:

- Identify and map all riparian areas.
- Inventory and analyze geologic and hydrologic resources (fossils, caves, groundwater basins and extractions, geologic Special Interest Areas, geologic features along scenic corridors, etc.) that are available to the public, affect other resources, or need special management or protection.
- Identify and mitigate geologic hazards (seismic activity, sliding land, land subsidence, flooding and erosion) through landscape and watershed planning, sediment placement site planning, engineering design, reclamation and maintenance.
- Inventory surface and groundwater extractions, diversions, miles/acres of streams, acres of water bodies, acres of riparian, etc.
- The validation of watershed standards for cumulative effects (less than 20 percent manipulation/year and less than 40 percent over five years).

WAT 1 – Watershed Function is a policy providing the protection, maintenance and restoration of natural watershed functions including slope processes, surface water and groundwater flow and retention and riparian area sustainability, by the following actions:

- Restore, maintain and improve watershed conditions. Assure that approved and funded rehabilitation and emergency watershed treatments are implemented in an effective and timely manner.
- Maintain or restore soil properties and productivity to ensure ecosystem health (soil microbiota and vegetation growth), soil hydrologic function, and biological buffering capacity.
- Manage RCAs to maintain or improve conditions for riparian dependent resources. RCAs include aquatic and terrestrial ecosystems and lands adjacent to perennial, intermittent, and ephemeral streams, as well as around meadows, lakes, reservoirs, ponds, wetlands, vernal pools, seeps, springs and other water bodies. Riparian dependent resources are those natural resources that owe their existence to the area, such as fish,

amphibians, reptiles, fairy shrimp, aquatic invertebrates, plants, birds, mammals, soil and water quality.

- Maintain natural stream channel conductivity, connectivity and function.

- Assess and manage geologic resources and hazards to integrate earth science principals and relationships into ecosystem management, reduce risks to people and resources, and to interpret and protect unique values.

- Identify, prioritize based on risk, and mitigate the impacts of abandoned and inactive landfills on water, soil and other resources. Stabilize and reclaim where necessary, abandoned and inactive landfills to maintain proper watershed function, public safety and resource benefit.

- Inventory, analyze and prioritize abandoned mines to identify chemical and physical hazards, historic significance, and biological resources prior to reclamation. Mitigate safety hazards and adverse environmental impacts, conduct reclamation as needed, and assure that water quality standards are met.

- Maintain watershed integrity by replacing or disposing of displaced soil and rock debris in approved placement sites.

WAT 2 - Water Management is a policy for the management of groundwater and surface water in order to maintain or improve water quantity and quality in ways that minimize adverse effects. The management policy outlines the following actions:

- Assess the impacts of existing and proposed groundwater extractions and tunneling projects and proposals to assure that developments will not adversely affect aquatic, riparian or upland ecosystems and other uses, resources or rights (e.g., tribal water rights).

- Promote water conservation at all national forest administrative and authorized facilities. Protect and improve water quality through implementing BMPs and other project-specific water quality protection measures for all national forest and authorized activities. Include appropriate conservation and water quality mitigation measures in the review response when reviewing non-forest water-related projects that may affect forest resources.

- Conserve and protect high quality water sources in quantities adequate to meet national forest needs.

- Take corrective actions to minimize conditions leading to state listing of 303(d) impaired waters on National Forest System land. For those waters that are both on and off National Forest System land ensure USFS management does not contribute to listed water quality degradation.

- Actively pursue the acquisition of water rights and water allocation processes to secure instream flow and groundwater resources for current and future needs sufficient to sustain native riparian dependent resources and other forest resources and uses.

- Identify the need for and encourage the establishment of water releases for current and future uses to maintain instream flow needs, including channel maintenance, and to protect and eliminate impacts on riparian dependent resources.

- Participate in all Federal Energy Regulatory Commission licensing and re-licensing efforts on National Forest System land to ensure sufficient consideration and protection is provided for riparian dependent resources. Incorporate instream flow, riparian, and other natural resource management requirements into 4(e) license conditions.

- Monitor water development projects to ensure that instream flows are meeting riparian dependent resource needs.

- To maintain or improve habitat containing threatened, endangered, proposed, candidate, and sensitive species coordinate activities with CDFG, NOAA Fisheries, USFWS, SWRCB, and other appropriate agencies involved in recommending instream flow and surface water requirements for waterways.

- Cooperate with federal, tribal, state and local governments, and private entities to secure the instream flows that are needed to maintain, recover, and restore riparian dependent resources, channel conditions, and aquatic habitat.

WAT 3 - Hazardous Materials is a policy for the management of known hazardous materials risks. The management policy outlines the following actions:

- Develop a Hazardous Materials Response Plan that addresses risk and standard cleanup procedures.

- Coordinate with federal, tribal, state, city and county agencies, and local landowners to develop emergency response guidelines for hazardous spills on National Forest System land or on adjacent non-National Forest System land with the potential to affect threatened, endangered, proposed, candidate, and sensitive fish and amphibian habitat. In the event of hazardous material spills in known habitat on National Forest System land, USFS will contact the USFWS and NOAA Fisheries (as appropriate) within 24 hours. Quickly contact resource personnel and use them as consultants to minimize impacts to habitat and to initiate emergency consultation with the USFWS if necessary. Provide habitat maps to response personnel for hazardous spills.

State

Fish and Game Code Sections 1600 through 1606

Sections 1601 through 1606 of the Fish and Game Code require that a Notification of Lake or Streambed Alteration Agreement be submitted to the CDFG for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank

of any river, stream, or lake." The CDFG reviews the proposed actions and, if necessary, submits (to the applicant) a proposal that includes measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by the CDFG and applicant is a Lake or Streambed Alteration Agreement.

Porter-Cologne Water Quality Control Act

The intent of the Porter-Cologne Water Quality Control Act was enacted in 1969 (Water Code Section 13000 *et seq.*) to protect water quality and the beneficial uses of water, and applies to both surface and ground water. Under this law, the SWRCB develops statewide water quality plans, and the RWQCBs develop basin plans, which identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of both statewide and basin plans. Waters regulated under the Act, referred to as "waters of the state," include isolated waters that are no longer regulated by the USACE. Any person discharging, or proposing to discharge, waste to waters of the state must file a Report of Waste Discharge and receive either WDRs or a waiver to WDRs before beginning the discharge.

The Proposed Projects are located within the jurisdiction of the San Diego RWQCB. The RWQCB is the primary regulatory agency with jurisdiction over stormwater discharges, as well as activities that have the potential to impact the quality of surface water or groundwater. The federal CWA and the California Porter-Cologne Water Quality Control Act require that the RWQCB adopt a water quality control basin plan to guide and coordinate the management of water quality in the Region. The purpose of the plan is to: (1) designate beneficial uses of the San Diego Region's surface and ground waters; (2) designate water quality objectives for the reasonable protection of those uses; and (3) establish an implementation plan to achieve the objectives. In conformance with this legislative mandate, the San Diego RWQCB adopted the Comprehensive Water Quality Control Plan for the San Diego Basin (Basin Plan) in 1975. The San Diego RWQCB subsequently adopted numerous amendments modifying specific Basin Plan water quality standards and policies to reflect current water quality conditions and priorities. In 1994, the 1975 Basin Plan was updated and rewritten. Therefore, the Water Quality Control Plan for the San Diego Basin (9) that was adopted on September 8, 1994 supersedes the previous 1975 Basin Plan and its amendments.

Local

Pursuant to Article XII, Section 8, of the California Constitution, the CPUC has exclusive jurisdiction, in relation to local government, to regulate the design, siting, installation, operation, maintenance, and repair of electric transmission facilities. The Proposed Projects are therefore not subject to local discretionary regulations. No local regulations are relevant to the Proposed Projects for the purposes of evaluation under the CEQA Checklist.

4.1 Environmental Setting

Each of the Proposed Projects is the reconstruction of an existing 69 kV power line. The environmental setting includes the current and on-going construction, operation, and maintenance of each of the 69 kV power lines in their existing locations.

The Proposed Projects are located in unincorporated areas of the County of San Diego. The overall climate in the County of San Diego varies between a mild coastal climate in the west, to wider temperature ranges and more precipitation in the mountains in the central portion of the County, and a hotter and drier climate in the desert and desert transitional areas in the eastern portion of the County. The Proposed Projects are within the central portion of the County at elevations ranging from approximately 1,300 to 5,500 feet. Average annual precipitation in the combined area of the Proposed Projects ranges from approximately 28.2 inches in Julian, 24.5 inches in Descanso, and 14.8 inches in Boulevard. A majority of the precipitation in the combined area of the Proposed Project is in the form of rain and falls between the months of November and February. Higher elevations, particularly the mountains within the CNF, will also receive some precipitation in the form of snow.

The Proposed Projects are located within the southeastern portion of the San Diego River Basin Region. This Region is located in the southwestern corner of California and encompasses approximately 3,900 square miles of surface area. It includes a majority of San Diego County, as well as portions of southwestern Orange County and southwestern Riverside County. The Region is bounded to the north by a hydrologic divide starting near Laguna Beach, in the west, and extending inland to the ridge of the Elsinore Mountains and into the CNF. To the east the Region is bounded by the San Bernardino, San Jacinto, and Laguna Mountain ranges. The southern boundary of the Region is along the U.S. and Mexico international border, and the western boundary of the Region is along the coastline of the Pacific Ocean.

Surface Waters

San Diego River Hydrologic Basin

The San Diego River Basin Region is divided into 11 hydrologic units (HUs), 54 hydrologic areas (HAs), and 147 hydrologic subareas (HSAs). As defined in the Water Quality Control Plan for the San Diego Basin, HUs are the entire watershed of one or more streams, HAs are major tributaries and/or major ground water basins within the HU, and HSAs are major subdivisions of HAs, including both water-bearing and non-water-bearing formations.

The Proposed Projects are spread throughout five HUs, or watersheds. From north to south these HUs are San Luis Rey, San Dieguito, San Diego, Sweetwater, and Tijuana. Table 9: Hydrologic Boundaries of the Existing 69 Kilovolt Power Lines outlines which HUs, HAs, and HSAs each of the Proposed Projects is within. Each of the HUs within the combined area of the Proposed Projects ultimately flow to the Pacific Ocean, which ranges from approximately 25 to 50 miles west of the Proposed Projects.

San Luis Rey Hydrologic Unit

The San Luis Rey HU is located in northern San Diego County. The major stream system of the HU is the San Luis Rey River, which originates in the Palomar and Hot Springs Mountains, as well as several other mountain ranges along the western border of the Anza Borrego Desert Park.

Table 9: Hydrologic Boundaries of the Existing 69 Kilovolt Power Lines

Existing 69 kV Power Line	Hydrologic Region	Hydrologic Unit	Hydrologic Area	Hydrologic Subarea(s)
TL625	San Diego	Sweetwater	Upper Sweetwater	Loveland, Japatul, Descanso
		Tijuana	Barrett Lake	N/A
TL626	San Diego	San Dieguito	Santa Ysabel	Witch Creek
		San Diego	El Capitan	Conejos Creek
		Sweetwater	Boulder Creek	Inaja
			Upper Sweetwater	Descanso
TL629	San Diego	Sweetwater	Upper Sweetwater	Descanso
		Tijuana	Barrett Lake	N/A
			Monument	Pine
			Cottonwood	N/A
			Cameron	N/A
			Campo	Canyon City, Clover Flat
TL682	San Diego	San Luis Rey	Lower San Luis	Pauma, La Jolla Amago, Warner
TL6923	San Diego	Tijuana	Potrero	Barrett, Round Potrero, Long Potrero
			Barrett Lake	N/A
			Campo	Canyon City

Sources (California Department of Water Resources, 2003; California RWQCB, Colorado River Basin Region, 2006; San Diego RWQCB 1995)

The river extends over 55 miles across northern San Diego County, forming a watershed with an area of approximately 565 square miles. The river is interrupted by Lake Henshaw, a reservoir owned and operated by the Vista Irrigation District. The river ultimately discharges to the Pacific Ocean near the City of Oceanside. Of the nine major watersheds in the San Diego region, the San Luis Rey is the third largest.

San Dieguito Hydrologic Unit

The San Dieguito HU is located south of the San Luis Rey HU and comprises an area of approximately 345 square miles. The main drainage channel is the San Dieguito River, which originates in the Volcan Mountains in eastern San Diego County. The unit contains five water storage reservoirs including Lake Hodges, Lake Sutherland, Lake Poway, Olivenhain, and San Dieguito Reservoir. The unit also contains one coastal lagoon, the San Dieguito Slough, located at the mouth of the San Dieguito River, in the City of Del Mar. The lagoon is normally closed off from the Pacific Ocean by a sandbar. The San Dieguito HU is the fourth largest watershed in the San Diego Region.

San Diego Hydrologic Unit

The San Diego HU is located in central San Diego County and comprises and area of approximately 440 square miles. The main drainage channel of the unit is the San Diego River, which begins in the mountains northwest of the town of Julian, and drains to the Pacific Ocean near the community of Ocean Beach. Major tributaries to the San Diego River include Boulder, Conejos, Los Coches, San Vincente, and Forester Creeks. The unit also contains five reservoirs: El Capitan, San Vicente, Lake Jennings, Lake Cuyamaca, and Lake Murray. San Vicente, Lake Jennings, and Lake Murray reservoirs store mainly Colorado River water that is transported via an aqueduct system. El Capitan mainly stores local runoff and some Colorado River water. Cuyamaca Reservoir stores only local runoff. Much of the impounded water is used to provide potable water to major population centers, including a portion of the San Diego metropolitan area and the communities of El Cajon, Santee, Lakeside, Alpine, and Julian. The San Diego HU is the second largest watershed in the Region.

Sweetwater Hydrologic Unit

The Sweetwater HU is located in southern San Diego County and encompasses approximately 230 square miles. The main drainage channel of the unit is the Sweetwater River, which begins in the mountains northeast of the community of Descanso, and ultimately flows to the San Diego Bay (which in turn flows to the Pacific Ocean). The Sweetwater HU includes two reservoirs: Sweetwater Reservoir and Loveland Reservoir. It is the seventh largest watershed in the Region.

Tijuana Hydrologic Unit

The Tijuana HU is located in the southernmost portion of San Diego County, along the U.S. and Mexico International Border. It encompasses a total region of approximately 1,750 square miles on either side of the border—approximately 470 square miles of which are located in the U.S. The main drainages of the watershed within the U.S. are Cottonwood Creek and Campo Creek, which are tributaries to the Tijuana River. Both creeks begin in California and flow southwest, draining into the Tijuana River in Mexico. The Tijuana River then flows northwest, crossing up into California and flowing into the Tijuana Estuary, which connects to the Pacific Ocean in the

City of Imperial Beach. There are two reservoirs within the HU on the U.S. side— Morena Reservoir and Barrett Lake.

According to the Basin Plan, the Tijuana HU is the most severely impacted watershed in San Diego County. It is classified as a Category I (impaired) watershed by the SWRCB due to a wide variety of water quality problems, including non-point agricultural sources on the U.S. side of the border and a large variety of point and non-point sources on the Mexico side of the border.

Rivers, Creeks, Waterbodies, and Wetlands

The Proposed Projects are located near various named rivers, creeks and other waterbodies, including Pine Valley Creek , La Posta Creek, Samagatuma Creek, Sweet Water River, and Cottonwood Creek near TL629; Loveland Reservoir near TL625; San Luis Rey River, Lake Henshaw, Potrero Creek, and Buena Vista Creek near TL682; Barrett Lake and San Diego City Conduit near TL6923; San Diego River, Cedar Creek, Orinoco Creek, Boulder Creek, Kelly Creek, and King Creek near TL626.

In addition, many unnamed, intermittent creeks and drainages are present throughout the areas of the Proposed Projects. The Proposed Projects are also located within or in close proximity to other surface waters such as wet meadows, seasonally flooded areas, riparian areas, and erosional features. Wetland vegetation indicative of a wet-meadow was present within poles or work areas along TL625, TL626, and TL682. However, a wetland delineation (in accordance with the 1987 USACE Wetland Delineation Manual) was not performed. Artificial ponds are located in close proximity to poles along TL626. There are five poles and one stringing site along TL626 and TL629 that are located within riparian areas although there are no drainages located within 40 feet of these poles. A description and list of potentially jurisdictional waters located within the combined area of the Proposed Projects was provided in the Preliminary Plan of Development (POD).

Groundwater

The Proposed Projects are within the San Diego Subregion of the South Coast Hydrologic Region of California. Within the San Diego Subregion there are 27 delineated groundwater basins. Most of the Proposed Projects are not within a groundwater basin; however, components of TL629 and TL682 do fall within groundwater basins as described in the following sections. Hydrologic units and groundwater basins are depicted in Figure 1: Hydrologic Units and Groundwater Basins.

Campo Valley Groundwater Basin

An approximately three-mile segment of TL629—from the intersection of Cameron Truck Trail and La Posta Truck Trail, south to where the line crosses Buckman Springs Road—is within the Campo Valley Groundwater Basin. The Campo Valley Groundwater Basin is a small basin underlying the Campo Valley and is a U.S. EPA-designated Sole Source Aquifer. The Campo Valley Groundwater Basin has a surface area of approximately 5.5 square miles and is bounded by non-permeable crystalline rocks of the Peninsular Ranges. The primary water-bearing formation of this basin is Quaternary alluvium; but residuum derived from the weathering of local Cretaceous granitic rocks may also be a contributing water-bearing formation. The Quaternary alluvium has been estimated to range in thickness from approximately three feet to

100 feet with an average of approximately 55 feet. Recharge of the basin is from direct precipitation as well as effluent from a small number of septic tanks. Groundwater quality is generally suitable for domestic and irrigation uses, for which it is currently used. A study in

1983 estimated the groundwater storage at approximately 7,614 acre-feet, with the storage capacity at approximately 63,450 acre-feet. Typical well yields of the basin are less than 40 gallons per minute. Limited water level data is available, but depth to groundwater is generally greater than 15 feet.

