CALIFORNIA PUBLIC UTILITIES COMMISSION

SAN DIEGO GAS & ELECTRIC
SAN MARCOS TO ESCONDIDO
TIE LINE (TL) 6975 69kV PROJECT

Draft Initial Study/Mitigated Negative Declaration

April 2019

A.17-011-010

Prepared for:
California Public Utilities Commission

Prepared by:
Environmental Science Associates

ESA

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ACRONYMS AND ABBREVIATIONS

$\mu g/m^3$	micrograms per cubic meter
AB	Assembly Bill
AC	alternating current
ACHP	Advisory Council on Historic Preservation
ACSR	aluminum conductor steel reinforced
ACSS	aluminum conductor steel supported
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
AEC	Advantage Environmental Consultants
Air Basin	San Diego Air Basin
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
ALS	Advanced Life Support
AMS	Alternative Management Standards
amp	ampere
amsl	above mean sea level
AOI	Area of Interest
A-P Zone	Alquist-Priolo Earthquake Fault Zone
APLIC	Avian Power Line Interaction Committee
APM	Applicant Proposed Measure
ASCE	American Society of Civil Engineers
Basin Plan	Water Quality Control Plan for the San Diego Basin
BBN	undefined in 3.13 Noise, page 47
BGEPA	Bald Eagle and Golden Eagle Protection Act
BMP	Best Management Practice
BOE	Board of Equalization
B.P.	before present
BSA	biological study area
Business Plan Act	California Hazardous Materials Release Response Plan and Inventory Law
C&D	Construction and Demolition
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFÉ	Corporate Average Fuel Economy
CAISO	California Independent System Operators
CALGreen	California's Green Building Standards Code
CalEEMod	California Emissions Estimator Model

Cal/EPA	California Environmental Protection Agency
CalOES	California Office of Emergency Services
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CaRFG	California Reformulated Gasoline
CAL FIRE	California Department of Forestry and Fire Protection
CAP	Congested Area Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CEA	California Earthquake Authority
CEC	California Energy Commission
CCA	Community Choice Aggregation
CCR	California Code of Regulations
CDC	California Department of Conservation
CDFW	California Department of Fish and Wildlife
CDP	Carlsbad Desalination Plant
CDPH	California Department of Public Health
CE	State-listed Endangered Species
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Information System
CESA	California Endangered Species Act
CFN	Commercial Fueling Network
CFP	California Fully Protected
CFPP	Construction Fire Prevention Plan
CFR	Code of Federal Regulations
CFPP	Construction Fire Prevention Plan
CGP	California Construction General Storm Water Discharge Permit
CGS	California Geological Survey
CH_4	methane
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
CIP	Capital Improvement Projects
CMP	Congestion Management Plan
CMWD	Carlsbad Municipal Water District
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COS	Conservation and Open Space
CPUC	California Public Utilities Commission
CR	State-listed Rare Species

CRHR	California Register of Historical Resources
CRMP	Cultural Resources Monitoring Plan
CRPR	California Rare Plant Rank
CUPA	Certified Unified Program Agency
CWA	Federal Water Pollution Control Act (Clean Water Act)
cy	cubic yards
dB	decibel
dBA	A-weighted decibel
DC	direct current
DEH	Department of Environmental Health
DMP	Debris Management Plan
DOC	California Department of Conservation
DOF	California Department of Finance
DOGGR	California Division of Oil, Gas, and Geothermal Resources
(US)DOT	United States Department of Transportation
DPM	Diesel Particulate Matter
Ds	square-root scaled distance
DTSC	United States Department of Toxic Substance Control
DWQ	Division of Water Quality
E-CAP	Escondido Climate Action Plan
EDD	Employment Development Department
EIA	United States Energy Information Administration
EIR	Environmental Impact Report
ELF	extremely low frequency
EMF	electric and magnetic fields
EPCRA	Emergency Planning and Community Right-to-Know Act
ESA	Environmental Science Associates
EWA	Encina Wastewater Authority
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
FC	Candidate for Federal Listing
FE	Federally Endangered
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
FPA	Focused Planning Area
FR	Federal Register
FT	Federally Threatened Species
FTA	Federal Transit Authority
FTZ	Fire Threat Zones
GHG	greenhouse gas
GIS	Geographic Information System

GO	General Order
Guidelines	Greenway Guidelines
GSAs	groundwater sustainability agencies
GSPs	groundwater sustainability plans
GWh	Gigawatt-hours
HARRF	Hale Avenue Resource Recovery Facility
HFC	hydrofluorocarbon
HMBP	Hazardous Materials Business Plan
HOA	Homeowners Association
hrs	hours
HRFA	Highest Risk Fire Areas
HSWA	Hazardous and Solid Waste Act
HWCL	Hazardous Waste Control Law
Hz	hertz
I	Interstate
IBC	International Building Code
ICC	International Code Council
IEPR	Integrated Energy Policy Report
ILAs	incidental landing areas
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
IS/MND	Initial Study/Mitigated Negative Declaration
ITP	incidental take permit
IWMP	Integrated Waste Management Plan
K	K Factor
KOP	Key Observation Point
kV	kilovolt
kWh	kilowatt-hours
LADWP	Los Angeles Department of Water and Power
LEI	Lead Environmental Inspector
L_{dn}	day-night noise level
L_{eq}	equivalent sound level
L_{max}	maximum sound level
L_{min}	minimum sound level
LOS	Level of Service
LRAs	Local Responsibility Area
LU&S	Locally Unusual and Significant
LUST	Leaking Underground Storage Tank
MBTA	Migratory Bird Treaty Act
MCAS	Marine Corps Air Station
MCM	1000 circular mils (thousands of circular mils)

MEIR	maximum exposed individual resident
mg/m^3	milligrams per cubic meter
min	minute
MHCP	Multiple Habitat Conservation Plan
MJHMP	Multi-Jurisdictional Hazard Mitigation Plan
MLD	Most Likely Descendant
MMRCP	Mitigation Monitoring, Reporting, and Compliance Program
MND	Mitigated Negative Declaration
MRDS	Mineral Resources Data System
MRZ	Mineral Resource Zone
MS4	municipal separate storm sewer system
MSCP	Multiple Species Conservation Program
MW	megawatt
N_2O	nitrous oxide
N/A	Not Applicable
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NASEO	National Association of State Energy Officials
NCCP	Natural Community Conservation Planning
NCTD	North County Transit District
NECPA	National Energy Conservation Policy Act
NERC	North American Electric Reliability Corporation
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic and Safety Administration
NO_2	nitrogen dioxide
NOC	Notice of Completion
NOI	Notice of Intent
NOP	Notice of Preparation
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NRPA	National Recreation and Park Association
NSA	noise-sensitive area
O_3	ozone
O&M	Operation and Maintenance
OA	Operational Area
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OHP	Office of Historic Preservation
OHWM	Ordinary High Water Mark
OMWD	Olivenhain Municipal Water District
OSHA	Occupational Safety and Health Administration

PAMA	preapproved mitigation areas
PCA	passenger car equivalent
PEA	Proponent's Environmental Assessment
PFC	perfluorocarbon
PG&E	Pacific Gas & Electric Company
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PPV	peak particle velocity
ppm	parts per million
PRMMP	Paleontological Resources Monitoring and Mitigation Plan
Project	San Marcos-Escondido Tie Line 6975 69kV Project
PSD	Prevention of Significant Deterioration
PSFS	Public Safety, Facilities, and Services Element
PSR	pre-activity survey report
PTC	Permit to Construct
Pub. Res. Code	Public Resources Code
PVC	polyvinyl chloride
RAQS	Regional Air Quality Strategy
RCRA	Resource Conservation and Recovery Act
RCS	Resource Conservation Strategy
ROG	reactive organic gases
RPS	Renewables Portfolio Standard
ROW	right(s)-of-way
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SanGIS	San Diego Geographic Information Source
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCEC	Southern California Earthquake Center
SCIC	South Coastal Information Center
SDAPCD	San Diego Air Pollution Control District
SDCG&E	San Diego Consolidated Gas and Electric Company
SDCWA	San Diego County Water Authority
SDG&E	San Diego Gas and Electric Company
SDMP	Soil and Dewatering Management Plan
SDNHM	San Diego Natural History Museum
SDS	Safety Data Sheets
SE	State Endangered under CESA
SEMS	California Standardized Emergency Management System
sec	second
SF_6	sulfur hexafluoride
SGMA	Sustainable Groundwater Management Act of 2014

SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SMARA	Surface Mining and Reclamation Act
SMARTS	Stormwater Multiple Applications and Report Tracking Systems
SO_2	sulfur dioxide
SOI	sphere of influence
SPCC	Spill Prevention and Control Countermeasures
SR	State Route
SRAs	State Responsibility Area
SSC	CDFW Species of Special Concern
SSD	solid state decouplers
ST	Threatened under CESA
STPs	shovel test probes
SVP	Society of Vertebrate Paleontology
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
TBD	to be determined
TCR	Tribal Cultural Resources
TEU	test excavation units
TL	Tie Line
TMDL	Total Maximum Daily Load
TPP	transmission planning process
TWW	Treated Wood Waste
UBC	Uniform Building Code
UCERF3	Uniform California Earthquake Rupture Forecast
USACE	United States Army Corps of Engineers
Unified Program	Unified Hazardous Waste and Hazardous Materials Management Regulatory Program
USC	United States Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
UXO	Unexploded ordnance
VdB	vibration velocity in decibels
v/c	volume/capacity ratio
VID	Vista Irrigation District
VOCs	volatile organic compounds
VP	viewpoints
VWD	Vallecitos Water District

WDR	waste discharge requirement
WGCEP 2014	Working Group on California Earthquake Probabilities 2014
WL	CDFW Watch List

EXECUTIVE SUMMARY

Introduction

On November 15, 2017, San Diego Gas and Electric Company (SDG&E) submitted a Permit to Construct (PTC) Application (A.17-11-010) to the California Public Utilities Commission (CPUC) for the SDG&E San Marcos to Escondido Tie Line (TL) 6975 69 kV Project (Project). SDG&E proposes to install new overhead single-circuit electric power line structures, rebuild existing structures from single circuit to double circuit, and perform the reconductoring and re-energizing of existing conductors, pursuant to CPUC General Order (GO) 131-D. The PTC Application includes the Proponent's Environmental Assessment (PEA) prepared pursuant to Rule 2.4 of the CPUC's Rules of Practice and Procedure.

The Project is subject to the California Environmental Quality Act (CEQA). CEQA requires a lead agency – here, the CPUC – to prepare an Initial Study (IS) to determine if the Project may have a significant effect on the environment (CEQA Guidelines §15063(a)). If the agency determines there is substantial evidence that the Project may cause a significant effect on the environment, it shall prepare an Environmental Impact Report (EIR). The lead agency shall prepare a negative declaration if there is no substantial evidence that the Project may cause a significant effect on the environment (CEQA Guidelines §15063(b)). If the IS identifies potentially significant effects of the Project, but the applicant agrees to revisions that would avoid or mitigate the effects to a point where clearly no significant effects would occur, then a Mitigated Negative Declaration (MND) shall be prepared (Pub. Res. Code §§21064.5, 21080(c); 14 Cal. Code Regs. §§15064(f)(2), 15070(b)).

Based on the analysis in the IS and the substantial evidence supporting the analysis, it has been determined that all significant environmental impacts of the Project would be avoided or reduced to below the level of significance with the incorporation of feasible mitigation measures agreed to by SDG&E. For this reason, adoption of an IS/MND satisfies the requirements of CEQA.

Project Description

The Project is located primarily in the cities of San Marcos and Escondido and unincorporated areas in northern San Diego County, California. It would originate at the San Marcos Substation on the west and terminate at the Escondido Substation on the east and would be located within SDG&E right-of-way (ROW). To fully accommodate the Project, 1.2 acres of additional ROW would be acquired in San Marcos. Primary Project components include:

- A 69kV circuit breaker and concrete pad, 30-foot A-frame, seven piers, and two 69 kV 2,000-amp disconnects would be installed within the existing San Marcos Substation on Discovery Street in San Marcos;
- Rebuild Tie Line 680C, add Tie Line 6975 to create a double circuit, replace porcelain insulators with polymer insulators, and reconductor an existing 12 kV line for a distance of 1.8 miles west of the San Marcos Substation;
- Construct a new single circuit power line approximately 2.8 miles in length on new steel poles parallel to the existing Tie Line 13811/13825 within an existing 150-foot SDG&E ROW;
- Reconductor and re-energize approximately 7.4 miles of existing power line, as well as insulator replacement, in unincorporated San Diego County and Escondido;
- Removal of an oil containment wall and replacement of existing oil circuit breaker pad with a new gas circuit breaker, and a transfer of the existing overhead conductor from the 138kV rack to an existing 69kV bay position at the existing Escondido Substation site; and,
- Replacement of existing wood poles with new steel galvanized direct-bury and foundation poles, as well as the removal of some existing pole structures from service, along the entire Project alignment.

Environmental Determination

This IS/MND has been prepared to identify the potential environmental effects resulting from implementation of the Project, evaluate the level of significance of these effects, and identify the revisions in the Project (i.e., mitigations) that would avoid the effects or reduce them below established thresholds of significance. This IS/MND relies on information from SDG&E's Application for a PTC, the accompanying PEA, a Project site reconnaissance, SDG&E's responses to deficiency letters and data requests by the CPUC, and the environmental expertise of the CPUC's consultant, who has prepared this IS/MND.

In its PEA, SDG&E identified a number of Applicant Proposed Measures (APMs) to avoid or reduce potential impacts associated with the Project. In some instances, those APMs have been superseded by CPUC-recommended mitigation measures, as described in this IS/MND. Those APMs that have not been superseded are considered part of the Project for the purpose of this IS/MND and, upon adoption of the Final MND, would become part of the Mitigation Monitoring, Reporting, and Compliance Program to assure that implementation of and compliance with the APMs would be monitored and enforced by the CPUC. Based on the analysis documented in this IS/MND, in addition to implementation of APMs, mitigation measures are recommended for the following resource areas, to reduce impacts of the Project to a less-than-significant level:

- Biological Resources
- Cultural Resources
- Geology, Soils, Seismicity, and Paleontological Resources
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise
- Public Services
- Recreation
- Transportation and Traffic
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

The mitigation measures either supplement or supersede the APMs proposed by SDG&E. SDG&E has agreed to implement all of the recommended mitigation measures as part of the Project. Upon adoption of the Final MND, the recommended mitigation measures would become part of the Project Mitigation Monitoring, Reporting, and Compliance Program.

Environmental impacts, applicable APMs, and mitigation measures for the Project are provided in Chapter 3 of this IS/MND. **Table ES-2** at the end of this Executive Summary identifies the potentially significant environmental impacts of the Project and applicable APMs and recommended mitigation measures that reduce those impacts to a less-than-significant level. The draft Mitigation Monitoring, Reporting, and Compliance Plan included in Chapter 5 of this IS/MND will be updated if needed to reflect the CPUC's decision on the Project, including any revisions to the mitigation measures that must be implemented if the Project is approved.

Required Approvals

The Project would require federal and State permits associated with ground-disturbing work. Local permits also would be required for grading and construction within, under, or over roadways (**Table ES-1**).

TABLE ES-1
ANTICIPATED POTENTIAL PERMIT, APPROVAL, AND CONSULTATION REQUIREMENTS

Permit/Approval/Consultation	Agency	Jurisdiction/Purpose
Federal Agencies		
Congested Area Plan	Federal Aviation Administration (FAA)	Use of helicopters within populated areas will be coordinated with the FAA, as applicable.
State Agencies		
Permit To Construct (PTC)	CPUC	Overall project approval and CEQA review
NPDES–General Construction Permit	State Water Resources Control Board	Stormwater discharges associated with construction activities disturbing more than 1.0 acre of land.
Local Agencies[a]		
Encroachment Permit and Traffic Control Plan(s)	Cities of San Marcos, Carlsbad, Escondido, and San Diego County	Construction within, under, or over city roadways (West San Marcos Blvd, Palomar Airport Road, S Rancho Santa Fe Road, San Elijo Road, Country Club Road, Kauana Loa Drive, and Auto Park Way)

NOTES:

[a] Noise variance approvals are not included herein because SDG&E would meet and confer with local agencies where construction is anticipated to exceed noise limits published within the applicable local noise codes. Actual noise variances would not be procured; therefore, this process is not listed within this table.

SOURCE: SDG&E, 2017, 2018d.

Environmental Determination

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Based upon an Initial Study, it is determined that the proposed Project WOULD NOT HAVE a significant effect on the environment with the incorporation of the Applicant Proposed Measures (APMs) and mitigation measures (attached). The Initial Study is available for review at the CPUC, 505 Van Ness Avenue, San Francisco, California 94102.

Joyce Steingass
Project Manager
California Public Utilities Commission

3-26-19
Date

TABLE ES-2
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.1 Aesthetics – Would the project:			
Impact 3.1.a: Have a substantial adverse effect on a scenic vista.	Less than Significant	None required	Less than Significant
Impact 3.1.b: Substantially damage scenic resources, including, but not limited to, tress, rock outcroppings, and historic buildings within a state scenic highway.	No Impact	None required	No Impact
Impact 3.1.c: Substantially degrade the existing visual character or quality of public views of the site and its surroundings, or since the project is in an urbanized area, whether it would conflict with applicable zoning and other regulations governing scenic quality.	Less than Significant	None required	Less than Significant
Impact 3.1.d: Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area.	Less than Significant	None required	Less than Significant
3.2 Agricultural Resources – Would the project:			
Impact 3.2.a: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.	No Impact	None required	No Impact
Impact 3.2.b: Conflict with existing zoning for agricultural use, or a Williamson Act contract.	No Impact	None required	No Impact
Impact 3.2.c: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined in Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g).	No Impact	None required	No Impact
Impact 3.2.d: Result in the loss of forest land or conversion of forest land to non-forest use.	No Impact	None required	No Impact
Impact 3.2.e: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use	No Impact	None required	No Impact

TABLE ES-2 (CONTINUED)
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.3 Air Quality – Would the project:			
Impact 3.3.a: Conflict with or obstruct implementation of the applicable air quality plan.	Less than Significant	None required	Less than Significant
Impact 3.3.b: Violate any air quality standard or result in a cumulatively considerable net increase in an existing or projected air quality violation.	Less than Significant	None required	Less than Significant
Impact 3.3.c: Expose sensitive receptors to substantial pollutant concentrations.	Less than Significant	None required	Less than Significant
Impact 3.3.d: Result in substantial emissions (such as odors or dust) adversely affecting a substantial number of people.	Less than Significant	None required	Less than Significant
3.4 Biological Resources – Would the project:			
Impact 3.4.a: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service	Significant	**APM BIO-1:** SDG&E will conduct all construction and operation and maintenance activities in accordance with NCCP Operational Protocols to avoid and minimize impacts on biological resources.	Less than Significant
		APM BIO-2: All earth-moving equipment will be free of mud and vegetative material before being mobilized onto work areas associated with the Project.	
		APM BIO-3: Except when not feasible due to physical or safety constraints, all Project construction vehicle movement will be restricted to the Project work areas, existing roads, and access roads constructed as a part of the Project and mapped by SDG&E in advance of construction. Approval from a biological monitor will be obtained prior to vehicle travel off of existing access roads.	
		APM BIO-4: Civil and land survey personnel will keep survey vehicles on existing roads. During Project surveying activities, brush clearing for footpaths, line-of-sight cutting, and land surveying panel point placement in sensitive habitat prior approval will be required from the Project's biological monitor. Hiking off roads or paths for survey data collection will be allowed year-round as long as all of the other applicable APMs are met.	
		APM BIO-5: Prior to the start of construction, the boundaries of sensitive plant populations that require protection will be delineated with clearly visible flagging or fencing by a qualified biologist. The flagging and/or fencing will be maintained in place for the duration of construction. Flagged and fenced areas will be avoided to the extent practicable during construction activities in that area. If impacts on sensitive plant species are unavoidable, SDG&E will perform soil and plant salvage activities to enhance recovery of these special-status plants, consistent with the provisions in the Enhancement Section 7.2.1 of the NCCP. These include the stockpiling of native soil in the area where Nuttall's scrub oak and wart-stemmed Ceanothus occur and top soil replacement after construction. Quality assurances and success criteria milestones for the restoration area as a whole will conform to the standards provided in Enhancement Section 7.2.1 of the NCCP.	

TABLE ES-2 (CONTINUED)
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.4 Biological Resources – Would the project (cont.)			
Impact 3.4.a (cont.)		**APM BIO-6:** ***Coastal California Gnatcatcher.*** Prior to construction, SDG&E shall retain a qualified biologist to conduct surveys for the coastal California gnatcatcher in suitable habitat, to determine if any active nests are within or in the immediate vicinity of proposed construction activities. If feasible, SDG&E will avoid construction during the peak breeding season (February 15 – August 31) for coastal California gnatcatcher and migratory birds. When it is not feasible to avoid trimming or removal of vegetation or during the peak breeding season, SDG&E will perform a site survey in the area where the work is to occur. Trimming or removal of vegetation during the peak breeding season will require a preconstruction survey by a qualified biologist to confirm that active nests will not be affected. This survey will be performed to determine the presence or absence of nesting birds. If an active nest (i.e., containing eggs or young) is identified within the construction area during the survey, work will be temporarily halted and redirected away from the site. The qualified biologist in the field will determine a no-work buffer zone around the nest of sufficient size and dimensions that construction activities will not result in disturbance or direct removal of the active nest, or will not cause a breeding bird to abandon its nest. If the nesting and/or breeding activities are being conducted by a federal or state-listed species, SDG&E will consult with the USFWS and CDFW as necessary. Monitoring of the nest will continue until the birds have fledged or construction is no longer occurring on site. ***Migratory Birds.*** Trimming or removal of vegetation during the peak breeding season (February 15 to August 31) will require a pre-construction survey by a qualified biologist to confirm that active nests will not be affected. If an active nest is detected within the construction area during the survey, work will be temporarily halted and redirected away from the site. The qualified biologist in the field will determine a no-work buffer zone around the nest of sufficient size and dimensions that construction activities will not result in disturbance or direct removal of the active nest, or will not cause a breeding bird to abandon its nest.	
		APM BIO-7: If a raptor nest is observed during preconstruction surveys, a qualified biologist would determine if it is active. If the nest is determined to be active, the biological monitor would monitor the nest to ensure nesting activities and/or breeding activities are not substantially adversely affected. If the biological monitor determines that Project activities are disturbing or disrupting nesting and/or breeding activities, the monitor will make recommendations to reduce the noise and/or disturbance in the vicinity of the nest**.**	
		APM BIO-8: A biological monitor will be present during all ground-disturbing and vegetation removal activities. Immediately prior to initial ground-disturbing activities and/or vegetation removal, the biological monitor will survey the site to ensure that no special-status species will be impacted.	
		APM BIO-9: Wherever possible, vegetation will be left in place or mowed, instead of grubbed, to avoid excessive root damage and to allow for regrowth and to minimize soil erosion.	

TABLE ES-2 (CONTINUED)
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.4 Biological Resources – Would the project (cont.)			
Impact 3.4.a (cont.)		**Mitigation Measure BIO-1: Project Compliance with the Federal and California Endangered Species Acts.** Prior to approval of the Notice to Proceed (NTP), SDG&E shall provide CPUC with a written commitment to implement its 1995 Subregional Natural Community Conservation Plan (NCCP) or 2017 Low Effect HCP (LEHCP), including proof that sufficient mitigation/take credits are assigned to the Project to cover potential impacts on all special-status plant and animal species present in the BSA or having moderate or high potential to occur in the biological study area (BSA). If there are not sufficient mitigation/take credits available in the NCCP or LEHCP at the time of NTP approval, then prior to the commencement of Project construction, SDG&E shall secure take authorization from the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW), as appropriate, for all federal and State-listed special-status plant and animal species present in the BSA or having moderate or high potential to occur in the BSA that are impacted by the Project. The conditions of these authorizations shall be equally or more effective than the protocols and practices included in the NCCP/LEHCP. SDG&E shall provide the CPUC with copies of these authorizations to show that compliance with permitting conditions would be equal to or more effective than the approved NCCP/LEHCP protocols and practices. SDG&E shall also submit to CPUC any monitoring reports, incident reports, etc., required by USFWS and/or CDFW when submitted to those agencies. **Mitigation Measure BIO-2: Establishment of Cylindrical Construction Buffers.** The biological monitor shall establish a three-dimensional cylinder-shaped buffer around active nests that have the potential to be affected by helicopter use or ground-based activities associated with helicopter use. A vertical buffer shall extend at least 300 feet vertically above the location of the nest and at least 300 feet horizontally for passerines (or 500 feet vertically and horizontally for raptors and 500 feet vertically and 0.5 mile horizontally for white-tailed kite). The biological monitor and SDG&E project manager shall monitor the helicopter tracks (i.e., flight patterns, durations) daily to ensure compliance with these established buffers. This buffer assumes the helicopter activities are temporary or infrequent in nature (no longer than one minute [e.g., pass-by] or visit the site once in a day). If helicopter work occurs in the vicinity of an active nest for an extended period of time, the biological monitor may determine, based on the nature of the work and nest monitoring observations, that the buffer is insufficient for the nest and adjust the buffer distance appropriately.	
Impact 3.4.b: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.	Significant	Implement APMS BIO-1 through BIO-6, APM BIO-8, APM BIO-9, located above.	Less than Significant

TABLE ES-2 (CONTINUED)
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.4 Biological Resources – Would the project (cont.)			
Impact 3.4.c: Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means	Significant	**Mitigation Measure BIO-3: Avoid Jurisdictional Resources.** To avoid impacts on jurisdictional areas, SDG&E and its contractor shall flag work area limits and work shall be restricted to the flagged limits. Additionally, silt fencing shall be installed on the side of the work area closest to the jurisdictional feature, to minimize construction-generated run-off or sedimentation. A qualified biologist shall verify that silt fencing and construction work is properly installed and are located outside of jurisdictional areas to confirm their avoidance. Monitoring shall take place during rain events to confirm the integrity of silt fencing and verify runoff does not enter jurisdictional areas.	Less than Significant
Impact 3.4.d: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	Significant	Implement APMS BIO-1 through APM BIO-9 and Mitigation Measures BIO-1 through BIO-3, located above.	Less than Significant
Impact 3.4.e: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	No Impact	None required	No Impact
Impact 3.4.f: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	No Impact	None required	No Impact
3.5 Cultural Resources – Would the project:			
Impact 3.5.a: Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines §15064.5**.**	Significant	**Mitigation Measure CUL-1: Retention of Qualified Archaeologist.** Prior to the start of any ground disturbing activity, a Qualified Archaeologist, defined as an archaeologist meeting the Secretary of the Interior's Standards for professional archaeology (U.S. Department of the Interior, 2008) shall be retained by SDG&E to carry out all APMs and mitigation measures related to archaeological resources. **Mitigation Measure CUL-2: Pre-Construction Cultural Resources Sensitivity Training.** Prior to the start of any ground-disturbing activity, the Qualified Archaeologist shall prepare cultural resources sensitivity training materials for use during Project-wide Worker Environmental Awareness Training (or equivalent). The cultural resources sensitivity training shall be conducted by a qualified environmental trainer (often the Lead Environmental Inspector [LEI] or equivalent position) working under the supervision of the Qualified Archaeologist. The Qualified Archaeologist shall determine and ensure the suitability of the qualified environmental trainer. The cultural resources sensitivity training shall be conducted for all construction personnel. Construction personnel shall be informed of the types of archaeological resources that may be encountered, and of the proper procedures to be implemented in the event of an inadvertent discovery of archaeological resources or human remains. SDG&E shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.	Less than Significant

TABLE ES-2 (CONTINUED)
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.5 Cultural Resources – Would the project (cont.)			
Impact 3.5.a (cont.)		**Mitigation Measure CUL-3: Development and Implementation of Cultural Resources Monitoring Plan.** Prior to the start of any Project-related ground disturbing activities the Qualified Archaeologist shall prepare a Cultural Resources Monitoring Plan (CRMP). The CRMP shall stipulate the location and timing of archaeological and Native American monitoring, including, but not limited to, the monitoring of all ground disturbing activities within 250 feet of P-37-032160 and within 100 feet of the remaining 10 archaeological resources (P-37-004495, -004499, -005501, -007306, -010551, -010550, -011442, -012209, -034831, and TL6975-S-5) that have the potential to contain or are known to contain subsurface archaeological deposits, as well as all ground disturbing activities within Segment 3 and the easternmost 500 feet of Segment 2. The CRMP shall include monitoring protocols to be carried out during Project construction. The CRMP shall stipulate that a Native American monitor associated with one or more of the Native American groups that have expressed interest in the Project (i.e. San Luis Rey Band of Mission Indians, Rincon Band of Luiseno Indians, and/or Santa Ysabel Band of the Iipay Nation) be retained to monitor all Project-related ground disturbance stipulated in the CRMP. In preparing the CRMP, the Native American groups that have expressed interest in monitoring shall be consulted regarding the scheduling of monitors. A Native American monitoring schedule shall be incorporated into the CRMP. The CRMP shall contain an allowance that the Qualified Archaeologist, based on observations of subsurface soil stratigraphy or other factors during initial grading, and in coordination with the Native American monitor(s) and SDG&E, may reduce or discontinue monitoring as warranted if it is determined that the possibility of encountering archaeological deposits is low. The CRMP shall outline the appropriate measures to be followed in the event of unanticipated discovery of cultural resources during Project implementation, including that all ground disturbance within 100 feet of an unanticipated discovery shall cease until a treatment plan is developed by the Qualified Archaeologist in coordination with SDG&E and the Native American monitor(s) and which will consider the resources archaeological and tribal value. The CRMP shall identify avoidance as the preferred manner of mitigating impacts to cultural resources. The CRMP shall establish the criteria utilized to evaluate the significance (per CEQA) of the discoveries, methods of avoidance consistent with CEQA Guidelines Section 15126.4(b)(3), as well as identify the appropriate treatment to mitigate the effect of the Project if avoidance of a significant resource is determined to be infeasible. The CRMP will also include provisions for the treatment of archaeological sites that qualify as unique archaeological resources pursuant to PRC Section 21083.2, which places limits on the costs of mitigation for unique archaeological resources. The plan shall also include reporting of monitoring results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and State repositories. The CRMP shall be submitted to SDG&E and CPUC for review and approval prior to the start of Project-related ground disturbance, as well as to the Native American groups that have expressed interest in the Project (i.e. San Luis Rey Band of Mission Indians, Rincon Band of Luiseno Indians, and/or Santa Ysabel Band of the Iipay Nation) for review and comment.	

TABLE ES-2 (CONTINUED)
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.5 Cultural Resources – Would the project (cont.)			
Impact 3.5.a (cont.)		**Mitigation Measure CUL-4: Data Recovery Excavations at P-37-032160.** Prior to the start of any Project-related ground disturbing activities within 250 feet of archaeological site P-37-032160, data recovery excavations shall be carried out to collect scientifically consequential data associated with known resource P-37-032160 where Project-related ground disturbing activities including but not limited to pole replacement, trenching, potholing, and AC mitigation well and test station installations will be carried out. Prior to the start of the data recovery excavations, a research design shall be prepared by the Qualified Archaeologist outlining the research questions to be addressed as part of the data recovery, as well as the field and lab methods and any special studies proposed to obtain the scientifically consequential information. The research design shall be submitted to SDG&E and CPUC for review and approval prior to the start of the data recovery excavations, as well as to the San Luis Rey Band of Mission Indians for review and comment. A data recovery report presenting the methods and results of the data recovery excavations shall be prepared and reviewed by the CPUC and SDG&E, and submitted to the San Luis Rey Band of Mission Indians for review and comment. The final data recovery report shall be placed on file at the South Coast Information Center.	
		Mitigation Measure CUL-5: Exclusionary Fencing. Prior to Project-related ground disturbing activities, exclusionary fencing shall be installed to ensure that the five previously recorded archaeological sites within or immediately adjacent to the Project alignment that have surface manifestations (P-37-004495, -004499, -007306, -012209, and TL6975-S-5) are not inadvertently impacted during Project implementation. The exclusionary fencing shall encompass the mapped site boundaries plus a 25-foot radius to ensure an appropriate buffer is maintained between the sites and Project-related ground disturbing activities. For the four archaeological resources bisected by Project access roads (P-37-004495, -004499, -007306, and TL6975-S-5), the exclusionary fencing shall be established along the shoulder of the existing roads. To ensure avoidance, the exclusionary fencing shall be marked with signs indicating that staff associated with the Project are not to go beyond the limits of the fencing. The exclusionary fencing shall not identify the protected areas as demarcating archaeological resources in order to discourage unauthorized disturbance, vandalism, or collection of artifacts.	
		Mitigation Measure CUL-6: Pre-Construction Surveys. Prior to the start of Project-related ground disturbing activities, pre-construction surveys of the four archaeological sites bisected by existing access roads (P-37-004495, -004499, -007306, and TL6975-S-5) shall be conducted to map and collect all artifacts located within the road beds. Artifact mapping shall be conducted using a hand held GPS unit capable of sub-meter accuracy, and the final disposition of the artifacts shall be determined by SDG&E in coordination with the San Luis Rey Band of Mission Indians.	
		Mitigation Measure CUL-7: Road Maintenance within Archaeological Sites. During Project implementation, routine road maintenance, including but not limited to grading and blading, shall be avoided within the four archaeological sites bisected by existing access roads (P-37-004495, -004499, -007306, and TL6975-S-5). Should maintenance activities such as drainage or culvert repairs be required to stabilize the access road, all ground disturbing activities within 100 feet of the four archaeological sites shall be monitored as stipulated in the CRMP.	

TABLE ES-2 (CONTINUED)
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.5 Cultural Resources – Would the project (cont.)			
Impact 3.5.b: Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines Section 15064.5.	Significant	Implement Mitigation Measure CUL-1 through CUL-7, located above.	Less than Significant
Impact 3.5.c: Disturb any human remains, including those interred outside of dedicated cemeteries.	Significant	**Mitigation Measure CUL-8: Inadvertent Discovery of Human Remains.** If human remains are uncovered during Project construction, all work within 100 feet of the find shall be immediately halted, and the San Diego County coroner shall be contacted to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5(e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the County Coroner shall contact the California Native America Heritage Commission (NAHC), in accordance with Health and Safety Code Section 7050.5(c), and Public Resources Code Section 5097.98 (as amended by AB 2641). The NAHC shall then identify a Most Likely Descendant (MLD) of the deceased Native American, who shall then help determine what course of action should be taken in the disposition of the remains. Per Public Resources Code Section 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section, with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.	Less than Significant
3.6 Energy – Would the project:			
Impact 3.6.a: Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during construction or operation.	Less than Significant	None required	Less than Significant
Impact 3.6.b: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	No Impact	None required	No Impact
3.7 Geology, Soils, Seismicity, and Paleontological Resources – Would the project:			
Impact 3.7.a.i: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State	Less than Significant	None required	Less than Significant

TABLE ES-2 (CONTINUED)
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.7 Geology, Soils, Seismicity, and Paleontological Resources – Would the project (cont.)			
Impact 3.7.a.ii: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking**.**	Significant	**Mitigation Measure GEO-1: Geotechnical Report.** The structural requirements of the California Building Code (CBC) are applicable to certain structural components of the Project, including retaining walls, screen walls, fences, and control shelters. SDG&E and/or its contractors shall design such structures to comply with such CBC standards and shall adhere to and implement all design recommendations and parameters established in the Project's Geotechnical Investigation Report by GEOCON Inc. and the AC Interference Analysis & Mitigation System Design by ARK Engineering & Technical Services. In addition, SDG&E shall retain a California registered professional engineer(s) to prepare a supplemental geotechnical report. This report shall address specific geotechnical hazards that were not addressed in the Geotechnical Investigation Report, and provide recommendations for mitigating such hazards. The analysis in that report shall include, but not be limited to, the following: • Recommendations to address the liquefaction risk within the Quaternary alluvium along Segment 1 and 3, if any; • Recommendations to address the corrosive soils that are present along Segments 1 and 2, if any, which pose a risk to the concrete pier foundations and direct bury poles; • Recommendations to address the landslide potential along Segment 2, if any, where planned ground disturbing activities could trigger landslides; • Evaluation of the site-specific conditions and recommendations specific to micropiles where proposed, if final design includes the use of micropiles. The recommendations shall ensure that when incorporated, the Project shall not increase the potential for ground failure, slope instability, and/or landslides, and shall be resistant to damage from ground shaking, ground failure, corrosive soils, unstable slopes, and landslides. SDG&E shall submit the supplemental geotechnical report to the CPUC Project Manager for review and approval at least 30 days prior to the start of construction.	Less than Significant
Impact 3.7.a.iii: Directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.	Significant	Implement Mitigation Measure GEO-1, located above.	Less than Significant
Impact 3.7 a.iv: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.	Significant	Implement Mitigation Measure GEO-1, located above.	Less than Significant
Impact 3.7.b: Result in substantial soil erosion or the loss of topsoil.	Less than Significant	None required	Less than Significant
Impact 3.7.c: Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	Significant	Implement Mitigation Measure GEO-1, located above.	Less than Significant

TABLE ES-2 (CONTINUED)
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.7 Geology, Soils, Seismicity, and Paleontological Resources – Would the project (cont.)			
Impact 3.7.d: Be located on expansive or corrosive soil, creating substantial direct or indirect risks to life or property	Significant	Implement Mitigation Measure GEO-1, located above.	Less than Significant
Impact 3.7.e: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.	No Impact	None required	No Impact
Impact 3.7.f: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Significant	**Mitigation Measure PALEO-1: Project Paleontologist.** SDG&E or its contractor shall retain a qualified professional paleontologist (qualified paleontologist) meeting the Society of Vertebrate Paleontology (SVP) standards as set forth in the "Definitions" section of Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (2010) prior to the approval of demolition or grading permits. The qualified paleontologist shall attend the Project kick-off meeting and Project progress meetings on a regular basis, shall report to the site in the event potential paleontological resources are encountered, and shall implement the duties outlined in Mitigation Measures PALEO-2 through PALEO-4.	Less than Significant
		Mitigation Measure PALEO-2: Worker Training. Prior to the start of any ground disturbing activity (including vegetation removal, pavement removal, etc.), the qualified paleontologist shall prepare paleontological resources sensitivity training materials for use during Project-wide Worker Environmental Awareness Training (or equivalent). The paleontological resources sensitivity training shall be conducted by a qualified environmental trainer (often the Lead Environmental Inspector [LEI] or equivalent position) working under the supervision of the qualified paleontologist. In the event construction crews are phased, additional trainings shall be conducted for new construction personnel. The training session shall focus on the recognition of the types of paleontological resources that could be encountered within the Project site and the procedures to be followed if they are found, as outlined in the approved Paleontological Resources Monitoring and Mitigation Plan in Mitigation Measure PALEO-3. SDG&E and/or its contractor shall retain documentation demonstrating that all construction personnel attended the training prior to the start of work on the site, and shall provide the documentation to the CPUC Project Manager upon request.	
		Mitigation Measure PALEO-3: Paleontological Monitoring. The qualified paleontologist shall prepare, and SDG&E and/or its contractors shall implement, a Paleontological Resources Monitoring and Mitigation Plan (PRMMP). SDG&E shall submit the plan to the CPUC Project Manager for review and approval at least 30 days prior to the start of construction. This plan shall address specifics of monitoring and mitigation and comply with the recommendations of the SVP (2010), as follows. • The qualified paleontologist shall identify, and SDG&E or it contractor(s) shall retain, qualified paleontological resource monitors (qualified monitors) meeting the SVP standards (2010).	

TABLE ES-2 (CONTINUED)
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.7 Geology, Soils, Seismicity, and Paleontological Resources – Would the project (cont.)			
Impact 3.7.f (cont.)		• The qualified paleontologist and/or the qualified monitors under the direction of the qualified paleontologist shall conduct full-time paleontological resources monitoring for all ground-disturbing activities in previously undisturbed sediments in the Project site that have high paleontological sensitivity. This includes any depth of excavation into the Santiago Formation, as well as excavations that exceed 10 feet in depth in areas mapped as young alluvial floodplain deposits that overlie the Santiago Formation. The PRMMP shall clearly map these portions of the Project based on final design provided by SDG&E and/or its contractor(s). • If many pieces of heavy equipment are in use simultaneously but at diverse locations, each location will need to be individually monitored. • Monitors shall have the authority to temporarily halt or divert work away from exposed fossils in order to evaluate and recover the fossil specimens, establishing a 50-foot buffer. • If construction or other Project personnel discover any potential fossils during construction, regardless of the depth of work or location and regardless of whether the site is being monitored, work at the discovery location shall cease in a 50-foot radius of the discovery until the qualified paleontologist has assessed the discovery and made recommendations as to the appropriate treatment. • The qualified paleontologist shall determine the significance of any fossils discovered, and shall determine the appropriate treatment for significant fossils in accordance with the SVP standards. The qualified paleontologist shall inform SDG&E of these determinations as soon as practicable. See Mitigation Measure PALEO-4 regarding significant fossil treatment. • Monitors shall prepare daily logs detailing the types of activities and soils observed, and any discoveries. The qualified paleontologist shall prepare a final monitoring and mitigation report to document the results of the monitoring effort and any curation of fossils. SDG&E shall provide the daily logs to the CPUC Project Manager upon request, and shall provide the final report to the CPUC Project Manager upon completion. **Mitigation Measure PALEO-4: Significant Fossil Treatment.** If any find is deemed significant, as defined in the SVP standards (2010) and following the process outlined in Mitigation Measure PALEO-3, the qualified paleontologist shall salvage and prepare the fossil for permanent curation with a certified repository with retrievable storage following the SVP standards.	
3.8 Greenhouse Gas Emissions – Would the project:			
Impact 3.8.a: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	Less than Significant	None required	Less than Significant
Impact 3.8.b: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	No Impact	None required	No Impact

TABLE ES-2 (CONTINUED)
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.9 Hazards and Hazardous Materials – Would the project:			
Impact 3.9.a: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials**.**	Less than Significant	**APM HAZ-1:** A Health and Safety Plan will be prepared and implemented during construction. The Health and Safety Plan will describe the anticipated hazards that construction workers may encounter while working on the Project, the safety measures that must be taken to address those hazards, and the necessary training requirements for personnel working on the Project. Safety hazards and applicable federal and state occupational standards will be identified in conjunction with the development of appropriate response actions, as well as a protocol for accident reporting. The Health and Safety Plan will also identify security and safety requirements for staging areas, storage yards, excavation areas, and any other areas of the Project where hazards may exist during construction activities. In addition, information regarding medical kits, safety equipment, and evacuation procedures will be outlined in the Health and Safety Plan. A qualified safety field representative will be present on site to observe and document adherence to the Health and Safety Plan as needed. The Health and Safety Plan will be prepared by the SDG&E construction contractor and will be available immediately prior to construction.	Less than Significant
Impact 3.9b: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	Significant	Implement APMs TRA-1 and TRA-**2**, which can be found in *Transportation and Traffic,* located below. **Mitigation Measure HAZ-1: Soil and Dewatering Management Plan.** SDG&E and the contractor conducting soil excavation and (if needed) dewatering shall develop and implement a Soil and Dewatering Management Plan (SDMP) that describes the procedures for managing excavated soil and groundwater generated from dewatering activities. The SDMP shall include procedures for monitoring soil for possible contamination, identifying the specific stockpiling locations and measures to contain the stockpiled soil to prevent run on and run off, and materials disposal specifying how the construction contractor(s) will remove, handle, transport, and dispose of all excavated materials in a safe, appropriate, and lawful manner. The SDMP shall specify the contractor will segregate and dispose of soil with chemical concentrations above regulatory standards. Soil with chemical concentrations below regulatory standards may be reused or recycled. Soil with chemical concentrations above regulatory standards shall be disposed of in accordance with the applicable provisions of Cal. Code Regs. Title 22, Chapter 11, Article 3, Section 66261 (i.e., Class III (non-hazardous waste), Class II (non-hazardous and "designated" waste), or Class I (non-hazardous and hazardous waste)). The SDMP must identify protocols for soil testing and disposal, identify the approved disposal sites, and include written documentation that the disposal site can accept the waste. The contractor shall include procedures for the safe and legal disposal of groundwater generated from dewatering, if any. The procedures shall include water sampling and testing procedures to quantify chemical concentrations in the water, and dispose of the water in a safe and legal manner. Note that the disposal of groundwater generated from dewatering may be disposed of under the State's VOC and Fuel General Permit, depending on chemical concentrations and local sanitary sewer acceptance criteria. Contract specifications shall mandate full compliance with all applicable local, State, and federal regulations related to the identification, transportation, and disposal of hazardous materials, including those encountered in soil and groundwater. This SDMP shall be submitted to CPUC for review and approval prior to commencement of construction.	Less than Significant

TABLE ES-2 (CONTINUED)
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.9 Hazards and Hazardous Materials – Would the project (cont.)			
Impact 3.9.c: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.	Significant	Implement Mitigation Measure HAZ-1, located above.	Less than Significant
Impact 3.9.d: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.	Significant	Implement Mitigation Measure HAZ-1, located above.	Less than Significant
Impact 3.9.e: Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area	Less than Significant	None required	Less than Significant
Impact 3.9.f: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Less than Significant	Implement APMs TRA-1 and TRA-2, which can be found in *Transportation and Traffic,* located below.	Less than Significant
Impact 3.9.g: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.	Significant	Implement Mitigation Measure WIL-1, which can be found in *Wildfire*, located below.	Less than Significant
3.10 Hydrology and Water Quality – Would the project:			
Impact 3.10.a: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.	Significant	Implement Mitigation Measure HAZ-1: Soil and Dewatering Management Plan, which can be found in *Hazards and Hazardous Materials*, located above.	Less than Significant
Impact 3.10.b: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	Less than Significant	None required	Less than Significant
Impact 3.10.c.i: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site.	Less than Significant	None required	Less than Significant
Impact 3.10.c.ii: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite.	Less than Significant	None required	Less than Significant

TABLE ES-2 (CONTINUED)
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.10 Hydrology and Water Quality – Would the project (cont.)			
Impact 3.10.c.iii: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	Less than Significant	None required	Less than Significant
Impact 3.10.c.iv: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows.	No Impact	None required	No Impact
Impact 3.10.d: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.	Less than Significant	None required	Less than Significant
Impact 3.10.e: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	Less than Significant	None required	Less than Significant
3.11 Land Use – Would the project:			
Impact 3.11.a: Physically divide an established community.	No Impact	None required	No Impact
Impact 3.11.b: Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	No Impact	None required	No Impact
3.12 Mineral Resources – Would the project:			
Impact 3.12.a: Whether the Project would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.	Less than Significant	None required	Less than Significant
Impact 3.12.b: Whether the Project would result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.	No Impact	None required	No Impact

TABLE ES-2 (CONTINUED)
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.13 Noise – Would the project:			
Impact 3.13.a: Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Significant	**APM NOI-1:** Construction activities will occur during the times established by the local ordinances, with the exception of certain activities where nighttime and weekend construction activities are necessary, including, but not limited to, construction work timeframes mandated by permit, pouring of foundations, and pulling of the conductor, which require continuous operation or must be conducted during off-peak hours per agency requirements. SDG&E will meet and confer with the applicable jurisdiction to discuss temporarily deviating from the requirements of the noise ordinance, as described in the noise variance process. **Mitigation Measure NOI-1: Construction Noise Reduction and Mitigation Plan.** To reduce daytime noise impacts due to Project construction near sensitive receptors, SDG&E shall develop and implement a Construction Noise Reduction and Mitigation Plan (Plan). The Plan shall be submitted to the CPUC at least 14 days prior to the commencement of construction activities for review and approval. The Plan shall include a requirement for SDG&E to administer a noise monitoring program when construction activities are conducted within 100 feet of sensitive receptor locations to ensure that the provisions of the Plan, including those identified below, are effective in reducing construction noise levels at sensitive receptor locations to 75 dBA L_{eq} or less. The Plan shall present specific measures that identify how the construction noise limit of 75 dBA as an hourly L_{eq} at nearby sensitive receptor locations will be adhered to, how potential exceedances will be documented and corrected, and how impacts on sensitive receptors from exceedances that cannot be corrected or avoided will be mitigated, including but not limited to the following measures: ***Noise Reduction*** The following measures shall apply to construction activities within 100 feet of sensitive receptor locations: • Impact tools (e.g., jack hammers, pavement breakers, and rock drills) shall be hydraulically or electrically powered where feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dB. External jackets on the tools themselves shall be used where feasible; this could achieve a reduction of 5 dB. Quieter procedures, such as use of drills rather than impact tools, shall be used whenever feasible. • When construction activities that could potentially exceed 75 dBA are conducted, construction equipment and trucks shall be equipped with enhanced noise control measures (where feasible and reasonably available). Enhanced noise control measures shall be identified in the Plan and could include, but are not limited to, improved exhaust mufflers and intake silencers, engine enclosures, noise shields or shrouds, etc. • When construction activities that could potentially exceed 75 dBA are conducted, noise barriers such as noise shields, barriers, blankets, or enclosures shall be used, where feasible, adjacent to or around noisy construction equipment. Noise control shields/barriers/ blankets shall be made featuring weather-protected, sound-absorptive material on the	Less than Significant

TABLE ES-2 (CONTINUED)
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.13 Noise – Would the project (cont.)			
Impact 3.13.a (cont.)		construction-activity side of the noise shield/barrier/blanket. The noise barrier must be installed in a location that completely blocks line-of-sight between the construction noise source (e.g., generator, backhoe) and sensitive receptors located within 100 feet of the noise source. • Stationary construction noise sources shall be located as far from adjacent receptors as possible. They shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or other measures to the extent this does not interfere with construction. ***Notification and Correction*** • Distribute to the potentially affected residences within 100 feet of Project construction an informational pamphlet, and post signs at conspicuous publicly accessible places at each construction site, that indicate the hours of construction work and applicable noise level limits and provide a "hotline" telephone number, which shall be attended during active construction working hours and record messages outside of working hours, for use by the public to register complaints. SDG&E shall identify whether posted hours and/or the 75 dBA Leq threshold have been exceeded, take action to keep to posted hours and/or reduce noise levels below 75 dBA, and notify CPUC within 24 hours. With regard to any noise complaints received citing project construction, SDG&E shall ensure that all complaints received during or outside of working hours shall be logged noting date, time, complainant's name, nature of complaint, and any corrective action taken, and shall submit such information to the CPUC Project Manager within 48 hours of receiving the complaint. • For construction activities that involve a helicopter (e.g., sock line installation, movement of materials), at least one week prior to the start of such activity, additional notice shall be issued or delivered [by a means which provides proof of delivery] by SDG&E and/or its contractor to sensitive receptors within 300 feet of planned helicopter activity. This notice shall include the estimated date and time of the proposed work, as well as the estimated duration of the work, both in terms of overall duration per segment and duration per pole location. ***Relocation*** • The Plan shall provide for temporary relocation of residents in the event that the Plan or the noise monitoring program identifies the potential for construction noise to exceed 75 dBA L_{eq} within 100 feet of such receptors.	
		Mitigation Measure NOI-2: Blasting Plan. Prior to conducting any blasting activities, SDG&E shall develop a Blasting Plan in coordination with an acoustical analyst, geotechnical engineer, and construction contractor. The Plan shall be submitted to the CPUC at least 14 days prior to the commencement of construction activities for review and approval to ensure that all components of this measure have been included and all required reviews, signatures, and permits obtained. The plan shall include a current/valid copy of the Explosives Permit issued by the San Diego County Sheriff's Office, as well as documentation that all local blasting requirements have been adhered to. The Blasting Plan shall include at a minimum the following measures:	

TABLE ES-2 (CONTINUED)
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.13 Noise – Would the project (cont.)			
Impact 3.13.a (cont.)		• Methods of matting or covering of blast area to prevent excessive air blast pressure. • Description of air blast monitoring program. • If necessary, SDG&E and/or its contractors shall use portable noise barriers between the source and affected occupied properties to reduce excessive noise impacts. • Blasting shall be limited to between the hours of 7:00 a.m. and 7:00 p.m. daily. • Blasting notification procedures, lead times, and list of those notified. Public notification to potentially affected sensitive receptors describing the expected extent and duration of the blasting. • Verification that explosives are not being proposed for use within 300 feet of the boundary of any occupied parcels zoned for residential. In the event that blasting activities are proposed within this distance, SDG&E will provide verification to the CPUC that residences affected by noise are notified of the date and time of blasting and offered temporary relocation assistance.	
Impact 3.13.b: Generation of, excessive groundborne vibration or groundborne noise levels.	Significant	**Mitigation Measure NOI-3: Vibration Reduction Plan.** Prior to any blasting construction, the applicant shall develop a Vibration Reduction Plan in coordination with an acoustical analyst, geotechnical engineer, and construction contractor, and submit the Plan to the CPUC for approval at least 14 days prior to any proposed blasting. The Vibration Reduction Plan shall include vibration reduction measures to ensure that surrounding buildings will be exposed to less than 0.2 PPV to prevent building damage. At a minimum, the plan shall consider the following measures: • Evidence of licensing, experience, and qualifications of blasting contractors. • The Plan shall establish a vibration limit of 0.2 PPV at nearby structures in order to protect structures from blasting activities and identify specific locations for monitoring. A pre-blast survey shall be conducted of any potentially affected structures. • The Plan shall identify the appropriate size of the explosive charge to ensure that a vibration level of 0.2 PPV is not exceeded at nearby structures. • Impacted property owners shall be notified at least 48 hours prior to the visual inspections. • Post-construction inspection of structures shall be performed to identify (and repair if necessary) any damage from blasting vibrations. Any damage shall be documented by photograph, video, etc. This documentation shall be reviewed with the individual property owners and SDG&E shall arrange and fund any needed repairs. Documentation of these efforts shall be provided to the CPUC.	Less than Significant
Impact 3.13.c: Be located within the vicinity of a private airstrip or an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels.	No impact	None required	No Impact

TABLE ES-2 (CONTINUED)
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.14 Population and Housing – Would the project:			
Impact 3.14.a: The Project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).	Less than Significant	None required	Less than Significant
Impact 3.14.b: The Project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.	No Impact	None required	Less than Significant
3.15 Public Services – Would the project:			
Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:			
Impact 3.15.a.i: Fire protection.	Significant	Implement Mitigation Measure WIL-1, located below.	Less than Significant
Impact 3.15.a.ii: Police protection.	Less than Significant	None required	Less than Significant
Impact 3.15.a.iii: Schools.	No Impact	None required	No Impact
Impact 3.15.a.iv: Parks.	No Impact	None required	No Impact
Impact 3.15.a.v: Other public facilities.	No Impact	None required	No Impact
3.16 Recreation – Would the project:			
Impact 3.16.a: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.	Less than Significant	None required	Less than Significant
Impact 3.16.b: Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.	No Impact	None required	No Impact
Impact 3.16.c: Disrupt access to recreational opportunities.	Significant	**APM PS-1:** SDG&E will provide the public with advance notification of construction activities. Concerns related to dust, noise, and access restrictions with construction activities will be addressed within this notification.	Less than Significant
		APM PS-2: All construction activities will be coordinated with the property owner or authorized agent for each affected park, trail, or recreational facility prior to construction in these areas.	

TABLE ES-2 (CONTINUED)
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.16 Recreation – Would the project:			
Impact 3.16.c (cont.)		**APM PS-3:** As needed, signs will be posted directing vehicles to alternative park access and parking, if available, in the event construction temporarily affects parking near trailheads.	
		APM PS-4: All parks, trails, and recreational facilities that are physically impacted during construction activities and are not directly associated with the new permanent facilities, will be returned to an approximate pre-construction state, while still allowing for SDG&E to safely operate and maintain the facilities, following the completion of the Project. SDG&E will replace or repair any damaged or removed public equipment, facilities, and infrastructure in a timely manner.	
		Implement Mitigation Measures NOI-1 and NOI-2, located above.	
3.17 Transportation and Traffic – Would the project:			
Impact 3.17.a: Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.	Significant	**APM TRA-1:** If construction requires lane closures, traffic delays, or other encroachment of construction activities within public travelways, the Applicant will adhere to local traffic control regulations and establish a traffic control plan as needed to comply with local ordinances. Traffic control plans will describe signage, flaggers, or other controls to be used to regulate traffic where necessary and to maintain a safe transportation corridor during construction.	Less than Significant
		Mitigation Measure TRA-1: Coordination with North County Transit District (NCTD). SDG&E and its contractor shall: • Minimize interruptions to transit services and facilities. In the event that a temporary removal or relocation of a bus stop is necessary, coordination with NCTD shall occur to ensure that any such action is consistent with the transit operator's needs. • The applicant shall coordinate with NCTD at least 30 days in advance of right-of-way construction work to ensure that any such construction activities are consistent with maintaining the transit services' operations.	
Impact 3.17.b: Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.	No Impact	None required	No Impact
Impact 3.17.c: Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.	Less than Significant	None required	Less than Significant
Impact 3.17.d: Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	Less than Significant	None required	Less than Significant

TABLE ES-2 (CONTINUED)
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.17 Transportation and Traffic – Would the project (cont.)			
Impact 3.17.e: Result in inadequate emergency access.	Less than Significant	Implement APM TRA-1, located above **APM TRA-2:** The Applicant will coordinate with local emergency response agencies during construction within existing public roadways to allow safe passage and access by emergency vehicles and equipment.	
Impact 3.17.f: Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	Significant	Implement Mitigation Measure TRA-1, located above	Less than Significant
3.18 Tribal Cultural Resources – Would the project:			
Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is.			
Impact 3.18.a.i: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).	No Impact	None required	No Impact
Impact 3.18.a.ii: A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	Significant	Implement CUL-1 through CUL-4, located in the *Cultural Resources* section, located above.	Less than Significant
3.19 Utilities and Service Systems – Would the project:			
Impact 3.19.a: Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.	No Impact	None required	No Impact
Impact 3.19.b: Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.	No Impact	None required	No Impact

TABLE ES-2 (CONTINUED)
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.19 Utilities and Service Systems – Would the project (cont.)			
Impact 3.19.c: Not result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	No Impact	None required	No Impact
Impact 3.19.d: Generate solid waste in excess of state or local standards or in excess of the capacity of local infrastructure	Significant	**Mitigation Measure US-1: Construction and Demolition Debris Recycling Ordinances.** SDG&E and its contractors shall recycle and/or reuse 90 percent of inert materials and 70 percent of all other materials, as well as 100 percent of trees, stumps, rocks, and other vegetation. In order to document and track such diversions, the applicant shall provide the following: • Prior to construction, the Applicant shall provide a preliminary Construction and Demolition Debris Register (Preliminary Debris Register) that lists all anticipated construction and demolition solid waste streams (by weight) along with how the project will dispose/divert each waste. The Preliminary Debris Register shall also list the anticipated destination(s) (i.e., location or facility) for each waste stream. The Preliminary Register shall document how the project shall achieve the minimum waste diversion percentages. • During construction activities, the Applicant shall keep records (e.g., a log) on site documenting the disposal and/or diversion of all construction and demolition debris that leaves the project site. The Applicant shall also keep copies of all corresponding receipts or similar documentation from solid waste facility, recycling center, green waste facility, or other permitted facility. • During construction activities, the Applicant shall provide updates for solid waste diversion to the CPUC as part of the Quarterly Project Status Reports required by the Mitigation Monitoring, Reporting, and Compliance Program (MMRCP). • Following the completion of construction activities, the Applicant shall provide a Final Debris Register that documents the final construction and demolition debris totals, destinations, and diversion percentages. The Final Debris Register shall document the Project's final compliance with the minimum diversion percentages.	Less than Significant
Impact 3.19.e: Negatively impact the provision of solid waste services or impair the attainment of solid waste reduction goals.	Significant	Implement Mitigation Measure US-1, located above	Less than Significant
Impact 3.19.f: Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.	Significant	Implement Mitigation Measure US-1, located above	Less than Significant

TABLE ES-2 (CONTINUED)
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.20 Wildfire – Would the project:			
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:			
Impact 3.20.a: Substantially impair an adopted emergency response plan or emergency evacuation plan?	Less than Significant	None required	Less than Significant
Impact 3.20.b: Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.	Significant	**Mitigation Measure WIL-1: Fire Safety.** SDG&E and/or its contractors shall prepare and implement a Final Project-specific Construction Fire Prevention Plan (CFPP) to ensure the health and safety of construction workers and the public from fire-related hazards. The Final Project-Specific Construction Fire Prevention Plan shall include the provisions in the TL 6975 Construction Fire Prevention Plan provided in Appendix 4.8-B of the Proponent's Environmental Assessment (SDG&E, 2017b), as well as the requirements listed below. Prior to construction, SDG&E shall contact and consult with the San Diego Unit of CAL FIRE, the San Diego County Fire Authority, and the fire departments of the cities of Carlsbad, Escondido, San Marcos, and Vista to determine the appropriate amounts of fire equipment to be carried on the vehicles and appropriate prevention measures to be taken. SDG&E shall submit verification of its consultation with the appropriate fire departments to the CPUC Project Manager. SDG&E shall submit the CFPP to the CPUC Project Manager for approval 60 days prior to commencement of construction activities and shall make the approved Final CFPP available to all construction crew members prior to construction of the Project. The Final CFPP shall list fire safety measures including fire prevention and extinguishment procedures, as well as specific emergency response and evacuation measures that would be followed during emergency situations; examples are listed below. The Final CFPP also shall provide fire-related rules for smoking, storage and parking areas, usage of spark arrestors on construction equipment, and fire-suppression tools and equipment. The Final CFPP shall include or require, but not be limited to, the following: • SDG&E and/or its contractors shall have water tanks, water trucks, or portable water backpacks (where space or access for a water truck or water tank is limited) sited/available in the study area for fire protection. • All construction vehicles shall have fire suppression equipment. • SDG&E shall ensure that all construction workers receive training on the proper use of fire-fighting equipment and procedures to be followed in the event of a fire. • As construction may occur simultaneously at several locations, each construction site shall be equipped with fire extinguishers and fire-fighting equipment sufficient to extinguish small fires. • SDG&E shall instruct construction personnel to park vehicles within roads, road shoulders, graveled areas, and/or cleared areas (i.e., away from dry vegetation) wherever such surfaces are present at the construction site. • SDG&E and its contractor shall cease work during Red Flag Warning events in areas where vegetation would be susceptible to accidental ignition by Project activities (such as welding or use of equipment that could create a spark).	Less than Significant

TABLE ES-2 (CONTINUED)
ENVIRONMENTAL IMPACTS WITH IMPLEMENTATION OF APPLICANT PROPOSED MEASURES AND MITIGATION MEASURES

Environmental Impact	Initial Significance Finding	Applicant Proposed Measures (APM)[a] and Mitigation Measures (MM) Identified in the Draft IS/MND	Significance after APMs and Mitigation
3.20 Wildfire – Would the project (cont.)			
Impact 3.20.b (cont.)		• At each construction site, after construction has been completed for the day, the project contractor and/or the SDG&E Contract Administrator will perform visual inspections to ensure that all ignition risks are minimized or eliminated before leaving the work site. • Successful implementation of Mitigation Measure WIL-1: Fire Safety would be demonstrated by the development of a Final CFPP in consultation with local fire authorities which documented and submitted to the CPUC for final approval. Additionally, successful implementation of Mitigation Measure WIL-1 would require that SDG&E and its contractor comply with all components of the Final CFPP, that ignition from project construction activities is promptly reported to the fire department(s) with jurisdiction, and that when it is safe to do so, any project-caused ignition is suppressed immediately.	
Impact 3.20.c: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.	Less than Significant	None required	Less than Significant
Impact 3.20.d: Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes	Significant	Implement Mitigation Measure WIL-1, located above	Less than Significant

NOTES:
[a] Not all Applicant Proposed Measures (APMs) are included in this table. Only those APMs which were found to reduce adequately reduce an impact to a less-than-significant level are included.

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CHAPTER 1
Introduction

On November 15, 2017 San Diego Gas and Electric Company (SDG&E) submitted a Permit to Construct (PTC) Application (A.17-11-010) to the California Public Utilities Commission (CPUC) for the SDG&E San Marcos to Escondido Tie Line (TL) 6975 69 kV Project (Project). Upon review of Proponent's Environmental Assessment (PEA), the CPUC's Energy Division notified SDG&E that its PTC application was complete on March 16, 2018. SDG&E proposes to install new overhead single-circuit electric power line structures, to rebuild existing structures from single circuit to double circuit, and to reconductor and re-energize existing conductors, as described in further detail in Chapter 2, *Project Description*. Pursuant to the requirements of the California Environmental Quality Act (CEQA), the CEQA Guidelines, and CPUC General Order (GO) 131-D, the CPUC has prepared an Initial Study (IS) to evaluate potential environmental impacts of the Project.

If, following preparation of an IS, there is no substantial evidence of significant environmental effects, or if potential significant effects can be reduced to a point where clearly no significant effect on the environment would occur, a Negative Declaration shall be prepared (Pub. Res. Code §21080(c)(1)). If an IS prepared for a project indicates that significant environmental effect(s) that cannot be mitigated to a less than significant level could occur, the CPUC shall prepare an Environmental Impact Report (EIR).

A Mitigated Negative Declaration (MND) may be prepared when "the initial study has identified potentially significant effects on the environment, but: (1) revisions in the project plans or proposals made by, or agreed to by, the applicant would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur, and (2) there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment" (Pub. Res. Code §21064.5). The CPUC has determined, based on the results of the IS, that the appropriate type of CEQA documentation for this Project is an MND.

This IS/MND identifies the potential environmental effects of the Project, evaluates their level of significance, and identifies the revisions in the Project agreed to by SDG&E that would avoid the effects or mitigate them below the level of significance. Specifics of the Project described and analyzed in this Draft IS/MND are based on SDG&E's Application for a PTC, the Proponent's Environmental Assessment (PEA) (SDG&E, 2017), SDG&E's responses to deficiency letters and data requests by the CEQA team (SDG&E, 2018a-g). This information is intended to describe construction, operations, and maintenance requirements and activities to inform an analysis of the Project's environmental effects.

This Chapter evaluates the Project using the Appendix G checklist questions set forth in the 2018 Amendments and Additions to the State CEQA Guidelines adopted by the Natural Resources Agency in November 2018, with one exception: The Draft IS/MND does not rely on the revised questions in the Transportation category of the updated Guidelines for the reasons addressed more specifically in Section 3.17, *Transportation and Traffic.*

The proposed Updated Guidelines Appendix G checklist also adds two new sections: (1) Energy and (2) Wildfire. The Draft IS/MND includes these two sections in its analysis of the Project's environmental effects.

For the purposes of this Chapter and the Draft IS/MND, each resource-specific study area used for each environmental resource analysis is summarized and provided below in **Table 1-1**, Resource-Specific Study Area.

TABLE 1-1
RESOURCE-SPECIFIC STUDY AREA

Resource Section	Resource-Specific Study Area Used in Each Section Analysis
3.1 Aesthetics	This resource-specific study area includes the landscapes directly affected by the Project and the surrounding areas from which the Project would be visible.
3.2 Agriculture and Forestry Resources	This resource-specific study area is defined as the footprint of all components of the Project, including all areas of temporary and/or permanent ground disturbance including in the SDG&E right-of-way (ROW) and the existing access roads.
3.3 Air Quality	The regional study area for the analysis of impacts related to implementation of an air quality plan and violation of air quality standards is the San Diego Air Basin (Air Basin), which is contiguous with the political boundaries of the County of San Diego, encompassing 4,260 square miles. For impacts related to exposing sensitive receptors to substantial pollutant concentrations and emissions of dust, odors, and other potential nuisance emissions, the local study area consists of areas surrounding Project work sites where emissions would be most concentrated, and the analysis focuses on the nearest receptors.
3.4 Biological Resources	This resource-specific biological study area (BSA) is defined as the existing environment for wildlife, botanical, and wetland resources within and adjacent to the Project site, as well as adjacent habitats and habitat suitability considered for biological resources within an approximate 500-foot buffer from the limits of the Project area that could reasonably be affected by Project construction, operation, and maintenance activities.
3.5 Cultural Resources	This resource-specific study area includes a 150-foot buffer on either side of the center line of the entire Project alignment, as well as including all Project components, access roads, staging yards, substation locations, and pole replacement sites.
3.6 Energy	The potential impacts are analyzed based on an evaluation of whether construction and operation energy use estimates for the Project would be considered excessive, wasteful, or inefficient. For the purposes of this analysis, the SDG&E service area and California region were used as a basis for energy consumption relative to the energy consumed from the Project.
3.7 Geology, Soils, Seismicity, and Paleontological Resources	The resource-specific study area for impacts related to geology, soils, and seismicity is defined as the Project footprint and vicinity, including all areas of temporary and/or permanent ground disturbance. For paleontological resources, the study area includes all areas within 1 mile of the immediate Project alignment, and in particular, the Santiago Formation.
3.8 Greenhouse Gases	For the purposes of this analysis, the significance threshold relevant to Project-specific emissions is distinct to the County of San Diego, which is contiguous with the San Diego Air Basin boundaries, and is used as the Project specific study area.
3.9 Hazardous Material	This resource-specific study area is defined as the area comprising all component of the Project as well as areas that would be subject to either temporary or permanent disturbance as a result of the Project or used for the transportation of materials, equipment, and workers. Regulatory databases were used to search for sites within 0.25 mile of the Project.

TABLE 1-1 (CONTINUED)
RESOURCE-SPECIFIC STUDY AREA

Resource Section	Resource-Specific "Study Area" Used in Each Section Analysis
3.10 Hydrology	This resource-specific study area includes the Project site and vicinity, including the footprint of all areas of Project-related temporary and/or permanent ground disturbance, as well as water features and drainages potentially influenced by the Project.
3.11 Land Use and Planning	This resource-specific study area is defined as the footprint of all Project components, including all areas of temporary and/or permanent ground disturbance and the surrounding communities within which the Project would be constructed, operated, and maintained.
3.12 Mineral Resources	This resource-specific study area is defined as the footprint of all components of the Project including all areas of temporary and/or permanent ground disturbance.
3.13 Noise	This resource-specific study area is defined as the area surrounding the Project where Project construction and operational noise may be heard.
3.14 Population and Housing	This resource-specific study area is defined as the footprint of all components of the Project, including all areas of temporary and/or permanent ground disturbance and the surrounding communities within which the Project would be constructed and operated.
3.15 Public Services	This resource-specific study area is defined as public service facilities within 1 mile of the footprint of Project components including all areas of temporary and permanent ground disturbance, as well as Project staging areas.
3.16 Recreation	This resource-specific study area is defined as the footprint of all Project components including all areas of temporary and/or permanent ground disturbance as well as neighboring parks, open space, and other lands used for recreational purposes within 0.5 mile of the Project alignment.
3.17 Transportation and Traffic	This resource-specific study area is defined for each of the three segments as follows: • ***Segment 1 Rebuild*****:** this 1.8-mile segment mostly follows West San Marcos Boulevard in the City of San Marcos, beginning at Discovery Street/La Sombra Drive in the east and the San Marcos/ Carlsbad city limit to the west, where West San Marcos Boulevard turns into Palomar Airport Road; • ***Segment 2 New Build*****:** beginning at the western terminus of Segment 1, Segment 2 is a 2.8- mile segment in the City of San Marcos bounded by the San Marcos/Carlsbad city limit to the west, Palomar Airport Road to the north, and San Elijo Road to the south and east; • ***Segment 3 Reconductoring/Re-energizing*****:** this 7.4-mile segment runs from the City of San Marcos in the west to the City of Escondido to the east, with much of the alignment running across unincorporated San Diego County. Beginning at the southern terminus of Segment 2, Segment 3 is bounded by San Elijo and Elfin Forest roads to the south and west, West Mission Road to the north, and Citracado Parkway and Enterprise Street to the east.
3.18 Tribal Cultural Resources	This resource-specific study area includes a 150-foot buffer on either side of the center line of the entire Project alignment, including all Project components, access roads, staging yards, substation locations, pole replacement sites, and all areas of temporary and/or permanent ground disturbance.
3.19 Utilities	This resource-specific study area includes the Project site and vicinity, including the footprint of all areas of Project-related temporary and/or permanent ground disturbance.
3.20 Wildfires	This resource-specific study area is defined as the footprint of all components of the Project, including all areas of temporary and/or permanent ground disturbance included in the SDG&E right-of-way (ROW), existing access roads**,** and areas where housing and structures are located downstream or downslope of the Project.

1.1 CEQA Process

The CPUC determined that the Project, with proposed mitigation measures incorporated, would not have a significant adverse effect on the environment. Therefore, this Draft IS/MND has been prepared.

On April 1, 2019, the CPUC filed a Notice of Completion (NOC) with the Governor's Office of Planning and Research, State Clearinghouse, published a Notice of Intent (NOI) to Adopt a Mitigated Negative Declaration, and released this Draft IS/MND for a 45-day public review period. The Draft IS/MND was distributed to federal, State, and local agency representatives, and the NOI was distributed to property owners within 600 feet of the Project and to other interested organizations and individuals, as outlined in Appendix B of this IS/Draft MND. Legal notices will appear on April 1 and 8, 2019 in the *San Diego Union Tribune* and on April 4 and 11, 2019 in the *Times-Advocate* announcing the availability of the Draft IS/MND for public review in compliance with CEQA.

1.2 Public Review Process

On April 1, 2019, the CPUC mailed a notice to relevant agencies, organizations, and individuals residing in the Project area, announcing that the Draft IS/MND was available for public review (recipients are identified in Appendix B). The CPUC established a Project voice mail phone number (619) 719-4207, e-mail address (TL6975SanMarcos@esassoc.com), and Project web site (http://www.cpuc.ca.gov/environment/info/esa/TL6975/index.html) to enable the public to ask questions, provide comments, and obtain additional information about the Project and the analysis in the Draft IS/MND.

In accordance with Section 15105(b) of the CEQA Guidelines, the public review and comment period begins on April 1, 2019 and ends at 5 p.m. on May 15, 2019. Copies of all written comments on the Draft IS/MND that are received during this comment period will be included in the Final IS/MND. In order to address the concerns of the public, the CPUC will hold two public meetings on April 30, 2019 to give any agencies, organizations, and individuals the opportunity to address any concerns or questions on the Draft IS/MND in a public setting. The first meeting will occur in the afternoon from 1 p.m. to 3 p.m. at the San Elijo Recreation Center in the Terrace Hall, located at 1105 Elfin Forest Road in San Marcos. The second meeting will occur in the evening from 6 p.m. to 8 p.m. at the San Marcos Community Center in the Main Hall, located at 3 Civic Center Drive in San Marcos.

1.3 CPUC Jurisdiction

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Project. Pursuant to CPUC General Order No. 131-D, Section XIV.B:

> "*Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters.*"

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' land use regulations are not applicable to the Project as local jurisdictions do not have jurisdiction over the Project. Accordingly, the discussion of local regulations in this IS/MND is provided for informational purposes only.

1.4 References

San Diego Gas & Electric Company (SDG&E), 2017. SDG&E Proponents Environmental Assessment for the San Marcos to Escondido TL6975 69kV Project (A. 17. 011.010) Volumes I and II.

SDG&E, 2018a. SDG&E TL 6975 San Marcos to Escondido Project (A.17-11-010), SDG&E Response to Deficiency Letter #1, dated January 12, 2018.

SDG&E, 2018b. SDG&E TL 6975 San Marcos to Escondido Project (A.17-11-010), SDG&E Response to Deficiency Letter #2, dated February 28, 2018.

SDG&E, 2018c. SDG&E TL 6975 San Marcos to Escondido Project (A.17-11-010), SDG&E Response to Data Request #1, dated May 15, 2018.

SDG&E, 2018d. SDG&E TL 6975 San Marcos to Escondido Project (A.17-11-010), SDG&E Response to Data Request #2, dated June 1, 2018

SDG&E, 2018e. SDG&E TL 6975 San Marcos to Escondido Project (A.17-11-010), SDG&E Response to Informal Data Request #3(a), dated June 8, 2018.

SDG&E, 2018f. SDG&E TL 6975 San Marcos to Escondido Project (A.17-11-010), SDG&E Response to Data Request #3, dated July 16, 2018.

SDG&E, 2018g. SDG&E TL 6975 San Marcos to Escondido Project (A.17-11-010), SDG&E Response to Data Request #4, dated August 7, 2018.

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CHAPTER 2
Project Description

2.1 Introduction

San Diego Gas and Electric Company (SDG&E) in its California Public Utilities Commission (CPUC) application (A.17-11-010), filed on November 15, 2017, requested a Permit to Construct (PTC) for the SDG&E San Marcos to Escondido Tie Line[1] (TL) 6975 69kV Project (Project) in northern San Diego County, California. The application includes the Proponent's Environmental Assessment (PEA) prepared pursuant to Rule 2.4 of the CPUC's Rules of Practice and Procedure. Under CPUC General Order 131-D, approval of this Project must comply with the California Environmental Quality Act (CEQA).

As explained in PEA Section 2, *Project Purpose and Need*, SDG&E proposes this Project to address existing North American Electric Reliability Corporation (NERC) reliability criteria violations by eliminating existing congestion and improving reliability (SDG&E, 2017). In serving the San Marcos/Escondido area's present electrical demands, the existing electrical tie lines and substations serving the area currently experience congestion. This congestion compromises the system's reliability, particularly during peak use. Based on the growth projected by area municipalities (as contemplated in their General Plans) and the San Diego Association of Governments (see Section 3.14, *Population and Housing*), as well as the planned growth of renewable energy generation in the Imperial Valley, this situation is anticipated to further deteriorate.

To alleviate the existing NERC violations, service projected growth, and improve reliability in the San Marcos/Escondido area, the Project includes constructing new overhead single circuit[2] power line structures, rebuilding existing structures, and reconductoring and re-energizing approximately 12 miles of a 69-kilovolt (kV) overhead electric power line from the existing San Marcos Substation to the existing Escondido Substation. The Project also includes acquisition of 1.2 acres of new right-of-way (ROW) adjacent to existing ROW. Project components are described in detail in Section 2.4, *Project Components*.

1 A tie line is an electrical line which connects two service areas. In the case of this project, Tie Line 6975 would "tie" together the areas served by the San Marcos and Escondido substations.

2 In terms of transmission, a single electrical circuit consists of a set of three conductors, or wires, which deliver electricity within the power grid. Accordingly, a double circuit consists of two sets of conductors (i.e., two sets of three wires) sharing common transmission poles.

2.2 Project Location and Overview

A summary of the Project components is presented in **Table 2-1**. For planning and discussion purposes, the Project is characterized in three segments, each defined by location and the type of work proposed. Each segment is described below.

As shown in **Figure 2-1**, the Project would primarily be located in northern San Diego County in the cities of San Marcos and Escondido, as well as within smaller portions of the cities of Carlsbad and Vista. Substantial portions of the Project would also traverse adjacent unincorporated areas of San Diego County, including the community of Lake San Marcos. The Project also may include the use of two existing auxiliary staging yards in the City of San Diego during construction. The proposed power line would be constructed and/or rebuilt primarily within SDG&E right-of-way (ROW).

The Project alignment would originate at SDG&E's existing San Marcos Substation in the west and terminate at SDG&E's existing Escondido Substation in the east (see **Figure 2-2**). The TL 6975 Power Line Mapbook developed by SDG&E is included as Appendix A (SDG&E, 2017). The mapbook figures present Project details including – but not limited to – pole numbers, new pole locations, pole removals, pole types, ROW, etc. The key map for Appendix A is provided here at **Figure 2-3**.

Each of the three Project segments is shown individually in **Figures 2-4** to **2-6b**, with additional detail on key Project components provided in Section 2.4, *Project Components*.

2.2.1 Segment 1 Rebuild

Segment 1 is shown in **Figure 2-4** and in greater detail in Appendix A, Figures A-1 to A-7. Approximately 1.8 miles of the existing single-circuit, 69 kV Tie Line 680C would be rebuilt as a double-circuit 69 kV line, from San Marcos Substation to approximately 730 feet west of the intersection of West San Marcos Boulevard/Palomar Airport Road and White Sands Drive/Business Park Drive in the City of Carlsbad. This would include replacing all of the existing wood poles that are 20.5 to 83.5 feet in height with galvanized steel poles ranging from 43.0 to 101.5 feet in height; replacing all existing porcelain insulators with polymer insulators; and reconductoring the existing 12 kV distribution line (SDG&E, 2018c). A new 69 kV line would be strung on these new poles to form a double circuit with existing Tie Line 680C. Segment 1 would require slightly over 1.2 acres of new ROW to widen the existing ROW. This new ROW is discussed in greater detail in Section 2.4.3, *Right-of-Way Requirements*.

Work proposed at the San Marcos Substation would include installation of a 69 kV sulfur hexafluoride (SF_6) circuit breaker and two 69 kV 2,000-amp disconnects, seven piers, and an A-frame[3] to accommodate the Project. This work would be contained within the confines of the substation, which is bounded on all sides by single-family residential development.

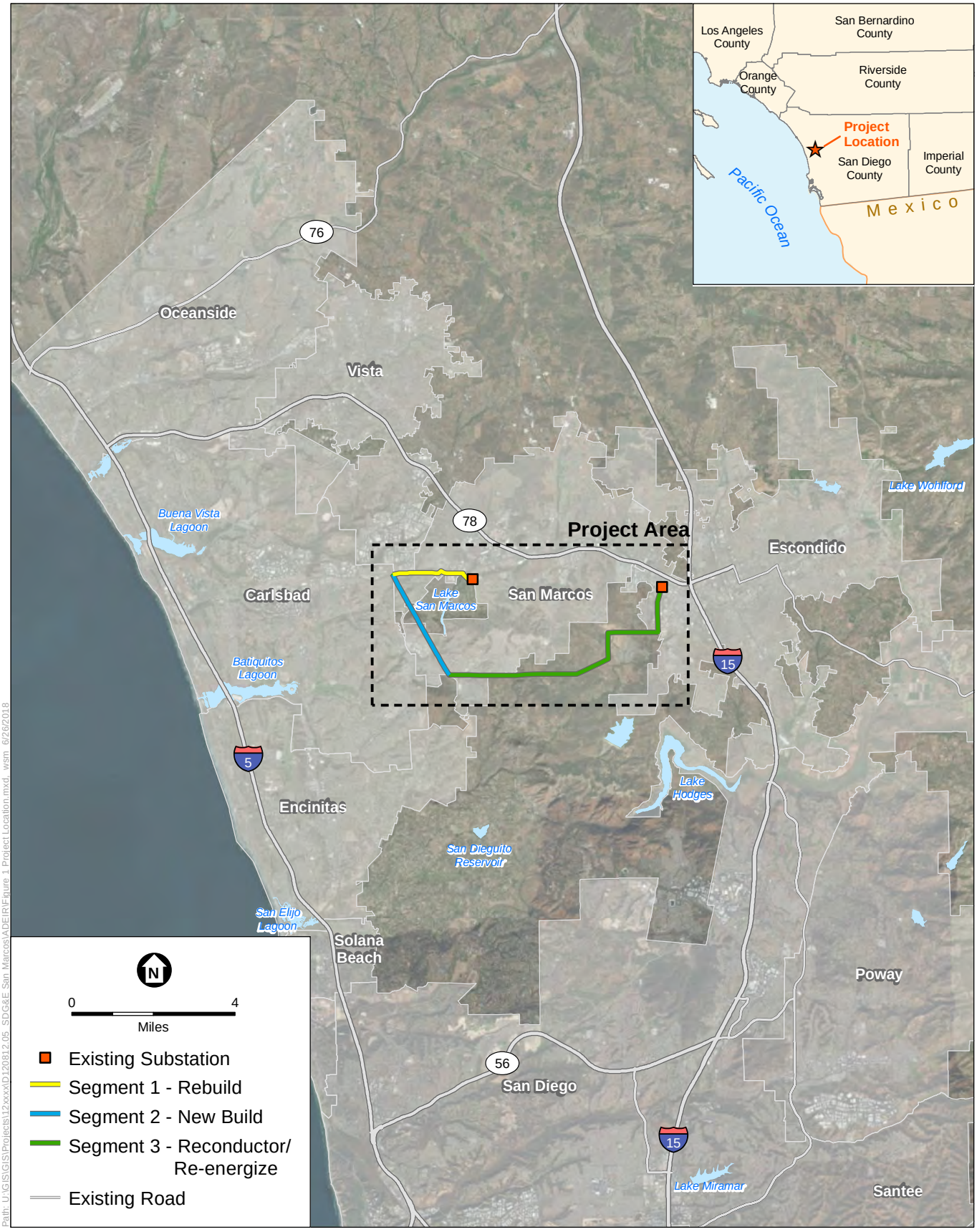
[3] An A-frame is a structure used to terminate a transmission line and support the line's connection to substation apparatus.