Cottonwood Valley Groundwater Basin

Approximately eight miles of the southern portion of TL629 are within the Cottonwood Valley Groundwater Basin. The Cottonwood Valley Groundwater Basin underlies portions of the Cottonwood, Cameron, and La Posta Valleys. This basin has a surface area of approximately 6.0 square miles and is bounded by crystalline rocks of the Peninsular Ranges, with the exception of the western end, which is bounded by Moreno Reservoir. The primary water-bearing formations are Quaternary alluvium and residuum. Groundwater storage and storage capacity of the basin are unknown. Information on groundwater quality for the basin is limited; however, one study in 1967 indicated the groundwater to be dominantly calcium bicarbonate in character with a total dissolved solids content ranging from approximately 130 to 645 milligrams per liter. Limited water level data is available, but depth to groundwater in the South San Diego County Basins is generally shallow with depths to groundwater estimates ranging from less than five feet to about 100 feet.

Warner Valley Groundwater Basin

Approximately four miles of TL682—from the northwestern side of Lake Henshaw, east to the Warners Substation—is within the Warner Valley Groundwater Basin. This groundwater basin underlies the Warner Valley and Valle de San Jose, the upper drainage of the San Luis Rey River in northeastern San Diego County. This basin has a surface area of approximately 3.8 square miles and is bounded by Lake Henshaw and the Elsinore fault to the west, and by impermeable crystalline rocks of the Peninsular Ranges. The primary water-bearing formations are Quaternary residuum, and Holocene alluvium underlain by Pleistocene alluvium. The Holocene alluvium is composed of boulders, gravel, sand, silt and clay, and the deposits are generally thin and unsaturated. The Pleistocene alluvium consists of poorly sorted arkosic gravel, sand, silt, and clay. Portions of the formation are at least 900 feet thick. The total storage capacity of the Warner Valley Groundwater Basin is estimated to be approximately 550,000 acre-feet. Current groundwater storage is unknown. Limited water level data is available, but estimated depth to groundwater is generally greater than 15 feet.

Groundwater within the Warner Valley Groundwater Basin is generally rated suitable for irrigation and domestic uses, with the exception of the Warner Hot Springs area, where it is rated inferior for irrigation use due to sodium content and inferior for domestic use due to high fluoride concentrations.

San Luis Rey Valley Groundwater Basin

Approximately five miles of the western portion of TL682 are within the San Luis Rey Valley Groundwater Basin. This Basin underlies an east-west-trending alluvium-filled valley located

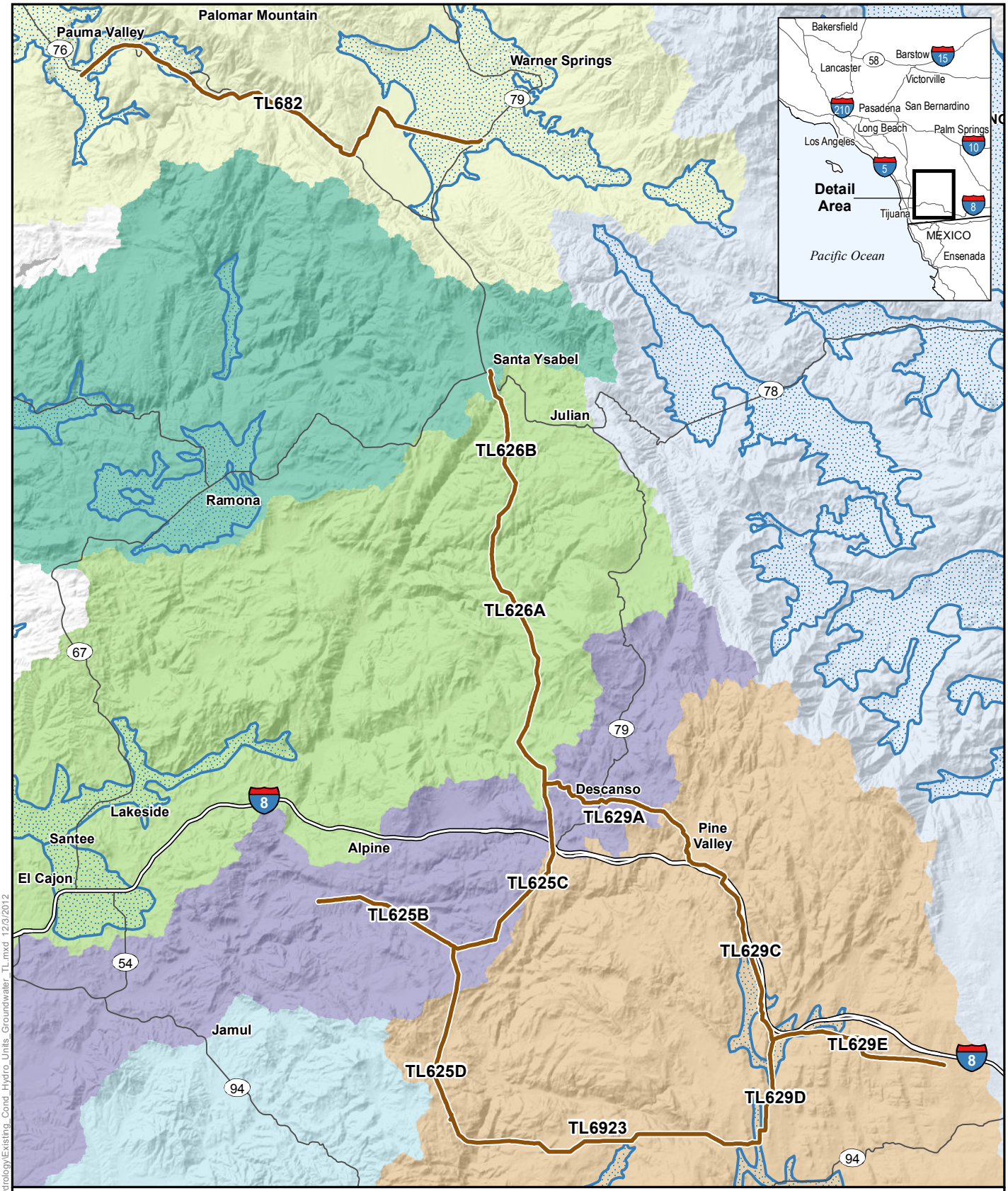

Figure 1: Hydrologic Units and Groundwater Basins — **CNF Power Line Replacement Projects**

Existing Transmission Line
Groundwater Basin

Hydrologic Unit/Watershed
Anza Borrego
Otay
San Diego
San Dieguito
San Luis Rey
Sweetwater
Tijuana

Interstate
State Highway
Lake/Reservoir

SDGE
A Sempra Energy utility
INSIGNIA ENVIRONMENTAL

1 inch = 6 miles
0 2 4 6 Miles

Source: SDG&E, 2012; CPAD 1.7 GreenInfo Network, 2011; Calwater 2.2.1, 2004

Z:\Projects\SDGE_CNF_ESRP\MXDs\Hydrology\Existing_Cond_Hydro_Units_Groundwater_TL.mxd 12/3/2012

along the western coast of San Diego County. The major hydrologic feature is the San Luis Rey River, which drains the valley overlying the basin. This basin has a surface area of approximately 46 square miles and is bounded on the east, northeast and southeast by the contact of alluvium with impermeable Mesozoic granitic and Pre-Cretaceous metamorphic rocks. In the northwest and southwest of the lower portion of the basin, alluvium is in contact with the semi-permeable Eocene marine deposits and Tertiary non-marine deposits. The basin is bounded on the west by the Pacific Ocean. The primary water-bearing formations are Quaternary and younger alluvium. Average thickness of the formation is 200 feet thick. The total storage capacity of San Luis Rey Groundwater Basin is estimated to be approximately 240,000 acre-feet. Current groundwater storage is unknown. Depth to groundwater estimates range from zero to 20 feet below land surface.

Surface Water Quality

Several waterbodies in the combined area of the Proposed Projects are listed as impaired pursuant to Section 303(d) of the CWA. These waterbodies include all of the San Luis Rey River east of I-15, Cottonwood Creek (within the Tijuana Rivershed), Morena Reservoir, and Loveland Reservoir.

The San Luis Rey River, east of I-15, is listed as impaired for nitrogen. TL682 spans the impaired section of the river immediately west of Lake Henshaw. The TL also comes within close proximity of the northern edge of the river in some locations along Highway 76. The closest existing Proposed Project pole is located approximately 110 feet from the river.

Cottonwood Creek, within the Tijuana Rivershed, is listed as impaired for selenium. This creek begins in Pine Valley and flows south, crossing under Highway 8 and into to Morena Reservoir, which is also a 303(d)-listed waterbody (listed for phosphorus, color, manganese, pH, and ammonia as nitrogen). The creek then flows west to Barrett Lake, and south along Barrett Lake Road, TL629 spans Cottonwood creek along I-8 and TL6932 spans the creek in one location along Barrett Lake Road. The closest existing Proposed Project pole is located approximately 40 feet from Cottonwood Creek. Morena Reservoir is located over 8,000 feet from any Proposed Project.

Loveland Reservoir is listed as impaired for aluminum, manganese, dissolved oxygen, and pH. TL625 spans a few of the northern branches of this reservoir along Japatul Valley Road. The closest existing Proposed Project pole is located approximately 145 feet from the reservoir.

Floodplains

Some of the Proposed Projects cross areas that are subject to flooding as identified by the FEMA. Figure 2: FEMA 100-Year Flood Zones Map illustrates the locations of 100-year flood zones within the combined area of the Proposed Projects. Four of the five Proposed Projects—TL6923, TL626A, TL682, and TL629—span a 100-year flood zone in one or more location. However; only TL682 and TL629 have components (poles) that are located directly within a 100-year flood zone. Sixteen poles are located directly within a 100-year flood hazard area along TL629A near Descanso. Twelve poles are located directly within a 100-year flood hazard area along TL682 in Warner Valley near Buena Vista Creek, east of Lake Henshaw. Both

TL626A and TL6923 cross a 100-year flood hazard area, though all poles are located outside of the flood plain.

Dam Failure Inundation Areas

The San Diego County Multi-Jurisdictional Hazard Mitigation Plan identifies potential dam inundation zones within San Diego County. Dam owners are required by State law to prepare and file Dam Inundation Maps with the State Office of Emergency Services. These maps delineate the areas at risk in the event of failure for each dam. Portions of the Proposed Projects fall within dam inundation zones. This includes portions of Proposed Projects that are located downstream of Barrett Dam, Barrett Spillway, Henry Jr. Dam, Cuyamaca Dam, Cuyamaca Spillway, and Lake Henshaw Dam. The portions of Proposed Projects within dam inundation zones include the following:

- One pole and one stringing site of TL6923 are located in a dam inundation zone downstream of Barrett Lake, along Cottonwood Creek. The primary dam upstream of this location is the Barrett Dam Spillway, which feeds directly into the creek, approximately 2.0 miles north of where the line crosses the creek. Barrett Dam and Henry Jr. Dam are two additional dams that control flow into Barrett Lake. Impacts to these dams could also cause inundation to the structures along TL6923 located within the dam inundation zone.

- One pole of TL626 is located within the inundation zone of the Lake Cuyamaca Dam and the Cuyamaca Dam Spillway. These poles are located along the north and south sides of Boulder Creek, approximately 4.0 miles southwest, and downstream of, Lake Cuyamaca.

- Six poles along TL682 are within the inundation zone of the Lake Henshaw Dam. The Lake Henshaw Dam inundation zone follows the entire length of the San Luis Rey River, from the west side of Lake Henshaw, to the Pacific Ocean at the City of Oceanside. TL682 generally follows Highway 76, from Lake Henshaw to the community of Rincon, which parallels the north side of the San Luis Rey River. The components of TL682 that are within the inundation zone are those which are in close proximity to the San Luis Rey River.

Other dams in the general vicinity of the Proposed Project include Palo Verde Dam, Corte Madera, Thing Valley, Morena, Lake Loveland, El Capitan, and Sutherland dams. No Proposed Project falls within the dam inundation zones of any of these dams.

5 NOISE

The following subsections describe the regulatory framework and physical setting of the Proposed Project as it relates to noise. Federal, state, and local regulations pertaining to noise are discussed first, followed by an examination of existing noise levels and noise-sensitive receptors.

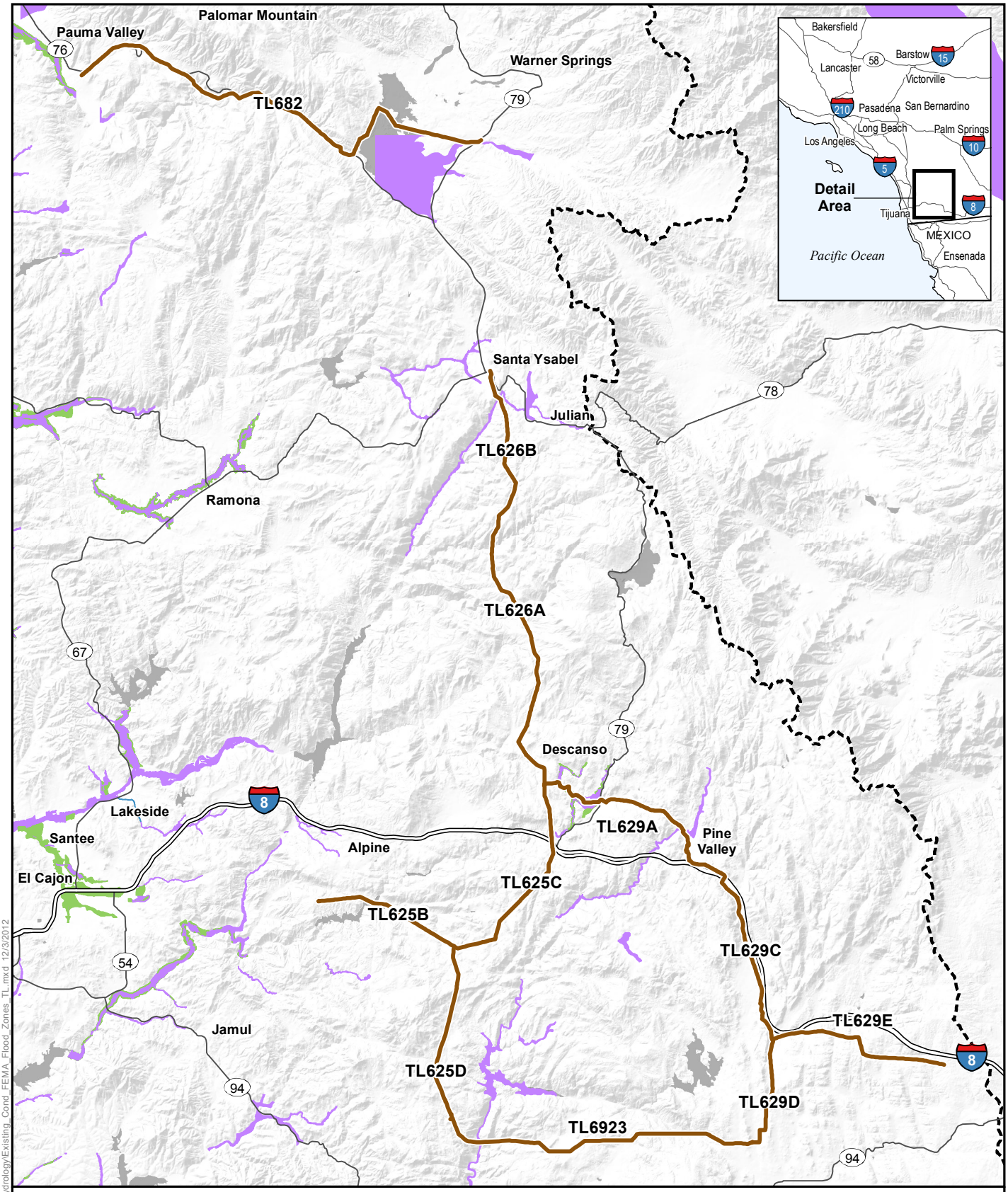

Figure 2: FEMA 100-Year Flood Zones Map

CNF Power Line Replacement Projects

Existing Transmission Line

FEMA Flood Zones

- 0.2 Percent Annual Chance Flood Hazard
- 1 Percent Annual Chance Flood Hazard Contained in Channel
- 100-Year Flood Zone

Hydrologic Basin Planning Area Boundary

Interstate

State Highway

Lake/Reservoir

SDGE
A Sempra Energy utility

INSIGNIA ENVIRONMENTAL

1 inch = 6 miles

0 2 4 6 Miles

Source: SDG&E, 2012; CPAD 1.7 GreenInfo Network, 2011; FEMA, 2011

Z:\Projects\SDGE_CNF_ESRP\MXDs\Hydrology\Existing_Cond_FEMA_Flood_Zones_TL.mxd 12/3/2012

5.0 Regulatory Background

The following discussion provides the federal, state, and local regulatory background for noise that may be relevant to the Proposed Project. No distinction between construction- and operation-related noise exists for any of these regulations.

Federal

No federal noise standards directly regulate noise in the operation of 69 kV power line facilities. However, in 1974 the U.S. EPA established guidelines for noise levels, and below certain levels, no reason exists to suspect that the general population will be at risk from any of the identified effects of noise. The U.S. EPA guidelines include:

- equivalent sound level (L_{eq})(24) less than 70 A-weighted decibels (dBA) to protect against hearing loss;[4]
- day-night equivalent noise level (L_{dn}) less than 55 dBA to protect against activity interference and annoyance in residential areas, farms, and other outdoor areas where quiet is a basis for use;
- L_{eq}(24) less than 55 dBA to protect against outdoor activity interference where limited time is spent, such as school yards and playgrounds;
- L_{dn} less than 45 dBA to protect against indoor activity interference and annoyance in residences; and
- L_{eq}(24) less than 45 dBA to protect against indoor activity interference in school yards.

These levels are not standards, criteria, regulations, or goals, but are defined to protect public health and welfare with an adequate margin of safety, and to provide guidelines for implementing noise standards locally.

Two federal regulations or standards related to noise may be relevant to the Proposed Projects, as described in the subsections that follow.