TABLE 2-1
PROJECT SUMMARY

Segment/Substation	Length (miles)	Description of Work
1 – Rebuild	1.8	• Rebuild TL 680C 69 kV circuit • Add TL 6975 to create a double 69 kV circuit • Replace wooden poles with steel poles • Replace porcelain insulators with polymer insulators • Reconductor underbuilt distribution line • Require 1.2 acres of additional ROW • Work to occur from San Marcos Substation, generally westward along Discovery Street and West San Marcos Boulevard/Palomar Airport Road, to the SDG&E TL 13811/13825 corridor west of White Sands Drive
2 – New Build	2.8	• Build TL 6975 single 69 kV circuit • Overhead power line on steel poles • Parallel to, and 30 feet offset east of, existing 13811/13825 138 kV power line • Work to occur within SDG&E ROW from Palomar Airport Road southeastward to Meadowlark Junction near San Elijo and Hidden Canyon roads
3 – Reconductoring/ Re-energizing	7.4	• New power line on existing steel lattice towers • Reconductor existing de-energized line on north side of towers from Meadowlark Junction to Harmony Grove Road • Replace porcelain insulators with polymer insulators • Re-energize existing line from Harmony Grove Road to Escondido Substation • Work to occur from Meadowlark Junction, generally eastward over land and north along Citracado Parkway, to the Escondido Substation
San Marcos Substation	N/A	• Install concrete circuit breaker pad • Install circuit breaker and 2 disconnects • Install 7 piers • Install A-frame • Install control and protection relays in existing control shelter
Escondido Substation	N/A	• Transfer existing conductor from 138 kV to 69 kV rack • Rearrange existing 69 kV circuits to accommodate new circuit • Replace existing oil circuit breaker with a new gas circuit breaker • Reconstruct existing circuit breaker pad • Install additional circuit breaker and disconnects • Remove three wooden poles • Install new steel poles and guys/anchors

NOTES: TL = Tie Line
ROW = Right-of-Way

SOURCE: SDG&E, 2017

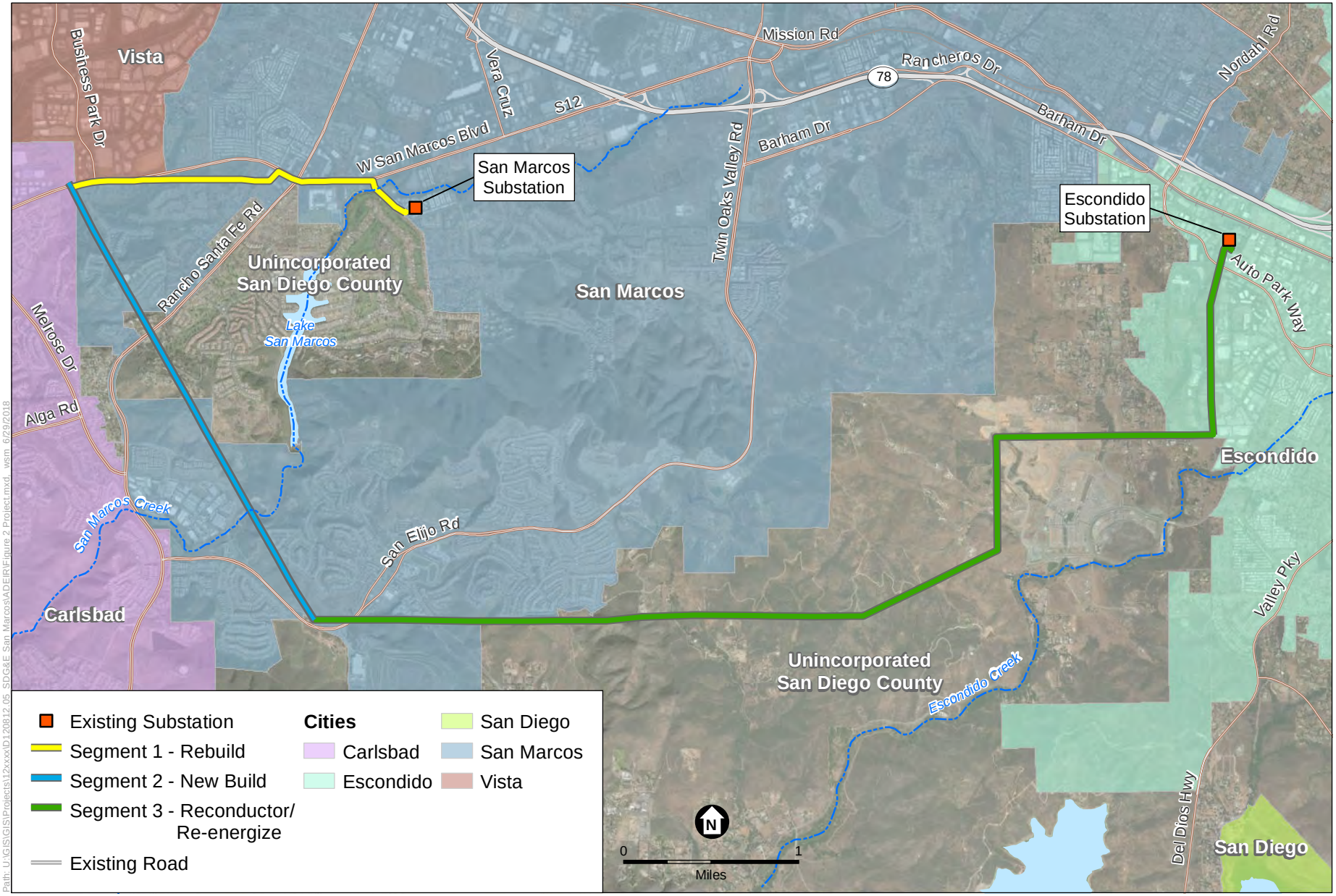


Path: U:\GIS\GIS\Projects\12xxxx\D120812 05_SDG&E San Marcos\ADEIR\Figure 1 Project Location.mxd wsm 6/26/2018

SOURCE: SDGE, 2018

TL 6975 San Marcos to Escondido Project

Figure 2-1
Regional Location



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SOURCE: SDGE, 2018

TL 6975 San Marcos to Escondido Project

Figure 2-2
Project Location

ESA

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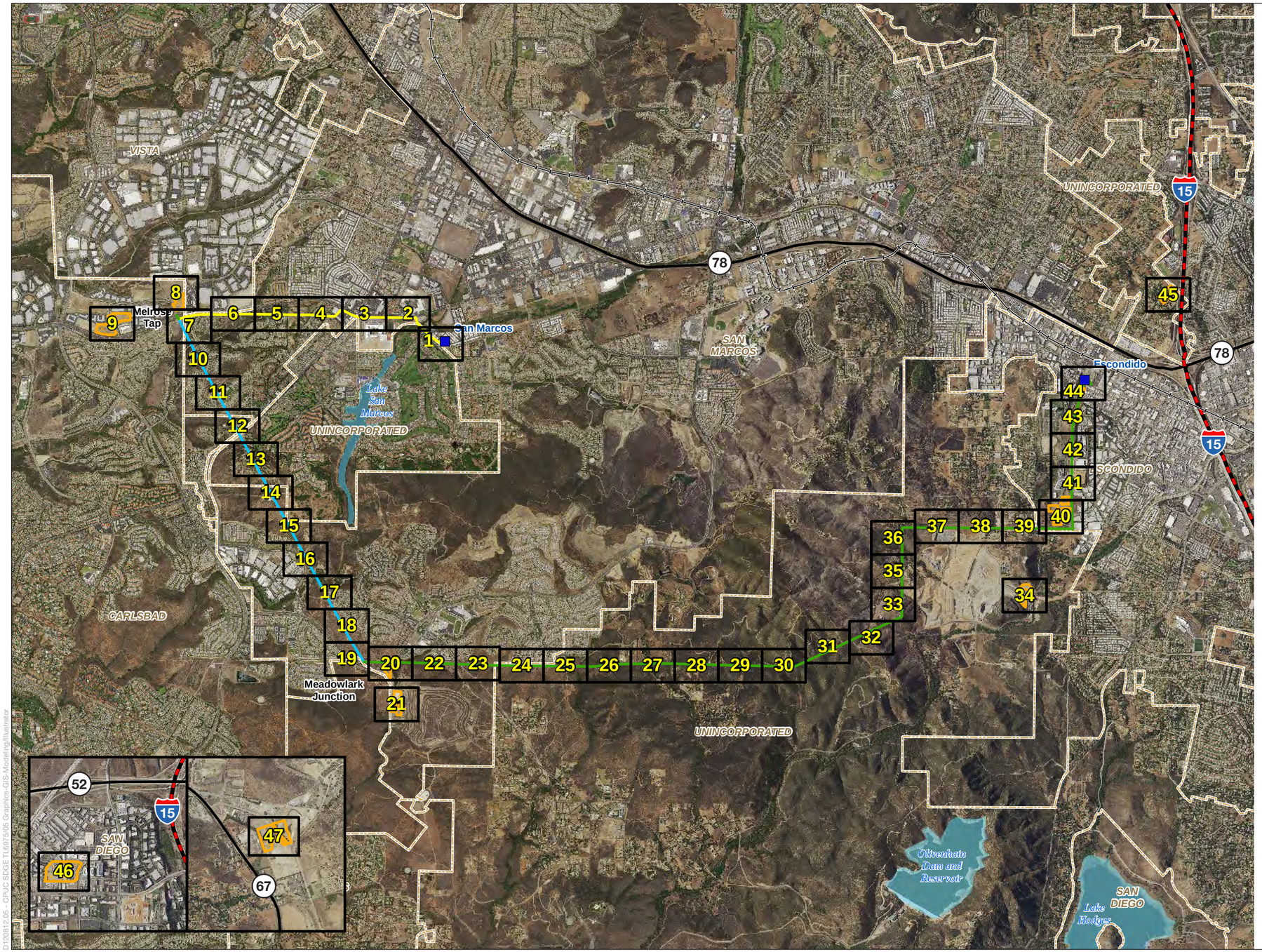

Legend

Project Alignment

- Segment 1 - Rebuild
- Segment 2 - New Build
- Segment 3 - Reconductor

Project Features

- Staging Yard

General Features

- Existing Substation
- Interstate
- State Highway
- Railroad
- City Boundary
- County Boundary
- Waterbody
- Mapbook Page

N

0 1,000 2,000 3,000 4,000 5,000

Feet

D120812.05 - CPUC SDGE TL6975/05 Graphics-GIS-Modeling/Illustrator

SOURCE: SDGE

TL 6975 San Marcos to Escondido Project

Figure 2-3
Project Alignment Key Map

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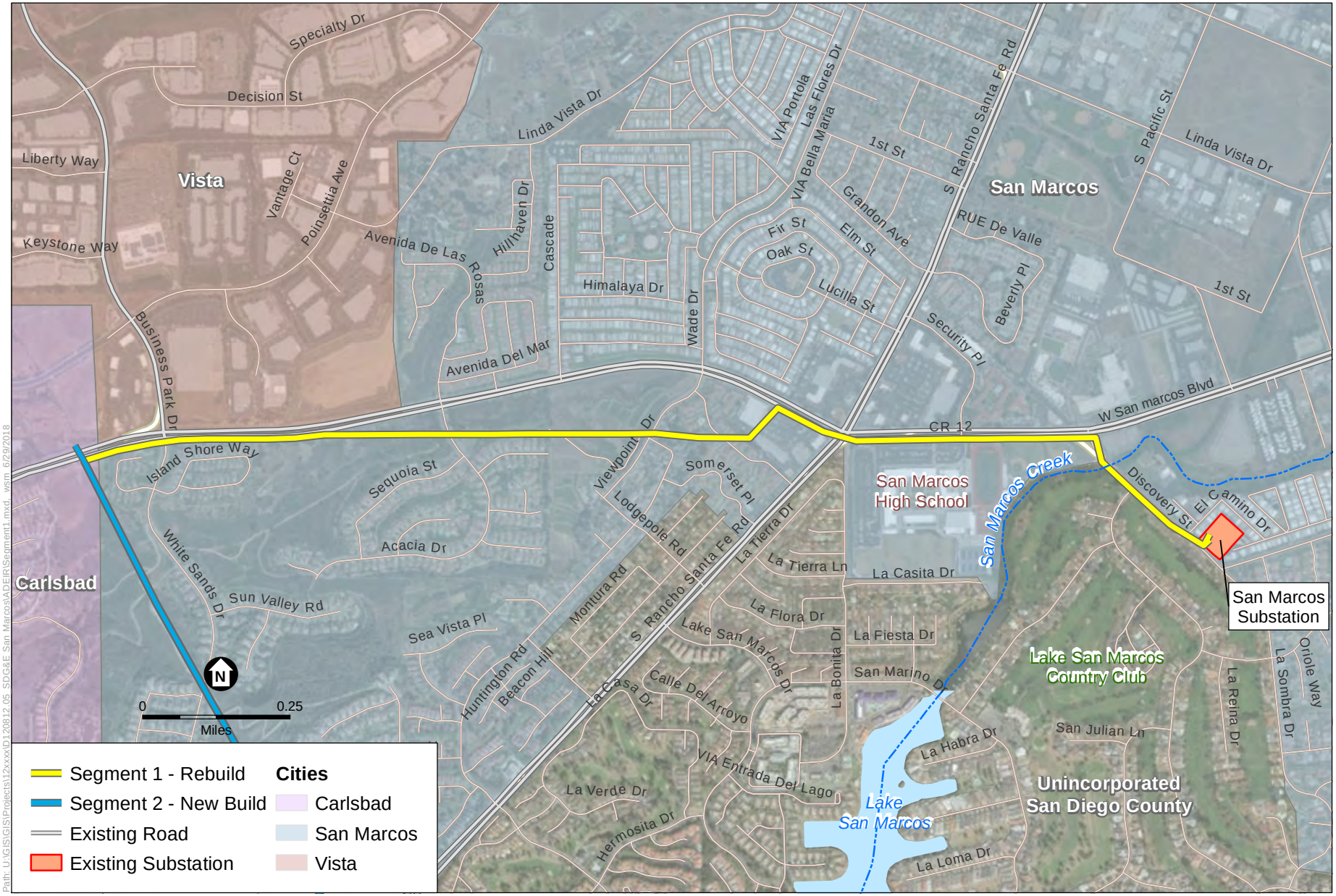


SOURCE: SDGE, 2018

TL 6975 San Marcos to Escondido Project

Figure 2-4
Segment 1

Heading west out of the San Marcos Substation, the tie line alignment includes the residential development along the west side of Discovery Street north to West San Marcos Boulevard. Just south of San Marcos Boulevard, the alignment passes the St. Mark Golf Course on the west and the Valley Christian School on the east. At West San Marcos Boulevard, the alignment heads west on the south side of the street. It runs along the frontage of San Marcos High School to South Rancho Santa Fe Road. Office buildings, an apartment complex, and a shopping center are opposite the high school on the north side of the street. The alignment continues west, leaves the street and traverses south across the San Marcos Plaza shopping center parking lot and resumes a westward track through a multi-family and single-family neighborhood. West of Viewpoint Drive, it crosses a nursery and then proceeds along the north side of a single-family neighborhood to Acacia Drive. West from here, the alignment crosses an undeveloped area and continues along the south side of West San Marcos Boulevard midway between Acacia Drive and White Sands Drive. From White Sands Drive, it continues west to the western terminus of Segment 1.

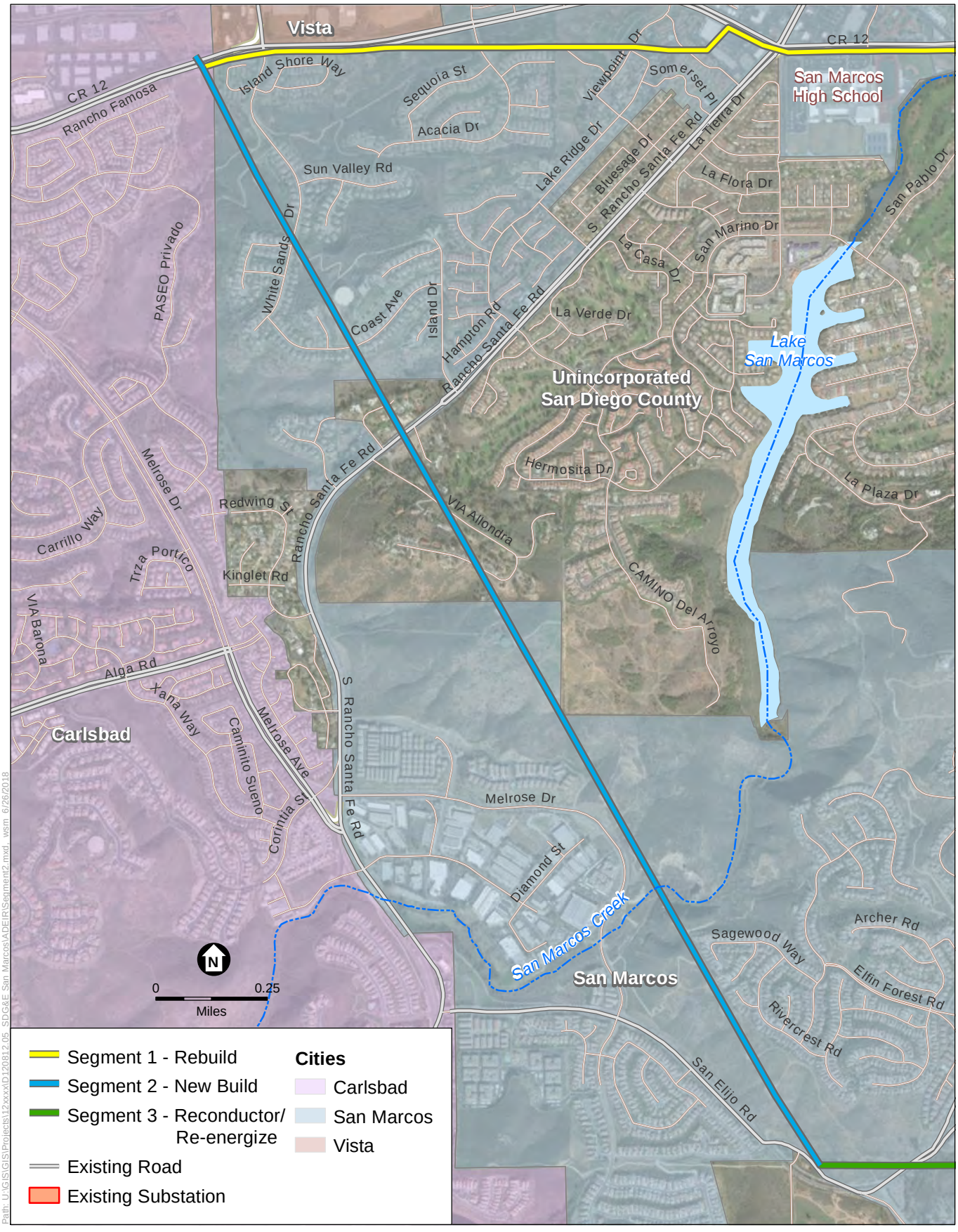
2.2.2 Segment 2 New Build

Segment 2 is shown on **Figure 2-5** and in greater detail in Appendix A, Figures A-7 and A-10 to A-19. This segment of the Project would include the construction of approximately 2.8 miles of new single-circuit 69kV overhead power line on new steel poles within the existing SDG&E ROW. Segment 2 would be located adjacent to SDG&E's existing 138 kV power line (Tie Line 13811/13825) southeast to Meadowlark Junction along San Elijo Road. The new segment would be constructed parallel to, and approximately 30 feet east of, the centerline of the existing line. The new steel poles would be installed at the same spacing as the structures supporting the existing 138 kV power line. To accommodate the Project at Meadowlark Junction, an existing 12 kV distribution line would be reconfigured on existing equipment within the Project boundary (SDG&E, 2017).

From north to south, Segment 2 would include the single-family residential area between Palomar Airport Road and White Sands Drive. After passing through the Via Allondra/Via Del Corvo neighborhood immediately south of White Sands Drive, the alignment would proceed over hilly undeveloped terrain to Meadowlark Junction. Approximately 2,500 feet north of this junction, the proposed alignment would skirt the west side of the single-family neighborhood along Sagewood Way, Copper Court, Brookside Court, and Rivercrest Road. While undeveloped, this area contains trails and maintained plantings.

2.2.3 Segment 3 Reconductoring/Re-energizing

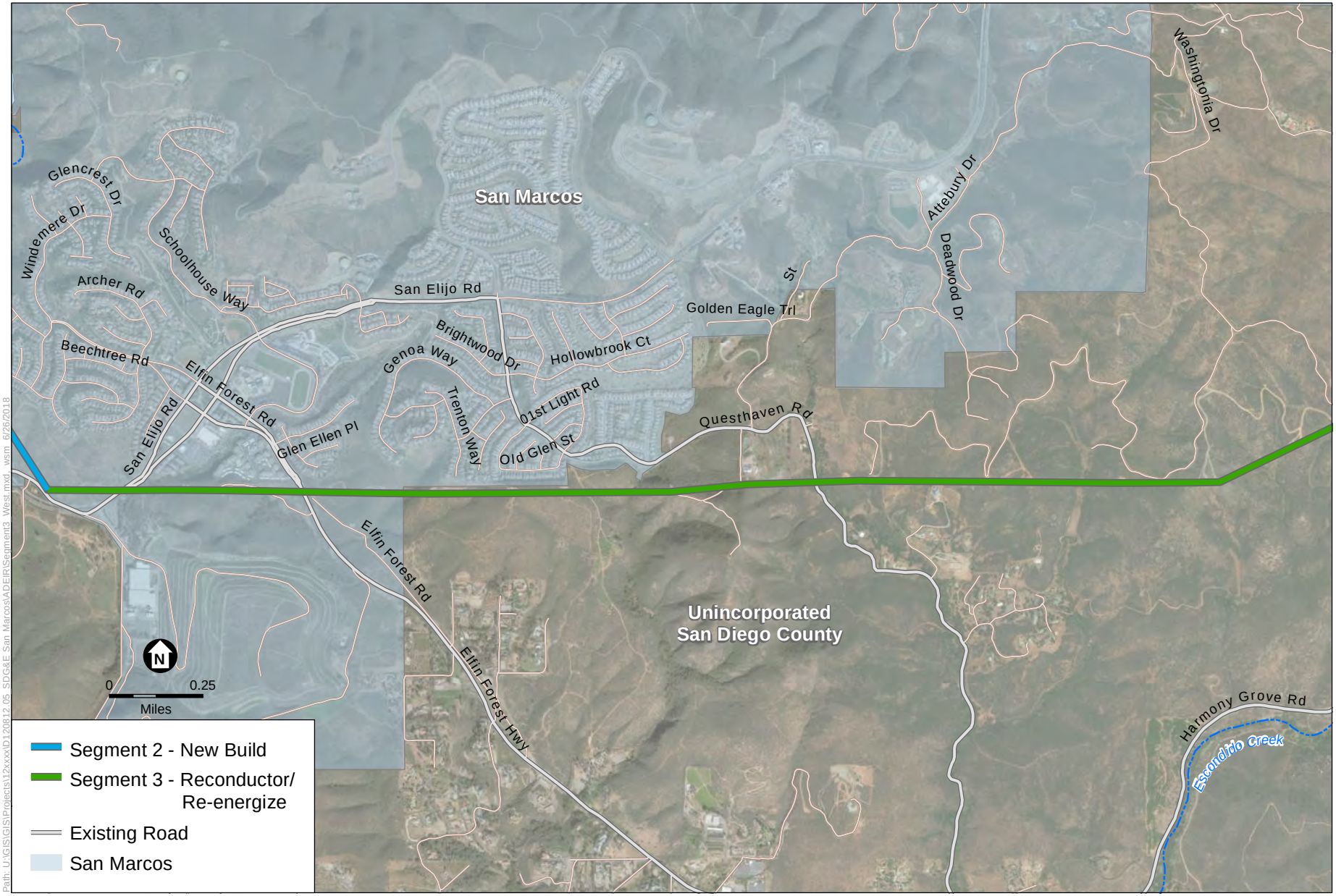
Segment 3 is shown on **Figures 2-6a** and **2-6b** and in greater detail in Appendix A, Figures A-19 to A-20, A-22 to A-33, and A-35 to A-44. The longest segment in the Project, Segment 3 would involve the reconductoring and re-energizing of approximately 7.4 miles of existing power line from Meadowlark Junction east and north to the Escondido Substation. The existing copper conductor along this alignment would be removed and replaced with new conductors. The existing porcelain insulators would be replaced with polymer insulators. Construction at the Escondido Substation would include the rearrangement of existing circuit racks to accommodate the Project (SDG&E, 2017).



SOURCE: SDGE, 2018

TL 6975 San Marcos to Escondido Project

Figure 2-5
Segment 2



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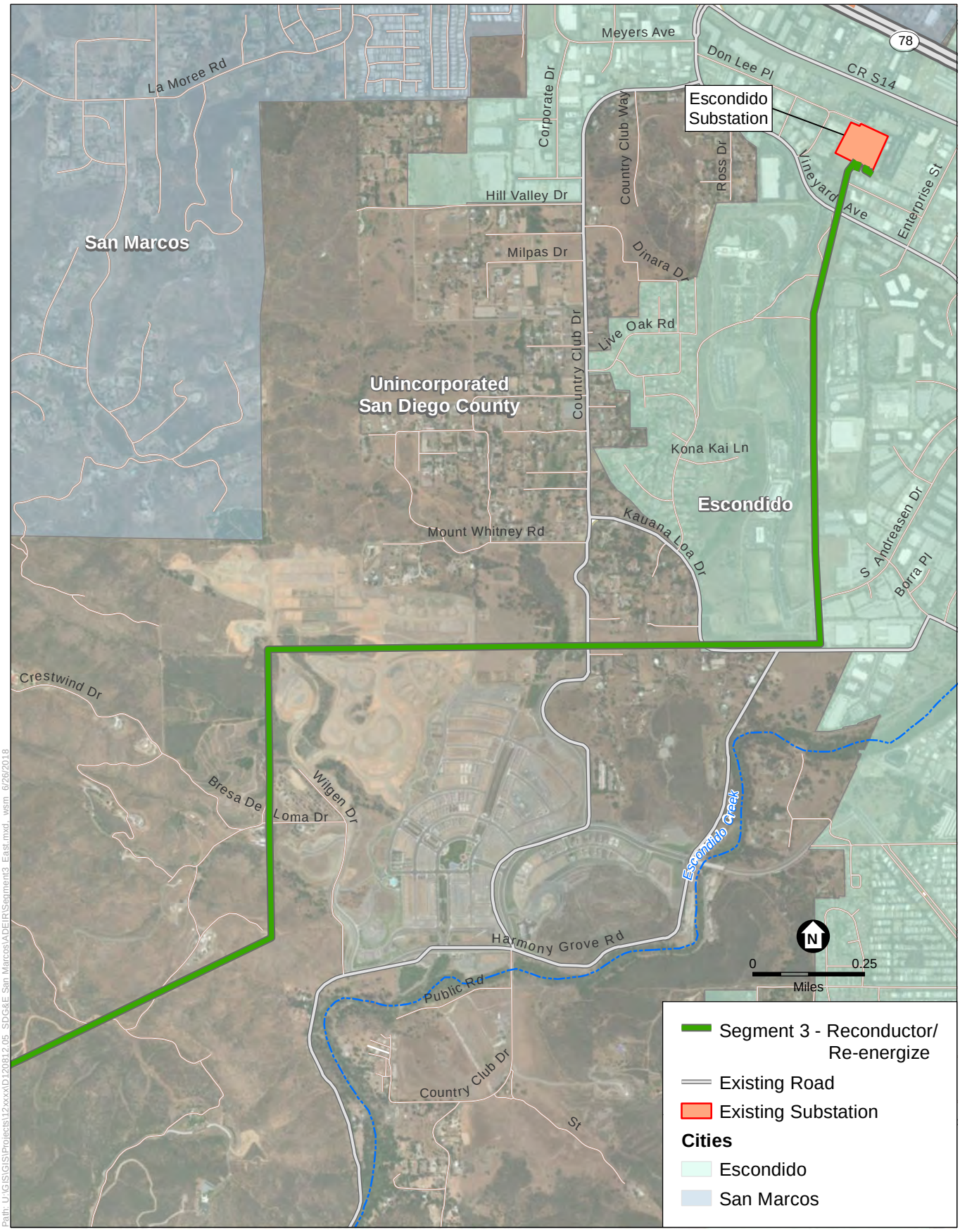
SOURCE: SDGE, 2018

TL 6975 San Marcos to Escondido Project

Figure 2-6a
Segment 3 - West

ESA



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SOURCE: SDGE, 2018

TL 6975 San Marcos to Escondido Project

Figure 2-6b
Segment 3 - East

For the most part, Segment 3 includes hilly, undeveloped terrain. East of San Elijo Road, the alignment skirts to the south of residential neighborhoods off of Elfin Forest and Questhaven roads in the San Elijo Hills area of San Marcos. To the east approaching the Hidden Villa Ranch development in Escondido, the alignment continues north and then east around this development parcel. As it comes in eastward along the north side of Kauana Loa Drive/Harmony Grove Road, it turns north parallel to the east of Citracado Parkway. At Auto Park Way, the alignment continues north, entering SDG&E's Northeast Operations Center and terminating in the Escondido Substation.

2.3 Existing System

2.3.1 Existing Substations

San Marcos Substation

The existing San Marcos Substation is located at 1260 Discovery Street south of West San Marcos Boulevard in the City of San Marcos (see **Figure 2-7**). The substation is currently accessed by two power lines – Tie Lines 680C and 684. The Project would install a third power line (Tie Line 6975) at the substation.

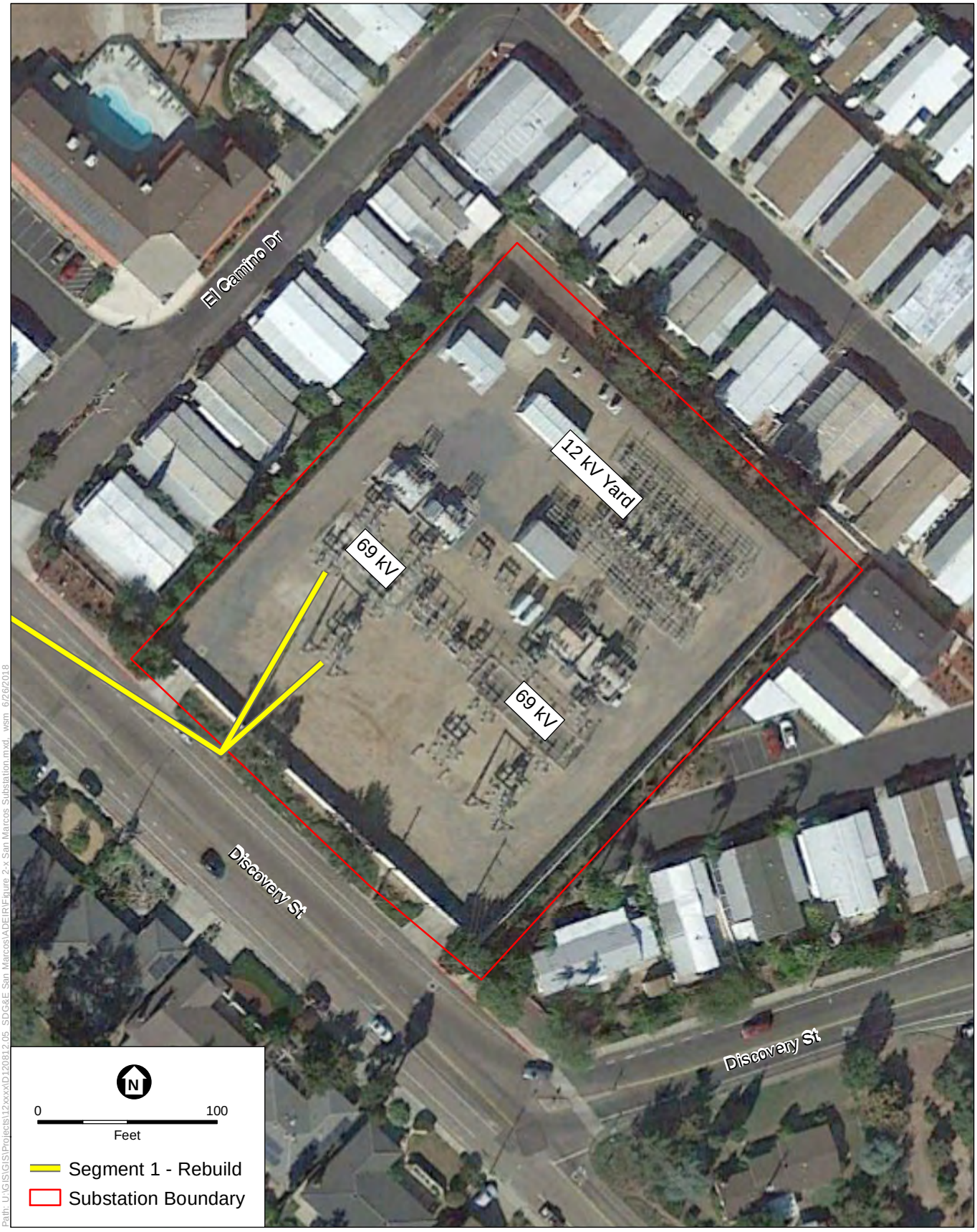
Escondido Substation

The existing Escondido Substation is located southwest of the Highway 78/Interstate 15 interchange and just north of Auto Park Way in the City of Escondido (see **Figure 2-8**). This substation currently has 13 power lines accessing the substation; the Project would add a 14th power line here.

2.3.2 Existing Transmission Alignment

As noted above, portions of the Project would be in the cities of Carlsbad, Escondido, Vista, and San Marcos, as well as in unincorporated San Diego County. The Project would be collocated with existing power lines on new or existing poles within existing SDG&E ROWs or franchise[4] easements for most of the alignment, including portions of the existing Tie Lines 680C and 13811/13825, and de-energized Tie Line 99911.

[4] A franchise agreement is a binding contract between a utility company and either a municipal agency or a county. The agreement establishes specific rights within the public right-of-way to extend and maintain utility-owned facilities. SDG&E operates under a franchise agreement with each municipality and San Diego County for the extension or new installation of gas and electric facilities.



SOURCE: Google Earth, 2016; SDGE, 2018

TL 6975 San Marcos to Escondido Project

Figure 2-7
San Marcos Substation

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SOURCE: Google Earth, 2016; SDGE, 2018

TL 6975 San Marcos to Escondido Project

Figure 2-8
Escondido Substation

2.4 Project Components

The following describes the characteristics of the Project's components, which include: substation work; power line installation, reconductoring (i.e., replacement), and re-energizing; pole replacement and installation; alternating current (AC) interference mitigation system; and right-of-way (ROW) acquisition.

2.4.1 Substations

San Marcos Substation

At the San Marcos Substation, a new concrete circuit breaker pad, up to 7 feet by 7 feet in size, would be installed. Seven piers, up to 2 feet in diameter and 6 feet long, would be installed, as well as a 30-foot A-frame with two footings measuring up to 9 feet by 13 feet each. A 69 kV SF_6 circuit breaker and two 69 kV 2,000-amp disconnects would be installed for the new line. The new power line would connect from the A-frame to the Tie Line 6975 power pole immediately outside the substation's west wall via a single conductor/phase (see Figure 2-7). Required control and protection relays would be installed in the existing control shelter within the substation.

Escondido Substation

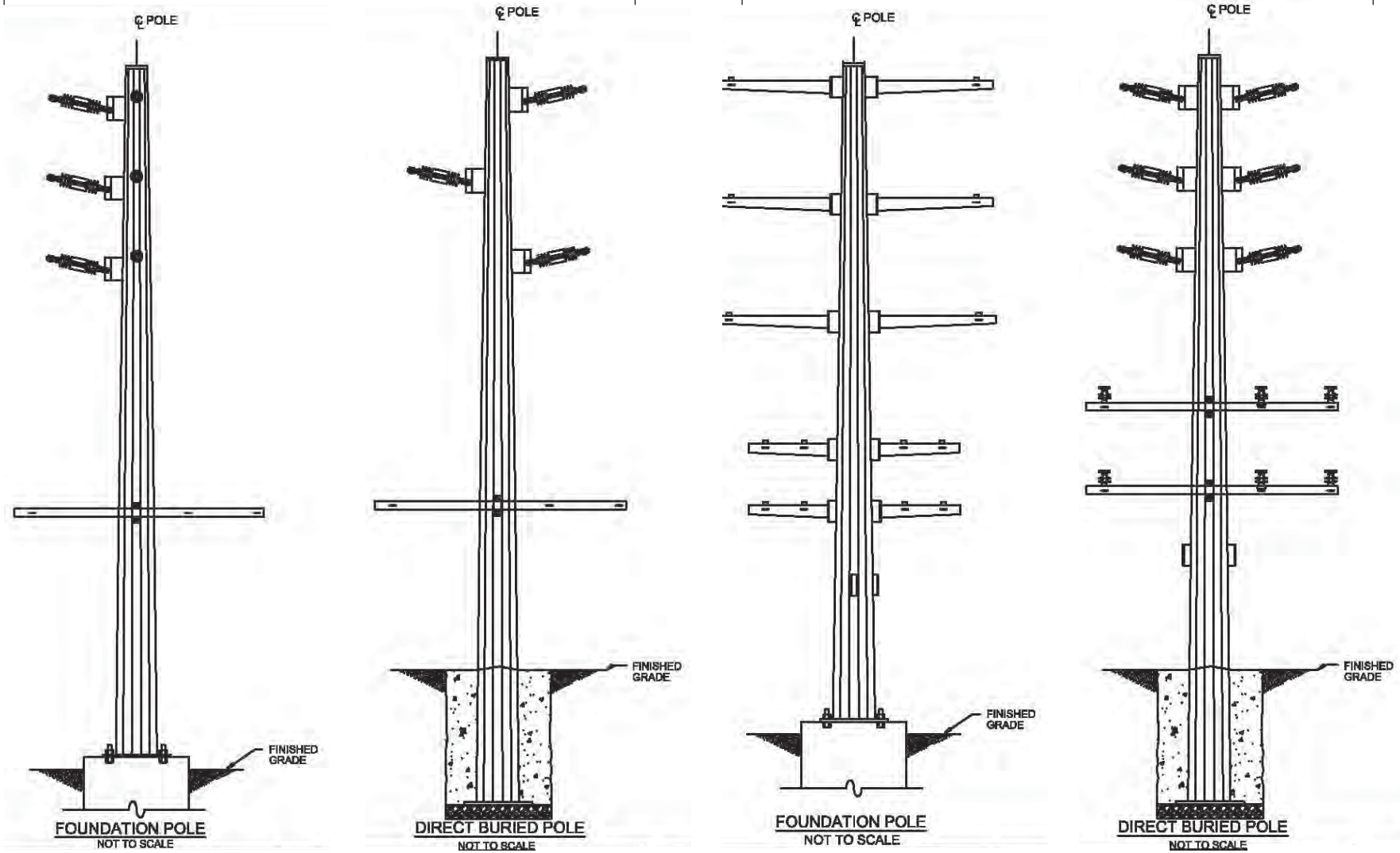
At Escondido Substation, the existing overhead conductor would be transferred from the 138 kV rack to an existing 69 kV bay position to accommodate the Project (see Figure 2-8). Three existing 69 kV circuits – Tie Lines 6908, 6934, and 689 – would be transferred to different bay positions to accommodate this new circuit and avoid power line crossings. The overhead spans (or "drop spans") of these existing power lines would be relocated to available bay positions within the substation. Also within the substation, an oil containment wall measuring approximately 14 feet by 12 feet and a concrete circuit breaker pad measuring approximately 8 feet by 8 feet would be removed, as the existing oil circuit breaker would be replaced with a gas (SF_6) circuit breaker, which does not require containment.[5] A new, larger concrete circuit breaker pad measuring 10 feet by 10 feet would be installed. To connect Tie Line 6908 to the new bay location, two 69 kV 2,000-amp disconnects[6] and one 69 kV SF_6 circuit breaker would be installed. Relay settings would be modified as required in the existing control shelter. New steel poles and replacement guys and anchors would be installed adjacent to and south of the southern corner of the substation. Three existing poles immediately outside the substation would be removed from service (SDG&E, 2017).

2.4.2 Power Line

The Project includes the rebuild, new build, and reconductoring/re-energizing of power line poles and towers, including overhead structures and underground duct packages. Each component is described below and typical pole types are illustrated in **Figure 2-9**.

5 Oil and sulfur hexafluoride (SF_6) are media used within circuit breakers to prevent arcing as they are non-conductive. The type of oil in the existing circuit breaker at the Escondido Substation is mineral oil, which requires the containment wall. SF_6 is a gas, which does not require a secondary containment structure.

6 A "disconnect" is a switch which would isolate a conductor or circuit from the power source.



* Segment 3: New poles or pole replacements only.

SOURCE: SDGE, 2018

TL 6975 San Marcos to Escondido Project

Figure 2-9
Typical Pole Types

Poles/Towers

Table 2-2 provides a summary of the number and types of poles, as well as dimensional information, to be used in each Project segment. The pole locations and types are shown in the TL 6975 Power Line Mapbook included as Appendix A (see Figure 2-3 for a key map).

TABLE 2-2
PROJECT POLE/STRUCTURE SUMMARY

Pole Type	Approximate Quantity	Maximum Height Above Ground (feet)	Base Diameter at Grade (feet)	Tip Diameter (inches)
Segment 1 Rebuild				
Direct Bury	26	101.5	2.5	15
Pier Foundation/Micropile Foundation[a]	11	100	8	29
Remove from Service	10	43	N/A	N/A
Pole-Top Work[b]	6	43	N/A	N/A
No Work	4	56.5	N/A	N/A
Racks	2	50	N/A	N/A
Segment 2 New Build				
Direct Bury	5	88	2.5	15
Pier Foundation/Micropile Foundation[a]	11	110	8	29
Remove from Service	0	0	0	0
Pole-Top Work[b]	1	80	N/A	N/A
No Work	3	170	N/A	N/A
Racks	0	N/A	N/A	N/A
Segment 3 Reconductor/Re-Energize				
Direct Bury	1	43.1	2.5	15
Pier Foundation/Micropile Foundation[a]	4	85	8	29
Remove from Service	9	74.5	N/A	N/A
Existing Structure Re-Energize Conductors (No Work)	5	160	N/A	N/A
Pole-Top Work[b]	36	118.3	N/A	N/A
No Work	5	83	N/A	N/A
Racks	5	50	N/A	N/A

NOTES:

[a] Micropile foundations may be substituted for pier foundations due to site-specific substrate or access conditions, or to minimize disturbance to a sensitive resource.

[b] Those poles in this table identified as “pole-top work” may also be identified as “overhead work” elsewhere in this section.

SOURCE: SDG&E, 2017, 2018d

Two types of poles would be used to replace the existing wood poles: direct-bury dulled galvanized steel poles and engineered dulled galvanized steel poles supported on foundations. The installation techniques are discussed below. In locations where existing poles are being replaced, the position of the new poles would be offset by 6 to 8 feet.

In general, the new 69 kV steel poles would range in height from 43 to 110 feet above ground surface. The pole-top diameters would vary from 15 to 29 inches. All new steel poles would be constructed to current SDG&E standards, including design standards for avian protection (Edison Electrical Institute et al., 2012).

In Segment 1, each of the new steel poles would have six transmission arms and two distribution arms to accommodate a double circuit. They would range from 43 to 101.5 feet in height, with the majority of them being a consistent 83.5 in height. Of these, 26 would be direct-bury poles and 11 would be foundation poles. Ten poles would be removed from service altogether, many of them being guy support poles and wires that would not be needed for the self-supporting steel poles. Currently, guy wires stretch across West San Marcos Boulevard/Palomar Airport Road in several locations and would be removed as part of the Project. The 10 remaining poles along Segment 1 would not be replaced and would require overhead work only or would not require modification at all (i.e., conductor stringing, insulator modification).

At the point where Tie Line 6975 would transition from Segment 1 to Segment 2 along Palomar Airport Road, two wood poles would be replaced and two wood poles would be removed from service. Of the new poles, one would be a foundation pole and the other would be a direct-bury steel pole. Three existing poles at this location (north of Palomar Airport Road) would not require modification.

Segment 2 would have all new steel poles to accommodate a single circuit. They would range from 61 to 110 feet in height. The main line of Segment 2 would consist of 11 foundation poles and five direct-bury poles installed at the same spacing as the existing Tie Line 13811/13825 line, which the Project would parallel 30 feet to the east within the SDG&E easement.

The Project would be installed primarily on 29 existing steel lattice towers in Segment 3, ranging between 43.1 to 170 feet in height, re-establishing a double circuit. At Meadowlark Junction, where Project transitions from Segment 2 to Segment 3, one existing pole would be replaced with a steel pole and one new steel pole would be installed. The remaining five poles in this transition area at Meadowlark Junction would not be replaced; only anchor work, overhead work, re-energizing, or no work at all would occur at these pole locations. On the eastern end of the segment roughly parallel to Citracado Parkway, five existing poles, ranging in height from 52 to 170 feet, would be re-energized.

Direct-Bury Steel Poles

Direct-bury steel poles are dulled galvanized steel poles that are secured using a concrete backfill. These poles would be used at 32 locations. Direct-bury steel poles would require up to a 25-foot by 60-foot work area, plus a 40-foot-diameter work area around the pole, to provide a safe and adequate temporary workspace, including within the access road. These work areas could vary depending on specific ground conditions at each pole site, but would be no larger than the assumptions stated here. The poles would range in height from 43 to 101.5 feet above grade. The diameter of the pole at ground level would be up to 30 inches for light-duty steel poles. The poles would be buried into the ground to a depth of 7 to 16 feet, as necessary for installation.

Pier Foundation Poles

Concrete pier foundation poles are engineered steel poles that are anchor bolted to a reinforced concrete foundation. Foundation construction would require up to a 35-foot by 50-foot work area, plus a 40-foot-diameter work area around the pole, to provide a safe and adequate temporary workspace, including a temporary work area in the access road. The new poles would have a height of 43 to 110 feet height above ground. Up to 26 concrete-pier foundation poles would be installed. The concrete base would measure 6 to 12 feet in diameter, ranging from 14 to 40 feet in depth, with up to 2 vertical feet of the base exposed above ground level.

Micropile Foundation Poles

Micropile foundation poles are similar to those used on concrete pier foundations. As noted in more detail below in Section 2.5.4, *Pole Construction*, micropile foundations would be installed in areas where there are found to be site-specific substrate and/or access constraints, as well as at sites where ground disturbance must be minimized due to the presence of a sensitive resource. A micropile foundation consists of several small-diameter, drilled, and grouted reinforced foundations. A series of up to 16 individual micropiles would be drilled in a circular array of a diameter similar to an equivalent pier foundation. One micropile is typically a small hole up to 8 inches in diameter at the ground line, excavated to a depth of up to 40 feet, depending on the underlying substrate. (SDG&E, 2018h)

Like pier foundations, micropile foundation construction would require up to a 35-foot by 50-foot work area, plus a 40-foot-diameter work area around the pole, to provide a safe and adequate temporary workspace, including a temporary work area in the access road. The new poles would also have a height of 43 to 110 feet height above ground. Up to 26 micropile foundation poles could be installed in lieu of concrete pier foundations, dependent on site-specific conditions as noted.

Conductor/Cables

Above-Ground Installation

The distance from the ground to the lowest conductor would be at least 30 feet. The distance between the conductors on each pole would be approximately 9 feet. The span lengths for the Project are expected to be the same as those currently existing along the entire Project alignment. The pole replacements and new pole placements in Segments 1 and 2, respectively, would be located at or parallel to existing poles. With two exceptions at either end of Segment 3, the Project would be installed on existing towers. These exceptions include the installation of two pier foundation poles and removal of five existing poles at the Escondido Substation, as well as the removal of five existing poles, replacement of two existing pier foundation poles, and replacement of one existing direct-bury pole.

In Segment 1, along West San Marcos Boulevard/Palomar Airport Road, the span lengths average 365 feet. The span lengths would average 1,230 feet in Segment 2. As noted above, the new poles along Segment 2 would be spaced with the poles supporting the existing line. In Segment 3, the span lengths average 1,125 feet. The components used to construct the 69 kV line would have

non-reflective surfaces. The insulators would be constructed of a gray polymer, the conductors would be made from aluminum-wrapped steel, and the power poles and hardware would be dulled galvanized steel.

Below-Ground Installation

Along Segment 1, there are existing cable poles on which the distribution lines transition underground. As the new pole positions would be slightly offset from the existing poles, some trenching would be required to intercept existing underground conduit and reroute it to the new pole. Trenching activities would typically be performed in an area up to 30 feet of each pole.

Distribution Underbuild

Existing distribution lines are currently carried on poles and towers along portions of the Project alignment. In Segment 1, the existing distribution line, which would be collocated with the Project, would be reconductored and installed on the new poles. One new 85-foot-tall pole would be installed at the junction of Segment 1 and Segment 2. At Meadowlark Junction, the existing distribution line would also be reconfigured and rerouted to the new pole locations, along with an extended access road. Overhead work would occur at two poles at Meadowlark Junction, at a maximum height of 80 feet.

Reconductoring and Re-energizing

As described in the sections above, the Project would include reconductoring and re-energizing existing SDG&E power lines within the existing ROW. With the exception of a small portion of Segment 3, the new conductor serving the Project would be carried on polymer insulators in all segments. In Segment 1, all existing porcelain insulators would be replaced with polymer insulators and Tie Line 680C, which would be collocated with the Project, would be reconductored with aluminum-clad steel-reinforced wire. Within Segment 3, the existing de-energized conductor and porcelain insulators on the north side of the towers would be removed and replaced with polymer insulators and new conductors. The existing conductors in Segment 3 would remain in place.

2.4.3 Alternating Current (AC) Interference Mitigation System

Alternating current (AC) electrical interference effects from the existing power lines on existing underground natural gas pipelines along the Project alignment were investigated for worker safety (e.g., electrical shock) and pipeline hazards (e.g., corrosion). As discussed in greater detail in Section 3.9, *Hazards and Hazardous Materials*, the proximity of the power lines to the natural gas pipelines could create hazards, including subjecting personnel to electric shock up to a lethal level, accelerated corrosion, arcing through pipeline coating, arcing across insulators, disbondment or degradation of coating, or possibly perforation of the pipeline. The results of the investigation concluded that the presence of the power lines does induce a current to the pipelines and exceeds acceptable design limits. Given that the Project power lines would be on the same alignment as those in the investigation, it is presumed that they would have similar effects on these existing pipelines (ARK, 2017). To address this potential hazard, this Project includes an AC interference mitigation system.

This mitigation system would include 11 deep wells and solid state decouplers (SSD), as well as three coupon test stations, installed in the West San Marcos Boulevard/Palomar Airport Road ROW from Via Vera Cruz on the east in San Marcos to a point in Carlsbad approximately 0.4 mile west of White Sands Drive (see **Figure 2-10**) (Aegion|Corrpro, 2018). The system effectively parallels Segment 1. Each well would be 100 feet deep and 6 inches in diameter, though the upper 30 feet would be 8 inches in diameter to allow for a polyvinyl chloride (PVC) casing. Each well would contain a copper grounding rod connected to a copper wire, in turn connecting the well to a SSD, and backfilled with conductive concrete.

Each SSD would be housed in a pedestal composed of fiberglass casing generally measuring 14 inches by 9 inches and 36 inches in height. Once installed, the base of the pedestal would be buried 8 to 12 inches below grade, leaving up to 28 inches exposed at ground surface. The pedestal would house the SSD mechanism, as well as the wires and cables connecting it to the wells and the pipeline. It would be locked for security purposes.

To conduct periodic tests to monitor the functionality of the AC interference mitigation system, three coupon test stations would also be installed in the West San Marcos Boulevard/Palomar Airport Road ROW. Each test station would consist of a 2-inch PVC pipe fitted with a lockable lid and containing a plastic terminal board and wire leads to the pipe and coupon. Each coupon test station would be located directly above the subject pipeline. The coupon test station would be installed below ground 4 to 12 inches from the pipe. For more information on coupon test stations, see Section 2.5.9, *Belowground Construction*, located below.

2.4.4 Right-of-Way Requirements

Segment 1

SDG&E currently has existing easements and franchise agreement rights along a 10- or 20-foot-wide SDG&E ROW corridor. In portions of the corridor where the existing easement is 10 feet wide, additional ROW would be acquired to provide a 20-foot-wide easement and accommodate the new structures. In total, this additional ROW area measures 5,146 linear feet and comprises about 1.2 acres.

The legal parcels that would be affected by the proposed additional ROW area are located along the south side of West San Marcos Boulevard at San Marcos High School (i.e., Poles 11 to 20) and from the vicinity of Viewpoint Drive west to the vicinity of Acacia Drive (i.e., Poles 26 to 37). At San Marcos High School, the ROW expansion would be 7 feet to the north, and 3 feet to the south, along the existing ROW. From Pole 26 to a point midway between Poles 30 and 31, the ROW would be extended 10 feet to the north of the existing ROW. There is an exception in the area at Pole 27, where the new ROW would be 17 feet wide north from the existing ROW. This area of new ROW tapers to 10 feet in width moving either direction away from Pole 27. From the midway point between Poles 30 and 31 to Poles 37, the ROW would be expanded 6 feet to the north and 4 feet to the south of existing ROW (SDG&E, 2018c). These areas of additional ROW are shown in Figures A-2 to A-6 in Appendix A.

SOURCE: SDGE, 2018

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Figure 2-10

AC Interference Mitigation System

SDG&E currently owns the approximately 1.87-acre parcel that contains San Marcos Substation. All anticipated work to integrate the new power line would be done within the existing SDG&E substation area. No new ROW would be required.

Construction access and permanent access are currently provided by existing SDG&E easements and SDG&E franchise rights. No additional land acquisition for access purposes is anticipated.

Segment 2

SDG&E currently has valid easements and franchise agreement rights in Segment 2 along a 150-foot-wide SDG&E corridor. This segment is approximately 2.8 miles long and adjacent to the existing Tie Line 13811/13825 power line. The Project would be constructed within this SDG&E corridor approximately 30 feet east of centerline of the existing Tie Line 13811/13825 structures. All of the new steel poles would have graded roads and access/maintenance pads built to them to facilitate construction and provide long-term maintenance access. Construction access and permanent access are currently provided by existing SDG&E easements and SDG&E franchise rights. No additional land acquisition for access purposes is proposed.

Segment 3

SDG&E currently has valid easements and franchise agreement rights along an existing SDG&E ROW corridor in Segment 3. All pole replacements within Segment 3 have existing graded roads and access/maintenance pads to facilitate construction and long-term access. The new poles located near Escondido Substation would not require any grading and existing access is sufficient. Construction access and permanent access are currently provided by existing SDG&E easements and SDG&E franchise rights. No additional land acquisition for access purposes is proposed.

SDG&E currently owns the 6-acre parcel that contains the Escondido Substation. All anticipated work to integrate the Project would be done within the existing substation area. No new ROW would be required.

TABLE 2-3
NEW RIGHTS OF WAY REQUIREMENTS

Project Segment	Length (feet)	Area (acres)
Segment 1 Rebuild	5,146	1.2
Segment 2 New Build	0	0
Segment 3 Reconductoring/Re-energizing	0	0

SOURCE: SDG&E, 2017

2.5 Project Construction

This section includes an overview of the schedule, sequencing, workforce, and typical construction methods and equipment requirements for Project construction. The types of work described include pre-construction preparation, pole installation, conductor stringing, removal of existing facilities, helicopter use, construction within substations, and belowground construction.

2.5.1 Construction Schedule and Sequencing

As shown in **Table 2-4**, pre-construction activities (including establishment of staging areas and delivery of materials to established SDG&E yards) would commence in December 2019.

TABLE 2-4
POWER LINE CONSTRUCTION SCHEDULE

Project Activity	Duration (days)	Anticipated Start and End Date
Pre-Construction Activities	30	Dec 30, 2019 – Feb 7, 2020
Access road construction/refreshing	63	Feb 2020 – Apr 2020
Material haul	33	Jan 21, 2020 – Mar 2, 2020
AC interference mitigation system installation	77	Feb 2020 – Apr 2020
Auger holes, direct-bury poles: (approx. 32 poles)	60	Segment 1: Feb 2020 – Mar 2020 Segment 2: Mar 2020
Pier Foundation construction, approx. 26 poles	125	Segment 1: Feb 2020 – May 2020 Segment 2: May 2020 – Aug 2020 Segment 3: May 2020
Micropile Foundation construction, up to 26 poles[a]	125	Segment 1: Feb 2020 – May 2020 Segment 2: May 2020 – Aug 2020 Segment 3: May 2020
Structure installation and assembly, per crew, two crews required (including old pole removal) (approx. 100 new structures, 19 removed structures)	99	Segment 1: Mar 2020 – May 2020 Segment 2: Aug 2020 Segment 3: May 2020
Stringing activities/transfer conductor/sagging activities	121	Segment 1: May 2020 – Jul 2020 Segment 2: Sep 2020 – Oct 2020 Segment 3: Jul 2020 – Sep 2020
Trenching for installation of underground cables	98	Segment 1: May 2020 – Jul 2020
Demobilization/right-of-way restoration and cleanup/road refreshing	99	Segment 1: Jul 2020 – Sep 2020 Segment 2: Oct 2020 – Nov 2020 Segment 3: Sep 2020 – Oct 2020

NOTE:
[a] Micropile foundations may be substituted for pier foundations due to site-specific substrate or access conditions, or to minimize disturbance to a sensitive resource. Therefore, micropile foundations are shown to have the same construction schedule as pier foundations.

SOURCE: SDG&E, 2017, 2018c

Construction would occur in three phases along the Project alignment. First, access to the proposed pole locations would be established, the pole installation work areas would be graded, direct-bury pole locations would be bored, and concrete foundations would be poured for the pier foundation poles. The new poles would then be installed, with the existing conductors temporarily transferred to the new poles. When a new segment of poles is established, the existing conductor would be removed, the new conductor pulled into place, and then energized.

In the case of Segment 3, existing insulators and other equipment on the towers would be replaced prior to the installation of the Project. The final phase would be the removal and disposal of the existing poles, insulators, etc., with the exception of those on which third-party communication wires are in place. In those cases, pole removal would be delayed until the communication company transfers those wires to the new poles. Segment 3 would not be subject to pole installation and removal activities, as the existing towers in Segment 3 would be used to support the Project.

Work for Segment 1 would require a total of up to 8 months from the start of pole placement activities to the conclusion of demobilization/right-of-way restoration and cleanup/road refreshing. Similarly, work for Segment 2 would require a total of up to 9 months and work for Segment 3 would require a total of up to 6 months. However, actual construction activity (and disturbance) would occur at a given point would occur for a much shorter period of time, and then move along the alignment. In the case of the Project, it is anticipated that actual work activity at any given point along the alignment would be accomplished within two to three weeks for each phase.

Scheduling work at the substations would not be dependent on the other Project activities. Substation work would occur over the course of four months, totaling 10 to 12 weeks of active work. The work would be coordinated to reduce or avoid outage impacts to the system during construction. In any case, the substation work would be completed prior to the energization of the Project.

Although nighttime construction is not anticipated, it may be required as a result of a condition of an agency permit or local traffic control direction from one of the study area jurisdictions. Therefore, this analysis will consider the possibility of limited nighttime work.

2.5.2 Construction Workforce and Equipment

It is estimated that the Project would involve up to 85 construction workers. Construction activities would involve several crews working concurrently at different locations. Power line construction would be conducted using stringing crews to string the conductor, foundation crews to work on the power pole structures, and grading crews to prepare the structure sites and access for construction. In addition, the installation of underground power lines would also involve construction crews. It is assumed that up to 55 workers could be in action at one time during power line construction, assuming that foundation construction occurs concurrently with direct-bury construction (**Table 2-5**). Refer to **Table 2-6** for a list of anticipated construction equipment to be used and the number of construction personnel.

TABLE 2-5
ANTICIPATED CONSTRUCTION EQUIPMENT

Equipment Type	Equipment Use
Two-ton flatbed trucks	Haul materials (including new poles)
Aerial bucket trucks	Access poles, string conductor, modify structure arms, provide guard structures, and other various uses.
Air compressors	Operate air tools
Asphalt grinder	Grind asphalt
Backhoe	Excavate trenches
Bobcat	Excavate trenches
Boom truck	Access poles and other height-restricted items; Lift/set steel
Boom truck with trailer	Deliver steel, disc, panels and insulators
Bucket truck/man-lift	Set steel; Install equipment; Use as guard structure
Bulldozer	Grade pads and access road; Demolition; Excavate and backfill walls
Bull wheel tensioner	Control conductor at pulling tension during pulling operation
Cable dolly	Pull cable
Cable dolly (trailer)	Transport reels of conductor (no engine, can be pulled by assist truck)
Compactor	Compact soil; Clear/grub/finish
Concrete saw	Cut and saw concrete and asphalt
Concrete truck	Transport and process concrete
Crane	Lift, position structures
Crew truck	Transport crew
Desander	Filter drilling mud
Drilling rig/truck-mounted augur	Excavate for direct-bury and micropile poles; Excavate trenches
Drum puller	Transmission and power line pulls
Dump truck	Haul excavated materials/import backfill, as needed
Dump truck with compressor and emulsion sprayer	Street repair
Excavator	Excavate soils/materials (trenching)
Flatbed boom truck	Haul and unload materials
Forklift	Transport materials at structure sites and staging yards
Fuel truck	Contains fuel
Generator	Portable electricity
Grader	Road construction and maintenance
Grout plant	Foundation construction
Helicopter (typically light and medium duty)	Transport materials; String conductor, Install and remove travelers; Set structures
Hydraulic rock-splitting/rock-drilling equipment	Drill through rock, as needed
Hydro vacuum truck	Potholing; Well excavation
Jackhammer	Break concrete and asphalt
Line truck	Install clearance structures; Pull cables/connections
Loader	Demolition; Load dump trucks
Mobile fueling trucks	Refuel equipment
Mower	Clear vegetation
Motor grader	Grading
Mud rotary drill rig	Well excavation
Oil processing rig	Used for transformer oil processing
Paver	Paving of new asphalt
Pickup trucks	Transport construction personnel
Portable generators	Operate power tools
Pulling rig	Pull conductor into position or duct and secure it at the correct tension
Reel trailer	Feed new conductor to the pulling and tensioner; Collect old conductor
Relay/telecommunication van	Transport and support construction personnel
Roller	Repair streets
Scraper	Grade pads and access roads
Service/support truck	Haul materials, equipment, workers
Splice trailer	Store splicing supplies
Spreader	Spread asphalt
Underground combo truck	Pull cable and connections
Tool van	Tool storage
Tractor/Trailer unit	Transport materials at structure sites and staging yards
Vacuum truck	Pump water and liquids, as needed
Water truck	Dust control
Wire truck	Hold spools of wire

SOURCE: SDG&E, 2017

TABLE 2-6
ESTIMATED CONSTRUCTION EQUIPMENT AND PERSONNEL

Activity	People	Days[a]	Equipment	Quantity	Horsepower Rating	Hours of Use per Day	Additive Hours of Use per Day	Segment Number
Access Road Construction/Refreshing	1 crew of 4 - 5	63	motor grader	1	174	6	6	Segment 2
			pickup truck	2	250	5	10	Segment 2
			water truck	1	250	4	4	Segment 2
Material Hand	1 crew of 5	33	yard and field crane or line truck	1 at each end (2 total)	250	4	8	All segments
			fork lift	1 at each end (2 total)	83	4	8	All segments
Preconstruction Activities (Staging Yard Setup Road Refreshing, Vegetation Trimming/BMP Installation)	2 crews of 4 - 5 (8 - 10 total)	30	dump truck	2	250	3	6	All segments
			excavator	2	162	3	6	All segments
			loader	2	37	4	8	All segments
			motor grader	2	174	5	10	All segments
			mower	2	74	4	8	All segments
			tractor/trailer unit	1	250	4	4	All segments
			pickup truck	2	250	4	8	All segments
			water truck	1	250	4	4	All segments
Auger Holes, Direct-Bury Poles Tie Line 6975: (approx. 34 poles)	6 crews of 4 - 5 (24 - 30 total)	60	air compressor	4	78	4	16	Segments 1 and 2
			boom truck	4	250	6	24	Segments 1 and 2
			drilling rig	4	82	6	24	Segments 1 and 2
			line truck	4	250	5	20	Segments 1 and 2
			pickup truck	4	250	4	16	Segments 1 and 2
			pressure digger	2	82	4	8	Segments 1 and 2
			tractor/trailer unit	1	250	3	3	Segments 1 and 2
			water truck	4	250	4	16	Segments 1 and 2

TABLE 2-6 (CONTINUED)
ESTIMATED CONSTRUCTION EQUIPMENT AND PERSONNEL

Activity	People	Days[a]	Equipment	Quantity	Horsepower Rating	Hours of Use per Day	Additive Hours of Use per Day	Segment Number
Pier Foundation Construction (approx. 26 poles)	3 crews of 4 - 5 (12 - 15 total)	125	air compressor	3	78	4	12	All segments
			boom truck	3	250	3	9	All segments
			drilling rig	3	82	7	21	All segments
			excavator	3	162	4	12	All segments
			forklift	3	83	3	9	All segments
			generator	3	84	3	9	All segments
			loader	3	37	3	9	All segments
			pickup truck	3	250	4	12	All segments
			water truck	3	250	3	9	All segments
Micropile Foundation[b] Construction (approx. 13 poles)	2 crews of 4 - 5 (8 - 10 total)	45	air compressor	2	78	3	6	All segments
			backhoe	1	97	3	3	All segments
			crane	2	226	3	6	All segments
			crew truck	2	250	4	8	All segments
			flatbed truck	2	250	4	8	All segments
			forklift	2	83	3	6	All segments
			fuel truck	1	250	3	3	All segments
			generator	2	84	4	8	All segments
			grout plant	1	84	2-3	3	All segments
			pickup truck	1	250	4	4	All segments
			tractor/trailer unit	1	250	3	3	All segments
			water truck	2	250	3	6	All segments
Structure Installation and Assembly, per Crew, 2 Crews Required (including old pole removal) (approx. 100 new structures, 19 removed structures)	6 crews of 4 - 5 (24 - 30 total)	99	pickup truck	6	250	4	24	All segments
			bucket truck	9	250	6	54	All segments
			line truck	6	250	5	30	All segments
			helicopter, light duty	1		4	4	Segment 2
			boom truck	9	250	6	54	All segments

TABLE 2-6 (CONTINUED)
ESTIMATED CONSTRUCTION EQUIPMENT AND PERSONNEL

Activity	People	Days[a]	Equipment	Quantity	Horsepower Rating	Hours of Use per Day	Additive Hours of Use per Day	Segment Number
AC Interference Mitigation System Well Construction	1 crew of 3 - 4	77	mud rotary drill rig	1	500	8	8	Segment 1
			support truck	1	430	4	4	Segment 1
			desander	1	74	6	6	Segment 1
			hydro vacuum truck	1	300	2	2	Segment 1
			water truck	1	550	6	6	Segment 1
			vacuum truck	1	550	8	8	Segment 1
			service truck	1	310	4	4	Segment 1
Coupon Text Station Construction	1 crew of 2 - 3	12	hydro vacuum truck	1	300	2	2	Segment 1
			service truck	1	310	4	4	Segment 1
			support truck	1	430	4	4	Segment 1
			backhoe	1	95	6	6	Segment 1
Stringing Activities/ Transfer Conductor/ Sagging Activities (includes removal of old conductors) (approx. 42 structures reconductored/re-energized)	6 crews of 4 - 5 (24 - 30 total)	121	boom truck	6	250	6	36	All segments
			double-bull-wheel tensioned (heavy)	3	300	6	18	All segments
			drum puller	3	300	6	18	All segments
			forklift	3	83	3	9	All segments
			line truck	6	250	4	24	All segments
			pickup truck	6	250	4	24	All segments
			water truck	3	250	4	12	All segments
			wire truck	3	82	5	15	All segments
			helicopter, light duty	1		4	4	Segment 2 only
Trenching for Installation of Underground Cables	1 crew of 4 - 5	99 (4 - 5 days for concrete truck and wire dolly)	concrete truck	2	400	3	6	Segment 2
			crane	1	226	4	4	Segments 1 and 2
			dump truck	1	250	3	3	Segments 1 and 2
			line truck	1	250	4	4	Segments 1 and 2
			water truck	1	250	3	3	Segments 1 and 2

TABLE 2-6 (CONTINUED)
ESTIMATED CONSTRUCTION EQUIPMENT AND PERSONNEL

Activity	People	Days[a]	Equipment	Quantity	Horsepower Rating	Hours of Use per Day	Additive Hours of Use per Day	Segment Number
Trenching for Installation of Underground Cables (cont.)			wire dolly	1	82	3	3	Segments 1 and 2
			pulling rig	1	82	4	4	Segments 1 and 2
			backhoe	1	97	3	3	Segments 1 and 2
Demobilization/Right-of-Way Restoration and Cleanup/Road Refreshing	6 crews of 4 - 5 (24 - 30 total)	99	backhoe	3	97	4	12	All segments
			dump truck	3	400	5	15	All segments
			excavator	3	162	4	12	All segments
			loader	3	37	4	12	All segments
			motor grader	3	174	4	12	All segments
			mower	3	74	4	12	All segments
			pickup truck	6	250	4	24	All segments
			tractor/trailer unit	3	250	4	12	All segments
			water truck	3	250	4	12	All segments

NOTES:
[a] This reflects the additive total of days of a given construction activity. See Section 2.5.1 for the Project's construction sequencing plan.
b Micropile foundations would be used in lieu of pier foundations only in limited cases which site-specific substrate and/or access conditions prohibit used on pier foundations, or to minimize ground disturbance.
c Segment 1 and Poles 55 and 56 are excluded from the micropile foundation option as the underlying Santiago geologic formation has high sensitivity for paleontological resources which could not be avoided or salvaged and permanently lost through the drilling process used to install this type of foundation.

SOURCE: SDG&E, 2017, 2018c

2.5.3 Pre-Construction Preparation

Work Areas

The Project would be located primarily within existing SDG&E utility corridors and franchise areas that currently have permanent work pads and access roads. Operation and maintenance of the Project would utilize these existing work areas and roads, as well as limited additional proposed permanent work areas also located within SDG&E ROWs and franchises, that would remain following completion of construction activities. These additional work areas are primarily in Segment 2 at each of the new pole locations. **Table 2-7** outlines the anticipated permanent work areas that would be created as a result of the Project. All permanent work areas would be within the temporary work areas described in various construction elements presented below and in **Table 2-8**. These permanent and temporary work areas are shown in the Power Line Route Mapbook found in Appendix A.

TABLE 2-7
PERMANENT WORKING AREAS

Work Area	Quantity	Surficial Area (acres)
New Structure Operation Work Pads[a]	60	1.92
New Permanent Spur Roads[b]	4	0.12
New Permanent Access Road	1	0.18

NOTES: Table contents based on preliminary engineering and subject to change.

[a] Permanent structure operation work pads would be contained within the temporary structure installation work areas described in this chapter. Retaining walls and other area required to create a safe operations work pad are also included within this calculation. Areas are included here only where new work pads would be required. Therefore, the number of new work pads is less than the total number of new structures.

[b] The Project would be located within existing utility corridors with extensive existing access and spur roads. Operation and maintenance of the Project would utilize these existing roads for the vast majority of access requirements. Only newly required spur roads are included within this table because the existing access road network is considered part of the existing environment.

SOURCE: SDG&E, 2017

TABLE 2-8
TEMPORARY WORKING AREAS

Type of Work Area	Quantity	Total Surficial Area (acres)
Stringing Sites	21	1.8
Helicopter Incidental Landing Areas	0	0
Staging Yards	10	74.1
Guard Structures	50	0.40
Pole Work Areas	93	7.3
Turnaround Areas	N/A	N/A
Underground Construction	N/A[a]	0.1
Temporary Poles[b]	TBD	TBD

NOTES:

[a] A total of 360 feet of underground conduit would be installed

[b] Temporary poles would occasionally be used during construction; however, location and quantity are yet to be determined

SOURCE: SDG&E, 2017

Cut and fill would be required at some structure locations to create construction and line maintenance pads. Actual cut-and-fill grading amounts may vary, dependent upon field conditions and the completion of final detailed engineering. For purposes of this analysis, it is estimated that up to 3,751 cubic yards of cut would be generated and up to 4,072 cubic yards of fill would be needed. Up to 3,063 cubic yards of soil would be imported and 2,742 cubic yards of soil would be exported.

Access Roads

Construction access would use existing SDG&E access roads and public roadways to the extent possible. Most work areas are accessible by vehicle on unpaved SDG&E-maintained access roads or by overland travel. To provide crews and equipment access to the associated poles, existing access roads may require smoothing or refreshing; vegetation clearing may be necessary to maintain some existing access roads and re-establish unmaintained access roads. At designated drainage-crossing locations along the access roads, the blade of the smoothing equipment would be lifted 25 feet on either side of the drainage to avoid affecting it. Drainage crossings may be temporarily bridged if necessary to reach a work site. If installed, a bridge would be required to comply with all applicable resource regulations if the subject drainage is determined to be jurisdictional. Based on preliminary engineering, a total of up to 225 linear feet of new spur roads would be required to access Poles 68, 70, 77, and 78 from the existing access road. The four new spur roads would be up to 14 feet wide, requiring up to 0.09 acre of land (**Table 2-9**). A new access road would also be constructed to access Pole 36. It would be 88 feet long and 14 feet wide, requiring an approximate area of 0.03 acre.

TABLE 2-9
ACCESS ROAD CHARACTERISTICS

Type of Road	Description	Surficial Area (acres)[a]
Existing Dirt Road	Typically, double track. May have been graded previously. No other preparation required, although a few sections may need to be regraded and crushed rock applied in very limited areas for traction.	28.46
New Permanent Spur Roads	Roads would be 14 feet wide, graded. No other preparation required, although crushed rock may need to be applied in very limited areas for traction.	0.09
New Permanent Access Road	Roads would be up to 14 feet wide, graded. No other preparation required, although crushed rock may need to be applied in very limited areas for traction.	0.03
Overland Access	No preparation required. Typically, grassy areas that are relatively flat. No restoration would be necessary.	0
Footpath	Footpaths may require minor trimming to traverse. Construction crews would be selective regarding which paths they choose to use.	0

NOTES:

[a] Based on typical road width of 14 feet.

SOURCE: SDG&E, 2017

Vegetation Clearance

The Project would require vegetation clearing associated with access and work areas during construction and operation and maintenance. Construction activities would utilize existing flat, cleared areas such as existing access roads, existing line maintenance pads, and previously disturbed areas. The amount of work space needed for construction of new structures would vary, depending on the size and type of the structure, the surrounding topography, and the presence of sensitive resources. Grading would occur only where relatively flat areas are not already present.

The specific amounts and types of vegetation to be removed may not be known until plant surveys, field reviews, and Project engineering are complete. This analysis conservatively assumes that vegetation would be cleared entirely from all temporary work areas and that natural recruitment of vegetation would be allowed to occur in temporary use areas that are not required for permanent use.

Staging Yards

The Project includes 10 temporary construction staging yards, comprising a total area of 74.1 acres. The staging yards may be used as refueling areas for vehicles and construction equipment; equipment wash stations; pole assemblage; materials and equipment storage, storage containers, construction trailers, and portable restrooms; and, for construction worker parking and security lighting at night for safety. This lighting would be shielded to direct light downward and away from any nearby sensitive receptors. These areas may include generator use for temporary power in construction trailers. Construction workers would typically park and meet at the staging yard at the start of each workday. In-ground fencing would be installed at the staging yards, if not already installed. Gravel may be used for ground cover at staging yards to avoid the unsafe (i.e., uneven) surface conditions and sediment transport off-site.

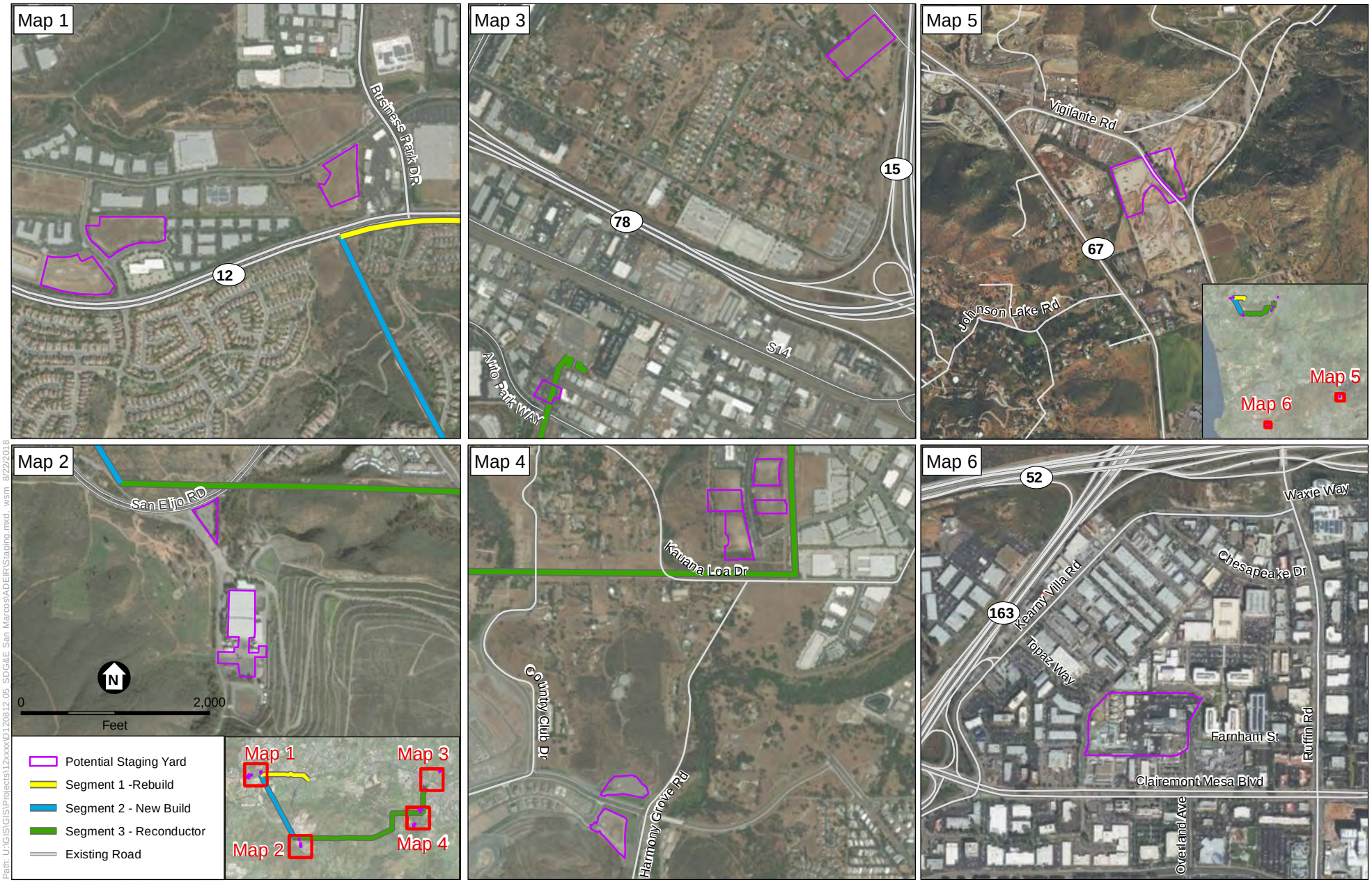
SDG&E has identified candidate staging yards with the size and location to accommodate the scope of the Project (see **Table 2-10**, Potential Staging Yards, and **Figure 2-11**) (SDG&E, 2018a). Previously utilized staging yards have been identified, as well as large undeveloped areas near portions of the Project alignment that have been previously disturbed and/or graded. SDG&E generally does not hold ownership or easement over these candidate sites; therefore, some may not be available when pre-construction activities (described above) would occur.

Two auxiliary staging yards are listed in Table 2-10. These yards are not located in the vicinity of the Project and would be used only for additional materials storage. They would not be used for vehicle refueling, construction trailers, portable restrooms, parking, or equipment wash areas; they would be used to receive and store materials until shipped to the Project. The Kearny staging yard is currently owned by SDG&E and used for other projects. It is located at 5488 Overland Avenue in the Kearny Mesa area of San Diego, approximately 25 miles south of the Project area. The Icon 3PL Materials Yard could serve as a potential vendor drop for materials ahead of yard/site delivery. It is located at 12332 Vigilante Road in Lakeside, approximately 25 to 30 miles southeast of the Project area.

TABLE 2-10
POTENTIAL STAGING YARDS

Staging Yard Name and Location	Description	Approximate Size (acres)	Approximate Location in Relation to Project
Carlsbad Business Park City of Carlsbad	Previously disturbed and graded, within an industrial area along Eagle Drive north of Palomar Airport Road	5.94	Northern portion, 0.36 mile west of Pole 51
Eagle Drive #2 City of Carlsbad	Previously disturbed and graded, within an industrial area along Eagle Drive north of Palomar Airport Road. Graded access within the lot.	5.8	Northern portion, 0.46 mile west of Pole 51
Lionshead Ave #5 City of Carlsbad	Previously disturbed and graded, within an industrial area along Lionshead Avenue north of Palomar Airport Road. Graded access within the lot.	4.5	Northern portion, 0.06 mile north of Pole 51
Montiel and Rock Springs unincorporated San Diego County	Previously disturbed and graded, within a residential area along Rock Springs Road	5	Southern portion, 0.21 mile south of Pole 77
Recycling Plant City of San Marcos	Previously disturbed and graded, within a large warehouse recycling yard along San Elijo Road. Has graded access and paved indoor storage.	Lot 1: 5.6 Lot 2: 1.45	Southern portion, 0.21 mile south of Pole 77
NE District Employee Parking Lot City of Escondido	Existing parking lot with planters at the end of the rows with small trees. Located along Commercial Street.	1	Eastern portion, 300 feet south of Escondido Substation
Harmony Grove unincorporated San Diego County	Two lots, graded and devoid of vegetation, north and south of Harmony Grove Village Parkway.	Lot 1: 2.54 Lot 2: 1.85	Eastern portion, 0.4 mile south of Pole 106
South Andreasen City of Escondido	Four lots that are already graded, with dedicated entry points and low vegetation growth. Located along Citracado Parkway.	Lot 1: 2.95 Lot 2: 1.06 Lot 3: 1.92 Lot 4: 2.2	Eastern portion, 100 feet west of Pole 109
Kearny (Auxiliary) City of San Diego	Owned by SDG&E and located along Overland Avenue in Kearny Mesa	15.98	Auxiliary, not in Project area
Icon 3PL Materials yard (Auxiliary) unincorporated San Diego County	Potential vendor drop for materials ahead of yard/site delivery in Lakeside	14.5	Auxiliary, not in Project area

SOURCE: SDG&E, 2017



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SOURCE: SDGE, 2018

TL 6975 San Marcos to Escondido Project

Figure 2-11
Staging Areas

ESA

2.5.4 Pole Construction

Pole Installation/Removal Work Areas

To accommodate construction equipment and activities during the installation and removal of power poles and structures, and while transferring the power line conductors and re-energizing, temporary work areas would be established. Vegetated areas would be cleared and graded at each location, as needed. Work areas for the different pole types would be as follows:

- Direct-bury steel pole installation, pole removal, and overhead-work-only poles would require up to a 40-foot-diameter work area at the pole site, plus an adjacent rectangular work measuring up to 25 feet by 60 feet.
- Both the pier and micropile foundation steel pole installation would also require up to a 40-foot-diameter work area at the pole site, plus an adjacent rectangular work measuring up to 35 feet by 50 feet.

The work areas for each type of pole foundation would generally be centered on the existing pole location; however, actual area would vary in shape as determined by site conditions and access requirements. Regardless of the shape, this analysis assumes that each work area for a direct-bury steel pole would be no larger than 2,760 square feet and that each work area for a pier or micropile foundation would be no larger than 3,000 square feet. As most of the new poles in Segment 1 and Segment 3 would be located in the immediate vicinity of existing poles with existing permanent work areas, the proposed new work areas could be smaller consistent with the Project's use of existing maintenance pads and access roads.

For purposes of this analysis, temporary impact areas for the installation of all types of poles, including the work area previously described, and an additional potential impact area would be located primarily within the access road to account for minor modifications made in the field during construction. Along West San Marcos Boulevard, this work area would also encompass up to two traffic lanes at each pole site.

After construction, surveys of the vegetation would take place along the alignment to assess the need for clearances pursuant to CPUC General Order 95 and Public Resources Code Sections 4292 and 4293. Vegetation surveys would determine the need for vegetation management activities that would conform to applicable fire safety standards. General Order 95 requires radial clearance of bare line conductors from tree branches or foliage with 18 inches, or 48 inches in high or very high fire threat zones. Within State Responsibility Areas (SRAs), including much of Segment 3, Public Resources Code Section 4292 requires maintaining a minimum of 10 feet of vegetation clearance around poles, and Section 4293 requires a minimum clearance of 4 feet around conductors.

Structure Foundations/Maintenance Pads

Prior to installing the pole structure foundations, vegetation at each site would be cleared and the area would be graded either in a flat or in a terraced fashion, as needed. At some sites, soil may be imported to raise the elevation of the structure pads. Retaining walls may be needed. A

retaining wall may be required at pole locations 55, 60, and 61. The retaining wall at Pole 55 would be 15 feet high, 138 feet in length, with a 4-foot foundation depth and would require 565 cubic yards of net fill. The retaining wall at Pole 60 would be 19 feet high, 144 feet in length, with a 4-foot foundation depth and would require 1,118 cubic yards of net fill. The retaining wall at Pole 61 would be 17 feet high, 145 feet in length, with a 4-foot foundation depth and would require 977 cubic yards of net fill (SDG&E, 2018d).