Occupational Health and Safety Act of 1970

The Occupational Health and Safety Act of 1970 covers all employers and their employees in the 50 states, the District of Columbia, Puerto Rico, and other U.S. territories. Administered by the OSHA, the law assigns OSHA two regulatory functions—setting standards and conducting inspections—to ensure that employers are providing safe and healthful workplaces. OSHA standards may require that employers adopt certain practices, means, methods, or processes that are reasonably necessary and appropriate to protect workers on the job. Employers must become familiar with the standards applicable to their establishments and eliminate hazards. Included in this law is a regulation for worker noise exposure to not exceed 90 dBA over an eight-hour work

[4] The human ear is not uniformly sensitive to all sound frequencies; therefore, the A-weighting scale has been devised to correspond with the human ear's sensitivity. The A-weighting scale uses the specific weighting of sound pressure levels from about 31.5 hertz to 16 kilohertz for determining the human response to sound.

shift. Areas where exposure exceeds 85 dBA must be designated and labeled as high-noise-level areas, and hearing protection is required.

Federal Aviation Administration Community Noise Equivalent

While not a regulation specifically, the FAA established a Community Noise Equivalent Level (CNEL)[5] of 65 decibels (dB) as the noise standard associated with aircraft noise measured at exterior locations in noise-sensitive land uses (NSLU).[6] This standard is also generally applied to railroad noise.

State

No state regulations explicitly regulate noise associated with 69 kV power lines. Three state regulations related to noise may be relevant to the Proposed Projects, however, as described in the subsections that follow.

California Noise Control Act

The California Noise Control Act states that excessive noise is a serious hazard to public health and welfare, and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also recognizes that continuous and increasing bombardment of noise exists in urban, suburban, and rural areas. This law declares that the State of California has the responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise.

California Noise Insulation Standards

The California Noise Insulation Standards were adopted in 1974 by the California Commission on Housing and Community Development, and were meant to establish noise insulation standards for multi-family residential buildings. This document establishes standards for interior room noise attributable to outside noise sources. The regulations also specify that acoustical studies must be prepared whenever a residential building or structure is proposed to be located near an existing or adopted freeway route, expressway, parkway, major street, thoroughfare, railway, rapid transit line, or industrial noise source, and where such noise source or sources create an exterior CNEL (or L_{dn}) of 60 dB or greater. Such acoustical analysis must demonstrate that the residence has been designed to limit intruding noise to an interior CNEL (or L_{dn}) of at least 45 dB.

Caltrans Transportation- and Construction-Induced Vibration Guidance

This document provides practical guidance to Caltrans engineers, planners, and consultants who must address vibration issues associated with the construction, operation, and maintenance of Caltrans projects. Continuous or frequent intermittent vibration sources, such as impact pile drivers, are significant when their peak particle velocity (PPV) exceeds 0.1 inch per second.

[5] CNEL measurements are weighted averages of sound levels gathered over a 24-hour period, essentially measuring ambient noise. Measurements taken during day, evening, and nighttime periods are weighted separately, recognizing that humans are most sensitive to noise in late-night hours and are more sensitive during evening hours than in daytime hours.

[6] NSLU is defined as any residence, hospital, school, hotel, resort, library, or any other facility where quiet is an important attribute of the environment.

More specific criteria for structures and potential annoyance have been developed by Caltrans and were used in the Noise Technical Report previously provided to the CPUC to evaluate potential Proposed Project sources that are continuous or transient. Table 10: Vibration Damage Threshold Guidance lists the maximum levels of vibration allowed by Caltrans, and Table 11: Human Response to Transient Vibration lists the Caltrans thresholds of perception for human response.

Local

Pursuant to Article XII, Section 8, of the California Constitution, the CPUC has exclusive jurisdiction, in relation to local government, to regulate the design, siting, installation, operation, maintenance, and repair of electric transmission facilities. The Proposed Projects are therefore not subject to the following local discretionary regulations; the discussion that follows is provided for informational purposes only to assist with CEQA review.

San Diego County Guidelines for Determining Significance for Noise

The San Diego County Guidelines for Determining Significance for noise is used by county staff reviewing discretionary projects and environmental documents, pursuant to the CEQA. Project implementation that is anticipated to result in the exposure of any on- or off-site, existing or reasonably foreseeable future NSLU to exterior or interior noise (including noise generated from a project together with noise from roads, railroads, airports, heliports, and all other noise sources) that is either in excess of a CNEL of 60 dB or an increase of a CNEL of 10 dB over pre-existing noise is considered significant. These thresholds apply only to operational activities; construction-related noise thresholds are described in the following subsection.

County of San Diego Noise Ordinance

The County of San Diego Noise Ordinance establishes prohibitions for disturbing, excessive, or offensive noise and contains provisions—such as sound level limits—for the purpose of securing and promoting public health, comfort, safety, peace, and quiet. Limits, as specified by zoning, are provided in Table 12: San Diego County Sound Level Limits. As shown in Table 12: San Diego County Sound Level Limits, the applicable limit one-hour average sound level for use regulations with a density of less than 11 dwelling units per acre is five dBA lower than those with a density of 11 or more dwelling units per acre. In the case that two adjacent properties each have different zone classifications, the sound level limit at the location on the boundary between the two properties is the arithmetic mean of the respective limits for the two zones, except for extractive industries. It is unlawful for any person to cause or allow the creation of any noise that exceeds the applicable limits of the Noise Ordinance at any point on or beyond the boundaries of the property where the sound is produced.

The Noise Ordinance allows San Diego County to grant variances from the noise limitations for temporary on-site noise sources, which are subject to terms and conditions intended to achieve compliance. The San Diego County Department of Planning and Land Use recommends the use of these limits to establish thresholds of significance for noise. Fixed-location public utility transmission facilities located on or adjacent to a property line are subject to this noise level limit, measured at or beyond six feet from the boundary of the easement where the equipment is located. This limit applies to operational activities of the facility only.

Table 10: Vibration Damage Threshold Guidance

Structure Type/Condition	Maximum PPV[7] (inches per second)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, and ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Caltrans, 2006

Table 11: Human Response to Transient Vibration

Human Response	PPV (inches per second)
Severe	2.0
Strongly Perceptible	0.9
Distinctly Perceptible	0.24
Barely Perceptible	0.035

Source: Caltrans, 2006

[7] Transient sources create a single, isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Table 12: San Diego County Sound Level Limits

Zone Categories	Period	Applicable Limit One-Hour Average Sound Level (dBA)
RS, RD, RR, RMH, A70, A72, S80, S81, S87, S88, S90, S92, RV, and RU. Use regulations with a density of less than 11 dwelling units per acre.	7 a.m. to 10 p.m. 10 p.m. to 7 a.m.	50 45
RRO, RC, RM, C30, S86, RV, RU, and V5. Use regulations with a density of 11 or more dwelling units per acre.	7 a.m. to 10 p.m. 10 p.m. to 7 a.m.	55 50
S94, V4, and all other commercial zones	7 a.m. to 10 p.m. 10 p.m. to 7 a.m.	60 55
V1, V2 V1 V2 V3	7 a.m. to 7 p.m. 7 p.m. to 10 p.m. 10 p.m. to 7 a.m. 10 p.m. to 7 a.m. 7 a.m. to 10 p.m. 10 p.m. to 7 a.m.	60 55 55 50 70 60
M50, M52, M54	Anytime	70
S82, M58, and all other industrial zones	Anytime	75

Source: San Diego County, 1982

The Noise Ordinance establishes additional noise limitations for the operation of construction equipment. Specifically, construction noise cannot exceed an average of 75 dB during the allowed construction period when measured at or within the property lines of any property developed for residential purposes, unless a variance is granted. It is unlawful for any person to operate construction equipment at any construction site on:

- Monday through Saturday, except between the hours of 7 a.m. and 7 p.m.;
- Sundays;
- Days appointed by the president, governor, or the Board of Supervisors for a public fast; and
- Thanksgiving or other holidays.

In addition, except for emergency work or work on a public road project, impulsive noise cannot exceed the maximum sound level shown in Table 13: Maximum Sound Level (Impulsive) Measured at Occupied Property, when measured at the boundary line of the property where the noise source is located, or on any occupied property where the noise is received, for 25 percent of the hour.

Table 13: Maximum Sound Level (Impulsive) Measured at Occupied Property

Occupied Property Use	Maximum Impulsive Sound Level (dBA)
Residential, Village Zoning, or Civic Use	82
Agricultural, Commercial, or Industrial Use	85

Source: San Diego County, 1982

San Diego County General Plan Noise Element

The San Diego County General Plan establishes limitations on sound levels to be received by NSLUs from operational activities. New development may cause an existing NSLU to be affected by noise, or it may create or locate an NSLU in such a place that it is affected by noise.[8] The Noise Element identifies airports and traffic on public roadways as the major sources of noise.

The Noise Element states that an acoustical study is required if it appears that an NSLU will be subject to noise levels of CNEL equal to 60 dBA or greater (from operational activities). If that study confirms that more than 60 dBA CNEL will be experienced, modifications that reduce the exterior noise level to less than 60 dBA CNEL and the interior noise levels to below 45 dBA CNEL must be made to the development. If these modifications are not made, the development will not be approved unless a finding is made that specific social or economic considerations warrant project approval. However, if the noise level is expected to exceed 75 dBA CNEL even with such modifications, the development will not be approved, irrespective of such social or economic considerations.

[8] Development is defined as any physical development including, but not limited to: residences, commercial or industrial facilities, roads, civic buildings, hospitals, schools, and airports.

San Diego County Department of Planning and Land Use Noise and Vibration Guidelines

The Department of Planning and Land Use has issued guidelines to determine significance for noise and vibration, based largely on federal transit guidelines. Vibration is considered significant if project implementation will expose the uses listed in Table 14: San Diego County Groundborne Vibration and Noise Limits to groundborne vibration or noise levels equal to or in excess of the levels shown.

5.1 Environmental Setting

Each of the Proposed Projects is the reconstruction of an existing 69 kV power line. The environmental setting includes the current and on-going construction, operation, and maintenance of each of the 69 kV power lines in their existing location.

The following subsections describe the existing noise levels and the NSLUs in the combined area of the Proposed Projects.

Existing Noise Levels

The sound levels in most communities fluctuate, depending on the activity of nearby and distant noise sources, time of the day, or season of the year. Within an hour, the sound level can fluctuate between the lowest level (L_{min}) and the highest level (L_{max}).

Ambient sound measurements were taken at 14 locations along the Proposed Projects to characterize the existing environment. These sound measurements, recorded in dBA, included the following:

- L_{eq} is an average of the time-varying sound energy for a specified time period. The L_{eq} was measured and reported for each hour of measurement and for the daytime period when construction is expected to occur.
- $L_{(10)}$ is the level that is exceeded 10 percent of the time.
- $L_{(90)}$ is the level that is exceeded 90 percent of the time and is often utilized as a descriptor of the background noise.

The Noise and Vibration Technical Report describes the noise methodology and procedures and provides the modeling results. The noise measurement locations are provided in the Noise and Vibration Technical Report, and the noise measurement survey results are summarized in Table 15: Noise Measurement Survey Results.

The following subsections describe the land uses and sources of ambient noise along each of the Proposed Projects, in addition to the results of the noise measurements.

TL625

TL625 has three segments covering approximately 22.5 miles of improvements. TL625C begins at Descanso Substation (southern terminus of TL626 and western terminus of TL629), passes through residential areas and across developed lands, and travels through or adjacent to USFS-administered lands to I-8. South of I-8, TL625C follows Japatul Valley Road and passes through

Table 14: San Diego County Groundborne Vibration and Noise Limits

Land Use Category[9]	Groundborne Vibration Impact Levels (inches/second rms)[10]		Groundborne Noise Impact Levels (dBA)	
	Frequent Events[11]	Infrequent Events[12]	Frequent Events[11]	Infrequent Events[12]
Category 1: Buildings where low ambient vibration is essential for interior operations (research and manufacturing facilities with special vibration constraints)	0.0018[13]	0.0018[13]	N/A[14]	N/A[14]
Category 2: Residences and buildings where people normally sleep (hotels, hospitals, residences, and other facilities)	0.0040	0.010	35	43
Category 3: Institutional land uses with primarily daytime use (schools, churches, libraries, other institutions, and quiet offices)	0.0056	0.014	40	48

Source: San Diego County, 1982

[9] For Categories 2 and 3 with occupied facilities, isolated events—such as blasting—are significant when the PPV exceeds one inch per second. Continuous or frequent intermittent vibration sources—such as impact pile drivers—are significant when their PPV exceeds 0.1 inch per second. More specific criteria for structures and potential annoyance have been developed by Caltrans and will be used to evaluate these continuous or transient sources in San Diego County.

[10] "rms" is defined as root mean square.

[11] "Frequent Events" is defined as more than 70 vibration events per day. Most rapid transit projects fall into this category.

[12] "Infrequent Events" is defined as fewer than 70 vibration events per day. This category includes most commuter rail systems.

[13] This criterion limit is based on levels that are acceptable for most moderately sensitive equipment, such as optical microscopes. Vibration sensitive manufacturing or research requires detailed evaluation to define acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the heating, ventilation, and air-conditioning systems, as well as stiffened floors.

[14] Vibration-sensitive equipment is not sensitive to groundborne noise. In addition, some buildings such as concert halls, television and recording studios, and theaters can be very sensitive to vibration and noise, but they do not fit into any of the three categories. The San Diego County guidelines give criteria for acceptable levels of groundborne vibration and noise for these various types of special uses.

Table 15: Noise Measurement Survey Results

Proposed Project	Measurement Identification	Measurement Location[15]	Within CNF? (yes/no)	L_{eq}(day)[16] (dBA)	CNEL (dBA)	Ambient Noise Sources
TL625	A	19605 Japatul Road	Yes	41	44	Local traffic, ranch activities, helicopters and other aircraft, and natural sounds
	B	Near Carveacre Road	Yes	44	45	Local traffic, helicopters and other aircraft, and natural sounds
	E	22779 Japatul Valley Road	Yes	42	56	Local traffic, helicopters and other aircraft, and natural sounds (nighttime cicadas)
TL626	M	Inaja Memorial Park	Yes	52	64	Local traffic, helicopters and other aircraft, and natural sounds (nighttime cicadas)
	N	Pole Z371508 on Burrel Way	Yes	42	53	Local traffic, helicopters and other aircraft, and natural sounds (nighttime cicadas)
	U	Approximately 200 feet west of Boulder Creek Road and 440 feet northwest of the Boulder Creek Road/Sherilton Ranch Road intersection	Yes	37	44	Local traffic, helicopters and other aircraft, and natural sounds (nighttime cicadas)
TL629	C	Boulder Oaks Campground	Yes	44	52	Local traffic, helicopters and other aircraft, and natural sounds

[15] All residential structures located near measurement locations are less than 11 units per acre.
[16] L_{eq}(day) is from 7 a.m. to 7 p.m.

Proposed Project	Measurement Identification	Measurement Location[15]	Within CNF? (yes/no)	L_{eq}(day)[16] (dBA)	CNEL (dBA)	Ambient Noise Sources
TL629 (cont.)	J	Meadow Lane/Tanglewood Drive intersection	Yes	53	53	Local traffic, helicopters and other aircraft, and natural sounds
	K	27408 Old Highway 80	Yes	48	53	Local traffic, barnyard activities, gardening activities, and natural sounds
	L	Pole Z41000 near Cameron Truck Trail	No	45	51	Local traffic, ranching activities, and natural sounds
TL682	S	San Luis Rey Picnic Area	Yes	48	67	Local traffic, helicopters and other aircraft, and natural sounds (nighttime cicadas)
	T	La Jolla Indian Reservation	No	41	48	Local traffic, residential activities, and natural sounds
TL6923	F	Lake Morena Drive	No	55	52	Local traffic, helicopters and other aircraft, and natural sounds
	F’	1704 Lake Morena Drive	No	47	52	Local traffic, helicopters and other aircraft, and natural sounds

residential and ranch acres before heading east to near Carveacre Road, where it splits into western and southern segments. TL625B travels primarily on the south side of Old Japatul Road and Dehesa Road, passing through ranches and USFS-administered lands before terminating at Loveland Substation. TL625D heads south to Barrett Substation, passing through USFS-administered lands and residential and ranch lands.

Noise measurement locations A, B, and E are located along TL625. The noise measurement survey results are provided in Table 15: Noise Measurement Survey Results. The average daytime L_{eq} was 42 dBA and the average CNEL was 48 dBA. Sources of ambient noise included local traffic, ranch activities, helicopters and other aircraft, and natural sounds, such as nighttime cicadas.

TL626

TL626 has approximately 18.8 miles of improvements between Descanso Substation and Santa Ysabel Substation to the north. TL626 passes through residential areas in the Descanso area and through and adjacent to USFS-administered lands and ranch lands.

Noise measurement locations M, N, and U are located along TL626. The noise measurement survey results are provided in Table 15: Noise Measurement Survey Results. The average daytime L_{eq} was 44 dBA and the average CNEL was 54 dBA. Sources of ambient noise included local traffic, helicopters and other aircraft, and natural sounds, such as nighttime cicadas.

TL629

TL629 connects Descanso Substation to Glencliff Substation (approximately 11.2 miles), Glencliff Substation to Cameron Tap (approximately 6.2 miles), Cameron Tap south to Cameron Substation (approximately 4.8 miles), and Cameron Tap east to Crestwood Substation (approximately 7.6 miles). TL629 passes through residential areas in Descanso, Guatay, Pine Valley, and along Buckman Springs Road north of Cameron Substation. TL629 parallels Old Highway 80 east of Descanso to Glencliff Substation, passing adjacent to or within USFS-administered lands.

Noise measurement locations C, J, K, and L are located along TL629. The noise measurement survey results are provided in Table 15: Noise Measurement Survey Results. The average daytime L_{eq} was 48 dBA and the average CNEL was 52 dBA. Sources of ambient noise included local traffic, helicopters and other aircraft, barnyard animals, gardening activities, ranching activities, and natural sounds.

TL682

TL682 connects Rincon Substation to Warners Substation (approximately 20.2 miles). TL682 closely parallels SR-76 east of Rincon Substation to west of Lake Henshaw, where it travels north around Lake Henshaw, then east to Warners Substation, which is located on the south side of SR-79 and approximately 750 feet west of the intersection with County Route S2. TL682 travels through farm lands near Rincon, ranch and residential areas on the La Jolla Indian Reservation, USFS-administered lands, and grazing lands.

Noise measurement locations S and T are located along TL682, and the noise measurement survey results are provided in Table 15: Noise Measurement Survey Results. The average daytime L_{eq} was 45 dBA and the average CNEL was 58 dBA. Sources of ambient noise included local traffic, helicopters and other aircraft, residential activities, and natural sounds, such as nighttime cicadas.

TL6923

TL6923 connects Barrett Substation to Cameron Substation (approximately 13.4 miles). TL682 travels across agricultural lands, as well as lands administered by the USFS and the BLM.

Noise measurement locations F and F' are located along TL6923. The noise measurement survey results are provided in Table 15: Noise Measurement Survey Results. The average daytime L_{eq} was 51 dBA and the average CNEL was 52 dBA. Sources of ambient noise included local traffic, helicopters and other aircraft, and natural sounds.

Noise-Sensitive Receptors

The majority of the Proposed Projects' noise-sensitive receptors are the approximately 500 residences within approximately 500 feet of the existing 69 kV power lines. The closest schools to the Proposed Projects are Descanso Elementary, which is located approximately 150 feet north of TL629, and Pine Valley Elementary, which is located approximately 800 feet north of TL629. Additional sensitive receptors located in proximity to the Proposed Projects are the Descanso Branch Library, which is approximately 90 feet northeast of TL629, and the Pine Valley Branch Library, which is approximately 340 feet west of TL629. There are no hospitals located within one mile of any of the Proposed Projects.

6 RECREATION

The following subsections describe the regulatory and physical setting of the Proposed Projects as they relate to recreation. Federal, state, and local regulations pertaining to recreation that may be relevant to the Proposed Projects are discussed, followed by an examination of the State Parks, wilderness areas, and recreational resources in the combined area of the Proposed Projects.

6.0 Regulatory Background

Pursuant to Article XII, Section 8 of the California Constitution, the CPUC has exclusive jurisdiction, in relation to local government, to regulate the design, siting, installation, operation, maintenance, and repair of electric facilities. As part of the environmental review process, SDG&E has considered relevant federal, state, and local regulations, plans, policies, and issues.

Federal

USFS CNF 2005 Land Management Plan

The USFS CNF 2005 Land Management Plan designates land use zones within the CNF for the purpose of identifying appropriate uses that are consistent with the achievement of the desired conditions described in the plan. The CNF 2005 Land Management Plan divides the forest into a series of geographical units that are referred to as "places." There are 11 places identified for the

CNF. Portions of the existing 69 kV power lines that compose the Proposed Projects are located within Laguna Place, Morena Place, Palomar Mountain, Pine Creek, Sweetwater Place, and Upper San Diego River. All of these places are primarily managed to maintain the appearance of natural, undeveloped landscapes with scenic and recreational resources.

Omnibus Public Land Management Act of 2009

The USFS designates wilderness areas within the U.S. through the Omnibus Public Land Management Act of 2009 and the U.S. Congress through the National Wilderness Preservation System. Many of these wilderness areas are located within national forests. No general plans have been developed for either of the wilderness areas crossed by the existing 69 kV power lines that compose the Proposed Projects. These wilderness areas are managed to preserve their primitive wilderness characteristics.

State

2002 State Park System Plan

The 2002 State Park System Plan contains goals, policies, objectives, and proposals for new programs and initiatives to guide the State Park system. The plan mentions that proper maintenance of State Park system facilities, including utility systems, is essential to provide for the public health, quality service, and safety of the parks.

Cuyamaca Rancho State Park General Plan

General plans for individual parks typically address goals and policies regarding the development and management of the individual park for which the plan is written. The State Parks located within the vicinity of the Proposed Projects are Cuyamaca Rancho State Park and Palomar Mountain State Park (for which no general plan has been developed to date). The Cuyamaca Rancho State Park Plan is administered by the California Department of Parks and Recreation and addresses the issues, problems, and opportunities that affect the State Park, as well as recreational trails and other outdoor recreation areas.

Local

Pursuant to Article XII, Section 8, of the California Constitution, the CPUC has exclusive jurisdiction, in relation to local government, to regulate the design, siting, installation, operation, maintenance, and repair of electric facilities. The Proposed Projects are therefore not subject to local discretionary regulations. No local regulations are relevant to the Proposed Projects for the purposes of evaluation under the CEQA Checklist.

6.1 Environmental Setting

Each of the Proposed Projects is the reconstruction of an existing 69 kV power line. The environmental setting includes the current and on-going construction, operation, and maintenance of each of the 69 kV power lines in their existing locations.

State Parks and Wilderness Areas

Approximately 27 percent of the existing 69 kV power lines that compose the Proposed Projects (approximately 28.6 miles) are located within the CNF. The CNF is under the jurisdiction of the USFS, and is the southernmost national forest in California. The forest was named in honor of

President Grover Cleveland, and the land was designated as a national forest in 1908 by President Theodore Roosevelt. The CNF consists of more than 567,000 acres and contains a variety of terrains and recreational opportunities. Recreational activities in the CNF include camping, horseback riding, mountain biking, picnicking, scenic driving, and hiking. Most hiking trails and facilities are open year-round. The CNF contains 16 general campgrounds, which collectively contain approximately 600 campsites. The CNF also contains five group campgrounds, which can accommodate anywhere from 11 to 104 people per campground, and 12 recreational vehicle (RV) camping areas, which are often located within general or group campgrounds. The majority of the campgrounds within the CNF are currently classified as light-usage campgrounds.

There are four congressionally designated wilderness areas within the CNF, two of which are located within the vicinity of the Proposed Projects. The two wilderness areas located within the vicinity of the Proposed Projects are Pine Creek Wilderness Area and Hauser Wilderness Area, which are managed with the goal of preserving their primitive wilderness characteristics. TL625 is located approximately 1.7 miles west of Pine Creek Wilderness Area and TL6923 is located approximately 0.1 mile south of Hauser Wilderness Area. TL625 and TL6923 were constructed and in operation prior to the designation of either the Pine Creek or Hauser Wilderness Areas.

Pine Creek Wilderness Area

Pine Creek Wilderness Area is one of the four congressionally designated wilderness areas within the CNF. It consists of approximately 13,000 acres and was designated by Congress as a wilderness area in 1984. It is managed by the USFS and bordered by Hauser Wilderness Area to the south. Pine Creek Wilderness Area can be accessed via I- 8, SR-79, and Sunrise Highway. Users predominately access the area from the north through the Pine Valley/Secret Canyon trailhead, which is located off of I-8. The wilderness area can also be accessed from the trailhead for Horsethief Canyon Trail, which is located off of Lyons Valley Road. Recreational activities within the wilderness area include hiking, backpacking, climbing, kayaking, canoeing, rafting, horseback riding, bird watching, and stargazing.

Hauser Wilderness Area

Hauser Wilderness Area is another one of the four congressionally designated wilderness areas within the CNF. It was designated by Congress as a wilderness area in 1984 and consists of approximately 7,547 acres. Hauser Wilderness Area is managed by the USFS and is bordered by the Pine Creek Wilderness Area to the north. Hauser Wilderness Area is California's southernmost wilderness area located on USFS-administered land. The primary access to this wilderness area is via the Pacific Crest National Scenic Trail from the Morena Regional Park trailhead. The Pacific Crest National Scenic Trail runs through Hauser Wilderness Area and is a 2,627-mile, long-distance mountain hiking and equestrian trail that stretches from Mexico to Canada. Access to the trailhead is from Morena Lake Road and Buckman Springs Road. Hauser Creek Trail follows Hauser Canyon for four miles just outside the southern wilderness boundary. No other trails exist in the wilderness area, and the rest of the area is seldom used. Recreational activities in Hauser Wilderness Area include hiking, backpacking, climbing, kayaking, canoeing, hunting, horseback riding, bird watching, and stargazing.

Cuyamaca Rancho State Park

Cuyamaca Rancho State Park is under State Parks jurisdiction and is located approximately 50 miles east of San Diego on SR-79, and 15 miles south of the unincorporated town of Julian. The park consists of more than 26,000 acres of mostly forested land and is located in the Laguna Mountains of the Peninsular Ranges. Cuyamaca Peak, the second highest point in San Diego County at approximately 6,500 feet, is located within the park. Recreational activities in the park include hiking, biking, horseback riding, and camping. Lake Cuyamaca is also located within the park and offers recreational activities, such as boating and fishing. One Proposed Project—TL626—is located approximately 1.5 miles west of Cuyamaca Rancho State Park.

Palomar Mountain State Park

Palomar Mountain State Park is under State Parks jurisdiction, consists of approximately 1,862 acres of mostly coniferous forest, and is located off of SR-76 within the Palomar Mountain Range. Recreational activities in the park include camping, picnicking, and hiking, as well as fishing in Doane Pond. One Proposed Project —TL682—passes within approximately 1.8 miles of Palomar Mountain State Park.

Recreational Resources in the Proposed Project Area

The subsections that follow summarize the recreational resources spanned by or located within the immediate vicinity of the Proposed Projects. The existing 69 kV power lines that compose the Proposed Projects, as well as various recreational resources located in the vicinity of the Proposed Projects, are shown in Figure 3: Recreational Resources. Trails crossed by the existing 69 kV power lines that compose the Proposed Projects are identified in Table 16: Trails Crossed by the Existing 69 Kilovolt Power Lines.

TL625

TL625 consists of three segments: Loveland Substation to Barrett Tap (TL625B), Barrett Tap to Descanso Substation (TL625C), and Barrett Tap to Barrett Substation (TL625D). TL625B originates at Loveland Substation, which is located on Sequan Truck Trail. The line then travels to the north of Loveland Reservoir. Though it is also located within the CNF, Loveland Reservoir is owned and operated by Sweetwater Authority, which is a public water agency. This reservoir is open to public shoreline fishing. TL625B crosses a trail used to access the reservoir fishing area. This segment of the line runs within approximately 555 feet of the trailhead, parking entrance, information kiosk, and parking lot. The line also crosses the area of the reservoir open to public fishing during the high-water season. In addition, the line crosses a California riding and hiking trail that travels along the opposite side of Japatul Road to the north of the reservoir.

The terminus of TL625C at Descanso Substation is located approximately 0.5 mile from the USFS-administered Stallion Oaks Campground. Stallion Oaks Campground contains 19 campsites and five RV hookups. Recreational activities on Stallion Oaks Campground include a clubhouse, fishing, and swimming. The segment of the line that runs from Barrett Tap to Barrett Substation (TL625D) passes within 1.2 miles of the trailhead of Horsethief Canyon Trail and the boundary of Pine Creek Wilderness Area.

TL626

TL626 runs from Santa Ysabel Substation to Descanso Substation and has been subdivided into two sections—TL626A and TL626B. TL626A originates at Santa Ysabel Substation near Old Julian Highway. From there, the line follows Old Julian Highway until it enters the CNF at pole Z213741 near Inaja Memorial Park. Inaja Memorial Park contains a picnic area that is open year-round for daytime use, as well as a memorial in honor of the 11 men who lost their lives fighting a forest fire in the CNF in 1956. The park also contains a 0.5-mile-long hiking trail called Inaja Memorial Trail. The nearest poles to the park are located approximately 0.2 mile southwest of the picnic area and 0.1 mile southwest of the hiking trail. These three poles are located in forested areas downhill from the park, and are not visible from within the park. The nearest visible poles are located approximately 0.2 mile southeast from Inaja Memorial Trail, across a valley and on the crest of the adjacent hill. In addition, the eastern portion of Santa Ysabel Open Space Preserve is located adjacent to SR-79 and SR-78, approximately 300 feet east of Santa Ysabel Substation and TL626A.

TL626B then continues through the CNF and runs approximately 3.8 miles west of Paso Picacho Campground, which is located on SR-79. As TL626B nears Descanso Substation, the line runs approximately 1.5 miles to the west of the boundary of Cuyamaca Rancho State Park. TL626B terminates at Descanso Substation, which is located approximately 0.1 mile east of Stallion Oaks Campground and 2.8 miles northeast of Ma-tar-awa RV Park, which is located within Viejas Indian Reservation. Ma-tar-awa RV Park features a clubhouse, convenience store, and swimming pool, as well as 99 RV hookups and campsites.

TL629

TL629 consists of four segments: Descanso Substation to Glencliff Substation (TL629A), Glencliff Substation to Cameron Tap (TL629C), Cameron Tap to Cameron Substation (TL629D), and Cameron Tap to Crestwood Substation (TL629E). TL629A runs from Descanso Substation to Glencliff Substation. As previously discussed, Descanso Substation is located approximately 0.1 mile east of Stallion Oaks Campground and 2.8 miles northeast of Ma-tar-awa RV Park. After departing from Descanso Substation, TL629A travels outside of the CNF for approximately 2.5 miles and runs adjacent to the southern boundary of Cuyamaca Rancho State Park. The nearest pole of TL629A is located approximately 400 feet south of the boundary of Cuyamaca Rancho State Park.

After re-entering the CNF, TL629A runs within approximately 0.3 mile of the trailhead for Pine Creek Trail and approximately 1.1 miles of the trailhead for Noble Canyon Trail. The Noble Canyon trailhead is the southernmost point of Noble Canyon National Recreational Trail, a 10.5-mile-long trail that is open year-round for hiking, mountain biking, and horseback riding.

Near the community of Pine Valley, TL629A runs within approximately 0.2 mile of the trailhead for Bear Valley Off-Highway Vehicle (OHV) Trail. TL629A also runs within approximately 200 feet west of Pine Valley County Park. As TL629A nears Glencliff Substation, the line crosses Sunrise Highway.

TL629C runs from Glencliff Substation to Cameron Tap. From Glencliff Substation, TL629C follows I-8 and Old Highway 80. TL629C passes within approximately 0.1 mile of Buckman

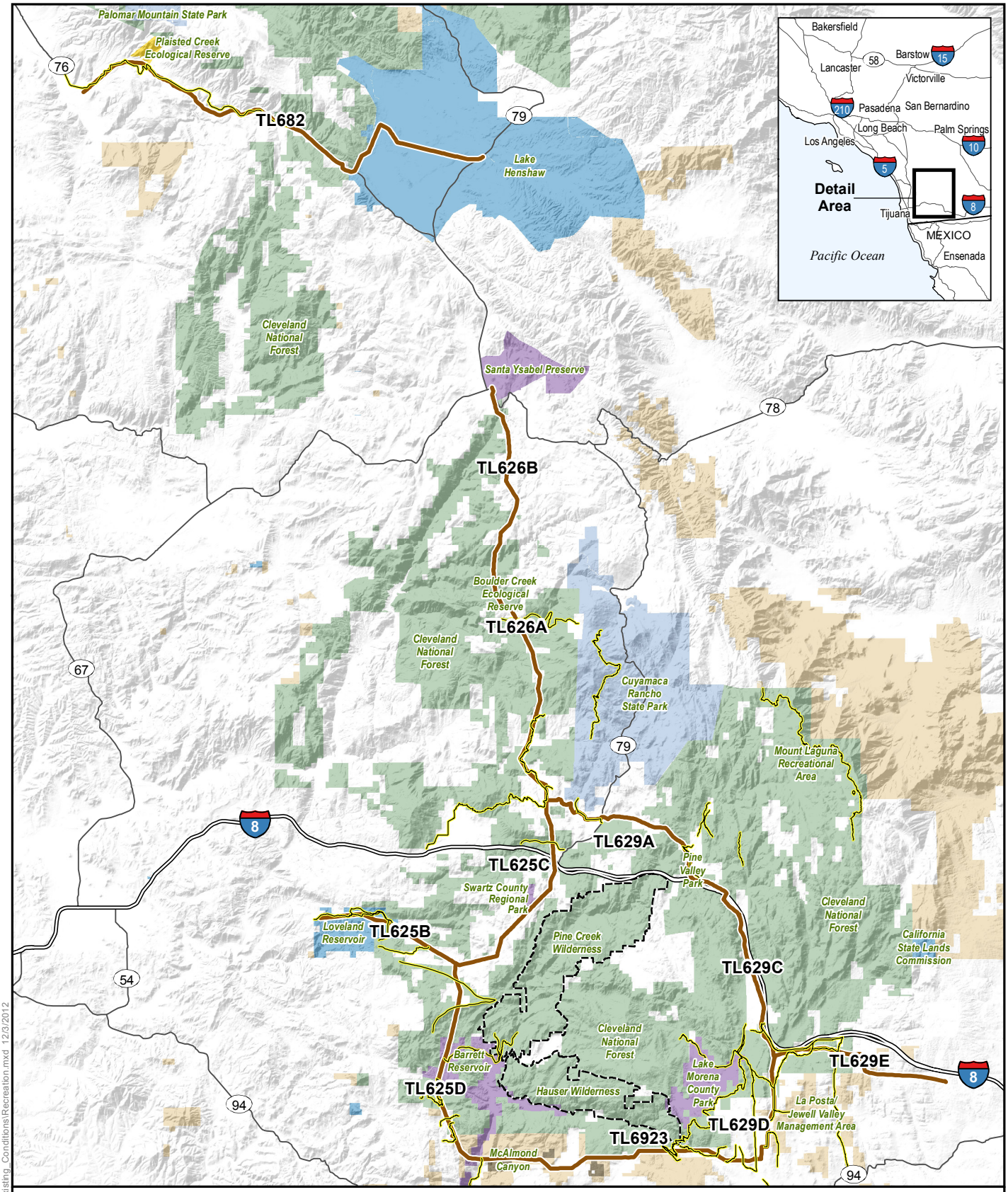

Figure 3: Recreational Resources

CNF Power Line Replacement Projects

- Existing Transmission Line
- Wilderness Area

Park/Open Space

- California Department of Fish and Game
- California Department of Parks and Recreation
- City/County
- Non Governmental Organization
- Other State/Special District
- U.S. Bureau of Land Management
- U.S. Forest Service
- Trail
- Interstate
- State Highway

SDGE A Sempra Energy utility

INSIGNIA ENVIRONMENTAL

1 in = 6 miles

0 2 4 6 Miles

Source: SDG&E, 2012; San Diego County, 2011; CPAD 1.8, July 2012, ©GreenInfo Network - www.calands.org

Z:\Projects\SDGE_CNF_ESRP\MXDs\Existing_Conditions\Recreation.mxd 12/3/2012

Table 16: Trails Crossed by the Existing 69 Kilovolt Power Lines

Trail Name	Number of Crossings
Barrett Lake Road/Lake Trail Connector Trail	11
Barrett Lake Road Pathway	1
Barrett Lake Trail	1
Big Potrero Spur Trail	1
Big Potrero Truck Trail	2
Boulder Creek Road Pathway	9
Buckman Springs Road Pathway	1
California Riding and Hiking Trail	9
Cameron Truck Trail	4
Carveacre Trail	1
Descanso Valley Pathway	2
Glens Trail	1
Hunters Camp Trail	1
Japatul Trail	1
Kitchen Creek Trail	1
La Posta Connector Trail	8
La Posta Creek/Old Highway 80 Pathway	2
La Posta Road Pathway	1
La Posta Truck Trail West Trail	1
Lake Morena Drive Pathway	1
Lake Trail	1
Manzanita to Lake Trail	13
Meadow Trail	1
Old Highway 80 Pathway	3
Pacific Crest National Scenic Trail	7
Phelps/Cameron Connector Trail	5

Trail Name	Number of Crossings
Pine Creek Road Pathway	1
Private Road Trail	1
Sequan Truck Trail Pathway	1
Skye Valley Trail	1
South Loveland Reservoir Trail	1
SR-76 Pathway	13
Trans County Regional Trail	1
Unknown Trail	1
Wildwood Glen Lane Pathway	1
Total	**111**

Sources: USFS, 2010; San Diego County, 2011

Springs Rest Area. Buckman Springs Rest Area is located across I-8 from TL629C and also includes a picnic area. The line continues south and passes within approximately 600 feet of Boulder Oaks Campground. The line also crosses over Pacific Crest National Scenic Trail.