Concrete Pier Foundations

A large auger would be used to excavate the holes, which could range from 6 to 12 feet in diameter. Foundation depths would typically range from 14 to 40 feet, but could increase up to a depth of 50 feet because of soil conditions. If unstable soil conditions are encountered, hole excavations may require the installation of steel casings to stabilize the sides of the excavation. The casing diameter would correspond with the diameter of the excavation. The length of the casing installed would be to the full depth of the excavation. The length of an individual casing section is typically 20 feet; therefore, multiple sections of casing may be used for deeper foundations. Following excavation, a reinforcing steel cage and anchor bolt cage would be installed in each hole. These cages would typically be assembled at the materials storage and staging areas, then transported to the structure site. Typical foundations would require 45 to 100 cubic yards of excavation and a slightly larger volume of concrete used as the foundations would protrude up to 2 feet above ground surface. A few poles in the vicinity of San Marcos Creek in Segment 1 could require up to 167 cubic yards of excavation. The concrete curing period would be up to one week, at which time workers would remove the concrete forms and place backfill around the foundations.

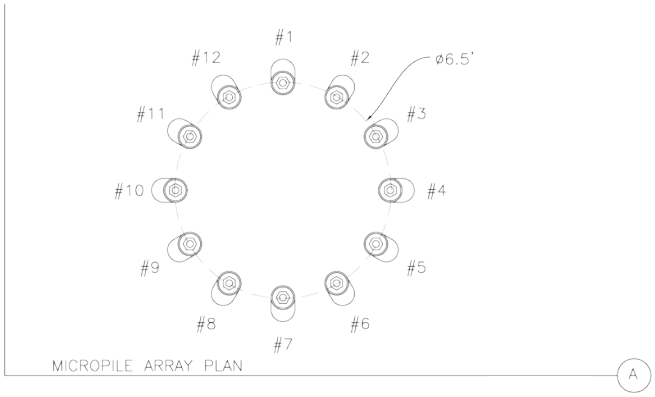
Micropile Foundations

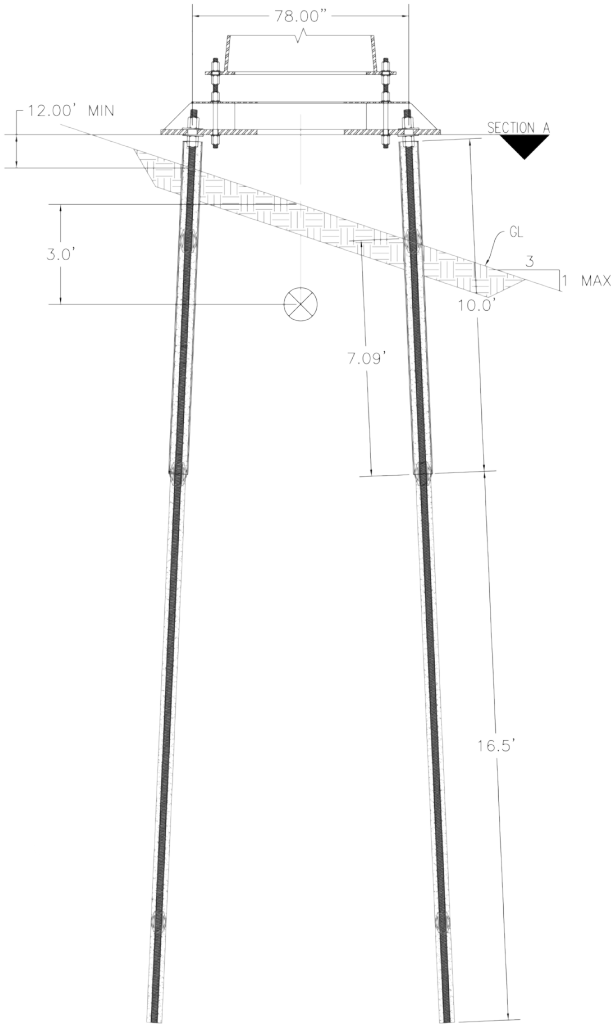
A micropile foundation consists of several small-diameter, drilled, and grouted reinforced foundations. For electric power line structure support such as that proposed for this Project, a series of up to 16 individual micropiles would be drilled in a circular array, as opposed to a larger conventional reinforced concrete pier foundation, as described above. One micropile is typically a small hole up to 8 inches in diameter at the ground line, excavated to a depth of up to 40 feet, depending on the properties of the soil or rock underlying the surface.

The piles would be constructed using high-strength steel casing, high-strength all-thread rebar, and grout. The high-strength all-thread rebar would be inserted into the hole and centered, with the surrounding annulus (i.e., empty space) would be filled with a non-shrink grout. The rebar would protrude above grade to be connected to a transition steel plate that would support the pole structure above grade. Loads from the pole structure would be transferred to the rebar, then transferred from the rebar to the grout to the surrounding soil. The steel casings would project a minimum of 1 foot above ground surface and the piles would connect to transition steel plates by either a steel cap or cast-in-place concrete cap connection. A diagram of a typical micropile foundation is provided in **Figure 2-12**.

Micropile Foundation - Belowground

*Not to Scale





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SOURCE: AECOM, 2013

TL 6975 San Marcos to Escondido Project

Figure 2-12
Typical Micropile Foundation

The micropiles are typically installed from a platform situated approximately 6 feet above the ground surface. The platforms and all equipment would be positioned by a truck-mounted crane. The platform would be supported on four to six telescoping legs that would be adjusted to support the platform on slopes. The drilling process would take place from the platform. The drills would be powered by generators or compressors that would either rest on the platform or be supported nearby on the ground. Following the installation of the micropile foundation, a line or boom truck would be used to remove the platform.

Steel Pole Installation for Concrete Pier and Micropile Foundations

Based on preliminary engineering and constructability review, it is anticipated that construction of power line structures would utilize ground equipment such as cranes, flatbed trucks, drill rigs, and excavators. As discussed below in Section 2.5.7, *Helicopter Use during Construction*, helicopters may be used during stringing activities and may be used for pole installation at pole locations 52 through 55 and 61 through 65. New steel poles would be delivered to the structure sites in two or more sections via flatbed truck and assembled on-site using a small truck-mounted crane. See Figure 2-9 for typical depictions of the standard pole types and foundations. After assembly, a large crane would be used to lift and set the pole sections into place on and secured to anchor bolts, which would either be embedded in the concrete foundation or, if micropile foundations are used, attached to the micropile foundations. Steel poles would require the installation of two 8-foot-long by 4-inch-wide grounding rods, up to 6 feet apart. The rods would be buried 8 to 18 inches below ground surface within the established work areas.

Direct-Bury Steel Pole Construction

To install the direct-bury steel poles, holes measuring up to 54 inches in diameter would be excavated by using a truck-mounted drill rig, by hand, or by blasting with the aid of a hand jack powered by an air compressor. The temporary work area would be within a 40-foot-diameter around the base of the pole. The diameter of the steel pole would measure 30 to 42 inches. Plywood sheeting and plastic covering would be used to cover the excavated holes until pole installation. The excavated soil would be temporarily stockpiled adjacent to the hole. Once the pole bases are installed, concrete would be used to backfill the holes around the bases. Any excess soil would be spread and compacted within 10 feet of the pole and as close to the pole as possible. Any additional excess soil would be dispersed evenly and compacted onto existing unpaved access roads where vehicle accessibility would be maintained. Direct-bury steel poles would require the installation of two 8-foot-long grounding rods, up to 6 feet apart connecting to the steel pole. The rods would be buried 8 to 18 inches below ground surface within the established work areas. Steel poles would include galvanized pole steps.

Other Considerations During Foundation Construction

It is not currently anticipated that blasting or dewatering would be required during construction of the Project, although either cannot be ruled out. A detailed discussion of each is found in Section 2.5.9, *Belowground Construction*.

2.5.5 Conductor Stringing

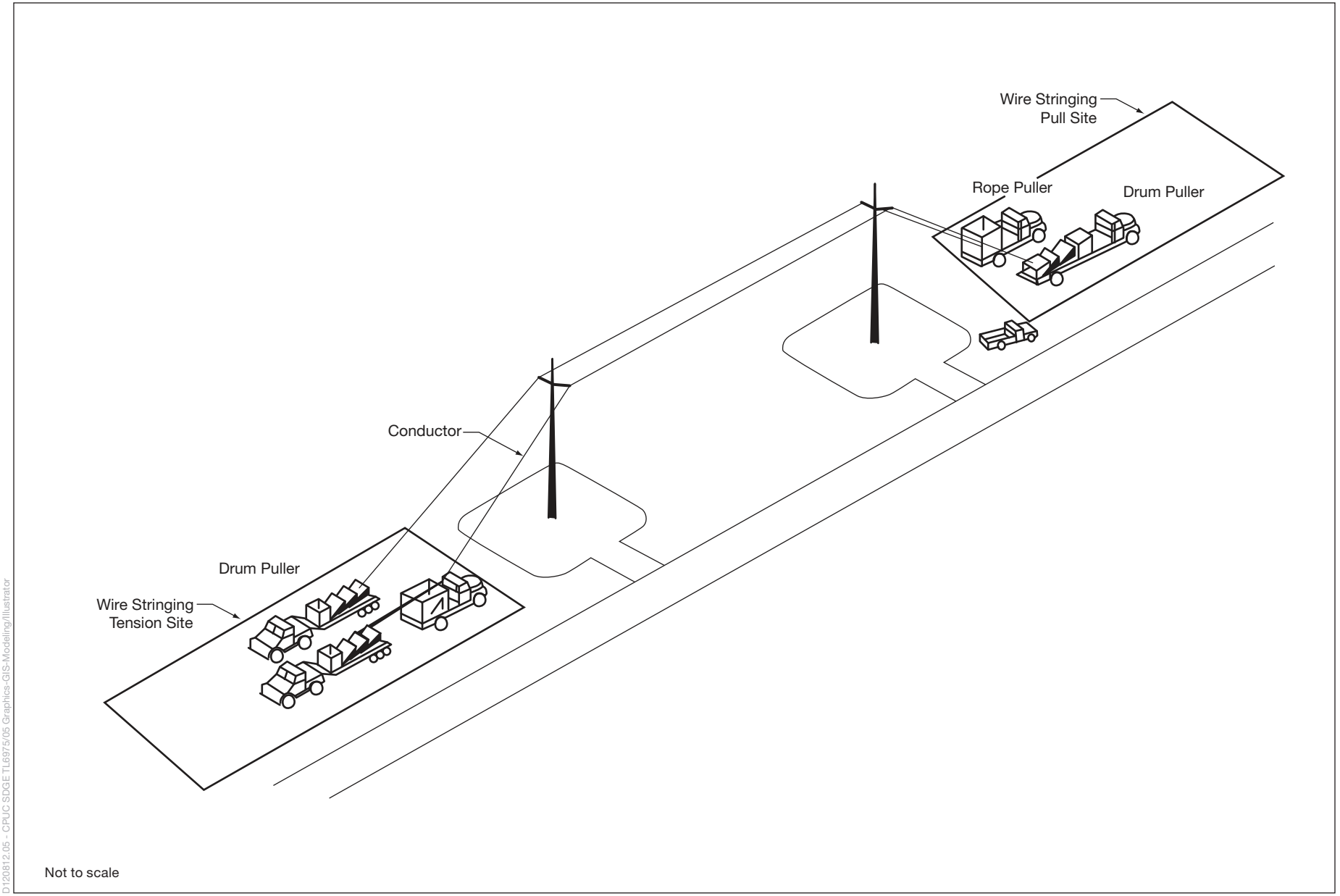
Following guard structure installation, SDG&E would coordinate with the California Independent System Operator (CAISO) to obtain all of the necessary line clearances prior to beginning conductor installation. This would ensure that the existing power lines could be taken out of service and that power could be redistributed to service centers and customers. SDG&E would coordinate line outages to maintain system reliability and construction personnel safety. Based on preliminary engineering, SDG&E does not anticipate any Project-based interruption of service to customers during construction.

The conductor stringing process is illustrated in **Figure 2-13**. Conductor stringing operations begin with the installation of travelers, or "rollers," on the bottom of each of the insulators using aerial man-lifts (bucket trucks). The travelers allow the conductor to be pulled through each structure until the entire line is ready to be pulled up to the final tension position. Following installation of the travelers, a sock line (a small cable used to pull the conductor) or the old conductor is pulled onto the travelers from structure to structure using aerial man-lifts traveling along the ROW. Once the sock line is in place, it is attached to a steel cable and pulled back through the travelers. The conductor is then attached to the cable and pulled back through the travelers using conventional tractor-trailer pulling equipment located at the stringing sites. Anchors would be required to stabilize the equipment. Alternatively, stringing may be conducted by helicopter for areas with limited access, as noted in the discussion in Section 2.5.7, *Helicopter Use during Construction*.

In some cases, sleeves or splices may be installed on the power line. This would occur when the conductor is slightly damaged during stringing operations or if the conductor is not long enough and needs to be joined to another segment. If the conductor is damaged, a repair sleeve would be wrapped around the outside of the conductor and pressed into place to protect the conductor. Full tension splices, or compression splices, would be utilized when the conductor is damaged too severely for a repair sleeve, when the conductor is not long enough to span between dead-end structures, or if stringing locations are spread too far apart. During full-tension splices, the two ends of the conductor are connected with the use of heavy-duty vices.

To tension the conductor, up to 21 designated stringing sites (described below) would be needed. The sites would also be needed for loading/unloading reel of conductor, string equipment, etc. These stringing sites would also be used to collect old conductors removed from the existing lines onto reels for transport offsite. Appendix A, TL 6975 Power Line Route Map, details the locations of all proposed stringing sites.

After the conductor is pulled into place, the sags between the poles would be adjusted. Pursuant to General Order 95, the conductor would be installed with a minimum ground clearance as determined by surrounding land uses, as described in **Table 2-11**. The conductor then would be clipped into the end of each insulator, the travelers removed, and vibration dampers and other accessories installed.



SOURCE: ESA, 2009

TL 6975 San Marcos to Escondido Project

Figure 2-13
Typical Construction Stringing Activity

ESA

TABLE 2-11
MINIMUM CONDUCTOR GROUND CLEARANCE

Conductor Voltage	Minimum Ground Clearance (feet)	Minimum Ground Clearance with Pedestrian Access Only (feet)
230 kV	30	25
138 kV	30	25
69 kV	30	25
12 kV	25	17

SOURCE: CPUC, 2015

For stringing operations, it takes up to three days to pull in three phases of conductor[7] for approximately 9,000 feet of power line. A helicopter may be used during stringing operations in Segment 2 to install the sock line that would be used to pull in the conductor. See Section 2.5.7, *Helicopter Use during Construction*, below for a description of helicopter use, if necessary for conductor stringing.

Stringing Sites

As noted above, up to 21 stringing sites would be established to provide a safe work space for installation and removal of overhead conductors. These stringing sites would generally be located adjacent to the new poles, as shown in Appendix A, TL 6975 Power Line Route Mapbook. The stringing sites would be up to 150 feet long by 20 feet wide, and located directly in line with, or offset from, the conductor. Each stringing site would require clearing an area up to 0.23 acre. As a result, in total the stringing sites would require up to 1.8 acres of land. Grading of the stringing sites is not anticipated, though depending on topography, some incidental grading may be required at stringing sites to create level pads for equipment.

Temporary Poles

Temporary poles would be used as needed. These poles would be used to temporarily hold conductors while work, including the installation of permanent poles and structures, is being completed in adjacent areas. It is anticipated that each of the temporary poles would be 40 to 60 feet height above ground and would require an approximate 20-foot-diameter work area, plus the use of the existing road. These poles would be in place for conductor transfer or stringing for up to five months. Each temporary pole location would be restored to its preconstruction condition.

Guard Structures

Bucket trucks may be utilized as guard structures during stringing activities. Where wooden poles are used as guard structures, installation requires the temporary use of an area measuring up to up to 1,500 square feet, depending upon guard structure configuration and location. The temporary work area is located in the immediate vicinity of the guard structure location. Guard structure

[7] In terms of electrical transmission for this Project, one phase is analogous to one conductor. A circuit consists of three phases, or conductors. In the context of the statement above, three phases of conductor refer to three strands of conductor.

installation, utilizing wood poles, would include excavating holes that would be up to 3 feet in diameter and 10 feet deep, along with an additional 14-foot by 25-foot temporary work area. Excavated soils would be temporarily stockpiled and replaced within the excavation following stringing activities. If boom trucks are used as guard structures, the temporary work area would also be 14 feet by 25 feet.

Guard Structure Installation

Prior to removing the existing conductor and installing the new overhead conductor, SDG&E would utilize temporary guard structures (i.e., poles) at road crossings, waterways, utility crossings, and other locations where the new conductor could come in contact with existing electrical and communication facilities, or vehicular and/or pedestrian traffic, in the event the line accidentally falls during stringing operations. Different types of guard structures may be used, depending on the site conditions, including boom and bucket trucks and wooden poles.

Where wooden poles would be used as guard structures, they typically are directly embedded wooden poles with a cross beam. Installation requires the temporary use of an area measuring up to 1,500 square feet, depending upon guard structure configuration and location. Guard structure installation, utilizing wood poles, would include excavating holes by auger that would be up to 3 feet in diameter and 10 feet deep. Excavated soils would be temporarily stockpiled and replaced within the excavation following stringing activities. A crane or line truck would lift the poles into place. No concrete foundations would be required to set the guard poles; no grading or other site work is anticipated. The temporary wooden guard poles would be removed following the completion of conductor stringing operations and the holes would be backfilled with excavated soil.

In some locations, such as paved areas, a boom or bucket truck may be used as a guard structure. Alternatively, SDG&E may use flaggers to temporarily hold traffic for brief periods of time while the overhead line is installed at road crossings. Traffic control is typically utilized for small roadway crossings. For extremely large crossings, such as freeways, both guard structures and traffic control may be used as well as netting between the guard structures.

A total of 50 guard structures would be installed at a total of 29 intersections (i.e., roadways, driveways, trails) along the Project alignment. The overcrossing between Poles 6 and 7 (Segment 1) would be completed using a guard structure. Traffic control would be required at all public roadway intersections regardless of the need for guard structures. SDG&E would acquire all required road crossing approvals, including implementation of any special guard structure procedures or requirements, as directed by each applicable land use jurisdiction.

2.5.6 Existing Facilities Removal

As previously described, construction of the Project segments would involve removing certain existing power line poles and structures (mainly wood but with a few steel structures). This would primarily occur in Segments 1 and 3, although the other segments also involve limited pole or structure removal. Many of the 10 poles to be removed in Segment 1 are wooden support poles located across the road from the existing power line. Removal of these poles would also eliminate the guy wires stretching over the roadways. In Segment 3, most of the nine poles to be removed are

located near Meadowlark Junction along San Elijo Road and at the Escondido substation. Refer to Appendix A, TL 6975 Power Line Route Mapbook, for the location of all poles to be removed.

The existing conductor (which are comprised of either aluminum/steel or copper) would be removed from the poles using wire trucks and pulling rigs. Guard structures would be utilized, as needed. For segments requiring reconductoring, such as Segment 3, existing hardware and insulators would be removed and replaced with new polymer insulators and hardware using cranes and aerial man-lifts. Crews may also climb poles to dismantle hardware.

The wooden poles would be removed completely and transported off-site by flatbed truck for disposal at an approved facility. The existing poles are treated with penta oil, creosote, chemonite, and/or chromated copper, depending on the year of installation. The base of the pole would be abandoned in place if it cannot be removed. In some cases, existing poles would be cut at ground level, with the remainder of the pole left in place to avoid impacts on sensitive resources.

If the base of the pole is removed, the void will be backfilled with soils from the pole replacement, or with native soil where excess soil is not available. If additional backfill material is required, clean decomposed granite would be used to backfill the old pole holes. Excess soil from the new holes would be placed on top of the decomposed granite.

The existing steel poles that would be removed from service would be dismantled by cranes and aerial man-lifts in sections. The sections would be transferred to a flatbed truck using a small truck-mounted crane. The steel poles would then be transported off-site for recycling or disposal at an approved facility. Individual steel member cutting (pole dismantling) is anticipated to be completed off-site. No torches are anticipated to be used on the Project right-of-way. If they are needed, the use of torches would be accounted for in the project-specific wildfire plan. Lattice tower removal is not anticipated as part of the Project. After the poles or structures have been removed, any existing concrete foundations would be jack hammered to up to 1 to 2 feet below grade; the debris would be removed and recycled or disposed of at an approved facility. In cases where there would be no excess soil from excavation of for a new pole or structure nearby, the hole would be backfilled with soil or materials similar to those in the surrounding area and the site would be restored.

All structural removal work would be completed from existing work pads (typically 35 feet by 75 feet) located at each existing pole site or temporary work areas for new structures, as needed. No new impact areas are anticipated to be required for pole removal. These areas would be kept clear of vegetation for operation and maintenance activities.

2.5.7 Helicopter Use during Construction

Though they may not be necessary based on actual field conditions at the time of construction, this analysis assumes that helicopters would be utilized as a construction tool for specific activities, including – but not limited to – stringing of overhead conductor, installation or removal of structures, and transportation of equipment associated with the Project. This use would be most likely to occur in Segments 2 and 3; however, the following analysis will assume use Project-wide. Two areas along Segment 2 where direct access may be challenging or the terrain would not allow safe work conditions are candidates for helicopter use. These two areas would include

Poles 52 to 55 (excluding Poles 54.1, 54.2, and 54.3 where no work is proposed) and Poles 61 to 65. SDG&E anticipates that light or medium-duty helicopters (e.g., K-Max and Astar) would be deployed. They would be utilized during daylight hours and flight paths would be limited to the existing SDG&E ROW, except for ingress and egress from the helicopter landing staging area – Palomar Airport. No incidental landing areas (ILAs) are expected to be required for the Project.

Helicopter activities would require up to 8 hours of total operation throughout Project construction. For instance, a helicopter may be used for 4 hours for conductor stringing along Segment 2. Upon completion of that task, a helicopter would not be needed again for two to three weeks, until the next section of line is ready to be pulled. SDG&E would comply with its Aviation Operations Manual that all helicopter operations must follow. This manual covers safety, roles and responsibilities, general flight operations, and training. Relative to the Project, this would include operating procedures that would help reduce the extent of noise exposure at sensitive receptors and reduce potential safety hazards (SDG&E, 2017).

2.5.8 Substation Construction

The Project would not include earthmoving construction activities at the San Marcos or the Escondido substation sites. As discussed previously in Section 2.4.1, *Substations*, a circuit breaker pad, a SF_6 circuit breaker, seven piers, and an A-frame would be installed at the San Marcos Substation. The new power line would connect from the A-frame to the Tie Line 6975 power pole via a single conductor.

At the Escondido Substation, an existing overhead conductor would be transferred from the 138 kV rack to an existing 69 kV bay position for the Project. Three existing 69 kV circuits would be transferred to different bay positions to accommodate this new circuit and avoid power line crossings. The last overhead spans (drop spans) of existing power Tie Lines 6908, 6934, and 689 would be relocated to available bay positions. A new concrete circuit breaker pad and SF_6 circuit breaker would be installed, and the old concrete circuit breaker pad and an oil containment wall would be removed from Bay 16 of the substation. To accommodate this, two foundation poles would be installed just south outside the substation. These new poles would replace five existing poles.

2.5.9 Belowground Construction

The general methods used to construct an underground distribution line are described in the following paragraphs. Within Segment 1, the existing underground distribution line adjacent to the Project would be reconductored. Based on the new pole positions, some trenching would be involved to intercept the existing underground conduit and reroute it to the new pole. Also described below is the installation of the AC interference mitigation system deep wells.

Belowground Distribution Line Construction

The general methods used to construct an underground distribution line are described in the following paragraphs.

Establish Workspace

To accommodate the installation of the underground duct banks, temporary workspaces centered on the duct bank alignments would be established. These areas would be cleared and graded, as needed, to provide a safe operating space for the construction equipment. The Project would include installing up to 360 feet of primary and secondary underground 12 kV conduit from new poles to intercept locations along existing conduit packages. A work space or up to 15 feet in width would be required to accommodate installation of the underground distribution line. A workspace with a total area of up to 0.10 acre would be established prior to construction.

12 kV Distribution Installation

Trenching

Prior to trenching, other utility companies would be notified to locate and mark existing underground utilities along the proposed underground alignment. Exploratory excavations (i.e., potholing) would also be conducted to verify the locations of existing facilities in the ROW. Coordination with the City of San Marcos, City of Escondido, and San Diego County would also occur in order to secure encroachment permits for trenching in the applicable ROW, as required. It is anticipated that some lanes of traffic on active roadways, such as West San Marcos Boulevard, would occasionally be closed during trenching activities. During lane closures, traffic controls would be implemented, as required by the encroachment permit.

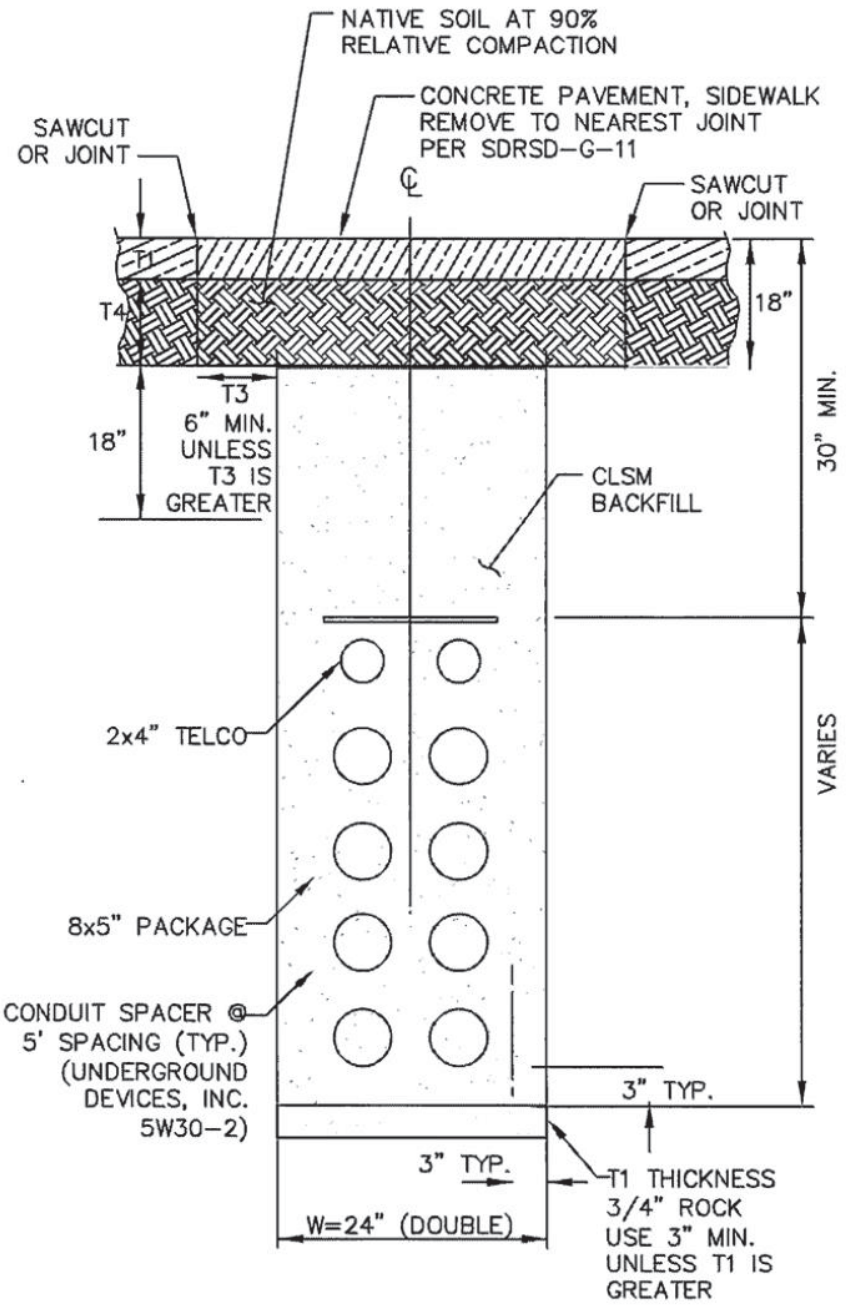
Duct Bank Installation

Duct banks[8] would be installed to intercept the existing conduit packages. Short trenches would be excavated from the pole to the duct bank location. As the trenches for the underground 12 kV duct banks are completed, SDG&E would install the cable conduits (separated by spacers) and pour concrete, slurry, or native soil around the conduits to form the duct banks (**Figure 2-14**). If the installation could not occur within one working day, the trench would be left open and covered with a metal plate until work commences again. The duct banks would typically consist of eight 5-inch-diameter PVC conduits, which house the electrical cables. The vertical configuration dimensions of the duct banks would be up to 1.5 feet wide by 2.7 feet tall.

The duct package generally consists of a single 600-volt to 12 kV distribution circuit. Where the distribution duct bank would cross other substructures that operate at normal soil temperature (e.g., gas lines, telephone lines, water mains, storm drains, sewer lines), a minimal radial clearance of 12 inches would be required. In instances where the duct bank would be installed parallel to other substructures, a minimum radial clearance of 24 inches would be required, although clearances of 2 to 5 feet are preferred from an operations standpoint.

Where the distribution duct bank would cross other substructures that operate at normal soil temperature (e.g., gas lines, telephone lines, water mains, storm drains, sewer lines), a minimal radial clearance of 12 inches would be required. In instances where the duct bank would be installed parallel to other substructures, a minimum radial clearance of 24 inches would be

[8] A duct bank is a bundle of PVC conduits, which are surrounded by a protective casing (either concrete or metal). These PVC conduits are used to carry electrical or data cables as part of a utility network.



DETAIL O

ASPHALT THICKNESS ENCOUNTERED IN THE
POTHOLING VARIED BETWEEN x & x" THICK,
UNDERLYING CONCRETE FOUND APPROXIMATELY x & x" THICK.

SOURCE: SDGE, 2018

TL 6975 San Marcos to Escondido Project

Figure 2-14
Typical Duct Bank

required. Clearances of 2 to 5 feet would be preferred. Where the duct banks cross or run parallel to substructures that operate at temperatures significantly exceeding normal soil temperature (e.g., other underground power line circuits, primary distribution cables, steam lines, heated oil lines), additional radial clearance may be required.

Cable Pulling, Splicing, and Termination

After installation of the conduit, SDG&E would install the distribution cable in the duct banks. To pull the cable through the ducts, a cable reel would be placed at one end of the section, with a pulling rig at the other end. A large rope would then be pulled through the duct using a pull line; the rope would then be attached to the pulling eyes to pull the cable back into the duct. A lubricant would be applied to the cable as it enters the duct to decrease friction during pulling. The electric cables and the existing communication cable would be pulled through the individual ducts at the rate of two or three segments between vaults per day.

AC Interference Mitigation System Deep Wells

Deep Well Installation

As discussed in Section 2.4, *Project Components*, an AC interference mitigation system would be installed as part of the Project to address safety concerns and the effects of AC interference on existing natural gas lines near the Project (Aegion|Corrpro, 2018). The integral part of this mitigation system is the 11 deep wells that would house grounding rods that would direct errant AC away from the existing gas lines.

The wells would be located in public ROW in the cities of San Marcos and Carlsbad (i.e., West San Marcos Boulevard, Palomar Airport Road). Each well would be 100 feet deep and 6 inches in diameter, though the upper 30 feet would be 8 inches in diameter to allow for a PVC casing. Each well would contain a copper grounding rod connected to a copper wire, in turn connecting the well to a SSD, and backfilled with conductive concrete. The wire would be laid in trenches up to 5 feet in depth to match pipeline depth. The trenches would be excavated using backhoes. Once the wire is connected to the pipe and SSD mechanisms, the trench would be backfilled and ground cover returned to its original condition.

After identification of known utilities in the work area, the upper 10 feet would be excavated using a hydrovac system. This method would use high pressure water or air to dislodge compacted soil and vacuum the spoils to a storage receptacle. The rest of each well would be excavated using a truck-mounted mud rotary drill. This method incorporates the use of an impact hammer and drill bit. Cuttings would be removed by water circulating through the drill head. The cuttings and water would be directed to a desander, which would sort the solid materials out and directly the drilling slurry back into the system for reuse.

In addition to lubricating the drill bit, the drilling slurry would serve to stabilize the wall of the well, maintain wall integrity, and temporarily impede the penetration of groundwater into the well. Spoils collected in the desander would be collected in a vacuum truck or bin and taken for sampling at an SDG&E facility. If determined not to be contaminated, the spoils would be held

for disposal with other waste at the SDG&E facility. If found to be contaminated, disposal would occur at a waste site approved and permitted to accept such material.

It is estimated that installation of these wells would require up to 2,000 gallons of water. The water would be either delivered to the work area by truck or from nearby hydrants, with approval from the appropriate owner/operator. The volume of spoils to be removed is estimate to be up to 3,000 gallons.

Coupon Test Stations

The coupon test stations are also underground features of the mitigation system. Like the well connections the pipeline, trenches would be excavated to install the coupon near the pipe and place the wires connecting it to the testing mechanism. The test station would be located immediately above the coupon site. Once the connections are made, the trenches would be backfilled and ground cover returned to its original condition.

Dewatering

Dewatering may be necessary in some locations. The geotechnical study conducted for the Project indicated groundwater levels ranging from 4 to 20 feet below ground surface (GEOCON Inc., 2017). Pole foundation excavations could yield up to 111,000 gallons, while no dewatering is anticipated for the trenches. Prior to construction, SDG&E would acquire coverage from the Regional Water Quality Control Board under the wavier of Water Discharge Requirements, Resolution R9-2014-0041, *Conditional Waivers of Waste Discharge Requirements for Low Threat Discharges in the San Diego Region*. Construction dewatering and dredged material disposal to land are among the activities covered by this waiver.

Blasting

If rock is encountered during excavation and cannot be removed by digging, a hydraulic rock drilling and splitting (rock-splitting) procedure would be used to minimize trenching or drilling time, depending on site-specific conditions. The procedure involves drilling a hole in the rock and inserting a non-blasting cartridge of propellant. Activation of the cartridge is mechanically initiated by an impact generation device. This hydro-fracturing effect causes controlled tensile crack propagation in the rock, but does not result in flyrock, noxious fumes, or ground vibrations.

In the unlikely event that rock blasting would be necessary in areas where solid rock is present and the hydraulic rock drilling and splitting procedure would be ineffective, the following blasting procedure would be executed to minimize both drilling time and noise impacts. The procedure would involve drilling 3-inch-diameter blast holes and inserting explosives. Blasting caps would be connected and a non-electric detonator would be employed. Flyrock protection would be installed prior to blasting and seismographs would be placed in proximity to measure and record peak particle velocity and air blast levels at various distances from the blast site. Dust control would include a combination of steel plate, plus geo-textile fabric with chain-link fence, covering and wetting the blasting surface. If blasting is necessary, the blasting contractor would be required to obtain a blasting permit and explosive permit per applicable local regulatory

ordinances. BMPs would be used before, during, and after all Project-related blasting activities, where necessary, to prevent erosion and off-site sedimentation.

2.5.10 Erosion and Sediment Control and Pollution Prevention During Construction

Soil disturbance would occur at pole installation locations along the power line and at temporary work areas. As described above, these areas would require vegetation clearing and minor grading.

SDG&E would adhere to all applicable National Pollutant Discharge Elimination System (NPDES) Construction General Permit requirements. Projects that disturb 1.0 acre or more of soil are required to obtain coverage under California State Water Resources Control Board (SWRCB) *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* Order No. 2009-0009- DWQ, as amended by Orders 2010-0014-DWQ and 2012-006-DWQ (General Construction Permit). This permit is intended to control the discharge of pollutants from point sources. The Construction General Permit requires the applicant to develop a Stormwater Pollution Prevention Plan (SWPPP) that includes a selection of BMPs to control erosion, discharge of sediments, and degradation of water quality. Furthermore, the BMPs included in the SWPPP must be monitored and revised throughout the construction process, as needed to respond to field conditions. In addition, SDG&E would implement its *BMP Manual for Water Quality Construction* (SDG&E, 2011). This manual includes BMPs that reduce impacts on soil loss and help ensure BMP usage is consistent with applicable rules and regulations.

2.5.11 Water Supply and Use

Water would be used during construction of the Project as needed for dust control on access roads, for soil compaction during grading, establishment of landscaping, dust suppression, and concrete mixing. Exposed surfaces would be watered twice-daily, or as required in the Project's SWPPP. The Project would require up to 3,079,000 gallons of water during construction and restoration (SDG&E, 2017). SDG&E anticipates that the majority of the water supply for the Project would come from Vallecitos Water District (VWD). SDG&E has received a water availability letter (i.e., "will serve" letter) for the Project which confirms that VWD has sufficient water supply to support the needs of the Project (SDG&E, 2018b). Water would be supplied primarily from a temporary connection to existing hydrants along Segments 1, 2, and 3. In some cases, water trucks would be required to truck water from these nearby facilities to service remote stretched of the Project alignment.

2.5.12 Waste Management, Cleanup, and Post-Construction Restoration

During construction activities, waste and minimal surplus soil would be generated due to pole removal, pole foundation excavation, and general construction activities (e.g., personal waste generated by workers and personnel). Surplus soils are anticipated to be minimal, as it would be used to refill holes left after removal of the existing poles. General waste from workers and

personnel is also expected to be minimal through waste control requirements includes in contract specifications. Disposal of removed poles is discussed below.

SDG&E would restore all areas temporarily disturbed by Project activities (including trenches, stringing sites, structure removal sites, and staging areas) to preconstruction conditions, consistent with fire break requirements. Restoration would include – but not be limited to: reseeding; planting replacement vegetation; restoring removed curbs, gutters, and sidewalks; repaving all removed or damaged paved surfaces; or replacing structures (such as fences), as appropriate. SDG&E does not anticipate using water for these efforts. In addition, all construction materials and debris would be removed from the Project area and recycled or properly disposed of off-site at licensed disposal facilities. See **Table 2-12** for information on construction material disposal. The construction contractor would be required to restore construction work areas to pre-construction condition. SDG&E would conduct a final survey to ensure that cleanup activities have been successfully completed. Final environmental impacts would be documented in a post-construction report.

TABLE 2-12
STANDARD DESTINATION OF RETIRED PROJECT COMPONENTS

Project Structure, Material, or Component	Common End Use or Destination	Estimated Quantities
Wood Power Line Structures/Poles	Sanitary disposal	120 tons
Conductor Cable	Recycled	30,000 feet
Insulators	Sanitary disposal	2 tons
Scrap Steel, Copper, and Other Metal	Recycled	1 ton
Concrete	Recycled	1 ton
Soils	Reused on-site or disposed of pursuant to applicable laws	2,800 cubic yards
Batteries	Recycled	N/A

SOURCE: SDG&E, 2017

To reduce anticipated potential impacts on vegetation resulting from development and use of proposed staging yards, proposed and existing access roads, and public roads may occur, SDG&E proposes to conduct restoration activities under the direction of a habitat restoration specialist. Temporarily disturbed areas where native vegetation would be affected, and that would not need to be maintained in a cleared state for future access and use, would be enhanced through vegetation restoration, habitat reclamation, or a combination of the two. Habitat reclamation involves the elimination of existing exotic vegetation (i.e., weed abatement) to facilitate the natural recolonization of a native habitat. Habitat restoration entails a range of techniques, including seeding, imprinting, and soil and plant salvage. The specific technique, type of equipment, and number of personnel required would depend on the size of the restoration area and the condition of the habitat, including the soil.

Post-construction activities would also include erosion control and trash and debris removal immediately following completion of construction. Where land is rented from private landowners (such as staging yards), post-construction restoration would be completed in consultation with the

landowner. All disturbed areas such as access roads and staging yards would be regraded to existing contours using a grader. Trenches within public roadways would be restored using rollers, pavers, graders, and concrete trucks.

Removed wood poles would be reused, recycled, or disposed. Non-reusable treated wood would be disposed of in a composite-lined portion of a municipal solid waste landfill approved by the Regional Water Quality Control Board, potentially including the Otay Landfill, which is located approximately 40 miles southeast of the Project site.

Temporary Work Areas

Work areas would be required for construction/installation of new facilities, removal of existing facilities, and storage and staging of construction equipment and materials within work areas. Following construction any work space not required for safety during operation and maintenance would be restored, as feasible, to pre-construction conditions following the completion of the Project.

2.6 Operation and Maintenance

2.6.1 General Project Operation and Maintenance Activities and Practice

This section describes the standard operation and maintenance (O&M) activities and procedures that SDG&E currently conducts and would continue to conduct along the Project alignment. For several years, SDG&E has continuously operated the facilities that would be modified by the Project. Following construction of the Project, SDG&E would continue to conduct these activities to be consistent with its standard operating procedures, including the Subregional NCCP Operational Protocols (see Section 3.4, *Biological Resources*). No change in SDG&E's O&M practices is anticipated or included as part of the Project. All O&M procedures would be conducted in accordance with CPUC General Order 131-D. If future O&M work associated with the Project is not exempted from CPUC authorization under General Order 131-D, supplemental CEQA review as part of commission authorization would be conducted.

SDG&E would regularly inspect, maintain, and repair Tie Line 6975, pending agency review of the Project and following completion of its construction. These activities would involve both routine preventive maintenance and emergency procedures to maintain service continuity. SDG&E would perform aerial and ground inspections of the proposed facilities and patrol above-ground components biannually. Helicopters would be used twice a year, once for visual inspection and once for infrared inspection. Inspection for corrosion, equipment misalignment, loose fittings, and other common mechanical problems would be performed at least every three years (per CPUC General Order 165) for power lines. These activities are substantially the same as existing O&M activities along Segments 1, 2, and 3, although they would take place in new locations along Segment 2.

Because of the additional structures and hardware, Segment 2 would require more inspections, with more items that could require repair or replacement, which would result in more trips to the segment relative to existing conditions. The miles traveled by light-duty trucks per month would increase from 156 to 168 miles, primarily due to the additional inspections required. Based on the estimated maintenance the Project would require, overall miles traveled per month would be up to 252, as compared to the 247 miles currently traveled per month.

The Project's slight increase in maintenance activities and related miles traveled would be offset by the decrease in maintenance activities resulting from the proposed pole replacement and reconductoring/re-energizing of the existing de-energized line. The existing power line alignment currently requires some maintenance activities that would no longer be needed because of the installation of steel poles and reconductoring/re-energizing of the existing de-energized line. The existing wooden poles require intrusive inspections every 10 years, which would no longer be necessary with the new steel poles. The de-energized power line requires insulator washing four times a year. This activity would no longer occur once the power line is re-energized and new insulators installed. This would result in a decrease in heavy truck use and mileage, from 91 down to 84 miles per month. De-energized lines on Segment 3 are currently inspected and maintained the same way as energized lines; therefore, when the line is reconductored as proposed, it would not require additional maintenance activities or additional trips along this segment.

2.6.2 Road Maintenance

Road maintenance includes grading of existing access roads, installation of BMPs specified in the SWPPP, spot repair of erosion sites, and vegetation trimming, as needed. The specific BMPs to be installed would be based on site conditions, but typical BMPs for road maintenance include fiber rolls, sandbag barriers, diversion berms, and drainage swales. SDG&E performs road maintenance, as necessary. This may require use of a motor grader, water truck, and pick-up trucks. Typically, road maintenance occurs every other year, depending on the condition of the road (i.e., substantial rain may accelerate erosion and may require more frequent repairs). The new access road and road spurs as part of the Project would be integrated into the road maintenance program.

2.6.3 Pole Structure Brushing and Tree Trimming

In accordance with firebreak clearance requirements in Public Resources Code Section 4292 and Title 14, Section 1254 of the California Code of Regulations, SDG&E would trim or remove flammable vegetation in the area surrounding subject power line poles to reduce potential fire and other safety hazards. One-person crews typically conduct this work using mechanical equipment, consisting of chain saws, weed trimmers, rakes, shovels, and leaf blowers. SDG&E typically inspects poles on an annual basis to determine if brushing is required.

In accordance with tree and power line clearance requirements in Public Resources Code Section 4293 and Title 14, Section 1256 of the California Code of Regulations, as well as CPUC General Order 95, SDG&E would trim trees and vegetation to manage fire and safety hazards and ensure electrical reliability. Regular inspection, regardless of habitat type, is necessary to

maintain proper line clearances. SDG&E conducts tree-trimming activities with a two-person crew in an aerial lift truck and a chipper trailer. SDG&E typically inspects trees in its service area for trimming needs on an annual basis.

2.6.4 Application of Herbicides

An application of herbicides may follow the mechanical trimming of vegetation to prevent vegetation from recurring. This activity generally requires one person in a pickup truck spraying around the base of the pole structure within a radius of up to 10 feet. The employee either walks from the nearest access road to apply the herbicide or drives a pickup truck directly to each pole structure location as access permits. This occurs annually during the wet season (i.e., fall through spring), prior to the last rains of the season. SDG&E practices application according to its annual "Pest Control Recommendation," which includes guidance on quantity, pesticide mix, hazards, restrictions, etc. This application method would be used for all Project facilities.

2.6.5 Equipment Repair and Replacement

Pole structures may support a variety of equipment, such as conductors, insulators, switches, transformers, lightning arrest devices, and line junctions as well as other electrical equipment. As a part of ongoing operation and maintenance activities once the Project has been completed, SDG&E may need to add, repair, or replace equipment to maintain uniform, adequate, safe, and reliable service. SDG&E may remove and replace an existing structure with a larger or stronger structure at the same location or at a nearby location because of damage or changes in conductor size. Equipment repair or replacement requires crew access to the equipment to be repaired or replaced.

2.6.6 Use of Helicopters

SDG&E uses helicopters in the visual inspection of overhead facilities and routinely patrols power lines. SDG&E uses helicopters for patrolling power lines during trouble jobs (e.g., outages or service curtailments) and for conducting maintenance activities in areas that have no vehicle access or are in rough terrain, such as sections of Segments 2 and 3. Helicopter use for routine inspections would occur twice a year for a duration of up to 1 hour per inspection; once for visual inspection and once for infrared inspection. In instances of unplanned repair or fault patrol, each occurrence would also be up to 1 hour in duration.

2.7 Anticipated Permits and Approvals

The CPUC is the Lead Agency under CEQA for the Project. SDG&E must comply with the CPUC's General Orders, including CPUC General Order 131-D, which promulgates permitting requirements for the construction of the Project.

In addition to the PTC, it is expected that SDG&E would need to obtain approval for the Project from other federal, state, and local agencies with jurisdiction over the area and/or resources potentially affected, as required and outlined in **Table 2-13**.

TABLE 2-13
ANTICIPATED POTENTIAL PERMIT, APPROVAL, AND CONSULTATION REQUIREMENTS

Permit/Approval/Consultation	Agency	Jurisdiction/Purpose
Federal Agencies		
Congested Area Plan	FAA	Use of helicopters within populated areas will be coordinated with the FAA, as applicable.
State Agencies		
Permit To Construct (PTC)	CPUC	Overall Project approval and CEQA review
NPDES–General Construction Permit	State Water Resources Control Board	Stormwater discharges associated with construction activities disturbing more than 1.0 acre of land.
Local Agencies[a]		
Encroachment Permit and Traffic Control Plan(s)	Cities of San Marcos, Carlsbad, Escondido, and San Diego County	Construction within, under, or over city roadways (West San Marcos Blvd, Palomar Airport Road, South Rancho Santa Fe Road, San Elijo Road, Country Club Road, Kauana Loa Drive, and Auto Park Way)

NOTES:

Table contents based on preliminary engineering and subject to change.

[a] Noise variance approvals are not included herein because SDG&E would meet and confer with local agencies where construction is anticipated to exceed noise limits published within the applicable local noise codes. Actual noise variances would not be procured; therefore, this process is not listed within this table.

SOURCE: SDG&E, 2017, 2018d

2.8 Applicant Proposed Measures

SDG&E proposes to incorporate Applicant Proposed Measures (APMs) to avoid or reduce potential impacts that otherwise could be caused by the Project. These are considered part of the Project in this analysis and are included as enforceable measures in Chapter 5, *Mitigation Monitoring Reporting and Compliance Program*. These Project features are also discussed in the context of the relevant environmental resource analyses presented in Chapter 3.

If – through its independent analysis and judgement – CPUC determines that any APM would not reduce or avoid substantial adverse changes in the significance of a potential impact to below the level of significance, the APM(s) will be supplemented or superseded by mitigation put forth by CPUC under its authority as lead agency pursuant to CEQA Guidelines Section 15041. The appropriate environmental resource analyses in Chapter 3 present CPUC's assessment of the effectiveness of APMs and any necessary mitigation measures, which are also included in the Project's Mitigation Monitoring Reporting and Compliance Program (MMRCP, Chapter 5).

Table 2-14 below identifies the APMs that are proposed by SDG&E for this Project for each resource area.

TABLE 2-14
APPLICANT PROPOSED MEASURES

APM Number	Description
BIO-1	SDG&E will conduct all construction and operation and maintenance activities in accordance with NCCP Operational Protocols to avoid and minimize impacts on biological resources.
BIO-2	All earth-moving equipment will be free of mud and vegetative material before being mobilized onto work areas associated with the Project.
BIO-3	Except when not feasible due to physical or safety constraints, all Project construction vehicle movement will be restricted to the Project work areas, existing roads, and access roads constructed as a part of the Project and mapped by SDG&E in advance of construction. Approval from a biological monitor will be obtained prior to vehicle travel off of existing access roads.
BIO-4	Civil and land survey personnel will keep survey vehicles on existing roads. During Project surveying activities, brush clearing for footpaths, line-of-sight cutting, and land surveying panel point placement in sensitive habitat prior approval will be required from the Project's biological monitor. Hiking off roads or paths for survey data collection will be allowed year-round as long as all of the other applicable APMs are met.
BIO-5	Prior to the start of construction, the boundaries of sensitive plant populations that require protection will be delineated with clearly visible flagging or fencing by a qualified biologist. The flagging and/or fencing will be maintained in place for the duration of construction. Flagged and fenced areas will be avoided to the extent practicable during construction activities in that area. If impacts on sensitive plant species are unavoidable, SDG&E will perform soil and plant salvage activities to enhance recovery of these special-status plants, consistent with the provisions in the Enhancement Section 7.2.1 of the NCCP. These include the stockpiling of native soil in the area where Nuttall's scrub oak and wart-stemmed Ceanothus occur and top soil replacement after construction. Quality assurances and success criteria milestones for the restoration area as a whole will conform to the standards provided in Enhancement Section 7.2.1 of the NCCP.
BIO-6	***Coastal California Gnatcatcher.*** Prior to construction, SDG&E shall retain a qualified biologist to conduct surveys for the coastal California gnatcatcher in suitable habitat, to determine if any active nests are within or in the immediate vicinity of proposed construction activities. If feasible, SDG&E will avoid construction during the peak breeding season (February 15 – August 31) for coastal California gnatcatcher and migratory birds. When it is not feasible to avoid trimming or removal of vegetation or during the peak breeding season, SDG&E will perform a site survey in the area where the work is to occur. Trimming or removal of vegetation during the peak breeding season will require a preconstruction survey by a qualified biologist to confirm that active nests will not be affected. This survey will be performed to determine the presence or absence of nesting birds. If an active nest (i.e., containing eggs or young) is identified within the construction area during the survey, work will be temporarily halted and redirected away from the site. The qualified biologist in the field will determine a no-work buffer zone around the nest of sufficient size and dimensions that construction activities will not result in disturbance or direct removal of the active nest, or will not cause a breeding bird to abandon its nest. If the nesting and/or breeding activities are being conducted by a federal or state-listed species, SDG&E will consult with the USFWS and CDFW as necessary. Monitoring of the nest will continue until the birds have fledged or construction is no longer occurring on site. ***Migratory Birds.*** Trimming or removal of vegetation during the peak breeding season (February 15 to August 31) will require a pre-construction survey by a qualified biologist to confirm that active nests will not be affected. If an active nest is detected within the construction area during the survey, work will be temporarily halted and redirected away from the site. The qualified biologist in the field will determine a no-work buffer zone around the nest of sufficient size and dimensions that construction activities will not result in disturbance or direct removal of the active nest, or will not cause a breeding bird to abandon its nest.
BIO-7	If a raptor nest is observed during preconstruction surveys, a qualified biologist would determine if it is active. If the nest is determined to be active, the biological monitor would monitor the nest to ensure nesting activities and/or breeding activities are not substantially adversely affected. If the biological monitor determines that Project activities are disturbing or disrupting nesting and/or breeding activities, the monitor will make recommendations to reduce the noise and/or disturbance in the vicinity of the nest.
BIO-8	A biological monitor will be present during all ground-disturbing and vegetation removal activities. Immediately prior to initial ground-disturbing activities and/or vegetation removal, the biological monitor will survey the site to ensure that no special-status species will be impacted.
BIO-9	Wherever possible, vegetation will be left in place or mowed, instead of grubbed, to avoid excessive root damage and to allow for regrowth and to minimize soil erosion.

TABLE 2-14 (CONTINUED)
APPLICANT PROPOSED MEASURES

APM Number	Description
CUL-1	Prior to the initiation of construction or ground-disturbing activities, all SDG&E contractors and subcontractor personnel will receive training regarding the appropriate work practices necessary to effectively implement the following APMs and comply with the applicable environmental laws and regulations. The training will address the potential for exposing subsurface cultural resources and recognizing possible buried resources. The training will include the procedures to be followed upon discovery or suspected discovery of archaeological materials, including Native American remains, and their treatment.
CUL-2	Prior to construction, a qualified archaeological consultant will be retained by SDG&E to complete an analysis and assessment of the potential to disturb resources that were identified during the initial studies from major ground-disturbing activities. The analysis and assessment will be prepared to meet regulatory requirements. Project sites that require testing for a significance determination or data recovery for significant sites, will be treated on a case-by-case basis using all applicable criteria. One area, the San Marcos High School area, has currently been identified as a site that would require further testing and or data recovery.
CUL-3	If grading or road improvements are to be conducted along existing access roads that contain unevaluated or NRHP- or CRHR-eligible resources, monitoring by a qualified archaeological monitor will occur where the access road crosses the site or is located within the boundaries of a site. If surface expressions of the site (i.e., artifacts) are present within the road, equipment blades will be lifted when traversing the site. Additionally, all vehicles will remain on existing dirt roads and/or new access routes identified for the Project. If needed, additional overland travel or access routes will be reviewed by SDG&E's Cultural Resource Specialist, and appropriate avoidance measures and monitoring will be implemented.
CUL-4	Native American monitoring may be implemented for portions of the Project that have the potential to affect unidentified TCRs. The role of the Native American monitor will be to observe Project construction in mapped sensitive areas and facilitate communication of tribal concerns to the qualified archaeologist, the SDG&E Cultural Resources Specialist, and/or construction personnel and tribal council.
CUL-5	A qualified archaeologist will attend preconstruction meetings, as needed, to consult with the excavation contractor concerning excavation schedules, archaeological field techniques, and safety.
CUL-6	Known cultural resources that can be avoided will be demarcated as ESAs. Construction crews will be instructed to avoid disturbance of these areas. A qualified archaeological monitor, under the direction of the qualified archaeologist, will monitor ground-disturbing activities in the vicinity of all ESAs and areas determined to have a high potential for buried cultural deposits within the Project Area. The requirements for archaeological monitoring will be noted in the preconstruction training and reiterated at construction tailboards, as appropriate. During construction, if ESA fencing has been established and the possibility of buried cultural deposits is determined to be low after initial ground disturbance, the onsite qualified archaeological monitor may determine that monitoring is no longer required in that area. The archaeologist's and monitor's duties will include monitoring, evaluating any finds, analyzing collected materials, and preparing a monitoring results report conforming to guidelines for Archaeological Resource Management Reports.
CUL-7	An archaeological monitoring results report (with appropriate graphics), which describes the results, analyses, and conclusions of the monitoring program, will be prepared and submitted to SDG&E's Cultural Resources Specialist following termination of construction activities in a given area when the monitoring program is no longer required. Any new cultural sites or features encountered will be recorded with the SCIC at San Diego State University.
CUL-8	All collected cultural remains will be cataloged and permanently curated with an appropriate institution. All artifacts will be analyzed to identify function and chronology as they relate to the history of the area. Faunal material will be identified as to species.
CUL-9	In the event that cultural resources are discovered, the archaeologist will have the authority to divert or temporarily halt ground disturbance to allow evaluation of potentially significant cultural resources. The archaeologist will contact SDG&E's Cultural Resource Specialist at the time of discovery. The archaeologist, in consultation with SDG&E's Cultural Resource Specialist, will determine the significance of the discovered resources. SDG&E's Cultural Resource Specialist must concur with the evaluation procedures to be performed before construction activities are allowed to resume. If the discovery is not significant; no further work is required. For significant cultural resources, preservation in place shall be the preferred manner of mitigating impacts. For resources that cannot be preserved in place, a Research Design and Data Recovery Program will be prepared and carried out to mitigate impacts.

TABLE 2-14 (CONTINUED)
APPLICANT PROPOSED MEASURES

APM Number	Description
PALEO-1	Prior to the initiation of construction or ground-disturbing activities, all SDG&E contractor, and subcontractor personnel will receive training regarding the appropriate work practices necessary to effectively implement the APMs and to comply with the applicable environmental laws and regulations. The training will address the potential for exposing paleontological resources and procedures to be followed upon discovery or suspected discovery.
PALEO-2	A qualified Project paleontologist (or qualified paleontological monitor working under the direction of a qualified Project paleontologist) will attend a preconstruction meeting, as needed, to consult with the excavation contractor concerning excavation schedules, paleontological field techniques, and safety.
PALEO-3	A qualified paleontological monitor will work under the direction of the qualified Project paleontologist and will be on site to observe excavation operations that involve the original cutting of previously undisturbed deposits with high or moderate paleontological resource sensitivity.
PALEO-4	Prior to construction, a paleontological resource consultant will be retained by SDG&E to complete an analysis and assessment of the potential to disturb resources from major ground-disturbing activities, such as facility pad grading, trenching, or new access road grading.
PALEO-5	In the event that fossils are encountered, the Project paleontological monitor will have the authority to divert or temporarily halt construction activities in the area of discovery to allow recovery of fossil remains in a timely fashion. The Project paleontological monitor shall contact SDG&E's Cultural Resource Specialist at the time of discovery. The paleontologist, in consultation with SDG&E's Cultural Resource Specialist, will determine the significance of the discovered resources. SDG&E's Cultural Specialist must concur with the evaluation procedures to be performed before construction activities are allowed to resume. If the resource is determined to be significant, it may be necessary to set up a small screen washing operation on site because of the potential for small fossil remains. If fossils are discovered, the paleontologist (or paleontological monitor) will recover them along with pertinent stratigraphic data. Because of the potential for recovery of small fossil remains, such as isolated mammal teeth, recovery of bulk sedimentary-matrix samples for offsite wet screening from specific strata may be necessary, as determined in the field. Fossil remains collected during monitoring and salvage will be cleaned, repaired, sorted, cataloged, and deposited in a scientific institution with permanent paleontological collections. A final monitoring report will be completed that outlines the results of the mitigation. The report will discuss the methods used, stratigraphic sections(s) exposed, fossils collected, and significance of recovered fossils.
HAZ-1	A Health and Safety Plan will be prepared and implemented during construction. The Health and Safety Plan will describe the anticipated hazards that construction workers may encounter while working on the Project, the safety measures that must be taken to address those hazards, and the necessary training requirements for personnel working on the Project. Safety hazards and applicable federal and state occupational standards will be identified in conjunction with the development of appropriate response actions, as well as a protocol for accident reporting. The Health and Safety Plan will also identify security and safety requirements for staging areas, storage yards, excavation areas, and any other areas of the Project where hazards may exist during construction activities. In addition, information regarding medical kits, safety equipment, and evacuation procedures will be outlined in the Health and Safety Plan. A qualified safety field representative will be present on site to observe and document adherence to the Health and Safety Plan as needed. The Health and Safety Plan will be prepared by the SDG&E construction contractor and will be available immediately prior to construction.
PS-1	SDG&E will provide the public with advance notification of construction activities. Concerns related to dust, noise, and access restrictions with construction activities will be addressed within this notification.
PS-2	All construction activities will be coordinated with the property owner or authorized agent for each affected park, trail, or recreational facility prior to construction in these areas.
PS-3	As needed, signs will be posted directing vehicles to alternative park access and parking, if available, in the event construction temporarily affects parking near trailheads.
PS-4	All parks, trails, and recreational facilities that are physically impacted during construction activities and are not directly associated with the new permanent facilities, will be returned to an approximate pre-construction state, while still allowing for SDG&E to safely operate and maintain the facilities, following the completion of the Project. SDG&E will replace or repair any damaged or removed public equipment, facilities, and infrastructure in a timely manner.
TRA-1	If construction requires lane closures, traffic delays, or other encroachment of construction activities within public travelways, SDG&E will adhere to local traffic control regulations and establish a traffic control plan as needed to comply with local ordinances. Traffic control plans will describe signage, flaggers, or other controls to be used to regulate traffic where necessary and to maintain a safe transportation corridor during construction.

TABLE 2-14 (CONTINUED)
APPLICANT PROPOSED MEASURES

APM Number	Description
TRA-2	SDG&E will coordinate with local emergency response agencies during construction within existing public roadways to allow safe passage and access by emergency vehicles and equipment.
NOI-1	Construction activities will occur during the times established by the local ordinances, with the exception of certain activities where nighttime and weekend construction activities are necessary, including, but not limited to, construction work timeframes mandated by permit, pouring of foundations, and pulling of the conductor, which require continuous operation or must be conducted during off-peak hours per agency requirements. SDG&E will meet and confer with the applicable jurisdiction to discuss temporarily deviating from the requirements of the noise ordinance, as described in the noise variance process.
NOI-2	SDG&E will provide notice of the construction plans to all property owners within 300 feet of the Project by mail at least one week prior to the start of construction activities. The announcement will state the anticipated construction start window, anticipated completion window, and hours of operation, as well as provide a telephone contact number for receiving questions or complaints during construction. SDG&E will maintain functional mufflers and/or silencers on all equipment to minimize noise levels as well as evaluate the potential use of portable noise barriers.
NOI-3	If blasting is deemed necessary for the construction of Project components, SDG&E will prepare a blasting plan. The blasting plan will be site specific, based on the location(s) of required blasting and location-specific conditions. The blasting plan will include a description of the planned blasting methods and a schedule for the blasting activities. The blasting plan will include measures to minimize noise related to blasting to the extent feasible.

SOURCE: SDG&E, 2017

2.9 Electric and Magnetic Fields Summary

Extremely low frequency (ELF) electric and magnetic fields (EMF) include alternating current (AC) fields and other electromagnetic, non-ionizing radiation from 1 Hz to 300 Hz. Power lines, like electrical wiring and electrical equipment, produce ELF (fields) at 60 Hz (OSHA, 2016). This analysis does not consider EMF in the context of the CEQA analysis of potential environmental impacts because: [1] there is no agreement among scientists that EMF creates a potential health risk, and [2] there are no defined or adopted CEQA standards for defining health risk from EMF. On January 15, 1991, the CPUC initiated an investigation to consider its role in mitigating the health effects, if any, of electric and magnetic fields from utility facilities and power lines. A working group of interested parties, the California EMF Consensus Group, was created by the CPUC to advise on this issue. The California EMF Consensus Group's fact-finding process was open to the public, and its report incorporated public concerns. Its recommendations were filed with the CPUC in March 1992. Based on the work of the California EMF Consensus Group, written testimony, and evidentiary hearings, CPUC's decision (D.93-11-013) was issued on November 2, 1993, to address public concern about possible EMF health effects from electric utility facilities. In August 2004, the CPUC opened an Order Instituting Rulemaking to update the Commission's policies and procedures related to electric and magnetic fields emanating from regulated utility facilities. The final decision was issued in D.06-01-042. The conclusions and findings included the following:

> "We find that the body of scientific evidence continues to evolve. However, it is recognized that public concern and scientific uncertainty remain regarding the potential health effects of EMF exposure. We do not find it appropriate to adopt any specific numerical standard in association with EMF until we have a firm scientific basis for adopting any particular value."

This continues to be the position of the CPUC regarding standards for EMF exposure. The State has not determined that any risk would merit adoption of any specific limits or regulations regarding EMF levels from electric power facilities

Presently, there are no applicable federal, state, or local regulations related to EMF levels from power lines or related facilities, such as substations. However, the CPUC has implemented a decision (D.06-01-042) requiring utilities to incorporate "low-cost" or "no-cost" measures for managing EMF from power lines up to 4.0 percent of total project cost. Four percent of total project budgeted cost is the benchmark in developing EMF mitigation guidelines, and mitigation measures would achieve some noticeable reductions.

Using the four percent benchmark and otherwise in accordance with "EMF Design Guidelines" filed with the CPUC in compliance with CPUC Decisions D.93-11-013 and D.06-01-042, SDG&E would implement low- and no-cost measures to reduce magnetic field levels for the Project.

2.10 References

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San Diego Gas & Electric Company (SDG&E), 2011. *Best Management Practices Manual for Water Quality Construction.* July.

SDG&E, 2017. SDG&E Proponents Environmental Assessment for the San Marcos to Escondido TL6975 69kV Project (A. 17. 011.010) Volumes I and II. November 15.

SDG&E, 2018a. SDG&E TL 6975 San Marcos to Escondido Project (A.17-11-010), SDG&E Response to Deficiency Letter #1, dated January 12.

SDG&E, 2018b. SDG&E TL 6975 San Marcos to Escondido Project (A.17-11-010), SDG&E Response to Deficiency Letter #2, dated February 28.

SDG&E, 2018c. SDG&E TL 6975 San Marcos to Escondido Project (A.17-11-010), SDG&E Response to Data Request #1, dated May 15.

SDG&E, 2018d. SDG&E TL 6975 San Marcos to Escondido Project (A.17-11-010), SDG&E Response to Data Request #2, dated June 1.

SDG&E, 2018e. SDG&E TL 6975 San Marcos to Escondido Project (A.17-11-010), SDG&E Response to Informal Data Request #3(a), dated June 8.

SDG&E, 2018f. SDG&E TL 6975 San Marcos to Escondido Project (A.17-11-010), SDG&E Response to Data Request #3, dated July 16.

SDG&E, 2018g. SDG&E TL 6975 San Marcos to Escondido Project (A.17-11-010), SDG&E Response to Data Request #4, dated August 7.

SDG&E, 2018h. SDG&E TL 6975 San Marcos to Escondido Project (A.17-11-010), SDG&E Response to Data Request #5, dated November 6.

SDG&E, 2018i. SDG&E TL 6975 San Marcos to Escondido Project (A.17-11-010), SDG&E Response to Data Request #6, dated November 21.

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CHAPTER 3

Environmental Checklist and Discussion

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3.1 Aesthetics

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
1.	**AESTHETICS — Would the project:**				
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c)	Substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d)	Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?	☐	☐	☒	☐

For the purposes of this analysis, the visual environmental impact is based on review of a variety of data provided by SDG&E as independently verified by the CPUC, including Project maps, drawings, aerial and ground level photography of the study area, local planning documents, and computer-generated visual simulations. The study area defined for this aesthetics analysis includes the landscapes directly affected by the Project and the surrounding areas from which the Project would be visible.

3.1.1 Environmental Setting

Aesthetic impacts may occur if a project would alter the perceived visual quality of the environment. This can result from changes to the visual character of the area, alteration of a scenic vista, changes to a scenic resource, or creation of a new source of light or glare that would affect views in the area. They are defined as follows:

- **Visual character** refers to the features of the natural (e.g., landforms, vegetation, rock and water features) and built (e.g., buildings, utility infrastructure) features of the landscape that contribute to the public's experience and appreciation of the environment.
- A **scenic vista** is generally considered to be a location from which the public can experience unique and exemplary views, which are typically from elevated vantage points that offer panoramic views of great breadth and depth.
- **Scenic resources** are specifically defined as features that are visible from a state scenic highway.
- **Light** is the amount of luminance emitted from an object and **glare** is the result of a large contrast in luminance between a bright light source and dark background within a viewer's field of vision.

The degree of impact also depends on viewer sensitivity to aesthetic changes. For this analysis, viewer sensitivity is categorized into high, moderate, and low visual sensitivity ranges. These ranges are based on a composite measurement of the overall susceptibility of an area or viewer group to adverse visual or aesthetic impacts, given the combined factors of:

- **Visual quality:** the overall visual impression or attractiveness of an area as determined by the particular landscape characteristics, including landforms, rock forms, water features, and vegetation patterns.
- **Viewer types and volumes of use:** the types of people viewing the affected landscape including, for example, motorists traveling on nearby roadways, park and other recreational area users, as well as residents and business patrons in Carlsbad, Escondido, Vista, San Marcos, and unincorporated San Diego County. Land uses that derive value from the quality of their settings, such as parks or scenic routes, are considered particularly sensitive to changes in visual setting conditions.
- **Viewer exposure:** landscape visibility, viewing distance, viewing angle, extent of visibility, and duration of view. For the purposes of this analysis, viewing distance is described in three general categories. Foreground refers to views observed from within 0.25 to a 0.5 mile from viewer; middle-ground refers to views from the foreground out up to three to five miles from the viewer; background extends from that middle-ground distance outward, as far as the view extends.

Visual Quality of the Region

The Project would be located within the coastal hills of San Diego County's northern valley, near Lake San Marcos, the San Elijo Hills, and Double Peak Regional Park. Elevations along the Project alignment range from 500 to 1,150 feet above sea level. The Project crosses diverse terrain with a variety of vegetation communities. As rainfall is very limited in the region, native vegetation is typically sparse, consisting of low growing chaparral and coastal sage scrub on the mesas (flat-topped hills). However, riparian vegetation is present along ravines and in canyon drainages. Open areas of exposed rock and light-colored soil are common elements of this landscape. The study area is comprised of urban/developed land, orchards/vineyards, intensive agricultural areas, coastal sage scrub, chaparral, grasslands, wetlands, marshes, riparian forests, woodlands, and freshwater areas. Scenic landscape features in this area include surrounding hillsides, Lake San Marcos, Rancho La Costa Preserve, Diamond Trail Preserve, and Escondido Creek Preserve.

The Project would traverse the cities of San Marcos, Escondido, Vista, and Carlsbad, as well as areas of unincorporated San Diego County. It would be located along a variety of land uses, including residential, commercial, industrial, open space/park/recreation, agriculture, public/institutional, roads, freeways, undeveloped/vacant land, access roads, and mixed-use land uses. The majority of Segment 1 is adjacent to San Marcos Boulevard, as well as commercial, industrial, and residential development in an urban area. Segment 2 would be located primarily in residential and open space areas. Segment 3 would traverse residential areas, undeveloped/open space, rolling hills, and industrial and commercial areas.

Within the study area there are numerous above-ground electric utility components, including poles, transmission infrastructure, and overhead conductors supporting existing power lines, as well as two existing substations. The Project would be situated between two major regional interstate highway corridors: Interstate 5 (I-5), located approximately 5 miles to the west, and I-15, approximately 1 mile to the east. By design, the local roadways in this part of San Diego generally follow curved patterns, following the natural topography of the adjacent hillsides.

Scenic Highways. There are no highways within 1 mile of the Project that are designated or eligible for State scenic designation by the California Department of Transportation

(Caltrans). The nearest Eligible State Scenic Highway is I-5, approximately 5 miles west of the Project (Caltrans, 2011).

Scenic Vistas. There are no officially designated scenic vistas in the study area. However, scenic views are available from informal recreation areas in Rancho La Costa Preserve, Diamond Trail Preserve, and Escondido Creek Preserve.

Light and Glare. Much of the Project study area is comprised of developed and urbanized lands where nighttime lighting is part of the built environment, which includes vehicle headlights, street lighting, parking lot lighting, security lighting, building lighting, as well as various other sources of light from surrounding commercial, industrial, and residential uses. However, light conditions in the open space areas, preserves, and undeveloped lands crossed by the Project are typically darker with the primary light source being associated with nearby streets and vehicles.

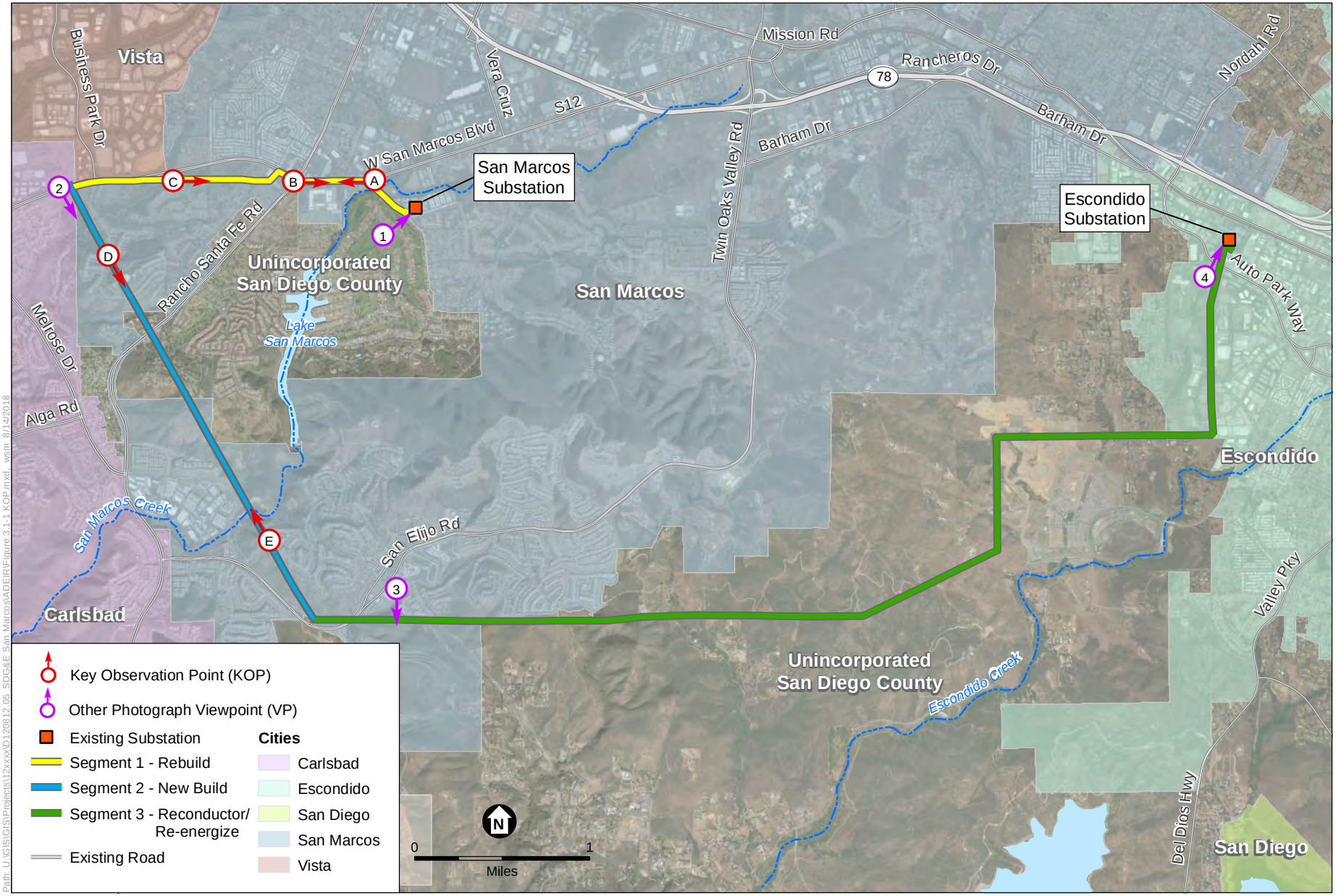
Visual Character. **Figure 3.1-1** shows the locations of Project components and photograph viewpoints (VP). **Figures 3.1-2** through **3.1-10** present nine photographs showing existing representative visual conditions and public views within the study area. To facilitate this impact analysis, five of these VPs were chosen as representative key observation points (KOP) – VPs which could have higher viewer sensitivity due to location, number of viewers, visual surroundings, etc. The impact analysis includes visual simulations of these five KOPs showing the existing view juxtaposed with a simulated view with the Project in place.

Table 3.1-1 presents the five primary components of the Project in terms of potentially affected viewers and representative photographic views (if applicable). Where notable visual changes could occur, the Project's appearance is shown in a set of before-and-after views, as seen from key public viewpoints listed under "Visual Simulation" within Table 3.1-1.

TABLE 3.1-1
SUMMARY OF PROJECT COMPONENTS, PRIMARY VIEWERS, REPRESENTATIVE PHOTOGRAPHS, AND VISUAL SIMULATIONS

Proposed Project Component (Existing View)	Potentially Affected Viewers	Key Observation Point (KOP)	Visual Simulation
San Marcos Substation (Figure 3.1-2)	Users of St. Mark's Golf Club; residents near substation; drivers, bikers, and pedestrians on Discovery Street.	N/A	No simulation
Segment 1 (Figures 3.1-3 through 3.1-5)	Users of St. Mark's Golf Country Club; students and faculty at San Marcos High School; students and faculty at Valley Christian School; workers and patrons near the intersection of West San Marcos Boulevard and Rancho Santa Fe Road; drivers, bikers, and pedestrians on West San Marcos Boulevard; residents along the transmission line.	A through C	Figures 3.1-11 through 3.1-13
Segment 2 (Figures 3.1-6 through 3.1-8)	Publicly accessible points in residential areas along the transmission line; Workers and patrons associated with commercial development along Melrose Drive; drivers, bikers, and pedestrians on White Sand Drive, South Rancho Santa Fe Road, Via Alondra, Via del Corvo, Melrose Drive, and San Elijo Road; users of Simmons Family Park, Diamond Trail, and the Rancho La Costa Preserve.	D through E	Figures 3.1-14 through 3.1-15
Segment 3 (Figure 3.1-9)	Users of the Sage Hill Preserve, Escondido Creek Preserve, Escondido Creek; workers in warehouses and offices north of Harmony Grove Road; workers and patrons of commercial development along Citracado Parkway and surrounding the substation; drivers, bikers, and pedestrians on San Elijo Road, Elm Forest Road, Questhaven Rd, Harmony Grove Road, Citracado Parkway, and Auto Park Way.	N/A	No simulation
Escondido Substation (Figure 3.1-10)	Workers and patrons of surrounding commercial and industrial development.	N/A	No simulation

SOURCE: ESA, 2018



SOURCE: SDGE, 2018

TL 6975 San Marcos to Escondido Project

Figure 3.1-1

Key Observation Point and Viewpoint Locations

San Marcos Substation

The San Marcos Substation (VP 1) is located on a 1.87-acre industrial site within an urbanized area of the City of San Marcos. It is surrounded by single-family housing, with Discovery Street creating a southwest boundary and has two power lines that access the substation. Much of the existing substation is obscured from view due to the presence of an 8-foot-tall wall and landscaping (see **Figure 3.1-2**).

Figure 3.1-2
VP 1, View of San Marcos Substation from Discovery Street – Looking Northeast

Segment 1

Segment 1 is approximately 1.8 miles long and includes a single-circuit, 69 kV transmission line on wooden poles ranging from 20 to 83 feet tall. It runs north past the St. Mark's Golf Club, then travels west along West San Marcos Boulevard past San Marcos High School and commercial businesses and offices near the West San Marcos Boulevard/South Rancho Santa Fe Road intersection. West of the intersection, the segment is located approximately 400 feet south of West San Marcos Boulevard for approximately 0.75 mile, traversing interspersed residential and open space areas. The westernmost 2,000 feet of the segment is adjacent to West San Marcos Boulevard, with office/commercial development to the north and residential development to the south.

Three representative photographs (KOPs A, B, and C) were taken from various locations along the segment to document existing conditions. These representative KOPs will be used to analyze the potential visual impact of the Project.

Figure 3.1-3 (KOP A) provides views looking west from the intersection of West San Marcos Boulevard and Discovery Street. The visual character of is defined by the surrounding constructed environment, including commercial/office buildings, a multi-unit residential complex on the north side of the roadway and the San Marcos High School campus on the south side. The developed visual character of this area is softened by the presence of landscaping and street trees. From this location, the transmission poles and lines are a prominent feature. Located between the San Marcos High School sports field and West San Marcos Boulevard, the existing transmission infrastructure is the tallest feature in foreground of the view. However, the transmission poles and line reduces in prominence in the background of the view where, due to the distance, it begins to have a similar visual dominance as the field lighting to the south and the trees along West San Marcos Boulevard to the west. Given the developed nature of the surroundings, the visual sensitivity in the area of KOP A is low to moderate.

Figure 3.1-3
KOP A, West San Marcos Boulevard & Discovery Street – Looking West

Figure 3.1-4 (KOP B) is the view to the east from the intersection of West San Marcos Boulevard and Rancho Santa Fe Road. From this location, the transmission poles and line are the prominent feature in the foreground, taller than the surrounding two- to three-story commercial/office development and San Marcos High School main building in the middle ground. The poles also above the horizon defined by the hillside in the background. Within the view, the prominence of the transmission poles and lines lessens as the discernable height difference between the transmission infrastructure and the hillside begins to decrease with increased distance from the KOP. Given the developed nature of the surroundings, the visual sensitivity in the area of KOP B is low to moderate.

Figure 3.1-4
KOP B, West San Marcos Boulevard & South Rancho Santa Fe Road – Looking East

Figure 3.1-5 (KOP C) shows a view to the east, through a neighborhood greenbelt and SDG&E right-of-way (ROW), from Acadia Drive immediately south of West San Marcos Boulevard. The relative prominence of the transmission poles and line is low due to the topography of the view (i.e., looking uphill) and presence of vegetation of similar height. A single-family neighborhood is immediately to the right out of view. West San Marcos Boulevard, and another single-family neighborhood to the north of it, is out of view to the left beyond the nature trees. The existing line would also be visible to those who use the SDG&E ROW access road for recreation. With the view limited by topography and dominance of the existing power line, the visual sensitivity in the area of KOP C is low to moderate.

Figure 3.1-5
KOP C, West San Marcos Boulevard & Acadia Street – Looking East

Segment 2

Segment 2 is approximately 2.8 miles long and includes an existing single-circuit, 138 kV transmission line on steel poles approximately 68 to 109 feet tall. It runs southeast through single-family residential areas and hilly, undeveloped open space areas that contain trails. A number of other transmission and distribution lines on metal and wooden poles are also present at Meadowlark Junction.

Three representative photographs (including KOPs D and E) document existing conditions.

Figure 3.1-6 (VP 2) provides a representative long distance view of the existing power line as it traverses neighborhoods and undeveloped areas in San Marcos and unincorporated San Diego County. This view looks southeast from the intersection point of Segments 1 and 2 along Palomar Airport Road in the City of Carlsbad. White Sands Drive is the paved roadway in the middle view. The dirt SDG&E access road runs under the existing power line, also in the middle view.

Figure 3.1-7 (KOP D) is a view looking southeast from White Sands Drive uphill toward a water storage tank at the crest of the hill in western San Marcos. From this location, the existing transmission poles and line and water tank are the prominent features. The poles are noticeably taller than surrounding one to two-story houses, the water tank, and surrounding low-lying vegetation. The transmission poles and line are also visible on the horizon as the power line crests the hill, increasing their prominence. Single-family residences are just out of view to either side of the simulation. Out of view, Simmons Family Park is located to the left (northeast) of the water tank just over the crest of the hill. Although there is existing abundant landscaping and the undeveloped portion of the hill are quite noticeable in the view, the existing utility structures, including street lighting, dominate the view, making the visual sensitivity moderate.

Figure 3.1-6
VP 2, View from Palomar Airport Road – Looking Southeast

Figure 3.1-7
KOP D, White Sands Drive & Sea Island Place – Looking Southeast

Figure 3.1-8 (KOP E) is a view from Brookside Court in southwest San Marcos looking northwest beyond two-story homes. This foreground view is dominated by the existing residential development, with the surrounding undeveloped terrain just visible over the roofs. The existing transmission poles and line are located in SDG&E ROW immediately west of the development and visually protrude into the horizon over the composite roofline. Above this roofline, they are unobscured by other built or natural features. The existing power line, street lighting, and dense residential development makes the visual sensitivity at KOP E moderate.

Figure 3.1-8
KOP E, Brookside Court –
Looking Northwest

Segment 3

Segment 3 is approximately 7.4 miles long and includes a de-energized transmission line on lattice towers approximately 145 to 170 feet tall. Segment 3 traverses residential areas, undeveloped/open space, rolling hills, and industrial and commercial areas. For the most part, Project improvements would be limited to reconductoring and re-energizing the line, which would utilize the existing structures and not change the existing appearance of these structures. **Figure 3.1-9** (VP 3) documents the visual appearance of Segment 3 along the Project's southern extent in San Marcos and east into unincorporated San Diego County. The existing visual sensitivity along Segment 3 is low.

Figure 3.1-9
VP 3, View of Segment 3 from Cooper Creek Apartments South Parking Lot – Looking South

Escondido Substation

The Escondido Substation is located on a 6-acre industrial site within an urbanized area of Escondido, and is surrounded by warehouses, parking lots, and 11 power lines that currently access the substation (see **Figure 3.1-10** [VP 4] and Table 3.1-1).