TL629C at Cameron Tap is located approximately 1.1 miles to the east of Lake Morena County Park, which is an approximately 3,250-acre park that offers recreational activities, such as hiking, fishing, and boating. Lake Morena County Park contains 86 camping sites; picnicking areas; fishing; a playground; eight miles of multiuse, non-motorized trails; wilderness cabins; boating; and hiking. Lake Morena County Park includes Lake Morena picnic area and Lake Morena Campground, as well as Lake Morena Reservoir. Pacific Crest National Scenic Trail runs along the eastern side of the park.

TL629C at Cameron Tap is also located approximately 4.7 miles to the east of Corral Canyon OHV Area, which is a special recreation area that includes Bobcat Meadow Campground, the Four Corners OHV trailhead, and Corral Canyon Campground—all of which are open year-round. Corral Canyon OHV Area has 51 miles of OHV trails and roads, and also contains picnic areas.

TL629D runs from Cameron Tap to Cameron Substation. This segment of the line is located approximately 1.5 miles east of Lake Morena County Park. TL629E runs from Cameron Tap to Crestwood Substation. Crestwood Substation, which is located within the Campo Indian Reservation, is located approximately 0.2 mile south of Golden Acorn Casino, approximately 1.7 miles south of the La Posta Indian Reservation and La Posta Casino, and approximately 1.3 mile northwest of Live Oak Springs Resort. Activities in Live Oak Springs Resort include hiking, RV camping, horseback riding, mountain biking, swimming, and stargazing.

TL682

TL682 runs from Rincon Substation to Warners Substation generally along SR-76. The portion of TL682 near Rincon Substation passes within 1.8 miles of Palomar Mountain State Park. The line then enters the La Jolla Indian Reservation for approximately 0.4 mile, then exits and passes within approximately 0.2 mile south of Oak Knoll Campground. Oak Knoll Campground is located near the intersection of Palomar Mountain Road and SR-76. TL682 is not visible from the campground. Inside the La Jolla Indian Reservation, the line travels within approximately 600 feet of La Jolla Campground. The line crosses the road leading to the campground entrance. In addition, one pole is located approximately 45 feet from a dirt path leading from the campground to a paved road outside the campground. La Jolla Campground is located within the La Jolla Indian Reservation, and a large number of users were present during the time of the May 2011 site visit. One pole is located approximately 200 feet across SR-76 from San Luis Rey picnic area; however, the pole is not visible from the picnic area as the picnic area is surrounded by trees and is located uphill from the picnic area.

The line then travels toward Lake Henshaw, passing within approximately 0.3 mile south of a scenic viewpoint and approximately 0.6 mile north of Lake Henshaw Resort. The line is visible from Lake Henshaw scenic viewpoint and from Lake Henshaw generally; the nearest pole is located approximately 0.2 mile from the water's edge. The line does not span any areas of Lake Henshaw that are accessible by boat. The line then exits the CNF and travels around the outer edge of the northern portion of Lake Henshaw. Lake Henshaw Resort offers activities such as

tent camping, RV camping, boating, bird watching, and fishing, and offers amenities such as cabins, a pool, spa, and children's playground.

TL6923

TL6923 runs from Barrett Substation to Cameron Substation. Barrett Substation is located at the boundary between BLM- and USFS-administered lands. Barrett Substation is located approximately 1.9 miles southwest of Barrett Lake. Access to Barrett Lake is limited to three days per week and by reservation only. Barrett Lake offers recreational activities, such as fishing, boating, and waterfowl hunting. From Barrett Substation, the line travels east through BLM and private land, traveling within 2.7 miles of Potrero County Park. Potrero County Park includes 39 camping sites, picnic areas, and a nature trail. As the line nears Cameron Substation, it passes within approximately one mile of Lake Morena County Park, which is located approximately 2.8 miles from Cameron Substation.

7 TRANSPORTATION AND TRAFFIC

The following subsections describe the regulatory and physical setting of the Proposed Projects as they relate to transportation and traffic. Federal, state, and local regulations pertaining to transportation and traffic are discussed first, followed by an examination of the existing roadway network and railway, airports, bus, and bicycle facilities in the combined area of the Proposed Projects.

7.0 Regulatory Background

Construction projects that cross public transportation corridors are typically subject to local, state, and federal encroachment permits. Use or obstruction of navigable air space also requires approval. The following summarizes transportation and traffic regulations that may be relevant to the construction of the Proposed Projects.

Federal

Highway Capacity Manual

The Highway Capacity Manual 2000 (HCM 2000), prepared by the federal Transportation Research Board (TRB), is the result of a collaborative effort between the TRB, Federal Highway Administration, and American Association of State Highway and Transportation Officials. The HCM 2000 contains guidelines for computing the capacity and quality of service of various highway facilities—including freeways, intersections, rural highways—and the effects of transit, pedestrians, and bicycles on the performance of these systems.

Federal Regulation Title 14

All airports and navigable airspace not administered by the Department of Defense are under the jurisdiction of the FAA. Federal Regulation Title 14 Section 77 defines what classifies as an airport for the purposes of the statute and establishes the standards and required notification for objects affecting navigable airspace. In general, construction projects exceeding 200 feet in height above ground level or extending at a ratio greater than 50 to one (horizontal to vertical) from a public or military airport runway less than 3,200 feet long out to a horizontal distance of 20,000 feet are considered potential obstructions and require notification to the FAA. In

addition, Federal Regulation Title 14 Section 133 requires an operating plan to be developed in coordination with and approved by the local FAA Flight Standards District Office having jurisdiction over the area in which helicopter use will be conducted.

State

The use of California state highways for alternative transportation purposes may require written authorization or an encroachment permit from Caltrans. Caltrans reviews all requests from utility companies that plan to conduct activities within its ROW. Encroachment permits may include conditions or restrictions that limit when construction activities can occur within or above roadways under the jurisdiction of Caltrans.

Local

Pursuant to Article XII, Section 8, of the California Constitution, the CPUC has exclusive jurisdiction, in relation to local government, to regulate the design, siting, installation, operation, maintenance, and repair of electric facilities. The Proposed Projects are therefore not subject to local discretionary regulations. No local regulations are relevant to the Proposed Projects for the purposes of evaluation under the CEQA Checklist.

7.1 Environmental Setting

Each of the Proposed Projects is the reconstruction of an existing 69 kV power line. The environmental setting includes the current and on-going construction, operation, and maintenance of each of the 69 kV power lines in their existing locations.

Existing Roadway Network

The Proposed Projects are located in the central portion of San Diego County, in and around the CNF and will cross a network of state, county, and private roadways. Figure 4: Major Transportation Routes depicts major state and county routes within the combined area of the Proposed Projects. Roads in San Diego County's maintained system are recorded in an official document, known as the Road Register, which is approved by the San Diego County Board of Supervisors. There are many roads in San Diego County that are maintained by other agencies. Freeways and state highways are maintained by Caltrans. In addition, there are private roads maintained by adjacent property owners, and public roads (such as those within cities) that are not within the County-maintained system.

A description of the existing roadway network, list of major and local roadways that will be used for access during construction and those that are spanned by the existing 69 kV power lines that compose the Proposed Projects, and average daily traffic and peak hour traffic levels for I-8, SR-76, SR-78, SR-79, and SR-94 was provided in the Preliminary POD.

Railway

None of the Proposed Projects span any railways. The nearest rail station is located approximately 15 miles southwest of the Proposed Projects in the City of Escondido and is operated by the North County Transit District.

Airports

Reider Ranch Airport, located approximately 0.75 mile from TL6923, is the closest airport to any of the Proposed Projects. Reider Ranch Airport is privately owned, houses two single-engine airplanes, and contains one runway approximately 2,000 feet long. Reider Ranch Airport is not subject to the requirements of Federal Regulation Title 14 because it does not meet the definition of an airport under Section 77.

The second nearest airport is the On the Rocks Airport, located approximately 1 mile from TL625. This airport is privately owned and houses one single-engine aircraft. The runway is approximately 2,340 feet long and is composed of gravel. The airport was activated in 1990 and is owned by Covert Canyon, LLC. On the Rocks Airport is not subject to the requirements of Federal Regulation Title 14 because it does not meet the definition of an airport under Section 77.

The nearest public airport to any of the Proposed Projects is Gillespie Field, which is located approximately 10.6 miles west of TL625 where it enters Loveland Substation. In addition, Jacumba Airport is located approximately 12.1 miles east of TL629. Gillespie Field is an approximately 775-acre public airport that houses 964 aircraft. The airport contains three paved runways approximately 5,341 feet, 2,737 feet, and 4,147 feet long, respectively. Jacumba Airport is an approximately 131-acre public airport that contains one approximately 2,510 foot-long gravel/dirt runway. Jacumba Airport does not house any permanent aircraft.

Bus Facilities

The combined area of the Proposed Projects is generally serviced by the San Diego Metropolitan Transit System. Bus service within the combined area of the Proposed Projects is limited; however, Routes 888 and 894 are spanned by existing 69 kV power lines at points along Old Highway 80, I-8, and Buckman Springs Road. Route 888 operates on Mondays and Fridays from 9:40 a.m. to 12:10 p.m. traveling west, and 4:10 p.m. to 6:38 p.m. traveling east. Route 894 operates on weekdays from 6:12 a.m. to 4:10 p.m. traveling west, and from 9:00 a.m. to 7:08 p.m. traveling east. Route 888 and Route 894 will each travel through the combined area of the Proposed Projects twice per day (once heading east, and once heading west).

Bicycle Facilities

According to the SANDAG, the only bicycle infrastructure included in the combined area of the Proposed Projects occurs along highways that have a curb which allows bicycle use. Old Highway 80 falls within the classification of a Class III Bikeway, as it has limited signage and permanent markings and it is shared with pedestrians and motorists. No other designated bicycle facilities exist in the vicinity of the Proposed Projects.

8 VISUAL RESOURCES

This section includes a description of the regulatory framework and visual setting for the Proposed Projects. Existing visual conditions are characterized in terms of the physical landscape features that comprise visual resources in the combined area of the Proposed Projects.

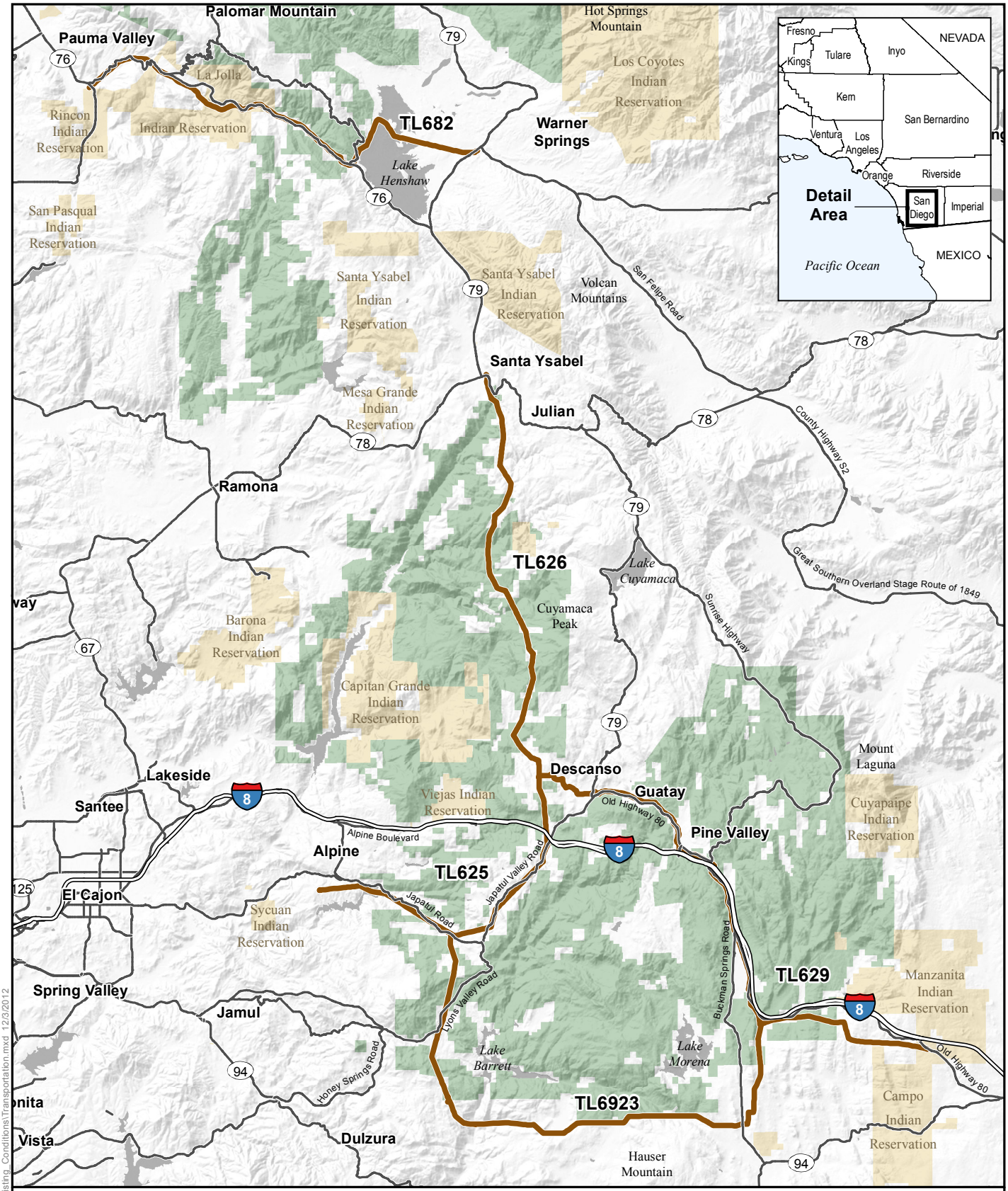

Figure 4: Major Transportation Routes — **CNF Power Line Replacement Projects**

Existing Transmission Line
Interstate
Lake/Reservoir
State Highway/Major Road

Land Administration
United States Forest Service
Bureau of Indian Affairs

SDGE A Sempra Energy utility
INSIGNIA ENVIRONMENTAL
ENVIRONMENTAL VISION

1 inch = 6 miles
0 4 8 Miles

Source: SDG&E, 2012; CPAD 1.7 GreenInfo Network, 2011

Z:\Projects\SDGE_CNF_ESRP\MXDs\Existing_Conditions\Transportation.mxd 12/3/2012

8.0 Regulatory Background

The following discussion provides the regulatory background for visual resources that may be relevant to the Proposed Projects.

Federal

National Wild and Scenic Rivers Act

The National Wild and Scenic Rivers Act was passed by Congress in 1968 to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. Rivers may be designated by Congress or, if certain requirements are met, the Secretary of the Interior. Each river is administered by either a federal or state agency, and protection of the river is provided through voluntary stewardship by landowners and river users and through regulation and programs of federal, state, local, or tribal governments. The San Luis Rey River and Cottonwood Creek are eligible for designation as Wild and Scenic Rivers.

State

California Department of Transportation Scenic Highway Program

California's Scenic Highway Program was created by the state Legislature in 1963, with the purpose to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. The State Scenic Highway System includes highways that are either eligible for designation as scenic highways or have been designated as such. The status of a state scenic highway changes from eligible to officially designated when the local jurisdiction adopts a scenic corridor protection program, applies to the California Department of Transportation for scenic highway approval, and receives the designation. A city or county may propose adding routes with outstanding scenic elements to the list of eligible highways; however, state legislation is required for them to become designated.

There are no designated state scenic highways in the combined area of the Proposed Projects; however, the Proposed Projects cross and parallel several eligible state scenic highways, which are illustrated in Figure 5: Regional Landscape Setting.

Local

Pursuant to Article XII, Section 8, of the California Constitution, the CPUC has exclusive jurisdiction, in relation to local government, to regulate the design, siting, installation, operation, maintenance, and repair of electric facilities. The Proposed Projects are therefore not subject to local discretionary regulations. No local regulations are relevant to the Proposed Projects for the purposes of evaluation under the CEQA Checklist.

8.1 Environmental Setting

Each of the Proposed Projects is the reconstruction of an existing 69 kV power line. The environmental setting includes the current and on-going construction, operation, and maintenance of each of the 69 kV power lines in their existing locations.

The Proposed Projects are situated in central San Diego County, in an area of undulating terrain dominated by the Laguna Mountains. Ranging in elevation from 1,000 to more than 6,500 feet

above sea level (asl), the Laguna Mountains are topographically part of the Peninsular Ranges Province, which extends to the tip of Baja California. The rugged landform of the Laguna Mountains is characterized by jagged rock outcroppings that contrast with more undulating terrain. Similar to the Sierra Nevada chain located to the north, the predominant orientation of the mountains is north-south. Although rainfall in the region is limited, pronounced variations in precipitation occur from west to east, giving way to increasingly arid conditions inland. The landscape of the western slopes includes numerous seasonal watercourses and rivers, many of which have been dammed. The relative density and texture of vegetation and the amount of exposed rock result in areas of strong visual contrasts within the landscape. The region's environmental setting enables a number of discrete vegetation communities, including savannah-like woodlands and riparian communities that include grassland and meadows, to co-exist in relatively close proximity to the numerous streams and seasonal watercourses that bisect the western areas. In the east, desert scrub—with its characteristic grey coloration—and chaparral—with its dark green foliage—dominate the drier, exposed hillsides. At higher elevations, coniferous forest and meadows become the predominant visual element of the natural landscape.

The majority of the Proposed Projects lie on or near undeveloped land located within or near the CNF. The area's diverse natural landscape scenery attracts seasonal recreational visitors, including hikers, off-road vehicle users, equestrians, and campers. The local population is largely concentrated in small, scattered inland communities, such as Julian, Rincon, and Descanso, along with several small tribal reservations. The presence of the tribal reservations is evidenced by the mixture of agricultural, urban/ornamental, and disturbed landscapes that punctuate a region dominated by the largely natural landscapes of the CNF and adjacent jurisdictions. I-8, a major freeway corridor, bisects the combined area of the Proposed Projects and serves as the principal connector between San Diego and the urban and agricultural hubs to the east, such as El Centro and Yuma. Several state routes, smaller paved and unpaved roadways, and Old Highway 80—which parallels I-8—serve as the principal connections within the area for the local population, as well as seasonal travelers.

Due to the scattered population and limited development, sources of nighttime lighting are localized and sparse, mainly found along roadways and the few local commercial facilities that exist. Other established landscape features with some degree of visibility include substations, wood utility poles, overhead 69 kV power lines, the lattice steel towers of the Sunrise Powerlink Project, and telecommunications towers.

Proposed Projects' Visibility and Viewsheds

The viewshed of a Proposed Project is generally the area from which a Proposed Project is visible or can be seen. For purposes of describing a project's visual setting and assessing potential visual impacts, the viewshed can be broken down into distance zones of foreground, middle ground, and background. The foreground is defined as the zone within 0.25 to 0.5 mile from the viewer, and the immediate foreground is within 300 feet. Landscape detail is most noticeable and objects generally appear most prominent when seen in the foreground. The middle ground zone ranges from 0.5 mile to as far as three to five miles from the viewer, while the background encompasses everything from three to five miles to the horizon.

Analysis of the Proposed Projects primarily considers the potential effects of Proposed Project elements on foreground viewshed conditions, although consideration is also given to the

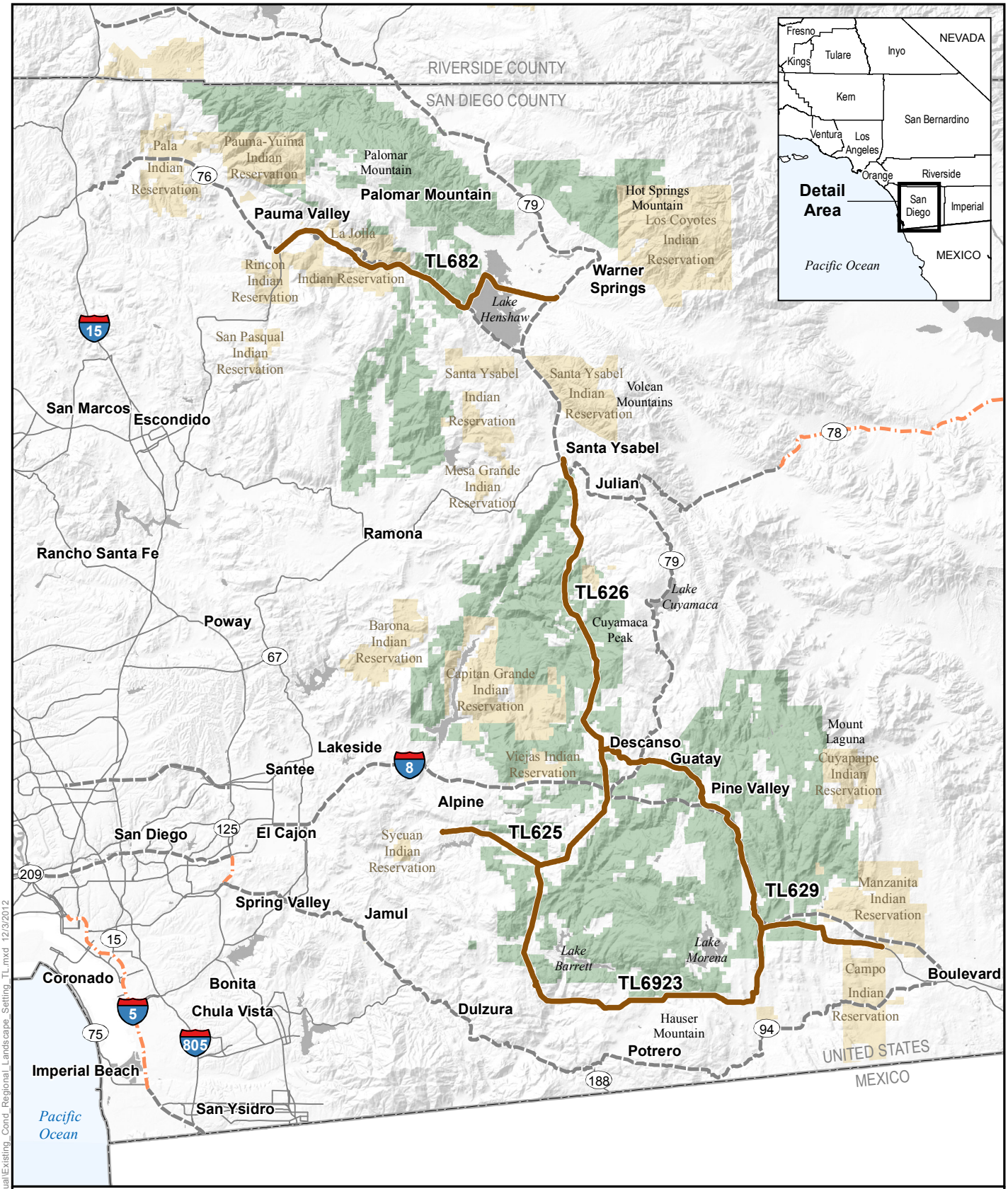

Figure 5: Regional Landscape Setting — **CNF Power Line Replacement Projects**

- Existing Transmission Line
- Designated State Scenic Highway
- Lake/Reservoir
- Eligible State Scenic Highway
- Political Boundary
- Other Road

Land Administration

- United States Forest Service
- Bureau of Indian Affairs

SDGE A Sempra Energy utility

INSIGNIA ENVIRONMENTAL

ENVIRONMENTAL VISION

1 inch = 8 miles

0 4 8 Miles

Source: SDG&E, 2012; CPAD 1.7 GreenInfo Network, 2011; Environmental Vision, 2012

Z:\Projects\SDGE_CNF_ESRP\MXDs\Visual\Existing_Cond_Regional_Landscape_Setting_TL.mxd 12/3/2012

potential effects on the middle ground and background views. As described in the following sections, the Proposed Projects will be visible from some nearby locations along public roads, just as the existing 69 kV power lines are visible today. In addition, they will be seen from limited residential and public recreation areas, just as the existing 69 kV power lines are visible today. At many locations, intervening natural landforms will partially or fully screen public views of the Proposed Projects. In addition, Proposed Project visibility will be limited in many areas where Proposed Projects blend in with surrounding or backdrop vegetation and landforms. The Proposed Projects will not be visible in their entirety from any single viewing location.

Visual Character of the Proposed Project Areas

The Proposed Projects each include one of five 69 kV power lines located within and around the CNF. For the purposes of analysis and construction planning, these 69 kV power lines have been divided into segments. The following subsections describe the visual character of the landscape along each of these 69 kV power lines. The Visual Resources Technical Report provides a set of maps that show the locations of the 69 kV power lines and photograph viewpoint locations. The Visual Resources Technical Report includes a set of 57 photographs that document representative existing visual conditions.

Visual Character of the Proposed Project Areas

The Proposed Projects each include one of five 69 kV power lines located within and around the CNF. For the purposes of analysis and construction planning, these 69 kV power lines have been divided into segments. The following subsections describe the visual character of the landscape along each of these 69 kV power lines. The Visual Resources Technical Report provides a set of maps that show the locations of the 69 kV power lines and photograph viewpoint locations. The Visual Resources Technical Report includes a set of 57 photographs that document representative existing visual conditions.

TL625

TL625 is approximately 22.5 miles long and lies within sparsely populated mountainous terrain in the unincorporated communities of Alpine, Dulzura, and Descanso. This component is largely located on USFS-administered land, away from paved roadways. Elevations along the line range from approximately 1,400 feet to more than 3,000 feet asl, and nearby mountain peaks include Chiquito Peak at 4,165 feet asl, Gaskill Peak at 3,863 feet asl, and Barber Mountain at 3,257 feet asl. Vegetation consists largely of low scrub, grassland, and chaparral; the vegetation is noticeably thinner on the surrounding higher terrain, with larger areas of exposed rock and soil. In general, intervening topography and vegetation restrict open views toward this Proposed Project. In addition, the variable texture of the landscape backdrop tends to reduce the contrast and general visibility of the 69 kV power line structures. Throughout its length, TL625 passes within 100 feet of approximately 35 residences.

TL625 consists of three segments: Loveland Substation to Barrett Tap (TL625B), Barrett Tap to Descanso Substation (TL625C), and Barrett Tap to Barrett Substation (TL625D).

TL625B

TL625B runs from Loveland Substation, located along the Sequan Truck Trail, southeast along Japatul Road to Barrett Tap through a rugged landscape covered with a mixture of chaparral desert scrub and grassland, with riparian forest in the vicinity of Loveland Reservoir. This existing line passes through both private and USFS-administered land, as well as the northern edge of Loveland Reservoir, which is jointly administered by the USFS and the Sweetwater Authority Water Agency and is a recreation facility used for fishing, camping, and hiking. It also passes within sight of a parking area along Japatul Road and a trailhead that leads to the reservoir. The Lemon Grove Rod and Gun Club, a private recreational facility, is located near Loveland Substation. The line also passes several residences. The following paragraphs describe photographs from the Visual Resources Technical Report in greater detail as they pertain to TL625B.

- The view from Sequan Truck Trail near Loveland Substation, shown in Photograph 1, includes open grassland and scrub with the substation seen in the foreground against rugged topography, including the approximately 2,801-foot-high Sycuan Peak. To the left, the visibility of the existing 69 kV power line poles is decreased by the surrounding terrain. Three reddish-brown, weathered-steel poles of an adjacent utility line appear in the foreground to the right of the substation.

- Photograph 2 shows the existing wood pole-supported TL625B line crossing Sequan Truck Trail. Visible at the center of the image on the ridgeline are a group of residences, as well as existing wood 12 kV distribution poles.

- The view from the Loveland Reservoir trailhead is depicted in Photograph 3, where existing wood H-frame structures and overhead conductors are visible beyond the signage in the foreground. These existing poles, which are located approximately 600 feet away, are less noticeable than the signage, as are other TL625B poles farther on the right.

- Taken from a location farther east on Japatul Road, Photograph 4 shows a diversely textured landscape that includes a view of Loveland Reservoir. Existing poles located within 500 feet of the road, while noticeable, do not particularly stand out against the varied landscape backdrop.

- Characteristic rolling topography with scrub and chaparral along Japatul Road near Carveacre Road is shown in Photograph 5. Residences lie within 500 feet on either side of TL625B, as evidenced by the white fence on the right (south) side of the roadway in the foreground and, in the distance, a paved driveway leading uphill. Existing weathered wood H-frame structures and poles blend in with the lighter-colored scrub and rock outcrops visible in the landscape.

TL625C

TL625C runs from Barrett Tap, located along Japatul Road, generally north along Lyons Valley Road through private and USFS-administered land. The mountainous terrain is covered in woodland, grasslands, chaparral, and scrub with roadway views frequently limited by vegetation

and topography. Japatul Valley Road, which TL625C crosses and parallels, is a San Diego County scenic route. This existing line also crosses I-8, which is another San Diego County scenic route. This segment runs near the largest number of residences; there are approximately 41 residences in Alpine and Descanso located within 500 feet of the line. The line also passes several residences. The following paragraphs describe photographs from the Visual Resources Technical Report in greater detail as they pertain to TL625C.

- Photograph 6 shows TL625C crossing Japatul Valley Road near Windfall Ranch, with the existing poles shown clearly against the sky.

- In Photograph 7, TL625C appears along the right (west) side of the roadway, with the existing poles shown clearly against the sky.

- Photograph 8 is a somewhat typical view of the existing poles and conductors where they parallel the road at a distance.

- In several cases, existing poles along the line are located in close proximity to residences. In a view farther north on Japatul Valley Road, Photograph 9 depicts a pole located on residential property, approximately 150 feet away from a residence.

- Photograph 10 in shows TL625C crossing I-8. On the left side of the roadway, an existing wood double-pole structure appears against the sky; on the opposite side of the roadway, TL625C structures are visible against a mountain backdrop. Existing aerial marker balls can be seen on the conductors where they cross the highway.

- In a view from Wildwood Glen Lane near a rural residential area north of I-8, Photograph 11 shows an existing pole visible against the sky behind a residence seen in the foreground. Dense vegetation screens the lower portions of this pole.

- Similar vegetation screening occurs in the view from Viejas Grand Road near Oak Grove Drive, approximately 0.4 mile south of Descanso Substation, as shown in Photograph 12. Descanso Substation is pictured in Photograph 23, along with TL626.

TL625D

TL625D runs south through particularly scenic and rugged topography with wide vistas. The segment lies within USFS-administered land and also runs through private residential and agricultural properties; a portion also follows and crosses Lyons Road, a San Diego County scenic route. Central portions of the segment are largely uninhabited, with residences concentrated at the ends of the segment in southern Alpine and Deerhorn Valley. Barrett Honor Camp, a juvenile correctional facility, is located approximately 1.5 miles to the east of TL625C near Barrett Lake. The following paragraphs describe photographs from the Visual Resources Technical Report in greater detail as they pertain to TL625D.

- With a view from a rural residential area south of Japatul Road, Photograph 13 shows TL625D running north toward Japatul Valley; Viejas Mountain is seen in the distance. On the left, a residential structure with a dark roof blends into a scenic panoramic landscape vista characteristic of this landscape setting. The dark cast of the chaparral,

which dominates the landscape in this high desert setting, effectively reduces the visibility of the relatively dark 69 kV power line poles where they appear against the mountainous backdrop. After crossing Lyons Valley Road near the Skye Valley Road turnoff, TL625D veers away from the highway and emerges from chaparral and woodland to cross an open landscape of grassland before crossing Barber Mountain to the south.

- As seen in Photograph 14 from Lyons Valley Road north of Barrett Lake Road, existing wood power poles are somewhat noticeable in the flat terrain below Barber Mountain. The wood poles become progressively less visible where they recede in the distance as the line ascends Barber Mountain. The dark chaparral covering the mountain slopes further reduces the visibility of the poles, but the light-colored soil of the access road contrasts noticeably with the hillside vegetation and increases the visibility of the road. Photograph 51 shows an aerial view of Barrett Substation, where the segment terminates, and TL6923.

TL626

This approximately 18.8-mile-long 69 kV power line runs south from Santa Ysabel Substation on SR-79 in the town of Santa Ysabel to Boulder Creek Substation, and continues south to Descanso Substation. TL626 crosses the rolling topography of the Cuyamaca Mountains, with nearby peaks including Cuyamaca Peak (6,512 feet asl), North Peak (5,993 feet asl), and Middle Peak (5,883 feet asl). In the north, the line crosses a landscape of open savannah characterized by grassland and punctuated by scattered clusters of oak trees. As this existing line approaches Descanso, the savannah gives way to chaparral with forested riparian corridors. Most of the line—approximately 16 miles—runs through USFS-administered land and is sparsely inhabited, crossing lightly travelled, paved and unpaved roads. Much of the central portion of TL626 roughly parallels Boulder Creek Road and the line crosses SR-79, a San Diego County scenic route, in Santa Ysabel. Some residences in the rural communities of Santa Ysabel, Julian, and Descanso come in close proximity to the line. It passes near the Inaja Memorial Overlook and trailhead, and Cuyamaca Peak lies approximately two miles east of the line. The following paragraphs describe photographs from the Visual Resources Technical Report in greater detail as they pertain to TL626.

- In a view from SR-78 near its junction with SR-79 in Santa Ysabel, Photograph 15 shows the line crossing the roadway near its origin at Santa Ysabel Substation. This existing substation, located on the right, is well screened by the roadside vegetation from this view, while the existing reddish-brown, weathered-steel poles and wood poles appear fairly prominent in the middle ground near the substation in this relatively flat, open landscape.

- Photographs 16 and 17 depict views from the Inaja Memorial trailhead and trail, respectively, near SR-78. In the view from the trailhead, a stone wall and viewing scope are visible foreground elements; beyond, rugged rock faces dominate the middle distance. Existing TL626 poles, some seen against the hillside and some against the sky, are a visible but subordinate element, as shown in Photograph 16. In the view from the trail, existing 69 kV power line poles are visible on both the left and right sides of the

photograph, and overhead conductors and marker balls are discernible where the line crosses the San Diego River valley, as shown in Photograph 17. Red and yellow aerial marker balls and barely discernible conductors are the only evidence of the 69 kV power line as it spans the valley.