Figure 3.1-10
VP 4, View of Escondido Substation from Citracado Parkway – Looking North

3.1.2 Regulatory Setting

Federal

No federal regulations are applicable to the Project regarding visual resources.

State

California Department of Transportation: Scenic Highway Program

The California legislature created the Scenic Highway Program in 1963 to protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to the highways. State requirements in the Streets and Highways Code, Section 260, et seq., govern the Scenic Highway Program. A highway may be designated as "scenic" depending on how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the travelers' enjoyment of the view. The Scenic Highway System includes highways that are either eligible for designation or have been designated as such.

The status of a State scenic highway changes from "eligible" to "officially designated" when the local jurisdiction adopts a scenic corridor protection program, applies to Caltrans for scenic highway approval, and receives the designation from Caltrans. A city or county may propose adding routes with outstanding scenic elements to the list of eligible highways; however, State legislation is required for designation.

The nearest State Scenic Highway of any status is I-5 (an eligible State Scenic Highway) which is approximately 5 miles to the west of Segment 2 of the Project (Caltrans, 2018).

Local

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction." The discussion below presents local policies and regulations for informational purposes only; CPUC does not consider these regulations "applicable" as that term is used in CEQA.

County of San Diego

San Diego County General Plan

Chapter 3, the Land Use Element, of the San Diego County General Plan, contains provisions regarding siting utilities within preserve areas that would be relevant to the portion of the Project within SDG&E ROW in the Sage Hills Preserve.

> ***Policy LU-12.4*:** Plan and site infrastructure for public utilities and public facilities in a manner compatible with community character, minimize visual and environmental impacts, and whenever feasible, locate any facilities and supporting infrastructure outside preserve areas.

Chapter 5, the Conservation Element, contains a general discussion of visual resources. Specifically, it contains a dark-skies policy, policies related to undergrounding utilities, and policies related to scenic county routes. The following goals and policies from the Conservation and Open Space Element of the San Diego General Plan pertain to the preservation of scenic resources (County of San Diego, 2011):

Goal COS-11: Preservation of scenic resources, including vistas of important natural and unique features, where visual impacts of development are minimized.

***Policy COS-11.1*:** Require the protection of scenic highways, corridors, regionally significant scenic vistas, and natural features, including prominent ridgelines, dominant landforms, reservoirs, and scenic landscapes.

***Policy COS-11.5*:** Coordinate with the California Public Utilities Commission, power companies, and other public agencies to avoid siting energy generation, transmission facilities, and other public improvements in locations that affect visually sensitive areas, whenever feasible. Require the design of public improvements within visually sensitive areas to blend into the landscape.

***Policy COS-11.7*:** Require new development to place utilities underground and encourage "undergrounding" in existing development to maintain viewsheds, reduce hazards associated with hanging lines and utility poles, and keep pace with current and future technologies.

Goal COS-12: Ridgelines and steep hillsides that are preserved for their character and scenic value.

***Policy COS-12.1*:** Protect undeveloped ridgelines and steep hillsides by maintaining semi-rural or rural designations on these areas.

***Policy COS-12.2*:** Require development to preserve physical features by being located down and away from ridgelines so that structures are not silhouetted against the sky.

San Diego County Zoning Ordinance

The San Diego County Zoning Ordinance contains regulations that apply to designated scenic areas, including scenic highway corridors and areas adjacent to significant recreational, historic, or scenic resources, such as the Sage Hills Preserve. These regulations include provisions for undergrounding utilities, grading, signage, and lighting.

5202 Application of the Scenic Area Regulations

The Scenic Area Regulations shall be applied to areas of unique scenic value, including, but not limited to, scenic highway corridors designated by the *San Diego County General Plan*, and areas adjacent to significant recreational, historic, or scenic resources, including, but not limited to, federal and state parks.

5210 Site Plan Review Criteria

a. ***Aboveground Utilities*.** Utilities shall be constructed and routed underground, except in those situations where natural features prevent undergrounding or where safety considerations necessitate aboveground construction and routing. Aboveground utilities shall be constructed and routed to minimize detrimental effects on the visual setting of the designated area. Where it is practical, aboveground utilities shall be screened from view from either the scenic

highway or the adjacent scenic, historic, or recreational resource by existing topography, by the placement of buildings and structures, or by landscaping and plantings that harmonize with the natural landscape of the designated area.

b. ***Grading*.** The alteration of the natural topography of the site shall be minimized and shall avoid detrimental effects on the visual setting of the designated area and the existing natural drainage system. Alterations of the natural topography shall be screened from view from either the scenic highway or the adjacent scenic, historic, or recreational resource by landscaping and plantings that harmonize with the natural landscape of the designated area, except when such alterations add variety to or otherwise enhance the visual setting of the designated area.

c. ***Signs*.** Off-site signs shall be prohibited in areas that are subject to the Scenic Area Regulations. The number, size, location, and design of all other signs shall not detract from the visual setting of the designated area or obstruct significant views. Subsequent to site plan review and approval, any alteration to signs, other than general maintenance, shall be subject to an Administrative Permit.

d. ***Lighting*.** The interior and exterior lighting of buildings and structures and the lighting of signs, roads, and parking areas shall be compatible with the lighting employed in the designated area.

City of Carlsbad General Plan

The City of Carlsbad General Plan designates open space to preserve aesthetic, cultural, and educational resources. Landforms that are protected under the General Plan include, but are not limited to, trails, preserves, hillsides, and habitats. There are no specific goals, policies, or ordinances that would be relevant to aesthetic concerns associated with utility projects (City of Carlsbad, 2015).

City of Escondido General Plan

The City of Escondido General Plan suggests that significant visual resources, such as ridgelines, hillsides, and viewsheds, should be preserved if they "serve as a scenic amenity and contribute to the quality of life for residents." I-15 is designated as a scenic corridor in the Plan. However, there are no specific goals, policies, or ordinances that would be relevant to aesthetic concerns associated with utility projects (City of Escondido, 2017).

City of San Marcos General Plan

Valued scenic landforms that are noted in the City of San Marcos General Plan include, but are not limited to, undeveloped hillsides, prominent landforms, creek corridors, and historic buildings. There are no specific goals, policies, or ordinances that would be relevant to aesthetic concerns associated with utility projects. However, State Route 78 is designated by the City of San Marcos as a view corridor and eligible as a State Scenic Highway (City of San Marcos, 2013).

City of Vista General Plan 2030

The City of Vista General Plan 2030 was prepared to guide the physical development of the incorporated city and any land outside of the city's boundaries that bear a relationship to its planning activities. The General Plan states that parks, designated open space, and places, buildings, and objects that embody the city's history should be preserved. However, there are no specific goals, policies, or ordinances that would be relevant to aesthetic concerns associated with utility projects (City of Vista, 2012).

3.1.3 Applicant Proposed Measures

No Applicant Proposed Measures (APMs) have been identified by SDG&E to address impacts to aesthetics.

3.1.4 Environmental Impacts

Methodology

The Project is not located an urbanized area, as defined in CEQA Guidelines Section 15387, and as mapped by the U.S. Census[1]. Therefore, this analysis is based on the Project being in a non-urbanized area. The visual impact assessment is based on evaluation of the changes to the existing visual environment that would result from construction and operation of the Project, and viewer response to that change. The analysis is based on review of information provided by SDG&E as independently verified on behalf of the CPUC, including project maps, drawings, aerial and ground-level photography of the study area, local planning documents, and computer-generated visual simulations. Field observations were conducted on April 11, 2018 to document existing visual conditions and to document potentially affected sensitive viewing locations. The methodology utilized in this analysis is adapted from an approach to visual impact assessment developed by the Federal Highway Administration (DOT, 2015).

An adverse aesthetic impact may occur when: (1) an action (i.e., a "project") perceptibly changes the existing physical features of the landscape that are characteristic of the region or locale; (2) an action introduces new features to the physical landscape that are perceptibly uncharacteristic of the region or locale, or become visually dominant in the viewshed; or (3) an action blocks or totally obscures aesthetic features of the landscape. The degree of visual impact depends on the noticeability of the adverse change. The noticeability of a visual impact is a function of a project's features, context, and viewing conditions (angle of view, distance, and primary viewing directions). The key factors in determining the degree of visual change are visual contrast, project dominance, and visual screening. The interaction of visual change with the components of visual sensitivity (visual quality, viewer types and volumes, and viewer exposure; see Section 3.1.1, *Environmental Setting*) is discussed below under "Overall Adverse Visual Impact."

Visual Contrast

Visual contrast is a measure of the degree of change in line, form, color, and texture that a project would create, when compared to the existing landscape. Visual contrast ranges from "none" to "strong", and may be characterized as:

- **None** –The element contrast is not visible or perceived;
- **Weak** –The element contrast can be seen, but does not attract attention;
- **Moderate** –The element contrast begins to attract attention and begins to dominate the characteristic landscape; and

[1] 2010 Census Urbanized Area Reference Maps: https://www.census.gov/geo/maps-data/maps/2010ua.html

- **Strong** – The element contrast demands the viewer's attention and cannot be overlooked.

Project Visual Dominance

Project visual dominance is a measure of the apparent size of a project component relative to other visible landscape features in the viewshed, or seen area. The visual dominance of a component is affected by its relative location in the viewshed and the distance between the viewer and the project component.

Visual Screening

View screening (blockage or impairment) is a measure of the degree to which a project would obstruct or block views to aesthetic features due to its position and/or scale. Blockage of aesthetic landscape features or views can cause adverse visual impacts, particularly in instances where scenic or view orientations are important to the use, value, or function of the land use.

Overall Adverse Visual Impact

Overall adverse visual impact reflects the composite visual changes to both the directly affected landscape and from sensitive viewing locations. The visual impact levels referenced in this analysis indicate the relative degree of overall change to the visual environment that the Project would create, considering visual sensitivity, visual contrast, view blockage, and the Project's visual dominance. In general, the determination of impact significance is based on combined factors of visual sensitivity and the degree of visual change that the Project would cause.

Table 3.1-2, *Guidelines for Determining Adverse Visual Impact Significance*, shows how the inter-relationship of these two overall factors determines the level of significance of visual impacts and presents the impact classifications used in this analysis.

TABLE 3.1-2
GUIDELINES FOR DETERMINING ADVERSE AESTHETIC IMPACT SIGNIFICANCE

Overall Visual Sensitivity	Overall Visual Change				
	Low	**Low to Moderate**	**Moderate**	**Moderate to High**	**High**
Low	No Impact	No Impact	Less than significant	Less than significant	Less than significant
Low to Moderate	No Impact	Less than significant	Less than significant	Less than significant	Less than significant
Moderate	Less than significant	Less than significant	Less than significant	Potentially Significant	Potentially Significant
Moderate to High	Less than significant	Less than significant	Potentially Significant	Potentially Significant	Significant
High	Less than significant	Less than significant	Potentially Significant	Significant	Significant

DEFINITIONS:

No Impact. Effects may or may not be perceptible, but are considered minor in the context of existing landscape characteristics and view opportunity.
Less than Significant. Impacts are perceived as negative, but do not exceed environmental thresholds.
Potentially Significant. Impacts are perceived as negative and may exceed environmental thresholds depending on project- and site-specific circumstances (e.g., orientation of the viewer).
Significant Impacts. Impacts with feasible mitigation may be reduced to less-than-significant levels or avoided altogether. Without mitigation or avoidance measures, significant impacts would exceed environmental thresholds.

SOURCE: ESA, modified from Federal Highway Administration (DOT, 2015).

To document the visual change that would occur, visual simulations are included. They present before and after images showing the Project from the key observation points, or KOPs, identified in Section 3.1.1. The simulated images present the location, scale, and appearance of the Project as it would be seen from publicly accessible KOPs within the study area. The KOP locations were selected to represent views seen by the largest number of public viewers; for this Project, such locations are located within public portions of residential areas and along public roadways. As shown in Figures 3.1-11 through 3.1-15, the visual simulations are illustrated as an existing view with a simulation below that portrays the Project from the corresponding KOP.

Discussion

a) Whether the Project would have a substantial adverse effect on a scenic vista: *LESS THAN SIGNIFICANT IMPACT.*

There are no officially designated vistas in the study area. The Project could be visible in long distance views from some locations in the Rancho La Costa Preserve, Diamond Trail Preserve, Sage Hill Preserve, and Escondido Creek Preserve. **Table 3.1-3**, *Scenic Vistas*, identifies the preserves, associated views, and whether the Project would affect those views.

TABLE 3.1-3
SCENIC VISTAS

Preserve	Associated Segment	Scenic Views	View Obstruction?
Rancho La Costa Preserve	Segment 2	Batiquitos Lagoon, Box Canyon and the Pacific Ocean	No, Project is located to the east behind the viewer
Diamond Trail Preserve	Segment 2	Pacific Ocean	No, Project is located to the east behind the viewer
Sage Hill Preserve	Segment 3	No designated scenic vistas	No, minimal change due to continued presence of power line.
Escondido Creek Preserve	Segment 3	No designated scenic vistas	No, minimal change due to continued presence of power line.

SOURCE: Parks and Recreation County of San Diego, 2010; City of Carlsbad, 2018; The Escondido Creek Conservancy, 2018.

As noted in Chapter 2.0, *Project Description*, the Project does not propose to construct and operate electrical infrastructure along any segment where some form of infrastructure does not currently exist. In Segment 1, existing poles would be replaced and an additional electrical circuit would be added to the circuit on the existing poles. While the Project would involve the construction of a new power line, it would be co-located with an existing larger power in SDG&E ROW. The Project would be designed such that the new power poles supporting the Project would be spaced at the same interval as the existing poles, thereby limiting visual contrast. The re-energization of Segment 3 would utilize existing poles and towers, which would not change the physical appearance of these facilities.

Although scenic vistas exist in the vicinity of the Project alignment, as noted above, the Project would not be within the foreground of any designated scenic vistas. Also, the Project components would not create a significant visual contrast or detract from the existing visual character along

the Project alignment would not change Therefore, impacts to scenic vistas resulting from construction, operation, or maintenance of the Project would be less than significant.

b) Whether the Project would substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway: *NO IMPACT.*

The Project would not substantially damage scenic resources within a State Scenic Highway. State Route 78 is designated by the City of San Marcos as a view corridor and eligible as a State Scenic Highway; however, it is located approximately 1.1 miles northeast of the San Marcos substation (City of San Marcos, 2013) and out of view. I-15 is designated as a scenic corridor in the Escondido General Plan, and is located approximately 1 mile to the east of the Project (City of Escondido, 2012) and out of view. Project-related changes would not be noticeable from either a State Scenic Highway or a city-designated scenic corridor; therefore, no impacts would occur.

c) Whether the Project would substantially degrade the existing visual character or quality of public views of the site and its surroundings, or since the project is in an urbanized area, whether it would conflict with applicable zoning and other regulations governing scenic quality: *LESS THAN SIGNIFICANT IMPACT.*

Construction

Construction-related visual impacts would result from the temporary presence of equipment, materials, and work crews at the San Marcos and Escondido substations, along the alignment, along access roads, and at staging yards and temporary staging areas. SDG&E has identified candidate staging yards with the size and location to accommodate the scope of the Project (see **Table 2-10**, Potential Staging Yards and **Figure 2-10** in Chapter 2, *Project Description*). Construction impacts on visual quality would be limited to the one-year construction period. Impacts along the alignment would be limited as construction work would be conducted in a sequential fashion, with work occurring in multiple locations along the Project alignment to minimize the total construction schedule, which would limit the presence of construction equipment, materials, etc. Staging areas would also be temporarily visually impacted by the presence of large equipment and materials (e.g., equipment wash stations, pole assemblage, materials and equipment storage, storage containers, construction trailers, portable restrooms, etc.); however, all staging areas and other work sites would be restored to their pre-Project condition following construction, as required in the Project Stormwater Pollution and Prevention Plan and SDG&E's BMP Manual (explained in detail in Section 3.10, *Hydrology and Water Quality*). Project construction would not substantially degrade the existing visual character of the substation sites or alignment, and overall visual sensitivity is expected to be low to moderate due to the short duration of construction activities (i.e., less than one year). Impacts would be less than significant.

There are no local zoning or other regulations related to scenic quality that would pertain to construction.

Operation

San Marcos Substation

At San Marcos Substation, a new 7- by 7-foot circuit breaker pad, SF_6 circuit breakers, seven piers (2 feet in diameter and 6 feet tall), and a 30-foot-tall A-frame would be installed to accommodate the Project. The San Marcos Substation is located in the western portion of the City of San Marcos. The City's General Plan conceptually defines significant visual resources; however, it does not provide specific goals, policies, or ordinances that provide criteria by which to assess impacts. Although there would be additional equipment at the substation, the overall visual change would be low, with most changes being screened by the existing fence and landscaping. The 30-foot A-frame would likely be visible from Discovery Street and neighboring residences, but would not change the visual character of the area. Viewer sensitivity in this area is moderate to high, with affected viewers including users of the Lake San Marcos Country Club and residents surrounding the substation; however, the Project would not substantially degrade the existing visual character of the area, and the overall impact would be less than significant due to the low degree of visual change proposed by the Project (see Table 3.1-2).

Segment 1

For Segment 1, along 1.8 miles of the alignment, wooden poles approximately 20 to 84 feet tall would be replaced with steel poles approximately 43 to 101.5 feet tall.

To determine the level of impact of the Project to existing visual character or quality of the area along the Project alignment, visual simulations were developed at three KOPs based on known Project characteristics. In Figures 3.1-11, 3.1-12, and 3.1-13, these simulations have been paired with the existing view at the respective KOP.

The new steel poles would be in approximately the same location as the existing wooden poles, though offset from 6 to 8 feet. The taller poles (approximately twice as tall as the existing poles) would be visually more apparent, with the poles being more visible in the distance because they would be taller than the surrounding trees. A comparison of the existing view and simulation demonstrates that the taller poles would be more perceptible than the existing poles at a distance due to their increased presence on the horizon. While the new poles would also be larger in diameter than the existing wooden poles, they would be similar in form and diameter would not appear to be significantly larger. The dull, non-reflective finish of the new structures would lessen their visibility when seen against the sky under typical viewing conditions, compared with the darker appearance of the existing poles. In addition, the lines would be higher than the existing lines and outside of some viewers' line of sight at ground level.

Viewer sensitivity in this area is low to moderate, given its developed visual nature. Affected viewers would include motorists, retail workers, shoppers, and recreationalists at San Marcos High School. The motorists, retail workers, and shoppers are transient viewers and would be less sensitive to visual changes. However, the recreationalists at San Marcos High School, and people watching games in the stands, would view the change for longer periods of time. Nonetheless, while they would be perceptible, the new poles and repositioned circuitry would not introduce a new visual element to the surroundings at KOP A. Per Table 3.1-2, the overall impact would be

less than significant due to the low to moderate viewer sensitivity and moderate degree of visual change of the Project.

Figure 3.1-11, *KOP A Existing and Proposed Conditions at West San Marcos Boulevard & Discovery Street – Looking West,* is a representative view at KOP A of the Project in the City of San Marcos. At KOP A, the taller poles would be more visually apparent due to their increased presence on the horizon. From this view, the new position of the circuitry would be lower on the horizon and would traverse views of the hillside in the background. In addition, the dull, non-reflective finish of the new structures would create more contrast against the tan backdrop of the surrounding hillside than under existing conditions.

Figure 3.1-12, *KOP B Existing and Proposed Conditions at West San Marcos Boulevard & South Rancho Santa Fe Road – Looking East,* also shows the new steel poles in approximately the same location as the existing wooden poles, though offset from 6- to 8 feet. KOP B is in the city of San Marcos. While the Project components would be perceptible, they would not introduce a new visual element to the surroundings at KOP B. This would result in a low to moderate visual change.

Viewer sensitivity in this area is low to moderate, being dominated by commercial development and the San Marcos High School main building in the middleground, but with the hills in the background. Affected viewers include motorists, retail workers, and shoppers who would be transient viewers and less sensitive to change. Therefore, the overall impact would be less than significant, per Table 3.1-2.

Figure 3.1-13, *KOP C Existing and Proposed Conditions at West San Marcos Boulevard & Acadia Street – Looking East,* shows a low-to-moderate visual change due to increased height and diameter of the poles. KOP C is in the City of San Marcos. A comparison of the existing view and simulated view demonstrates that the taller poles would be slightly more perceptible than the existing poles at a distance due to their increased presence on the horizon. However, given the angle of the view (i.e., looking uphill), the existing line is a dominant feature, just as the new line would be. Although the dull, non-reflective finish of the new structures would lessen their visibility when seen against the sky under typical viewing conditions, compared with the darker appearance of the existing poles, at ground-level the new finish of the poles would create more contrast against the darker vegetated backdrop. While the Project components would be perceptible, they would not introduce a new visual element to the surroundings at KOP C. This would result in a low to moderate visual change.

Viewer sensitivity in this area is low to moderate, with views from publicly-accessible areas, including neighborhood streets, being limited. Potential viewers outside of public neighborhood areas would be those who use the SDG&E ROW access road under the power line for recreation. However, as noted above, with the uphill angle of view limiting sight distance, the visually perceptible change would be in the Project materials, rather than the presence or height of the Project. Per Table 3.1-2, the overall impact would be less than significant.

Existing

Proposed

SOURCE: SDGE, 2018

TL 6975 San Marcos to Escondido Project

Figure 3.1-11
KOP A Existing and Proposed Conditions at West San Marcos Boulevard & Discovery Street – Looking West

Existing

Proposed

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SOURCE: SDGE, 2018

TL 6975 San Marcos to Escondido Project

Figure 3.1-12
KOP B Existing and Proposed Conditions at West San Marcos Boulevard & South Rancho Santa Fe Road – Looking East

Existing

Proposed

SOURCE: SDGE, 2018

TL 6975 San Marcos to Escondido Project

Figure 3.1-13
KOP C Existing and Proposed Conditions at West San Marcos Boulevard & Acadia Street – Looking East

Most of Segment 1 is within the City of San Marcos, and a small portion would be within unincorporated San Diego County. The City of San Marcos's General Plan conceptually defines valued scenic landforms; however, it does not provide specific goals, policies, or ordinances that provide criteria by which to assess impact. Segment 1 would be aboveground, but the portion located within unincorporated San Diego County would not conflict with the provisions of the San Diego General Plan requiring new development to place utilities underground because this segment would not be new development, but would replace an existing transmission line. This segment is not located within a designated scenic area; therefore, San Diego County Zoning Code Scenic Area Regulations are not applicable. There would be no impact with respect to conflict with applicable regulations.

Segment 2

For Segment 2, 2.8 miles of new transmission line would be placed on steel monopoles adjacent to the existing line, ranging from 61 to 110 feet in height, set approximately 30 feet east of and parallel to the existing power line in the existing SDG&E ROW. Consistent with the analysis of Segment 1, to determine the level of impact of the Project to existing visual character or quality of the area along the Project alignment, visual simulations were developed at two KOPs based on known Project characteristics. In Figures 3.1-14 and 3.1-15, these simulations have been paired with the existing view at the respective KOP.

Figure 3.1-14, *KOP D Existing and Proposed Conditions at White Sands Drive & Sea Island Place – Looking Southeast,* shows a low to moderate visual change due to introduction of the Project transmission line. The existing visual character of this segment is already defined by the existing transmission line, street lighting, and water storage tank in the distance. While the addition of the Project would result in increased constructed visual elements, it would not result in strong contrast against the surrounding environment due to the presence of the existing utility facilities. Therefore, a low to moderate visual change would occur. Viewer sensitivity in this area is moderate, with affected viewers including residents and users of Simmons Family Park. Therefore, per Table 3.1-2, the overall impact would be less than significant.

Figure 3.1-15, *KOP E Existing and Proposed Conditions at Brookside Court – Looking Northwest,* shows a moderate change due to introduction of the Project transmission line. Although the visual character of this segment is already influenced by the existing transmission line, the dense development of single-family residences also contributes to the visual quality of this KOP. The residences form a composite roofline in the foreground, which is prominent in the view. The addition of the Project power line would result in an additional linear utility feature on the horizon. Due to its placement on the ridge, these power transmission facilities would become a more dominant feature within the visual setting. In addition, the Project would reduce utility coherence and increase contrast, as the new line appears both shorter and taller than the existing line, depending on the topography. As a result, there would be a moderate visual change. Viewer sensitivity in this area is moderate; therefore, per Table 3.1-2, the overall impact would be less than significant.

Existing

Proposed

SOURCE: SDGE, 2018

TL 6975 San Marcos to Escondido Project

Figure 3.1-14
KOP D Existing and Proposed Conditions at White Sands Dr. & Sea Island Pl. – Looking Southeast

Existing

Proposed

SOURCE: SDGE, 2018

TL 6975 San Marcos to Escondido Project

Figure 3.1-15
KOP E Existing and Proposed Conditions at Brookside Court – Looking Northwest

Segment 2 would be located within the City of San Marcos and unincorporated San Diego County. The City of San Marcos' General Plan conceptually defines valued scenic landforms; however, it does not provide specific goals, policies, or ordinances that provide criteria by which to assess impact. The Project would be located aboveground, and would not be consistent with the San Diego County Zoning Code. The Project would be constructed and routed to minimize detrimental effects on the visual setting of the designated area because it would be placed within an existing transmission line corridor. This segment is not located within a designated scenic area; therefore, San Diego County Zoning Code Scenic Area Regulations are not applicable. The impact related to conflict with applicable regulations would be the same as the physical aesthetic impact described above, less than significant.

Segment 3

In Segment 3, the Project would be installed primarily on existing steel lattice towers and poles. The height and configuration of the lattice towers and poles would be unchanged. Due to the lack of visual change associated with this segment of the Project, overall change in visual character and overall visual sensitivity to the change would be low and no impact on the existing visual character or quality of public views would occur.

Segment 3 traverses the southern portion of the City of San Marcos, portions of undeveloped San Diego County, and the western portion of the City of Escondido. San Marcos' and Escondido's General Plans conceptually define valued scenic landforms and significant visual resources, respectively. However, neither plan provides specific goals, policies, or ordinances that provide criteria by which to assess impact. Segment 3 would be aboveground, but the portion located within unincorporated San Diego County would not conflict with the provisions of the San Diego General Plan requiring new development to place utilities underground because this segment would not be new development, but would reconductor or re-energize an existing transmission line. Most of this segment is not located within a designated scenic area; however, a portion would traverse the northern part of the Sage Hill Preserve. Therefore, San Diego County Zoning Code Scenic Area Regulations are applicable. Segment 3 would be constructed and routed to minimize detrimental effects on the visual setting of the preserve because it would be placed within an existing transmission line corridor on existing towers and poles. No grading would occur within the Preserve, and no new signs or lighting would be introduced. There would be no impact with respect to conflict with applicable regulations.

Escondido Substation

At the Escondido Substation, the existing overhead conductor, three existing 69 kV circuits, and existing overhead power lines would be relocated; a new circuit breaker pad and circuit breaker would be installed; and the old circuit breaker pad and an oil containment wall would be removed. To accommodate these changes, five existing poles located just south of the substation would be replaced with two pier foundation poles. The changes would not substantially change the visual character of the existing substation, and due to the industrial nature of the surrounding area, overall visual sensitivity to the proposed changes would be low. Therefore, no visual impact would occur.

This substation is located in the western portion of the City of Escondido. The city's General Plan conceptually defines significant visual resources; however, it does not provide specific goals, policies, or ordinances that provide criteria by which to assess impact. There would be no impact relative to applicable regulations.

Maintenance

Maintenance of the Project would occur as needed, would be limited in duration, and would include activities such as repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles, tree trimming, brush and weed control, and access road maintenance. Regular operation and maintenance activities of the overhead facilities would be performed from existing access roads, within SDG&E ROW, or within the existing footprint of the substations. Maintenance would be similar to SDG&E activities that currently occur along the alignment. As maintenance would be limited in duration and similar to current maintenance activities, there would not be any degradation to the visual character of the study area and overall visual sensitivity would be low. Therefore, the impact during Project maintenance would be less than significant.

d) Whether the Project would create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area: *LESS THAN SIGNIFICANT IMPACT.*

Construction and Maintenance

Nighttime construction may be required as a result of a condition of an agency permit (e.g., Caltrans encroachment permit) or local traffic control direction from one of the study area jurisdictions. As a result, construction lighting could adversely impact nighttime views in the vicinity of the construction sites. Additionally, some nighttime lighting may be required during emergency situations when SDG&E would need to inspect, maintain, and repair Tie Line 6975 to maintain service continuity. The Project includes 10 temporary construction staging yards that would include temporary security lighting, some of which would be located in developed areas while others would be located in more remote areas. SDG&E has identified candidate staging yards with the size and location to accommodate the scope of the Project (see **Table 2-10**, Potential Staging Yards and **Figure 2-10** in Chapter 2, *Project Description*). Where the staging areas are located in urban areas, there would be other sources of nighttime lighting (e.g., street lights, commercial signage, etc.). Where the staging areas are located in less developed areas, the lighting created by the staging areas would be more noticeable, creating more contrast against the darker surroundings. Due to distance and topography, it is unlikely that the staging areas in more remote areas would adversely affect nighttime views. However, the staging areas south of Escondido would have the highest likelihood for impacts because of lack of topography and how close it is to the new residential development to the west (approximately 500 feet). Project lighting would be directed on-site and shielded downward away from any off-site sensitive receptors and would be removed once the subject work was completed. Overall, visual impacts associated with light and glare would only occur on a temporary basis through the phased sequence of the construction schedule. Therefore, impacts related to Project lighting during construction and maintenance would be less than significant.

Operation

No new sources of substantial light or glare would be created that would adversely affect daytime or nighttime views in the area during operation of the Project. Any construction of alteration of a structure that may affect the National Airspace System is required to notify and comply with obstruction requirements set forth by the Federal Aviation Administration (FAA, 2007). Any structure (i.e., pole, tower) exceeding 200 feet above ground surface would be required to be equipped with obstruction lighting, which typically would be a flashing red beacon at the top of the structure. However, none of the proposed structures for this Project are over 200 feet above ground surface. No new lighting would be required at either of the substations, and neither the existing nor the proposed transmission line facilities require permanent lighting. New pole structures would use dulled galvanized steel or weathered steel designed to minimize the potential for glare. Potential glare from overhead conductors would be minimized through the use of non-specular conductors. Therefore, impacts regarding new substantial sources of light or glare during Project operation would be less than significant.

3.1.5 References

Caltrans, 2011. California Scenic Highway Mapping System, San Diego County. Available online at www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/sdiego.htm. Accessed June 1, 2018.

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3.2 Agriculture and Forestry Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
2. AGRICULTURE AND FORESTRY RESOURCES — In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. **Would the project:**				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

This section identifies and evaluates issues related to agriculture and forestry resources in the context of the Project. It includes a description of agricultural designations and zoning, Williamson Act contracts, forest and timberland zoning, and related uses. This section further provides a discussion of applicable state, regional, and local plans and programs, and an evaluation of potential impacts associated with implementation of the Project. For the purpose of this analysis of agriculture and forestry resources, the study area is defined as the footprint of all components of the Project, including all areas of temporary and/or permanent ground disturbance included in the SDG&E right-of-way (ROW) and the existing access roads.

3.2.1 Environmental Setting

According to the California Department of Conservation (DOC), the Project includes or is adjacent to several parcels of land designated as Unique Farmland. There are no lands within the defined study area that are designated as Prime Farmland or Farmland of Statewide Importance. All proposed staging yards are designated as Urban Built Up Land and/or Other Land and are not classified as Important Farmland (DOC, 2016a).

The Project ROW includes Unique Farmland in the following areas as identified on the DOC's California Important Farmland Finder (DOC, 2016a) and shown in **Figure 3.2-1**, *Farmland Mapping and Monitoring Program: Important Farmland*:

- An 85-foot section of Segment 1 along West San Marcos Boulevard and directly west of Viewpoint Drive in San Marcos;
- A 780-foot section of Segment 3 west of Bresa De Loma Drive in Escondido; and
- A 120-foot section of Segment 3 southwest of Mount Whitney Road in unincorporated San Diego County.

The Project ROW does not include any land enrolled in a Williamson Act (California Land Conservation Act of 1965) contract (DOC, 2017).

Section 12220 (g) of the California Public Resources Code defines forest land as "land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." Timberland as defined by Public Resources Code Section 4526 is land that is available for and capable of growing trees of any commercial species used to produce lumber and other forest products. Timberland production zone is defined in Section 51104(g) as an area that has been zoned pursuant to Government Code Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses.[1] The study area does not include any forest land or any land with substantial tree cover and would not include any defined forest land, timberland, or timberland production zone.

3.2.2 Regulatory Setting

Federal

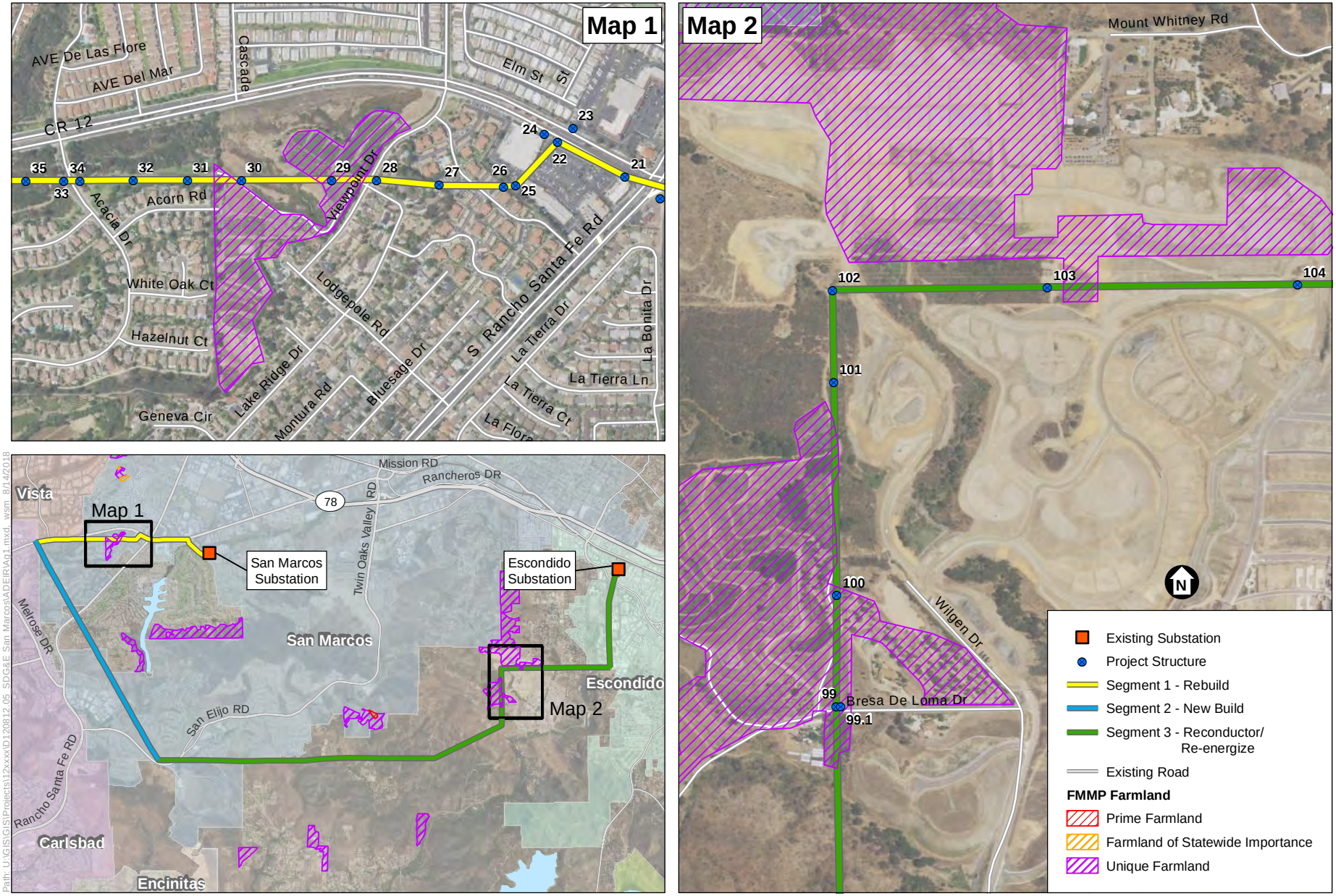
No federal plans or policies concerning agriculture and forestry resources apply to the Project.

State

California Farmland Mapping and Monitoring Program

The DOC maps important farmlands along California through the Farmland Mapping and Monitoring Program (FMMP). Unique Farmland is the only FMMP designation relevant to the Project. The Program classifies farmland based upon suitability of soil conditions for agriculture and their current land use. Unique Farmland is defined as lower quality soils and is used for the production of California's leading agricultural products. This type of farmland is typically irrigated, but may also include non-irrigated vineyards or orchards found in certain climatic zones. Unique Farmland must have been cropped within four years of the mapping date (DOC, 2016b).

[1] "compatible uses" include any use that "does not significantly detract from the use of the property for, or inhibit, growing and harvesting timber" (Government Code §51104(h)).



3.2-3

SOURCE: SDGE, 2018; CDOC, 2016

TL 6975 San Marcos to Escondido Project

Figure 3.2-1

Farmland Mapping and Monitoring Program: Important Farmland

ESA

California Public Utilities Commission General Order No. 131-D

The CPUC has sole and exclusive jurisdiction over the siting and design of the Project because it authorizes the construction, operation, and maintenance of investor-owned public utility facilities. Although, such projects are exempt from local land use and zoning regulations and discretionary permitting (i.e., they would not require discretionary approval from a local decision-making body such as a planning commission, county board of supervisors or city council), General Order No. 131-D, Section XIV.B requires that in locating a project "the public utility shall consult with local agencies regarding land use matters." The public utility would be required to obtain any required non-discretionary local permit (CPUC, 1995).

Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction." The discussion below presents local policies and regulations for purposes of determining whether any adverse environmental impact that might result from a conflict with these policies, but is not intended to identify local land use authority.

Within the study area, no areas designated as agricultural land, timberland, or forest land were identified within the cities of Carlsbad, Vista, or San Diego.

County of San Diego General Plan

The County of San Diego General Plan (2011) Conservation and Open Space Element intends to minimize land use conflicts, preserve agricultural resources, and support the long-term presence and viability of the agricultural industry as an important component of the region's economy and open space linkage. The following policies address agricultural resources in the County (County of San Diego, 2011):

COS-6.2: Protection of Agricultural Operations. Protect existing agricultural operations from encroachment of incompatible land uses by doing the following:

- Limiting the ability of new development to take actions to limit existing agricultural uses by informing and educating new projects as to the potential impacts from agricultural operations
- Encouraging new or expanded agricultural land uses to provide a buffer of non-intensive agriculture or other appropriate uses (e.g., landscape screening) between intensive uses and adjacent non-agricultural land uses
- Allowing for agricultural uses in agricultural areas and designing development and lots in a manner that facilitates continued agricultural use within the development
- Requiring development to minimize potential conflicts with adjacent agricultural operations through the incorporation of adequate buffers, setbacks, and project design measures to protect surrounding agriculture

- Supporting local and state right-to-farm regulations
- Retain or facilitate large and contiguous agricultural operations by consolidation of development during the subdivision process

City of Escondido General Plan

The Resource Conservation Element of the City of Escondido General Plan addresses goals and policies that pertain to agricultural resources (City of Escondido, 2012) as follows:

> **Goal-4:** Preservation of agricultural resources and continuation of agricultural production in appropriate areas within Escondido.
>
> > ***Policy-4.1*:** Maintain large-lot residential land uses with appropriate zoning designations in agricultural areas that are compatible with preserving agricultural productivity.

City of San Marcos General Plan

The goal and policies from the City of San Marcos General Plan pertaining to agricultural resources (City of San Marcos, 2012a) are presented below:

> **Goal COS-2:** The City is committed to conserving, protecting, and maintain open space, agricultural, limited resources for future generations. By working with property owners, local organizations, and state and federal agencies, the City can limit the conservation of resource lands to urban uses.
>
> > ***Policy COS-2-1*:** Provide and protect open space areas throughout the City for its recreational, agricultural, safety, and environmental value.
> >
> > ***Policy COS-2.2*:** Limit, to the extent feasible, the conversion of open space to urban uses and place a high priority on acquiring and preserving open space lands for recreation, habitat protection and enhancement, flood hazard management, water and agricultural resources protection, and overall community benefit

Zoning

GIS zoning maps and data for the cities of San Diego, San Marcos, Carlsbad, Escondido, and Vista and for San Diego County were used to identify agricultural and forestry zones within the study area.

In unincorporated San Diego County, the Project includes land zoned as Limited Agriculture (A70) and General Agriculture (A72) (County of San Diego, 2016). A portion of land zoned as A70 is located adjacent to Segment 2 near the overhead crossing of South Rancho Santa Fe Road. The eastern portion of Segment 3 includes four properties totaling approximately 1.5 miles of land zoned as A70. Directly south of and adjacent to Segment 3 is also a portion of land zoned as A72 (SanGIS, 2017).

The portion of Segment 2 that crosses South Rancho Santa Fe Road is located adjacent to two agricultural zones (A-1) in the City of San Marcos. The A-1 zone is classified as a low-intensity Agricultural Zone that is suitable for low-density residential hillside development (City of San Marcos, 2012b, and 2015).

There are no other properties zoned as agricultural zones within or adjacent to the study area in the cities of San Diego, Carlsbad, Vista, or Escondido.

There are also no portions or parcels of land within the Project that are zoned as forest land or timber production zones.

3.2.3 Applicant Proposed Measures

No Applicant Proposed Measures (APMs) have been identified to address potential impacts on agriculture or forestry resources.

3.2.4 Environmental Impacts

Discussion

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use: *NO IMPACT.*

Poles 29 and 30 are proposed within designated Unique Farmland along Segment 1 located directly west of Viewpoint Drive and south of West San Marcos Boulevard. The existing poles at these sites would be replaced with direct-bury steel poles and secured with a concrete backfill. Each direct-bury pole installation would require a temporary work area up to 40 feet in diameter and an additional adjacent work area measuring 25 by 60 feet. All structural removal work would be completed from the existing work pads located at each existing pole site. The replacement poles would be located 6 to 8 feet from the existing poles. Temporary disturbance and some minor vegetation clearance would occur during construction and installation of poles 29 and 30. However, in this location, the parcel designated as Unique Farmland is used as a tree nursery, and all trees appear to be grown in nursery tree boxes. Therefore, trees placed within the temporary work area and/or permanent footprint for pole replacements could feasibly be moved away from the work area without loss of crops. Following construction, temporary work areas would again become available for growing nursery trees.

Additionally, the existing ROW would be expanded in width by 10 feet along approximately 845 linear feet within this parcel of Unique Farmland. However, no vegetation clearance would be necessary for this expansion, and because of the existing use, the nursery trees could feasibly continue to be grown in the ROW. Neither the pole replacements nor the ROW expansion would permanently convert Unique Farmland to non-agricultural use.

Operation and maintenance activities along Segment 1 would remain consistent with maintenance of existing facilities, and therefore would not convert Unique Farmland to non-agricultural use. Therefore, no impact would occur.

Segment 3 includes Unique Farmland in two locations and would consist of re-energizing of the existing power line. Existing Poles 99 and 100 are within Unique Farmland located west of Bresa De Loma Drive in Escondido. Only overhead work would occur at these poles, with no new

ground disturbance. No poles are located within the area of Unique Farmland located west of Mount Whitney Road. Therefore, construction of Segment 3 would not result in any ground disturbance-related impacts within Unique Farmland. The current and existing de-energized line requires insulator washing four times a year; however, this activity would no longer occur once the power line is re-energized and new insulators are installed along Segment 3. As a result, operation and maintenance activities would decrease once the Project is operational. For further details on operation and maintenance of each Segment of the Project, refer to Section 2.0, *Project Description*. No conversion of Unique Farmland to non-agricultural use would occur. This segment of the Project would therefore result in no impact.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract: *NO IMPACT.*

Segment 3 would include land zoned for agricultural use (A70 zoning in unincorporated San Diego County). Project work within this segment would consist of overhead work and no ground disturbance. Therefore, no activities would occur and no new use would be introduced that would conflict with existing zoning, and there would be no impact.

As described in Section 3.2.1, the Project does not include any land that is subject to a Williamson Act contract; therefore, there would be no impact.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined in Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g): *NO IMPACT.*

There is no zoning for forest land or timberland found within the study area. Therefore, the Project would not conflict with existing zoning for or cause rezoning of forest land or timberland; therefore, there would be no impact.

d) Result in the loss of forest land or conversion of forest land to non-forest use: *NO IMPACT.*

As described in Section 3.2.1, none of the Project components would be located in an area zoned as forest land. There would be no impact.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use: *NO IMPACT.*

As described above, under Questions c and d, there is no forest land within or adjacent to the Project elements. Therefore, the Project would have no direct or indirect impact on the conversion of forest land to non-forest use. For portions of the Project that would be constructed or installed within existing agricultural lands, per the analysis under Question a and b, the Project would not permanently convert any Farmland to non-agricultural use and would not result in any necessary vegetation removal. The Project would be compatible with existing agricultural zoning and land uses along the transmission alignment. Furthermore, the Project does not include any features that would indirectly result in the conversion of Farmland. The Project would not result in the

permanent conversion of agricultural land or forest land resulting from other changes in the environment. Therefore, there would be no impact.

3.2.5 References

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3.3 Air Quality

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
3.	**AIR QUALITY —** Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. **Would the project:**				
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b)	Violate any air quality standard or result in a cumulatively considerable net increase in an existing or projected air quality violation?	☐	☐	☒	☐
c)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d)	Result in substantial emissions (such as odors or dust) adversely affecting a substantial number of people?	☐	☐	☒	☐

The regional study area for the analysis of impacts related to implementation of an air quality plan and violation of air quality standards is the San Diego Air Basin (Air Basin), which is contiguous with the political boundaries of the County of San Diego, encompassing 4,260 square miles. For impacts related to exposing sensitive receptors to substantial pollutant concentrations and emissions of dust, odors, and other potential nuisance emissions, the local study area consists of areas surrounding Project work sites where emissions would be most concentrated, and the analysis focuses on the nearest receptors.

3.3.1 Environmental Setting

Air quality is a function of both the rate and location of pollutant emissions under the influence of meteorological conditions and topographic features that influence pollutant movement and dispersal. Atmospheric conditions such as wind speed, wind direction, atmospheric stability, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants, which affects air quality.

Regional Topography, Meteorology, and Climate

The Air Basin is divided by the Laguna Mountain Range that generally runs parallel to the coast approximately 45 miles inland and separates the coastal area from the desert area. The Laguna Mountains have peaks reaching over 6,000 feet above mean sea level. The coastal region, where the Project would be located, is made up of coastal terraces that rise from the ocean into wide mesas[1] that transform into the Laguna foothills farther to the east. From the foothills, the topography gradually rises to the rugged Laguna Mountain range.

The climate of the Air Basin is dominated by a semi-permanent high pressure cell located over the Pacific Ocean. This cell influences the direction of prevailing winds (westerly to northwesterly) and

[1] A mesa is a flat-topped mountain or hill. It is a wide, flat, elevated landform with steep sides.

maintains clear skies for much of the year. The topography and climate influence air quality in the Air Basin and are considered constraints on efforts to reduce air pollution in the region. During the summer months, a warm air mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean's surface and the lowest layer of the atmosphere. This warm upper layer forms a cap over the cool marine layer and inhibits pollutants in the marine layer from dispersing away from the surface. In addition, light winds during the summer further limit ventilation. The Air Basin experiences more days of sunlight than many other urban areas in the nation, and sunlight triggers the photochemical reactions that produce ozone, a criteria pollutant (San Diego County, 2011).

The study area typically has average maximum and minimum winter (i.e., January) temperatures of 69 degrees Fahrenheit (ºF) and 43 ºF, respectively, while average summer (i.e., July) maximum and minimum temperatures are 87 ºF and 62 ºF, respectively. Rainfall averages approximately 16 inches per year (Weatherbase, 2018).

Criteria Air Pollutants

The U.S. Environmental Protection Agency (USEPA) has identified criteria air pollutants that are a threat to public health and welfare. These pollutants are called "criteria" air pollutants because standards have been established for each of them to meet specific public health and welfare criteria (see Section 3.3.2, *Regulatory Setting*). The following criteria pollutants are a concern in the regional study area.

Ozone

Ozone (O_3) is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. Ozone is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and oxides of nitrogen (NO_x), including nitrogen dioxide (NO_2). ROG and NO_x are known as precursor compounds for ozone. Significant ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight for approximately 3 hours.

Ozone is a regional air pollutant because it is not emitted directly by sources, but is formed downwind of sources of ROG and NO_x under the influence of wind and sunlight. Ozone concentrations tend to be higher in the late spring, summer, and fall, when the long sunny days combine with regional subsidence inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds, like ozone.

Particulate Matter

Respirable particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$) represent fractions of particulate matter that can be inhaled into air passages and the lungs and can cause adverse health effects. Particulate matter in the atmosphere results from many kinds of dust- and fume-producing industrial and agricultural operations, fuel combustion, and atmospheric photochemical reactions. Some sources of particulate matter, such as demolition and construction activities, are more local in

nature, while others, such as vehicular traffic, have a more regional effect. Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain absorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates can also damage materials and reduce visibility.

Other Criteria Pollutants

Carbon monoxide (CO) is a non-reactive pollutant that is a product of incomplete combustion and is mostly associated with motor vehicle traffic. High CO concentrations develop primarily during winter when periods of light winds combine with the formation of ground level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia.

Sulfur dioxide (SO_2) is produced through combustion of sulfur or sulfur-containing fuels such as coal. SO_2 is also a precursor to the formation of atmospheric sulfate and particulate matter (PM_{10} and $PM_{2.5}$) and contributes to potential atmospheric sulfuric acid formation that could precipitate downwind as acid rain. Lead has a range of adverse neurotoxin health effects, and was formerly released into the atmosphere primarily via leaded gasoline. The phase-out of leaded gasoline has resulted in decreasing levels of atmospheric lead.

Attainment Status

The Air Basin is classified as a non-attainment area for the state 1-hour and 8-hour ozone standards, as well as the federal 8-hour ozone standard. The Air Basin is also a non-attainment area relative to the state $PM_{2.5}$ and PM_{10} standards. For all other criteria pollutants, San Diego County is classified as either unclassified or as attainment with respect to state and federal standards (SDAPCD, 2018). Refer to **Table 3.3-1** for the current attainment status of the Air Basin.

Existing Ambient Air Quality

The San Diego Air Pollution Control District (SDAPCD) is the air district responsible for air quality within the Air Basin. The SDAPCD maintains a regional monitoring network that measures the ambient concentrations of criteria pollutants in the Air Basin. Ambient air quality measurements from air monitoring stations maintained by SDAPCD help to determine the level of air quality in the local area. The closest air quality monitoring stations to the Project alignment are the Camp Pendleton Station (10 miles northwest of Segments 1 and 2) and San Diego-Kearny Villa Road Station (17 miles south of Segment 3). There is an air monitoring station within 3 miles of Escondido Substation (Escondido East Valley Parkway station); however, this station has not published air monitoring data since 2015. **Table 3.3-2** shows a 5-year (2013 through 2017) summary of ozone, NO_2, PM_{10}, and $PM_{2.5}$ data monitored at the Camp Pendleton and San Diego-Kearny Villa Road stations. The data are compared to the California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS).

TABLE 3.3-1
SAN DIEGO AIR BASIN CRITERIA POLLUTANT ATTAINMENT STATUS

Pollutant	Federal	State
Ozone (O_3, 1-hour standard)	---[1]	Nonattainment
Ozone (O_3, 8-hour standard)	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment	Attainment
Nitrogen Dioxides (NO_2)	Attainment	Attainment
Inhalable Particulates (PM_{10}) (24-hour)	Attainment	Nonattainment
Inhalable Particulates (PM_{10}) (annual mean)	Unclassifiable[2]	Nonattainment
Fine Particulates ($PM_{2.5}$) (annual mean)	Attainment	Nonattainment

1 The federal 1-hour standard of 12 ppm was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in State Implementation Plans.
2 At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable.

SOURCE: SDAPCD, 2018

TABLE 3.3-2
LOCAL AMBIENT AIR QUALITY DATA SUMMARY (2013-2017)

Pollutant	Standard	Monitoring Data by Year				
		2013	2014	2015	2016	2017
Ozone, O_3 – Camp Pendleton Station						
Highest 1-Hour Average, ppm		0.078	0.097	0.093	0.083	0.094
Days over State Standard	0.09 ppm	0	0	0	0	0
Highest 8-Hour Average, ppm		0.066	0.079	0.076	0.073	0.081
Days over National Standard	0.070 ppm[a]	0	5	2	4	4
Nitrogen Dioxide, NO_2 – Camp Pendleton Station						
Highest 1-Hour Average, ppm		0.081	0.060	0.060	0.072	0.063
Days over National Standard	0.100 ppm	0	0	0	0	0
Annual Average, ppm		0	0	0	0	0
Exceed State Standard?	0.030 ppm	No	No	No	No	No
Respirable Particulate Matter, PM_{10} – San Diego-Kearny Villa Road Station						
Maximum 24-Hour Average (µg/m^3)		38.0	39.0	37.0	35.0	47.0
Estimated Days over State Standard	50 µg/m^3	0	0	0	0	0
Estimated Days over National Standard	150 µg/m^3	0	0	0	0	0
State Annual Average (µg/m^3)		20	19.5	16.7	*	17.6
Exceed State Standard?	20 µg/m^3	No	No	No	No	No
Fine Particulate Matter, $PM_{2.5}$ – Camp Pendleton Station						
Highest 24-Hour Average (µg/m^3)		42.3	28.0	41.2	28.8	26.0
Estimated days over National Standard	35 µg/m^3	1.1	*	*	*	*
Annual Average (µg/m^3)		*	*	*	*	*
Exceed National and State Standard?	12.0 µg/m^3	Yes	No	No	*	*

NOTES: ppm = parts per million; µg/m^3 = micrograms per cubic meter; * insufficient data

a On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour ozone concentration per year, averaged over 3 years, is equal to or less than 0.070 ppm. USEPA issued final designations by October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the ozone level in the area.

SOURCE: CARB, 2018

Sensitive Receptors

Some people (receptors) are considered more sensitive than others to air pollutants. This may be due to age, pre-existing health problems, proximity to emissions sources, and/or duration of exposure to air pollutants. The term "sensitive receptors" can also refer to places where such people live and work. Schools, hospitals, and convalescent homes are considered to be places relatively sensitive to poor air quality because children, elderly people, and the infirm are more susceptible to respiratory distress and other air quality-related health problems than the general public. Additionally, all residential areas are considered sensitive to poor air quality because people typically spend more time at home than any single other place. Recreational sites are also considered sensitive due to the greater exposure to ambient air quality because vigorous exercise associated with recreation results in breathing in more air than when at rest.

The local study area consists of residential, institutional, recreational, industrial, and commercial land uses. San Marcos Substation is in area surrounded by single-family residences, with the nearest approximately 20 feet from the substation property boundary. The Escondido Substation is located in an area surrounded by industrial uses, and the nearest residences are located approximately 875 feet from the property boundary.

Sensitive receptors adjacent to Segment 1 include single-family residences, High Tech High North County (a high school) and San Marcos High School. The closest single-family residence is located approximately 30 feet from construction areas along Segment 1. High Tech High North County is located 260 feet from onsite construction areas along Segment 1 and San Marcos High School is located approximately 220 feet from onsite construction areas along Segment 1. Sensitive receptors adjacent to Segments 2 and 3 consist of clusters of single-family residences. The closest single-family residence along Segment 2 is located approximately 30 feet from construction areas, while the closest single-family residence along Segment 3 is located approximately 35 feet from construction areas.

Toxic Air Contaminants

Toxic Air Contaminants (TACs) are airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer-causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes nearly 200 compounds, including Diesel Particulate Matter (DPM) exhaust emissions from diesel-fueled engines (CARB, 2011).

Valley Fever

Valley fever (formally known as Coccidioidomycosis) is an infectious disease caused by the fungus *Coccidioides sp*. Valley fever is also known as San Joaquin Valley fever, desert fever, or Cocci. Infection is caused by inhalation of *Coccidioides immitis* and *Coccidioides posadasii* spores that have become airborne when dry, dusty soil or dirt is disturbed by natural processes

such as wind or earthquakes, or by human induced ground-disturbing activities such as construction and farming.

The California Department of Public Health (CDPH) received reports of 16,108 incident cases of valley fever in the state from 2009 through 2012 (CDPH, 2014). In 2016, the number of valley fever cases in the state rose to 5,509, an increase of 71 percent from the previous year, and in 2017, the number rose again to 7,466 (CDPH, 2018). Coccidioidomycosis is highly endemic in the San Joaquin Valley and remains an important public health problem in California, but is not as prevalent in San Diego County as in other areas of the state. There were 274 reported cases of valley fever in San Diego County in 2017, for a rate of 8.3 cases per 100,000 people, as compared to 28.1 cases per 100,000 people in Ventura County and 150.4 cases per 100,000 people in San Luis Obispo County (CDPH, 2018). Some inland counties such as Kern and Kings counties experienced higher rates than these counties along the coast. There is currently no vaccine; efforts to develop a vaccine are ongoing (CDPH, 2014).

3.3.2 Regulatory Setting

Air quality within the Air Basin is addressed through the efforts of various federal, state, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through regulations, planning, policy-making, education, and a variety of programs. The air pollutants of concern and agencies primarily responsible for improving the air quality within the Air Basin and the pertinent regulations are discussed below.

Criteria Air Pollutants

Regulation of air pollution is achieved through both CAAQS and NAAQS as well as emission limits for individual sources of air pollutants. As required by the federal Clean Air Act (CAA), the USEPA has identified criteria pollutants and has established NAAQS to protect public health and welfare. NAAQS have been established for ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead.

To protect human health and the environment, the USEPA has set “primary” and “secondary” maximum ambient standards for all seven criteria pollutants. Primary standards were set to protect human health, particularly sensitive receptors such as children, the elderly, and individuals suffering from chronic lung conditions such as asthma and emphysema. Secondary standards were set to protect the natural environment and prevent further deterioration of animals, crops, vegetation, and buildings.

The NAAQS are defined as the maximum acceptable concentration that may be reached, but not exceeded more than once per year. California has adopted more stringent ambient air quality standards (i.e., CAAQS) for some of the criteria air pollutants. **Table 3.3-3** presents both sets of ambient air quality standards (i.e., national and state) and provides the attainment status for each. California has also established CAAQS for sulfates, hydrogen sulfide, visibility reducing particles, and vinyl chloride; however, emissions of these pollutants are not expected under the Project and are not further discussed in this IS/MND.

TABLE 3.3-3
NATIONAL AND STATE AMBIENT AIR QUALITY STANDARDS

Criteria Pollutant	Averaging Time	State Standard	Federal Primary Standard
Ozone	8 Hour	0.070 ppm	0.070 ppm
	1 Hour	0.09 ppm	---
Carbon Monoxide	8 Hour	9.0 ppm	9 ppm
	1 Hour	20 ppm	35 ppm
Nitrogen Dioxide	Annual Average	0.030 ppm	0.053 ppm
	1 Hour	0.18 ppm	0.100 ppm
Sulfur Dioxide	Annual Average	---	0.030 ppm
	24 Hour	0.04 ppm	0.14 ppm
	1 Hour	0.25 ppm	0.075 ppm
Respirable Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 mg/m^3	---
	24 Hour	50 mg/m^3	150 mg/m^3
Fine Particulate Matter ($PM_{2.5}$)[h]	Annual Arithmetic Mean	12 mg/m^3	12.0 mg/m^3
	24 Hour	---	35 mg/m^3
Lead	3-Month Rolling Average	---	0.15 mg/m^3
Hydrogen Sulfide	1 Hour	0.03 ppm/42 $\mu g/m^3$	---
Sulfates	24 Hour	25 mg/m^3	---
Vinyl Chloride	24 Hour	0.01 ppm/26 $\mu g/m^3$	---
Visibility Reducing Particles	8 Hour	Extinction of 0.23/km; visibility of 10 miles or more	---

NOTES: ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter; mg/m^3 = milligrams per cubic meter; --- = no applicable standard
SOURCE: CARB, 2016

Federal

The USEPA is responsible for implementing programs established under the federal CAA, such as establishing and reviewing the NAAQS and judging the adequacy of State Implementation Plans (SIPs), but has delegated the authority to implement many of the federal programs to the states while retaining an oversight role to ensure that the programs continue to be implemented.

State

The California Air Resources Board (CARB) is responsible for establishing and reviewing the State standards, compiling the California SIP and securing approval of that plan from USEPA, conducting research and planning, and identifying toxic air contaminants. CARB also regulates mobile sources of emissions in California, such as construction equipment, trucks, and automobiles, and oversees the activities of California's air quality districts, which are organized at the county or regional level. County or regional air quality management districts are primarily responsible for regulating stationary sources at industrial and commercial facilities within their geographic areas and for preparing the air quality plans that are required under the federal CAA and California CAA.

California's Diesel Risk Reduction Plan / Diesel Fuel Regulations

As part of California's Diesel Risk Reduction Plan, CARB has passed numerous regulations to reduce diesel emissions from vehicles and equipment that are already in use. Combining these retrofit regulations with new engine standards for diesel fueled vehicles and equipment, CARB intends to reduce DPM emissions by 85 percent from year 2000 levels by 2020. California Diesel Fuel Regulations (13 Cal. Code Regs. §§2281-2285; 17 Cal. Code Regs. §93114) provide standards for diesel motor vehicle fuel and non-vehicular diesel fuel.

CARB has also adopted a regulation for in-use off-road diesel construction and mining vehicles that is designed to reduce their emissions by imposing idling limitations on owners, operators, renters, or lessees of off-road diesel vehicles. The regulation requires an operator of applicable off-road vehicles (self-propelled diesel-fueled vehicles 25 horsepower and up that were not designed to be driven on-road) to limit idling to no more than 5 minutes (13 Cal. Code Regs. §2249).

Local

San Diego Air Pollution Control District

The Project is located in the San Diego Air Basin, which includes all of San Diego County. The SDAPCD is the local air district with jurisdiction within this region. SDAPCD programs include the adoption and enforcement of regulations and policies, as well as implementation of education and public outreach programs. SDAPCD is responsible for attaining and/or maintaining air quality in the Air Basin relative to the federal and state air quality standards. Specifically, SDAPCD has the responsibility to monitor ambient air pollutant levels throughout the Air Basin and to develop and implement strategies to attain the applicable federal and state standards.

Regional Air Quality Strategy for San Diego County

The Regional Air Quality Strategy (RAQS) addresses state ozone standards and is the only air quality plan applicable to the study area. The RAQS details the measures and regulations that focus on managing and reducing ozone precursors, such as NO_x and ROGs. It is periodically updated as new measures are identified that are technologically feasible, improve air quality, and/or protect public health. The most recent update is the 2016 Revision of the RAQS (SDAPCD, 2016). The measures identified in the RAQS are primarily designed to reduce ozone precursor emissions from stationary sources under the jurisdiction of the SDAPCD, such as industrial operations and manufacturing facilities. Construction, operation, and maintenance of the Project would not include stationary emissions sources; therefore, the RAQS is not applicable.

Particulate Matter Air Quality Management Plan

The California CAA does not require local districts to establish an air quality management plan for State PM_{10} nonattainment, but the SDAPCD has addressed PM_{10} emissions by preparing a report entitled "Measures to Reduce Particulate Matter in San Diego County" (SDAPCD, 2005). The SDAPCD is considering rulemaking for category-specific particulate matter control measures for emissions from residential wood combustion and from fugitive dust generated at construction sites and from unpaved roads.

SDAPCD Regulation IV – Prohibitions, Rule 50 – Visible Emissions

This rule prohibits any activity that would create air contaminant emissions darker than 20 percent opacity for more than an aggregate of 3 minutes in any consecutive 60-minute time period.

SDAPCD Regulation IV – Prohibitions, Rule 51 – Nuisance

This rule prohibits any activity that would 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. This rule also applies to sources of objectionable odors and prohibits the release of such odors that would affect the public.

SDAPCD Regulation IV – Prohibitions, Rule 55 – Fugitive Dust Control

This regulation prohibits any construction or demolition activity that would discharge visible dust emissions into the atmosphere beyond the property line for more than 3 minutes during any 60-minute period. This regulation also prohibits visible roadway dust due to track-out or carry-out.

3.3.3 Applicant Proposed Measures

No Applicant Proposed Measures (APMs) proposed by SDG&E pertain to air emissions.

3.3.4 Environmental Impacts

Discussion

a) Conflict with or obstruct implementation of the applicable air quality plan: *NO IMPACT.*

The only air quality plan applicable to the study area is the RAQS. The measures identified in the RAQS are primarily designed to reduce ozone precursor emissions from stationary sources under the jurisdiction of the SDAPCD, such as industrial operations and manufacturing facilities. Construction, operation, and maintenance of the Project would not include stationary emissions sources; therefore, the RAQS is not applicable to the Project. There would be no impact under this criterion.

b) Violate any air quality standard or result in a cumulatively considerable net increase in an existing or projected air quality violation: *LESS THAN SIGNIFICANT IMPACT.*

As summarized in Table 3.3-1, San Diego County is designated as non-attainment for the state 1-hour ozone standard, federal and state 8-hour ozone standard, state PM_{10} standard, and state $PM_{2.5}$ standard. The thresholds of significance for air pollutants that are used in this analysis were developed based on consideration of when the emission levels for which a project's individual emissions would be cumulatively considerable. If individual project emissions would exceed the identified significance thresholds discussed below, the project's contribution to a potential significant cumulative air quality impact would be cumulatively considerable. If project emissions would not exceed the significance thresholds, then the project's incremental

contribution to any potential cumulative impact would not be cumulatively considerable. As described below, the Project would not cause a cumulatively considerable net increase of any of these pollutants; therefore, the impact would be less than significant.

Construction

Construction would generate criteria air pollutant emissions over a period of up to 11 months. Exhaust emissions would result from construction equipment and machinery as well as from vehicular traffic generated by construction activities, commuting workers, and travel to and from staging yards for equipment and materials access and storage. The types of equipment and vehicles used would include line trucks, concrete trucks, haul trucks, pickup trucks, on-site generators, air compressors, bulldozers, backhoes, loaders, cabling equipment, and cranes. Medium- and light-duty helicopters would be used for overhead conductor stringing, transporting materials and supplies, and installation or removal of power line structures. Fugitive dust emissions would result from earthwork activities and entrained particulates that become airborne from vehicles traveling on paved and unpaved surfaces. Emission levels for the various construction activities would vary with the type of equipment, duration of use, operation schedules, and size of the construction labor force.

With its application for a Permit to Construct, SDG&E provided Project construction-related air pollutant emissions calculations and estimates. SDG&E's emission calculations were independently reviewed by the CPUC's consultant, Environmental Science Associates (ESA), and were found to be technically adequate. However, subsequent to submitting its application, SDG&E revised its Project to include an AC interference mitigation well system; therefore, ESA revised SDG&E's emissions calculations and estimates accordingly (see Appendix C, *Air Quality and Greenhouse Gas Emissions Calculations*). The California Emissions Estimator Model (CalEEMod) version 2016.3.2, and the construction schedule and equipment information presented in Chapter 2 were used to estimate the ground-based emissions of criteria pollutants generated during Project construction. This version of CalEEMod calculates the construction equipment exhaust emissions based on CARB's OFFROAD2011 model equipment emission and load factors and EMFAC2014 for on-road vehicles. Helicopter pollutant emissions were estimated based on emissions factors identified in USEPA's *Air Pollutant Emissions for Military and Civil Aircraft* (USEPA, 1978). All modeling details and assumptions can be found in Appendix C, *Air Quality and Greenhouse Gas Emissions Calculations*.

Table 3.3-4, *Maximum Daily Construction Emissions Summary*, presents the estimated peak daily Project construction emissions. These emissions would be dispersed throughout the study area at the various Project sites where activities would occur concurrently. For information on the types and amounts of construction equipment that would be used, refer to Table 2-6, *Estimated Construction Equipment and Personnel*, in Chapter 2.

To determine whether a significant impact would occur during construction, the SDAPCD and San Diego County recommend quantifying construction emissions and comparing them to Air Quality Impact Analysis trigger levels (pounds per day) found in the SDAPCD regulations for stationary sources (pursuant to Rule 20.2, et seq.) (SDAPCD, 1998). The SDAPCD did not establish these trigger levels specifically for CEQA purposes or to assess mobile source or construction emissions, but it considers any project emissions that would exceed the trigger levels to

TABLE 3.3-4
MAXIMUM DAILY CONSTRUCTION EMISSIONS SUMMARY

Year/Source	Emissions (pounds per day)					
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
2019						
Construction Emissions	3.15	30.09	18.85	0.04	48.00	6.08
Total	**3.15**	**30.09**	**18.85**	**0.04**	**48.00**	**6.08**
2020						
Construction Emissions	18.42	173.06	112.53	0.32	87.60	14.74
Helicopter Emissions	4.32	18.08	8.88	2.50	2.92	2.89
Total	**22.74**	**191.14**	**121.41**	**2.82**	**90.52**	**17.63**
Maximum Daily Emissions	**22.74**	**191.14**	**121.41**	**2.82**	**90.52**	**17.63**
Threshold	**75**	**250**	**550**	**250**	**100**	**55**
Significant?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

SOURCES: SDG&E, 2017; ESA, 2018; see Appendix C

potentially cause or contribute to a violation of an ambient air quality standard (SDAPCD, 1998). Therefore, the CPUC has determined that use of the SDAPCD significance thresholds are appropriate for a conservative evaluation as to whether Project construction or operation emissions could cause a violation of an air quality standard or contribute to an exceedance of an ambient air quality standard.

Since Rule 20.2 does not have trigger levels for ROG and $PM_{2.5}$, thresholds for these pollutants identified in San Diego County's *Land Use and Environment Group's Draft Guidelines for Determining Significance and Report Format and Content Report Format and Content Guidance Requirements, Air Quality* were used (San Diego County, 2007). The County found, and CPUC agrees, that use of these thresholds to evaluate projects in the County are appropriate because the ROG[2] threshold has been adopted by the South Coast Air Quality Management District's (SCAQMD) Air Quality Significance Thresholds (SCAQMD, 2015), which borders the county to the north and generally has stricter emissions thresholds than SDAPCD, and because the $PM_{2.5}$ threshold is based on USEPA's *Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards* (USEPA, 2005).

As disclosed in Table 3.3-4, maximum daily construction emissions would not exceed any of the thresholds of significance. Therefore, exhaust and fugitive dust emissions from Project construction would not result in a violation or contribute to a violation of an air quality standard. The associated impact would be less than significant.

[2] For the purposes of this analysis, ROG ozone precursors are assumed to be the same as volatile organic compounds (VOC) ozone precursors.

Operation and Maintenance

In general, routine Project operation and maintenance would be substantially the same as current conditions, but could result in a small number of additional worker vehicle trips. These additional trips would result in substantially lower emissions than the construction emissions presented in Table 3.3-4, which do not exceed the SDAPCD/County significance thresholds. Therefore, operation and maintenance of the Project would not result in a violation or contribute to a violation of an air quality standard, and the impact would be less than significant.

c) Expose sensitive receptors to substantial pollutant concentrations: *LESS THAN SIGNIFICANT IMPACT.*

Diesel particulate matter (DPM) was identified as a TAC by CARB in 1998. Project construction would result in temporary and short-term generation of DPM emissions from the use of off-road diesel equipment and from material deliveries and debris hauling using on-road heavy-duty trucks. Long-term sources of Project DPM emissions would be negligible and limited to a few vehicle trips per month related to inspection and maintenance activities.

The dose to which receptors are exposed is the primary factor affecting health risk from TACs. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on 9, 30, and/or 70-year exposure periods when assessing TACs (such as DPM) that have only cancer or chronic non-cancer health effects. However, such health risk assessments should be limited to the duration of the emission-producing activities associated with the Project, unless the activities occur for less than 6 months. Activities that would last more than 2 months, but less than 6 months, are recommended to be evaluated as if they would last for 6 months. The OEHHA does not recommend assessing cancer risk for projects lasting less than 2 months near the maximum exposed individual resident, or MEIR. (OEHHA, 2015)

Construction would occur over a period of up to 11 months along 12 miles of 69 kilovolt (kV) overhead and underground electric power line from the existing San Marcos Substation to the existing Escondido Substation. As described in Section 2.5.1, *Construction Schedule and Sequencing*, construction along the power line alignment segments would move along the alignment and would not be expected to expose any one receptor along the corridors for longer than three weeks. The total construction emissions and duration of exposure at any one sensitive receptor location along the power line alignment would be relatively minor compared to the exposure periods used in health risk assessments. In addition, the long-term operation of the Project would not result in any sources of TAC emissions. As a result, existing sensitive receptors would not be exposed to substantial TAC emissions from the Project, and this impact would be less than significant.

d) Result in substantial emissions (such as odors or dust) adversely affecting a substantial number of people: *LESS THAN SIGNIFICANT IMPACT.*

Project operation and maintenance would not create odorous or fugitive dust emissions. However, Project construction would include emissions sources, such as the operation of diesel equipment, which could result in the creation of objectionable odors and fugitive dust. Since construction activities would be limited to an 11-month period (at most) and would be spatially dispersed, these activities would not affect a substantial number of people in a given location for more than three weeks at a time. In addition, the Project would be required to comply with the SDAPCD's Regulation IV, which prohibits any construction or demolition activity that would discharge visible dust emissions into the atmosphere beyond the property line for more than 3 minutes during any 60-minute period. Therefore, impacts from odors and fugitive dust generated by construction would be less than significant.

Construction activities that include ground disturbance would have the potential to release *coccidioides immitis* spores. Although emissions of spores that cause valley fever could have the potential to adversely affect a substantial number of people, valley fever-related impacts associated with the Project would not be considered significant because ongoing ground-disturbing activities in the County currently represent a continual source of spores that contribute to the low number of valley fever cases reported each year. Project construction would result in localized ground-disturbing activities similar to those that occur continually within the County and the Project would not result in a substantial increase in spore release compared to baseline conditions. Therefore, Project construction would not represent an increased risk to public health. In addition, implementation of SDAPCD's Regulation IV, which requires implementation of fugitive dust control measures, would ensure that fugitive dust that could contain *coccidioides immitis* spores would be controlled to the maximum extent feasible. Valley fever-related impacts would be less than significant.

3.3.5 References

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3.4 Biological Resources

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
4.	**BIOLOGICAL RESOURCES — Would the project:**				
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c)	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

This section describes the existing environment for wildlife, botanical, and wetland resources within and adjacent to the Project site, as well as adjacent habitats and habitat suitability considered for biological resources within an approximate 500-foot buffer from the limits of the Project area that could reasonably be affected by Project construction, operation and maintenance activities. This is the biological study area (BSA) analyzed for potential Project impacts to biological resources.

The setting information presented herein was compiled from available scientific literature and database searches, general biological reconnaissance and focused species surveys, and the Biological Technical Report (ICF, 2017a; included in this IS/MND as Appendix D.2). Additionally, a reconnaissance-level site-visit was performed by Environmental Science Associates (ESA) on April 11, 2018, to verify field conditions.

3.4.1 Environmental Setting

Regional Setting

The Project site is located in the coastal hills of San Diego County's northern valley within the cities of Carlsbad, Escondido, Vista, San Marcos, and unincorporated areas of San Diego County. San Diego County is a biologically diverse region that supports rare and declining native habitats, federal and State-listed plant and animal species, and federally designated critical habitat for listed species. Topography in the BSA varies between flat terrain and steep slopes. The elevation of the Project site ranges from approximately 500 feet to 1,150 feet above mean sea level (amsl).

The Project would traverse developed residential neighborhoods, industrial facilities, open space preserves, and commercial and vacant lots. All construction would occur within existing rights-of-way (ROW), franchise positions (city/county roadways), and SDG&E fee-owned property.

Vegetation Communities

Vegetation communities and the plants that typically occur within these vegetation communities were classified according to Holland (1986) as modified by Oberbauer et al. (2008). Twenty-three distinct Holland/Oberbauer vegetation communities or land cover types occur within the approximate 680-acre BSA (ICF, 2017a). The BSA is dominated by Holland/Oberbauer classifications of urban/developed areas, disturbed habitat, Diegan coastal sage scrub, and coastal sage-chaparral transition. The approximate acreages for each vegetation community and land cover type within the BSA are listed in **Table 3.4-1**. Maps depicting the distribution of the vegetation communities throughout the BSA are presented in Appendix D.1, Figures 3.4-1.1 through 3.4-1.22.

Disturbed Habitat

Disturbed habitat consists of areas supporting densely to sparsely distributed weedy, non-native vegetation, compacted dirt roads, and other areas that do not support vegetation due to human interference. In the BSA, disturbed habitat consists of dirt roads and areas supporting non-native herbaceous species such as fennel (*Foeniculum vulgare*), redstem filaree (*Erodium cicutarium*), longbeak filaree (*Erodium botrys*), wild oat (*Avena fatua*), tocalote (*Centaurea melitensis*), and African fountain grass (*Pennisetum setaceum*). Some of the disturbed habitat in the BSA occurred in areas that appeared to have been used for agricultural purposes in the past.

Urban/Developed

Urban/developed areas consist of pavement, asphalt, permanent or semi-permanent structures, hardscape, and associated landscaping. These areas are typically devoid of vegetation with the exception of landscaped areas. Within the BSA, urban/developed areas consisted of paved roads, gravel roads, private residences, buildings, and associated landscaping.

Orchard/Vineyard

Orchard/vineyards describes areas supporting the cultivation of non-native plants, such as fruit trees. These trees are typically artificially irrigated and the understory is kept clear of vegetation or support scattered non-native herbaceous plant species. Within the BSA, orchards/vineyards consist of cultivated ornamental bushes including book-leaf mallee (*Eucalyptus kruseana*), citrus (*Citrus* sp.), and waxflower (*Chamelaucium* sp.).

TABLE 3.4-1
VEGETATION COMMUNITIES WITHIN THE BSA

NCCP[a] Vegetation Community	Holland/Oberbauer Vegetation Community[b]/ Land Cover Type	Approximate Acreage in BSA
Developed/Disturbed Land Cover Types		
Disturbed Habitat	Disturbed Habitat	124.0
	Urban/Developed	247.9
	Orchard/Vineyard	10.7
Agricultural	Intensive Agriculture	0.8
Uplands		
Coastal Sage Scrub	Diegan Coastal Sage Scrub*	103.5
	Diegan Coastal Sage Scrub-Burned*	0.6
	Diegan Coastal Sage Scrub-Disturbed*	18.7
Coastal Sage/Chaparral Mix	Coastal Sage-Chaparral Transition*	125.6
Southern Maritime Chaparral	Southern Maritime Chaparral*	20.8
	Southern Maritime Chaparral-Burned*	1.0
Grassland	Non-Native Grassland*	9.9
Open Oak Woodland	Coast Live Oak Woodland*	5.9
	Coast Live Oak Woodland-Disturbed*	0.3
Eucalyptus Forest	Non-Native Woodland	1.0
	Eucalyptus Woodlands	3.6
Riparian and Wetland		
Freshwater Marsh	Emergent Wetlands*	0.6
	Coastal and Valley Freshwater Marsh*	0.2
Riparian Forest	Southern Riparian Forest*	3.9
Coast Live Oak Riparian Forest	Southern Coast Live Oak Riparian Forest*	0.7
Riparian Scrub	Mule Fat Scrub*	0.1
	Southern Willow Scrub*	0.4
	Southern Willow Scrub-Disturbed*	0.0
Inland Water	Fresh Water	0.2
Total		**680.3**

NOTES:

[a] The SDG&E Subregional NCCP is discussed below in Section 3.4.2, Regulatory Setting, under the subheading "Other Technical Plans"

[b] Vegetation community codes correspond to Oberbauer et al. (2008), which also mirror Holland's (1986) element code. These codes help define the vegetation hierarchy inherent in a classification system. Similarly coded vegetation communities exhibit similar assemblages of plant and animal species, and typically exist in similar macro-habitat types.

* Indicates a sensitive natural community.

SOURCE: ICF, 2017a

Intensive Agriculture

Intensive agriculture includes dairies, nurseries, chicken ranches, and open spaces used to keep livestock, such as corrals. Agricultural areas on site included corrals and associated unvegetated areas. Some of these areas support weedy plant species similar to those listed under disturbed habitat.

Diegan Coastal Sage Scrub

Diegan coastal sage scrub is composed of low-growing, aromatic, drought-deciduous, soft-woody shrubs that have an average height of 3 to 4 feet. This habitat is typically found on sites with steep, dry slopes or on clay-rich soils that are slow to release stored water. These sites often include drier south- and west-facing slopes and occasionally north-facing slopes, where the community can act as a successional phase of chaparral development.

In the BSA, Diegan coastal sage scrub supports California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), deerweed (*Acmispon glaber* var. *brevialatus*), spreading goldenbush (*Isocoma menziesii*), California encelia (*Encelia californica*), blue-eyed-grass (*Sisyrinchium bellum*), fascicled tarplant (*Deinandra fasciculata*), windmill catchfly (*Silene gallica*), and dotseed plantain (*Plantago erecta*).

The abundance of non-native plant species, as well as the sparse distribution of typically dominant shrub species, are the characteristics that distinguish Diegan coastal sage scrub-disturbed from undisturbed Diegan coastal sage scrub. In the BSA, Diegan coastal sage scrub-disturbed is predominated by black sage, California buckwheat, or spreading goldenbush. Other plants commonly found in Diegan coastal sage scrub-disturbed included shortpod mustard (*Hirschfeldia incana*), California sagebrush, prickly Russian thistle (*Salsola tragus*), wild oat, fascicled tarplant, and coyote bush (*Baccharis pilularis*).

Portions of Diegan coastal sage scrub occurring in the southwestern portion of the BSA burned during the Poinsettia Fire in 2014. In the vegetation communities maps these areas are labeled, “Diegan Coastal Sage Scrub-Burned” (Appendix D.1). Shrubs in “Diegan Coastal Sage Scrub-Burned” were re-sprouting at the time of the survey and include laurel sumac, spreading goldenbush, California sagebrush, and wild cucumber (*Marah macrocarpa*).

Coastal Sage-Chaparral Transition

Coastal sage-chaparral transition consists of a mixture of herbaceous, woody, and shrubby species that forms a community with features of both coastal sage scrub and chaparral. It appears to be a post-fire successional community.

In the BSA, coastal sage-chaparral scrub is dominated by chamise and California sagebrush and occurred adjacent to Diegan coastal sage scrub. This vegetation community also supports coyote bush, black sage, sawtooth goldenbush, and laurel sumac.

Southern Maritime Chaparral

Southern maritime chaparral is typically a low-growing chaparral with open vegetation and occurs in areas within the fog belt. This habitat type is dominated by wart-stem-lilac (*Ceanothus verrucosus*) with Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*) often occurring as a co-dominant.

In the BSA, southern maritime chaparral is dominated by wart-stem-lilac and for the most part consists of a tall, impenetrable stand of woody shrubs. Other plants detected in this vegetation community include chamise (*Adenostoma fasciculatum*), black sage, sawtooth goldenbush (*Hazardia squarrosa*), mission manzanita (*Xylococcus bicolor*), bushrue (*Cneoridium dumosum*), white flowering currant (*Ribes indecorum*), Nuttall's snapdragon (*Antirrhinum nuttallianum*), heartleaf bush penstemon (*Keckiella cordifolia*), California brickellbush (*Brickellia californica*), slender sunflower (*Helianthus gracilentus*), and blue dicks (*Dichelostemma capitatum*).

Portions of southern maritime chaparral occurring in the southwestern portion of the BSA burned during the Poinsettia Fire in 2014. In the vegetation communities maps these areas are labeled southern maritime chaparral-burned (Appendix D.1). Shrubs in southern maritime chaparral-burned were re-sprouting and these areas supported additional species including large flower phacelia (*Phacelia grandiflora*), Fendler's meadow-rue (*Thalictrum fendleri*), and pineapple weed (*Matricaria discoidea*).

Non-native Grassland

Non-native grassland consists of a dense to sparse cover of annual grasses with flowering culms measuring approximately 1-meter-high (i.e., 3.28 feet), which may include numerous native wildflowers, particularly in years of high rainfall (Holland 1986). These annuals germinate with the onset of the rainy season and set seeds in the late spring or summer.

In the BSA, non-native grassland supports wild oat, ripgut brome (*Bromus diandrus*), shortpod mustard, fascicled tarplant, Crete weed (*Hedypnois cretica*), prickly Russian thistle, and spreading goldenbush. Some of the non-native grasslands in the survey area occurred in areas that appeared to have been used for agricultural purposes in the past.

Coast Live Oak Woodland

Coast live oak (*Quercus agrifolia*) is the dominant tree occurring in coast live oak woodland, reaching 30 to 80 feet in height. The shrub layer is usually poorly developed, and the herb layer is continuous and dominated by non-native grasses. This community typically occurs on north-facing slopes and shaded ravines.