- TL626 is also partially visible from scattered residences in Julian and farther south along Boulder Creek Road. From near Daley Flat Road in Julian, Photograph 18 shows a typical residential view of the existing line, located approximately 0.4 mile away. Although a wood utility pole from an unrelated line appears on the right side of the photograph, because of the distance and topography, the line is not especially visible from this location. Some of the rural roads in this area are gated, and public access is therefore limited.

- Taken from Boulder Creek Road, Photograph 19 shows the existing line passing near an isolated residence in an open desert landscape that is characteristic of parts of the region.

- Photographs 20 and 21 depict TL626 as it roughly parallels Boulder Creek Road within USFS-administered land. In Photograph 20, this existing line is located approximately 400 feet from the roadway at the western flank of Cuyamaca Peak. In this location, while the poles appear to blend into the mottled landscape of chaparral and rock, the accompanying access road is more visible against the mountainous backdrop, especially in the middle ground where the texture of the terrain is more uniform. Photograph 21, by contrast, shows the line running adjacent to the roadway, and poles appear prominently—one partially against the sky—along the left (west) side of the road in the foreground, becoming progressively less noticeable as they recede towards the distant hills.

- Farther south, the line passes through the rural community of Descanso. Photograph 22 shows the line from Boulder Creek Road at Burrell Way with a residential compound seen prominently in the foreground. Partially screened by mature trees, wood 69 kV power line poles can be seen along Burrell Way with overhead conductors crossing Boulder Creek Road. Photograph 23 includes the TL626 terminus and junction with TL629 at Descanso Substation near Boulder Creek Road and Oak Grove Drive. Vegetation screens most of the substation and the lower parts of the poles from this vantage point; however, upper portions of utility poles are clearly visible against the sky.

TL629

TL629 is an approximately 29.8-mile-long existing 69 kV power line. Running alongside Old Highway 80 for approximately half of its length, this line traverses the most heavily populated portion of the Proposed Project area, passing through the towns of Descanso, Guatay, and Pine Valley. With elevations along the line above 3,000 feet asl, the landscape consists of rolling hills and more mountainous terrain, and is largely vegetated with chaparral, grassland, and scattered areas of native woodland. Stands of non-native and ornamental landscape trees are often found around residences and commercial structures. Vertical elements, such as utility structures and overhead lighting, are established features of the landscape setting within the vicinity of this line. Open views are available from many roadway locations. TL629 consists of the following four segments: Descanso to Glencliff Substation (TL629A), Glencliff Substation to Cameron Tap

(TL629C), Cameron Tap to Cameron Substation (TL629D), and Cameron Tap to Crestwood Substation (TL629E).

TL629A

TL629A runs southeast from Descanso Substation through USFS-administered and private land. This segment of the line passes through intermittent woodland, as well as chaparral and grasslands. In many locations, views from adjacent roadways are limited by both trees and topography. This segment of TL629 crosses SR-79, a San Diego County scenic route, as well as Sunrise Highway, listed as a National Scenic Byway and San Diego County scenic route. The line passes the Pine Creek trailhead and the Bear Valley trailhead in the CNF. This segment is the most densely settled segment of TL629 and comes within 100 feet of approximately 70 residences in the Descanso, Guatay, and Pine Valley communities. The following paragraphs describe photographs from the Visual Resources Technical Report in greater detail as they pertain to TL629A.

- Photograph 23 shows the existing line's origin at Descanso Substation.

- Photograph 24, taken from Viejas Boulevard at River Drive, depicts the location where TL629A passes Descanso Elementary School. Although from this vantage point the TL629A pole on the left appears against the sky, mature trees serve as a backdrop that reduces the visibility of the wood pole closer to the right side of the view.

- In Photograph 25, a view farther east on Viejas Road, an existing angle pole and overhead conductors appear prominently near the center of the view; topography and nearby vegetation do little to screen it from this vantage point.

- Photograph 26 is a west-facing view from Viejas Road where the line travels along the right (north) side of the road and in close proximity to a number of residences. In this area, a line of unrelated wood 12 kV distribution poles parallels the line on the left side of the road.

- Photograph 27 shows the existing line from the intersection of Viejas Road and SR-79. A noticeably tall wood pole appears against the sky amid a cluster of commercial structures and shorter utility poles; two other poles to the right appear partially screened by a stand of trees characteristic of residential communities in the area.

- Photograph 28, a view from Old Highway 80 near Prut Road, shows existing wood poles and conductors on the right (north) edge of the road. While not directly screening the poles, the dense woodland beyond the highway shoulder helps attenuate the visual contrast of their strong vertical form.

- Photograph 29, taken from Guatay View Lane near Old Highway 80, shows existing wood poles silhouetted against the sky near a ridge-top residence.

- By contrast, Photograph 30 depicts the view toward TL629A from Old Highway 80 as it currently passes through a residential area in Pine Valley, which shows poles partially screened on a wooded residential property typical of valley bottom locations.

- East of Sunrise Highway, the line crosses I-8, as shown in Photograph 31, with existing poles visible against the sky in a sparsely vegetated landscape near Laguna Summit, which lies at an elevation of more than 4,000 feet asl.

TL629C

TL629C generally follows Old Highway 80, a designated California State Historic Route, as it runs south through Cottonwood Valley. On either side of this existing line, views include rolling topography and sparse vegetation. Several prehistoric sites eligible for the NRHP have been documented along Cottonwood Creek, which runs through the valley, resulting in the creek's eligibility for designation as a Wild and Scenic River.

Much of this segment runs through USFS-administered land, and USFS facilities include the Boulder Oaks campground and a picnic area/rest stop/interpretive center near the intersection of Buckman Springs Road and I-8. The following paragraphs describe photographs from the Visual Resources Technical Report in greater detail as they pertain to TL629C.

- A motorist's view of the area near this intersection reveals a landscape of varied color and texture that diminishes the visual contrast of the weathered wood utility poles lining the highway, thus reducing their visibility, as shown in Photograph 32.

- As shown in Photograph 33, taken from Boulder Oaks Campground, a more uniform cover of dark green chaparral has the opposite effect on the visibility of the existing wood poles, which can be seen distinctively near where they cross and parallel the Pacific Crest Trail. Further discussion of these recreation areas is provided in Section 9 Recreation.

- Photograph 34, taken from Old Highway 80 near Kitchen Creek Road, shows the segment angling south and away from the road. Existing TL629C poles are visible as they recede into the distance; however, the motorist's view is directed away from the alignment as the highway turns to the left. In addition, roadside vegetation screens lower portions of the poles, further obstructing them from this particular view.

TL629D

TL629D runs south along La Posta Creek and the Cameron Truck Trail and through Cameron Valley to Cameron Substation in the unincorporated community of Campo. Vegetation along this segment is characterized by open grasslands and chaparral with occasional clusters of trees. TL629D passes several scattered rural residences and ranches. In Photograph 35 in the Visual Resources Technical Report, which was taken from Buckman Springs Road near Cameron Substation, the substation appears near the center of the view against a hillside backdrop, and several wood and steel poles are seen partially silhouetted against the sky. Also partially visible against the sky in the distance is part of a lattice tower of the Sunrise Powerlink Project under construction when the photograph was taken. There is little within this landscape setting to screen views of the structures from the roadway in this area.

TL629E

TL629E runs toward the east, south of I-8 and Old Highway 80, through a rolling chaparral-covered landscape that gradually increases in elevation. Cameron Tap is located approximately

3,200 feet asl, and Crestwood Substation is located approximately 4,100 feet asl. This segment runs roughly parallel to Old Highway 80, but topography screens views from much of the highway. Although the segment crosses many unpaved roads, the area is sparsely inhabited, with only a few scattered residences that come in close proximity to the line. The segment crosses BLM-administered land, USFS-administered land, and private land; Crestwood Substation, located near Old Highway 80 south of the Golden Acorn Casino, is located on the Campo Indian Reservation. The following paragraphs describe photographs from the Visual Resources Technical Report in greater detail as they pertain to TL629E.

- Photograph 36 shows the view of TL629E from I-8 east of Kitchen Creek Road. Existing poles are similar in color to the landscape backdrop and not particularly noticeable, but reflective conductors are visible as light lines running across a dark landscape backdrop.

- In Photograph 37—which shows a view from La Posta Road, approximately 0.5 mile south of Old Highway 80—the line extends west and disappears over the ridgeline. At La Posta Road, approximately 0.5 mile south of Old Highway 80, the line crosses the road on comparatively flat, brush-covered terrain within view of I-8 and Old Highway 80. Looking east toward Old Highway 80 and I-8, a wood H-frame structure appears prominently against the skyline, together with overhead conductors of a roadside utility line. The lower part of the structure is less visible where it appears against the varied texture of the roadside and hillside vegetation.

- In a view taken from Crestwood Road, shown in Photograph 38, Crestwood Substation can be seen near the left side of the photograph, beyond foreground signage. Other vertical elements in this view include overhead lighting, fences and guardrails, and the poles and overhead conductors of various utility lines, most of which are seen silhouetted against the sky.

TL682

This approximately 20.2-mile-long 69 kV power line runs from Rincon Substation in Pauma Valley to Warners Substation, located along SR-79. For approximately 13 miles, TL682 generally follows SR-76, a San Diego County scenic route and crosses it several times. The line traverses areas of agricultural land use; areas of sparsely settled, mountainous landscapes characterized by dense chaparral and desert scrub; and areas of woodland and riparian forest near Lake Henshaw. To the east of Lake Henshaw, for the last approximately 4.5 miles of the line before its terminus at Warners Substation, the landscape opens out onto a rolling grassy plain with minimal development and open views of the surrounding mountains.

TL682 passes residences near the communities of Rincon and Pauma Valley, as well as through the La Jolla Indian Reservation and within five miles of the Palomar Observatory. The line crosses a section of the CNF near Lake Henshaw that includes the San Luis Rey Picnic Grounds and passes a scenic vista overlooking the lake on County Highway S7. Near its terminus at Warners Substation, the line parallels San Luis Rey River, which is eligible for designation as a Wild and Scenic River, and crosses SR-79, a San Diego County scenic route. The following paragraphs describe photographs from the Visual Resources Technical Report in greater detail as they pertain to TL682.

- A view from County Highway S6, depicted in Photograph 39, shows the line as it exits Rincon Substation. Set against a chaparral-covered mountainous landscape where the color and texture effectively reduce its visibility, the substation structures are not particularly noticeable in contrast to the nearby wood poles and steel poles.

- Photograph 40 was taken from the same location on County Highway S6, looking northeast along the alignment. In this view, the vertical form of existing poles are accentuated by their juxtaposition against the organic form of the haze-tinted mountains in the background and the surrounding orchard in this midday view.

- Photograph 41, taken from SR-76 near Rincon Ranch Road, shows the existing line crossing the roadway as it heads east out of the valley. The upper part of a wood pole is partially visible beyond the ornamental planting on the left side of the view, while on the opposite side of the road a reddish-brown, weathered-steel pole can be seen.

- In Photograph 42, a view taken from SR-76 east of Pauma Valley, the wooded edges of the valley and views of surrounding hillsides provide the backdrop for a number of built elements, including a residence, fence lines, and utility poles with overhead conductors. TL682 can be seen on the left side of the road from this vantage point. The conductors and the upper portions of two structures appear against the sky, and in the middle ground, the line is visible as it crosses SR-76.

- TL682 crosses the most heavily settled portion of the La Jolla Indian Reservation, in a riparian valley adjacent to SR-76. In a hillside view of the reservation, taken from the highway and shown in Photograph 44, the line is discernible, but not particularly noticeable where it crosses the valley approximately 0.25 mile away amid residences and scattered trees. A ground-level view shows several existing poles at the valley's edge, behind a typical residence surrounded by grazing pasture approximately 200 feet away. Less visible when seen against the hilly backdrop, the structures become more noticeable as the line climbs the ridge, as shown in Photograph 43.

- In a motorist's view, depicted in Photograph 45 and taken from the road leading to the reservation-managed campground, a TL682 pole in the foreground is somewhat prominent on the roadside embankment; however, the line becomes increasingly less noticeable as it descends into the densely vegetated San Luis Rey riparian corridor. The line then crosses SR-76 near the eastern edge of the La Jolla Indian Reservation.

- The view to the west that is depicted in Photograph 46 shows a multi-hued landscape of woodland, chaparral, grassland, and scrub landscape as the roadway skirts the riparian corridor to the left, with an uninterrupted view of the line upon a roadside embankment. While potentially quite noticeable from this location, the simplicity of the angle pole's form lessens its visual prominence in the edge of the view.

- By way of contrast, where the line crosses the San Luis Rey Picnic Grounds and enters the CNF farther east, the dense riparian vegetation along the river largely screens the view of the existing electric structures that are partially visible in the background, as shown in Photograph 47.

- Photograph 48 shows the line along SR-76, set back from the roadway on a high embankment densely covered in chaparral and mature trees. This obscures all but the tops of the existing poles as the line continues east along toward Lake Henshaw. TL682 is visible in the open landscape east of Lake Henshaw.

- From the Lake Henshaw Scenic Vista, as shown in Photograph 49, the line is scarcely visible when viewed against the mixed stands of chaparral, meadow, and riparian woodland below the vista and the expansive landscape beyond.

- As seen from the roadway in Photograph 50 and taken from SR-79, visibility of the line is largely unobstructed on the grassy plateau leading to Warners Substation; however, the structures tend to partially blend with the landscape backdrop.

TL6923

TL6923 is an approximately 13.4-mile-long 69 kV power line, situated near the Potrero and Campo communities and running from Barrett Substation east to Cameron Substation. TL6923 is located in the extreme southern portion of the CNF in a rugged desert landscape. This landscape is largely vegetated with scrub, along with thin stands of chaparral and scattered trees in the draws and bottomland of this arid landscape. This area is sparsely developed, with the line passing near ranches and few residences, and crossing both paved and unpaved roads and trails. TL6923 skirts the edge of the BLM-administered Hauser Mountain Habitat Management Area and near Hauser Mountain Wilderness in the CNF. It crosses the Pacific Crest Trail near Hauser Mountain, as well as Lake Morena Drive, a San Diego County scenic route.

The following paragraphs describe photographs from the Visual Resources Technical Report in greater detail as they pertain to TL6923.

- In a view from the air above Barrett Substation, Photograph 51 shows the rocky, scrub-covered landscape characteristic of large parts of the line. The substation appears in the center of the photograph, on a light-colored, graded pad that is clearly distinguishable from the surrounding scrub. In this view, as in the subsequent four views, the 69 kV power line structures, while visible in this open landscape, are not particularly noticeable as they tend to partially blend in with the coarsely textured terrain of the desert mountains. Existing access roads are a more discernible element within the landscape.

- In an aerial view of Deerhorn Valley near Barrett Substation, Photograph 52 shows several isolated homesteads within view of the line.

- Photograph 53 is an aerial view of TL6923 as it passes through McAlmond Canyon, a largely undeveloped landscape on BLM-administered land and private land, with its numerous rock outcrops and richly textured but increasingly sparse vegetation.

- The view from Round Potrero Road looking toward Round Potrero Ranch shows metal ranch buildings situated on the floor of a grassy valley, as shown in Photograph 54. Existing wood 69 kV power line poles appear at the hillside base, but are not especially noticeable against the terrain at this distance.

- Photograph 55 is a view of the line as it passes over Hauser Mountain on USFS-administered land near the Pacific Crest Trail. Three existing wood poles are visible, though not particularly prominent, against the coarse texture of the surrounding terrain. By contrast, the accompanying service road is comparatively noticeable within this landscape setting.

- In the view from Hauser Creek Road, an unpaved road ascending Hauser Mountain, existing wood 69 kV power line poles silhouetted against the sky are a relatively noticeable element in this landscape of low chaparral and desert scrub, as depicted in Photograph 56.

- In the view from Lake Morena Drive, a San Diego County scenic route located in an area of ranchland near Cameron Substation, existing wood poles and overhead conductors can be seen against the sky as they recede into the background; scattered trees and agricultural structures provide some visual variety and screening along the line, as shown in Photograph 57. As discussed previously in regard to TL629D, Photograph 35 shows the terminus of TL6923 at Cameron Substation.

9 REFERENCES

AARoads. Interstate Guide. Online. http://www.interstate-guide.com/i-008.html. Site visited July 21, 2011.

Acentech, Inc. April 2012. *Cleveland National Forest Electric Safety and Reliability Project Technical Noise Study Report*.

American Land and Leisure. Cleveland National Forest. Online. http://www.americanll.com/Cleveland%20Public.html. Site visited May 6, 2011.

Anchor Environmental CA, L.P. et al. San Diego River Watershed Characteristics Inventory Report. Online. http://www.projectcleanwater.org/pdf/sdr/Characteristics_Inventory1.pdf. Site visited May 18, 2011.

Aviation Safety Inspector. Oakland Flight Standards District Office. Personal Communication with T. Lin, Insignia Environmental. February 15, 2012.

Bureau of Land Management. Sawtooth Mountains Wilderness. Online. http://www.blm.gov/ca/pa/wilderness/wa/areas/sawtooth_mountains.html. Site visited April 27, 2011.

California Code of Regulations, California Building Code, Part 2, Title 24, Appendix Chapter 35: "Noise Insulation Standards for Multifamily Housing."

California Code of Regulations, Title 14, Chapter 3: "Guidelines for Implementation of the California Environmental Quality Act" (CEQA Guidelines). 2007.

California Department of Transportation. Officially Designated Scenic Highways: Caltrans Landscape Architecture Program. Online. http://www.dot.ca.gov/hq/LandArch/scenic/schwy.htm. Site visited May 10, 2011.

California Department of Transportation. San Diego County. Online. http://www.dot.ca.gov/hq/LandArch/scenic_highways/sdiego.htm. Site visited April 27, 2011.

California Health and Safety Code, Sections 46000-46080. California Noise Control Act of 1973.