In the BSA, coast live oak woodland is dominated by dense groupings of coast live oaks. The understory consists of blessed milkthistle (*Silybum marianum*), tumble mustard (*Sisymbrium altissimum*), toyon (*Heteromeles arbutifolia*), coastal woodfern (*Dryopteris arguta*), ripgut brome, soft brome (*Bromus hordeaceus*), shepherd's purse (*Capsella bursapastoris*), and sticky mouse-ear chickweed (*Cerastium glomeratum*).

The abundance of non-native tree species is the characteristic that distinguishes disturbed coast live oak woodland from undisturbed coast live oak woodland. In the BSA, disturbed coast live oak woodland supports coast live oak, red gum (*Eucalyptus camaldulensis*), and European olive (*Olea europaea*). The understory consisted of ripgut brome, soft brome, tumble mustard, and shortpod mustard.

Non-native Woodland

Non-native woodland describes a woodland composed primarily of non-native trees (with possible minimal presence of native species) that were planted, typically for landscaping purposes, but are not maintained or irrigated. In the BSA, non-native woodland consists of Peruvian pepper tree (*Schinus molle*), European olive, and to a lesser degree, red gum and coast live oak.

Eucalyptus Woodland

Eucalyptus woodland is similar to non-native woodland, but consists of a monotypic stand of eucalyptus trees (*Eucalyptus* spp.). Eucalyptus woodlands with a dense canopy typically do not support vegetation in the understory, while woodlands in which trees are scattered may support a shrubby or herbaceous understory.

Emergent Wetlands

Emergent wetlands occur in areas with relatively persistent wetlands hydrology and shallow water conditions, often in previously disturbed areas where wetlands are emerging. Although the vegetation community is directly affected by flooding, the presence of emergent wetlands is typically controlled by the presence of groundwater.

Emergent wetland in the BSA supports spikerush (*Eleocharis* sp.), annual saltmarsh aster (*Symphyotrichum subulatum*), rabbit foot beard grass (*Polypogon monspeliensis*), ditch beard grass (*Polypogon interruptus*), and great marsh evening primrose (*Oenothera elata*). This vegetation community within the BSA occurs within a detention basin, approximately 0.2 acre in size, south of the staging yards adjacent to Citracado Parkway along Segment 3.

Coastal and Valley Freshwater Marsh

Coastal and valley freshwater marsh occurs in areas flooded by freshwater that lack a significant current. It is typically dominated by perennial, emergent monocots typically measuring 13 to 16 feet in height. In the BSA, coastal and freshwater marsh consists of southern cattail (*Typha domingensis*), California bulrush (*Schoenoplectus californicus*), great marsh evening primrose, and curly dock (*Rumex crispus*). This vegetation community occurs within a detention basin, approximately 0.2 acre in size, south of the staging yards adjacent to Citracado Parkway along Segment 3.

Southern Riparian Forest

Southern riparian forest is a winter-deciduous forest dominated by moderately tall broadleafed trees with a closed or moderately closed canopy. This vegetation community is typically found along streams and rivers. Southern riparian forest in the BSA is predominated by red willow

(*Salix laevigata*), mule fat (*Baccharis salicifolia*), Goodding's black willow (*Salix gooddingii*), San Diego marsh-elder (*Iva hayesiana*), great marsh evening primrose, western ragweed (*Ambrosia psilostachya*), and yerba mansa (*Anemopsis californica*). This vegetation community occurs along streams and canyon bottoms within the BSA.

Southern Coast Live Oak Riparian Forest

Southern coast live oak riparian forest is a dense forest dominated by coast live oak. It has a closed or almost closed canopy and has an understory that is typically richer in herbs and poorer in shrubs compared to other riparian communities. This vegetation community occurs in association with bottomlands and the outer floodplains along larger streams.

This portion of the BSA burned during the 2014 Poinsettia fire. The coast live oaks are still alive and present, but the understory consists mostly of non-native species including ripgut brome, blessed milkthistle, soft brome, scarlet pimpernel (*Anagallis arvensis*), tocalote, and tumble mustard.

Mule Fat Scrub

Mule fat scrub is a, tall, herbaceous riparian scrub strongly dominated by mule fat. This early seral community is maintained by frequent flooding. It is usually found in intermittent stream channels with fairly coarse substrate and moderate depth to the water table. In the BSA, mule fat scrub was identified in one location: a small, narrow stand of mule fat shrubs adjacent to a detention basin supporting coastal freshwater marsh.

Southern Willow Scrub

Southern willow scrub is described as dense, broadleafed, winter-deciduous riparian thickets dominated by several willow species. Most stands are too dense to allow much understory development. This early seral community requires repeated flooding to prevent succession to southern cottonwood-sycamore riparian forest. It is usually found in loose, sandy or fine gravelly alluvium deposited near stream channels during flood flows. In the BSA, southern willow scrub supports young red willow within a detention basin.

The abundance of non-native plant species, as well as the sparse distribution of typically dominant shrub species, are the characteristics that distinguish southern willow scrub-disturbed from undisturbed southern willow scrub. In the survey areas, disturbed southern willow scrub was supported arroyo willow (*Salix lasiolepis*) and Peruvian pepper tree. This vegetation community occurs adjacent to non-native woodland along the margins of a pond.

Fresh Water

Fresh water refers to a body of water that is present year-round, such as a lake or a pond. Within the BSA fresh water consists of a pond located along a drainage. This pond had water at the time of the survey.

Sensitive Natural Communities

The California Department of Fish and Wildlife (CDFW) provides an inventory of vegetation communities that are considered sensitive by State and federal resource agencies, academic institutions, and various conservation groups in the California Natural Diversity Database (CNDDB). Determination of the sensitivity level of the vegetation communities is based on the Nature Conservancy Heritage Program Status Ranks, which ranks vegetation communities on a global and statewide basis according to the number and size of remaining occurrences and recognized threats.

The following 16 sensitive natural communities occur within the BSA and may be affected by the Project:

- Diegan Coastal Sage Scrub
- Diegan Coastal Sage Scrub-Burned
- Diegan Coastal Sage Scrub-Disturbed
- Coastal Sage-Chaparral Transition
- Southern Maritime Chaparral
- Southern Maritime Chaparral-Burned
- Non-Native Grassland
- Emergent Wetlands
- Coastal and Valley Freshwater Marsh
- Southern Riparian Forest
- Southern Coast Live Oak Riparian Forest
- Mule Fat Scrub
- Southern Willow Scrub
- Southern Willow Scrub-Disturbed
- Coast Live Oak Woodland
- Coast Live Oak Woodland-Disturbed

Special-Status Species

Special status species include those listed as threatened or endangered under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA); animals listed as "fully protected" under the California Fish and Game Code; animals designated as "Species of Special Concern" by CDFW (formerly California Department of Fish and Game); and plants listed as rare or endangered by the California Native Plant Society (CNPS).

This analysis treats species that meet the CEQA Guidelines Section 15380(b)(1)-(2) definition of rare or endangered as special-status. As species of plants and animals become restricted in range and limited in population numbers, species may become listed or candidates for listing as Endangered or Threatened and become recognized under CEQA as a significant resource. Examples of such species are vernal pool fairy shrimp and burrowing owl; the former is listed by the federal government and the latter is considered a California species of special concern.

Species Surveys

KP Environmental and ICF biologists conducted general plant and wildlife surveys and vegetation mapping in 2015 and 2017 (ICF, 2017a). Focused biological surveys were conducted by ICF for special-status plant species, least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), and coastal California gnatcatcher (*Polioptila californica californica*) (ICF, 2016a; see Appendix B of IS/MND Appendix D.2). A habitat assessment for arroyo toad (*Anaxyrus californicus*) was conducted by KP Environmental in 2015 and ICF in 2016 (ICF, 2016b; see Appendix E of IS/MND Appendix D.2); however, no suitable habitat was found and so focused

surveys were not conducted. These surveys and assessments were conducted at a time when the corresponding resource or sign of its presence would have been observable.

Potential for Occurrence

ESA, on behalf of the CPUC, compiled a list of special-status species reported or expected to occur within the BSA based on SDG&E's biological studies (ICF, 2017a), and search results from CNDDB (CDFW, 2018), CNPS's Online Inventory of Rare and Endangered Plants (CNPS, 2018), and the U.S. Fish and Wildlife Service (USFWS) Trust Resource List (USFWS, 2018). The list is presented in **Table 3.4-2**. Special status species occurrences within a 5-mile radius of the Project are shown in **Figures 3.4-2a** through **3.4-2c**). In addition to physical occurrences, this database search radius also captures species with nesting and/or foraging habitat coinciding with the BSA.

A total of 37 special-status wildlife species are known to potentially occur in the BSA (Table 3.4-2). Of these special status wildlife species, five avian species were identified as present during surveys conducted, and 21 have potential to occur within the Project area based on the proximity of historical records and/or the presence of suitable habitat. These five avian species present are (the status code following each is defined at bottom of Table 3.4-2):

- Least Bell's vireo (FE, SE)
- Coastal California gnatcatcher (FT, SSC)
- Cooper's hawk (*Accipiter cooperii*; WL)
- Yellow warbler (*Setophaga petechia*; SC)
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*; WL)

Ten species are unlikely to occur within the BSA because they are associated with vernal pools (permanent or nearly permanent bodies of water with vegetated banks and basking sites or emergent wetlands with open water for foraging), which do not occur within the BSA. These species are the San Diego fairy shrimp (*Branchinecta sandiegonensis*), arroyo toad, southwestern pond turtle (*Actinemys marmorata pallida*), Belding's Savannah sparrow (*Passerculus sandwichensis beldingi*), burrowing owl (*Athene cunicularia*), light-footed Ridgeway's rail (*Rallus longirostris levipes*), western snowy plover (*Charadrius alexandrinus nivosus*), yellow-billed cuckoo (*Coccyzus americanus*), big free-tailed bat (*Nyctinomops macrotis*), and Townsend's big-eared bat (*Corynorhinus townsendii*).

Birds

Focused surveys were conducted for three avian species: coastal California gnatcatchers, least Bell's vireo, and southwestern willow flycatcher. Of these, only coastal California gnatcatchers and least Bell's vireo were identified as present in the BSA. Within the BSA, surveys identified 33 coastal California gnatcatcher territories. Of these, 22 were confirmed as being occupied by paired gnatcatchers, with three pairs identified to have nests and four pairs identified to have nestlings or fledglings. In addition, two least Bell's vireo migrants were detected within the BSA in 2016. The Cooper's hawk, yellow warbler, and southern California rufous-crowned sparrow were also detected within the BSA (ICF, 2017a).

TABLE 3.4-2
SPECIAL-STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR IN THE BSA

Species Name	Covered under the NCCP[a] (Yes/No)	Status[b] Federal/ State/ Local	Habitat Requirements	Potential to Occur
Amphibians				
Western spadefoot toad (*Spea* (=*Scaphiopus) hammondii*)	Yes	SSC	Temporary pools with water temperatures between 9 degrees Celsius (°C) and <30°C that last at least 3 weeks within areas of open vegetation.	Habitat requirements necessary for this species are limited within the BSA. **Low Potential**
Reptiles				
California glossy snake (*Arizona elegans occidentalis*)	No	SSC	Sandy habitat in grasslands, coastal sage scrub, and chaparral.	Historical records from 1946 from within 5 miles of the site. No modern records. The BSA generally does not support the sandy habitat preferred by this species. **Low Potential**
Coastal whiptail (*Aspidoscelis tigris stehnegeri*)	No	SSC	Inhabits coastal sage scrub, chaparral, riparian, oak woodlands, and rocky areas. Occurs in habitats with gravel or sandy soils, often associated with washes.	The BSA contains habitat suitable to support this species. Also, the CNDDB lists two occurrences within 1 mile of the BSA. **High Potential**
Coast horned lizard (*Phrynosoma blainvillii*)	Yes	SSC	Grasslands, brushlands, woodlands, and open coniferous forest with sandy or loose soil; requires abundant ant colonies for foraging.	The BSA contains habitat suitable to support this species. The CNDDB lists four occurrences within 1 mile of the BSA. **High Potential**
Coronado skink (*Plestiodon skiltonianus interparietalis*	Yes	WL	Forest, open woodland, and grassy areas. Usually found under leaf litter, logs, or rocks.	The BSA contains habitat suitable to support this species. CNDDB records within 5 miles of the BSA. **High Potential**
Coast patched-nosed snake (*Salvadora hexalepis virgultea*)	Yes	SSC	Inhabits semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains.	The BSA contains habitat suitable to support this species. Also, the CNDDB lists one occurrence within 1 mile of the BSA. **High Potential**
Orange-throated whiptail (*Aspidoscelis hyperythra*)	Yes	WL	Occurs in semi- arid, brushy areas typically with loose soil and rocks, including washes, streamsides, rocky hillsides, coastal sage scrub, and chaparral. Can also occur in weedy, disturbed areas adjacent to these habitats.	The BSA contains habitat suitable to support this species. Also, the CNDDB lists two occurrences within 1 mile of the BSA. **High Potential**
Two-striped garter snake (*Thamnophis hammondii*)	Yes	SSC	Inhabits perennial and intermittent streams with rocky beds and bordered by willow thickets or other dense vegetation.	While this species has been recorded within 1 mile of the BSA (CNDDB), the BSA contains limited habitat suitable to support this species. **Moderate Potential**

TABLE 3.4-2 (CONTINUED)
SPECIAL-STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR IN THE BSA

Species Name	Covered under the NCCP[a] (Yes/No)	Status[b] Federal/ State/ Local	Habitat Requirements	Potential to Occur
Birds				
Bells sage sparrow (*Artemisiospiza belli belli*)	No	WL	Open chaparral and sage scrubs.	Widespread but uncommon species. Appropriate habitat present in the BSA, but not observed during focused avian surveys in 2016. **Moderate Potential**
California horned lark (*Eremophila alpestris actia*)	No	WL	Grasslands, recently disturbed habitat where seeds and insects are easy to find.	Appropriate habitat present in the BSA, but not observed during focused avian surveys in 2016. **Moderate Potential**
Coastal California gnatcatcher (*Polioptila californica californica*)	Yes	FT, SSC	Prefers open scrubby habitats such as coastal sage scrub and some forms of chaparral.	Species was detected during the 2016 focused surveys. **Present**
Cooper's hawk (*Accipiter cooperii*)	Yes	WL	Oak groves and mature stands of riparian woodland. This species has adapted well to development and is abundant in urban canyons with eucalyptus trees.	Species was detected incidentally during site visits. **Present**
Least Bell's vireo (*Vireo bellii pusillus*)	Yes	FE, CE	Riparian thickets either near water or in dry portions of river bottoms; nests along margins of bushes and forages low to the ground; may also be found using mesquite and arrow weed in desert canyons.	Species was detected during the 2016 focused surveys. **Present**
San Diego cactus wren (*Campylorhynchus brunneicapillus sandiegensis*)	Yes	SSC	Resident in coastal sage scrub with extensive or large cactus. Normally nests in large cactus thickets, with nests over 3 feet aboveground.	Not detected during focused California gnatcatcher surveys in coastal sage scrub. Limited potential habitat present. **Low Potential**
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	Yes	WL	Fairly common, widespread, and generally fairly conspicuous resident of rocky grassland and patchy shrub habitats, often including areas with disturbance from fire, trash, soil compaction, and non-native vegetation.	Species was detected during the 2016 focused surveys. **Present**
Southwestern willow flycatcher *(Empidonax trallii extimus)*	Yes	FE CE	Will forage over a variety of habitats; primarily riparian habitats with stratified canopy layers and presence of water.	Potentially suitable nesting and foraging habitat for this species is located within the BSA and was surveyed in 2016. Species was not detected during 2016 focused USFWS-protocol surveys. **Low Potential**
Tricolored blackbird (*Agelaius tricolor*)	No	CT	Breeds primarily in freshwater marshes with tall emergent vegetation; also stinging nettle and upland habitats such as thickets of Himalayan blackberry. Forages in rangelands, shrublands and agricultural fields.	Suitable acreage of breeding and foraging is not present within the BSA. **Low Potential**

TABLE 3.4-2 (CONTINUED)
SPECIAL-STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR IN THE BSA

Species Name	Covered under the NCCP[a] (Yes/No)	Status[b] Federal/ State/ Local	Habitat Requirements	Potential to Occur
Birds (cont.)				
White-tailed Kite (*Elanus leucurus*)	No	CFP	Nests in trees or large shrubs. Forages in grasslands and coastal sage scrub.	Shrubs in chaparral provide suitable nesting habitat for this species. Kite is known from the region. Not observed during focused avian surveys of the BSA. **Moderate Potential**.
Yellow-breasted chat (*Icteria virens*)	No	SSC	Associated with mature riparian woodland. Common summer resident in appropriate habitat throughout San Diego County.	Species was not detected during 2016 focused riparian bird surveys; however, nesting and foraging habitat suitable to support this species is located within the BSA. **Moderate Potential**
Yellow warbler (*Setophaga petechia*)	No	SSC	Associated with mature riparian woodland. Common summer resident in appropriate habitat throughout San Diego County.	Species was detected during the 2016 focused surveys. **Present**
Mammals				
American badger (*Taxidea taxus*)	Yes	SSC	Inhabits a diversity of habitats with principal requirements of sufficient food, friable soils, and relatively open, uncultivated ground. Grasslands, savannas, mountain meadows, and desert scrub.	The BSA contains habitat suitable to support this species. This is a wide-ranging but uncommon species. The CNDDB lists one occurrence within 1 mile of the BSA. **Moderate Potential**
Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*)	Yes	SSC	Coastal sage scrub, sage scrub/ grassland ecotones, and chaparral communities.	The BSA contains habitat suitable to support this species. Also, the CNDDB lists one occurrence within 1 mile of the BSA. **High Potential**
Pallid bat (*Antrozous pallidus*)	No	SSC	Throughout Southern California from coast to mixed conifer forest; grasslands, shrublands, woodlands, & forest; most common in open, dry habitats with rocky areas for roosting; yearlong resident in most of range. Roosts in rock crevices, caves, mine shafts, under bridges, in buildings and tree hollows.	Limited potential habitat within the BSA **Low Potential**
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	Yes	SSC	Mostly found on the coastal side of local mountains in open habitats, usually avoiding dense stands of chaparral or woodlands.	The BSA contains habitat suitable to support this species. Also, the CNDDB lists one occurrence within 1 mile of the BSA. **High Potential**
San Diego desert woodrat (*Neotoma lepida intermedia*)	Yes	SSC	Variety of shrub and desert habitats primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth.	The BSA contains habitat suitable to support this species. CNDDB lists two occurrences within 1 mile of the BSA. **High Potential**

TABLE 3.4-2 (CONTINUED)
SPECIAL-STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR IN THE BSA

Species Name	Covered under the NCCP[a] (Yes/No)	Status[b] Federal/ State/ Local	Habitat Requirements	Potential to Occur
Mammals (cont.)				
Mule deer (*Odocoileus hemionus*)	Yes		Species can be found in a variety of habitats.	The BSA contains habitat suitable to support this species. **High Potential**

NOTES:
[a] SDG&E Subregional Natural Community Conservation Plan
[b] Explanation of State and federal listing codes:

Federal listing codes:
FE: Federally Endangered Species
FT: Federally Threatened Species
FC: Candidate for Federal Listing

California listing codes:
CE: State-listed Endangered Species
CR: State-listed Rare Species
CT: State-listed Threatened Species
SSC: California Species of Special Concern
CFP: California Fully Protected
WL: CDFW Watch List

SOURCE: CDFW, 2018

Mammals

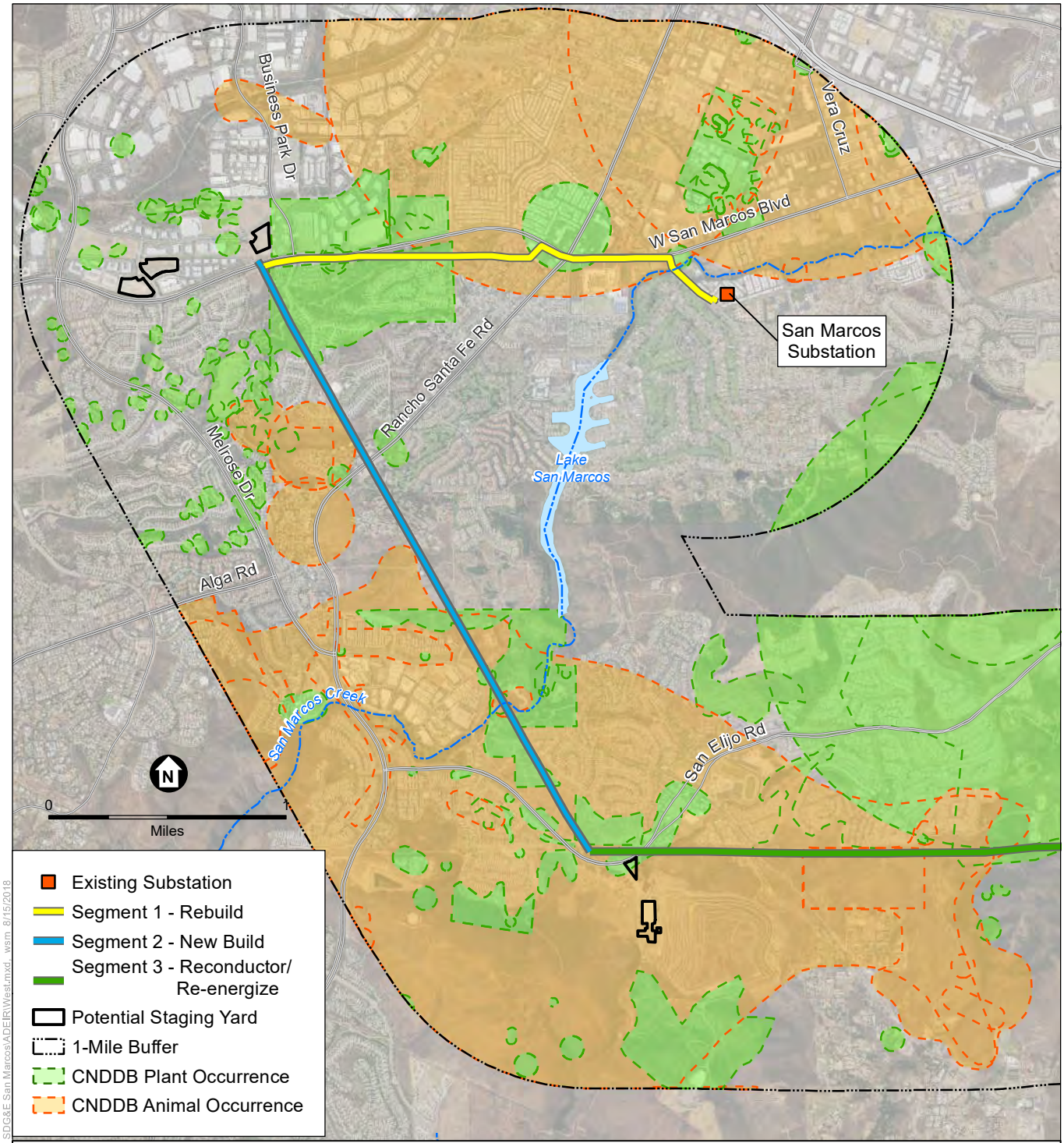
Five mammal species have moderate to high potential to occur within the BSA. The American badger has moderate potential to occur given that the BSA supports foraging and breeding habitat. In addition, northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), San Diego desert woodrat (*Neotoma lepidia intermedia*), and mule deer (*Odocoileus hemionus*) have high potential to occur within the BSA.

Reptiles

Six reptile species have moderate to high potential to occur within the BSA. The coastal whiptail (*Aspidoscelis tigris stehnegeri*), coast horned lizard (*Phrynosoma blainvillii*), Coronado skink (*Plestiodon skiltonianus interparietalis*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), and orange-throated whiptail (*Aspidoscelis hyperythra*) have a high potential to occur within the BSA. The two-striped garter snake (*Thamnophis hammondii*) has a moderate potential to occur within the BSA.

Special-Status Plants

Thirty-five special-status plant species were evaluated for their potential to occur within 5 miles of the BSA. Of these, 13 special-status plant species were determined to be present during field surveys. One plant species has a moderate potential to occur, nine species have a low potential to occur, and 12 species are not expected to occur within the BSA (ICF, 2017a; see Appendix D of IS/MND Appendix D.2). These species are listed in **Table 3.4-3** below.



Animal Occurrences
American badger
Bell's sage sparrow
coast horned lizard
coastal California gnatcatcher
coastal whiptail
hoary bat
least Bell's vireo
northwestern S.D. pocket mouse
orange-throated whiptail
San Diego desert woodrat
San Diego fairy shrimp
So. Cal. rufous-crowned sparrow
Townsend's big-eared bat
two-striped gartersnake

Plant Occurrences
California adolphia
decumbent goldenbush
Del Mar manzanita
Encinitas baccharis
felt-leaved monardella
Nuttall's scrub oak
Orcutt's brodiaea
Palmer's grapplinghook
San Diego button-celery
San Diego goldenstar
San Diego marsh-elder
San Diego thorn-mint
southern tarplant
spreading navarretia
summer holly
thread-leaved brodiaea
wart-stemmed ceanothus

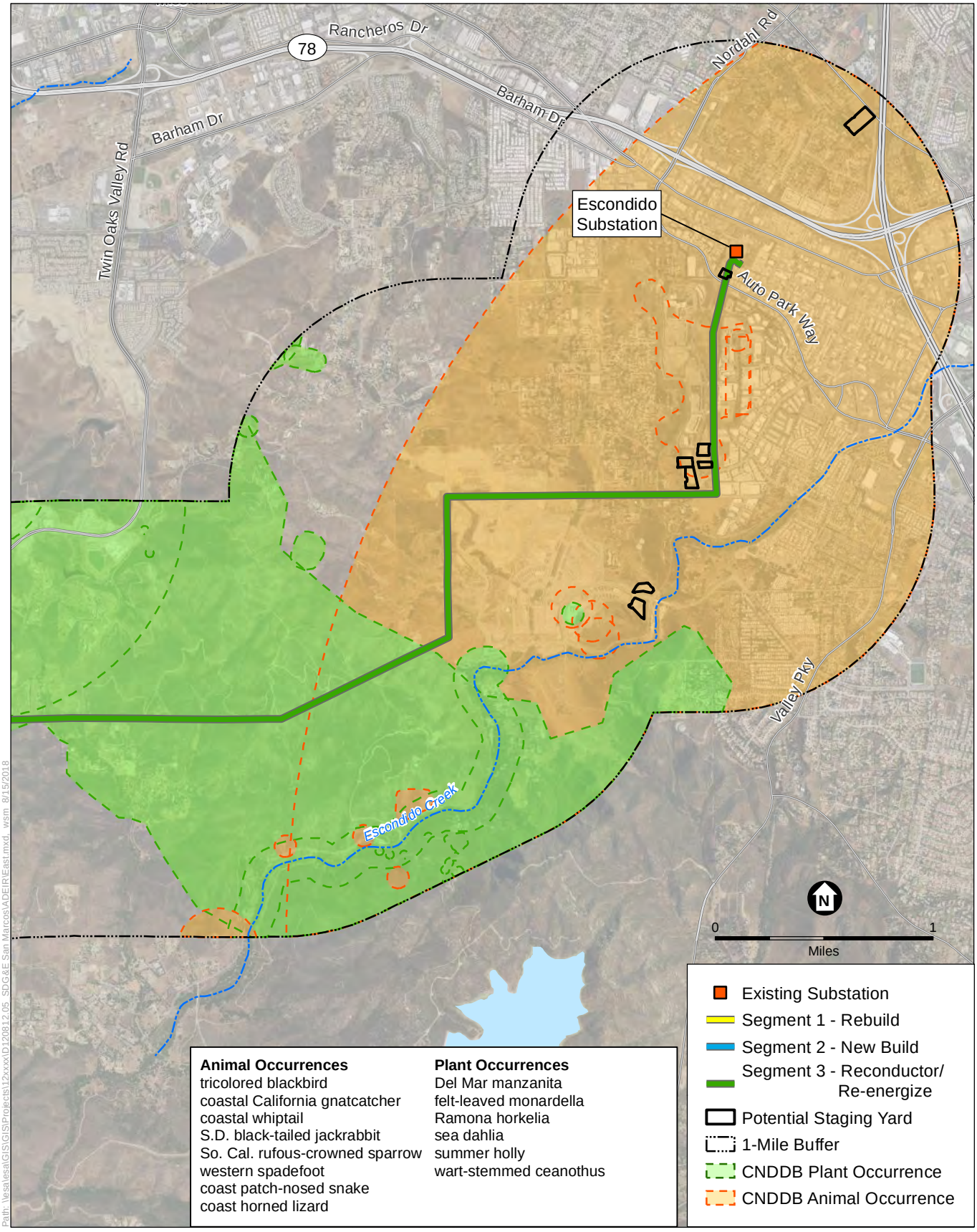
Path: J:\GIS\Projects\12xxxx\D120812.05_SDG&E San Marcos\ADEIR\West.mxd wsm 8/15/2018

Note: Only species within the extent of this map were included in the list above. Specific species locations are not shown per CNDDB mapping guidelines

SOURCE: SDGE, 2018; CDFW, 2018

TL 6975 San Marcos to Escondido Project

Figure 3.4-2a
CNDDB Occurrences:
Western Project Area



Path: \\esa\esa\GIS\GIS\Projects\12xxxx\D120812.05_SDG&E San Marcos\ADEIR\East.mxd wsm 8/15/2018

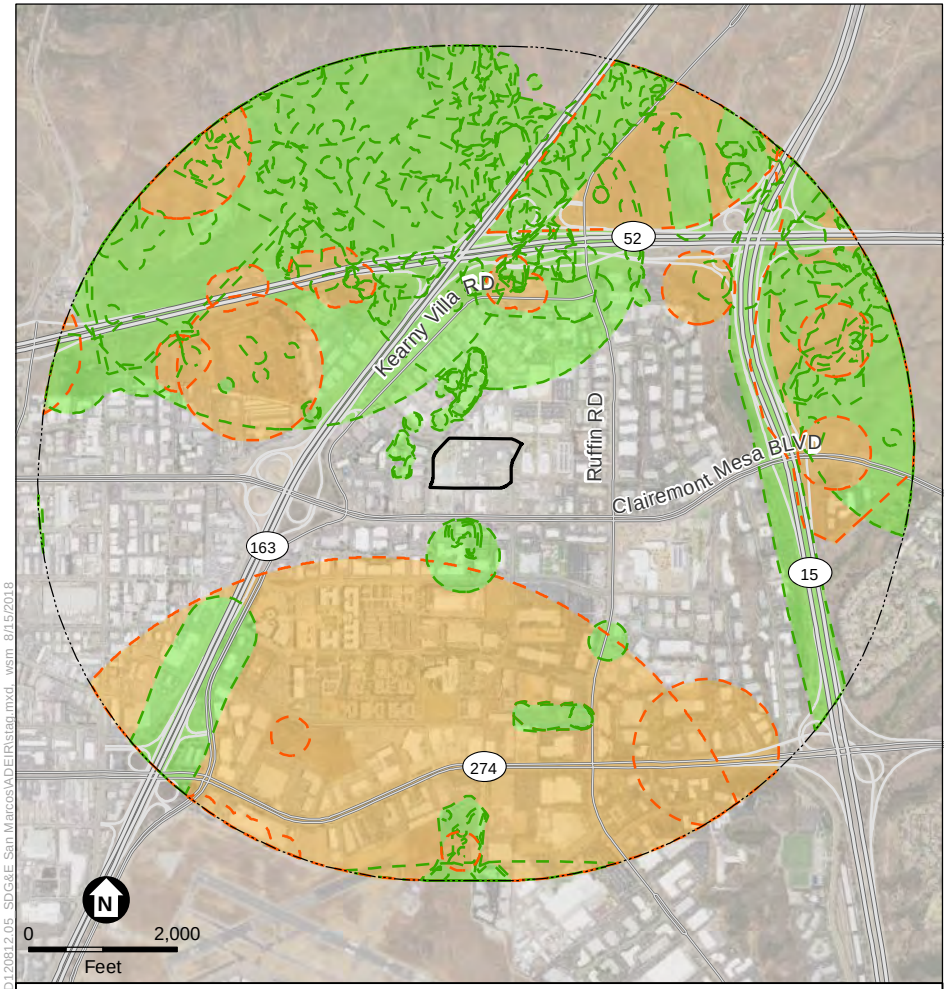
Note: Only species within the extent of this map were included in the list above. Specific species locations are not shown per CNDDB mapping guidelines

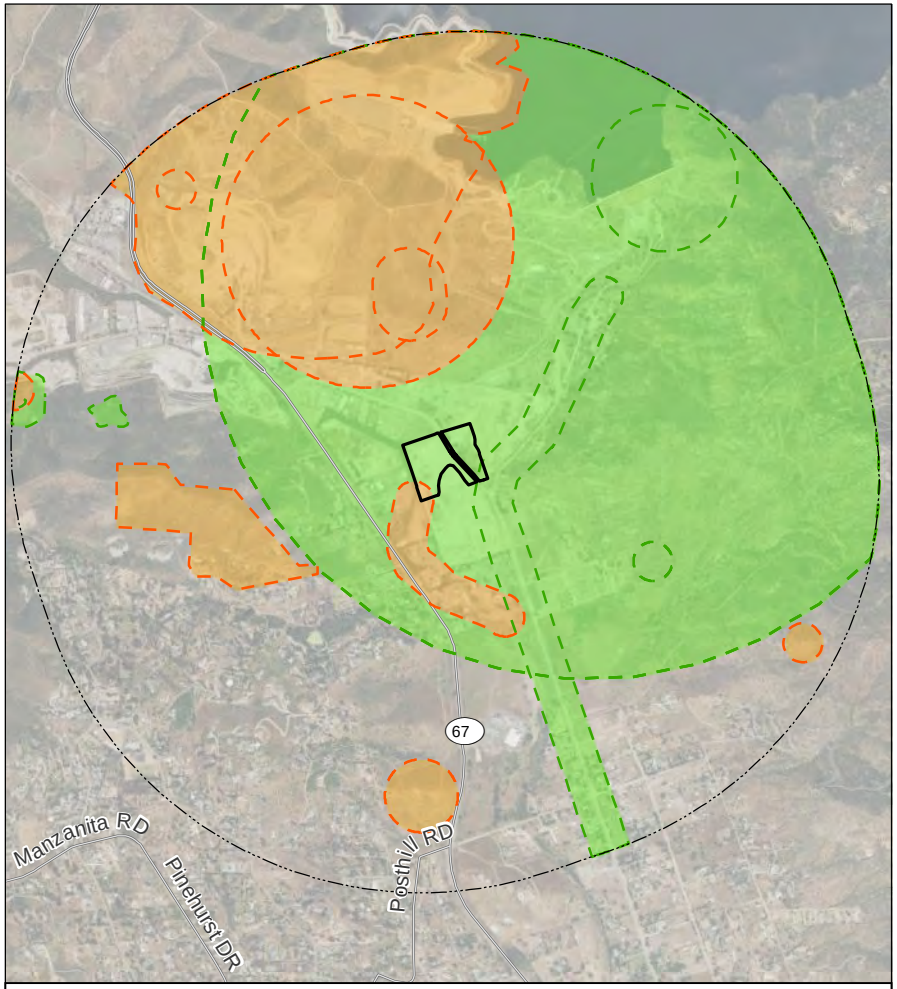
SOURCE: SDGE, 2018; CDFW, 2018

TL 6975 San Marcos to Escondido Project

Figure 3.4-2b

CNDDB Occurrences: Eastern Project Area





Animal Occurrences
California glossy snake
coast horned lizard
coastal California gnatcatcher
Coronado skink
orange-throated whiptail
San Diego fairy shrimp

Plant Occurrences
California Orcutt grass
long-spined spineflower
oil neststraw
Orcutt's brodiaea
Palmer's grapplinghook
prostrate vernal pool navarretia
San Diego barrel cactus
San Diego button-celery
San Diego goldenstar
San Diego mesa mint
singlewhorl burrobrush
spreading navarretia
variegated dudleya
wart-stemmed ceanothus
willowy monardella
woven-spored lichen

Potential Staging Yard
1-Mile Buffer
CNDDB Plant Occurrence
CNDDB Animal Occurrence

Animal Occurrences
coastal California gnatcatcher
coastal whiptail
least Bell's vireo
orange-throated whiptail
quino checkerspot butterfly
red-diamond rattlesnake

Plant Occurrences
California adolphia
coastal triquetrella
decumbent goldenbush
delicate clarkia
Orcutt's brodiaea
San Diego goldenstar
San Diego thorn-mint

Note: Only species within the extent of this map were included in the list above. Specific species locations are not shown per CNDDB mapping guidelines

SOURCE: SDGE, 2018; CDFW, 2018

TL 6975 San Marcos to Escondido Project

Figure 3.4-2c
CNDDB Occurrences:
Southern Project Area

TABLE 3.4-3
POTENTIAL FOR SPECIAL-STATUS PLANT SPECIES TO OCCUR IN THE BSA

Species Name	Covered under the NCCP[a] (Yes/No)	Listing Status[b]	Habitat Requirements	Potential to Occur
San Diego goldenstar (*Bloomeria clevelandii*)	No	1B.1	Perennial bulbiferous herb. Clay soils in chaparral, coastal sage scrub, valley grasslands, particularly near mima mound topography or the vicinity of vernal pools; 164–1,526 ft. Blooming period: April–May	Suitable habitat for this species occurs within the survey area. If present on- site this species would have been observed. **Low potential.**
Thread-leaved brodiaea (*Brodiaea filifolia*)	Yes	FT, SE, 1B.1	Perennial bulbiferous herb. Often found in clay soils in openings in chaparral, cismontane woodland, coastal scrub, playas, valley and foothill grassland, and vernal pools; 82–3,673 ft. Blooming period: March–June	Suitable habitat for this species occurs within the survey area. Surveys were conducted during an appropriate time of year to observe the species, and the species was not observed during surveys. However, all corms do not flower every year therefore there is a moderate potential for the species to occur. **Moderate potential**.
Orcutt's brodiaea (*Brodiaea orcuttii*)	Yes	1B.1	Bulbiferous herb. Found on mesic, clay, sometimes serpentinite soils in closed- cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools; 98–5,550 ft. Blooming period: May–July	Approximately 147 individuals were observed within the southwestern portion of the survey area. **Present**.
Wart-stemmed ceanothus (*Ceanothus verrucosus*)	Yes	2B.2	Evergreen shrub. Chaparral; 3–1,240 ft. Blooming period: December–May	This species is found in extensive stands throughout the western half of the survey area**.** **Present**.
Orcutt's spineflower (*Chorizanthe orcuttiana*)	Yes	FE, SE 1B.1	Annual herb. Sandy openings in closed- cone coniferous forest, maritime chaparral, and coastal scrub; 9-410 ft. Blooming period: March - May	Primarily a coastal species. No current or historical records from inland areas such as the BSA occurs in. **Low Potential**
Summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*)	No	1B.2	Evergreen shrub. Chaparral and cismontane woodland; 98–2,590 ft. Blooming period: April–June	Approximately 57 individuals were observed in the western portion of the survey area. **Present.**
Del Mar sand aster (*Corethrogyne filaginifolia* var. *linifolia*)	Yes	1B.1	Perennial herb. Sandy soils in coastal bluff scrub, coastal scrub, and openings in maritime chaparral; 49-492 ft. Blooming period: May-September	Primarily a coastal species (w/in one mile of shore). No current or historical records from inland areas such as the BSA occurs in. **Low Potential**
Western dichondra (*Dichondra occidentalis)*	No	4.2	Perennial rhizomatous herb. Chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland; 164–1,640 ft. Blooming period: January–July	Approximately 200 individuals were detected within the western portion of the survey area. **Present.**

TABLE 3.4-3 (CONTINUED)
POTENTIAL FOR SPECIAL-STATUS PLANT SPECIES TO OCCUR IN THE BSA

Species Name	Covered under the NCCP[a] (Yes/No)	Listing Status[b]	Habitat Requirements	Potential to Occur
Blochman's dudleya (*Dudleya blochmaniae* ssp. *Blochmaniae)*	Yes	1B.1	Perennial herb. Rocky, often clay or serpentine soils in coastal bluff scrub, chaparral, coastal scrub, and valley and foothill grassland; 16-1476 ft. Blooming period: April - June	Primarily a coastal species, localized in the Camp Pendleton area. No current or historical records from inland areas such as the BSA occurs in. **Low Potential**
Variegated dudleya (*Dudleya variegata*)	Yes	1B.2	Perennial herb. Clay soils in chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, and vernal pools; 9-1903 ft. Blooming period: April - June	Marginally suitable habitat present within the BSA. Rare plant surveys were done at an appropriate time of year to detect the blooms of this species. Not observed during rare plant surveys. **Low Potential**
Sticky Dudleya (*Dudleya viscida*)	Yes	1B.2	Perennial herb. Rocky soils in coastal bluff scrub, chaparral, cismontane woodland, and coastal scrub; 32-1804 ft. Blooming period: May - June	Primarily a coastal bluff species, localized in the Camp Pendleton area. No current or historical records from inland areas such as the BSA. **Low Potential**
Palmer's grapplinghook (*Harpagonella palmeri*)	Yes	4.2	Annual herb. Clay soils in chaparral, grasslands, coastal sage scrub; 65–3,132 ft. Blooming period: March–May	Approximately 300 individuals were detected in the northwestern portion of the survey area. **Present**.
Ramona horkelia (*Horkelia truncata*)	No	1B.3	Perennial herb. Clay and gabbroic soils in chaparral and cismontane woodland; 1,312–4,265 ft. Blooming period: May–June	Suitable gabbroic/granitic soils are limited within the survey area. Not observed during rare plant surveys. **Low Potential**.
San Diego marsh-elder (*Iva hayesiana*)	No	2B.2	Perennial herb. Marshes and swamps, wetland areas, and playas; 32–1,640 ft. Blooming period: April–October	Several individuals were detected in a riparian area in the western portion of the survey area. **Present**.
Small-flowered microseris (*Microseris douglasii* ssp. *platycarpha*)	No	4.2	Annual herb. Clay soils in cismontane woodland, coastal scrub, valley and foothill grassland, and vernal pools; 49–3,510 ft. Blooming period: March–May	Approximately 15 individuals were detected in the western portion of the survey area. **Present.**
Golden-rayed pentachaeta (*Pentachaeta aurea* ssp. *aurea*)	No	4.2	Annual herb. Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland, and valley and foothill grassland; 262–6,068 ft. Blooming period: March–July	Approximately 271 individuals were detected within the western portion of the survey area. **Present.**
Nuttall's scrub oak (*Quercus dumosa*)	No	1B.1	Perennial evergreen shrub. Sandy or clay loam in closed-cone coniferous forest, chaparral, and coastal scrub; 49–1,312 ft. Blooming period: February–August	Several large stands of this species were detected within the western portion of the survey area. **Present.**

TABLE 3.4-3 (CONTINUED)
POTENTIAL FOR SPECIAL-STATUS PLANT SPECIES TO OCCUR IN THE BSA

Species Name	Covered under the NCCP[a] (Yes/No)	Listing Status[b]	Habitat Requirements	Potential to Occur
Ashy spike-moss (*Selaginella cinerascens)*	No	4.1	Perennial rhizomatous herb. Chaparral and coastal sage scrub; 65–2,100 ft.	This species is found in several small patches on exposed rock outcrops and open soils in the western portion of the survey area. **Present.**

NOTES:
[a] SDG&E Subregional Natural Community Conservation Plan
[b] Explanation of State and federal listing codes:

Federal
FE = Endangered under the FESA
FT = Threatened under the FESA

State
SE = Endangered under the CESA
SR = Rare under the Native Plant Protection Act (NPPA)
ST = Threatened under CESA
FP = California Fully Protected
SSC = Species of Special Concern

Local
covered = covered species under the City/County MSCP
NEP = City of San Diego Narrow Endemic Plant

California Rare Plant Rank (CRPR)
1A = Plants presumed extinct in California
1B = Plants, rare, threatened, or endangered in California and elsewhere
2 = Plants rare, threatened, or endangered in California, but more common elsewhere
3 = Plants for which more information is need to determine status
4 = Plants of limited distribution – a watch list
0.1 = Seriously threatened in California
0.2 = Fairly threatened in California

SOURCES: CNPS, 2018; CDFW, 2018; ICF, 2017a, Appendix D, *Special-Status Plant and Wildlife Species Known or with Potential to Occur in the Survey Area*

The 13 special-status plant species detected within the BSA during spring 2016 special-status plant species surveys are: ashy spike-moss (*Selaginella cinerascens*), California adolphia (*Adolphia californica*), golden-rayed pentachaeta (*Pentachaeta aurea* ssp. *aurea*), Nuttall's scrub oak (*Quercus dumosa*), Orcutt's brodiaea (*Brodiaea orcuttii*), Palmer's grapplinghook (*Harpagonella palmeri*), San Diego marshelder (*Iva hayesiana*), San Diego sagewort (*Artemisia palmeri*), San Diego sunflower (*Bahiopsis laciniata*), small-flowered microseris (*Microseris douglasii* ssp. *platycarpha*), summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*), wart-stemmed ceanothus (*Ceanothus verrucosus*), and western dichondra (*Dichondra occidentalis*).

Other species addressed in Appendix D, *Special-Status Plant and Wildlife Species Known or with Potential to Occur in the Survey Area*, of IS/MND Appendix D.2 either were determined to have a low potential for occurrence or are not expected to occur within the BSA based on lack of observations during surveys and/or lack of suitable microhabitat conditions within the BSA. Species not expected to occur or with a low potential to occur will not be discussed further in this document; however, species, such as raptors, that could have nesting or foraging habitat overlapping the BSA are not excluded from this evaluation.

Preserve Areas

The BSA includes a number of preserve areas identified by the cities of Carlsbad, San Marcos, and Escondido, and unincorporated County of San Diego. This includes lands permanently protected as part of regional habitat conservation planning efforts and includes the County-owned Sage Hill Preserve, the Center for Natural Lands Management-managed University Commons, the Rancho Dorado Homeowners Association (HOA) Preserve, Carlsbad Raceway Open Space Preserve, San Elijo Hills Open Space, and the Carrillo Ranch Reserve. The Project would be located within SDG&E's ROW within these conserved lands.

Critical Habitat

The USFWS designates Critical Habitat for the survival and recovery of federally listed endangered and/or threatened species under the FESA (16 USC §1533 (a)(3)). Protected habitat includes areas for foraging, breeding, roosting, shelter, and movement or migration.

The USFWS has designated Critical Habitat for the coastal California gnatcatcher, San Diego fairy shrimp, spreading navarretia (*Navarretia fossalis*), and thread-leaved brodiaea (*Brodiaea filifolia*) in areas within 1 mile of the Project. The Project is located within Critical Habitat designated for coastal California gnatcatcher (ICF, 2017a). Approximately 151 acres of the BSA is within Critical Habitat for coastal California gnatcatcher.

Jurisdictional Wetlands and Waters

An aquatic resources mapping effort (Jurisdictional Delineation) was performed in 2017 to gather field data at potential wetland and non-wetland water resource areas under State or federal jurisdiction (ICF, 2017b; see in Appendix C of IS/MND Appendix D.2). A combination of pedestrian and vehicular surveys was conducted at all pole locations and Project access roads within the BSA.

A total of 157 aquatic features were evaluated for State and federal and jurisdiction within the BSA. Of these, 79 aquatic features were considered to be potentially State and federally jurisdictional. The 79 features fall into four categories: wetlands and riparian habitats, ephemeral streams, intermittent streams, and perennial streams. The remaining non-jurisdictional features consisted of swales, erosional features, and concrete ditches constructed as best management practices (BMPs) in upland areas.

Wetlands and/or riparian vegetation were identified within 26 of the 157 features in the BSA. The locations of these features are shown in the mapping included in the Jurisdictional Delineation Report (ICF, 2017b; see Figures 6b-01 to 6b-72). Wetlands and/or riparian vegetation were predominantly associated with intermittent and perennial streams and were dominated by black, red, and arroyo willows, mule fat, cattail (*Typha* sp.), and bulrush (*Schoenoplectus* sp.). Some wetlands held water at the time of the site visit.

CDFW-jurisdictional riparian areas included the wetland features above as well as Feature ID Nos. 067 and 091 (ICF, 2017b; Figures 6b-30 and 6b-47), which occurred within ephemeral streams and supported patches of mule fat, tamarisk (*Tamarix* sp.), and/or coast live oaks. A total of 59 ephemeral streams, four intermittent streams, and 12 perennial streams were identified within the BSA. These features had clear bed and bank, as well as multiple Ordinary High Water Mark (OHWM) indicators. OHWM indicators commonly included shelving, changes in particle size, water staining, changes in vegetation cover/species, and changes in slope from the active floodplain to the low terrace. The ephemeral streams in the BSA were variable in size and ranged from 1 to 15 feet wide measured from bank to bank. The majority of the intermittent streams identified throughout the Project alignment were associated with tributaries to San Marcos Creek and Escondido Creek. These features often supported riparian vegetation and wetlands.

Intermittent streams were typically identified in conjunction with perennial streams and were variable in size, ranging from 9 to 92 feet, measured from bank to bank. Perennial streams were associated with San Marcos Creek and associated unnamed tributaries. Each perennial stream contained flowing waters and evidence of inundation, and always supported wetlands and riparian vegetation. Also identified during the surveys were several non-jurisdictional features including erosional features, swales, and concrete v-ditches.

Wildlife Movement and Corridors

Wildlife corridors provide linkages (wildlife travel corridors) between otherwise fragmented patches of habitat caused by changes in vegetation communities, rugged terrain, and human disturbances. These linkages may be drainages, canyons, or ridgelines that provide access to foraging areas, water, breeding sites, and dispersal areas. These corridors provide cover and shelter during travel. Disturbance of wildlife corridors from human disturbance and development can cause harm to migrating species, cause species to exceed their population thresholds, and/or prevent healthy gene flow between populations.

Terrestrial wildlife species travel and migrate through both upland and riparian areas. Species that need protective cover from predators (e.g., mammals, reptiles, and smaller avian species) tend to migrate along natural drainages and riparian corridors. There are numerous riparian corridors in

the BSA, including multiple unnamed tributaries to San Marcos Creek and Escondido Creek. Riparian areas supply food, cover, and water for a large diversity of animals, and serve as migration routes and connectors between habitats for a variety of wildlife (Manci, 1989). The linear nature of riparian ecosystems provides distinct corridors that are important as migration and dispersal routes and as forested connectors between other types of habitats for wildlife. Woody vegetation must be present for many terrestrial species to find needed cover while traveling across otherwise open areas. Animals undergoing population dispersal use food and water from riparian areas during their movements. The value of waterway corridors for migratory movements are more accentuated in arid regions than in humid, more heavily vegetated areas (Montgomery, 1996). These areas may be used as migration corridors by a variety of species. Predator species such as bobcat (*Lynx rufus*) and mountain lion (*Puma concolor*) require larger portions of intact habitat, including interconnected upland and riparian systems such as these for viable home ranges and dispersal. Portions of the BSA do connect to these larger areas of connected upland and riparian systems.

The Project is located in the Pacific Flyway, which is a major north-south avian migratory corridor that extends along the West Coast from Alaska to Patagonia and links breeding grounds in the north to more southerly wintering areas. Over 60 percent of the species which are identified as neotropical migratory birds use riparian areas in the west as stopover areas during migration or for breeding habitat (Krueper, 1993). The riparian corridors in the BSA, including multiple unnamed tributaries to San Marcos Creek and Escondido Creek, function as important wildlife corridors for a variety of terrestrial and avian species.

3.4.2 Regulatory Setting

Federal

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) (7 USC §136, 16 USC §1531 et seq.) protects fish and wildlife that are listed as endangered or threatened by the USFWS. The FESA prohibits unauthorized "take" of endangered and threatened species, with take defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct." Harm has been defined to include significant habitat modification or degradation. For plants, this statute governs removing, possessing, maliciously damaging, or destroying any listed plant on federal land and removing, cutting, digging up, damaging, or destroying any listed plant on non-federal land in knowing violation of the law. Effects on critical habitat are considered by the USFWS when determining the degree to which a proposed action may adversely affect listed species.

Under Section 7 of the FESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, may adversely affect a threatened or endangered species, including plants, or its designated critical habitat. Through consultation and the issuance of a Biological Opinion, the Service may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity, provided the action would not jeopardize the continued existence of the species.

Under Section 10 of the FESA, an incidental take permit (ITP) may be issued to a non-federal entity if take is incidental to an otherwise lawful activity, the ITP application meets all issuance criteria, and a Habitat Conservation Plan is developed for the activity.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 (16 USC §§703–711) protects all migratory birds, including active nests and eggs, and prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. Birds protected under the MBTA include all native waterfowl, shorebirds, hawks, eagles, owls, doves, and other common birds such as ravens, crows, sparrows, finches, swallows, and others.

Clean Water Act of 1972

The U.S. Army Corps of Engineers (USACE) administers Section 404 of the Clean Water Act of 1972 (33 USC §1251 et seq.), as amended. Section 404 regulates activities in wetlands and "other waters of the United States." Wetlands are a subset of "waters of the United States" that are defined in the Code of Federal Regulations as waters used for interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide; interstate waters including wetlands; all other waters—such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds—which could affect interstate or foreign commerce; water impoundments; tributaries of waters; territorial seas; and adjacent wetlands.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 USC §668) provides protection for both the bald eagle (*Haliaeetus leucocephalus*) and the golden eagle (*Aquila chrysaetos*) by prohibiting the take of either of these species, including their parts, nests or eggs. This Act defines take as to "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb" any bald or golden eagle. It is administered by the USFWS, which grants limited take authorizations for qualifying activities. Persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner any bald eagle… [or golden eagle], alive or dead, or any part, nest, or egg thereof" without prior approval are subject to criminal penalties.

State

California Environmental Quality Act

The California Environmental Quality Act is the regulatory framework by which California public agencies identify and mitigate significant environmental impacts. In addition to threatened and endangered species, a species not listed under the federal or State endangered species act may be considered rare if the species exists in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens. A species also may be considered rare if it is likely to become "threatened" as that term is used in the Federal Endangered Species Act (CEQA Guidelines §15380).

California Endangered Species Act

CESA (Fish and Game Code §2050 et seq.) generally parallels the main provisions of FESA. CDFW administers the listing of endangered and threatened species under CESA through Title 14, CCR Sections 670.2 and 670.5, and regulates these species under Fish and Game Code Section 2050 et seq. CDFW may allow take of such species through its issuance of permits pursuant to Fish and Game Code Section 2081, except for species designated "Fully Protected." Unlike its federal counterpart, CESA adopts a narrower definition of "take," and CESA's protections apply to candidate species that have been petitioned for listing. CESA defines "take" to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." State lead agencies are required to consult with CDFW to ensure that any action undertaken would not jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat.

Native Plant Protection Act

The Native Plant Protection Act (Fish and Game Code §1913) is intended to preserve, protect, and enhance endangered or rare native plants in California. Vascular plants identified as rare or endangered by the CDFW and the CNPS, but which may have no designated status or protection under federal or State endangered species legislation, are defined according to a California Rare Plant Rank (CRPR) as follows:

- **Rank 1A:** Plants presumed extinct
- **Rank 1B:** Plants rare, threatened, or endangered in California and elsewhere
- **Rank 2:** Plants rare, threatened, or endangered in California, but more numerous elsewhere
- **Rank 3:** Plants about which more information is needed (a review list)
- **Rank 4:** Plants of limited distribution (a watch list)

Consistent with CEQA Guidelines Section 15380, plants designated with a CRPR of 1A, 1B, or 2 are considered to meet the criteria of endangered, rare, or threatened, and so are analyzed as "special-status species" in this document. Also pursuant to CEQA Guidelines Section 15380, CRPR 3 and 4 species deemed Locally Unusual and Significant may be analyzed under CEQA if there is sufficient information to assess potential impacts.

The Native Plant Protection Act exempts utility companies such as SDG&E from the requirement to obtain a "take" permit when only CESA-listed plants, and not habitat for CESA-listed wildlife species, would be affected by a project. Section 1913(b) states that "…the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right-of-way by the owner of the land or his agent, or the performance by a public agency or a publicly or privately owned utility of its obligation to provide service to the public, shall not be restricted…because of the presence of rare or endangered plants, except as provided in subdivision (c)." Subdivision (c) requires the utility to provide CDFW 10 days' notice to salvage affected plants prior to construction.

Protection of Birds and Birds' Nests

Under Fish and Game Code Section 3503, it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided. Section 3503.5 makes it unlawful to take, possess or destroy birds of prey in the orders Falconiformes (e.g., bald eagle, golden eagle, Swainson's hawk, American kestrel, peregrine falcon, prairie falcon) and Strigiformes (e.g., burrowing owl, short-eared owl), or to take, possess, or destroy the nests or eggs of these birds. Disturbance that causes nest abandonment and/or reproductive failure is prohibited under the Fish and Game Code. This statute does not provide for the issuance of an ITP. Under California Fish and Game Code Section 3513, it is unlawful to take or possess any migratory non-game bird except as provided by rules and regulations adopted under the Migratory Bird Treaty Act.

Species of Special Concern

Species of Special Concern is a category conferred by CDFW on animal species that meet the State definition of threatened or endangered, but have not been formally listed (e.g., federally or State-listed species), or are considered at risk of qualifying for threatened or endangered status in the future based on known threats. The designation is considered an administrative classification only, but CEQA lead agencies frequently consider these "special-status" for the purposes of their analyses and therefore any species that can be shown to meet the definition of "rare" or "endangered" under CEQA Guidelines Section 15380 has been evaluated within the discussion below.

Fully Protected Species

California Fish and Game Code Sections 3511, 4700, 5050, and 5515 apply "fully protected" status to 37 birds, mammals, reptiles, amphibians, and fish. CDFW may authorize incidental "take" of Fully Protected species for necessary scientific research, or if the species is covered under an approved Natural Community Conservation Plan (NCCP) (Fish and Game Code §2835). Fully protected species with potential to occur in the BSA are shown in Table 3.4-2.

California Special-status Natural Communities

CDFW maintains a list of vegetation communities that are of limited distribution, either statewide or in a county or region. Communities of special concern are assigned a State rank, based on their degree of imperilment (as measured by rarity, threats, and ecological trends). These communities do not necessarily contain special-status species or their habitat. Most wetlands and riparian plant communities are considered special-status natural communities. As noted in Section 3.4.1, *Environmental Setting*, the BSA includes wetlands and riparian plant communities.

California Fish and Game Code Wetlands Regulations

CDFW regulates activities that would interfere with the natural flow of, or substantially alter, the channel, bed, or bank of a lake, river, or stream. The regulatory definition of a stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks, and supports wildlife, fish, or other aquatic life. These activities are regulated under Fish and Game Code Section 1600 et seq. Requirements to protect the integrity of biological resources and water quality are often conditions of Streambed Alteration Agreements. As noted in Section 3.4.1, *Environmental Setting*, the BSA includes streams that may support wildlife, fish, or other aquatic life.

State and Regional Water Quality Control Boards

Responsibility for the protection of State waters resides with the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCBs), including the San Diego Region RWQCB. "Waters of the state" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code §13050(e)). All waters of the United States that are within the borders of California also are "waters of the state." The Federal government, through the USACE, may have concurrent jurisdiction over such waters, but California retains authority to regulate discharges. Any person discharging, or proposing to discharge, waste within any region that could affect "waters of the state" first must file a report of waste discharge with the appropriate RWQCB (Water Code §13260).

Local

It is noted that while local jurisdictions are preempted from regulating the Project pursuant to CPUC General Order No. 131-D, Section XIV.B, the plans, policies, and regulations described below are used in the impact analysis to determine whether any actual adverse environmental impact could occur as a result of a conflict with these plans, policies, and regulations.

County of San Diego

General Plan

The County of San Diego General Plan (2011) contains the following Conservation and Open Space (COS) policies regarding minimization of impacts and management of the regional preserve system:

> **Policy COS-1.2:** Minimize Impacts. Prohibit private development within established preserves. Minimize impacts within established preserves when the construction of public infrastructure is unavoidable.
>
> **Policy COS-1.3:** Management. Monitor, manage, and maintain the regional preserve system facilitating the survival of native species and the preservation of healthy populations of rare, threatened, or endangered species.

San Diego County Multiple Habitat Conservation Program

The Multiple Habitat Conservation Plan (MHCP) (2003) is a comprehensive conservation planning process that addresses the needs of multiple plant and animal species in northwestern San Diego County. The MHCP encompasses the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista (i.e., "North County"). Its goal is to conserve approximately 19,000 acres of habitat for the protection of more than 80 rare, threatened, or endangered species. A specific policy of the MHCP is to direct land development to areas outside the Focused Planning Area in exchange for conservation inside, resulting in the creation of a preserve system. The MHCP preserve system is intended to protect viable populations of native plant and animal species and their habitats in perpetuity, while accommodating continued economic development and quality of life for residents of North County.

Portions of the Project would occur within limits of the following subarea plans:

- City of Carlsbad Subarea Plan, approved in 2004
- City of San Marcos Subarea Plan, still in draft form
- City of Escondido Subarea Plan, approved in 2001

Draft San Diego County North County Multiple Species Conservation Program

The draft North County Multiple Species Conservation Plan (MSCP) plan area encompasses land in and around the unincorporated communities of Bonsall, De Luz, Fallbrook, Harmony Grove, Rancho Santa Fe, Lilac, Pala, Pauma Valley, Rainbow, Ramona, Rincon Springs, Twin Oaks Valley, and Valley Center. The draft North County MSCP (2009) has designated preapproved mitigation areas (PAMAs), which are areas with high biological value in which conservation will be encouraged by providing mitigation ratios that favor developing outside of the PAMA and mitigating inside the PAMA. The unincorporated areas of the Project, primarily within the middle of the Project alignment, are within areas included in the draft North County MSCP. Some portions of the alignment occur within areas currently designated as PAMA in the draft North County MSCP. However, the Project would be located primarily within SDG&E's ROW. The new ROW required in Segment 1 does not contain any PAMA designated by the draft North County MSCP.

County of San Diego Tree Ordinance

The San Diego Regulatory Code of Ordinances, Title 7, Division 1, Chapter 5 regulates the planting, trimming, and removal of trees on County-owned property and County highways.

City of Carlsbad

General Plan

The City of Carlsbad General Plan (2013) Open Space and Conservation Element of the General Plan establishes goals and policies for the development of a comprehensive, connected open space system and for the protection and conservation of the City's natural and historic resources.

> **4-G.3:** Protect environmentally sensitive lands, wildlife habitats, and rare, threatened or endangered plant and animal communities.
>
> **4-G.4:** Promote conservation of hillsides and ridgelines.

Tree and Shrub Ordinance

The Carlsbad Municipal Code, Title 11, Chapter 11.12 regulates the planting, trimming, and removal of trees within the public right-of-way of the city.

City of San Marcos

General Plan

The City of San Marcos General Plan (2013) Conservation and Open Space Element of the General Plan identifies natural, cultural, historic, and open space resources and provides goals, policies, and programs related to open space and conservation.

Goal COS-1: Identify, protect, and enhance significant ecological and biological resources within San Marcos and its adaptive Sphere of Influence.

***Policy COS-1.1*:** Support the protection of biological resources through the establishment, restoration, and conservation of high quality habitat areas.

***Policy COS-1.2*:** Ensure that new development, including Capital Improvement Projects, maintain the biotic habitat value of riparian areas, oak woodlands, habitat linkages, and other sensitive biological habitats.

***Policy COS-1.3*:** Continue to work with other federal, State, regional, and local agencies to implement SANDAG's MHCP.

Tree Ordinance

Section 14.20.010 of the San Marcos Municipal Code prohibits trimming, damaging, or removing trees, hedges or large shrubs from any public property or public right-of-way unless a permit is first obtained.

City of Vista

General Plan

The City of Vista General Plan (2012) contains the following Resource Conservation Strategy (RCS) goals regarding protection and conservation of resources within the City:

RCS Goal 5: Preserve and protect, to the extent practicable, the range of natural biological communities and species native to the City and region; and conserve viable populations of endangered, threatened, and key sensitive species and their habitats.

RCS Goal 6: Implement the provisions of the regional Multiple Habitat Conservation Plan (MHCP).

Tree Ordinance

The Vista Municipal Code, Chapter 12.04, prohibits trimming, damaging, or removing trees, shrubs, or flowers from any public place within the city unless a permit is first obtained

City of Escondido

General Plan

The City of Escondido General Plan Resource Conservation Chapter contains goals related to resource conservation policies intended to protect, promote, and preserve a vibrant community:

Goal 1: Preservation and enhancement of Escondido's open spaces and significant biological resources as components of a sustainable community.

***Policy 1.4*:** Coordinate the planning and development of the overall open space system with other public facilities and services within Escondido.

***Policy 1.5*:** Participate in the planning and preservation of an interconnected biological resources and open space plan with appropriate federal, state, and local agencies that enhances the viability of the regional ecosystem.

***Policy 1.6*:** Preserve and protect significant wetlands, riparian, and woodland habitats as well as rare, threatened or endangered plants and animals and their habitats through avoidance. If avoidance is not possible, require mitigation of resources either on- or off-site at ratios consistent with State and federal regulations, and in coordination with those agencies having jurisdiction over such resources.

***Policy 1.7*:** Requite that a qualified professional conduct a survey for proposed development project located in areas potentially containing significant biological resources to determine their presence and significance. This shall address any flora or fauna of rare and/or endangered status, declining species, species and habitat types of unique or limited distribution, and/or visually prominent vegetation.

***Policy 1.8*:** Require that proposed development projects implement appropriate measure to minimize potential adverse impacts on sensitive habitat areas, such as buffering and setbacks. In the event that significant biological resources are adversely affected, consult with appropriate State and federal agencies to determine adequate mitigation or replacement of the resource.

***Policy 1.9*:** Encourage proposed development projects to minimize the removal of significant stands of trees unless needed to protect public safety and to limit tree removal to the minimum amount necessary to assure continuity of functionality of building spaces.

***Policy 1.10*:** Prohibit any activities in riparian areas other than those permitted by appropriate agencies to protect those resources.

***Policy 1.11*:** Construct appropriate barriers to be maintained by property owners or homeowners' associations that restrict access to areas containing sensitive biological resources.

Tree Ordinance

The Escondido Municipal Code, Section 18-143, prohibits trimming, damaging, or removing trees, shrubs, or ornamental plants growing or located upon any public street, sidewalk, recreational area or public way unless a permit is first obtained.

Permitting Agreements

SDG&E Subregional NCCP

In December 1995, the USFWS and CDFW approved the SDG&E Subregional NCCP (SDG&E, 1995; included in this IS/MND as Appendix D.3) which was developed for the purpose of minimizing potential impacts on species and habitat associated with SDG&E's ongoing installation, use, maintenance, and repair of its gas and electric systems. The NCCP was developed by following the multiple species and habitat conservation planning approach. Also included in the NCCP are guidelines pertaining to the typical expansion of SDG&E's systems throughout much of its existing service territory.

The SDG&E Subregional NCCP includes avoidance and minimization measures and 61 Operational Protocols that apply to construction, as well as to operations and maintenance activities. In agreeing to implement the NCCP, SDG&E has committed to implementing these

measures for all its activities related to the siting, design, installation, construction, use, maintenance, repair, and removal of its facilities within the Subregional NCCP area. Those that would apply to this Project are identified and discussed, as appropriate, in the following impact analyses.

In approving the SDG&E Subregional NCCP, the USFWS and CDFW determined that implementation of the avoidance and minimization measures and Operational Protocols would avoid potential impacts and provide appropriate mitigation where such impacts are unavoidable. The agencies also determined that the NCCP ensured the protection and conservation of federal and State listed species and covered species. Thus, as a part of the NCCP, SDG&E was issued an ITP (Permit PRT-809637) in 1995 by the USFWS and CDFW for 110 covered species. The 1995 permit is subject to SDG&E's compliance with its Subregional NCCP and a 400-acre cap on habitat impacts. SDG&E developed a Low-Effect HCP and applied for a 5-year ITP for 15 animal species and 22 plant species through the USFWS pursuant to FESA Section 10(1)(1)(B) in late 2016. The Low-Effect HCP is designed to support the continuation of activities covered by the NCCP. Under the 2017 HCP, SDG&E would continue to apply all of the conservation efforts, mitigation measures, and Operational Protocols implemented under the NCCP. The 2017 HCP, as approved under Permit No. TE26660C-0, authorized in March 2017, would allow a maximum of 60 acres of impact over a 5-year permit term. SDG&E intends to utilize mitigation credits authorized under the 2017 HCP ITP to mitigate for impacts on sensitive habitats for the Project.

The Project would be located within the area where SDG&E’s utility operations are governed by the NCCP. SDG&E has indicated that it would seek incidental take coverage for temporary and permanent impacts to natural habitat resulting from construction of the Project through the NCCP, and may rely on the mitigation bank associated with the NCCP to fulfill the mitigation requirements for those impacts (ICF, 2017a). SDG&E proposes to authorize take under the 2017 HCP. For operation and maintenance of the Project, SDG&E would implement the NCCP to comply with the FESA and CESA (SDG&E, 1995; ICF, 2017a).

3.4.3 Applicant Proposed Measures

SDG&E has proposed the following Applicant Proposed Measures (APMs) to address impacts to biological resources attributable to Project construction, operations, and maintenance. Based on the following impact analyses, in instances where certain APMs were found not to adequately reduce an impact to a less-than-significant level, those APMs have been superseded by mitigation measures put forth by the CPUC.

APM BIO-1: SDG&E will conduct all construction and operation and maintenance activities in accordance with NCCP Operational Protocols to avoid and minimize impacts on biological resources.

APM BIO-2: All earth-moving equipment will be free of mud and vegetative material before being mobilized onto work areas associated with the Project.

APM BIO-3: Except when not feasible due to physical or safety constraints, all Project construction vehicle movement will be restricted to the Project work areas, existing roads, and access roads constructed as a part of the Project and mapped by SDG&E in advance of

construction. Approval from a biological monitor will be obtained prior to vehicle travel off of existing access roads.

APM BIO-4: Civil and land survey personnel will keep survey vehicles on existing roads. During Project surveying activities, brush clearing for footpaths, line-of-sight cutting, and land surveying panel point placement in sensitive habitat prior approval will be required from the Project's biological monitor. Hiking off roads or paths for survey data collection will be allowed year-round as long as all of the other applicable APMs are met.

APM BIO-5: Prior to the start of construction, the boundaries of sensitive plant populations that require protection will be delineated with clearly visible flagging or fencing by a qualified biologist. The flagging and/or fencing will be maintained in place for the duration of construction. Flagged and fenced areas will be avoided to the extent practicable during construction activities in that area. If impacts on sensitive plant species are unavoidable, SDG&E will perform soil and plant salvage activities to enhance recovery of these special-status plants, consistent with the provisions in the Enhancement Section 7.2.1 of the NCCP. These include the stockpiling of native soil in the area where Nuttall's scrub oak and wart-stemmed ceanothus occur and top soil replacement after construction. Quality assurances and success criteria milestones for the restoration area as a whole will conform to the standards provided in Enhancement Section 7.2.1 of the NCCP.

APM BIO-6: ***Coastal California Gnatcatcher.*** Prior to construction, SDG&E shall retain a qualified biologist to conduct surveys for the coastal California gnatcatcher in suitable habitat, to determine if any active nests are within or in the immediate vicinity of proposed construction activities. If feasible, SDG&E will avoid construction during the peak breeding season (February 15 – August 31) for coastal California gnatcatcher and migratory birds. When it is not feasible to avoid trimming or removal of vegetation or during the peak breeding season, SDG&E will perform a site survey in the area where the work is to occur. Trimming or removal of vegetation during the peak breeding season will require a preconstruction survey by a qualified biologist to confirm that active nests will not be affected. This survey will be performed to determine the presence or absence of nesting birds. If an active nest (i.e., containing eggs or young) is identified within the construction area during the survey, work will be temporarily halted and redirected away from the site. The qualified biologist in the field will determine a no-work buffer zone around the nest of sufficient size and dimensions that construction activities will not result in disturbance or direct removal of the active nest, or will not cause a breeding bird to abandon its nest. If the nesting and/or breeding activities are being conducted by a federal or State-listed species, SDG&E will consult with the USFWS and CDFW as necessary. Monitoring of the nest will continue until the birds have fledged or construction is no longer occurring on site.

Migratory Birds. Trimming or removal of vegetation during the peak breeding season (February 15 to August 31) will require a pre-construction survey by a qualified biologist to confirm that active nests will not be affected. If an active nest is detected within the construction area during the survey, work will be temporarily halted and redirected away from the site. The qualified biologist in the field will determine a no-work buffer zone around the nest of sufficient size and dimensions that construction activities will not result in disturbance or direct removal of the active nest, or will not cause a breeding bird to abandon its nest.

APM BIO-7: If a raptor nest is observed during preconstruction surveys, a qualified biologist would determine if it is active. If the nest is determined to be active, the biological monitor

would monitor the nest to ensure nesting activities and/or breeding activities are not substantially adversely affected. If the biological monitor determines that Project activities are disturbing or disrupting nesting and/or breeding activities, the monitor will make recommendations to reduce the noise and/or disturbance in the vicinity of the nest.

APM BIO-8: A biological monitor will be present during all ground-disturbing and vegetation removal activities. Immediately prior to initial ground-disturbing activities and/or vegetation removal, the biological monitor will survey the site to ensure that no special-status species will be impacted.

APM BIO-9: Wherever possible, vegetation will be left in place or mowed, instead of grubbed, to avoid excessive root damage and to allow for regrowth and to minimize soil erosion.

3.4.4 Environmental Impacts and Mitigation Measures

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service: *LESS THAN SIGNIFICANT WITH MITIGATION INCORPORTATED.*

Construction

Special-Status Plant Species

Based on the results of the special-status plant species surveys, 13 special-status plant species are known to occur within the BSA, including ashy spike-moss, California adolphia, golden-rayed pentachaeta, Nuttall's scrub oak, Orcutt's brodiaea, Palmer's grapplinghook, San Diego marsh-elder, San Diego sagewort, San Diego sunflower, small-flowered microseris, summer holly, wart-stemmed ceanothus, and western dichondra. Of these, 11 species—ashy spike-moss, California adolphia, golden-rayed pentachaeta, Orcutt's brodiaea, Palmer's grapplinghook, San Diego marsh-elder, San Diego sagewort, San Diego sunflower, small-flowered microseris, summer holly, and western dichondra—occur outside of all proposed permanent and temporary impact areas. Impacts on these species would not occur. The Project would result in direct permanent impacts on the remaining two species: Nuttall's scrub oak and wart-stemmed ceanothus, as summarized in **Table 3.4-4**.

TABLE 3.4-4
IMPACTS ON SPECIAL-STATUS PLANT SPECIES

Species	CRPR Listing Status	Occupied Area Mapped in the BSA (acres)	Area of Temporary Impact (acre) (percent of total)	Area of Permanent Impact (acre) (percent of total)	Area of Total Impacts (acre) (percent of total)
Nuttall's scrub oak	1B.1	26.0	0.06 (0.2 %)	0.11 (0.4 %)	0.17 (0.7%)
Wart-stemmed ceanothus	2B.2	514.7	0.68 (<0.1%)	0.27 (0.1 %)	0.95 (0.1%)

SOURCE: ICF, 2017a

Indirect temporary impacts on these plant species within and near construction areas could result from construction-related runoff, dust, sedimentation, and erosion, which have the potential to alter site conditions and degrade the quality of the habitat through the introduction of noxious weeds.

To minimize construction impacts on special-status plants, SDG&E would use a project biologist in accordance with NCCP Operational Protocol #13, who would flag occurrences of special-status plants outside of impact areas for avoidance in accordance with Operational Protocol #14. The Environmental Surveyor would also check that flagged areas of these special-status plants have been avoided and would document that compliance. In addition, SDG&E would implement Operational Protocol #39 to minimize fugitive dust by regularly watering construction areas and limiting onsite vehicle speeds to 15 miles per hour (mph).

Temporary impacts potentially resulting from erosion and sedimentation would be minimized through implementation of Operational Protocols #16, #19, and #20. Operational Protocol #16 requires that SDG&E design and implement maintenance, repair and construction activities to minimize new disturbance, erosion on manufactured and other slopes, and off-site degradation from accelerated sedimentation, and to reduce maintenance and repair costs. Operational Protocol #19 requires SDG&E to minimize erosion on access roads and other locations with water bars made from mounds of soil, or berms, shaped to direct flow and prevent erosion. Operational Protocol #20 requires SDG&E to use technological design and construction techniques to avoid erosion and siltation from construction into creeks, streams, or other waterways.

SDG&E would further avoid or reduce impacts on special-status plants by reducing impacts associated with the spread of noxious weeds in construction areas. APM BIO-2 requires that earth-moving equipment be free of mud and vegetative material before being mobilized to the BSA. APM BIO-3 restricts Project construction vehicle movement to the Project work area and existing roads to minimize the potential for collecting and spreading noxious weeds.

APM BIO-4 requires land surveying activities in sensitive habitat obtain prior approval from the Project's biological monitor. APM BIO-5 would reduce impacts on sensitive plant populations by requiring fencing and avoidance, and soil and plant salvage in accordance with habitat enhancement procedures in NCCP Section 7.2 where effects cannot be avoided. To further minimize impacts on special-status plant species, APMs BIO-8 and BIO-9 would be implemented, which would require a biological monitor to be present during all ground disturbing and vegetation removal activities and to survey the site immediately prior to initial ground-disturbing activities and/or vegetation removal to ensure that no special-status species would be impacted and that, wherever possible, vegetation would be left in place or mowed, instead of grubbed, to avoid excessive root damage and to allow for regrowth and to minimize soil erosion.

As noted in the discussion of the NCCP in Section 3.4.2, *Regulatory Setting*, in approving the NCCP, USFWS and CDFW determined that implementation of avoidance and minimization measures and Operational Protocols would avoid or reduce potential impacts on special-status plant and wildlife species and provide appropriate mitigation where impacts occur. However, there are currently no assurances that sufficient take or mitigation credits provided under the NCCP would be available at the time Project construction would commence or if additional take

authorization would be required by the wildlife agencies. If the take of listed species goes beyond the available take authorized under the NCCP, this additional take and/or adverse modification of habitat could result in a significant impact beyond what is covered under the NCCP. Therefore, in the event that there are not sufficient take or mitigation credits provided under the NCCP at the time of Project construction, **Mitigation Measure BIO-1** is proposed to avoid and reduce impacts. Implementation of this mitigation measure would ensure that the Project would comply with all regulatory requirements addressing special-status plant species, reducing this impact to less than significant.

> **Mitigation Measure BIO-1: Project Compliance with the Federal and California Endangered Species Acts.** Prior to approval of the Notice to Proceed (NTP), SDG&E shall provide CPUC with a written commitment to implement its 1995 Subregional Natural Community Conservation Plan (NCCP) or 2017 Low Effect HCP (LEHCP), including proof that sufficient mitigation/take credits are assigned to the Project to cover potential impacts on all special-status plant and animal species present in the BSA or having moderate or high potential to occur in the biological study area (BSA).
>
> If there are not sufficient mitigation/take credits available in the NCCP or LEHCP at the time of NTP approval, then prior to the commencement of Project construction, SDG&E shall secure take authorization from the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW), as appropriate, for all federal and State-listed special-status plant and animal species present in the BSA or having moderate or high potential to occur in the BSA that are impacted by the Project. The conditions of these authorizations shall be equally or more effective than the protocols and practices included in the NCCP/LEHCP. SDG&E shall provide the CPUC with copies of these authorizations to show that compliance with permitting conditions would be equal to or more effective than the approved NCCP/LEHCP protocols and practices. SDG&E shall also submit to CPUC any monitoring reports, incident reports, etc., required by USFWS and/or CDFW when submitted to those agencies.
>
> **Significance after Mitigation:** There is no documented assurance that there would be sufficient mitigation/take credits available to the Project under the current NCCP at the time of construction to address impacts on federal and State-listed sensitive plant species. With implementation of Mitigation Measure BIO-1, compliance with the requirements of the 1995 NCCP and the 2017 HCP, or with equally or more effective conditions imposed by new authorizations, would be required. Therefore, impacts on the special-status plant species attributable to the Project would be reduced to less than significant.

Special-Status Invertebrate and Amphibian Species

No special-status invertebrate or amphibian species were observed during site surveys or identified through the literature review as having high potential to occur within the BSA. In addition, no suitable habitat for special-status invertebrate or amphibian species is present in the BSA. Therefore, no impacts on special-status invertebrate or amphibian species would occur during construction.

Special-Status Reptile Species

Six special-status reptile species have a moderate or high potential to occur in the BSA: coastal whiptail, coast horned lizard, Coronado skink, coast patch-nosed snake, orange-throat whiptail,

and two-striped garter snake. Construction activities could directly and permanently impact these six special-status reptile species through the permanent removal of suitable foraging and breeding habitat, such as Diegan coastal sage scrub and nonnative grassland. Permanent impacts on habitat could be caused by the grading, trenching, and installation of the permanent placement of steel poles and structure foundations. Other permanent direct impacts on special-status reptiles could occur as a result of vehicular or excavation equipment strikes. Temporary direct impacts may result from the removal of upland habitat, such as Diegan coastal sage scrub and nonnative grassland, due to grading and trenching for the installation of the poles, and short-term disturbances to their foraging and breeding behaviors that result from implementation of the Project.

Temporary indirect impacts could occur due to construction noise and ground vibration, as animals may be deterred from inhabiting or foraging in areas near such activities. Additional indirect impacts could occur from construction-related dust, sedimentation, and erosion, which have the potential to alter site conditions and the use of the site by reptile species. In addition, temporary impacts associated with nighttime construction activities may result in temporary avoidance of construction areas due to lighting. Furthermore, the Project may result in impacts on these species if noxious weed seeds are spread within occupied habitats during construction; if allowed to establish and spread, these weeds could alter the habitat for these species.

Impacts on special-status reptile habitat associated with approximately 1.1 acres of permanent impact on native vegetation communities and 1.1 acres of temporary impact on native vegetation communities (Table 3.4-5) would be relatively small compared to the habitat that is available and contiguous with impacted habitat regionally, and the 1.1 acres of permanent impacts would not result in the long-term decline or threaten the long-term survival of any of these species. Therefore, permanent and temporary direct and indirect impacts on these species from the Project would be less than significant.

SDG&E would implement all applicable measures outlined in SDG&E Subregional NCCP, Section 7.1, Operational Protocols, to prevent potential impacts on special-status reptile species. In addition, implementation of the measures outlined in NCCP Section 7.2, Habitat Enhancement Measures, would further reduce impacts on habitat for special-status reptile species. SDG&E would implement Operational Protocol #1, which requires construction vehicles to maintain a 15 mph speed limit, reducing the potential for collisions, as well as Operational Protocol #11, in which all employees receive environmental training on special-status species potentially occurring within the Project footprint. Operational Protocol #38 requires that all steep-walled trenches be inspected twice daily to protect against wildlife entrapment. If wildlife is located in the excavation, the project biologist would remove the animal if they cannot escape unimpeded. SDG&E also would implement Operational Protocols #2, #4, #5, #7, and #10, which prohibit construction personnel from conducting activities that may harm or harass special-status wildlife species (i.e., hunting, feeding, harassing, relocating, and collecting wildlife).

SDG&E would reduce impacts associated with the spread of noxious weeds in the construction areas by conforming to the habitat reclamation procedures outlined in NCCP Section 7.2. Implementation of NCCP Section 7.1 (including the NCCP Operational Protocols) and Section 7.2

would ensure potential impacts on special-status reptiles would be less than significant. SDG&E would further minimize the impact by implementing APMs BIO-1 through BIO-5, BIO-8, and BIO-9, as discussed in above under "Special-Status Plant Species." These APMs would require a biological monitor to be present during all ground-disturbing and vegetation removal activities and to survey the site immediately prior to initial ground-disturbing activities and/or vegetation removal to ensure that no special-status reptile species would be impacted and that, wherever possible, vegetation would be left in place or mowed, instead of grubbed, to avoid impacts on special-status reptile species.

As noted in the discussion of the NCCP in Section 3.4.2., *Regulatory Setting*, in approving the NCCP, USFWS and CDFW determined that implementation of avoidance and minimization measures and Operational Protocols would avoid or reduce potential impacts on special-status plant and wildlife species and provide appropriate mitigation where impacts occur. However, there are currently no assurances that sufficient take or mitigation credits provided under the NCCP would be available at the time Project construction would commence. If the take of listed species goes beyond the available take authorized under the NCCP, this additional take and/or adverse modification of habitat could result in a significant impact beyond what is covered under the NCCP. Therefore, in the event that there are not sufficient take or mitigation credits provided under the NCCP at the time of Project construction, **Mitigation Measure BIO-1** is proposed to avoid or reduce impacts. Implementation of this mitigation measure would ensure that the Project would comply with all regulatory requirements addressing special-status reptile species, reducing this impact to less than significant.

> **Mitigation Measure BIO-1: Project Compliance with the Federal and California Endangered Species Acts.** See full text of this Mitigation Measure under the analysis of *Special-Status Plant Species*, above.
>
> **Significance after Mitigation:** There is no documented assurance that there would be sufficient mitigation/take credits available to the Project under the current NCCP at the time of its construction to address impacts on federal and/or State-listed sensitive reptile species. With implementation of Mitigation Measure BIO-1, compliance with the federal and California Endangered Species Acts would be required in the absence of sufficient NCCP credits. Therefore, impacts on the special-status reptile species attributable to the Project would be reduced to less than significant.