California Resources Agency. 2007. Title 14 California Code of Regulations, Chapter 3 Guidelines for Implementation of the California Environmental Quality Act. CEQA Guidelines.

California Resources Agency. 2010. Title 14 California Code of Regulations, Chapter 3 Guidelines for Implementation of the California Environmental Quality Act. CEQA Guidelines.

California State Parks. Cuyamaca Rancho State Park. Online. http://www.parks.ca.gov/?page_id=667. Site visited April 27, 2011.

California Wilderness Act of 1984. Pub. L. 98-425. 98 Stat. 1627. September 28, 1984.

Caltrans. 2002. Guide for the Preparation of Traffic Impact Studies.

Caltrans. 2006. Transportation- and Construction-Induced Vibration Guidance Manual. Caltrans Noise, Vibration, and Hazardous Waste Management Office.

Caltrans. 2009. Highway Design Manual.

Caltrans. District 11 Planning Division. Online. http://www.dot.ca.gov/dist11/departments/planning/pages/tcs.htm. Site visited July 21, 2011.

Caltrans. Traffic Data Branch. Online. http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/. Site visited July 21, 2011.

CARB. 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel Fueled Engines and Vehicles.

CARB. Air Monitoring Site Information. Online. http://www.arb.ca.gov/qaweb/site.php. Site visited April 13, 2011.

CARB. Area Designations Maps/State and National. Online. http://www.arb.ca.gov/desig/adm/adm.htm. Site visited October 19, 2012.

CARB. CAAQS – CARB. Online. http://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm. Site visited October 19, 2012.

Chin, Richard. San Diego County. Associate Transportation Specialist, Transportation Planning. Personal communication with T.Lin, Insignia Environmental. July 22, 2011. Richard.chin@sdcounty.ca.gov. (858) 874-4203.

City of Corona. 2008. Foothill Parkway Westerly Extension. Online. http://www.discovercorona.com/CityOfCorona/media/Media/Public%20Works/Documents/Foothill%20West/FPWE_Sec03.pdf. Site visited May 6, 2011.

City of Escondido (in collaboration with the cities of Del Mar, Poway, San Diego, Solana Beach and County of San Diego). San Dieguito Watershed Urban Runoff Management Program. Online. http://www.projectcleanwater.org/pdf/wurmp/sdg_wurmp_2008.pdf. Site visited May 18, 2011.

City of San Diego Official Website. Barrett Reservoir. Online. http://www.sandiego.gov/water/recreation/barrett.shtml. Site visited May 6, 2011.

Code of Federal Regulations, Title 8, Section 1910.95. Occupational Health and Safety Act of 1970.

Coghlan, Gerald and R. Sowa. USFS. National Forest Road System and Use. 1998.

County of San Diego, et al. *Watershed Urban Runoff Management Program, Tijuana River Watershed*. Online. http://www.projectcleanwater.org/pdf/wurmp/tj_wurmp_2008.pdf. Site visited May 18, 2011.

County of San Diego. 2007. Guidelines for Determining Significance for Hydrology. Department of Public Works Department of Planning and Land Use. San Diego, CA.

CPUC. 2008. Memorandum. Applicants Filing Proponent's Environmental Assessment.

CPUC. D0712052 Opinion Adopting PG&E, SCE's and SDG&E's Long-Term Procurement Plans. Online. http://docs.cpuc.ca.gov/published/FINAL_DECISION/76979.htm. Site visited April 16, 2011.

CPUC. Memorandum. Applicant's Filing Proponent's Environmental Assessment. November 24, 2008.

Deméré, T.A., S.A. Siren, and K.A. Randall. 2012. Paleontological Resources in the Cleveland National Forest San Diego Gas and Electric Company Transmission and Distribution Line Electric Safety and Reliability Plan Project. Department of PaleoServices, San Diego Natural History Museum.

DWR. California's Groundwater. Bulletin 118 – Update 2003. Online. http://www.water.ca.gov/groundwater/bulletin118/bulletin118update2003.cfm. Site visited May 27, 2011.

DWR. Hydrologic Regions of California: South Coast. Online. http://www.water.ca.gov/groundwater/bulletin118/south_coast.cfm. Site visited May 27, 2011.

DWR. Integrated Water Resources Information System. Online. http://www.water.ca.gov/iwris/#. Site visited May 18, 2011.

Environmental Vision. 2012. *Visual Resources Technical Study: Cleveland National Forest Electric Safety and Reliability Project*.

FAA. Obstruction Evaluation/Airport Airspace Analysis (OE/AAA). Online. https://oeaaa.faa.gov/oeaaa/external/portal.jsp. Site visited August 4, 2011.

Federal Register. "National Scenic Byways Program." May 18, 1995. Vol. 60, No. 96. 26759-26762.

Federal Regulations Title 14 Section 133.33. Operating Rules.

FHWA. FHWA Functional Classification Guidelines. Online. http://www.fhwa.dot.gov/planning/fcsec2_1.htm. Site visited February 17, 2012.

iADAM Air Quality Data Statistics. Online. http://www.arb.ca.gov/adam/. Site visited October 19, 2012.

Innovative Mapping Solutions. 2009. Mapping San Diego. Online. http://mappingsandiego.com/viewMap.html. Site accessed March 27, 2012.

IPCC. 1995. Climate Change 1995: The Science of Climate Change.

IPCC. 2007. Working Group III Contribution to the Intergovernmental Panel on Climate Change Fourth Assessment Report, Climate Change 2007: Mitigation of Climate Change.

Kumeyaay Nation. The Kumeyaay History. Online. http://www.kumeyaay.info/. Site visited July 1, 2011.

La Suer, Jay. 2006. Historic U.S. Highway Route 80. California State Assembly Concurrent Resolution No. 123.

Laguna Mountain Volunteer Association. 2003. Laguna Mountain Recreation Area. Online. http://lmva.org/trails/map.htm. Site visited May 6, 2011.

Lizama, Naomi W. San Diego County. Department of Public Works, Road Register. Personal communication with T. Lin, Insignia Environmental. July 21, 2011 and July 22, 2011. Naomi.lizama@sdcounty.ca.gov. (858) 694-3283.

Metropolitan Water District of Southern California. September 2007. Groundwater Basin Reports – Chapter IV, Central San Diego County Basins. Online. http://www.mwdh2o.com/mwdh2o/pages/yourwater/supply/groundwater/PDFs/SanDiegoCountyBasins/CentralSanDiegoCountyBasins.pdf. Site accessed March 27, 2012.

North County Transit District. Sprinter Stations. Online. http://www.gonctd.com/stations#sprinter_stations. Site visited February 15, 2012.

Project Clean Water. San Diego's Watersheds. Online. http://www.projectcleanwater.org/html/watersheds.html. Site visited May 18, 2011.

Public Law 101-601. Native American Graves Protection and Repatriation Act. November 16, 1990.

RWQCB, San Diego Region (9). 1995. San Diego Hydrologic Basin Planning Area Map. Online. http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/docs/sdrwqcb_basinplanmap.pdf. Site visited May 12, 2011.

RWQCB, San Diego Region. Water Quality Control Plan for the San Diego Basin. Online. http://www.swrcb.ca.gov/rwqcb9/water_issues/programs/basin_plan/index.shtml. Site visited May 13, 2011.

San Diego Bay Copermittees. San Diego Bay Watershed Urban Runoff Management Program Document. Online. http://www.projectcleanwater.org/pdf/wurmp/sdbay_wurmp_2008.pdf. Site visited May 18, 2011.

San Diego County Department of Parks and Recreation. Lake Morena Regional Park Reservations. Online. https://reservations.sdparks.org/activity/camping.asp. Site visited February 19, 2012.

San Diego County Department of Public Works. CEQA Initial Study - Environmental Checklist Form. Online. http://www.sdcdpw.org/engineer/pdf/FINAL%20IS%209.8.06.pdf. Site visited May 10, 2011.

San Diego County Draft General Plan Update. Online. http://www.sdcounty.ca.gov/dplu/gpupdate/docs/draftgp/draftgeneralplan_04022010.pdf. Site visited July 11, 2011.

San Diego County General Plan Update. 2009. Draft EIR. Online. http://www.sdcounty.ca.gov/dplu/gpupdate/docs/bos_oct2010/attachE/2.06_Geo.pdf. Site visited June 20, 2011.

San Diego County General Plan Update. 2011. Final EIR. Online. http://www.sdcounty.ca.gov/dplu/gpupdate/docs/BOS_Aug2011/EIR/FEIR_2.06_-_Geology_2011.pdf. Site visited February 7, 2012.

San Diego County General Plan. Adopted August 3, 2011. Online. http://www.sdcounty.ca.gov/dplu/gpupdate/docs/BOS_Aug2011/C.1-4_Conservation_and_Open_Space.pdf. Site visited February 7, 2012.

San Diego County. 1967–2000. San Diego County General Plan.

San Diego County. 1982. Title 3, Division 6, Chapter 4, Section 36. San Diego County Noise Abatement and Control. County Code of Regulatory Ordinances.

San Diego County. 1998. "Division 9. Light Pollution Code." San Diego County Code. County of San Diego. Section 59.101.

San Diego County. 1998. Multiple Species Conservation Program.

San Diego County. 2002. Community Right-of-Way Development Standards: Julian Historic District and the Julian Community Planning Area.

San Diego County. 2003. San Diego County General Plan.

San Diego County. 2006. Average Weekday Traffic Volumes.

San Diego County. 2007. Guidelines for Determining Significance and Report Format and Content Requirements Noise. Department of Planning and Land Use, Department of Public Works.

San Diego County. 2008. Transportation Impact Fee.

San Diego County. 2010. "Draft Environmental Impact Report." San Diego County General Plan. County of San Diego.

San Diego County. 2010. Flexibility in County Road Design.

San Diego County. 2010. Guidelines for Determining Significance and Report Format and Content Requirements: Transportation and Traffic.

San Diego County. 2010. Public Road Standards.

San Diego County. 2010. San Diego County Draft General Plan.

San Diego County. 2011. Alpine Community Plan.

San Diego County. 2011. Central Mountain Subregional Plan.

San Diego County. 2011. Conservation and Open Space Element.

San Diego County. 2011. County Maintained Road System.

San Diego County. 2011. Jamul-Dulzura Subregional Plan.

San Diego County. 2011. Julian Community Plan.

San Diego County. 2011. Mountain Empire Subregional Plan.

San Diego County. 2011. North Mountain Subregional Plan.

San Diego County. 2011. Pala-Pauma Valley Subregional Plan.

San Diego County. 2011. San Diego County General Plan Mobility Element.

San Diego County. 2011. San Diego County General Plan Update Final Environmental Impact Report.

San Diego County. Airports. Online. http://www.sdcounty.ca.gov/dpw/airports.html. Site visited July 25, 2011.

San Diego County. Community Right-of-Way Development Standards: County Town Area of the Borrego Springs Planning Area.

San Diego County. County Maintained Roads. Online. http://www.sdcounty.ca.gov/dpw/roads/maintroad.html. Site visited July 21, 2011.

San Diego County. Lake Morena County Park. Online. http://www.sdcounty.ca.gov/parks/Camping/lake_morena.html. Site visited May 6, 2011.

San Diego County. Standards for Private Roads.

San Diego Regional Airport Authority. Gillespie Field Airport Land Use Compatibility Plan. Online. http://www.san.org/documents/aluc/Gillespie%20ALUCP.pdf. Site visited April 11, 2012.

SANDAG. Notice of Public Hearing – Draft 2008 Congestion Management Program Update. Online. http://www.sandag.org/index.asp?publicnoticeid=110&fuseaction=notices.detail. Site visited July 29, 2011.

SCAQMD. 2007. Software Users Guide: URBEMIS2007 for Windows.

Schaefer, Jerry and B. Williams. Inventory, Evaluation, and Treatment of Cultural Resources in the Cleveland National Forest Transmission and Distribution Line Increased Fire Safety Project in Support of the Proponent's Environmental Assessment. ASM Affiliates, Inc. 2011.

SDAPCD. 2005. Measure to Reduce Particulate Matter in San Diego.

SDAPCD. 2007. Eight-Hour Ozone Attainment Plan for San Diego County.

SDAPCD. Air Pollution Control District, APCD-SD. Online. http://www.sdapcd.org/rules/rules/randr.html. Site visited April 16, 2011.

SDG&E. 1995. San Diego Gas & Electric Company Subregional Natural Community Conservation Plan.

SDG&E. 2002. San Diego Gas & Electric Company Water Quality Construction Best Management Practices Manual.

SDG&E. 2007. San Diego Gas & Electric Company Low Effect Habitat Conservation Plan for the Quino Checkerspot Butterfly.

SDG&E. 2009. ECO Substation Project Proponent's Environmental Assessment.

Smardon, RC, J.F. Palmer, and J.P. Felleman, eds. 1986. "Foundations for Visual Project Analysis." New York: Wiley.

SWRCB. Impaired Waterbodies. Online. http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml. Site visited May 12, 2011.

Transit.511sd.com. Maps and Timetables. Online. http://www.sdcommute.com/Services/. Site visited February 15, 2012.

TRC. 2008. *San Diego River Watershed Urban Runoff Management Plan*.

U.S. Bureau of Land Management and Department of the Interior, and the Office of the Solicitor. 2001. "The Federal Land Policy and Management Act of 1976." Washington, D.C.

U.S. Bureau of Land Management and Department of the Interior. 1980. Visual Resource Management Program. Washington, D.C.

U.S. Bureau of Land Management and Department of the Interior. 1994. California Desert District, Palm Springs-South Coast Resource Area. "South Coast Resource Management Plan and Record of Decision."

U.S. Bureau of Land Management and Department of the Interior. 2007. El Centro Field Office. "Eastern San Diego County Resource Management Plan and Final Environmental Impact Statement." PDF file.

U.S. Bureau of Land Management and Department of the Interior. Manual H-8410-1 - Visual Resource Inventory. Online. http://www.blm.gov/nstc/VRM/8410.html.

U.S. Bureau of Land Management and Department of the Interior. Manual 8431 - Visual Resource Contrast Rating. Online. http://www.blm.gov/nstc/VRM/8431.html.

U.S. Census Bureau. San Diego County Quick Facts from the US Census Bureau. Online. http://quickfacts.census.gov/qfd/states/06/06073.html. Site visited April 16, 2011.

U.S. Department of Agriculture Forest Service. "GIS Clearinghouse." Online. http://www.fs.fed.us/r5/rsl/clearinghouse/gis-download.shtml/. Site visited June 16, 2011.

U.S. Department of Agriculture Forest Service. 1995. "Landscape Aesthetics: A Handbook for Scenery Management." United States Forest Service.

U.S. Department of Agriculture Forest Service. 2006. "Cleveland National Forest Palomar and Descanso Ranger Districts San Bernardino Meridian." Map. United States Forest Service.

U.S. Department of Agriculture Forest Service. September 2005a. "Part 2 Cleveland National Forest Strategy." Land Management Plan. United States Forest Service.

U.S. Department of Agriculture Forest Service. September 2005b. "Part 3 Design Criteria for the Southern California National Forests." Land Management Plan. United States Forest Service.

U.S. Department of Transportation. 2011. Federal Highways Administration. "National Scenic Byways Program." Online. http://www.byways.org/explore/byways/2170/.

U.S. DOT. 2001. AC 36-1H – Noise Levels for U.S. Certificated and Foreign Aircraft.

U.S. DOT. 2006. FHWA Roadway Construction Noise Model User's Guide.

U.S. DOT. 2006. Transient Noise and Vibration Impact Assessment.

U.S. EPA. 2002. Health Assessment Document for Diesel Engine Exhaust.

U.S. EPA. SF6 Emission Reduction Partnership for Electric Power Systems. Online. http://www.epa.gov/electricpower-sf6/. Site visited April 16, 2011.

U.S. EPA. SF6 Leak Rates from High Voltage Circuit Breakers – U.S. EPA Investigates Potential Greenhouse Gas Emissions. Online. http://www.epa.gov/electricpower-sf6/documents/leakrates_circuitbreakers.pdf. Site visited April 16, 2011.

U.S. Marine Corps. 2010. Environmental Assessment: 25 Area Combat Town Upgrade Marine Corps Base Camp Pendleton California. Online. http://www.pendleton.usmc.mil/base/environmental/EA/25AreaCombatTownFinal.pdf. Site visited May 10, 2011.

U.S. National Forest Campground Guide. Cleveland National Forest. Online. http://www.forestcamping.com/dow/pacficsw/clevcmp.htm#burnt rancheria. Site visited May 6, 2011.

USACE Sacramento District. Navigable Waters of the U.S, California. Online. http://www.spk.usace.army.mil/organizations/cespk-co/regulatory/ca_waterways.html. Site visited September 14, 2011.

USDA Forest Service. 2005. Pacific Southwest Region. Cleveland National Forest Land and Resource Management Plan.

USDA Forest Service. 2006. Cleveland National Forest Palomar and Descanso Ranger Districts, California, San Bernardino Meridian. 1:126,720.

USDA Forest Service. Cleveland National Forest Camping & Cabins. Online. http://www.fs.usda.gov/activity/cleveland/recreation/camping-cabins. Site visited February 16, 2012.

USDA Forest Service. Cleveland National Forest. Online. http://www.fs.fed.us/r5/cleveland/. Site visited April 21, 2011.

USFS. 2005. Cleveland National Forest 2005 Land Management Plan Part 2.

USFS. Cleveland National Forest History & Culture. Online. http://www.fs.usda.gov/main/cleveland/learning/history-culture. Site visited February 16, 2012.

USFWS. National Wild and Scenic Rivers. Online. http://www.rivers.gov/. Site visited April 4, 2011.

USGS. Maps. Dates vary.

Western Regional Climate Center. Climatological Data Summaries for Southern California. Online. http://www.wrcc.dri.edu/summary/Climsmsca.html. Site visited May 18, 2011.

Wilderness.net. Hauser Wilderness. Online. http://www.wilderness.net/index.cfm?fuse=NWPS&sec=wildView&WID=232. Site visited April 27, 2011.

Williams, Brian. ASM Affiliates, Inc. Personal communication with F. Bauermeister, Insignia Environmental. March 27, 2012.