Special-Status Avian Species and Other Nesting Avian Species

Nine special-status avian species are known to occur or have a potential to occur within the BSA: Bell's sage sparrow, California horned lark, coastal California gnatcatcher, Cooper's hawk, least Bell's vireo, southern California rufous-crowned sparrow, white-tailed kite, yellow-breasted chat, and yellow warbler. These special-status species and other nesting birds protected by the MBTA and the California Fish and Game Code could be directly permanently impacted by the removal of habitat used for foraging and nesting by avian species, as well as by other activities related to Project construction, such as conflicts with construction equipment. Permanent direct impacts on individuals may occur from vehicular strikes or excavation equipment strikes. Vehicular collisions occur most frequently during the vegetation clearing stage of construction, and involve nestlings and recently fledged young that cannot safely avoid equipment. In addition,

electrocution of avian species can occur from wing contact with two conductors, as avian species perching, landing, or taking off from a utility pole can complete the electrical circuit. Avian electrocutions can also occur through simultaneous contact with energized phase conductors and other equipment or simultaneous contact with an energized wire and a grounded wire. Electrocution of avian species poses a greater potential hazard to larger birds, such as raptors, because their body sizes and wing spans are large enough to bridge the distance between the conductor wires and, thus, complete the electrical circuit. Project activities that could temporarily directly affect special-status avian species habitat include general construction-related activities, including vegetation trimming and vegetation removal. Vegetation trimming and vegetation removal could result in temporary removal of nesting or foraging habitat and/or the removal of some food sources during construction.

Potential indirect impacts on avian species include those resulting from decreased suitability of habitat in the BSA due to various factors such as increased noise from construction activities and vehicles, vehicle emissions, helicopter use, dust, and other human activity. Noise from construction activities can affect avian species in multiple ways, such as depressing breeding success by acoustical masking, interfering with intra-specific communication, and interfering with detection of predators. Construction activities could disrupt breeding and foraging activities, and could prevent birds from attending to nests or could cause birds to flush from their nests, endangering eggs and chicks. Dust could have an adverse effect on the health of chicks and adults as well as on the viability and presence of prey insects and on the overall health of vegetation. Temporary indirect impacts on all avian species include the disruption of nesting behavior due to a temporary increase in the presence of humans, as well as noise from construction equipment and vehicles. Temporary impacts may also result from unauthorized actions from construction personnel, such as hunting or feeding of avian species. Night lighting associated with construction activities may also temporarily affect avian species roosting and foraging behavior, especially for avian species that are active after dark. As part of Operational Protocol #35, SDG&E would conduct biological monitoring during construction if such is recommended in the pre-activity survey report.

Indirect impacts on avian species may also occur if oak trees are killed as a result of construction personnel parking under oak driplines; the risk of damaging oak trees would be reduced through implementation of Operational Protocol #6, which prohibits construction personnel from parking or driving under oak trees.

SDG&E would further avoid or reduce impacts on avian species by implementing APMs BIO-1 through APM BIO-5, which keep work confined to existing roads and Project work areas and outside of nesting and foraging habitat. Further, APM BIO-6 would require avoidance of construction during the nesting or breeding season and would require a nesting survey in the area where the work is to occur when such avoidance is not feasible to determine the presence or absence of nesting birds protected under the MBTA. Upon discovery of nesting federal or State-listed species, SDG&E would consult with the USFWS and CDFW as necessary. Per APM BIO-7, if a raptor nest is observed during preconstruction surveys, a qualified biologist would determine if it is active. If the qualified biologist determines that Project activities are disturbing

or disrupting nesting and/or breeding activities, the qualified biologist would implement measures described in APM BIO-7 to reduce the noise and/or disturbance in the vicinity of the nest.

Impacts associated with the spread of noxious weeds in the construction areas would be addressed by conforming to the habitat reclamation procedures outlined in NCCP Section 7.2. In addition, temporary lighting at staging and storage areas would be directed on site and away from any sensitive receptors as part of the NCCP Operational Protocols. The power line structures would be constructed in compliance with the Avian Power Line Interaction Committee (APLIC) Suggested Practices for Avian Protection on Power Lines (Edison Electric Institute, et al, 2012). The APLIC standards are in addition to SDG&E's current construction standard, which includes increased phase spacing and cover-ups to reduce avian mortality from electrocution. Therefore, the potential for avian electrocution would be reduced to a less-than-significant level.

Additional avian species-specific detail is provided below.

Coastal California Gnatcatcher. The Project could have permanent and temporary impacts on the coastal California gnatcatcher, which is known to occur within the BSA based on results of the focused, protocol-level, breeding season surveys conducted in spring 2016. Additionally, the Project would result in 0.7 acre of direct permanent impacts and 3.4 acres of direct temporary impacts within Critical Habitat for coastal California gnatcatcher at multiple locations throughout the alignment due to vegetation clearing and ground disturbance. The Project would result in the permanent loss of 0.8 acre of coastal sage scrub habitat which would be mitigated for in accordance with acreage requirements stipulated in NCCP Table 7.4 for new facilities, as authorized through the revised 5-year HCP ITP. With implementation of the SDG&E Subregional NCCP Operational Protocols (see above), these impacts on the coastal California gnatcatcher would be less than significant.

Least Bell's Vireo. The Project could have temporary impacts on least Bell's vireo, which is known to occur within the BSA based on results of the focused, protocol-level, breeding season surveys conducted in spring 2016. The Project has been designed to avoid impacts on the riparian vegetation communities that may support the species. With implementation of the SDG&E Subregional NCCP Operational Protocols (see above), these impacts on least Bell's vireo would be less than significant.

All Other Special-Status Avian Species. The Project could cause impacts on suitable habitat for the remaining special-status avian species—Cooper's hawk, Southern California rufous-crowned sparrow, California horned lark, white-tailed kite, yellow breasted chat, and yellow warbler. Three of these species—the white-tailed kite, yellow-breasted chat, and yellow warbler—are typically associated with riparian areas. All other sensitive upland vegetation that may be used by the remaining special-status avian species also would be mitigated in the same manner. For all avian species, SDG&E would implement all applicable measures outlined in SDG&E Subregional NCCP, Section 7.1, Operational Protocols, to avoid and/or minimize potential impacts on special-status avian species. Avoidance and minimization measures from the NCCP would address impacts on non-NCCP covered species such as white-tailed kite, which have similar ecological requirements as NCCP-covered raptors.

Implementation of NCCP Section 7.1 (including the NCCP Operational Protocols) and Section 7.2, as well as APMs BIO-1 through BIO-9, would occur as part of the Project and would avoid or minimize most impacts on special-status avian species with the exception of helicopter impacts. Significant impacts related to helicopter use are described below.

As noted in the discussion of the NCCP in Section 3.4.2, *Regulatory Setting*, in approving the NCCP, USFWS and CDFW determined that implementation of avoidance and minimization measures and Operational Protocols would avoid or reduce potential impacts on special-status plant and wildlife species and provide appropriate mitigation where impacts occur. However, there are currently no assurances that sufficient take or mitigation credits provided under the NCCP would be available at the time Project construction would commence. If the take of listed species goes beyond the available take authorized under the NCCP, this additional take and/or adverse modification of habitat could result in a significant impact beyond what is covered under the NCCP. Therefore, in the event that there are not sufficient take or mitigation credits provided under the NCCP at the time of Project construction, **Mitigation Measure BIO-1** is proposed to avoid and reduce impacts. Implementation of this mitigation measure would ensure that the Project would comply with all regulatory requirements addressing special-status avian species, reducing this impact to less than significant.

Additionally, although APM BIO-7 requires avoidance measures for raptor nests, implementation of APM BIO-7 would not avoid or mitigate impacts on avian species resulting from potential helicopter use to the maximum extent feasible because it does not prohibit the use of helicopters or other potential disturbances within proximity of an active nest, and helicopter pass-bys may result in adverse impacts that could not be avoided through the monitoring protocol proposed under APM BIO-7. **Mitigation Measure BIO-2** is proposed to avoid or minimize potential helicopter impacts not reduced to a less-than-significant level by APM BIO-7. Implementation of these mitigation measures would ensure that the Project would comply with all regulatory requirements addressing special-status avian species.

> **Mitigation Measure BIO-1: Project Compliance with the Federal and California Endangered Species Acts.** See full text of this Mitigation Measure under the analysis of *Special-Status Plant Species*, above.
>
> **Mitigation Measure BIO-2: Establishment of Cylindrical Construction Buffers.** The biological monitor shall establish a three-dimensional cylinder-shaped buffer around active nests that have the potential to be affected by helicopter use or ground-based activities associated with helicopter use. A vertical buffer shall extend at least 300 feet vertically above the location of the nest and at least 300 feet horizontally for passerines (or 500 feet vertically and horizontally for raptors and 500 feet vertically and 0.5 mile horizontally for white-tailed kite). The biological monitor and SDG&E project manager shall monitor the helicopter tracks (i.e., flight patterns, durations) daily to ensure compliance with these established buffers. This buffer assumes the helicopter activities are temporary or infrequent in nature (no longer than one minute [e.g., pass-by] or visit the site once in a day) If helicopter work occurs in the vicinity of an active nest for an extended period of time, the biological monitor may determine, based on the nature of the work and nest monitoring observations, that the buffer is insufficient for the nest and adjust the buffer distance appropriately.

Significance after Mitigation: There is no documented assurance that there would be sufficient mitigation/take credits available to the Project under the current NCCP at the time of its construction to address impacts on federal and/or State-listed sensitive avian species. With implementation of Mitigation Measure BIO-1, compliance with the federal and California Endangered Species Acts would be required in absence of sufficient NCCP credits. Avoidance of impacts resulting from helicopter use is not currently covered within NCCP Section 7.1 Operational Protocols or the APMs proposed for this Project. With implementation of Mitigation Measure BIO-2, impacts of helicopter use on the special-status avian and other nesting avian species would be sufficiently reduced to avoid disruption to nesting avian species. Therefore, impacts on special-status avian species would be reduced to less than significant.

Special-Status Mammal Species

Five special-status mammal species have a moderate or high potential to occur within the BSA based on the presence of CNDDB occurrences nearby and suitable habitat within the BSA: American badger, northwestern San Diego pocket mouse, San Diego black-tailed jackrabbit, San Diego desert woodrat, and mule deer.

The Project could result in both permanent and temporary impacts on these special-status mammal species. Direct permanent impacts would occur as a result of removal of vegetation for the permanent placement of steel poles within their habitat, specifically within the sensitive natural communities identified in Table 3.4-5, Impacts on Vegetation Communities. Permanent impacts may include the loss of suitable foraging habitat resulting from removal of vegetation communities that have the potential to support these species. The Project may also result in impacts on special-status mammal species if non-native noxious weed seeds are spread within occupied habitats during construction. If allowed to establish and spread, these noxious weeds could alter the habitat for these species. Power lines and other Project-related structures provide potential perching opportunities for raptor species, which can increase the potential for predation of wildlife, including special-status mammal species, by raptors.

Temporary direct impacts may result from construction noise, lighting, groundborne vibration, and other construction-related short-term disturbances that could temporarily disrupt their typical daily foraging activities. Temporary indirect impacts on special-status mammal species include the temporary loss of habitat from vegetation trimming resulting from Project construction activities.

Because the Project involves installing an additional power line in Segment 2 within SDG&E ROW, the extent of predation on special-status mammals would increase slightly as a result of additional structures available for predators like raptors. Because these species are most active at night, temporary impacts associated with nighttime construction activities may result in temporary avoidance of construction areas due to lighting, temporarily reducing the animal's ability to forage at night. These temporary impacts would be short-term and located in only a few work areas at a time during construction of the Project. None are expected to result in a long-term decline of any special-status mammal species.

SDG&E would implement all applicable measures outlined in SDG&E Subregional NCCP, Section 7.1, Operational Protocols, to prevent potential impacts on special-status mammal species. These measures include, but are not limited to, restricting vehicle access to existing roads to the extent feasible, avoiding vehicle collisions with wildlife species to the extent practicable, conducting preconstruction surveys in suitable habitat, restricting the handling of all wildlife to expert handlers, and having a biological monitor on site to avoid and minimize impacts on biological resources, such as vegetation communities that have the potential to support these species. SDG&E would further minimize or reduce impacts on special-status mammal species by implementing APMs BIO-1 through BIO-4, BIO-8, and BIO-9. Furthermore, implementation of the measures outlined in SDG&E Subregional NCCP, Section 7.2, Habitat Enhancement Measures, would further reduce impacts on habitat for special-status mammal species.

As noted in the discussion of the NCCP in Section 3.4.2., *Regulatory Setting*, in approving the NCCP, USFWS, and CDFW determined that implementation of avoidance and minimization measures and Operational Protocols would avoid or reduce potential impacts to special-status plant and wildlife species and provide appropriate mitigation where impacts occur. However, there are currently no assurances that sufficient take or mitigation credits provided under the NCCP would be available at the time Project construction would commence. If the take of listed species goes beyond the available take authorized under the NCCP, this additional take and/or adverse modification of habitat could result in a significant impact beyond what is covered under the NCCP. Therefore, in the event that there are not sufficient take or mitigation credits provided under the NCCP at the time of Project construction, **Mitigation Measure BIO-1** is proposed to avoid and reduce impacts. Implementation of this mitigation measure would ensure that the Project would comply with all regulatory requirements addressing special-status mammal species, reducing this impact to less than significant.

> **Mitigation Measure BIO-1: Project Compliance with the Federal and California Endangered Species Acts.** See full text of this Mitigation Measure under the analysis of *Special-Status Plant Species*, above.
>
> **Significance after Mitigation:** There is no documented assurance that there would be sufficient mitigation/take credits available to the Project under the current NCCP at the time of its construction to address impacts on federally- and/or State-listed sensitive mammal species. With implementation of Mitigation Measure BIO-1, compliance with the federal and California Endangered Species Acts would be required in the absence of sufficient NCCP credits. Therefore, impacts on special-status mammal species attributable to the Project would be reduced to less than significant.

Operation and Maintenance

SDG&E currently maintains and operates extensive existing electric utility, transmission, distribution, and substation facilities throughout the BSA. The frequency of operation and maintenance activities for the Project would increase slightly. Although the proposed steel poles would require less maintenance and repair than the existing wood poles, the added structures in Segment 2 would require an increase in frequency of maintenance trips. However, as noted in Question a in Section 3.17, Transportation and Traffic, this increase would be minimal and the

potential impact on the environment would be negligible. As such, impacts to special-status species would be less than significant.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service: ***LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED.***

Construction

The SDG&E Subregional NCCP and HCP allow for impacts on sensitive vegetation communities when incidental to otherwise lawful activities and conducted in full compliance with the NCCP measures. Compliance with the NCCP measures is intended to avoid or minimize impacts on sensitive natural resources.

Potential permanent and temporary impacts that may result from construction of the Project were calculated and analyzed by using the vegetation map produced during the 2016 field surveys, as well as additional information in SDG&E Subregional NCCP Section 3.1, Data Base References. Total impacts on vegetation communities are summarized in **Table 3.4-5**.

The Project could cause impacts on sensitive vegetation communities. These communities include the NCCP Community types coastal sage scrub, coastal sage/chaparral mix, southern maritime chaparral, grassland, open oak woodland, freshwater marsh, riparian forest, coast live oak riparian forest, and riparian scrub. Project construction could result in permanent loss and/or temporary disturbance of sensitive vegetation communities. Direct permanent impacts on sensitive natural vegetation communities could result from the permanent placement of steel poles within southern maritime chaparral and Diegan coastal sage scrub associated with Segment 2. Segments 1 and 3 are existing power lines with existing poles; all existing facilities would be completely removed where feasible when they are replaced (Appendix D.1, Figures 3.4-1.1 through 3.4-1.3 and Figures 3.4-1.8 through Figures 3.4-1.18). Additionally, most poles associated with Segment 1 would be located in existing disturbed habitat. In Segment 3, 29 existing steel lattice towers would be used for the project, minimizing the need for new construction. Temporary direct impacts would result from grading, brush removal, and vegetation trimming required during construction for pole removal, installation, staging yards, stringing sites, laydown areas, footpaths, and guard structures. No temporary or permanent impacts would occur within riparian habitat.

Indirect impacts on sensitive vegetation communities may include the increased exposure to exotic plant species. Non-native exotic plant species are opportunistic and often occupy disturbed soils such as those within electric utility line corridors and areas of exposed bare ground that may occur within the disturbance area. Wildfires caused by downed electric lines are rare but may occur. Exotic species often frequent areas adjacent to and within burn areas following a wildfire. Once introduced, these exotic plant species often outcompete natives for resources, resulting in a reduction in growth, future dispersal, and recruitment of native species, and the eventual degradation of the vegetation community. Erosion and stormwater contaminant runoff also may degrade adjacent vegetation communities. Finally, dust deposition on leaf surfaces may result from construction traffic on dirt roads or lots.

TABLE 3.4-5
IMPACTS ON VEGETATION COMMUNITIES

NCCP[a] Vegetation Community	Holland/Oberbauer Vegetation Community[b]/ Land Cover Type	Permanent Impact (Acres)	Temporary Impact (Acres)
Disturbed/Developed			
Disturbed Habitat	Disturbed Habitat	0.7	22.0
	Urban/Developed	0.3	56.1
	Orchard/Vineyard	<0.1	0.2
Agricultural	Intensive Agriculture	--	--
Uplands			
Coastal Sage Scrub	Diegan Coastal Sage Scrub*	0.8	0.7
	Diegan Coastal Sage Scrub-Burned*	--	<0.1
	Diegan Coastal Sage Scrub-Disturbed*		<0.1
Coastal Sage/Chaparral Mix	Coastal Sage-Chaparral Transition*	--	--
Southern Maritime Chaparral	Southern Maritime Chaparral*	0.3	0.3
	Southern Maritime Chaparral-Burned*	--	<0.1
Grassland	Non-Native Grassland*	--	<0.1
Open Oak Woodland	Coast Live Oak Woodland*	--	--
	Coast Live Oak Woodland-Disturbed*	--	--
Eucalyptus Forest	Non-Native Woodland	--	--
	Eucalyptus Woodlands	--	<0.1
Riparian/Wetlands			
Freshwater Marsh	Emergent Wetlands*	--	--
	Coastal and Valley Freshwater Marsh*	--	--
Riparian Forest	Southern Riparian Forest*	--	--
Coast Live Oak Riparian Forest	Southern Coast Live Oak Riparian Forest*	--	--
Riparian Scrub	Mule Fat Scrub*	--	--
	Southern Willow Scrub*	--	--
	Southern Willow Scrub-Disturbed*	--	--
Inland Water	Fresh Water	--	--
	Total	**2.0**	**79.4**

NOTES:
[a] SDG&E Subregional Natural Community Conservation Plan.
[b] Vegetation community codes correspond to Oberbauer et al. (2008), which also mirror Holland's (1986) element code. These codes help define the vegetation hierarchy inherent in a classification system. Similarly coded vegetation communities exhibit similar assemblages of plant and animal species, and typically exist in similar macro-habitat types.
* Indicates a sensitive natural community.

SOURCE: ICF, 2017a

The SDG&E Subregional NCCP allows for impacts on sensitive habitats when incidental to otherwise lawful activities and when conducted in full compliance with the NCCP. Compliance with the NCCP is designed to avoid impacts whenever possible and to implement protection measures to avoid and minimize take to the maximum extent possible. Consistent with the NCCP, the Project has been designed to avoid sensitive habitat areas when possible, and includes such directives as not placing new poles in drainage areas, using existing access roads where feasible,

and placing any new facilities, staging areas, stringing sites, guard structures, and helicopter landing zones outside sensitive habitats when feasible.

Where avoidance of sensitive habitat areas is not possible, or where sensitive habitat areas exist adjacent to the Project work areas, implementation of the measures in NCCP Sections 7.1 and 7.2 would further minimize impacts in sensitive natural communities. Specifically, SDG&E would mark the boundaries of work limits and sensitive habitats and resources that would be avoided in accordance with Operational Protocol #14. Operational Protocols #1 and #39 would reduce fugitive dust resulting from construction vehicles by requiring that vehicles drive at speeds of 15 mph or less, and that regular watering occurs, respectively. Operational Protocol #20 requires SDG&E to use BMPs to minimize erosion and sedimentation effects of stormwater. The Project would also be required to comply with the Construction General Permit, as discussed in Section 3.10, *Hydrology and Water Quality*, requiring preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which would include BMPs to control run-on and runoff from construction work sites. The SWPPP BMPs would include, but would not be limited to, physical barriers to prevent erosion and sedimentation, construction of sedimentation basins, limitations on work periods during storm events, use of infiltration swales, protection of stockpiled materials, and a variety of other measures that would substantially reduce or prevent erosion from occurring during construction. NCCP Section 7.2 would be implemented to enhance habitat and minimize invasive species establishment and spread. SDG&E would further reduce impacts by implementing APMs BIO-1 through BIO-5, BIO-8, and BIO-9 as discussed under Question a.

SDG&E proposes to withdraw credit from the SDG&E mitigation bank for approximately 1.1 acres (46,443 square feet) of permanent impacts on sensitive vegetation communities (not categorized as disturbed/developed land cover types) as identified in Table 3.4-5, which would be mitigated at a 2:1 ratio for impacts within a preserve and a 1:1 mitigation ratio for impacts outside of a preserve (as discussed in NCCP Section 7.4). Total mitigation credit withdrawal requirements would be further refined during the pre-activity survey report (PSR) phase of the Project, prior to the beginning of construction.

Temporary impacts of approximately 47,324 square feet (1.1 acres) would occur on sensitive vegetation communities (not categorized as disturbed/developed land cover types) from the Project as identified in Table 3.4-5. Temporary impacts are mitigated through basic site remediation, which includes native hydroseed for erosion control. If roots are not grubbed during temporary impacts, then hydroseeding may not be necessary. As discussed in NCCP Section 7.4, this applies to areas greater than 500 square feet, and only where grubbing occurred. For all temporary impacts greater than 500 square feet that are located outside of a preserve, acreage not meeting success criteria shall be deducted from SDG&E mitigation credits at a 1:1 ratio. Within a preserve, any areas not meeting success criteria shall be deducted from SDG&E mitigation credits at a 1:1 ratio.

Habitat that is expected to recover on its own consists of non-native grassland, in which the majority of species are non-native in origin. Because SDG&E does not actively enhance nonnative vegetation, and because this habitat type is generally considered resilient enough to completely regenerate to pre-activity levels without active enhancement measures, these areas would be monitored in order to determine whether or not they meet success criteria. With

implementation of the required mitigation for permanent impacts, Operational Protocols, revegetation and habitat rehabilitation in accordance with NCCP Section 7.2, impacts on sensitive habitats would be less than significant.

Implementation of the measures in SDG&E Subregional NCCP Section 7.1, Operational Protocols, Section 7.2, Habitat Enhancement Measures, and/or Section 7.4, Mitigation Credits will reduce impacts to sensitive vegetation communities to less than significant. NCCP Section 7.2, Habitat Enhancement Measures, includes mitigation measures for the protection of sensitive habitats. NCCP Section 7.4, Mitigation Credits, describes the procedure to implement mitigation credits and provides the mitigation ratios to be used. SDG&E would further minimize the impact by implementing APMs BIO-1 through BIO-5, BIO-8, and BIO-9. These measures would require a biological monitor to be present during all ground-disturbing and vegetation removal activities and to survey the site immediately prior to initial ground-disturbing activities and/or vegetation removal to ensure that no sensitive vegetation communities would be impacted and that, wherever possible, vegetation would be left in place or mowed, instead of grubbed, to avoid impacts on sensitive vegetation communities and associated dependent wildlife species. With implementation of the NCCP and APMs, impacts on sensitive vegetation communities would be less than significant.

USFWS Critical Habitat

Some temporary and permanent Project impact areas are within USFWS-designated Critical Habitat for coastal California gnatcatcher (refer to Appendix D.2, Biological Technical Report, Figure 3, Preserves and Critical Habitat). The Project would result in 0.7 acre of direct permanent impacts and 3.4 acres of direct temporary impacts within Critical Habitat for coastal California gnatcatcher at multiple locations throughout the alignment due to vegetation clearing and ground disturbance. This area is small compared to the habitat that is available regionally for the species, and much of the habitat mapped as Critical Habitat that would be permanently impacted is disturbed.

The Project may result in additional indirect impacts on Critical Habitat if non-native invasive weeds are spread during construction; if allowed to establish and spread, non-native invasive weeds may change the species composition of Critical Habitat. Additionally, construction vehicles and equipment may cause temporary indirect impacts such as an increase in sedimentation, erosion, and trampling, and an increase in the amount of fugitive dust.

Consistent with the SDG&E Subregional NCCP, the Project has been designed to avoid sensitive habitat areas. SDG&E would further minimize impacts on Critical Habitat with the implementation of the APMs BIO-1 through BIO-5, BIO-8, and BIO-9, as discussed in previous sections. In addition, SDG&E would implement BIO-6, which would require surveys for coastal California gnatcatcher by a qualified biologist during the nesting season and appropriate work buffers around nests and appropriate agency consultation.

As noted in the discussion of the NCCP in Section 3.4.2., in approving the NCCP, USFWS and CDFW determined that implementation of avoidance and minimization measures and Operational Protocols would avoid potential impacts and provide appropriate mitigation where impacts occur.

With implementation of NCCP Section 7.1 (including the NCCP Operational Protocols) and Section 7.2, and APMs BIO-1 through BIO-6, BIO-8, and BIO-9, potential impacts on USFWS critical habitat for coastal California gnatcatcher would be less than significant.

Preserve Areas

The Project would intersect with various designated preserves and open space easements. The Project would traverse San Elijo Hills Open Space in the City of San Marcos, and permanent impacts would occur on two areas. The Project would traverse University Commons Preserve managed by the Center for Natural Lands Management and includes several temporary and permanent impacts adjacent to existing access roads. The Project would temporarily and permanently impact several areas within the Rancho Dorado HOA Preserve in the City of San Marcos and Carrillo Ranch Reserve and Carlsbad Raceway Open Space Preserve in the City of Carlsbad. Temporary impacts would occur within the County of San Diego Sage Hill Preserve, primarily within existing disturbed areas of an existing SDG&E access road. Direct and indirect permanent and temporary impacts on preserves and HCP lands would be minimal, and the overall function, viability, and purpose of the preserves would not be adversely affected. The Project would use existing roads within the preserves, and permanent installations would occur on disjoint features that would not permanently adversely interfere with drainages, topography, jurisdictional features, wildlife corridors, wildlife movement, or preserve assembly. Moreover, all temporary impacts would be revegetated in accordance with the standards in NCCP Section 7.2. Therefore, impacts on preserve lands would be less than significant.

SDG&E would avoid or reduce potential impacts and ensure the protection and conservation of these lands in accordance with the SDG&E Subregional NCCP and would implement Operational Protocols that apply to construction and operation and maintenance activities. As described in previous sections, SDG&E also would implement APMs BIO-1 through BIO-6, BIO-8, and BIO-9.

Operation and Maintenance

SDG&E currently maintains and operates extensive existing electric utility, transmission, distribution, and substation facilities throughout the BSA. The frequency of operation and maintenance activities for the Project would increase slightly. Although the proposed steel poles would require less maintenance and repair than the existing wood poles, the added structures in Segment 2 would require an increase in frequency of maintenance trips. However, this increase would be so slight the potential impact on sensitive habitats would be negligible. As such, impacts would be less than significant.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means: *LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.*

Construction

The Project has been designed to avoid impacts to wetlands and non-wetland waters that are regulated by USACE, CDFW, RWQCB, and/or pursuant to the applicable federal and State regulations. No existing or proposed poles are or would be located within an aquatic feature. Five

existing poles and one associated work area are within 25 feet of a jurisdictional feature: Poles 7 and 35, the work area between Poles 70 and 71, and Poles 72, 97, and 99. All work areas associated with these poles have been sited to ensure no impacts on these features occur.

A full discussion of each aquatic resource adjacent to a Project component is presented in the Jurisdictional Delineation Report (see Appendix C of IS/MND Appendix D.2) and summarized below, including detail on implementation of Mitigation Measure BIO-3:

- **Pole 7:** Located approximately 5 feet from jurisdictional feature 002. Work would include the replacement of a pier foundation. The work area has been revised to avoid the mapped extent of this feature. Work area limits would be flagged to ensure the work avoids this feature.
- **Pole 35:** Located approximately 1 foot from jurisdictional feature 10b. The impact footprint occurs near the top of the bank of feature 10b. Work would be limited to the east side of the pole.
- **Work area between Poles 70 and 71:** Located approximately 1 foot from jurisdictional feature 060. The work area has been revised to avoid impacts to feature. Work would be confined to the existing road.
- **Pole 72:** Located approximately 5 feet from feature 056. Work would consist of overhead work to the existing pole. Work area limits would be flagged to ensure that the work area avoids feature 056.
- **Pole 97:** Located 5 feet from feature 089b. Feature is within 5 feet of temporary impact area. Work area limits would be flagged to avoid impact to this feature.
- **Pole 99:** Located within 3 feet of feature 092. Work area limits would be flagged to ensure all work occurs within the access road limits and avoids impacts to the feature.

In addition, there are a number of existing access road crossings through jurisdictional aquatic features; these existing crossings would be used and no new or additional grading or road improvements are proposed. If installed, a bridge would be required to comply with all applicable resource regulations if the subject drainage is determined to be jurisdictional. Proposed staging yards also support aquatic features; therefore, impact areas associated with these yards have been located to avoid all aquatic features.

APMs BIO-1 through BIO-5 require implementation of the NCCP Operational Protocols, keeping equipment free of mud and vegetative material, staying within designated work area and existing roads, and flagging work area limits and installing silt fencing around sensitive plant populations adjacent to the work areas of the six pools would help avoid impacts to these resource. However, the APMs do not specifically address jurisdictional resources. Therefore, **Mitigation Measure BIO-3** is proposed to provide specific avoidance measures to protect aquatic features considered jurisdictional, but not currently covered in NCCP Section 7.1 Operational Protocols or the APMs proposed for the Project.

> **Mitigation Measure BIO-3: Avoid Jurisdictional Resources.** To avoid impacts on jurisdictional areas, SDG&E and its contractor shall flag work area limits and work shall be restricted to the flagged limits. Additionally, silt fencing shall be installed on the side of the work area closest to the jurisdictional feature, to minimize construction-generated

run-off or sedimentation. A qualified biologist shall verify that silt fencing and construction work is properly installed and are located outside of jurisdictional areas to confirm their avoidance. Monitoring shall take place during rain events to confirm the integrity of silt fencing and verify runoff does not enter jurisdictional areas.

Significance after Mitigation: SDG&E would avoid or reduce potential impacts and ensure the protection and conservation of these lands in accordance with the SDG&E Subregional NCCP and implement Operational Protocols that apply to construction and operation and maintenance activities. As described above, SDG&E would implement APMs BIO-1 through BIO-5 to further reduce impacts on jurisdictional resources. As these measures provide general protection for biological resources, Mitigation Measure BIO-3 is proposed to provide specific protections to avoid impacts on jurisdictional resources. Thus, Mitigation Measure BIO-3 would ensure potential impacts jurisdictional resources would be reduced to less than significant.

Operation and Maintenance

The frequency of operation and maintenance activities near jurisdictional features would increase slightly as a result of additional maintenance needs at the five poles and the associated work area near jurisdictional features. Although the proposed steel poles would require less maintenance and repair than the existing wood poles, the added structures in Segment 2 would require an increase in frequency of maintenance trips, including on those existing access road crossings through jurisdictional aquatic features. However, this increase would be so slight that the potential impact on federally protected wetlands would be negligible. Work could occur adjacent to jurisdictional features; however, this work would be limited in duration and in area, and SDG&E would comply with standard BMPs described above. If necessary, SDG&E would obtain any permits required to conduct maintenance activities that would impact wetlands. As such, impacts would be less than significant.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites: *LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED.*

The Project would not result in significant permanent or temporary impacts on local or regional wildlife movement corridors, including migratory bird routes. Construction activities within areas that serve as wildlife corridors may temporarily disrupt normal animal movement due to the presence of construction equipment and materials, excavations associated with the pole removals and new pole installation, increased human presence, increased noise levels, and increased vehicular traffic along access roads. Construction vehicles have the potential to result in accidental injury or mortality of onsite species during construction; however, wildlife would be mobile and would likely temporarily leave an area where construction activity is occurring.

Construction would not occur in all areas simultaneously, as noted in Section 2.5.1 in Chapter 2, *Project Description*, thus resulting in only a minor potential for impact on wildlife movement at any point in time and at any given location. Temporary restrictions on wildlife movement would also be localized to only a portion of the potential wildlife movement area that animals can use at any one time because wildlife species would be able to use areas outside of the proposed construction areas.

In addition, permanent impact areas have small footprints that are discontinuous, with breaks of natural habitat between them that would therefore not restrict or impede wildlife movement. Therefore, impacts on migratory wildlife corridors or the use of native wildlife nursery sites, including nesting bird sites as discussed in Question a above, would be less than significant. SDG&E would conduct activities in accordance with NCCP Operational Protocols to avoid and minimize impacts on biological resources. SDG&E would also implement APMs BIO-1 through BIO-9.

However, certain nesting bird habitats and jurisdictional resources that serve as riparian corridors for wildlife movement are not currently covered within the NCCP Section 7.1 Operational Protocols or the APMs proposed for the Project, and as described under Question a with respect to helicopter impacts on nesting birds (i.e., nursery sites) and under Question c with respect to construction-generated runoff and sedimentation into jurisdictional areas (i.e., riparian corridors), significant impacts could occur. Mitigation Measures BIO-1, BIO-2, and BIO-3 require specific actions to ensure avoidance and minimization of impacts on these habitat types.

> **Mitigation Measure BIO-1: Project Compliance with the Federal and California Endangered Species Acts.** See full text of this Mitigation Measure under Question a, above.
>
> **Mitigation Measure BIO-2: Establishment of Cylindrical Construction Buffers.** See full text of this Mitigation Measure under Question a, above.
>
> **Mitigation Measure BIO-3: Avoid Jurisdictional Resources.** See full text of this Mitigation Measure under Question c, above.
>
> **Significance after Mitigation:** Implementation of Mitigation Measures BIO-1, BIO-2, and BIO-3 would reduce the disruption of normal animal movement due to helicopter use and construction-generated runoff and sedimentation into jurisdictional areas used for wildlife movement, including riparian corridors. With implementation of Mitigation Measures BIO-1, BIO-2, and BIO-3, impacts would be mitigated to a less-than-significant level.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance: *NO IMPACT.*

Project construction would not conflict with any of the local environmental policies or ordinances to protect biological resources identified in Section 3.4.2, *Regulatory Setting*. The Project is located within the cities of Carlsbad, Escondido, San Marcos, and Vista, and in unincorporated San Diego County. Based on a review of applicable local policies, the Project would not conflict with local policies and plans, which include the tree ordinances and biological resource-related general plan policies of each of these jurisdictions. Therefore, the Project would not conflict with any local policies or plans protecting biological resources. No impact would occur.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan: *NO IMPACT.*

The Project is not subject to local discretionary regulations related to biological resources because the CPUC has exclusive jurisdiction over the siting, design, and construction of the Project; however, the Project would also occur within the area covered by, and would follow the requirements of, the SDG&E Subregional NCCP and Low Effect HCP. SDG&E's existing NCCP and HCP supersede the County of San Diego MSCP and approved City and County Subarea Plans and, therefore, are the only conservation plans that apply to the Project. The Project would not conflict with the provisions of either of these conservation plans. SDG&E would follow the Operational Protocols identified in the NCCP for construction and operations and maintenance of the Project.

The Project includes areas within the City of Carlsbad MHCP Subarea Plan, City of San Marcos MHCP Subarea Plan, City of Escondido MHCP Subarea Plan, and the planning area of the draft County of San Diego North County MSCP. Although these local plans are not applicable under CPUC jurisdiction, the Project would not conflict with local HCPs and NCCPs, including these plans. In addition, the Project would not conflict with the monitoring, management, or maintenance of either the County of San Diego Subarea Plan of the MSCP, and specifically the MHPA. Therefore, the Project would not conflict with any local policies or plans protecting biological resources and there would be no impact.

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3.5 Cultural Resources

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
5.	**CULTURAL RESOURCES — Would the project:**				
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines §15064.5?	☐	☒	☐	☐
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?	☐	☒	☐	☐
c)	Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Cultural resources include historic architectural resources; archaeological resources; and human remains. This section provides an assessment of potential impacts on cultural resources as a result of Project implementation.

The cultural resources study area for the Project includes a 150-foot buffer on either side of the center line of the entire Project alignment, as well as including all Project components, access roads, staging yards, substation locations, and pole replacement sites.

3.5.1 Environmental Setting

Prehistoric Period

The chronology of coastal southern California is typically divided into three general time periods: the Early Holocene (11,000 to 8,000 before present [B.P.]), the Middle Holocene (8,000 to 4,000 B.P.), and the Late Holocene (4,000 B.P. to A.D. 1769). Within this general timeframe, the archaeology of southern California is generally described in terms of cultural "complexes." A complex is a specific archaeological manifestation of a general mode of life, characterized archaeologically by technology, particular artifacts, economic systems, trade, burial practices, and other aspects of culture.

Early Holocene (11,000 to 8,000 B.P.)

While it is not certain when humans first came to California, their presence in southern California by about 11,000 B.P. has been well documented. At Daisy Cave, on San Miguel Island (located in the Pacific Ocean off the coast of Los Angeles, cultural remains have been radiocarbon dated to between 11,100 and 10,950 years B.P. (Byrd and Raab, 2007). On the mainland, radiocarbon evidence confirms occupation of the Orange County and San Diego County coasts by about 9,000 B.P., primarily in lagoon and river valley locations (Gallegos, 2002). During the Early Holocene, the climate of southern California became warmer and more arid and the human population, residing mainly in coastal or inland desert areas, began exploiting a wider range of plant and animal resources (Horne and McDougall, 2003).

The primary Early Holocene cultural complex in coastal southern California was the San Dieguito Complex. The people of the San Dieguito Complex (about 10,000–8,000 B.P.) inhabited the chaparral zones of southwestern California, exploiting the plant and animal resources of these ecological zones (Moratto, 1984; Warren, 1967). Leaf-shaped and large-stemmed projectile points are typical of San Dieguito Complex material culture.

Middle Holocene (8,000 to 4,000 B.P.)

During the Middle Holocene, there is evidence for the processing of acorns for food and for the increased importance of hunting (Horne and McDougall, 2003). The processing of plant foods, particularly acorns, increased, a wider variety of animals were hunted, and trade with neighboring regions intensified (Horne and McDougall, 2003). Major technological changes appeared as well, particularly with the advent of the bow and arrow, which largely replaced the use of the dart and atlatl, or spear thrower.

The Middle Holocene La Jolla Complex (about 8,000–4,000 B.P.) is essentially a continuation of the San Dieguito Complex. La Jolla groups lived in chaparral zones or along the coast, often migrating between the two. Coastal settlement focused around the bays and estuaries of coastal Orange and San Diego counties. La Jolla peoples produced large, coarse stone tools, but also produced well-made projectile points, and milling slabs. The La Jolla Complex represents a period of population growth and increasing social complexity, and it was also during this time period that the first evidence of the grinding of seeds for flour, as indicated by the abundance of millingstones in the archaeological record, appears (Horne and McDougall, 2003).

Late Holocene (4,000 B.P. to A.D. 1769)

During the Late Holocene, native populations of southern California were becoming less mobile and populations began to gather in small sedentary villages with satellite resource-gathering camps. Evidence indicates that the overexploitation of larger, high-ranked food resources may have led to a shift in subsistence. This shift focused on acquiring greater amounts of smaller resources, such as shellfish and small-seeded plants (Byrd and Raab, 2007). In coastal southern California, conditions became dryer and many lagoons had been transformed into saltwater marshes. Because of this, populations abandoned mesas, flat elevated landforms, and ridge tops to settle nearer to permanent freshwater resources (Gallegos, 2002). Although the intensity of trade had already been increasing, it reached its zenith during this time period, with asphaltum (tar), seashells and steatite being traded from southern California to the Great Basin.

Ethnographic Period

Luiseño

The Luiseño were named after the Mission San Luis Rey, to which many of them were relocated. The language of the Luiseño people has been identified as belonging to the Cupan group of the Takic subfamily, which is part of the larger Uto-Aztecan language family (Bean and Shipek, 1978). Luiseño territory was bordered by Agua Hedionda Creek on the south and Aliso Creek on the northwest, encompassed most of the drainage of the San Luis Rey River and the Santa Margarita River, and extended east as far as the San Jacinto Mountains. Today this area is located within

northern San Diego, southern Orange, and Riverside counties, and would have encompassed diverse environments including lagoons and marshes, coastal areas, inland river valleys, foothills, and mountains. Luiseño placenames in the Project vicinity include *$iikapa, piyeevo*, and *ánáavax* (Rincon Cultural Resources Department, 2018).

The Luiseño subsisted on small game, coastal marine resources, and a wide variety of plant foods such as grass seeds and acorns. Luiseño houses were conical thatched reed, brush, or bark structures. The Luiseño inhabited permanent villages centered around patrilineal clans, with each village headed by a chief (Sparkman, 1908). Seasonal camps associated with villages were also used. Each village or clan had an associated territory and hunting, collecting, and fishing areas. Villages were typically located in proximity to a food or water source, or in defensive locations, often near valley bottoms, streams, sheltered coves or canyons, or coastal strands (Bean and Shipek, 1978). It is estimated that there may have been around 50 Luiseño villages with a population of about 200 each at the time of the first Spanish contact (Bean and Shipek, 1978).

Today, there are six federally recognized tribes in California who share Luiseño tribal affiliation, language, and culture, including the La Jolla Band of Luiseño Indians (La Jolla), Rincon Band of Luiseño Indians (Rincon), Pauma Yuima Band of Mission Indians (Pauma), Pechanga Band of Luiseño Indians (Pechanga), Pala Band of Mission Indians (Pala), and Soboba Band of Luiseño Indians (Soboba).

Kumeyaay

The greater San Diego area was inhabited by a group of people known generally as the Kumeyaay. The Kumeyaay are one of many local Native groups collectively referred to as the Diegueño, specifically representing populations occupying an area that encompassed roughly southern present-day San Diego County, southern Imperial County, and northern Baja California (Kroeber, 1925). The Kumeyaay language belonged to the Yuman language family, Hokan stock (Luomala, 1978). Subsistence strategy for the Kumeyaay involved small-game hunting and resource gathering, with a noted reliance upon marine resources near San Diego Bay and along the Pacific Coast. Inland Kumeyaay populations relied primarily upon the exploitation of small game animals including insects, fish, birds, dove, rabbits, and squirrels, as well as abundantly available vegetal resources such as many varieties of seeds, principally the acorn, cacti, and herbaceous plants. Studies indicate that the Kumeyaay divided their seasonal subsistence between the mountain and the desert ecological zones. With the seasons, the Kumeyaay moved in small bands from one productive area to another to ensure a near constant food supply (Luomala, 1978).

In 1769, the Mission San Diego de Alcalá was founded and Kumeyaay were missionized and eventually moved onto reservations (Luomala, 1978). Today, Kumeyaay tribal members within the United States are divided into twelve federally recognized bands: Barona, Campo, Ewiiaapaayp, Inaja-Cosmit, Jamul, La Posta, Manzanita, Mesa Grande, San Pasqual, Santa Ysabel, Sycuan, and Viejas. An additional San Diego County band, the Kwaaymii Laguna Band of Indians, is not currently federally recognized. Several more Kumeyaay communities are present in Mexico.

Historic Period

The first European presence near present day San Diego came in 1542, when Juan Rodriguez Cabrillo led an expedition along the coast. Europeans did not return until 1769, when the expedition of Gaspar de Portola traveled overland from San Diego to San Francisco. In the late 18th century, the Spanish began establishing missions in California and forcibly relocating and converting native peoples (Horne and McDougall, 2003). The nearest mission to the Project was Mission San Diego de Alcalá, founded in 1769 by Father Junipero Serra.

Disease and hard labor took a toll on the native populations; by 1900, the Native Californian population had declined by as much as 95 percent (Chartkoff and Chartkoff, 1984). In addition, native economies were disrupted, trade routes were interrupted, and native ways of life were significantly altered.

In 1821, Mexico, which included much of present-day California, became independent from Spain, and during the 1820s and 1830s the California missions were secularized. Mission property was supposed to have been held in trust for the Native Californians, but instead was handed over to civil administrators and then into private ownership. After secularization, many former Mission Indians were forced to leave the Missions and seek employment as laborers, ranch hands, or domestic servants (Horne and McDougall, 2003).

In 1848, gold was discovered in California, leading to a huge influx of people from other parts of North America. In 1850, California became part of the United States of America. The opening of the Butterfield Overland Stage route in 1858 and later the California Southern Railroad line in 1882 greatly increased the number of people coming to southern California.

San Marcos

The San Marcos Valley was first noted in 1797 by Spanish soldiers who named it Los Vallecitos de San Marcos in honor of the feast day for Saint Mark (City of San Marcos, 2013). The land was granted as Rancho Vallecitos de San Marcos, an 8,975-acre land grant, to Jose Marie Alvarado in 1840. During the first half of the 19th century, the fertile valley saw sporadic settlement, but in 1883, John H. Barham founded the first formal town in the valley. The town was named Barham in honor of its founder, and boasted a post office, a blacksmith shop, a feed store, and a weekly newspaper (Rossi, 2005). By 1888, the California Southern Railroad, which ran between Los Angeles and San Diego, was built approximately 2 miles north of Barham and closer to a new town site established by the San Marcos Development Company (Rossi 2005). The San Marcos Development Company was established in 1887 by Jacob Gruendyke, a banker, and W.G. Jacobs. Gruendyke and Jacobs purchased the lands formerly encompassed the Rancho Los Vallecitos de San Marcos, laid out a town site and began selling lots (Carroll, 1975). By 1892 the new community of San Marcos was booming with 87 registered voters and a busy train depot with four trains a day passing through from Los Angeles (City of San Marcos, 2013). During the early 20th century, San Marcos' economy was dominated by agriculture and the town offered a telephone service and mail delivery (City of San Marcos, 2013). During the 1950s, the construction of State Route 78 connected San Marcos to the broader region, and the San Diego Aqueduct brought Colorado River water to the area. These two developments allowed San Marcos to expand

further, and in 1963 the City incorporated with a population of 2,500 residents. As of 2010, San Marcos has population of 83,781 and is serviced by State Route 78.

Escondido

In 1834, a 12,653-acre land grant, known as the Rincon del Diablo Rancho, or "corner of the devil," located within the Escondido Valley, was granted to Juan Bautista Alvarado of San Diego (Escondido History Center, 2011). Alvarado constructed a large adobe overlooking the Escondido Valley and raised cattle for the hide and tallow trade. In the early 1850s, Juan and his wife died and their children each sold their shares of the rancho to a San Diego judge named Oliver S. Witherby (Escondido History Center, 2011). By 1868, Witherby sold the rancho to Edward McGeary and the three Wolfskill brothers, John, Matthew and Josiah (Escondido History Center, 2011). McGeary and the Wolfskill brothers shifted the economic activities of the rancho from cattle ranching to sheep ranching. In 1883, the ranch was sold to The Stockton Company for $128,138.70 (Escondido History Center, 2011). A year later The Stockton Company transferred its interest in the valley to The Escondido Company, which planted large vineyards of Muscat grapes. In March 1886, The Escondido Company deeded the ranch to the Escondido Land & Town Company for $104,042 (Escondido History Center, 2011). In 1887, the Escondido Land & Town Company invested in the construction of a rail line that connected Escondido to the town of Oceanside, located approximately 18 miles to the northwest (Escondido History Center, 2011). The rail line transported the agricultural products of the Escondido Valley to outside markets and stimulated settlement in the region. In 1887, the Santa Fe Depot was built on the west end of Grand Avenue and remained in operation until 1945 (Escondido History Center, 2011). In 1950, Highway 395 connected Escondido to the ever expanding City of San Diego, located approximately 30 miles to the southwest. During the Cold War of the 1950s, the City and County of San Diego expanded as military defense spending increased and the demand for affordable housing skyrocketed. To meet the increased demand for new housing, many of Escondido's vineyards and citrus orchards were transformed into housing subdivisions (Escondido History Center, 2011).

History of Electrical Transmission in California and San Diego County

The following context summarizes the history of electrical transmission in California and San Diego County provided in the historic resources evaluation report prepared in support of the Project (Yates et al., 2018).

Transmission Technology in California

Overhead electric transmission lines were first developed in Europe as early as the 1870s. By 1891, the San Bernardino Light & Power Company constructed the first long distance transmission line in California, which extended 28 miles from Pomona to San Bernardino. The following year, a 23-mile line was constructed between Riverside and Mill Creek and was operated as the first 10 kV commercial three-phase alternating current (AC) transmission line in the region. In 1895, an 11 kV commercial three-phase AC transmission line was constructed from the Folsom Powerhouse to Sacramento, a distance of 22 miles. At the turn of the century, electrical transmission technology evolved at a rapid pace with increases in voltage capacity and the development of steel lattice towers, which reduced the labor costs of transmission line construction.

In 1907, E. M. Hewlett and H. W. Buck developed the suspension insulator, which allowed long-distance transmission capacity to reach 100,000 kV. By 1909 three transmission lines could deliver as much as 100 kV of electricity at distances greater than 150 miles: Great Western Power's Las Plumas line from Big Bend to Oakland (155 miles); Colorado Power Company's Glenwood-Denver line (152 miles); and the Southern Power Company's Great Falls, South Carolina-Durham, North Carolina line (210) miles. The construction of the Big Creek transmission line in 1913 set the stage for the evolution of transmission technology and design in California. The 214-mile, 150 kV line was constructed by the Pacific Light and Power, which employed steel lattice towers 41 feet high and incorporated cross arms approximately 34 feet wide, which engineers designed to carry conduit at average lengths of 660 feet between tower locations. Soon after the construction of the Big Creek line, Southern California Edison (SCE) acquired the Big Creek system and began upgrading and building new lines with 220 kV capacity by augmenting existing towers to carry heavier loads. During the 1920s additional transmission lines were constructed using steel lattice towers designed to carry heavier loads allowing for 220 kV capacity transmission over hundreds of miles.

The development of Boulder Dam during the 1930s resulted in the next major advancement in long-distance electricity transmission. SCE constructed three single-circuit 220 kV lines, known as the First, Second, and Third Boulder Lines, to transmit power from Boulder Dam on the Colorado River to the Los Angeles area. In 1936 the Los Angeles Department of Water and Power (LADWP) completed the Boulder Dam-Los Angeles 287.5 kV line, which represented the highest commercial operating voltage in the world at the time. By 1940, long-distance transmission capacity would reach the 300 kV. After World War II, the effort to connect the electrical systems of large regions resulted in the largest advances in transmission technology. The interconnection effort in the Western United States was known as the Pacific Intertie Project. California-based SCE and Pacific Gas & Electric Company (PG&E) joined with the Bonneville Power Administration and Portland General Electric to construct twin 500 kV lines from Southern California to Washington in 1960. Engineers designed larger steel lattice towers to accommodate the 500 kV lines' heavier loads.

Electrical Service in San Diego County

Early Gas and Electric Company Formation 1881-1904

In 1881, a group of San Diego city leaders, R. M. Powers, O. S. Witherby, Bryant Howard, James Gordon, and E. W. Morse, launched the San Diego Gas Company to meet the demand for municipal gas distribution resulting from the city of San Diego's population boom in the 1870s and 1880s. Later that year the San Diego Gas Company completed construction of a gas plant at 10th and M (now Imperial) streets, as well as three miles of gas mains, and by April 1883 a coal gas plant was constructed.

The modern-day San Diego Gas & Electric (SDG&E) power grid was initiated by the Jenney Electric Company, of Indianapolis, Indiana, in 1886. The city contracted Jenney Electric Company to construct an electrical plant at 2nd and J streets. The electrical plant had two 100-horsepower boilers which were able to operate four 30-light direct current arc light generators, allowing for the city's first electric street lights to begin operation in March 1886.

However, in the fall of 1886, Jenney Electric Company went bankrupt and 1886 the electrical plant was purchased by E. S. Babcock and H. L. Story. With Jenney Electric Company's infrastructure, Babcock and Story established the Coronado Gas and Electric Company in January of 1887. Babcock and Story provided electricity to San Diego's street lamps and made plans to supply electricity and gas to Coronado, but due to financial pressures, the Coronado Gas and Electric Company consolidated with the San Diego Gas Company in the spring of 1887, becoming the San Diego Gas, Fuel, and Electric Light Company.

The San Diego Gas, Fuel, and Electric Light Company provided services to many of the early hotels and businesses in downtown San Diego. The company expand its infrastructure and built a new electric generating plant, later becoming known as Station A, at 10th and Imperial streets, next to their gas plant. However, with San Diego's economic decline in the late 1880s, the San Diego Gas, Fuel, and Electric Light Company had more infrastructure than needed, and the city went from a high of 173 electric lights to 120. Throughout the 1890s and early 1900s, competition from other service providers, as well as the need to replace aging infrastructure, resulted in the company not keeping up with the needs of San Diego's growing population. To remedy this, the San Diego Gas, Fuel, and Electric Light Company's prices dropped from $5.00 per cubic foot to $1.50 per cubic foot and constructed an electrical distribution system of 30 miles of pole lines with a total of 1,374 utility poles and a gas distribution system of 41.2 miles.

Expansion of Service 1916-1940

In the early 1900s, the San Diego Gas, Fuel, and Electric Light Company was unable to raise enough capital to match the pace of growth in San Diego, and so in April of 1905 it was sold to H. M. Byllesby & Company of Chicago and incorporated as the San Diego Consolidated Gas & Electric Company (SDCG&E). SDCG&E quickly began expanding infrastructure and provided gas and electric services to University Heights, La Jolla, Pacific Beach, Coronado, and National City. By 1911, SDCG&E's gas service reached Chula Vista and its electrical services reached Grossmont, El Cajon, Lakeside, Santee, and Spring Valley. The following year gas service reached Lemon Grove and electrical service reached Sunnyside, Bonita, Nestor, and Palm City. Imperial Beach and San Ysidro were added in 1913. The expansion of the power grid to these communities increased their agricultural output providing an efficient way to pump water for irrigation and the beginning of the large chicken and turkey hatchery business in the County.

SDCG&E's infrastructure expansion within San Diego County began in 1916, when the company purchased the Oceanside Electric and Gas Company and connected the company's transmission line to Del Mar and beyond to Oceanside. By 1918, the transmission line was expanded beyond its northern most point in Oceanside to San Juan Capistrano, and tying in to SCE's system. In 1919, San Diego's City Council voted to contract with SDCG&E to build a power line for the construction of Barrett Dam, near Campo. However, this rapid growth in distribution capacity strained SDCG&E's production infrastructure and in 1920 they bought a second generating station, known as Station B, located at the southwest corner of Kettner and Broadway. In just 15 years, from the start of the Byllesby Group's control of SDCG&E in 1905 to 1920, it had grown exponentially. By 1920, SDCG&E served more than four times the number of customers than in 1905.

In 1921, construction began on an additional power plant known as Station C located at 4th and Ash streets to furnish all commercial direct current within the city and alternating current to the underground and overhead district north of Broadway and west of Balboa Park. In 1922, a 16-mile-long 88 kV transmission line from the Escondido Mutual Water Company's Power Plant on the Rincon Reservation was constructed through the San Luis Rey River Canyon to the Henshaw Dam to secure the County's power supply. The construction of the line marked the start of large scale expansion of services into the back country of San Diego County. The rough terrain across the backcountry was previously thought of as impassable, but Type – W poles, a light weight style of wooden poles, were used to aid construction across the seemingly inaccessible county. Also at Rincon in 1923, SDCG&E connected its transmission lines to the Southern Sierras Power Company in the Imperial Valley to provide protection of continuous service in the Imperial Valley. In 1923, a total of $3,685,255 was spent on improvements across SDCG&E's territory which at that time reached Fallbrook, Henshaw Dam, Otay Dam, and Barrett Dam.

To keep pace with the growth of customers, SDCG&E began construction on a new power plant, Station B, in 1928, which was planned to house a 28,000 kW electrical generator, the largest ever installed in San Diego (Raymond, 1928a). During the end of the 1920s, SDCG&E constructed new tie lines for transmission outside the city center and into more rural and remote parts of San Diego County. SDCG&E relocated the 66 kV transmission line between San Juan Capistrano and San Onofre, and extended existing transmission lines to include customers in Tijuana, and in El Monte. With the onset of the Great Depression in 1929, SDCG&E's holdings continued to expand with the purchase of the South Coast Gas Company which served Carlsbad and Oceanside, and the purchase of a share of the power produced by the Boulder Dam.

San Diego Gas and Electric Company 1940–Today

In 1935, the Public Utility Holding Act passed, which changed the ownership rules of holding companies and forced them to integrate and coordinate their utility systems. As a result, SDCG&E was forced to offer the sale of stock and was renamed the San Diego Gas & Electric Company. SDCG&E had been owned by Engineering and Management Company since 1905, and was sold in 1940 to the Standard Gas and Electric Company, a subsidiary of the Standard Power and Light Corporation. After the formation of SDG&E, the company became largely an independent organization, locally managed and mostly locally owned.

The 1940s was a time of huge expansion for SDG&E, mainly due to San Diego's large military presence and the population surge it brought. Electrical sales in 1941 jumped 27 percent and SDG&E's electrical grid peaked at 24 percent above the year prior. During World War II, maintenance across SDG&E's system fell due to a labor shortage, but maintaining a constant and reliable source of electricity became even more important to the war effort. Several new transmission lines were constructed to provide interconnections with SCE, to prevent a loss of power across southern California.

Much of the growth of SDG&E's transmission and distribution system in the 1940s was focused on connecting new customers in outlying areas where SDG&E distribution lines had not yet reached. The government supported expanding the grid to the rural areas of the county as farming districts were encouraged to produce more food for the war effort, which increased the demand

for electricity to support additional irrigation. In 1945, SDG&E earmarked $8 million dollars for expansion to update their generators, improve distribution lines, and extend distribution lines to rural areas, such as Borrego Springs. By the late 1940s, more than 1,741 miles of utility lines were added to SDG&E's distribution system, mainly in rural areas.

Through the 1950s, additional expansion took place on pace with the growth of population in San Diego County. Additional power stations were constructed, including the Encina Power Plant at Carlsbad, which began operating in 1954. The company also updated other power stations and expanded the gas distribution system. After the rapid expansion of service during the post-World War II period, SDG&E began research into alternative forms of energy from nuclear power in the 1960s, to solar and wind power in the 1990s. From the post-war period onward SDG&E worked to modernize its power grid to meet increased electricity needs across San Diego County.

Methodology and Known Resources

The following discussion regarding the identification of known cultural resources within the study area as further described below in the Cultural Resources Surveys section is based on the following documents: *Archaeological Survey Report for TL6975 Escondido to San Marcos New 69kV TL, San Diego County, California,* prepared by NWB Environmental Services, LLC. (Hector and Tansey, 2015); *Supplemental Cultural Resources Survey Report for TL 6975 Escondido to San Marcos 69kV Transmission Line, San Diego County, California,* prepared by ICF (McGinnis, 2017); *Supplemental Cultural Resources Subsurface Survey Report for TL 6975 San Marcos 69kV Transmission Line, San Diego County, California,* prepared by ICF (Droessler, 2017); *Historical Resources Inventory and Evaluation Report for TL 6975: San Marcos to Escondido Project, San Diego, County, California*, prepared by ICF (Yates et al., 2018); and *Letter Report: eTS 28798—Supplemental Cultural Resources Survey Report for TL 6975 San Marcos to Escondido Project, Proposed Coupon Test Station #3, San Diego County, California* prepared by ICF (Cox, 2019).

Records Searches

A cultural resources records search for the Project was conducted in 2014 at the California Historical Resources Information System (CHRIS) South Coastal Information Center (SCIC) housed at San Diego State University. The records search included a review of all previously recorded cultural resources and previous investigations within a 0.5-mile radius of the Project alignment. Supplemental records searches were conducted in 2016, 2017, and 2018 to capture modifications in the Project design during the intervening time.

The records searches indicate that 194 cultural resources have been previously recorded within 0.5 mile of the Project alignment. Of these 194 resources, 15 (P-37-004495, -004499, -005501, -007306, -009047, -010550, -010551, -011442, -012209, -255575, -017514, -031871, -032160, -033103, and -033635) are within the Project study area. Of these 15 resources, nine are prehistoric archaeological sites (P-37-004495, -004499, -005501, -007306, -010550, -010551, -012209, -255575, and -032160), one is a multicomponent archaeological site (P-37-011442), two are historic architectural resources (P-37-031871 [ranch complex] and -033635 [road segment]), and three are prehistoric isolates (P-37-009047, -017514, and -033103). A detailed description of each site is provided under Resource Descriptions below.

Cultural Resources Surveys

Cultural resources surveys of the Project alignment were conducted in February, March, and April 2015. Supplemental cultural resources surveys of the Project alignment were also conducted in February and March 2017, as well as June and December 2018.

The 2015 and 2017 cultural resources survey area comprised the Project's centerline plus a 150-foot buffer on each side of the centerline (i.e., the study area). Additionally, each pole location, associated anchor locations, cleared work areas, and staging areas were inspected. The mapped locations of the previously recorded cultural resources identified within the Project alignment by the records search were revisited. Of the 15 previously recorded resources, four (P-37-007306 [prehistoric archaeological site], -012209 [prehistoric archaeological site], -031871 [ranch complex], and -033635 [road segment]) were re-identified as part of the survey. The mapped locations of 10 resources were inspected, but were located within paved and/or developed areas and have either been destroyed or otherwise obscured by the development. The remaining resource consists of archaeological deposits associated with P-37-032160 (prehistoric habitation site). These deposits were capped during development of the surrounding area and, although the resource was not visible during the survey, it is known to contain intact archaeological deposits. Two new resources consisting of a historic-period refuse scatter (P-37-034831) and a lithic scatter (TL-6975-S-5) were also documented as part of the cultural resources surveys.

The June 2018 cultural resources survey was conducted to document six existing electrical infrastructure components that are historical architectural resources located within the study area including San Marcos Substation, Escondido Substation, TL 680/C, TL 13811/13825, TL 13811A, and Harmony Grove Road to Escondido Substation alignment.

The December 2018 cultural resources survey was conducted for the location of coupon test station 3 in San Marcos near the intersection of West San Marcos Boulevard and Via Vera Cruz, which was added to the Project after the initial studies were conducted. The survey did not identify any cultural resources within a 150-foot radius around that proposed location.

Resource Descriptions

The following provides details regarding the 15 previously recorded resources indicated in the records search and the eight newly recorded cultural resources located within the study area identified as a result of the cultural resources surveys, summarized in **Table 3.5-1**. Of these 23 resources, 17 are located within the SDG&E ROW (P-37-004495, -004499, -005501, -007306, -009047, -010551, -017514, -025575, -031871, -032160, -033635, -034831, TL-6975-S-5, San Marcos Substation, Escondido Substation, TL 680C, and Harmony Grove Road to Escondido Substation Transmission Line) and six are located within 150 feet of the Project centerline (P-37- 010550, -011442, -012209, -033103, and TL 13811/13825, and TL 13811A).

TABLE 3.5-1
RESOURCES WITHIN AND ADJACENT TO THE STUDY AREA

Primary # (P-37-)	Permanent Trinomial (CA-SDI-)[1]	Temporary Identifier	Site Description	Date Recorded	California Register of Historical Resources Eligibility	Distance from the Study Area (150-foot buffer on either side of Project alignment)	Comments
004495	4495	-	Prehistoric archaeological site: lithic quarry	1975	Recommended CRHR eligible	Within	Inaccessible during survey due to fence line
004499	4499	-	Prehistoric archaeological site: lithic quarry	1975	Recommended CRHR eligible	Within	Inaccessible during survey due to fence line
005501	5501	-	Prehistoric archaeological site: bedrock milling features	1978	Recommended Not eligible	Within	Not relocated; presumed destroyed or obscured by development
007306	7306	-	Prehistoric archaeological site: lithic scatter	1979	Not evaluated	Within	Relocated
009047	-	-	Prehistoric isolate: shell fragment	1981	Recommended Not eligible	Within	Not relocated; presumed destroyed or obscured by development
010550	10550	-	Prehistoric archaeological site: lithic scatter	1985	Recommended Not eligible	75 feet	Not relocated; presumed destroyed or obscured by development
010551	10551	-	Prehistoric archaeological site: lithic scatter	1985	Recommended Not eligible	Within	Not relocated; presumed destroyed/obscured by development
011442	11442	-	Multicomponent archaeological site: prehistoric lithic scatter and historic-period refuse scatter	1989	Not evaluated	80 feet	Relocated; partially destroyed by San Elijo Rd
012209	12209	-	Prehistoric archaeological site: village site	1978	Recommended CRHR eligible	75 feet	Relocated; as previously described
017514	-	-	Prehistoric isolate: quartz fragment	1999	Recommended Not eligible	Within	Not relocated; presumed destroyed/obscured by development
025575	16988	-	Prehistoric archaeological site: temporary campsite	2004	Recommended Not eligible	Within	Not relocated; presumed destroyed/obscured by development

[1] Trinomials are unique identifiers assigned to archaeological sites by the California Office of Historic Preservation. These identifiers include a two letter state identifier, a three-letters county identifier, and one or more sequential digits representing the order in which the site was listed in that county

TABLE 3.5-1 (CONTINUED)
RESOURCES WITHIN AND ADJACENT TO THE STUDY AREA

Primary # (P-37-)	Permanent Trinomial (CA-SDI-)[2]	Temporary Identifier	Site Description	Date Recorded	California Register of Historical Resources Eligibility	Distance from the Study Area (150-foot buffer on either side of Project alignment)	Comments
031871	-	-	Historic architectural resource: ranch house and outbuildings	2009	Not evaluated	Within	Relocated
032160	20363	-	Prehistoric archaeological site: habitation site	2010	Recommended CRHR eligible	Within	Relocated
033103	-	-	Prehistoric isolate: two flakes	2013	Recommended Not eligible	90 feet	Not relocated; presumed destroyed/obscured by development
033635	21128	-	Historic architectural resource: road segment	2014	Recommended Not eligible	Within	Relocated
034831	21674	TL-6975-S-4	Historic-period archaeological site: refuse scatter	2017	Not evaluated	Within	Newly identified
-	-	TL-6975-S-5	Prehistoric archaeological site: lithic scatter	2017	Not evaluated	Within	Newly identified
-	-	San Marcos Substation	Historic architectural resource: substation	2018	Recommended not eligible	Within	Newly identified
-	-	Escondido Substation	Historic architectural resource: substation	2018	Recommended not eligible	Within	Newly identified
-	-	TL 680C	Historic architectural resource: transmission line	2018	Recommended not eligible	Within	Newly identified
-	-	TL 13811/13825	Historic architectural resource: transmission line	2018	Recommended not eligible	30 feet	Newly identified
-	-	TL 13811A	Historic architectural resource	2018	Recommended not eligible	30 feet	Newly identified
-	-	Harmony Grove Road to Escondido Substation Transmission Line	Historic architectural resource: transmission line	2018	Recommended not eligible	Within	Newly identified

[2] Trinomials are unique identifiers assigned to archaeological sites by the California Office of Historic Preservation. These identifiers include a two letter state identifier, a three-letters county identifier, and one or more sequential digits representing the order in which the site was listed in that county

P-37-004495: This resource is a prehistoric archaeological site originally recorded in 1975 as a 2-acre lithic quarry containing hearth features, millions of flakes, thousands of cores, and many hammerstones. In 2000, the site was updated and was found to be partially destroyed by the development of the San Elijo Landfill which overlaps the site's southern boundary. The site was revisited as part of the cultural resources surveys conducted for the Project, but much of the site was fenced off and inaccessible. The mapped location of the site encompasses an existing parking lot that would be used for staging, and is bisected by an existing access road that would be used to access the Project alignment. Resource P-37-004495 may be eligible for listing in the CRHR, but has not been formally evaluated. (McGinnis, 2017)

P-37-004499: This resource is a prehistoric archaeological site originally recorded in 1975 as a 14-acre lithic quarry site consisting thousands of flakes, preforms, utilized flakes, several hammerstones, and battered nodules. In 2000, the site was updated and was found to overlap the eastern boundary of P-37-004495. Because P-37-004495 and -004499 overlap and are functionally similar, ICF recommended combining the two sites within a single boundary. The mapped location of the site overlaps a portion of Segment 3 and encompasses existing dirt access roads that would be used to access the Project alignment. Resource P-37-004499 may be eligible for listing in the CRHR, but has not been formally evaluated. (McGinnis, 2017)

P-37-005501: This resource is a prehistoric archaeological site originally recorded in 1978 as a bedrock milling feature consisting of two slicks on one exposed granitic boulder. The mapped location of the site was visited during the cultural surveys conducted in support of the Project, and was found to be located within a developed industrial park. The site is presumed to have been destroyed during development of the industrial park. The mapped location of the site encompasses the location of a proposed guard structure. The site has been previously recommended ineligible for listing in the CRHR due to its likely destruction. (McGinnis, 2017)

P-37-007306: This resource is a prehistoric archaeological site originally recorded in 1979 as a moderately dense lithic scatter covering a 150- by 30-meter area (McGinnis, 2017). The mapped location of the site was inspected as part of the cultural resources surveys conducted in support of the Project and one serrated quartzite blade and one groundstone were identified. The mapped location of the site encompasses a dirt road that would be used to access the Project alignment. Resource P-37-007306 has not been previously evaluated for listing in the CRHR.

P-37-009047: This resource is a prehistoric isolate originally recorded in 1981 as a *Chione* shell fragment. The mapped location of the isolate, which is located in a graded lot, was inspected as part of the cultural resources surveys conducted in support of the Project, but no evidence of the isolate or any other cultural materials were noted (McGinnis, 2017). The mapped location of the resource is within a proposed staging yard. This resource has not been previously evaluated for listing in the CRHR.

P-37-010550: This resource is a prehistoric archaeological site originally recorded in 1985 as an artifact scatter consisting of lithic debitage, one core, one scraper, and one fragment of shell within a 335- by 49-meter area. The mapped location of the site, which is located within an existing industrial park, was inspected as part of the cultural resources survey conducted in

support of the Project, but no evidence of the site could be detected. It is presumed that the site was destroyed during the construction of the industrial park. The mapped location of the site is within 75 feet of a Project staging yard. The site has been previously recommended ineligible for listing in the CRHR due to its likely destruction. (McGinnis, 2017)

P-37-010551: This resource is a prehistoric archaeological site originally recorded in 1985 as a light-density artifact scatter consisting of debitage, one hammerstone, and two fragments of shell within a 79- by 49-meter area. The mapped location of the site, which is bisected by a four-lane road, was inspected as part of the cultural resources surveys conducted in support of the Project, but no evidence of the site could be detected. It is presumed the site was destroyed as part of the road construction. The site overlaps a Project stringing area, as well as a proposed pole replacement location. The site has been previously recommended ineligible for listing in the CRHR due to its likely destruction. (McGinnis, 2017)

P-37-011442: This resource is a multicomponent archaeological site originally recorded in 1989. The site's prehistoric component consists of an artifact scatter comprised of shell, lithics, and formed tools. The site's historic-period component consists of a refuse scatter comprised of amethyst and aqua glass fragments, as well as tin can and white ware fragments. The mapped location of the site was inspected as part of the cultural resources survey conducted in support of the Project. The eastern portion of the site is located within San Elijo Road and is presumed to have been destroyed, but the site's western half remains intact. The mapped location of the site is approximately 80 feet from the Project alignment where overhead work would occur during Project implementation. The site has not been previously evaluated for listing in the CRHR. (McGinnis, 2017)

P-37-012209: This resource is a prehistoric archaeological site originally recorded in 1979 as a lithic scatter. The site record for the resource includes transcribed notes from an early 20th century analysis of the site, which is described as containing bedrock mortars, pictographs, and stone walled rooms. In 1991 and 2001, the site was revisited and found to contain two discrete loci (Locus 1 and Locus 2) on two separate hills, both containing a number of bedrock milling features, lithic debitage, and pictograph panels. In 2010, the site was subject to intensive subsurface testing that included the excavation of 87 test excavation units (TEUs) at Locus 1 and 90 TEUs at Locus 2. The excavations identified a substantial subsurface deposit largely associated with late prehistoric occupation of the site. Based on the results of the testing, the site was found to be CRHR eligible due to its data potential (Criterion 4; see *Regulatory Framework Section* a detailed discussion of the CRHR criteria) and a data recovery program, which included the excavation of an additional 218 TEUs at Locus 1, was initiated in 2015. The data recovery excavations resulted in the recovery of more than 156,000 artifacts, relocation of pictographs, and recovery of human remains. The site was inspected as part of the cultural resources surveys conducted in support of the Project, and was found to match the description provided as part of the data recovery excavation undertaken in 2015. The site is located approximately 90 feet from a proposed guard structure installation. (McGinnis, 2017)

P-37-017514: This resource is a prehistoric isolate consisting of an angular piece of quartz recorded in 1999. The mapped location of the isolate, which is located in a developed industrial

park, was inspected as part of the cultural resources surveys conducted in support of the Project, but no evidence of the isolate could be detected (McGinnis, 2017). The mapped location of the isolate is within 20 feet of an existing dirt road that would be used during Project implementation. This resource has not been previously evaluated for listing in the CRHR.

P-37-025575: This resource is a prehistoric archaeological site recorded in 2004 as a temporary campsite consisting of lithic debitage, bedrock milling features, faunal remains, and fire affected rock. In 2004, the site was subject to subsurface testing to evaluate its eligibility for listing in the CRHR. The testing included the excavation of 10 shovel test probes (STPs) and one TEU. As a result of the testing, 384 artifacts were recovered. The mapped location of the site was visited a part of the cultural resources surveys and was found to be located within vacant lots previously graded for the development of business parks. No cultural materials associated with the site were identified and the site is presumed to be destroyed. The site overlaps two proposed staging yards. The 2004 subsurface testing resulted in a recommendation that the site is ineligible for listing in the CRHR. (McGinnis, 2017)

P-37-031871: This resource is a historic architectural resource originally recorded in 2010 as the Vigilante Ranch complex which comprises a residence constructed in 1914 and several outbuildings. The mapped location of the resource, which is surrounded by existing sand mining operations, was visited as part of the Project cultural resources surveys, and was found to match the description provided in the 2010 documentation. The resource is located within a proposed staging yard and has not been previously evaluated for listing in the CRHR. (McGinnis, 2017)

P-37-032160: This resource is a prehistoric archaeological site identified in 2001 during construction monitoring (McGinnis, 2017). After its initial discovery, the site was subject to subsurface testing, which included the excavation of STPs, TEUs, and trenches to determine the site's horizontal and vertical extents. The testing resulted in the recovery of lithics, ground stone, shell, fire-affected rock, bone, and ochre (McGinnis, 2017). After the excavation, the site was capped under at least 6 inches of sterile soil, leaving much of the site's deposits intact and undisturbed. The mapped location of the site was visited during the cultural resources surveys conducted in support of the Project and no evidence of the site could be detected on the surface. However, subsurface testing was carried out within the portions of the site that overlap the Project. The testing included the excavation of 12 STPs, which resulted in the recovery of cultural materials from depths as deep as 150 cm (Droessler, 2017). Identified artifacts and features include midden soils, fragments of shell (*Ostrea* and *Argopecten*), faunal remains, metavolcanic flakes, three bifacial mano fragments, one metavolcanic core/hammerstone, and a metavolcanic core tool (Droessler, 2017). The site overlaps and area of the Project where pole replacements would occur. The site has been previously recommended eligible for listing in the CRHR due to the data potential (Criterion 4) of its intact subsurface deposits.

P-37-033103: This resource is a prehistoric isolate consisting of two metavolcanic flakes recorded in 2013. The mapped location of the resource, which is located within a graded lot, was inspected as part of the cultural resources surveys conducted in support of the Project, but no evidence of the isolate was detected. The resource is presumed to have been destroyed when the lot was graded. This resource has not been previously evaluated for listing in the CRHR.

P-37-033635: This resource is a historic architectural resource originally recorded in 2014 as an 850-foot-long orphaned road segment. The road segment appears to coincide with a road depicted in an 1879 plat map, but was paved sometime in the mid-20th century and bypassed when San Elijo Road was realigned between 2004 and 2005. The road segment has been re-paved and widened over the years and appears to be currently used as an access road for the existing transmission alignment. The road segment was visited as part of the cultural resources surveys conducted in support of the Project and was found to match previous descriptions. The resource encompasses a portion of the Project where stringing areas would be established, and an access road branching from the resource locale would be constructed. Resource P-37-033635 has been previously recommended ineligible for listing in the CRHR. (McGinnis, 2017)

P-37-034831: This resource is a newly recorded historic-period archaeological site consisting of scattered brick and debris. The resource is located within a portion of the Project alignment where no ground disturbing activities are proposed. Resource P-37-034831 has not been evaluated for listing in the CRHR. (McGinnis, 2017)

TL-6975-S-5: This resource is a newly recorded prehistoric archaeological site consisting of a lithic reduction area. The resource straddles an existing dirt road that would be used to access the Project alignment during Project implementation. Resource TL-6975-S-5 has not been evaluated for listing in the CRHR. (McGinnis, 2017)

San Marcos Substation: This resource is a newly recorded historic architectural resource consisting of the active San Marcos Substation facility. The substation occupies an approximate 1.5-acre property in the City of San Marcos at the eastern terminus of Segment 1. As indicated by historic aerial photographs, the substation was constructed by SDG&E in the late 1960s. The facility is surrounded by concrete block walls or fencing. Two power lines access the station, one from the southeast and one from the southwest. The lines connect to steel portals (or racks). The facility contains typical elements of a substation, including transformers, circuit breakers, switches, busbars, and other equipment subject to alteration and replacement over the last 50 years. The substation has three modest-sized rectangular-plan utilitarian buildings and several smaller enclosed utilitarian structures. The buildings have no windows, save for vision lights at some entry doors, and they lack any sort of architectural expression. They are entirely commonplace examples of latter-20th-century substation construction. The San Marcos Substation has been recommended ineligible for listing in the CRHR. (Yates et al., 2018)

Escondido Substation: This resource is a newly recorded historic architectural resource consisting of the active Escondido Substation facility. The substation occupies an approximate 5-acre square area within the City of Escondido, at the northern terminus of Segment 3. The substation appears to have been established circa 1950 and increased in area by 1967. SDG&E improved and expanded the substation substantially thereafter, likely within a few years after 1967 given the growth that occurred in the area at that time. The terraced site is entirely surrounded by security fences. Eleven power lines access the facility, mostly from the south. This substation contains a number of transformers, circuit breakers, switches, busbars, capacitor banks, and other equipment that has been subject to alteration and replacement over the last 50 years. The facility also contains five rectangular-plan utilitarian buildings, as well as multiple smaller

enclosed utilitarian structures. One of the buildings has exposed concrete block walls. Others have metal siding and roofing. Entirely lacking in architectural expression, the buildings and enclosed structures are commonplace examples of late 20th century substation construction. The Escondido Substation has been recommended ineligible for listing in the CRHR. (Yates et al., 2018)

TL 680C: This resource is a newly recorded historic architectural resource consisting of a transmission line. Originally a distribution line and currently classified as a power line, TL 680C is an active facility occupying a 2.57-mile segment of Segment 1. The transmission line contains 46 existing structures, reaching heights of up to 80 feet. Of the 46 structures, 36 of these are wood and steel poles that carry the circuits, the remaining 10 structures are wood or steel support poles. Each pole structure consists of a central pole of wood or steel construction, sets of cross arms, insulators, and other electrical equipment as needed. The transmission line has been in use for over 50 years; however, most of the poles carrying TL 680C have been replaced during the last 49 years. Only two of TL 680C's poles are 50 years old or older, having been installed in 1964 and 1967. Two others were installed between 1969 and 1973. Pole cards and field inspection indicate that all other poles were all installed within the last 44 years; most of these date to the 1980s and 1990s. TL 680C has been recommended ineligible for listing in the CRHR. (Yates et al., 2018)

TL 13811/13825: This resource is a newly recorded historic architectural resource consisting of a transmission line. TL 13811/13825 is comprised of 20 steel poles ranging from 60 to 70 feet high, most with three pairs of horizontal cross arms. This power line alignment is over 50 years; however, all of the existing TL 13811/13825 poles within the Project alignment are less than 50 years old. The resource is parallel to and within 30 feet of Segment 2 of the Project alignment. Due to the age of the poles, TL 13811/13825 has been recommended ineligible for listing CRHR. (Yates et al., 2018)

TL 13811A: This resource is a newly recorded historic architectural resources consisting of a transmission line. The transmission line was constructed in 1959 and comprises 29 steel lattice towers. TL 13811 is located immediately adjacent to Segment 3 of the Project alignment. The resource has been recommended ineligible for listing in the CRHR. (Yates et al., 2018)

Harmony Grove Road to Escondido Substation Transmission Line: This resource is a newly recorded historic architectural resource consisting of a transmission line. The transmission line comprises 13 steel poles and one steel tower. The transmission line overlaps an approximately 1.1-mile portion of Segment 3. Although this transmission line is over 50 years old, all of the poles within the Project alignment between Harmony Grove Road and Escondido Substation are under 50 years old. The resource has been recommended ineligible for listing in the CRHR. (Yates et al., 2018)

Native American Consultation

As described in Section 3.18, *Tribal Cultural Resources*, CPUC conducted Assembly Bill 52 (AB 52) consultation with, as well as courtesy outreach to (i.e., informal tribal consultation), Native American Tribes to solicit information about resources in the area that might be impacted by the Project. Respondents in these processes include: the San Luis Rey Band of Mission

Indians, the Rincon Band of Luiseno Indians, the Santa Ysabel Band of the Iipay Nation, the Viejas Band of Mission Indians, and the Pala Band of Mission Indians. The following provides several key components of the AB 52 consultations/courtesy outreach as they pertain to the discussion of archaeological resources, while a complete summary of these processes can be found in Section 3.18.

San Luis Rey Band of Mission Indians

Two AB 52 consultation meetings were held between CPUC and the San Luis Rey Band of Mission Indians on April 27, 2018 and July 9, 2018. During the meetings, San Luis Rey representatives provided information on areas generally sensitive for archaeological resources, as well as specific information pertaining to previously recorded archaeological resource P-37-032160, a CRHR-eligible prehistoric archaeological site containing intact subsurface deposits as described above in the Resource Descriptions section. San Luis Rey representatives were present during the initial discovery and excavation of the site (which was not connected with this Project), as well as the subsurface testing carried out in support of the Project. The San Luis Rey representatives stated that the artifacts recovered from P-37-032160 were being held on their behalf and were to be given to the Tribe at a later date. The San Luis Rey representatives indicated that construction monitoring and the preparation and implementation of data recovery plan would constitute appropriate mitigation for impacts that could result from Project-related ground disturbing activities at the site. The San Luis Rey representatives also requested review of the research design to be included in the data recovery plan. Additionally, the San Luis Rey representatives indicated that particular sensitivity for archaeological resources is associated with the portions of the Project alignment along Citracado Parkway, including the entirety of Segment 3 and the easternmost 500 feet of Segment 2.

Rincon Band of Luiseno Indians

One AB 52 consultation meeting was held between CPUC and the Rincon Band of Luiseno Indians on June 12, 2018. During the meeting the Rincon representatives indicated that monitoring would be warranted for Project-related ground-disturbing activities in the vicinity of archaeological sites P-37-032160 and -012209.

Santa Ysabel Band of Iipay Nation

In response to the AB 52 notification letter sent by the CPUC, the Santa Ysabel Band of Iipay Nation, in an email dated July 24, 2018, recommended that Kumeyaay Native American monitors be retained to monitor Project construction, and that avoidance be the primary means of mitigating impacts for prehistoric archaeological resources inadvertently discovered during Project construction.

Viejas Band of Mission Indians

In response to the AB 52 notification letter sent by CPUC, the Viejas Band of Mission Indians responded in a letter stating the Project alignment is located in an area of cultural significance to the Kumeyaay and recommended that the San Pasqual Band of Mission Indians be contacted. The San Pasqual were contacted as part of CPUC's outreach, but no response has been received to date.

Pala Band of Mission Indians

In response to the AB 52 notification letter sent by CPUC, the Pala Band of Mission Indians responded in a letter stating the Project alignment is located outside of the tribe's traditional use area and declined AB 52 consultation. Pala defers to tribal groups in closer proximity to the Project alignment.

3.5.2 Regulatory Setting

Federal

Although there is no federal nexus associated with the Project, the following information regarding federal laws addressing cultural resources is presented to provide context and continuity with State laws.

National Historic Preservation Act

The principal federal law addressing historic properties is the National Historic Preservation Act (NHPA), as amended (54 United States Code of Laws [USC] 300101 et seq.), and its implementing regulations (36 CFR Part 800). Section 106 requires a federal agency with jurisdiction over a proposed federal action (referred to as an "undertaking" under the NHPA) to take into account the effects of the undertaking on historic properties, and to provide the Advisory Council on Historic Preservation (ACHP) and other interested parties an opportunity to comment on the undertaking.

The term "historic properties" refers to "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register" (36 CFR Part 800.16(*l*)(1)). The implementing regulations (36 CFR Part 800) describe the process for identifying and evaluating historic properties, for assessing the potential adverse effects of federal undertakings on historic properties, and seeking to develop measures to avoid, minimize, or mitigate adverse effects. The Section 106 process does not require the preservation of historic properties; instead, it is a procedural requirement mandating that federal agencies take into account effects to historic properties from an undertaking prior to approval.

The steps of the Section 106 process are accomplished through consultation with the State Historic Preservation Officer (SHPO), federally-recognized Indian tribes, local governments, and other interested parties. The goal of consultation is to identify potentially affected historic properties, assess effects to such properties, and seek ways to avoid, minimize, or mitigate any adverse effects on such properties. The agency also must provide an opportunity for public involvement (36 CFR 800.1(a)). Consultation with Indian tribes regarding issues related to Section 106 and other authorities (such as NEPA and Executive Order No. 13007) must recognize the government-to-government relationship between the Federal government and Indian tribes, as set forth in Executive Order 13175, 65 FR 87249 (Nov. 9, 2000), and Presidential Memorandum of Nov. 5, 2009.

National Register of Historic Places

The NRHP was established by the NHPA of 1966, as "an authoritative guide to be used by federal, State, and local governments, private groups and citizens to identify the Nation's historic

resources and to indicate what properties should be considered for protection from destruction or impairment" (36 CFR 60.2) (U.S. Department of the Interior, 2002). The NRHP recognizes a broad range of cultural resources that are significant at the national, state, and local levels and can include districts, buildings, structures, objects, prehistoric archaeological sites, historic-period archaeological sites, traditional cultural properties, and cultural landscapes. As noted above, a resource that is listed in or eligible for listing in the NRHP is considered "historic property" under Section 106 of the NHPA.

To be eligible for listing in the NRHP, a property must be significant in American history, architecture, archaeology, engineering, or culture. Properties of potential significance must meet one or more of the following four established criteria:

1. Are associated with events that have made a significant contribution to the broad patterns of our history;
2. Are associated with the lives of persons significant in our past;
3. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
4. Have yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting one or more of the criteria of significance, a property must have integrity. Integrity is defined as "the ability of a property to convey its significance" (U.S. Department of the Interior, 2002). The NRHP recognizes seven qualities that, in various combinations, define integrity. The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance.

Ordinarily religious properties, moved properties, birthplaces or graves, cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the past 50 years are not considered eligible for the NRHP unless they meet one of the "Criteria Considerations" (A-G), in addition to meeting at least one of the four significance criteria and possessing integrity (U.S. Department of the Interior, 2002).

State

California Register of Historical Resources

The State implements the National Historic Preservation Act (NHPA) of 1966, as amended, through its statewide comprehensive cultural resources surveys and preservation programs. The Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The OHP also maintains the Historic Resources Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the State's jurisdictions.

The California Register of Historical Resources (CRHR) is "an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (Public Resources Code Section 5024.1[a]). The criteria for eligibility for the CRHR are based upon National Register criteria (Public Resources Code Section 5024.1[b]). Certain resources are determined by statute to be automatically included in the CRHR, including California properties formally determined eligible for, or listed in, the National Register.

To be eligible for the CRHR, a prehistoric or historic-period property must be significant at the local, state, and/or federal level under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the CRHR must meet one of the criteria of significance described above and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the CRHR.

Additionally, the CRHR consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The CRHR automatically includes the following:

- California properties listed on the National Register and those formally determined eligible for the National Register;
- California Registered Historical Landmarks from No. 770 onward;[3] and,
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the CRHR.

Other resources that may be nominated to the CRHR include:

- Historical resources with a NRHP Status Code of Category 3 through 5 (those properties identified as eligible for listing in the National Register, the CRHR, and/or a local jurisdiction register);

[3] The current standards for designating a California Historic Landmarks are applied to landmarks #770 and onward. Landmarks designated prior to #770 do not meet the current designation criteria and, therefore, do not qualify has historical resources.

- Individual historical resources;
- Historical resources contributing to historic districts; and,
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

California Environmental Quality Act

CEQA is the principal statute governing environmental review of projects occurring in the State and is codified at Public Resources Code Section 21000 et seq. CEQA requires lead agencies to determine if a proposed project would have a significant effect on the environment, including significant effects on historical or unique archaeological resources.

Under CEQA (Section 21084.1), a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. An archaeological resource may qualify as an "historical resource" under CEQA. The CEQA Guidelines (Title 14 California Code of Regulations Section 15064.5) recognize that historical resources include: (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR; (2) a resource included in a local register of historical resources, as defined in Public Resources Code Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of Public Resources Code Section 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record. The fact that a resource does not meet the three criteria outlined above does not preclude the lead agency from determining that the resource may be an historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1.

If a lead agency determines that an archaeological site is a historical resource, the provisions of Section 21084.1 of CEQA and Section 15064.5 of the CEQA Guidelines apply. If a project may cause a substantial adverse change (defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired) in the significance of an historical resource, the lead agency must identify potentially feasible measures to mitigate these effects (CEQA Guidelines Sections 15064.5(b)(1) and 15064.5(b)(4)).

If an archaeological site does not meet the criteria for a historical resource presented in the CEQA Guidelines, then the site may be treated in accordance with the provisions of Public Resources Code Section 21083, which establishes requirements for unique archaeological resources. As defined in Public Resources Code Section 21083.2 a "unique" archaeological resource is an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or,
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If an archaeological site meets the criteria for a unique archaeological resource as defined in Section 21083.2, and the lead agency determines that a project would have a significant effect on unique archaeological resources, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place (Section 21083.1(a)). If preservation in place is not feasible, mitigation measures are required.

The CEQA Guidelines note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (CEQA Guidelines Section 15064.5(c)(4)).

Assembly Bill 52

A summary of the AB 52 statutes is provided in Section 3.18, *Tribal Cultural Resources*.

California Health and Safety Code Section 7050.5

California Health and Safety Code Section 7050.5 requires that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlay adjacent remains, until the County Coroner has examined the remains. If the Coroner determines, or has reason to believe, the remains to be those of a Native American, the Coroner shall contact the NAHC by telephone within 24 hours.

California Public Resources Code Section 5097.98

California Public Resources Code Section 5097.98 provides procedures in the event human remains of Native American origin are discovered during project implementation. It requires that no further disturbances occur in the immediate vicinity of the discovery, that the discovery is adequately protected according to generally accepted cultural and archaeological standards, and that further activities take into account the possibility of multiple burials. It further requires the NAHC, upon notification by a County Coroner, designate and notify a Most Likely Descendant (MLD) regarding the discovery of Native American human remains. Once the MLD has been granted access to the site by the landowner and inspected the discovery, the MLD then has 48 hours to provide recommendations to the landowner for the treatment of the human remains and any associated grave goods.

In the event that no descendant is identified, or the descendant fails to make a recommendation for disposition, or if the land owner rejects the recommendation of the descendant, the landowner may, with appropriate dignity, reinter the remains and burial items on the property in a location that will not be subject to further disturbance.

Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction." The discussion below presents local regulations for informational purposes only.

San Diego County

The San Diego County regulations and policies pertaining to cultural resources can be found in the Conservation and Open Space Element of the *County of San Diego General Plan*. The Board of Supervisors adopted the current version of the *County of San Diego General Plan* on August 3, 2011 (County of San Diego, 2011).

The Conservation and Open Space Element includes two goals that deal with cultural and historic resources. Goal 1 is the protection and preservation of the County's important archaeological resources for their cultural importance to local communities, as well as for their research and educational potential. The County has developed the following six policies to help ensure the protection of the County's resources.

- Preserve important archaeological resources from loss or destruction and require development to include appropriate mitigation to protect the quality and integrity of these resources.
- Require development to avoid archaeological resources whenever possible. If complete avoidance is not possible, require development to fully mitigate impacts to archaeological resources.
- Require the appropriate treatment and preservation of archaeological collections in a cultural appropriate manner.
- Require consultation with affected communities, including local tribes to determine the appropriate treatment of cultural resources.
- Require human remains be treated with the utmost dignity and respect and that the disposition and handling of human remains will be done in consultation with the MLD and under the requirement of Federal, State and County Regulations.
- Coordinate with public agencies, tribes, and institutions in order to build and maintain a central database that includes a notation whether collections from each site are being curated, and if so, where, along with the nature and location of cultural resources throughout the County of San Diego.

Goal 2 is the protection, conservation, use, and enjoyment of the County's important historic resources. The County has developed the following two policies to help ensure the protection of the County's resources.

- Encourage the preservation and/or adaptive reuse of historic sites, structures, and landscapes as a means of protecting important historic resources as part of the discretionary application

process, and encourage the preservation of historic structures identified during the ministerial application process.

- Encourage and promote the development of educational and interpretive programs that focus on the rich multicultural heritage of the County of San Diego.

City of Escondido

General Plan

The City of Escondido General Plan, Resource Conservation Element (2012), contains the following historic resources goal and policies relevant to the Project:

> **Goal 5:** Preservation of important cultural and paleontological resources that contribute to the unique identity and character of Escondido.
>
> > ***Cultural Resources Policy 5.1*:** Maintain and update the Escondido History Sites survey to include significant resources that meet local, state, or federal criteria.
> >
> > ***Cultural Resources Policy 5.2*:** Preserve significant cultural and paleontological resources listed on the national, State, or local registers through: maintenance or development of appropriate ordinances that protect, enhance and perpetuate resources; incentive programs; and/or the development review process.
> >
> > ***Cultural Resources Policy 5.3*:** Consult with appropriate organization and individuals (e.g., South Coastal Information Center [SCIC] of the California Historical Resources Information System [CHRIS], NAHC, Native American groups and individuals, and San Diego Natural History Museum) early in the development process to minimize potential impacts to cultural and paleontological resources.
> >
> > ***Cultural Resources Policy 5.4*:** Recognize the sensitivity of locally significant cultural resources and the need for more detailed assessments through the environmental review process.
> >
> > ***Cultural Resources Policy 5.5*:** Preserve historic buildings, landscapes, and districts with special and recognized historic or architectural value in their original locations through preservation, rehabilitation (including adaptive reuse), and restoration where the use is compatible with the surrounding area.
> >
> > ***Cultural Resources Policy 5.6*:** Review proposed new development and/or remodels for compatibility with the surrounding historic context.
> >
> > ***Cultural Resources Policy 5.7*:** Comply with appropriate local, State, or federal regulations governing historical resources.

Escondido Municipal Code Article 40: Historic Resources

The City of Escondido has established a local register of historic resources (local register) as well as local landmarks. Section 33-794 of Article 40 of the Escondido Municipal Code provides the following guidance on the criteria for local register listing and local landmark designation:

> Prior to granting a resource local register or historical landmark status, the City council shall consider the definitions for historical resources and historical districts and shall find that the resource conforms to one (1) or more of the criteria listed in this section. A

structural resource proposed for the local register shall be evaluated against criteria number one (1) through seven (7) and must meet at least two (2) of the criteria. Signs proposed for the local register shall meet at least one (1) of the criteria numbered eight (8) through ten (10). Landscape features proposed for the local register shall meet criterion number eleven (11). Archaeological resources shall meet criterion number twelve (12). Local register resources proposed for local landmark designation shall be evaluated against criterion number thirteen (13). The criteria are as follows:

(1) Escondido historical resources that are strongly identified with a person or persons who significantly contributed to the culture, history, prehistory, or development of the City of Escondido, region, state or nation;

(2) Escondido building or buildings that embody distinguishing characteristics of an architectural type, specimen, or are representative of a recognized architect's work and are not substantially altered;

(3) Escondido historical resources that are connected with a business or use that was once common but is now rare;

(4) Escondido historical resources that are the sites of significant historic events;

(5) Escondido historical resources that are fifty (50) years old or have achieved historical significance within the past fifty (50) years;

(6) Escondido historical resources that are an important key focal point in the visual quality or character of a neighborhood, street, area or district;

(7) Escondido historical building that is one of the few remaining examples in the city possessing distinguishing characteristics of an architectural type;

(8) Sign that is exemplary of technology, craftsmanship or design of the period when it was constructed, uses historical sign materials and is not significantly altered;

(9) Sign that is integrated into the architecture of the building, such as the sign pylons on buildings constructed in the Modern style and later styles;

(10) Sign that demonstrates extraordinary aesthetic quality, creativity, or innovation;

(11) Escondido landscape feature that is associated with an event or person of historical significance to the community or warrants special recognition due to size, condition, uniqueness or aesthetic qualities;

(12) Escondido archaeological site that has yielded, or may be likely to yield, information important in prehistory;

(13) Escondido significant historical resource that has an outstanding rating of the criteria used to evaluate local register requests. (Ord. No. 2000-23, § 4, 9-13-00; Ord. No. 2008-16, § 4, 7-16-08)

City of San Marcos

The Open Space and Conservation Element of the San Marcos General Plan (2013) provides the following goal and policies relevant to cultural resources.

Goal COS-11: Continue to identify and evaluate cultural, historic, archeological, paleontological, and architectural resources for protection from demolition and inappropriate actions.

***Policy COS-11.1*:** Identify and protect historic and cultural resources including individual properties, districts, and sites (e.g., archaeological sites) in compliance with CEQA.

***Policy COS-11.2*:** Prohibit the demolition or removal of a historic structure without evaluation of the condition of the structure, the cost of rehabilitation, and the feasibility of alternatives to preservation in place including but not limited to relocation, or reconstruction offsite, and/or photo-preservation.

***Policy COS-11.3*:** Identify opportunities for adaptive reuse of historic sites and buildings to preserve and maintain their viability.

3.5.3 Applicant Proposed Measures

SDG&E has proposed the following Applicant Proposed Measures (APMs) to address impacts to cultural resources attributable to Project construction, operations, and/or maintenance. Based on the following impact analyses, in instances where certain APMs were found not to adequately reduce an impact to a less-than-significant level, those APMs have been superseded by mitigation measures put forth by the CPUC.

APM CUL-1: Prior to the initiation of construction or ground-disturbing activities, all SDG&E contractors and subcontractor personnel will receive training regarding the appropriate work practices necessary to effectively implement the following APMs and comply with the applicable environmental laws and regulations. The training will address the potential for exposing subsurface cultural resources and recognizing possible buried resources. The training will include the procedures to be followed upon discovery or suspected discovery of archaeological materials, including Native American remains, and their treatment.

APM CUL-2: Prior to construction, a qualified archaeological consultant will be retained by SDG&E to complete an analysis and assessment of the potential to disturb resources that were identified during the initial studies from major ground-disturbing activities. The analysis and assessment will be prepared to meet regulatory requirements. Project sites that require testing for a significance determination or data recovery for significant sites, will be treated on a case-by-case basis using all applicable criteria. One area, the San Marcos High School area, has currently been identified as a site that would require further testing and or data recovery.

APM CUL-3: If grading or road improvements are to be conducted along existing access roads that contain unevaluated or NRHP- or CRHR-eligible resources, monitoring by a qualified archaeological monitor will occur where the access road crosses the site or is located within the boundaries of a site. If surface expressions of the site (i.e., artifacts) are present within the road, equipment blades will be lifted when traversing the site. Additionally, all vehicles will remain on existing dirt roads and/or new access routes identified for the Project. If needed, additional overland travel or access routes will be reviewed by SDG&E's Cultural Resource Specialist, and appropriate avoidance measures and monitoring will be implemented.

APM CUL-4: Native American monitoring may be implemented for portions of the Project that have the potential to affect unidentified TCRs. The role of the Native American monitor will be to observe Project construction in mapped sensitive areas and facilitate communication of tribal concerns to the qualified archaeologist, the SDG&E Cultural Resources Specialist, and/or construction personnel and tribal council.

APM CUL-5: A qualified archaeologist will attend preconstruction meetings, as needed, to consult with the excavation contractor concerning excavation schedules, archaeological field techniques, and safety.

APM CUL-6: Known cultural resources that can be avoided will be demarcated as Environmentally Sensitive Areas. Construction crews will be instructed to avoid disturbance of these areas. A qualified archaeological monitor, under the direction of the qualified archaeologist, will monitor ground-disturbing activities in the vicinity of all ESAs and areas determined to have a high potential for buried cultural deposits within the Project Area. The requirements for archaeological monitoring will be noted in the preconstruction training and reiterated at construction tailboards, as appropriate. During construction, if ESA fencing has been established and the possibility of buried cultural deposits is determined to be low after initial ground disturbance, the onsite qualified archaeological monitor may determine that monitoring is no longer required in that area. The archaeologist's and monitor's duties will include monitoring, evaluating any finds, analyzing collected materials, and preparing a monitoring results report conforming to guidelines for Archaeological Resource Management Reports.

APM CUL-7: An archaeological monitoring results report (with appropriate graphics), which describes the results, analyses, and conclusions of the monitoring program, will be prepared and submitted to SDG&E's Cultural Resources Specialist following termination of construction activities in a given area when the monitoring program is no longer required. Any new cultural sites or features encountered will be recorded with the SCIC at San Diego State University.

APM CUL-8: All collected cultural remains will be cataloged and permanently curated with an appropriate institution. All artifacts will be analyzed to identify function and chronology as they relate to the history of the area. Faunal material will be identified as to species.

APM CUL-9: In the event that cultural resources are discovered, the archaeologist will have the authority to divert or temporarily halt ground disturbance to allow evaluation of potentially significant cultural resources. The archaeologist will contact SDG&E's Cultural Resource Specialist at the time of discovery. The archaeologist, in consultation with SDG&E's Cultural Resource Specialist, will determine the significance of the discovered resources. SDG&E's Cultural Resource Specialist must concur with the evaluation procedures to be performed before construction activities are allowed to resume. If the discovery is not significant; no further work is required. For significant cultural resources, preservation in place shall be the preferred manner of mitigating impacts. For resources that cannot be preserved in place, a Research Design and Data Recovery Program will be prepared and carried out to mitigate impacts.

3.5.4 Environmental Impacts

Discussion

a) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines §15064.5: *LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.*

Construction

The cultural resource studies conducted in support of the Project identified 23 cultural resources within 150 feet of the centerline of the Project alignment or within the footprints of Project components. These resources include eight historic architectural resources (P-37-031871 [ranch complex] and -033635 [road segment], San Marcos Substation, Escondido Substation, TL 680C, TL 13811/13825, TL 13811A, and Harmony Grove Road to Escondido Substation transmission line) and 15 archaeological resources. Of the 15 archaeological resources, 10 are prehistoric archaeological sites (P-37-004495, -004499, -005501, -007306, -010550, -010551, -012209, -025575, -32160, and TL-6975-S-5), one is a historic-period archeological site (P-37-034831), one is a multicomponent archaeological site (P-37-011442), and three are prehistoric isolates (P-37-009047, -017514, and -033103).

Of the eight historic architectural resources, seven (P-37-033635 [road segment], San Marcos Substation, Escondido Substation, TL 680C, TL 13811/13825, TL 13811A, and Harmony Grove Road to Escondido Substation transmission line) are recommended ineligible for listing in the CRHR and do not qualify as historical resources pursuant to CEQA. The remaining one resource, P-37-031871 (ranch complex) has not been previously evaluated for listing in the CRHR and, therefore, has the potential to qualify as a historical resource pursuant to CEQA. Resource P-37-031871 is located within a Project staging yard that would be used for the temporary storage of equipment and material. Use of the staging yard would not demolish, destroy, or otherwise alter P-37-031871. Therefore, the Project would not have the potential to cause a substantial adverse change in its significance.

Of the 15 archaeological resources, four prehistoric sites (P-37-004495, -004499, -012209, and -032160) have been previously recommended eligible for listing in the CRHR, and therefore qualify as historical resources pursuant to CEQA. Three of these resources (P-37-004495, -004499, and -032160) overlap portions of the Project sites and one is located within 80 feet of a proposed guard structure installation (P-37-012209). Resources P-37-004495 and -004499 overlap portions of the Project alignment where a paved parking lot would be used as a staging area and an existing dirt road would be used to access the Project alignment. Resource P-37-032160, which is known to contain significant archaeological deposits, overlaps a portion of the Project alignment where pole replacement would be carried out.

Of the 15 archaeological resources, seven (P-37-005501, -009047, -010550, -010551, -017514, -025575, and -033103) have been previously recommended ineligible for listing in the CRHR and, therefore, do not qualify as historical resources pursuant to CEQA. Of these seven resources, three are prehistoric isolates (P-37-009047, -017514, and -033103) that lack cultural context due to their isolated nature. Because isolated artifacts represent only a single datum, they are unable

to address relevant research questions pertaining to prehistoric subsistence, trade, settlement, and mobility and, therefore, are not considered eligible for the CRHR. One prehistoric archaeological site has been subject to subsurface testing (P-37-025575) that failed to identify intact archaeological deposits and the site was, therefore, recommended ineligible for listing in the CRHR. Three prehistoric archaeological sites (P-37-005501, -010550, and -010551) are presumed to be destroyed by previous development based on the cultural resources surveys conducted for the Project. Although no surface manifestation of these sites exists, no subsurface testing has occurred within the sites to determine the presence/absence of subsurface archaeological deposits. Therefore, there exists the potential that subsurface archaeological deposits associated with these three sites underlie the ground surface. Should subsurface deposits associated with these sites be present, they may be eligible for listing in the CRHR and, therefore, qualify as historical resources pursuant to CEQA. Of these three resources, two are mapped in locations that overlap portions of the Project alignment (P-37-005501 and -010551) where guard structures and new towers would be installed, and one (P-37-010550) is mapped within 75 feet of a proposed staging area.

Of the 15 archaeological resources, two prehistoric archaeological sites (P-37-007306 and TL-6975-S-5), one multicomponent archaeological site (P-37-011442) and one historic-period archaeological site (P-37-034831) have not been previously evaluated for listing in the CRHR and therefore have the potential to qualify as historical resources pursuant to CEQA. Of these resources, three (P-37-007306 [prehistoric site], -034831 [historic-period site], and TL-6975-S-5 [prehistoric site]) are bisected by existing dirt roads that would be used to access the Project alignment and one (P-37-011442 [multicomponent site]) is located within 80 feet of the of an existing dirt road that would be used to access the Project alignment.

In sum, of the 23 documented cultural resources, 11 archaeological sites qualify or have the potential to qualify as historical resources pursuant to CEQA (**Table 3.5-2**). Eight (P-37-004495, -004499, -005501, -007306, -010551, -032160, -034831, and TL6975-S-5) of these are located within the Project alignment and three (P-37-10550, 011442, -012209) are located on, adjacent to, or within 150 feet of the centerline of the Project alignment. Given this proximity to the Project alignment, they may be subject to impacts as a result of Project construction.

In addition to these 11 known archaeological sites that may be impacted by Project construction, unknown subsurface archaeological deposits may underlie the Project alignment where ground disturbing activities would be carried out. Consultation with the San Luis Rey Band of Mission Indians has indicated that portions of the Project alignment in the vicinity of Citracado Parkway, including the entirety of Segment 3 and the easternmost 500 feet of Segment 2, should be considered sensitive for the presence of subsurface archaeological deposits. Should unknown subsurface archeological deposits underlie the Project alignment, they may qualify as historical resources pursuant to CEQA, and could be significantly impacted by Project-related ground disturbance.

TABLE 3.5-2
SUMMARY OF POTENTIAL PROJECT IMPACTS ON HISTORICAL RESOURCES

Primary # (P-37-)	Permanent Trinomial (CA-SDI-)	Temporary Identifier	Site Description	Historical Resource?	Distance from Study Area (150-foot buffer on either side of Project alignment)	Potential for Significant Project Impacts?	Impacts after mitigation
004495	4495	-	Prehistoric archaeological site: lithic quarry	Yes	Within	Yes	Less than significant
004499	4499	-	Prehistoric archaeological site: lithic quarry	Yes	Within	Yes	Less than significant
005501	5501	-	Prehistoric archaeological site: bedrock milling features	Potentially	Within	Yes	Less than significant
007306	7306	-	Prehistoric archaeological site: lithic scatter	Potentially	Within	Yes	Less than significant
009047	-	-	Prehistoric isolate: shell fragment	No	Within	No	NA
010550	10550	-	Prehistoric archaeological site: lithic scatter	Potentially	75 feet	Yes	Less than significant
010551	10551	-	Prehistoric archaeological site: lithic scatter	Potentially	Within	Yes	Less than significant
011442	11442	-	Multicomponent archaeological site: prehistoric lithic scatter and historic-period refuse scatter	Potentially	80 feet	Yes	Less than significant
012209	12209	-	Prehistoric archaeological site: village site	Yes	75 feet	Yes	Less than significant
017514	-	-	Prehistoric isolate: quartz fragment	No	Within	No	NA
025575	16988	-	Prehistoric archaeological site: temporary campsite	No	Within	No	NA
031871	-	-	Historic architectural resource: ranch house and outbuildings	Potentially	No	No	NA
032160	20363	-	Prehistoric archaeological site: habitation site	Yes	Within	Yes	Less than significant
033103	-	-	Prehistoric isolate: two flakes	No	90 feet	No	NA
033635	21128	-	Historic architectural resource: road segment	No	Within	No	NA
034831	21674	TL-6975-S-4	Historic-period archaeological site: refuse scatter	Potentially	Within	Yes	Less than significant
-	-	TL-6975-S-5	Prehistoric archaeological site: lithic scatter	Potentially	Within	Yes	Less than significant
-	-	San Marcos Substation	Historic architectural resource: substation	No	Within	No	NA
-	-	Escondido Substation	Historic architectural resource: substation	No	Within	No	NA

TABLE 3.5-2 (CONTINUED)
SUMMARY OF POTENTIAL PROJECT IMPACTS ON HISTORICAL RESOURCES

Primary # (P-37-)	Permanent Trinomial (CA-SDI-)	Temporary Identifier	Site Description	Historical Resource?	Distance from Study Area (150-foot buffer on either side of Project alignment)	Potential for Significant Project Impacts?	Impacts after mitigation
-	-	TL 680C	Historic architectural resource: transmission line	No	Within	No	NA
-	-	TL 13811/13825	Historic architectural resource: transmission line	No	30 feet	No	NA
-	-	TL 13811A	Historic architectural resource	No	30 feet	No	NA
-	-	Harmony Grove Road to Escondido Substation Transmission Line	Historic architectural resource: transmission line	No	Within	No	NA

To reduce impacts on historical resources, SDG&E proposed APMs CUL-1 through CUL-9 requiring training, monitoring, avoidance, recovery, documentation, etc. The CPUC has determined that these APMs would not reduce or avoid substantial adverse changes in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5 to below the level of significance. Therefore, APMs CUL-1 through CUL-9 are superseded by **Mitigation Measures CUL-1** through **CUL-7**, which identify specific measures and standards that would reduce potential impacts to less than significant.

Mitigation Measure CUL-1: Retention of Qualified Archaeologist. Prior to the start of any ground disturbing activity, a Qualified Archaeologist, defined as an archaeologist meeting the Secretary of the Interior's Standards for professional archaeology (U.S. Department of the Interior, 2008) shall be retained by SDG&E to carry out all APMs and mitigation measures related to archaeological resources.

Mitigation Measure CUL-2: Pre-Construction Cultural Resources Sensitivity Training. Prior to the start of any ground-disturbing activity, the Qualified Archaeologist shall prepare cultural resources sensitivity training materials for use during Project-wide Worker Environmental Awareness Training (or equivalent). The cultural resources sensitivity training shall be conducted by a qualified environmental trainer (often the Lead Environmental Inspector [LEI] or equivalent position) working under the supervision of the Qualified Archaeologist. The Qualified Archaeologist shall determine and ensure the suitability of the qualified environmental trainer. The cultural resources sensitivity training shall be conducted for all construction personnel. Construction personnel shall be informed of the types of archaeological resources that may be encountered, and of the proper procedures to be implemented in the event of an inadvertent discovery of archaeological resources or human remains. SDG&E shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.

Mitigation Measure CUL-3: Development and Implementation of Cultural Resources Monitoring Plan. Prior to the start of any Project-related ground disturbing activities the Qualified Archaeologist shall prepare a Cultural Resources Monitoring Plan (CRMP). The CRMP shall stipulate the location and timing of archaeological and Native American monitoring, including, but not limited to, the monitoring of all ground disturbing activities within 250 feet of P-37-032160 and within 100 feet of the remaining 10 archaeological resources (P-37-004495, -004499, -005501, -007306, -010551, -010550, 011442, -012209, -034831, and TL6975-S-5) that have the potential to contain or are known to contain subsurface archaeological deposits, as well as all ground disturbing activities within Segment 3 and the easternmost 500 feet of Segment 2. The CRMP shall include monitoring protocols to be carried out during Project construction. The CRMP shall stipulate that a Native American monitor associated with one or more of the Native American groups that have expressed interest in the Project (i.e. San Luis Rey Band of Mission Indians, Rincon Band of Luiseno Indians, and/or Santa Ysabel Band of the Iipay Nation) be retained to monitor all Project-related ground disturbance stipulated in the CRMP. In preparing the CRMP, the Native American groups that have expressed interest in monitoring shall be consulted regarding the scheduling of monitors. A Native American monitoring schedule shall be incorporated into the CRMP.

The CRMP shall contain an allowance that the Qualified Archaeologist, based on observations of subsurface soil stratigraphy or other factors during initial grading, and in coordination with the Native American monitor(s) and SDG&E, may reduce or discontinue

monitoring as warranted if it is determined that the possibility of encountering archaeological deposits is low. The CRMP shall outline the appropriate measures to be followed in the event of unanticipated discovery of cultural resources during Project implementation, including that all ground disturbance within 100 feet of an unanticipated discovery shall cease until a treatment plan is developed by the Qualified Archaeologist in coordination with SDG&E and the Native American monitor(s) and which will consider the resources archaeological and tribal value. The CRMP shall identify avoidance as the preferred manner of mitigating impacts to cultural resources. The CRMP shall establish the criteria utilized to evaluate the significance (per CEQA) of the discoveries, methods of avoidance consistent with CEQA Guidelines Section 15126.4(b)(3), as well as identify the appropriate treatment to mitigate the effect of the Project if avoidance of a significant resource is determined to be infeasible. The CRMP will also include provisions for the treatment of archaeological sites that qualify as unique archaeological resources pursuant to PRC Section 21083.2, which places limits on the costs of mitigation for unique archaeological resources. The plan shall also include reporting of monitoring results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and State repositories. The CRMP shall be submitted to SDG&E and CPUC for review and approval prior to the start of Project-related ground disturbance, as well as to the Native American groups that have expressed interest in the Project (i.e. San Luis Rey Band of Mission Indians, Rincon Band of Luiseno Indians, and/or Santa Ysabel Band of the Iipay Nation) for review and comment.

Mitigation Measure CUL-4: Data Recovery Excavations at P-37-032160. Prior to the start of any Project-related ground disturbing activities within 250 feet of archaeological site P-37-032160, data recovery excavations shall be carried out to collect scientifically consequential data associated with known resource P-37-032160 where Project-related ground disturbing activities including but not limited to pole replacement, trenching, potholing, and AC mitigation well and test station installations will be carried out. Prior to the start of the data recovery excavations, a research design shall be prepared by the Qualified Archaeologist outlining the research questions to be addressed as part of the data recovery, as well as the field and lab methods and any special studies proposed to obtain the scientifically consequential information. The research design shall be submitted to SDG&E and CPUC for review and approval prior to the start of the data recovery excavations, as well as to the San Luis Rey Band of Mission Indians for review and comment. A data recovery report presenting the methods and results of the data recovery excavations shall be prepared and reviewed by the CPUC and SDG&E, and submitted to the San Luis Rey Band of Mission Indians for review and comment. The final data recovery report shall be placed on file at the South Coast Information Center.

Mitigation Measure CUL-5: Exclusionary Fencing. Prior to Project-related ground disturbing activities, exclusionary fencing shall be installed to ensure that the five previously recorded archaeological sites within or immediately adjacent to the Project alignment that have surface manifestations (P-37-004495, -004499, -007306, -012209, and TL6975-S-5) are not inadvertently impacted during Project implementation. The exclusionary fencing shall encompass the mapped site boundaries plus a 25-foot radius to ensure an appropriate buffer is maintained between the sites and Project-related ground disturbing activities. For the four archaeological resources bisected by Project access roads (P-37-004495, -004499, -007306, and TL6975-S-5), the exclusionary fencing shall be established along the shoulder of the existing roads. To ensure avoidance, the exclusionary fencing shall be marked with signs indicating that staff associated with the Project are not to go beyond the limits of the fencing. The exclusionary fencing shall not

identify the protected areas as demarcating archaeological resources in order to discourage unauthorized disturbance, vandalism, or collection of artifacts.

Mitigation Measure CUL-6: Pre-Construction Surveys. Prior to the start of Project-related ground disturbing activities, pre-construction surveys of the four archaeological sites bisected by existing access roads (P-37-004495, -004499, -007306, and TL6975-S-5) shall be conducted to map and collect all artifacts located within the road beds. Artifact mapping shall be conducted using a hand held GPS unit capable of sub-meter accuracy, and the final disposition of the artifacts shall be determined by SDG&E in coordination with the San Luis Rey Band of Mission Indians.

Mitigation Measure CUL-7: Road Maintenance within Archaeological Sites. During Project implementation, routine road maintenance, including but not limited to grading and blading, shall be avoided within the four archaeological sites bisected by existing access roads (P-37-004495, -004499, -007306, and TL6975-S-5). Should maintenance activities such as drainage or culvert repairs be required to stabilize the access road, all ground disturbing activities within 100 feet of the four archaeological sites shall be monitored as stipulated in the CRMP.

Significance after Mitigation: CEQA Guidelines Sections 15064.5(b)(1) and 15064.5(b)(4) require a lead agency to identify feasible measures to mitigate a substantial adverse change in the significance of a historical resource. Mitigation Measures CUL-1 through CUL-7 are feasible measures that would reduce or avoid substantial adverse changes in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5; thus, with implementation of these measures, impacts would be less than significant.

Operations and Maintenance

Project operation and maintenance activities that involve ground disturbance, such as road maintenance and pole brushing, have the potential to impact the 11 known archaeological resources within 150 feet of the Project alignment centerline that are known to contain or have the potential to contain subsurface archaeological deposits that qualify as historical resources pursuant to CEQA. In addition to the known resources, these Project operation and maintenance activities also have the potential to impact unknown archaeological deposits that may underlie the Project alignment. Implementation of **Mitigation Measures CUL-1** through **CUL-7** would reduce potential Project operation and maintenance impacts to known or unknown archaeological deposits that qualify or have the potential to qualify as historical resources pursuant to CEQA to a less-than-significant level.

Implement Mitigation Measures CUL-1 through CUL-7. See full text for these Mitigation Measures under Question a, above.

Significance after Mitigation: CEQA Guidelines Sections 15064.5(b)(1), and 15064.5(b)(4) require a lead agency to identify feasible measures to mitigate a substantial adverse change in the significance of a historical resource. Mitigation Measures CUL-1 through CUL-7 are feasible measures that would reduce or avoid substantial adverse changes in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5; thus, with implementation of these measures, impacts would be less than significant.

b) Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines Section 15064.5: *LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.*

Construction

The cultural resource studies conducted in support of the Project identified 15 archaeological resources located within 150 feet of the Project alignment centerline. These resources include 10 prehistoric archaeological sites (P-37-004495, -004499, -005501, -007306, -010550, -010551, -012209, -025575, -32160, and TL-6975-S-5), one historic-period archeological site (P-37-034831), one multicomponent archaeological site (P-37-011442), and three prehistoric isolates (P-37-009047, -017514, and -033103).

Of the 15 archaeological resources, four prehistoric archaeological sites (P-37-004495, -004499, -012209, and -032160) are recommended eligible for listing in the CRHR, qualifying as historical resources (Table 3.5-2). Cultural resources that qualify as historical resources do not qualify as unique archaeological resources (CEQA Guidelines § 15064.5(c)). Therefore, these four prehistoric archaeological sites do not qualify as unique archaeological resources. **Table 3.5-3** lists the remaining 11 archeological resources.

Four archaeological resources, including one prehistoric archaeological site (P-37-025575) and three prehistoric isolates (P-37-009047, -017514, and -033103), do not qualify as unique archaeological resources. Resource P-37-025575, a prehistoric archaeological site, was subject to subsurface testing that failed to identify intact archaeological deposits. The mapped location of the site is within a develop area and no surface manifestation of the site could be identified. Given that no surface manifestation or subsurface deposit were identified, the site has likely been destroyed and, therefore, and does not qualify as a unique archaeological resource. Similarly, the three prehistoric isolates (P-37-009047, -017514, and -033103) lack cultural context due their isolated nature and do not qualify as unique archaeological resources.

Of the remaining seven archaeological resources, two prehistoric archaeological sites (P-37-007306 and TL-6975-S-5), one multicomponent archaeological site (P-37-011442), and one historic-period archeological site (P-37-034831) have not been previously evaluated for listing in the CRHR and it is unknown whether they qualify as historical resources under CEQA. If they do not qualify as historical resources, they may qualify as unique archaeological resources. Three prehistoric archaeological sites (P-37-005501, -010550, and -010551) are presumed to be destroyed and have been recommended ineligible for listing in CRHR. However, these three sites have the potential to contain subsurface archaeological deposits. Should subsurface deposits associated with these sites be present, and should they be found ineligible for listing in the CRHR, they may qualify as unique archeological resources.

Of these seven archaeological sites that have the potential to qualify as unique archaeological resources, four prehistoric archeological sites (P-37-005501, -007306, -010551, and TL6975-S-5) and one historic-period archaeological site (P-37-034831) overlap portions of the Project alignment where staging yards, guard structure installations, pole installation sites, and stringing sites are proposed. Many of these sites are bisected by existing dirt roads that would be used to access the Project alignment. The remaining three archaeological sites, which include one

TABLE 3.5-3
SUMMARY OF PROJECT IMPACT ON UNIQUE ARCHAEOLOGICAL RESOURCES

Primary # (P-37-)	Permanent Trinomial (CA-SDI-)	Temporary Identifier	Site Description	Unique Archaeological Resource?	Distance from Study Area (150-foot buffer on either side of Project alignment)	Potential for Significant Project Impacts?	Impacts after mitigation
5501	5501	-	Prehistoric archaeological site: bedrock milling features	Potentially	Within	Yes	Less than significant
7306	7306	-	Prehistoric archaeological site: lithic scatter	Potentially	Within	Yes	Less than significant
9047	-	-	Prehistoric isolate: shell fragment	No	Within	No	NA
10550	10550	-	Prehistoric archaeological site: lithic scatter	Potentially	75 feet	Yes	Less than significant
10551	10551	-	Prehistoric archaeological site: lithic scatter	Potentially	Within	Yes	Less than significant
11442	11442	-	Multicomponent archaeological site: prehistoric lithic scatter and historic-period refuse scatter	Potentially	80 feet	Yes	Less than significant
17514	-	-	Prehistoric isolate: quartz fragment	No	Within	No	NA
25575	16988	-	Prehistoric archaeological site: temporary campsite	No	Within	No	NA
33103	-	-	Prehistoric isolate: two flakes	No	90 feet	No	NA
34831	21674	TL-6975-S-4	Historic-period archaeological site: refuse scatter	Potentially	Within	Yes	Less than significant
-	-	TL-6975-S-5	Prehistoric archaeological site: lithic scatter	Potentially	Within	Yes	Less than significant

prehistoric archaeological site (P-37-10550) and one multicomponent archaeological site (P-37-011442), are located immediately adjacent to existing access roads, as well as proposed staging yards. Potential impacts to these resources would occur as a result of traffic, road maintenance, and equipment staging, as well as subsurface excavations associated with pole replacement and/or guard structure installation. These seven archaeological resources may qualify as unique archeological resources pursuant to CEQA. Project-related ground disturbance could cause a substantial adverse change in the significance of these resources, which would be a significant impact.

As noted above, unknown subsurface archaeological deposits may underlie the Project alignment, with Segment 3 having been identified as highly sensitive for the presence of subsurface archaeological deposits. Should unknown subsurface archeological deposits underlie the Project alignment, they may qualify as unique archaeological resources pursuant to CEQA, and Project-related ground disturbance could cause a substantial adverse change in the significance of these resources, which would be a significant impact.

To reduce impacts on archaeological resources, APMs CUL-1 through CUL-9 were proposed requiring training, monitoring, avoidance, recovery, documentation, etc. Based on this analysis, the APMs are superseded by **Mitigation Measures CUL-1** through **CUL-7**, which identify specific measures and standards that would reduce potential impacts to less than significant.

> **Implement Mitigation Measure CUL-1 through CUL-7.** See full text for these Mitigation Measures under Question a, above.
>
> **Significance after Mitigation:** CEQA Section 21083.1(a) requires reasonable efforts be made to preserve in place any and all identified unique archaeological resources, as defined in Section 21083.2, that a lead agency has determined would be significantly impacted by a project. Mitigation Measures CUL-1 through CUL-7 present reasonable efforts for the preservation in place of unique archaeological resources pursuant to CEQA Section 21083.1(a); thus, with implementation of these measures, impacts would be less than significant.

Operations and Maintenance

Project operation and maintenance activities that involve ground disturbance, such as road maintenance and pole brushing, have the potential to impact the seven archaeological (P-37-005501, -007306, -010550, -010551, -011442, -034831, and TL-6975-S-5) resources within 150 feet of the Project alignment centerline that have the potential to qualify as unique archaeological resources pursuant to CEQA. In addition to the seven known archaeological resources, Project operation and maintenance activities also have the potential to impact unknown subsurface archaeological deposits underlying the Project alignment that may qualify as unique archaeological resources. Implementation of **Mitigation Measures CUL-1** through **CUL-7** would reduce potential Project operations and maintenance impacts to known or unknown archaeological resources that may qualify as unique archaeological resources pursuant to CEQA to a less-than-significant level.

Implement Mitigation Measure CUL-1 through CUL-7. See full text for these Mitigation Measures under Question a, above.

Significance after Mitigation: CEQA Section 21083.1(a) requires reasonable efforts be made to preserve in place any and all identified unique archaeological resources, as defined in Section 21083.2, that a lead agency has determined would be significantly impacted by a project. Mitigation Measures CUL-1 through CUL-7 present reasonable efforts for the preservation in place of unique archaeological resources pursuant to CEQA Section 21083.1(a); thus, with implementation of these measures, impacts would be less than significant.

c) Disturb any human remains, including those interred outside of dedicated cemeteries: *LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.*

No known human remains exist within the study area. However, human remains were previously identified during archaeological excavation at P-37-012209, which is located within close proximity to the Project. Therefore, Project-related ground-disturbing activities have the potential to unearth, expose, or disturb previously unknown human remains. Implementation of **Mitigation Measure CUL-8** would reduce potential impacts on human remains to less than significant.

Mitigation Measure CUL-8: Inadvertent Discovery of Human Remains. If human remains are uncovered during Project construction, all work within 100 feet of the find shall be immediately halted, and the San Diego County coroner shall be contacted to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5(e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the County Coroner shall contact the California Native America Heritage Commission (NAHC), in accordance with Health and Safety Code Section 7050.5(c), and Public Resources Code Section 5097.98 (as amended by AB 2641). The NAHC shall then identify a Most Likely Descendant (MLD) of the deceased Native American, who shall then help determine what course of action should be taken in the disposition of the remains.

Per Public Resources Code Section 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section, with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.

Significance after Mitigation: California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98 require protocols to be implemented should human remains be identified during excavation activities. Mitigation Measure CUL-8 includes the requirements as outlined in California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98, and would reduce potential impacts on human remains to less than significant.

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3.6 Energy

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
6.	**ENERGY — Would the project:**				
a)	Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation?	☐	☐	☒	☐
b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

This impact analysis evaluates the potential for the Project to result in a substantial increase in energy demand and/or wasteful use of energy during Project construction, operation, and maintenance. The potential impacts are analyzed based on an evaluation of whether construction and operational energy use estimates for the Project would be considered excessive, wasteful, or inefficient. For the purposes of this analysis, the SDG&E service area and California region, including San Diego County, were used as a basis for energy consumption relative to the energy consumed from the Project.

3.6.1 Environmental Setting

San Diego Gas & Electric (SDG&E)

SDG&E is a regulated public utility that provides electric services to approximately 3.6 million customers and natural gas services to approximately 3.3 million customers within a 4,100-square-mile service territory in Southern California that encompasses San Diego County and an adjacent portion of southern Orange County (Sempra Energy, 2017). Operating characteristics of SDG&E's electricity and distribution systems are provided below.

SDG&E Electric Utility Operations

To meet customer demand, SDG&E produces power from its own electric generation facilities and procures it from other suppliers through CPUC-approved purchased-power contracts or through purchases on a spot basis[1] (Sempra Energy, 2017). SDG&E owns and operates two combined-cycle[2] generating facilities: the Palomar Energy Center in Escondido and the Desert Star Energy Center in Boulder City, Nevada. SDG&E owns and operates two peaking plants:[3] Miramar Energy Facility in San Diego and Cuyamaca Peak in El Cajon. SDG&E also utilizes the Otay Mesa Energy Center, which Calpine currently owns and operates, and which currently is the subject of a power purchase tolling agreement[4] with SDG&E. As of December 31, 2017, SDG&E owned 114 megawatts (MW) of battery storage (including 70 MW pending CPUC approval) and

1 Spot basis purchases are agreements reached for immediate sale/purchase.
2 A combined-cycle power plant uses both a gas and a steam turbine together to produce electricity.
3 Peaking plants are small, efficient power units that can reach full generating capacity within approximately 10 to 15 minutes to meet immediate demand on the grid, and run only during periods of extremely high electricity demand.
4 Tolling contracts are purchased-power contracts under which SDG&E provides natural gas for generation to the energy supplier.

contracted approximately 13.5 MW of battery storage (all pending CPUC approval) (Sempra Energy, 2017). In 2017, approximately 48 percent of the energy delivered to SDG&E customers came from renewable energy-related projects (Sempra Energy, 2017). SDG&E's supply as of December 31, 2017, is presented in **Table 3.6-1** below.

TABLE 3.6-1
SDG&E ELECTRIC RESOURCES[a]

Source	Net Operating Capacity (Megawatts MW)	Percent (%) of Total
Owned generation facilities, natural gas[b]	1,193	22
Purchased-power contracts:		
Qualifying facilities:	246	5
Renewables:		
Wind	1,234	23
Solar	1,306	24
Other	53	1
Tolling and other[c]	1,341	25
Total	5,373	100

NOTES:
[a] Excludes approximately 114 MW of battery storage owned (including 70 MW pending CPUC approval) and approximately 13.5 MW of battery storage contracted (all pending CPUC approval).
[b] SDG&E owns and operates four natural gas-fired power plants (Palomar Energy Center, Desert Star Energy Center, Miramar Energy Facility, and Cuyamaca Peak), three of which are in California and one of which is in Nevada.
[c] Includes the Otay Mesa Energy Center.

SOURCE: Sempra Energy, 2017

Service to SDG&E's customers is supported by its electric transmission and distribution system. SDG&E's electric transmission and distribution facilities include substations and overhead and underground lines located in San Diego, Imperial, and Orange counties of California and in Arizona and Nevada. The facilities consist of 2,090 miles of transmission lines, 23,479 miles of distribution lines, and 160 substations. SDG&E facilities near the Project are identified in Chapter 2, Project Description. Periodically, various areas of SDG&E's service territory require expansion to accommodate customer growth, reliability, and safety (Sempra Energy, 2017).

Electricity Consumption

Table 3.6-2 shows electricity consumption by sector in SDG&E's service area. As shown in the table, SDG&E delivered approximately 19 billion kilowatt-hours (kWh) of electricity in 2017 (Sempra Energy, 2017).

TABLE 3.6-2
ELECTRICITY CONSUMPTION IN SDG&E SERVICE AREA (2017)

Residential	Commercial	Industrial	Street and Highway Lighting	Direct Access	Total Usage
All Usage Expressed in Millions of kWh (GWh)					
6,577	6,700	2,189	75	3,394	19,011

SOURCE: Sempra Energy, 2017

In 2017, residential use represented approximately 42 percent of electricity volume (89 percent of total meters), commercial use represented 43 percent (11 percent of total meters), industrial use represented 14 percent (0.03 percent of total meters), and street and highway lighting use represented 0.5 percent (0.1 percent of total meters). Compared to the typical utility in the U.S., SDG&E delivers a higher relative percentage of its total power sold to residential customers, who on average consume less power than an average commercial customer. San Diego's mild climate and SDG&E's energy efficiency programs also contribute to lower consumption by customers. In addition, rooftop solar installations, especially in recent years, have reduced residential and commercial volumes sold by SDG&E. As of December 31, 2017, the residential and commercial rooftop solar capacity in SDG&E's territory totaled 836 MW (Sempra Energy, 2017).

Gasoline, Diesel, and Jet Fuel

Supply

California is nearly self-sufficient with regard to the gasoline and diesel fuel supply, obtaining nearly all of the supply to meet local demand from California refineries. Crude oil is refined to produce a wide array of petroleum products, including gasoline, diesel, and jet fuels. In addition, storage tank capacities at pipeline terminals in California are optimized to accommodate the largest weekly delivery of refined product (gasoline, diesel or jet fuel) that is expected throughout the year (California Energy Commission [CEC], 2014). Refineries in California often operate at or near maximum capacity because of the high demand for petroleum products. When unplanned refinery outages occur, replacement supplies must be brought in by marine tanker from refineries in the State of Washington or on the U.S. Gulf Coast. California requires that all motorists use, at a minimum, a specific blend of motor gasoline called California Reformulated Gasoline (CaRFG) as part of an overall program to reduce emissions from motor vehicles. Refineries in several other countries can also supply CaRFG. However, locating and transporting replacement motor gasoline that conforms to California's strict fuel specifications from overseas can take several weeks (EIA, 2017). As a result, unplanned outages often result in a reduction in supply that causes prices to increase, sometimes dramatically. The severity and duration of these price spikes depend on how quickly the refinery issue can be resolved and how soon supply from alternative sources can reach the affected market (EIA, 2015).

Most petroleum supply disruptions or shortage events are resolved by the energy industry before they become significant (NASEO, 2018). An extended refinery outage occurred in February 2015 due to a fire and explosion at ExxonMobil's Torrance, California, refinery that resulted in price spikes due to long lead times and higher prices of imported supplies. Other periods of price spikes have occurred in California, most notably in 2008, 2009, and 2012, that were similar in duration and magnitude to the 2015 supply disruption, and resulted in price increases that persisted for an average of eight weeks and took an average of two weeks to be passed through to retail prices (EIA, 2015). However, there are instances where the severity and scope of disasters require additional actions by government to help facilitate and coordinate response and recovery efforts (NASEO, 2018).

Consumption and Distribution

Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles (CEC, 2018a). Diesel fuel is the second largest transportation fuel used in California, representing 17 percent of total fuel sales behind gasoline. Nearly all heavy duty-trucks, delivery vehicles, buses, trains, ships, boats and barges, farm equipment, construction equipment, heavy duty military vehicles and equipment have diesel engines. Diesel is the fuel of choice because it has 12 percent more energy per gallon than gasoline and has fuel properties that prolong engine life making it ideal for heavy duty vehicle applications (CEC, 2018b). According to the State Board of Equalization (BOE), approximately 15.5 billion gallons of gasoline, including aviation gasoline, and 3.1 billion gallons of diesel, including off-road diesel, were sold in California in 2017 (BOE 2018a, 2018b). In San Diego County, it is estimated that 1.37 billion gallons of gasoline and 102 million gallons of diesel were sold in 2016 (CEC, 2018c).

The CEC estimated that there were between 400 and 799 gasoline stations in San Diego County in 2016 (CEC, 2018c). Commercial fleet fueling services are available in the City of Vista, approximately 1.40 miles north of Segment 1, and the City of Escondido, approximately 2.25 miles east of Segment 3 (CFN, 2018). Helicopter staging and fueling services are available at Palomar Airport, located approximately 2.72 miles east of Segments 1 and 2 (San Diego County, 2018).

3.6.2 Regulatory Setting

Federal

National Energy Conservation Policy Act

The National Energy Conservation Policy Act (NECPA, 42 USC §8201 et seq.) serves as the underlying authority for federal energy management goals and requirements and is the foundation of most federal energy requirements. NECPA established energy-efficiency standards for consumer projects and includes a residential program for low-income weatherization assistance, grants and loan guarantees for energy conservation in schools and hospitals, and energy-efficiency standards for new construction. Furthermore, the NEPCA established fuel economy standards for on-road motor vehicles in the United States. The National Highway Traffic and Safety Administration (NHTSA), which is part of the U.S. Department of Transportation (USDOT), is responsible for establishing additional vehicle standards and revising existing standards under the NEPCA. The USDOT is authorized to assess penalties for noncompliance. In the course of more than 30 years, this regulatory program has resulted in improved fuel economy throughout the United States' vehicle fleet (NHTSA, 2014, 2018).

National Energy Policy Act of 2005

The National Energy Policy Act of 2005 (42 USC §13201 et seq.) sets equipment energy efficiency standards and seeks to reduce reliance on nonrenewable energy resources and provide incentives to reduce current demand on these resources. For example, the act establishes programs in order to improve the reliability and efficiency of distributed energy resources and systems by integrating advanced energy technologies with grid connectivity.

Energy and Independence Security Act of 2007 and Corporate Average Fuel Economy Standards

The Energy and Independence Security Act of 2007 (42 USC §17001) sets federal energy management requirements in several areas, including energy reduction goals for federal buildings, facility management and benchmarking, performance and standards for new buildings and major renovations, high-performance buildings, energy savings performance contracts, metering, energy-efficient product procurement, and reduction in petroleum use, including by setting automobile efficiency standards, and increase in alternative fuel use. This act also amends portions of the National Energy Policy Conservation Act, as described above.

State

Warren-Alquist Act

The 1975 Warren-Alquist Act (Pub. Res. Code §25000 et seq.) established the California Energy Resources Conservation and Development Commission, now known as the CEC. The Act established a state policy to reduce wasteful, uneconomical and unnecessary uses of energy by employing a range of measures. The Act also was the driving force behind the creation of CEQA Guidelines Appendix F, Energy Conservation.

State of California Integrated Energy Policy

Public Resources Code Section 25301(a) requires the CEC to develop an integrated energy plan at least every two years for electricity, natural gas, and transportation fuels. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. An overarching goal of the resulting Integrated Energy Policy Report is to achieve the statewide greenhouse gas reduction targets, while improving overall energy efficiency. For example, the CEC's 2018 Integrated Energy Policy Report Update includes increasing grid flexibility as a key component and maintaining the reliability of the electricity system while integrating larger amounts of variable wind and solar generation (CEC, 2018d).

Renewables Portfolio Standard (RPS)

The state's Renewables Portfolio Standard (RPS) was established in 2002 via SB 1078, which required 20 percent of the state's energy portfolio to be supplied by renewable sources such as solar, wind, hydroelectricity, geothermal, and bioenergy renewable energy by 2017. RPS goals have been accelerated over time to require the state's energy portfolio to be supplied by renewable sources in increasingly higher percentages. Since 2011, the RPS target has required all electricity retailers in the state, including investor-owned utilities such as Pacific Gas and Electric (PG&E), Southern California Edison (SCE), and San Diego Gas and Electric (SDG&E) to procure 33 percent of their energy sales from renewable sources by the end of 2020 (CPUC, 2018b). SB 350, passed in 2015, directs California utilities to further increase the amount of renewable energy to be delivered to customers to 50 percent by 2050. Collectively, PG&E, SCE, and SDG&E met the 33 percent goal in 2016 and are forecasted to reach 50 percent in 2020 (CPUC, 2018c). SB 100, passed in 2018, revised the goal of the program to achieve a 50 percent

renewable resources target by 2026, and a 60 percent target by 2030. Additionally, SB 100 created a policy of the state that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by 2045.

California Advanced Clean Cars Program/Zero Emission Vehicle Program

In January 2012, the California Air Resources Board (CARB) approved a new emissions-control program for vehicle model years 2017 through 2025. The program combines the control of smog, soot, and greenhouse gas with requirements for greater numbers of zero-emission vehicles into a single package of standards called Advanced Clean Cars. The components of the Advanced Clean Cars Program include the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and greenhouse gas emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years. In March 2017, CARB voted unanimously to continue with the vehicle greenhouse gas emission standards and the ZEV program for cars and light trucks sold in California past 2025 (CARB, 2017).

CARB Heavy Duty Regulations

CARB's On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation also requires diesel trucks that operate in California to be upgraded to reduce emissions. Newer heavier trucks must meet PM filter requirements beginning in 2012. Lighter and older heavier trucks must be replaced starting in 2015. By 2023 nearly all trucks would have 2010 model year engines or equivalent (CARB, 2018).

In 2004, CARB adopted a fourth tier of increasingly stringent advanced after treatment for new off-road compression-ignition engines, including those found in construction equipment. These "Tier 4" standards were phased-in across product lines from 2008 through 2015 and reduced exhaust emission levels by up to 95 percent compared to previous control strategies. In 2007, CARB first approved the Off-Road Regulation that requires off-road fleets to reduce their emissions by retiring, replacing, or repowering older engines (CARB, 2016).

Local

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction." The discussion below presents local policies for informational purposes only.

San Diego County General Plan

The Conservation and Open Space Element of the San Diego County General Plan contains the following goals related to energy conservation:

Goal COS-14: Sustainable Land Development. Land use development techniques and patterns that reduce emissions of criteria pollutants and GHGs through minimized transportation and energy demands, while protecting public health and contributing to a more sustainable environment.

Goal COS-18: Sustainable Energy. Energy systems that reduce consumption of non-renewable resources and reduce GHG and other air pollutant emissions while minimizing impacts to natural resources and communities.

City of Carlsbad General Plan

The Sustainability Element of the Carlsbad General Plan contains the following goal and policies related to energy efficiency:

Goal 9-G.3: Promote energy efficiency and conservation in the community.

***Policy 9-P.13*:** Use the city's Climate Action Plan as the platform for delineating and implementing measures to improve energy conservation, and increase renewable energy use (such as solar) in existing and new development.

***Policy 9-P.14*:** Support a regional approach to study the feasibility of establishing Community Choice Aggregation (CCA) or another program that increases the renewable energy supply and maintains the reliability and sustainability of the electrical grid.

City of Escondido Climate Action Plan and General Plan

The Escondido Climate Action Plan (E-CAP) establishes goals and policies that include energy use reduction measures as well as other sustainability strategies. The strategy outlined below would include fuel savings.

R2-C1: Construction Emissions Reductions

The following measures will be incorporated into the Screening Tables for New Development as options for new projects to reduce their emissions:

- Turn off all diesel-powered vehicles and gasoline-powered equipment when not in use for more than five minutes.
- Support and encourage ridesharing and transit incentives for the construction crew.

Additionally, the Resource Conservation element of the Escondido General Plan includes goals and policies related to energy. Applicable Escondido General Plan policies are outlined below.

Air Quality and Climate Projection Policy 7.2: Reduce regional greenhouse gas emissions through the following measure(s):

i) Encouraging the use of non-polluting alternative energy systems.

City of San Marcos General Plan

The Conservation and Open Space Element of the City of San Marcos' General Plan contains the following policies related to energy conservation to support the city's greenhouse gas reduction goals:

***Policy COS-4.5*:** Encourage energy conservation and the use of alternative energy sources within the community.

***Policy COS-4.6*:** Promote efficient use of energy and conservation of available resources in the design, construction, maintenance and operation of public and private facilities, infrastructure and equipment.

City of Vista General Plan

The Resource Conservation and Sustainability Element of the City of Vista's General Plan contain the following goal and policy that pertain to energy use.

RCS Goal 14: Promote efficient and sustainable use of energy resources through conservation, demand reduction activities, and alternate energy sources.

***RCS Policy 14.13*:** Support SDG&E in the location of new or expanded service facilities where appropriate, and support maintenance and operational activities through coordinated efforts with SDG&E staff and contractors.

3.6.3 Applicant Proposed Measures

No Applicant Proposed Measures (APMs) have been proposed by SDG&E to reduce potential energy-related impacts of the Project.

3.6.4 Environmental Impacts

Discussion

a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during construction or operation: *LESS THAN SIGNIFICANT IMPACT*.

The Project would not involve the use of electricity or natural gas; therefore, the analysis below relates to transportation-related fuel consumption.

Construction

The analysis in this section utilizes the greenhouse gas emissions estimates identified in Appendix C.1, *Air Quality and Greenhouse Gas Emissions Calculations,* to estimate gasoline and diesel fuel consumption volumes for construction-related equipment and vehicles. The fuel use calculations are provided in Appendix C.2, *San Marcos-Escondido TL 6975 69kV Project Fuel Use,* and are summarized below.

Construction would result in fuel consumption from the use of construction tools and equipment, haul truck trips, helicopter use, and vehicle trips generated from workers traveling to and from the Project sites. Construction is expected to consume a total of approximately 124,600 gallons of diesel fuel from construction equipment and haul truck trips, approximately 5,520 gallons of gasoline from construction worker vehicle trips, and approximately 730 gallons of jet fuel from helicopter activities. For reference, approximately 1.37 billion gallons of gasoline and 102 million

gallons of diesel were sold in San Diego County in 2016 (CEC, 2018c). Construction activities and corresponding fuel energy consumption would be temporary and localized, as the use of diesel fuel for heavy-duty equipment would not be a typical condition of the Project during operation.

In addition, a comparison of greenhouse gas emissions for similar electric transmission line projects in the area indicates that there are no unusual Project characteristics that would cause the use of construction equipment that would be less energy efficient compared with the other similar construction projects. Project construction-related CO_2 emissions were compared to the SDG&E TL 649 Wood-to-Steel Replacement Project (CPUC, 2018a), the SDG&E TL 695 and TL 6971 Reconductor Project (CPUC, 2017), and the SDG&E Tie-Line 637 Wood-to-Steel Project (CPUC, 2014) in San Diego County. Based on this comparison, as well as the Project's relatively low energy demand, construction-related fuel consumption by the Project would not result in inefficient, wasteful, or unnecessary energy use compared with the energy use for other construction projects in the region. This impact would be less than significant.

Operation and Maintenance

In general, routine operation and maintenance of the Project would be substantially the same as current conditions, but could result in a small number of additional worker vehicle trips during routine maintenance and inspection activities, due to additional structures and hardware implemented along Segment 2. These additional worker trips would result in a negligible increase in fuel consumption, as discussed in Section 3.3, *Air Quality*. Therefore, operation and maintenance would not result in the wasteful, inefficient, and/or unnecessary consumption of energy. This impact would be less than significant.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency: *NO IMPACT.*

The Project would result in a second 69 kV power line from the San Marcos Substation to the Escondido Substation to address North American Electric Reliability Corporation (NERC) violations that were identified during the California Independent System Operators (CAISO) 2015/2016 transmission planning process. The conversion of the single circuit to a double circuit would meet mandatory NERC reliability criteria in the Escondido Area Load Pocket and alleviate 69 kV congestion at the existing Escondido/San Marcos substations. As discussed above, the CEC's 2018 Integrated Energy Policy Report Update includes a goal to maintain the reliability of the electricity system while integrating larger amounts of variable wind and solar generation. Since the Project would address reliability issues, it would not conflict with the renewable energy goals of California's Integrated Energy Policy.

In terms of energy usage from heavy-duty vehicles used during construction, the USEPA and NHTSA established a comprehensive Heavy-Duty National Program that would reduce greenhouse gas emissions and increase fuel efficiency for on-road heavy-duty vehicles beginning with model year 2014 (USEPA, 2011). CARB's On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation also requires diesel trucks that operate in California to be upgraded to reduce emissions, such that by 2023 nearly all trucks would have 2010 model year engines or equivalent

(CARB, 2018). Vehicles used during Project construction would already incorporate these standards; therefore, the Project would not impede the efficient use of fuel for heavy-duty vehicles. Off-road equipment during construction would be subject to off-road equipment regulations such as Tier 4 standards or the Off-Road Regulation implemented by CARB, and would therefore not impede the implementation of CARB's energy efficiency programs. Additionally, the use of diesel fuel for heavy-duty vehicles and off-road equipment would not be a typical condition of the Project during operation; therefore, the Project would not conflict with the implementation of fuel efficiency plans.

In terms of light-duty vehicle energy usage, as described above, the NHTSA required manufacturers of light-duty vehicles to meet an estimated combined passenger car and light truck average fuel economy level of 34.1 miles per gallon (mpg) by model year 2016. In the course of more than 30 years, the NECPA regulatory program has resulted in improved fuel economy throughout the United States' vehicle fleet, and has also protected against inefficient, wasteful, and unnecessary use of energy. Regardless of the uncertainty for fleet-wide emissions past 2021, the projected fleet-wide mpg for light-duty vehicles is expected to reach 41.7 mpg by 2020 (USEPA, 2012, 2018). Additionally, CARB's Advanced Clean Cars Program will continue to improve fuel efficiency and reduce gasoline use through an increase of ZEVs and PHEVs. Vehicles used by Project construction and maintenance workers would already incorporate these standards and programs; therefore, the Project would not impede the efficient use of fuel for light-duty vehicles.

Since the Project has relatively low energy demand, would address reliability issues, and would comply with fuel and energy efficiency regulations, it would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency, and therefore no impact would occur.

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3.7 Geology, Soils, Seismicity, and Paleontological Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
7. GEOLOGY, SOILS, SEISMICITY AND PALEONTOLOGICAL RESOURCES— Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
iv) Landslides?	☐	☒	☐	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☒	☐	☐
d) Be located on expansive or corrosive soil, creating substantial direct or indirect risks to life or property?[1]	☐	☒	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

This impact analysis considers the potential geology, soils, seismicity, and paleontological impacts associated with the construction, operation, and maintenance of the Project. The resource-specific study area for impacts related to geology, soils, and seismicity is defined as the Project footprint and vicinity, including all areas of temporary and/or permanent ground disturbance. For paleontological resources, the study area includes all areas within 1 mile of the immediate Project alignment, and in particular, the Santiago Formation described in more detail below.

[1] The CBC, based on the International Building Code (IBC) and the now defunct Uniform Building Code (UBC), no longer includes a Table 18-1-B. Instead, Section 1803.5.3 of the CBC describes the criteria for analyzing expansive soils.

3.7.1 Environmental Setting

Local Geology

The study area lies within the Peninsular Ranges Geomorphic Province in northern San Diego County. The Peninsular Ranges Physiographic Province extends from the West Coast of the United States to the Colorado Desert on the east and extends just north of the Los Angeles area to the Southern California border. All of the geologic units within the study area are identified and depicted in **Table 3.7-1** and **Figure 3.7-1**, *Geologic Units in the Study Area*, as described in the geologic map of the area (Kennedy and Tan, 2007) and described in more detail in the paleontological resource assessment prepared for the Project (PaleoServices, 2017).

Unit Descriptions

The geologic unit designations given in this report come from the designations given on the Kennedy and Tan (2007) geologic map of the Oceanside quadrangle.

Young Alluvial Floodplain Deposits (Qya)

Approximately 0.5 mile of Segments 1 and 3 are underlain by young alluvial floodplain deposits. These deposits are late Pleistocene to Holocene (11,700 years ago to recent) in age and consist of poorly consolidated and poorly sorted permeable flood-plain deposits of sand, silt, and clay (Kennedy and Tan, 2007).

The Society of Vertebrate Paleontology (SVP) defines paleontological resources as being older than the middle Holocene, or about 5,000 years. Therefore, younger Holocene alluvium is considered to have low paleontological potential at the surface, with increasing potential in deeper (and older) layers in the subsurface (PaleoServices, 2017).

Santiago Formation (Tsa)

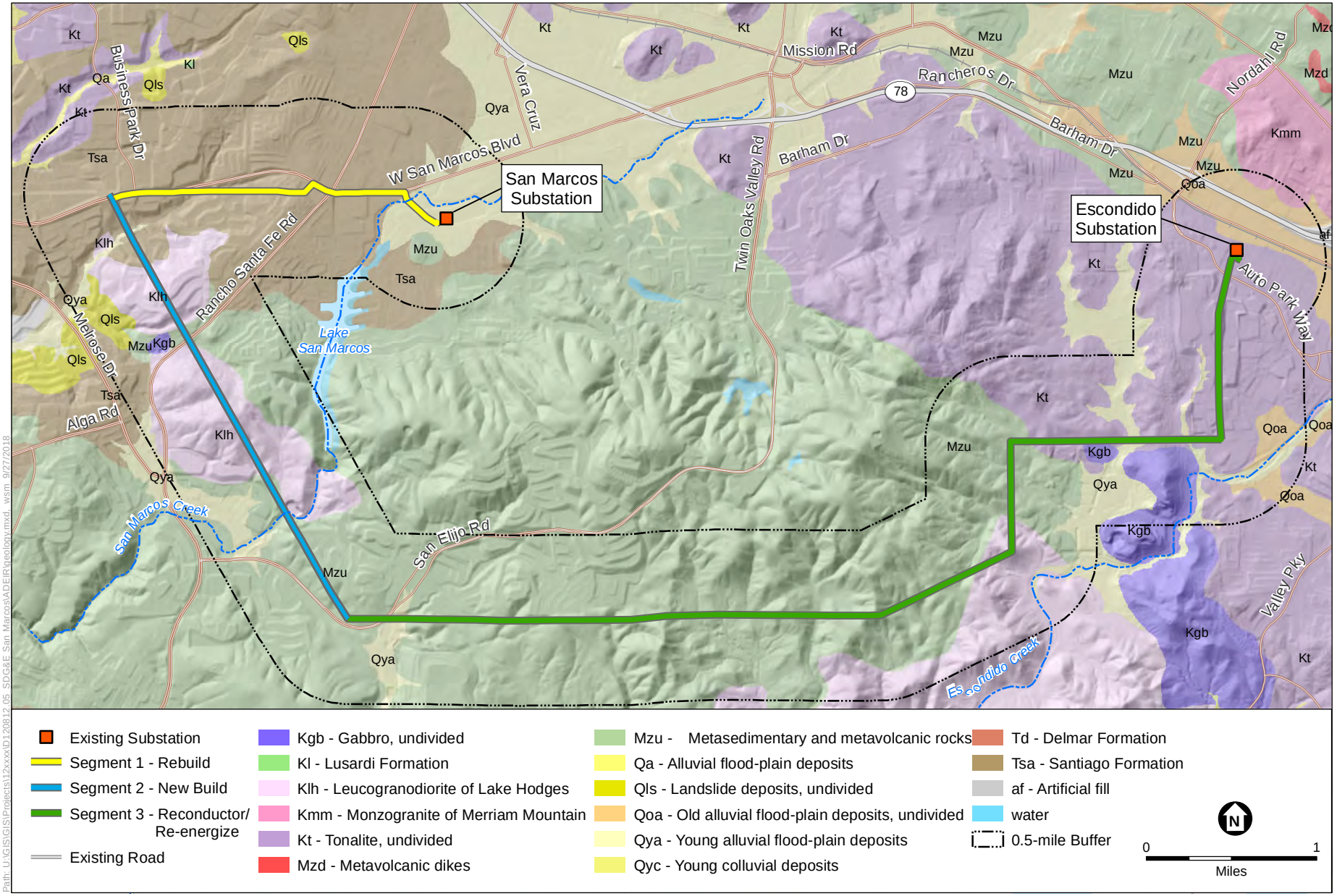
Approximately 2.2 miles of Segments 1 and 2 are underlain by middle Eocene-age (approximately 40 to 49 million years ago) rocks of the Santiago Formation. The Santiago Formation is divided into three distinct members, of which the central and upper members may be impacted by the Project. The central member consists of gray and brownish-gray soft, medium-grained, moderately well sorted arkosic sandstone. The upper member consists of gray, coarse-grained arkosic sandstone and grit. Vertically and laterally throughout the formation there exists greenish-brown, massive claystone interbeds, tongues and lenses of lagoonal claystone and siltstone (Kennedy and Tan, 2007).

The central and upper members consist of arkosic sandstone representing deposition in continental, estuarine, and marine environments, and both preserve significant fossil resources including plants, invertebrates, and vertebrates such as reptiles (e.g., turtles, snakes, lizards, crocodiles), birds, and mammals (e.g., opossums, primates, rodents, rhinoceros, and many others) (PaleoServices, 2017). Therefore, the Santiago Formation has high potential for paleontological resources.

TABLE 3.7-1
GEOLOGIC UNITS IN THE STUDY AREA

Symbol	Unit Name	Period	Description
Segment 1			
Qya	Young alluvial flood-plain	Quaternary (Holocene and Late Pleistocene Epoch)	Poorly consolidated, poorly sorted, permeable flood-plain deposits and sandy, silty, or clay-bearing alluvium
Tsa	Santiago Formation	Quaternary (Middle Eocene)	Medium to coarse-grained Arkosic sandstone that is poorly to moderately sorted. Throughout the formation are massive claystone interbeds and lenses that are often fossiliferous.
Segment 2			
Tsa	Santiago Formation	Quaternary (Middle Eocene)	Medium to coarse-grained Arkosic sandstone that is poorly to moderately sorted. Throughout the formation are massive claystone interbeds and lenses that are often fossiliferous.
Kt	Tonalite	mid-Cretaceous	Massive, coarse-grained, light gray hornblende-biotite tonalite
Kgb	Gabbro	mid-Cretaceous	Massive, coarse-grained, dark gray, and black biotite-hornblende-hypersthene gabbro
Klh	Leucogranodiorite of Lake Hodges	mid-Cretaceous	Massive, medium- to coarse-grained biotite-hornblende, leucogranodiorite
Mzu	Metasedimentary and metavolcanic rocks	Jurassic	Wide variety of unmetamorphosed and low to high metamorphic grade volcanic and sedimentary rocks. They include prebatholithic (metamorphosed) and synbatholithic (unmetamorphosed) rocks, including metavolcanic rocks (Santiago Peak Volcanics) of Larsen.
Segment 3			
Qya	Young alluvial flood-plain	Quaternary (Holocene and Late Pleistocene Epoch)	Poorly consolidated, poorly sorted, permeable flood-plain deposits and sandy, silty, or clay-bearing alluvium
Kt	Tonalite	mid-Cretaceous	Massive, coarse-grained, light gray hornblende-biotite tonalite
Kgb	Gabbro	mid-Cretaceous	Massive, coarse-grained, dark gray, and black biotite-hornblende-hypersthene gabbro
Klh	Leucogranodiorite of Lake Hodges	mid-Cretaceous	Massive, medium- to coarse-grained biotite-hornblende, leucogranodiorite
Mzu	Metasedimentary and metavolcanic rocks	Jurassic	Wide variety of unmetamorphosed and low to high metamorphic grade volcanic and sedimentary rocks. They include prebatholithic (metamorphosed) and synbatholithic (unmetamorphosed) rocks, including metavolcanic rocks (Santiago Peak Volcanics) of Larsen.

SOURCE: Kennedy and Tan, 2007



3.7-4

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SOURCE: SDGE, 2018; Kennedy and Tan, 2007

TL 6975 San Marcos to Escondido Project

Figure 3.7-1

Geologic Units in the Study Area

ESA

Cretaceous Intrusive Igneous Rocks (Kgb, Klh, Kt)

Approximately 2.4 miles of Segments 2 and 3 are underlain by several Cretaceous intrusive igneous rock units described in Table 3.7-1.

Plutonic igneous rocks form from the crystallization of magma within the Earth's crust and, therefore, will not preserve fossil resources (PaleoServices, 2017). These units have no potential for paleontological resources.

Mesozoic Metasedimentary and Metavolcanic Rocks, Undivided (Mzu)

Approximately 4.7 miles of Segment 3 is underlain by Mesozoic metasedimentary and metavolcanic rocks. This unit consist of sedimentary rocks interbedded with volcanic flows, all of which has been subjected to low-grade metamorphism.

While low-grade metasedimentary rocks can preserve fossil resources in some circumstances, none are documented from the vicinity of the study area, which is most likely underlain by metavolcanic rocks (PaleoServices, 2017). Therefore, this unit is assigned low paleontological potential in the study area.

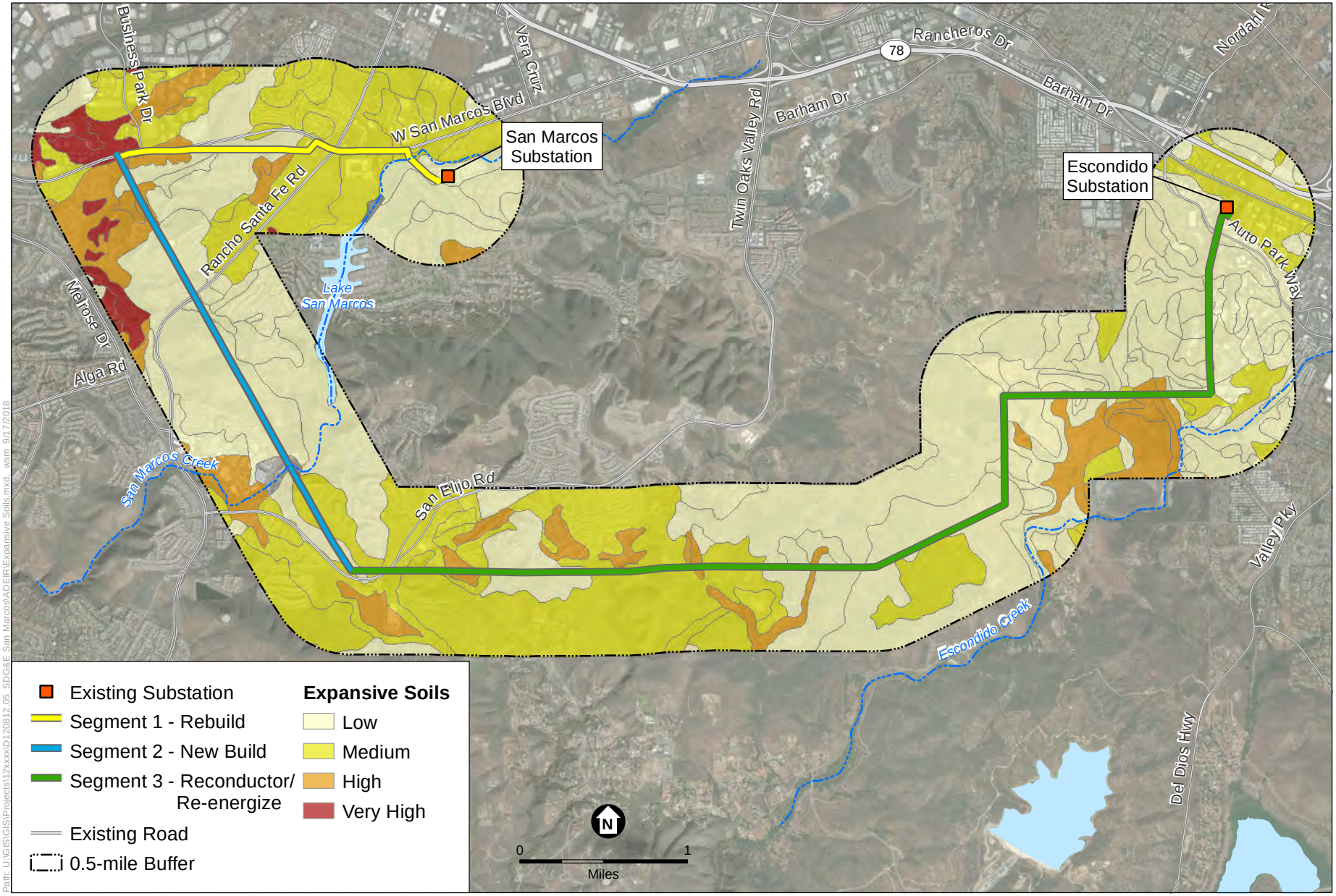
Soils

Soil Expansion

Expansive soils are soils that possess a "shrink-swell" characteristic, also referred to as linear extensibility. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying; the volume change is reported as a percent change for the whole soil. Changes in soil moisture can result from rainfall, landscape irrigation, utility leakage, roof drainage, and/or perched groundwater.[2] Expansive soils are typically very fine-grained and have a high to very high percentage of clay. Structural damage may occur incrementally over a long period of time, usually as a result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils. Linear extensibility is used to determine the shrink-swell potential of soils. If the linear extensibility is more than 3 percent, shrinking and swelling may cause damage to building, roads, and other structures. (NRCS, 2018).

While a majority of the area surrounding the Project has a low shrink-swell potential, there are portions of each segment that have a moderate to very high shrink-swell potential, as shown on **Figure 3.7-2**, *Expansive Soils*. A geotechnical investigation was performed by GEOCON Inc., and laboratory tests indicate that soils may be moderately to highly expansive. This is based on the California Building Code (CBC) criterion that soils with an expansion index greater than 20 are considered expansive (GEOCON Inc., 2017; NRCS, 2017b). The linear extensibility data from the Natural Resources Conservation Service (NRCS) is based on the general characteristics of the types of soils in the Area of Interest. The laboratory results from GEOCON Inc. are based on actual soil samples taken from locations within the study area, and are much more accurate.

[2] Perched groundwater is a local saturated zone above the water table that typically exists above an impervious layer (such as clay) of limited extent.



SOURCE: SDGE, 2018; NRCS, 2018

TL 6975 San Marcos to Escondido Project

Figure 3.7-2
Expansive Soils

ESA

Soil Corrosivity

The corrosivity of soils pertains to the potential for certain soils to cause an electrochemical or chemical reaction that can corrode or weaken uncoated steel or concrete. The rate at which these materials corrode is dependent on a number of variables, including but not limited to: soil moisture, texture, mineral content, and acidity. The rate of corrosion of steel is based on soil moisture, particle-size distribution, acidity, and electrical conductivity. Corrosion of concrete is based on the sulfate and sodium content, texture, moisture and acidity of the soil. The risk of corrosion is expressed as low, moderate, or high.

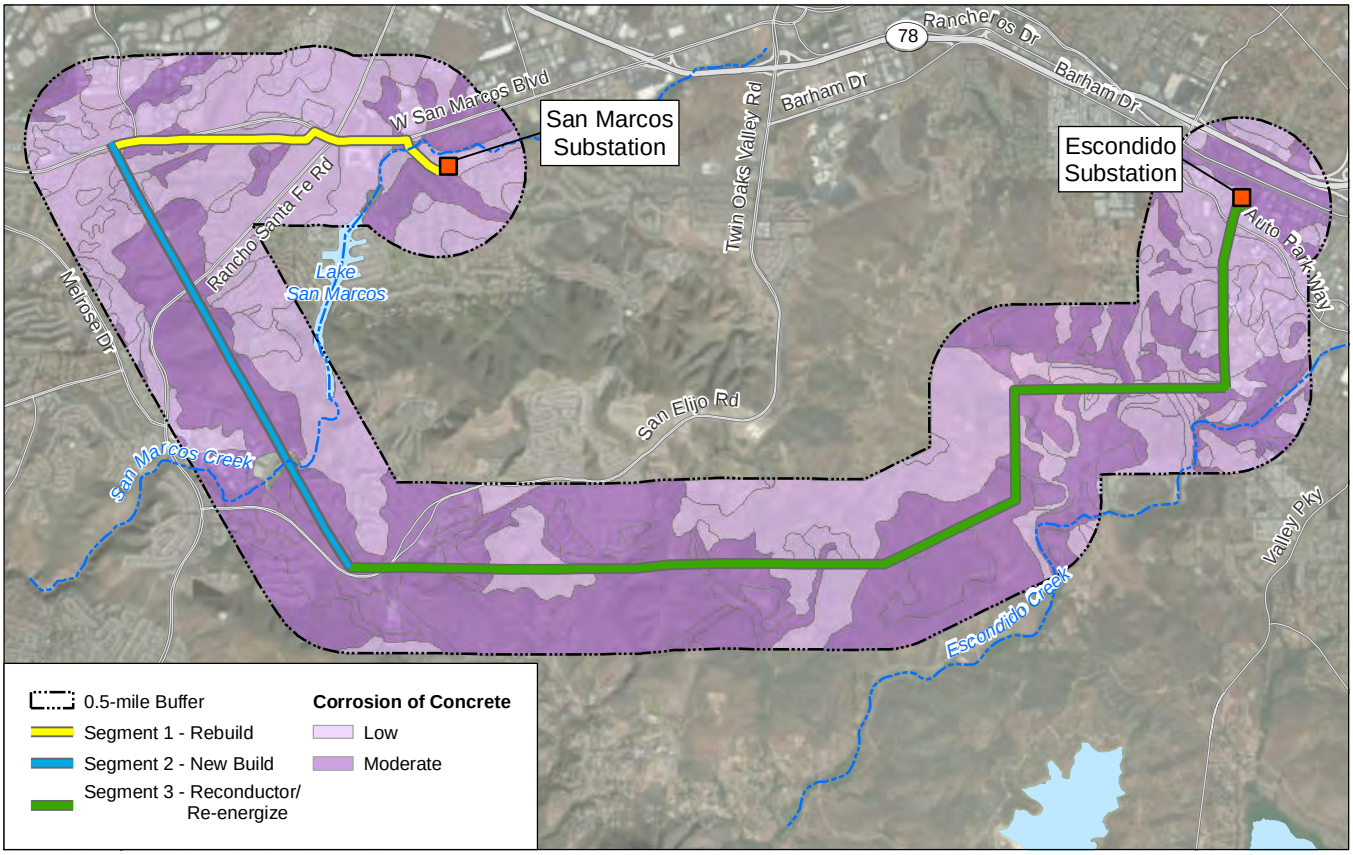
The NRCS Web Soil Survey, provides data assessing the corrosivity of soils, specifically the corrosion of steel and concrete (NRCS, 2017b, 2017c). Analysis of the study area, with an emphasis on locations where the components of the Project that would include underground installation of power lines or where structures would come into contact with soils beneath the surface, shows some variability in soil corrosivity, shown in **Figure 3.7-3**, *Corrosive Soils*. While the evaluation or identification of corrosive materials was not part of the scope of services provided by GEOCON Inc., one sample (taken from Segment 1, on Discovery Street) was tested for corrosion potential; the sample is not considered corrosive (GEOCON Inc., 2017). The Web Soil Survey (2017) identifies soils along Segments 2 and 3 that have a high potential for corrosion of uncoated steel and a moderate potential for corrosion of concrete. The two types of poles that would be installed as part of the Project would either be galvanized steel or both galvanized and anchored to a concrete-pier foundation. While the steel poles would be protected, the concrete foundation would be exposed to moderately corrosive soils along Segments 2 and 3.

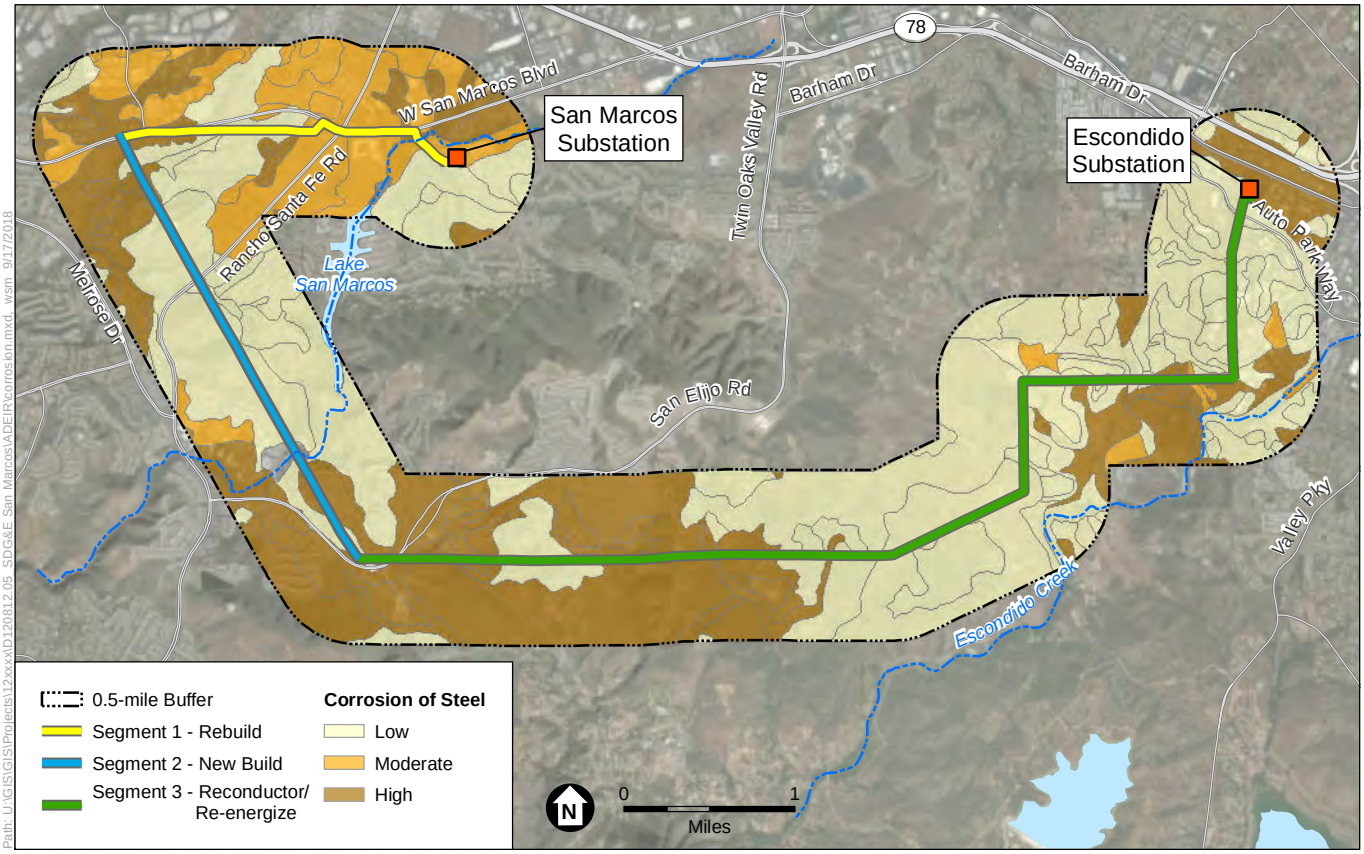
As a part of investigating the level of induced AC interference effects of the existing power lines on the existing natural gas pipelines within the same alignment, the potential to induce corrosion in the pipelines was investigated (ARK, 2017). The investigation details are discussed in Section 3.9, *Hazards and Hazardous Materials*. The investigation results concluded that the presence of the power lines does induce a current to the pipelines and exceeds acceptable "design limits." To reduce the induced AC interference effects, the investigation recommended the installation of a series vertical deep wells along pipeline sections, as well as three AC coupon test stations[3] to monitor the pipeline currents, along West San Marcos Boulevard.

Subsidence

Subsidence is the gradual lowering of the land surface due to compaction of underlying materials. Subsidence can occur as a result of the extraction of groundwater and oil, which can cause subsurface clay layers to compress and lower the overlying land surface. The Project does not include the extraction of water or oil.

[3] A "coupon test station" facilitates the measurement of both alternating current (AC) and direct current (DC) in belowground metal pipes. This data is used to monitor the effects of the electrical current and the surrounding fill on the integrity of the pipe.





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SOURCE: NRCS, 2018

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Figure 3.7-3

Corrosive Soils

Earthquake Hazards

Faults and Seismicity

The study area is located in a historically seismically active portion of California. While it has been over 80 years since the last significant fault rupture in the area, the faults in the area have the potential to rupture in the near future (Field et al., 2015). The 2014 Working Group on California Earthquake Probabilities[4] concluded that there is a high probability that a M_W 6.7 earthquake or higher will strike Southern California in the next 30 years (Field et al., 2015). There are no known faults in the immediate study area (CGS, 2010a). However, there are a number of fault systems in the region (CGS, 2010a). The most significant of these fault systems are the Newport-Inglewood/Rose Canyon Fault Zone, the Elsinore Fault Zone, and the San Andreas Fault Zone (**Table 3.7-2** and **Figure 3.7-4**).

TABLE 3.7-2
FAULTS IN PROXIMITY TO THE STUDY AREA

Fault Name	Approximate Distance (miles) from Study Area and Direction (relative to Study Area)	Years Since Last Known Rupture	Approximate Maximum Earthquake Magnitude (M_W*)
Newport-Inglewood/Rose Canyon fault zone (Del Mar Section)	9.5 miles southwest	81	7.5
Elsinore fault zone (Julian Section)	15.5 miles northeast	1,226	7.9
Elsinore fault zone (Temecula Section)	16.0 miles northeast	281	7.9
San Andreas fault zone (Coachella Section)	>60 miles northeast	334	8.0

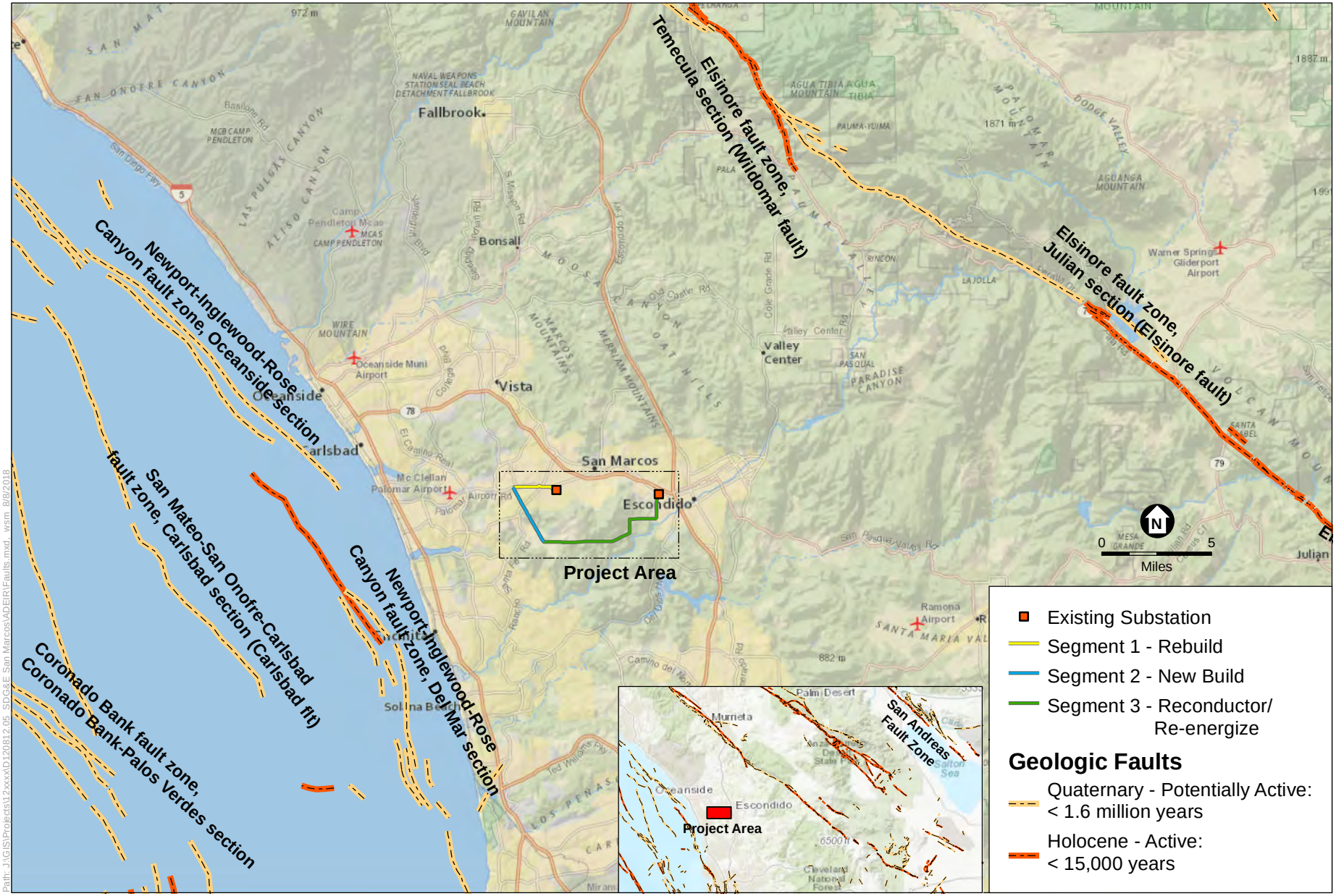
* The moment magnitude (M_W) of an earthquake is the measure of the total energy expended during an earthquake; It is used here in place of the local magnitude (M_L) (i.e., the Richter magnitude scale), as local magnitude is an inaccurate measure of large earthquakes (USGS, 2018b).

SOURCE: Field et al., 2015; GEOCON Inc., 2017.

Fault Rupture

Faults are planar features within the earth's crust that have formed to release strain caused by the dynamic movements of the earth's major tectonic plates. An earthquake on a fault is produced when these strains overcome the inherent strength of the earth's crust and the rock ruptures. The rupture causes seismic waves that propagate through the earth's crust, producing the ground shaking effect known as an earthquake. The rupture also causes variable amounts of slip along the fault, which may or may not be visible at the earth's surface (USGS, 2018a).

4 Also referred to as WGCEP 2014, this is a working group comprised of seismologists from the U.S. Geological Survey (USGS), California Geological Survey (CGS), Southern California Earthquake Center (SCEC), and California Earthquake Authority (CEA).



SOURCE: SDGE, 2018; CGS, 2010

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Figure 3.7-4
Active Faults

ESA

The magnitude and nature of fault rupture can vary for different faults or even along different strands of the same fault. Future faulting is generally expected along different segments of faults with recent activity.[5] Structures, transportation facilities, and utility systems crossing fault traces are at risk during a major earthquake due to ground rupture caused by differential lateral and vertical movement on opposite sides of the active fault trace (USGS, 2018c). While this region of California is seismically active, there are no active faults that cross the study area. The closest fault to the Project right-of-way is the Del Mar Section of the Newport-Inglewood/Rose Canyon fault zone. It is located approximately 9.5 miles to the southwest of the Project site, and has the potential to produce an earthquake with a maximum magnitude of 7.5 (GEOCON Inc., 2017; Field et al., 2015). The San Andreas and Elsinore fault zones have been delineated on an Earthquake Fault Zone Map and are considered Earthquake Fault Zones (A-P Zone) (CGS, 2018). However, due to the distances from the Project, any surface rupture of these faults would not impact the study area.

Ground Shaking

Ground shaking due to a seismic event can cause extensive damage to life and property, and may affect areas hundreds of miles away from the earthquake's epicenter. The extent of the damage varies by event and is determined by several factors, including (but not limited to): magnitude and depth of the earthquake, distance from epicenter, duration and intensity of the shaking, underlying soil and rock types, and integrity of structures (USGS, 2018c).

The entire Southern California region, including the study area, could be subject to strong ground shaking during earthquakes. According to the ShakeMap that corresponds with the earthquake planning scenario generated by the United States Geological Survey (USGS), if a M_W 7.6 event were to occur on the Julian Section of the Elsinore fault zone, the study area may experience strong to very strong ground shaking with moderate to heavy damage expected (USGS, 2016a). Additionally, a similar scenario for a M_W 7.5 earthquake on the Newport-Inglewood/Rose Canyon fault zone indicates strong to moderately severe ground shaking in the event of an earthquake in this fault zone (USGS, 2016b).

In 2015, the 2014 Working Group on California Earthquake Probabilities presented the third Uniform California Earthquake Rupture Forecast (UCERF3). According to this report, there is a 5 percent probability of a M_W 6.7 earthquake, or greater, and a 93 percent probability of a M_W 6.7 or greater earthquake in the Southern California Region over the next 30 years (Field et al., 2015).

Liquefaction and Lateral Spreading

Liquefaction is a phenomenon in which unconsolidated, water saturated sediments become unstable due the effects of strong seismic shaking. During an earthquake, these sediments can behave like a liquid, potentially causing severe damage to overlying structures. Lateral spreading is a variety of minor landslide that occurs when unconsolidated liquefiable material breaks and spreads due to the effects of gravity, usually down gentle slopes. Liquefaction-induced lateral

[5] California Geological Survey, 2008. Guidelines for Evaluating and Mitigation Seismic Hazards, CGS Special Publication 117A.

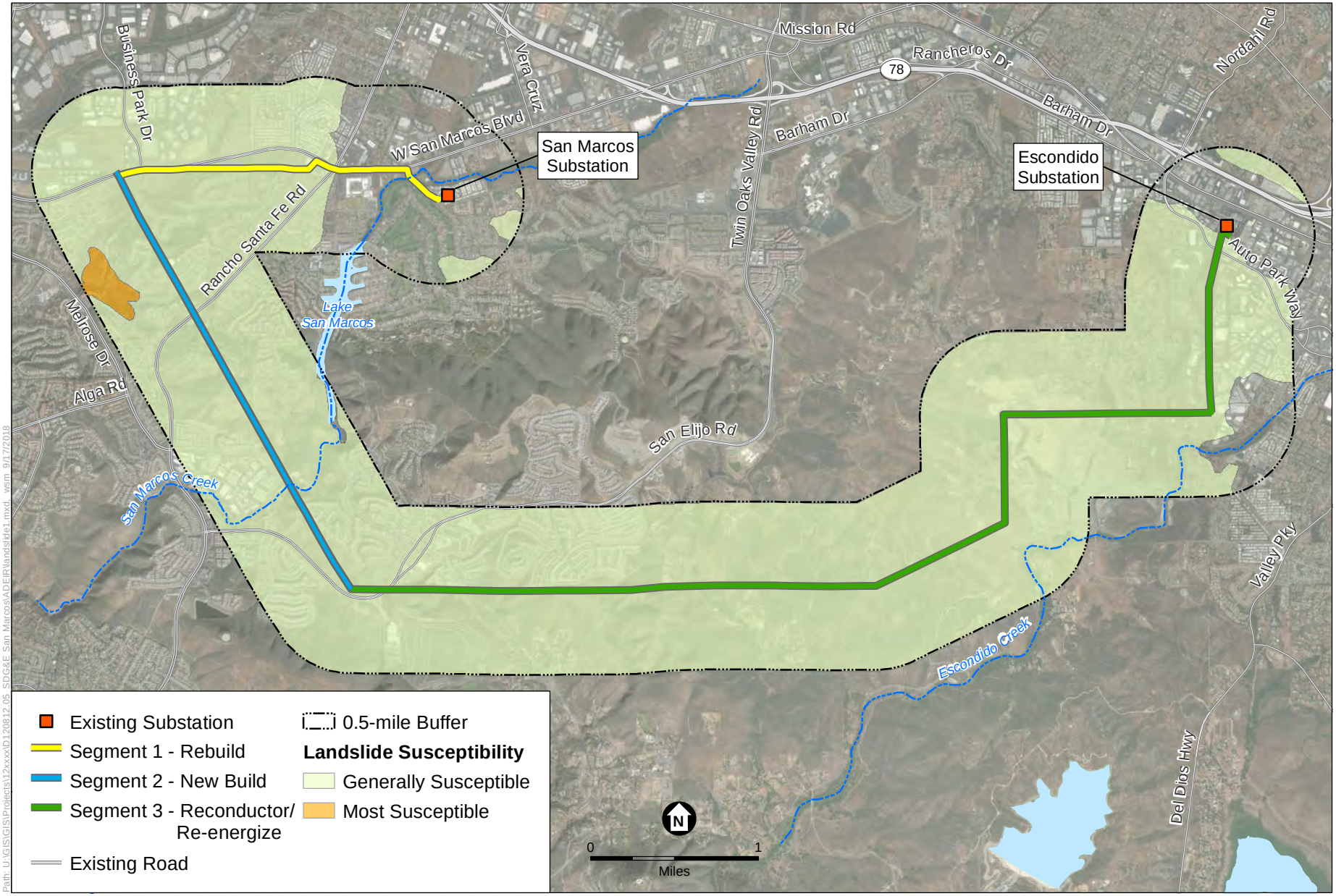
spreading is defined as the finite, lateral displacement of gently sloping ground as a result of pore-pressure buildup or liquefaction in a shallow underlying deposit during an earthquake. The occurrence of this phenomenon is dependent on many complex factors, including the intensity and duration of ground shaking, particle-size distribution, and density of the soil.

The potential damaging effects of liquefaction include differential settlement, loss of ground support for foundations, ground cracking, heaving and cracking of structure slabs due to sand boiling, and buckling of deep foundations due to ground settlement. Dynamic settlement (i.e., pronounced consolidation and settlement from seismic shaking) may also occur in loose, dry sands above the water table, resulting in settlement of and possible damage to overlying structures. In general, a relatively high potential for liquefaction exists in loose, sandy soils that are within 50 feet of the ground surface and are saturated (below the groundwater table). Lateral spreading can move blocks of soil, placing strain on buried pipelines that can lead to leaks or pipe failure.

The City of San Marcos General Plan Safety Element includes a map of Soil Slippage Susceptibility that delineates areas of landslide and liquefaction susceptibility. While most of Segments 1 and 2 are in an area of low susceptibility, there are small areas along Segment 2 that are mapped as moderate susceptibility to landslide and liquefaction (City of San Marcos, 2012). There are no Liquefaction Hazard Areas mapped on the Seismic and Geologic Hazards map included in the Community Protection Element of the Escondido General Plan (City of Escondido, 2012a). There is no information available on the susceptibility of the unincorporated areas of the Project in the San Diego County General Plan Safety Element (San Diego County, 2011). The geotechnical conditions report prepared by GEOCON Inc. acknowledges the potential for liquefaction in the loose saturated alluvial deposits below the groundwater level, and that liquefaction induced settlement of up to 4 inches may occur (GEOCON Inc., 2017). (See Figure 3.7-1 for a map of the geologic units in the area.) There is an approximately 0.3-mile portion of Segment 1 that overlies young alluvial flood-plain deposits (on Discovery Street), as well as a small portion of Segment 3; however, there are no proposed structures where the alluvial deposits are located along Segment 3.

Landslides

Landslides are one of the various types of downslope movements in which rock, soil, and other debris are displaced due to the effects of gravity. The potential for material to detach and move down slope depends on a variety of factors including the type of material, water content, steepness of terrain, and more. The California Geological Survey (CGS) provides Landslide Hazard Identification Maps which indicate potential areas of concern. According to the Relative Landslide Susceptibility and Landslide Distribution map by Tan and Giffen (1995a-c), Segments 2 and 3 are mapped as “Generally Susceptible” (**Figure 3.7-5**). This is designated on the map as a “3-1” or “3-2” subarea. Areas with this designation are at or near their stability limits due to the materials that comprise the area and the steepness of the slopes. Subarea 3-1 differs from 3-2 in that subarea 3-2 contains areas with steeper slopes. Both subareas are mapped in the study area (Tan and Giffen, 1995a-c).



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SOURCE: SDGE, 2018; NRCS, 2018; CDOC, 1995

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Figure 3.7-5
Landslide Potential

ESA

Paleontological Resources

Paleontological resources are the fossilized remains of plants and animals, including vertebrates (animals with backbones; mammals, birds, fish, etc.), invertebrates (animals without backbones; starfish, clams, coral, etc.), and microscopic plants and animals (microfossils), and can include mineralized body parts, body impressions, or footprints and burrows. They are valuable, non-renewable, scientific resources used to document the existence of extinct life forms and to reconstruct the environments in which they lived. Fossils can be used to determine the relative ages of the depositional layers in which they occur and of the geologic events that created those deposits. The age, abundance, and distribution of fossils depend on the geologic formation in which they occur and the topography of the area in which they are exposed. The geologic environments within which plants or animals became fossilized usually were quite different from the present environments in which the geologic formations exist.

PaleoServices, operated by the San Diego Natural History Museum (SDNHM), conducted a paleontological resources assessment for the Project that consisted of a search of the records maintained at SDNHM and a review of the relevant scientific literature, geologic mapping, and unpublished paleontological reports (PaleoServices, 2017).

Paleontological Resources Potential

The paleontological resources assessment (PaleoServices, 2017) provides the paleontological potential ratings of the geologic units in the study area, as described above under *Local Geology, Unit Descriptions*. Descriptions of these paleontological potential ratings, as provided by PaleoServices, are as follows:

High Potential: Geologic units with high potential have produced, or are likely to produce, significant vertebrate, invertebrate, or paleobotanical remains. High potential geologic units may contain fossil materials that are rare, well-preserved, critical for stratigraphic or paleoenvironmental interpretation, and/or provide important information about the paleobiology, and evolutionary history (phylogeny) of animal and plant groups.

Moderate Potential: Moderate potential is assigned to geologic units known to contain paleontological localities with fossil material that is poorly preserved, common elsewhere, or stratigraphically unimportant. The moderate potential category is also applied to geologic units that are judged to have a strong, but unproven, potential for producing important fossil remains.

Low Potential: Low potential is assigned to geologic units that, based on their relatively young age and/or high-energy depositional history, are judged unlikely to produce important fossil remains. Typically, low potential units produce fossil remains in low abundance, or only produce common/widespread invertebrate fossils whose taphonomy, phylogeny, and ecology is already well understood.

No Potential: Geologic units with no potential are either entirely igneous in origin and therefore do not contain fossil remains, or are moderately to highly metamorphosed and thus any contained fossil remains have been destroyed. Artificial fill materials also have no potential, because the stratigraphic and geologic context of any contained organic remains (i.e., fossils) has been lost.

As described above, the Santiago Formation is considered to have a high potential for containing significant paleontological resources. Another unit, young alluvial floodplain deposits, has low paleontological potential at the surface that increases to high potential in the subsurface. The Santiago Formation underlies Segment 1 and a portion of Segment 2 (see Figure 3.7-1), and is known to contain scientifically important marine and estuarine invertebrate fossils, as well as terrestrial vertebrate fossils. Young Holocene alluvium overlies Santiago Formation where Segment 1 begins on Discovery Street, and so maintains a high potential for paleontological resources at depth.

Unique Paleontological Resources

The County of San Diego defines a unique paleontological resource as any fossil or assemblage of fossils, or paleontological resource site or formation, that meets any of the following criteria:

- Is the best example of its kind locally or regionally;
- Illustrates a paleontological or evolutionary principle (e.g. faunal succession; plant or animal relationships);
- Provides a critical piece of paleobiological data (illustrates a portion of geologic history or provides evolutionary, paleoclimatic, paleoecological, paleoenvironmental or biochronological data);
- Encompasses any part of a "type locality" of a fossil or formation;
- Contains a unique or particularly unusual assemblage of fossils;
- Occupies a unique position stratigraphically within a formation; or
- Occupies a unique position, proximally, distally or laterally within a formation's extent or distribution. (County of San Diego, 2009)

This analysis uses this definition of unique paleontological resources.

Paleontological Resources Records Search

The search of the paleontological records housed at the SDNHM revealed 42 documented fossil collection sites located with a 1-mile radius of the Project. All of the localities are from the central member of the Santiago Formation, which is Eocene in age. The localities produced trace fossils (e.g., sponge borings, worm burrows, and coprolites) and fossilized impressions or remains of plants (e.g., flowering plants and horsetails), shells of marine invertebrates (e.g., bryozoans, ostracods, snails, mussels, oysters, clams, tusk shells, barnacles, crabs, and sea urchins), and teeth and bones of marine vertebrates (e.g., sharks, rays, and bony fish) and terrestrial vertebrates (e.g., softshell turtles and crocodiles) (PaleoServices, 2017).

3.7.2 Regulatory Setting

Federal

Occupational Safety and Health Administration

The Occupational Safety and Health Act requires employers to comply with safety and health standards promulgated by the Occupational Safety and Health Administration (OSHA). OSHA Excavation standards, 29 Code of Federal Regulations (CFR) Part 1926, Subpart P, contain requirements for excavation and trenching operations.

Paleontological Resources Preservation Act

The Paleontological Resources Protection Act, as provided in Title VI, Subtitle D, Paleontological Resources Preservation of the Omnibus Public Land Management Act of 2009 (Public Law 111-011), requires the preservation, management, and protection of paleontological resources on lands administered by the Bureau of Land Management, the Bureau of Reclamation, the National Park Service, and the U.S. Fish and Wildlife Service and ensure that these federally owned resources are available for current and future generations to enjoy as part of America's national heritage. The Act address the management, collection, and curation of paleontological resources from federal lands using scientific principles and expertise, including collection in accordance with permits; curation in an approved repository; and maintenance of confidentiality of specific locality data. The Paleontological Resources Preservation Act authorizes civil and criminal penalties for illegal collecting, damaging, otherwise altering or defacing, or for selling paleontological resources, and the proposed rule further details the processes related to the civil penalties, including hearing requests and appeals of the violation or the amount of the civil penalties.

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. In accordance with this act, the State Geologist established regulatory zones, called "earthquake fault zones," around the surface traces of active faults and published maps showing these zones. Within these zones, buildings for human occupancy cannot be constructed across the surface trace of active faults. Each earthquake fault zone extends approximately 200 to 500 feet on either side of the mapped fault trace, because many active faults are complex and consist of more than one branch. There is the potential for ground surface rupture along any of the branches.

California Building Code

The California Building Code (CBC), which is codified in Title 24 of the California Code of Regulations (Cal. Code Regs.), Part 2, was promulgated to safeguard the public health, safety, and general welfare by establishing minimum standards related to structural strength, means of egress to facilities (entering and exiting), and general stability of buildings. The purpose of the CBC is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction. The California Building

Standards Commission administers Title 24, and, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or they are not enforceable. The provisions of the CBC apply to the construction, alteration, movement, replacement, repair, location, maintenance, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

While the Project does not propose to erect any buildings or structures that would be occupied by people, the Project remains under the purview of the CBC because the towers, poles, foundations, retaining walls, etc., associated with this Project are considered structures. The California Health and Safety Code defines a "structure" as an edifice or building of any kind or any piece of work artificially built or composed of parts joined together in some definite manner (Health and Safety Code § 18908). Title 24 also states that the construction, installation, alteration, removal, repair, or replacement of any electrical system are regulated by CBC.

Relevant to the Project, Chapter 18 of the CBC covers the requirements of geotechnical investigations, including expansive soils (§1803); excavation, grading, and fills (§1804); load-bearing of soils (§1806); as well as foundations (§1808), shallow foundations (§1809), and deep foundations (§1810). Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also addresses mitigation measures to be considered in structural design, which may include ground stabilization, selecting appropriate foundation type and depths, selecting appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions (ICC, 2016).

For a given project, the preliminary geotechnical report based on the initial design is prepared prior to the CEQA document (as has been done for this project in the form of the Geotechnical Conditions Report by GEOCON) and to a level sufficient to support the CEQA document. The CEQA document analyzes the impacts with the understanding that subsequent to the certification of the CEQA document, the project applicant will complete the final design, including the preparation of a final geotechnical report. The final geotechnical report would include the results and recommendations of the preliminary geotechnical report, and add further detail if needed to address the final project design and relevant mitigation measures identified in the CEQA document (e.g., if a pole location moves in response to a mitigation measure to a location that was not studied in the preliminary report). In the case of the Project, the final geotechnical report will be in the form of a supplemental geotechnical report addressing specific geotechnical hazards that may impact the Project.

California Public Utilities Commission General Orders 95 and 128

California Public Utilities Commission (CPUC) General Orders (GO) 95 and 128 apply to construction and reconstruction of overhead and underground electric lines in California. The replacement of poles, towers, or other structures is considered reconstruction and requires adherence to all strength and clearance requirements of this order. Since the Project proposes to

construct, reconstruct, and reconductor power lines, these orders apply to the Project. To recognize relative hazards, lines are segregated into classes defined in CPUC Rule 20.6. These classes of lines and the relation of lines to each other and to objects over which they are constructed determine construction requirements. GO 95 applies to construction activities that are associated with overhead electric line construction, which includes conductors or circuits added to crossarms, any element added to a pole, and the replacement of poles towers or other structures. GO 128 provides general standards for the construction of construction of underground electrical supply systems, including any element added to an existing underground system. The maintenance, reconstruction, and/or replacement of any existing underground system must adhere to GO 128 as well.

Design of transmission lines must adhere to the National Electric Safety Code. Guidance documents are published by the Institute of Electrical and Electronics Engineers and American Society of Civil Engineers (ASCE), including ASCE 74, Guidelines for Electrical Transmission Line Structural Loading, which states, "Transmission structures are not typically designed for vibration caused by earthquakes because these loads are less than that of wind/ice combinations." The exception to this general rule occurs if the tower is built in liquefiable materials, in which case the materials may not support the weight of the tower and tower foundation during a seismic event.

National Pollutant Discharge Elimination System (NPDES) Construction General Permit

Project construction would disturb 1.0 acre or more of land surface and could affect the quality of stormwater discharges into waters of the U.S.; therefore, it would be subject to the *NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). The Construction General Permit regulates construction-related discharges of pollutants in stormwater to waters of the U.S. from sites that disturb 1.0 or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than 1.0 acre of land surface. The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including installation of water pipelines and other utility lines. See Section 3.9, *Hydrology and Water Quality*, for additional details.

Public Resources Code Section 5097.5 and Section 30244

State requirements for paleontological resource management are included in Public Resources Code (PRC) Section 5097.5 and Section 30244. These statutes prohibit the removal of any paleontological site or feature from public lands without permission of the jurisdictional agency, define the removal of paleontological sites or features as a misdemeanor, and require reasonable mitigation of adverse impacts to paleontological resources from developments on public (State, county, city, district) lands.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act was passed in 1990 following the Loma Prieta earthquake to reduce threats to public health and safety and to minimize property damage caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones, and

cities, counties, and other local permitting agencies to regulate certain development projects within these zones. For projects that would locate structures for human occupancy within designated Zones of Required Investigation, the Seismic Hazards Mapping Act requires project applicants to perform a site-specific geotechnical investigation to identify the potential site-specific seismic hazards and corrective measures, as appropriate, prior to receiving building permits (CDC, 2007). The *CGS Guidelines for Evaluating and Mitigating Seismic Hazards* (Special Publication 117A) provides guidance for evaluating and mitigating seismic hazards (CGS, 2008). The CGS is in the process of producing official maps based on USGS topographic quadrangles, as required by the Act. To date, there is no available information on the four topographic quadrangles that encompass the study area (i.e., the San Marcos, Rancho Santa Fe, Escondido, and Valley Center quadrangles).

Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the Project. No local regulations are relevant to this analysis for the purpose of identifying any adverse environmental impacts that have not already been considered.

3.7.3 Applicant Proposed Measures

SDG&E has proposed the following Applicant Proposed Measures (APMs) to address impacts to paleontological resources attributable to Project construction, operations, and/or maintenance. Based on the following impact analyses, in instances where these APMs were found not to adequately reduce the impacts to a less-than-significant level, the APMs have been superseded by mitigation measures put forth by the CPUC.

APM PALEO-1: Prior to the initiation of construction or ground-disturbing activities, all SDG&E contractor, and subcontractor personnel will receive training regarding the appropriate work practices necessary to effectively implement the APMs and to comply with the applicable environmental laws and regulations. The training will address the potential for exposing paleontological resources and procedures to be followed upon discovery or suspected discovery.

APM PALEO-2: A qualified Project paleontologist (or qualified paleontological monitor working under the direction of a qualified Project paleontologist) will attend a preconstruction meeting, as needed, to consult with the excavation contractor concerning excavation schedules, paleontological field techniques, and safety.

APM PALEO-3: A qualified paleontological monitor will work under the direction of the qualified Project paleontologist and will be on site to observe excavation operations that involve the original cutting of previously undisturbed deposits with high or moderate paleontological resource sensitivity.

APM PALEO-4: Prior to construction, a paleontological resource consultant will be retained by SDG&E to complete an analysis and assessment of the potential to disturb resources from major ground-disturbing activities, such as facility pad grading, trenching, or new access road grading.

APM PALEO-5: In the event that fossils are encountered, the Project paleontological monitor will have the authority to divert or temporarily halt construction activities in the area of discovery to allow recovery of fossil remains in a timely fashion. The Project paleontological monitor shall contact SDG&E's Cultural Resource Specialist at the time of discovery. The paleontologist, in consultation with SDG&E's Cultural Resource Specialist, will determine the significance of the discovered resources. SDG&E's Cultural Specialist must concur with the evaluation procedures to be performed before construction activities are allowed to resume. If the resource is determined to be significant, it may be necessary to set up a small screen washing operation on site because of the potential for small fossil remains. If fossils are discovered, the paleontologist (or paleontological monitor) will recover them along with pertinent stratigraphic data. Because of the potential for recovery of small fossil remains, such as isolated mammal teeth, recovery of bulk sedimentary-matrix samples for offsite wet screening from specific strata may be necessary, as determined in the field. Fossil remains collected during monitoring and salvage will be cleaned, repaired, sorted, cataloged, and deposited in a scientific institution with permanent paleontological collections. A final monitoring report will be completed that outlines the results of the mitigation. The report will discuss the methods used, stratigraphic sections(s) exposed, fossils collected, and significance of recovered fossils.

3.7.4 Environmental Impacts and Mitigation Measures

Discussion

a.i) Whether the Project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault: *LESS THAN SIGNIFICANT IMPACT*.

There are no Earthquake Fault Zones in the study area, as would be delineated on Alquist-Priolo Earthquake Fault Zoning Maps. However, there are active faults in the surrounding area. Project activities include rebuilding existing circuits, constructing new single-circuit power lines, reconductoring power lines, upgrading existing substations, and replacing wooden poles with new steel poles. Aside from routine maintenance by SDG&E employees, the substations would not be staffed. None of the proposed activities would increase the risk of exposure of people to loss, injury, or death involving rupture of a known fault. The impacts under this criterion would be less than significant.

a.ii) Whether the Project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking: *LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED.*

Strong seismic ground shaking could occur in the study area because there are active fault zones near the Project. While the Project would be located in a seismically active area, the substations and associated infrastructure would not be used for human occupancy, nor would any Project components exacerbate the existing risk of seismic shaking or associated damage. All Project components would be designed and constructed consistent with CPUC GO 95 and the applicable

sections of the CBC. As discussed in the CBC subsection in Section 3.7.2, *Regulatory Setting*, upon certification of the CEQA document, the Project applicant would prepare the final design, including a supplemental report to accompany the Geotechnical Conditions Report by GEOCON, which would address site-specific geotechnical hazards that may impact the Project. The supplemental geotechnical report would include the results and recommendations from GEOCON Inc.'s geotechnical conditions investigation, updated to include information regarding the final project design (e.g., any changes in pole locations and analysis of site-specific geotechnical hazards). Compliance with all the applicable design parameters would reduce the impacts associated with seismic ground shaking. However, although a supplemental geotechnical investigation would be required as part of the final design as required by the CBC, review of GEOCON Inc.'s Geotechnical Conditions Report revealed that landslides and corrosive soils had not been adequately investigated and could result in a significant impact without incorporation of appropriate geotechnical recommendations into final project plans.

The implementation of **Mitigation Measure GEO-1** would require the Project to adhere to and implement the recommendations from the Geotechnical Conditions Report by GEOCON Inc., as well as the supplemental report that will accompany it. The supplemental report shall add investigation and analysis to address impacts associated with potential ground shaking that could trigger landslides and, as discussed below under Question d, the investigation of corrosive soils and provide recommendations, as needed.

> **Mitigation Measure GEO-1: Geotechnical Report.** The structural requirements of the California Building Code (CBC) are applicable to certain structural components of the Project, including retaining walls, screen walls, fences, and control shelters. SDG&E and/or its contractors shall design such structures to comply with such CBC standards and shall adhere to and implement all design recommendations and parameters established in the Project's Geotechnical Investigation Report by GEOCON Inc. and the AC Interference Analysis & Mitigation System Design by ARK Engineering & Technical Services. In addition, SDG&E shall retain a California registered professional engineer(s) to prepare a supplemental geotechnical report. This report shall address specific geotechnical hazards that were not addressed in the Geotechnical Investigation Report, and provide recommendations for mitigating such hazards. The analysis in that report shall include, but not be limited to, the following:
>
> - Recommendations to address the liquefaction risk within the Quaternary alluvium along Segment 1 and 3, if any;
> - Recommendations to address the corrosive soils that are present along Segments 1 and 2, if any, which pose a risk to the concrete pier foundations and direct bury poles;
> - Recommendations to address the landslide potential along Segment 2, if any, where planned ground disturbing activities could trigger landslides;
> - Evaluation of the site-specific conditions and recommendations specific to micropiles where proposed, if final design includes the use of micropiles.
>
> The recommendations shall ensure that when incorporated, the Project shall not increase the potential for ground failure, slope instability, and/or landslides, and shall be resistant to damage from ground shaking, ground failure, corrosive soils, unstable slopes, and

landslides. SDG&E shall submit the supplemental geotechnical report to the CPUC Project Manager for review and approval at least 30 days prior to the start of construction.

Significance after Mitigation: Adherence to CPUC GO 95, as well as Mitigation Measure GEO-1, which requires the Project adhere and implement the seismic design recommendations of the Geotechnical Conditions Report by GEOCON Inc., the supplemental geotechnical report, and the AC interference analysis and mitigation report would ensure a less-than-significant impact associated with seismic ground shaking.

a.iii) Whether the Project would directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction: *LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED.*

The majority of Project components would replace and/or upgrade existing facilities in similar locations, including existing poles along the reconductoring route. As noted above, the Project would be designed consistent with the CPUC GO 95 and applicable sections of the CBC, which would also reduce the risk from seismically-induced ground failures. However, because the effects of seismically-induced ground failures are a direct result of ground shaking produced by earthquakes, there would still be a significant impact related to seismically-induced ground failures. The implementation of **Mitigation Measure GEO-1**, would require the Project to adhere to and implement the recommendations from the Geotechnical Conditions Report by GEOCON Inc., and any additional recommendations put forth in the supplemental geotechnical report that specifically address the impacts associated with seismically-induced ground failures.

Mitigation Measure GEO-1: Geotechnical Report. See full text of this Mitigation Measure under Question a.ii, above.

Significance after Mitigation: With the implementation of appropriate soil engineering measures identified in the Project's Geotechnical Conditions Report and supplemental geotechnical report, such as the use of well-compacted non-expansive engineered fill containing a mix of soil particle sizes, liquefaction susceptibility of soils supporting Project structures would be reduced further. Therefore, through the implementation of Mitigation Measure GEO-1, the extent to which the Project would directly or indirectly cause or exacerbate the exposure of people or structures to seismic-related ground failure would be less than significant.

a.iv) Whether the Project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides: *LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED.*

As stated in 3.7.1, *Environmental Setting*, Segments 2 and 3 have a general susceptibility for landslides as the topography along Segments 2 and 3 has areas of varying slope. Due to this general susceptibility, the Project would face a significant impact related to landslides. To ensure that Project activities (i.e., construction and maintenance) would not directly or indirectly exacerbate the current conditions, **Mitigation Measure GEO-1** would require the supplemental geotechnical report to analyze for any slope instability along portions of the Project that are designated as susceptible to landslides by regulatory maps provided by the CGS.

Mitigation Measure GEO-1: Geotechnical Report. See full text of this Mitigation Measure under Question a.ii, above.

Significance after Mitigation: With implementation of Mitigation Measure GEO-1, the impacts associated with landslides would be addressed with specific design measures and recommendations to reduce this potential. Therefore, this impact would be less than significant.

b) Whether the Project would result in substantial soil erosion or the loss of topsoil: *LESS THAN SIGNIFICANT IMPACT.*

The Project would include ground-disturbing construction activities, including trenching and directional drilling, which could increase the risk of erosion or sediment transport. Total ground disturbance would be more than 1.0 acre. Construction would have the potential to result in soil erosion during excavation, grading, trenching, and soil stockpiling. Because the overall footprint of construction activities would exceed 1.0 acre, the Project would be required to comply with the Construction General Permit, described above in Section 3.7.2, *Regulatory Framework*, and as discussed in Section 3.9, *Hydrology and Water Quality*. This state requirement was developed to ensure that stormwater is managed and erosion is controlled on construction sites. The Construction General Permit requires preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which requires applications of Best Management Practices (BMPs) to control run-on and runoff from construction work sites. The BMPs would include, but would not be limited to, physical barriers to prevent erosion and sedimentation, construction of sedimentation basins, limitations on work periods during storm events, use of infiltration swales, protection of stockpiled materials, and a variety of other measures that would substantially reduce or prevent erosion from occurring during construction. Compliance with these independently enforceable existing requirements would reduce the Project's potential impacts associated with soil erosion and loss of topsoil during construction to less than significant.

c) Whether the Project would be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse: *LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED.*

As previously discussed, the Geological Conditions Report by GEOCON Inc. recognizes the possibility of soil liquefaction in certain areas, specifically the alluvial floodplain deposits present in Segments 1 and 3. Additionally, slope instability maps indicate that Segments 2 and 3 would have general susceptibility to landslides (see Figure 3.7-5). The unstable soils and/or the underlying geology would present a significant impact; as such, **Mitigation Measure GEO-1**, described above in Question a.ii, would require a supplemental geotechnical investigation to analyze for landslide potential and soil instability in areas that have been designated as generally susceptible to landslides by regulatory maps from the CGS. If significant impacts arise from that investigation, appropriate design recommendations would be implemented (also required by Mitigation Measure GEO-1). Adherence to these measures would reduce impacts to a less-than-significant level.

Mitigation Measure GEO-1: Geotechnical Report. See full text of this Mitigation Measure under Question a.ii., above.

Significance after Mitigation: With implementation of Mitigation Measure GEO-1, the impacts associated with unstable geologic or soil units would be addressed by specific testing for the degree of instability in the soils and development of specific design measures and recommendations to reduce the potential for significant impacts related to soil instability. Therefore, the impact would be reduced to a less-than-significant level.

d) Whether the Project would be located on expansive or corrosive soil, creating substantial direct or indirect risks to life or property: *LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED.*

Expansive Soil

The laboratory test that was performed as part of the Geological Conditions Report identified some soils that exhibit low to medium expansion potential (GEOCON Inc., 2017). The CBC considers soils that have an Expansion Index of 20 or more to be expansive. Of the three samples tested, Sample B5-1 (located along Segment 1) has an Expansion Index of 68, which is considered a medium expansion potential. The impacts to life or property associated with expansive soils would be significant. The Project design and construction activities would be required to comply with CPUC rules and would employ standard engineering and building practices common to construction projects throughout California. In addition, the Geological Conditions Report by GEOCON Inc. provides design recommendations that would reduce the impacts associated with expansive soils. Adherence to the CPUC General Orders and the design recommendations with the Geological Conditions Report by GEOCON Inc., as well as implementation of **Mitigation Measure GEO-1**, which requires the Project to adhere to all pertinent design standards promulgated by the applicable sections of the CBC and to implement the recommendations presented in the Project's supplemental geotechnical investigation, would ensure the impacts under this criterion would be less than significant.

Corrosive Soil

The direct bury poles that would be installed in the ground are galvanized steel, which are at a low risk of corrosion. Likewise, the steel casings used for the micropile foundations would be galvanized. The steel poles that would be anchored in a concrete pier foundation would be exposed to soils that are moderately corrosive to concrete. Areas along the alignment where concrete pier foundations may be exposed to corrosive soils would be along the westernmost 350 feet of Segment 1, the entirety of Segment 2, and west and east ends of Segment 3. The impacts associated with corrosive soils would be significant if action is not taken to address these risks. In response to these potential impacts, the Project would be required to comply with the applicable CBC sections, which include conducting a supplemental geotechnical investigation to identify geotechnical hazards and providing recommendations to address those hazards.

The induced AC interference investigation discussed above in Section 3.7.1, *Environmental Setting*, concluded that the induced AC interference current is not within acceptable design limits. This induced AC interference is known to contribute to the corrosive properties of soils. This contribution from the induced AC interference current, coupled with the existing moderate corrosion potential of the soil, would create a significant impact to life or property. To address this potential hazard, the Project includes an AC interference mitigation system what would include the installation of 11 deep wells along specific pipeline sections, as well as three

AC coupon test stations to monitor the pipeline currents (refer to Section 2.4.3, *Alternating Current (AC) Interference Mitigation System*). The deep wells would house grounding rods serving to redirect any induced or errant AC away from pipelines and reduce the risk of soil corrosion.

These requirements would be enforced by **Mitigation Measure GEO-1**, which requires the Project to comply with the recommendations detailed in the Geotechnical Conditions Report, the AC Interference Analysis & Mitigation System Design (ARK Engineering & Technical Services, 2017), and an accompanying supplemental geotechnical report. The implementation of the geotechnical and AC mitigation design recommendations would reduce the impact of corrosive soils to the concrete foundations to less than significant.

> **Mitigation Measure GEO-1: Geotechnical Report.** See full text of this Mitigation Measure under Question a.ii, above.
>
> **Significance after Mitigation:** With the implementation of appropriate soil engineering measures identified in the Project's Geotechnical Conditions Report, the AC Interference Analysis & Mitigation System Design, and the supplemental geotechnical report, such as the use of well-compacted non-expansive engineered fill containing a mix of soil particle sizes, expansive susceptibility and corrosion potential of soils supporting Project structures would be reduced further. Therefore, this impact would be less than significant.

e) Whether the Project would have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater: *NO IMPACT.*

The Project would not include the use of septic tanks or any alternative wastewater disposal systems. For this reason, the Project would not introduce an environmental or public health hazard by building septic tanks or other wastewater disposal systems in soils that are incapable of adequately supporting such systems. Therefore, no impact would occur.

f) Whether the Project would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. *LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED.*

Construction-associated grading, excavation, and drilling for Project components could destroy paleontological resources. The loss of a unique paleontological resource or site that could yield information important to prehistory, or that embodies the distinctive characteristics of a type of organism, environment, period of time, or geographic region, would be a significant environmental impact. Direct impacts on paleontological resources primarily concern the potential destruction of nonrenewable paleontological resources and the loss of information associated with these resources. This includes the unauthorized collection of fossil remains. If potentially fossiliferous bedrock or surficial sediments are disturbed, the disturbance could result in the destruction of paleontological resources and subsequent loss of information.

For Project sites that are underlain by paleontologically sensitive geologic units, the greater the amount of ground disturbance, the higher the potential for significant impacts to paleontological resources. For Project sites that are directly underlain by geologic units with no paleontological

sensitivity, there is no potential for impacts on paleontological resources unless sensitive geologic units which underlie the non-sensitive unit are also affected. The County of San Diego notes in its Guidelines for Determining Significance, "It is the opinion of local paleontological professionals that when the volume of excavation exceeds 2,500 cubic yards, the potential loss of paleontological resources is much higher than for lesser amounts of excavation" (County of San Diego, 2009). These guidelines indicate that for projects within areas of High or Moderate Paleontological Resources Potential that propose excavation equal to or greater than 2,500 cubic yards, the services of a qualified paleontological monitor should be required.

As described in Section 3.7.1, Environmental Setting, the Santiago Formation beneath Segment 1 and a portion of Segment 2 has a high potential for paleontological resources, and many fossil localities already have been found in the Santiago Formation. Project-related ground disturbance within this formation would result in a significant impact on the paleontological resources in the area if it were to destroy unique paleontological resources. Given the high potential for the presence of such resources, it is assumed that excavation and grading in Segments 1 and portions of Segment 2 within the Santiago Formation, as well as for the AC interference mitigation system installation, would have a high likelihood of destroying paleontological resources. Based on the pole foundation types listed in Table 2-2 and shown in Appendix A, this analysis assumes that up to 27 direct-bury poles and 14 pier or micropile foundation poles would be constructed within the Santiago Formation in Segments 1 and 2. The approximate excavation volume would be up to 10 cubic yards for each direct bury pole. It is conservatively assumed that the excavation volume for each pier foundation pole would be 100 cubic yards. Thus, pole installation in the Santiago Formation would result in up to 1,670 cubic yards of excavation. Additional excavation would occur in support of the proposed retaining walls in the portion of Segment 2 that is within the Santiago Formation. Construction of the AC interference mitigation system would result in approximately 15 cubic yards of drilling spoils, with additional trenching to place the copper wire. In total, although the Project excavation within the Santiago Formation may be under 2,500 cubic yards, this analysis assumes that the excavation volumes are sufficient to result in a potentially significant impact requiring the use of a qualified paleontological monitor and other mitigation measures.

To reduce impacts on paleontological resources, SDG&E proposed APMs Paleo-1 through Paleo-5 requiring employee training, monitoring by a qualified paleontological monitor, assessment of disturbance potential, and fossil recovery, preservation, and documentation. The CPUC has determined that these APMs would not reduce or avoid significant impacts on paleontological resources to below the level of significance because they do not adequately identify personnel qualification standards, worker training standards, monitoring protocols, or recovery and documentation standards. Therefore, APMs Paleo-1 through Paleo-5 are superseded by **Mitigation Measures PALEO-1** through **PALEO-4**. To ensure the preservation of any paleontological resources that may be encountered during Project construction, the CPUC would require implementation of **Mitigation Measures PALEO-1** through **PALEO-4** to provide performance standards and other mitigation requirements to ensure that the impacts to paleontological resources are reduced to a less-than-significant level.

Mitigation Measure PALEO-1: Project Paleontologist. SDG&E or its contractor shall retain a qualified professional paleontologist (qualified paleontologist) meeting the Society of Vertebrate Paleontology (SVP) standards as set forth in the "Definitions" section of Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (2010) prior to the approval of demolition or grading permits. The qualified paleontologist shall attend the Project kick-off meeting and Project progress meetings on a regular basis, shall report to the site in the event potential paleontological resources are encountered, and shall implement the duties outlined in Mitigation Measures PALEO-2 through PALEO-4.

Mitigation Measure PALEO-2: Worker Training. Prior to the start of any ground-disturbing activity (including vegetation removal, pavement removal, etc.), the qualified paleontologist shall prepare paleontological resources sensitivity training materials for use during Project-wide Worker Environmental Awareness Training (or equivalent). The paleontological resources sensitivity training shall be conducted by a qualified environmental trainer (often the Lead Environmental Inspector [LEI] or equivalent position) working under the supervision of the qualified paleontologist. In the event construction crews are phased, additional trainings shall be conducted for new construction personnel. The training session shall focus on the recognition of the types of paleontological resources that could be encountered within the Project site and the procedures to be followed if they are found, as outlined in the approved Paleontological Resources Monitoring and Mitigation Plan in Mitigation Measure PALEO-3. SDG&E and/or its contractor shall retain documentation demonstrating that all construction personnel attended the training prior to the start of work on the site, and shall provide the documentation to the CPUC Project Manager upon request.

Mitigation Measure PALEO-3: Paleontological Monitoring. The qualified paleontologist shall prepare, and SDG&E and/or its contractors shall implement, a Paleontological Resources Monitoring and Mitigation Plan (PRMMP). SDG&E shall submit the plan to the CPUC Project Manager for review and approval at least 30 days prior to the start of construction. This plan shall address specifics of monitoring and mitigation and comply with the recommendations of the SVP (2010), as follows.

- The qualified paleontologist shall identify, and SDG&E or its contractor(s) shall retain, qualified paleontological resource monitors (qualified monitors) meeting the SVP standards (2010).
- The qualified paleontologist and/or the qualified monitors under the direction of the qualified paleontologist shall conduct full-time paleontological resources monitoring for all ground-disturbing activities in previously undisturbed sediments in the Project site that have high paleontological sensitivity. This includes any depth of excavation into the Santiago Formation, as well as excavations that exceed 10 feet in depth in areas mapped as young alluvial floodplain deposits that overlie the Santiago Formation. The PRMMP shall clearly map these portions of the Project based on final design provided by SDG&E and/or its contractor(s).
- If many pieces of heavy equipment are in use simultaneously but at diverse locations, each location will need to be individually monitored.
- Monitors shall have the authority to temporarily halt or divert work away from exposed fossils in order to evaluate and recover the fossil specimens, establishing a 50-foot buffer.

- If construction or other Project personnel discover any potential fossils during construction, regardless of the depth of work or location and regardless of whether the site is being monitored, work at the discovery location shall cease in a 50-foot radius of the discovery until the qualified paleontologist has assessed the discovery and made recommendations as to the appropriate treatment.

- The qualified paleontologist shall determine the significance of any fossils discovered, and shall determine the appropriate treatment for significant fossils in accordance with the SVP standards. The qualified paleontologist shall inform SDG&E of these determinations as soon as practicable. See Mitigation Measure PALEO-4 regarding significant fossil treatment.

- Monitors shall prepare daily logs detailing the types of activities and soils observed, and any discoveries. The qualified paleontologist shall prepare a final monitoring and mitigation report to document the results of the monitoring effort and any curation of fossils. SDG&E shall provide the daily logs to the CPUC Project Manager upon request, and shall provide the final report to the CPUC Project Manager upon completion.

Mitigation Measure PALEO-4: Significant Fossil Treatment. If any find is deemed significant, as defined in the SVP standards (2010) and following the process outlined in Mitigation Measure PALEO-3, the qualified paleontologist shall salvage and prepare the fossil for permanent curation with a certified repository with retrievable storage following the SVP standards.

Significance after Mitigation: These mitigation measures require qualified technical specialists to provide oversight and worker training, as well as define the specialists' qualifications, the nature of the specialists' involvement in Project work, and worker training content. These measures also provide clear parameters for resource monitoring and steps to be executed if a paleontological resource is discovered. With these defined requirements, any fossils encountered during Project excavation would be recovered and treated so that the permanent loss of resources and valuable information is minimized. Although fossils would not be recoverable from the AC interference mitigation system deep wells due to the proposed excavation method, the potential loss resulting from these well would not constitute a significant loss (i.e., a total of up to 15 cubic yards spread among 11 deep wells with 6- to 8-inch diameters, or approximately 1 percent of total Project excavation within the Santiago Formation). Identification and curation of fossils from the remaining Project excavation within the Santiago Formation would contribute to the paleontological record for this location. Potential impacts on unique paleontological resources would be less than significant with implementation of mitigation measures.

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3.8 Greenhouse Gas Emissions

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
8.	**GREENHOUSE GAS EMISSIONS — Would the project:**				
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b)	Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

This section describes the Project's estimated greenhouse gas (GHG) emissions and their impact on the environment, as well as any potential conflicts with GHG-related plans, policies, and regulations. For the purposes of this analysis, the significance threshold relevant to Project-specific emissions is distinct to the County of San Diego, which is contiguous with the San Diego Air Basin boundaries, and is used as the Project-specific study area.

3.8.1 Environmental Setting

Climate Change

According to the U.S. Environmental Protection Agency (USEPA), the term "climate change" refers to any significant change in measures of climate (such as temperature, precipitation, or wind) lasting for an extended period (over several decades or longer). There is scientific consensus that climate change is occurring and that human activity contributes to that change. Gases that trap heat in the atmosphere are often called GHGs. Emissions of GHGs, if not sufficiently curtailed, are likely to contribute further to increases in global temperatures. The potential effects of climate change in California include sea level rise and reductions in snowpack, as well as an increased number of extreme-heat days per year, high ozone days, large forest fires, and drought years (CARB, 2018). Globally, climate change could affect numerous environmental resources through potential, though uncertain, changes in future air temperatures and precipitation patterns. According to the International Panel on Climate Change (IPCC), the observed and/or projected effects of climate change vary regionally, but include the following direct effects (IPCC, 2014):

- Changing precipitation and snow melt patterns;
- Negative effect on crop yield;
- Increased heat waves, drought, flood, wildfires, and storm events;
- Reduced renewable water resources in most dry subtropical regions; and
- Ocean acidification damage to marine ecosystems.

In addition, many secondary effects are projected to result from climate change, including a global rise in sea level, ocean acidification, impacts on agriculture, changes in disease vectors,

and changes in habitat and biodiversity. The possible outcomes and feedback mechanisms involved are not fully understood, and much research remains to be done; however, over the long term, the potential exists for substantial environmental, social, and economic consequences.

Greenhouse Gas Emissions

Both natural processes and human activities emit GHGs. The accumulation of GHGs in the atmosphere regulates the Earth's temperature; however, emissions from human activities – such as burning fossil fuels (e.g., oil, natural gas, and coal) for electricity production and heat and the use of fossil fuel-powered motor vehicles – have elevated the concentration of GHGs in the atmosphere. This accumulation of GHGs has contributed to an increase in the temperature of the Earth's atmosphere and to global climate change.

GHG emissions that result from human activities primarily include carbon dioxide (CO_2), with much smaller amounts of nitrous oxide (N_2O), methane (CH_4, often from unburned natural gas), sulfur hexafluoride (SF_6) from high-voltage power equipment, and hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs) from refrigeration/chiller equipment. Because these GHGs have different warming potentials (i.e., the amount of heat trapped in the atmosphere by a certain mass of the gas), and CO_2 is the most common reference gas for climate change, GHG emissions are often quantified and reported as CO_2-equivalent (CO_2e) emissions. For example, while SF_6 represents a small fraction of the total annual GHGs emitted worldwide, this gas is very potent, with 23,900 times the global warming potential of CO_2. Therefore, an emission of 1 metric ton of SF_6 would be reported as 23,900 metric tons CO_2e. The global warming potential of CH_4 and N_2O are 25 times and 298 times that of CO_2, respectively (CARB, 2016a). The principal GHGs resulting from human activity that enter and accumulate in the atmosphere are described below.

Carbon Dioxide

CO_2 is a naturally occurring gas that enters the atmosphere through natural as well as anthropogenic (human) sources. Key anthropogenic sources include the burning of fossil fuels, solid waste, trees, wood products, and other biomass, as well as industrially relevant chemical reactions such as those associated with manufacturing cement. CO_2 is removed from the atmosphere when it is absorbed by plants as part of the biological carbon cycle.

Methane

Like CO_2, CH_4 is emitted from both natural and anthropogenic sources. Key anthropogenic sources of CH_4 include gaseous emissions from landfills, releases associated with mining and materials extraction industries (in particular coal mining), and fugitive releases associated with the extraction and transport of natural gas and crude oil. CH_4 emissions also result from livestock and agricultural practices. Small quantities of CH_4 are released during fossil fuel combustion.

Nitrous Oxide

N_2O is also emitted from both natural and anthropogenic sources. Important anthropogenic sources include industrial activities, agricultural activities (primarily the application of nitrogen fertilizer), the use of explosives, combustion of fossil fuels, and decay of solid waste.

Fluorinated Gases

HFCs, PFCs, and SF_6 are synthetic gases emitted from a variety of industrial processes. They contribute substantially more to the greenhouse effect on a pound-for-pound basis than the GHGs described previously. Fluorinated gases are often used as substitutes for ozone-depleting substances (i.e., chlorofluorocarbons, hydrochlorofluorocarbons, and halons). These gases are typically emitted in small quantities, but because of their potency they are sometimes referred to as "high global warming potential gases." Fluorinated gases in the form of SF_6 can be emitted by circuit breakers such as those used at substations.

Greenhouse Gas Sources

Anthropogenic GHG emissions in the United States result mostly from the combustion of fossil fuels for transportation and power production. Energy-related CO_2 emissions resulting from fossil fuel exploration and use account for approximately three-quarters of the human-generated GHG emissions in the United States, primarily in the form of CO_2 emissions. More than half of the energy-related emissions come from large stationary sources, such as power plants; approximately one-third derive from transportation; and most of the remaining emissions come from industrial processes, agriculture, commercial, and residential uses (USEPA, 2016a).

Table 3.8-1 summarizes statewide emissions of GHGs from relevant source categories for 2010 through 2016. Specific contributions from individual air basins, such as the San Diego Air Basin, which encompasses the Project, are included in the emissions inventory but are not itemized by air basin. In 2016, California produced 429.4 million gross metric tons of CO_2e emissions. Transportation was the source of 41 percent of the state's GHG emissions, followed by industrial at 23 percent, electricity generation at 16 percent, commercial and residential sources at 12 percent, and agriculture and forestry comprised the remaining 8 percent (CARB, 2018).

TABLE 3.8-1
CALIFORNIA GHG EMISSIONS (MILLION METRIC TONS CO_2E)

Emission Inventory Category	2010	2011	2012	2013	2014	2015	2016	
Electricity Generation (In State)	46.91	41.37	51.18	49.60	51.81	50.21	42.67	9.9%
Electricity Generation (Imports)	43.67	46.94	44.15	40.24	36.56	33.88	26.28	6.1%
Transportation	170.16	166.52	166.16	165.80	167.14	170.89	174.01	40.5%
Industrial	100.93	100.63	100.89	103.75	104.23	102.10	100.37	23.4%
Commercial	20.09	20.73	21.11	21.64	21.37	22.07	23.04	5.4%
Residential	31.26	32.03	30.04	31.19	26.26	27.05	28.34	6.6%
Agriculture and Forestry	34.27	34.89	36.08	34.61	35.95	34.41	33.84	7.9%
Not Specified (Solvents & Chemicals)	0.82	0.79	0.78	0.77	0.78	0.79	0.79	0.2%
Total Gross Emissions	448.1	443.9	450.4	447.6	444.1	441.4	429.4	**100.0%**

SOURCE: CARB, 2018.

3.8.2 Regulatory Setting

Federal

Clean Air Act

On April 2, 2007, in Massachusetts v. USEPA (549 US 497), the U.S. Supreme Court found that GHGs are air pollutants covered by the Clean Air Act. On April 17, 2009, the USEPA Administrator signed proposed "endangerment" and "cause or contribute" findings for GHGs under Section 202(a) of the Clean Air Act. The USEPA found that six GHGs, taken in combination, endanger both the public health and the public welfare of current and future generations. Pursuant to 40 CFR Part 52, *Proposed Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule*, USEPA has mandated that Prevention of Significant Deterioration (PSD) and Title V requirements apply to facilities whose stationary source CO_2e emissions exceed 100,000 tons per year (USEPA, 2016b). The Project would not trigger PSD or Title V permitting under this regulation because it would generate less than 100,000 tons of CO_2e emissions per year.

40 CFR Part 98. Use of Electric Transmission and Distribution Equipment

Pursuant to federal regulations (40 CFR Part 98, Subpart DD), operators of certain electrical facilities, such as SF_6-containing circuit breakers, are required to report SF_6 emissions to the USEPA (USEPA, 2016c). The SF_6-containing circuit breakers associated with the Project would be subject to reporting under this regulation.

State

Executive Order B-55-18

In September 2018, Governor Brown signed EO B-55-18, committing California to total, economy-wide carbon neutrality by 2045. EO B-55-18 directs CARB to work with state agencies to develop an implementation framework for and accounting that tracks progress toward this goal.

Renewables Portfolio Standard and Senate Bill 100

The state's Renewables Portfolio Standard (RPS) is described in detail in Section 3.6, *Energy*. SB 100, passed in 2018, revised the goal of the program to achieve a 50 percent renewable resources target by 2026, and a 60 percent target by 2030. Additionally, SB 100 created a policy of the state that eligible renewable energy resources and zero-carbon resources must supply 100 percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by 2045.

Executive Order S-3-05

In June 2006, Governor Schwarzenegger signed Executive Order S-3-05, which established the following statewide emission-reduction targets through the year 2050:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and

- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

This executive order does not contain any requirements that directly pertain to the Project.

Assembly Bill 32

California Assembly Bill (AB) 32, *the Global Warming Solutions Act of 2006*, required the California Air Resources Board (CARB) to establish a statewide GHG emissions target for 2020 based on 1990 emission levels. AB 32 required CARB to adopt regulations that identify and require selected sectors or categories of emitters of GHGs to report and verify their statewide GHG emissions, and CARB is authorized to enforce compliance with the program. Under AB 32, CARB also was required to adopt a statewide GHG emissions limit equivalent to the statewide GHG emissions levels in 1990, which must be achieved by 2020. CARB established this limit in December 2007 at 427 million metric tons of CO_2e. This is approximately 30 percent below forecasted "business-as-usual" emissions of 596 million metric tons of CO_2e in 2020, and about 10 percent below average annual GHG emissions during the period of 2002 through 2004 (CARB, 2009). In the interest of achieving the maximum technologically feasible and cost-effective GHG emission reductions, AB 32 permits the use of market-based compliance mechanisms such as the cap-and-trade program and requires CARB to monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market-based compliance mechanism that it adopts.

California Climate Change Scoping Plan

Pursuant to AB 32, CARB adopted a *Climate Change Scoping Plan* in December 2008 (CARB, 2008) outlining measures to meet the 2020 GHG reduction goals. In order to meet these goals, California must reduce its GHG emissions by 30 percent below projected 2020 business-as-usual emissions levels or about 15 percent from today's levels. The Scoping Plan recommends measures that are worth studying further, and that the State of California may implement, such as new fuel regulations. Of these measures, only one is directly relevant to the Project. Measure H-6, High Global Warming Potential Gases, was designed to reduce emissions of SF_6 within the electric utility sector and at particle accelerators by requiring the use of best achievable control technology to detect and repair leaks, and the recycling of SF_6. It estimates that a reduction of 174 million metric tons of CO_2e (about 191 million U.S. tons) from the transportation, energy, agriculture, forestry, and other sources could be achieved should the state implement all of the measures in the Scoping Plan. The Scoping Plan relies on the requirements of Senate Bill (SB) 375 (discussed below) to implement the carbon emission reductions anticipated from land use decisions. In May 2014, CARB published its *First Update to the Scoping Plan* (CARB, 2014), building upon the initial Scoping Plan with new strategies and recommendations.

In November 2017, CARB published *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target*, which takes into account the key programs associated with implementation of the other two Scoping Plans—such as GHG reduction programs for cars, trucks, fuels, industry, and electrical generation—and builds upon, in particular, existing programs related to the Cap-and-Trade Regulation; the Low Carbon Fuel Standard; much cleaner cars, trucks, and freight movement; power generation for the state using cleaner renewable

energy; and strategies to reduce methane emissions from agricultural and other wastes by using it to meet the state's energy needs. The 2017 Scoping Plan also addresses, for the first time, GHG emissions from natural and working lands, including the agriculture and forestry sectors. It is intended to set forth a program to achieve the 2030 GHG emissions reduction target established by SB 32 of 40 percent below 1990 levels by 2030 (see below). (CARB, 2017)

Mandatory Reporting Requirements

Pursuant to California Code of Regulations Title 17, Sections 95100 through 95158, operations of large industrial stationary combustion and process emissions sources that emit 10,000 metric tons CO_2e or more per calendar year are required to report and verify their GHG emissions to CARB. As indicated in Table 3.8-3, the total amortized GHG emissions for the Project would be 74.1 metric tons CO_2e per year, which is below the AB 32 reporting threshold; therefore, the Project would not be subject to the AB 32 mandatory reporting requirements.

Market-Based "Cap-and-Trade" Compliance Mechanism

AB 32 allows the use of market-based compliance mechanisms to achieve the maximum technologically feasible and cost-effective GHG emission reductions, and CARB has since adopted a cap-and-trade program that covers major sources of GHG emissions such as refineries and power plants (CARB, 2008). The program applies to facilities that would emit 25,000 metric tons or more of CO_2e per year. Since the total amortized GHG emissions for the Project are estimated at 74.1 metric tons CO_2e per year, the cap-and-trade program would not apply to the Project (see Question a below for a discussion and breakdown of the construction-related and operational Project GHG emissions).

Senate Bill 97

In 2007, the California State Legislature passed SB 97, which required amendment of the CEQA Guidelines to incorporate analysis of, and mitigation for, GHG emissions from projects subject to CEQA. The amendments took effect March 18, 2010. The amendments added Section 15064.4 to the CEQA Guidelines, specifically addressing the potential significance of GHG emissions. Section 15064.4 calls for a "good faith effort" to "describe, calculate or estimate" GHG emissions and indicates that the analysis of the significance of any GHG impacts should include consideration of the extent to which the project would:

- Increase or reduce GHG emissions;
- Exceed a locally applicable threshold of significance; or
- Comply with "regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions."

The CEQA Guidelines also state that a project may be found to have a less-than-significant impact related to GHG emissions if it complies with an adopted plan that includes specific measures to sufficiently reduce GHG emissions (14 Cal. Code Regs. § 15064(h)(3)). The CEQA Guidelines do not require or recommend a specific analytical methodology or provide quantitative criteria for determining the significance of GHG emissions.

Regulation for Reducing SF_6 Emissions from Gas Insulated Switchgear

The purpose of this regulation (17 Cal. Code Regs. § 95350 et seq.) is to achieve GHG emission reductions by reducing SF_6 emissions from gas-insulated switchgear. Owners of such switchgear must not exceed maximum allowable annual emissions rates, which are reduced each year until 2020, after which annual emissions must not exceed 1.0 percent of the total SF_6 capacity of all of the owner's active gas-insulated switchgear equipment. As defined by the regulation, the annual emissions rate equals the gas-insulated switchgear owner's total annual SF_6 emissions from all active gas-insulated switchgear equipment divided by the average annual SF_6 nameplate capacity of all active gas-insulated switchgear equipment. Owners must regularly inventory gas-insulated switchgear equipment, measure quantities of SF_6, and maintain records of these for at least 3 years. Additionally, by June 1st each year, owners also must submit an annual report to CARB's Executive Officer for emissions that occurred during the previous calendar year (CARB, 2016b).

Executive Order B-30-15 and SB 32

In April 2015, Governor Brown issued an executive order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. Reaching this emission reduction target puts California on a trajectory to reach its ultimate goal of reducing emissions 80 percent under 1990 levels by 2050, as identified in Executive Order S-3-05. Executive Order B-30-15 also specifically addresses the need for climate adaptation and directs state government to:

- Incorporate climate change impacts into the state's Five-Year Infrastructure Plan;
- Update the Safeguarding California Plan, the State climate adaption strategy to identify how climate change will affect California infrastructure and industry and what actions the state can take to reduce the risks posed by climate change;
- Factor climate change into state agencies' planning and investment decisions; and
- Implement measures under existing agency and departmental authority to reduce GHG emissions (Office of the Governor, 2015).

Executive Order B-30-15 required CARB to update the AB 32 Climate Change Scoping Plan to incorporate the 2030 target. Subsequently, SB 32, which codifies the Executive Order's 2030 emissions reduction target, was approved by the Governor on September 8, 2016. SB 32 requires CARB to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions to ensure that statewide GHG emissions are reduced to at least 40 percent below the 1990 statewide GHG emissions limit no later than December 31, 2030, the target established by Executive Order B-30-15. CARB adopted the 2017 Scoping Plan to set forth a program to achieve this target (see *California Climate Change Scoping Plan* discussion, above).

Local

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public

utilities subject to the CPUC's jurisdiction." The discussion below presents local regulations for informational purposes only.

County of San Diego General Plan

The County of San Diego General Plan's Conservation and Open Space Element (County of San Diego, 2011) includes the following policies that would otherwise be relevant to the Project.

> ***Policy COS 17.1: Reduction of Solid Waste Materials.*** Reduce greenhouse gas emissions and future landfill capacity needs through reduction, reuse, or recycling of all types of soil waste that is generated. Divert solid waste from landfills in compliance with State law.
>
> ***Policy COS 17.2: Construction and Demolition Waste.*** Require recycling, reduction and reuse of construction and demolition debris.

Local Climate Action Plans

The County of San Diego Climate Action Plan (CAP) contains GHG reduction strategies related to building environment and transportation, energy, solid waste, water and waste water, and agriculture and conservation to reduce GHG emissions through 2050 (San Diego County, 2018). The City of Carlsbad CAP contains goals, policies, and actions to reduce GHG through 2035 (City of Carlsbad, 2015). The City of Vista CAP includes measures to reduce GHG emissions by 15 percent below 2005 levels by 2020, consistent with AB 32 (City of Vista, 2012). The City of San Diego CAP includes measures to reduce GHG emissions by 15 percent below 2010 levels by 2020. The City calculated its 2050 GHG emission reductions at 80 percent below the 2010 baseline and set a 2035 target based upon the trajectory for meeting the City's 2050 reductions (City of San Diego, 2015). The City of Escondido CAP set a goal to reduce emissions back to 1990 levels by the year 2020, which was calculated as a 15 percent decrease from 2005 levels (City of Escondido, 2013). The City of San Marcos CAP establishes a reduction target of 15 percent below 2005 levels by 2020 and a target of 28 percent below 2005 levels by 2030 (City of San Marcos, 2013).

Since the goals and strategies in each of these CAPs are geared towards reducing GHG emissions from City and County operations and development projects seeking discretionary approvals from local jurisdictions, none of the goals and strategies provided in the CAPs are directly applicable to the Project. However, several of the CAPs identify construction and demolition waste diversion as a GHG reduction measure; such diversion is addressed in detail in Section 3.18, *Utilities*.

3.8.3 Applicant Proposed Measures

No Applicant Proposed Measures (APMs) have been identified by SDG&E for the purpose of reducing the impacts of the Project's GHG emissions.

3.8.4 Environmental Impacts

Approach to Analysis

Climate change impacts are global, and therefore inherently cumulative in nature; no typical single project would result in emissions of a magnitude that would be significant on a project basis. As such, the assessment of significance in this analysis is based on a determination of whether the GHG emissions from the Project represent a cumulatively considerable contribution to climate change. The Project would result in GHG emissions from both short-term construction and long-term operations and maintenance activities.

The San Diego Air Pollution Control District (SDAPCD) has not formally adopted a CEQA significance threshold for GHG emissions; however, the County of San Diego recommends the use of a screening threshold of 900 metric tons CO_2e per year (County of San Diego, 2015). The California Air Pollution Control Officers Association has indicated that use of this threshold would result in capture of more than 90 percent of development projects. A 90 percent emissions capture rate means 90 percent of development projects would result in emissions that would exceed the threshold and be subject to analysis in an environmental document prepared pursuant to CEQA, including analysis of feasible alternatives and/or imposition of feasible mitigation measures. It has been determined by the CPUC that Projects with low annual GHG emission rates below the County of San Diego screening threshold of 900 metric tons CO_2e per year would not be expected to interfere with the state's ability to achieve the GHG reduction targets established in Executive Order S-3-05 and B-55-18.

This GHG significance threshold is intended for long-term operational GHG emissions, but for construction related GHGs, the County (County of San Diego, 2015) recommends that total emissions from construction be amortized over 20 years representing the life of the project and added to operational emissions and then compared to the operation-based significance threshold (County of San Diego, 2015). Similar to the County's recommended approach for construction emissions, this analysis amortizes Project construction emissions over a 20-year project lifetime, adds them to the operational emissions, and then compares the combined emissions to the significance threshold of 900 metric tons CO_2e per year.

The Project's potential to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions is assessed by examining any potential conflicts with the GHG reduction goals set forth in Executive Order S-3-05, Executive Order B-30-15, AB 32, and SB 32, including the potential for the Project to conflict with the recommended actions identified by CARB in its Climate Change Scoping Plan or any associated adopted regulations.

Discussion

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment: *LESS THAN SIGNIFICANT IMPACT.*

Construction

Construction would generate GHG emissions over a period of up to 11 months. Exhaust emissions would result from construction equipment and machinery as well as from construction-related vehicular traffic. With its application for a Permit to Construct, SDG&E provided Project construction-related GHG emissions calculations and estimates. SDG&E's emission calculations were independently reviewed by the CPUC's consultant, Environmental Science Associates (ESA), and were found to be technically adequate. However, subsequent to submitting its application, SDG&E revised its Project to include an AC interference mitigation well system; therefore, ESA revised SDG&E's emissions calculations and estimates accordingly. The California Emissions Estimator Model (CalEEMod) version 2016.3.2 and construction schedule and equipment information presented in Chapter 2 were used to estimate ground-based GHG emissions during Project construction. This version of CalEEMod calculates the construction equipment exhaust emissions based on CARB's OFFROAD2011 model equipment emission and load factors and EMFAC2014 for on-road vehicles. Helicopter pollutant emissions were estimated based on emissions factors identified in USEPA's *Air Pollutant Emissions for Military and Civil Aircraft* (USEPA, 1978). See Appendix C for all emission factors and assumptions used to estimate Project construction GHG emissions.

Table 3.8-2, *Proposed Project Construction GHG Emissions*, presents the total estimated GHG construction emissions that would be associated with the Project generated by off-road construction equipment, on-road vehicles, and helicopter use. Project construction would generate approximately 1,823 metric tons CO_2e.

TABLE 3.8-2
PROPOSED PROJECT CONSTRUCTION GHG EMISSIONS

Construction Year	GHG Emissions (metric tons)			
	CO_2	CH_4	N_20	CO_{2e}
2019				
Construction Emissions	3.8	<0.1	<0.1	3.8
2020				
Construction Emissions	1,798.3	0.5	<0.1	1,811.8
Helicopter Emissions	7.1	<0.1	<0.1	7.2
Total CO_2e	**1,822.8**			

SOURCE: SDG&E, 2017; ESA, 2018; See Appendix C

Operation and Maintenance Emissions

In general, routine operation and maintenance of the Project would be substantially the same as current conditions, but could result in a small number of additional worker vehicle trips during

routine operation and maintenance activities. These additional worker vehicle trips would result in GHG emissions that would be negligible. However, GHG emissions would result from a new SF_6-insulated 69 kV circuit breakers at the San Marcos Substation and Escondido Substation. Annual SF_6 emissions for the Project were estimated based on a leak rate of 1.0 percent of the total SF_6 capacity,[1] and that the two new circuit breakers would be installed that would have a combined SF_6 capacity of 0.66 pounds. The estimated annual SF_6 emissions would be 7.2 metric tons CO_2e per year.

Total Amortized Annual Emissions

As indicated in Table 3.8-2, total GHG construction emissions would be approximately 1,823 metric tons CO_2e. These emissions amortized over a 20-year period equal approximately 91.2 metric tons per year. As presented in **Table 3.8-3**, *Proposed Project Amortized Annual Emissions*, adding 91.2 metric tons of CO_2e to the operational emissions of 7.2 metric tons CO_2e per year equals a total Project GHG emissions rate of approximately 98.4 metric tons CO_2e per year, which would be substantially less than the significance threshold of 900 metric tons CO_2e per year. Therefore, the Project would not generate GHG emissions, either directly or indirectly, that would have a significant impact on the environment. Impacts would be less than significant.

TABLE 3.8-3
PROJECT AMORTIZED ANNUAL EMISSIONS

Emissions Source	CO_2e metric tons/year
Construction emissions: total amortized (20 year period)	91.2
SF_6 Circuit Breaker Emissions	7.2
Total	**98.4**
Significance threshold	900
Significant impact?	No

SOURCE: SDG&E, 2017, 2018; see Appendix C for all emissions estimates.

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases: *NO IMPACT.*

Construction, operation, and maintenance of the Project would result in increased GHG emissions compared to baseline conditions; however, the emissions would not exceed regional or quantitative thresholds developed to comply with AB 32 and the Climate Change Scoping Plan. As discussed in *Approach to Analysis* above, CPUC has determined that Projects with low annual GHG emission rates below the County of San Diego screening threshold of 900 metric tons CO_2e per year would not be expected to interfere with the state's ability achieve the GHG reduction targets established in Executive Order S-3-05 and B-55-18. Since Project amortized GHG emissions would well below the significance threshold (see Table 3.8-3, above), it would not conflict with GHG reduction goals set forth in Executive Order S-3-05, Executive Order B-55-18, Executive

[1] A leak rate of 1.0 percent is considered to be a conservative assumption because the leakage rate for current SF_6-containing circuit breaker designs is under 0.5 percent per year (Siemens, 2017).

Order B-30-15/SB 32, or AB 32, including the proposed programs identified by CARB in its AB 32 and SB 32 Climate Change Scoping Plans.

Regarding management of Project-related SF_6, SDG&E currently implements internal standards and programs for the operation and maintenance of its SF_6-containing equipment (SDG&E, 2018). These include the following:

- Recording company-wide SF_6 purchases for use in reporting annual GHG emissions under the CEC's California Climate Action Registry Power Utilities Protocol and as a member of the USEPA SF_6 Partnership.
- Reporting GHG emissions with the Climate Registry.
- Implementing an SF_6 recycling program.
- Training employees on the safety and proper handling of SF_6.
- Implementing SDG&E's SF_6 leak detection and repair program. This program includes monthly visual inspections of each generator circuit breaker, which includes checking pressure levels within the breaker and recording these readings in SDG&E's Substation Management System.

Inventories of Project SF_6-containing equipment and implementation of the above standards and programs would be documented and annually reported to USEPA and CARB. Because implementation of SDG&E's internal SF_6 standards and programs would minimize leaks of SF_6, the Project would be consistent with the intent of AB32 Scoping Plan Measure H-6: High Global Warming Potential Gas Reductions from Stationary Sources, and CARB's associated legislation. Because the Project would be consistent (and would not conflict) with these plans, policies, and regulations, it would cause no impact related to this significance criterion.

3.8.5 References

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3.9 Hazards and Hazardous Materials

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
9.	**HAZARDS AND HAZARDOUS MATERIALS — Would the project:**				
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☐	☒	☐	☐
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☒	☐	☐
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☒	☐
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☒	☐	☐

For the purposes of this analysis, the study area for the evaluation of hazardous materials is defined as an area comprised of all components of the Project as well as areas that would be subject to temporary and/or permanent ground disturbance as a result of the Project or used for the transportation of materials, equipment, and workers.

3.9.1 Environmental Setting

Materials and waste may be considered hazardous if they are poisonous (toxic), can be ignited by open flame (ignitable), corrode other materials (corrosive), or react violently, explode, or generate vapors when mixed with water (reactive). The term “hazardous material” is defined in California Health and Safety Code Section 25501(n)(1) as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment.

In some cases, past industrial or commercial uses on a site can result in spills or leaks of hazardous materials and/or petroleum products to the environment, thus resulting in soil and groundwater contamination. Federal and state laws require that soils having concentrations of contaminants such

as lead, gasoline, or industrial solvents that are higher than certain regulatory standards must be handled and disposed of as hazardous waste during excavation, transportation, and disposal. The California Code of Regulations, Title 22, Section 66261.20-24 contains technical descriptions of characteristics that would cause soil to be classified as a hazardous waste.

The use of hazardous materials and disposal of hazardous wastes are subject to numerous laws and regulations at all levels of government. See Section 3.9.2, *Regulatory Setting*.

Hazardous Materials Database Records Search

To evaluate the potential presence of hazardous materials in soil and groundwater, regulatory databases were searched for sites within 0.25 mile of the Project to identify the documented use, storage, generation, and/or releases of hazardous materials and/or petroleum products. In addition, active contaminated sites that are currently undergoing monitoring and remediation were identified.

Based on a review of the Department of Toxic Substances Control (DTSC) EnviroStor and the State Water Resources Control Board (SWRCB) GeoTracker hazardous materials databases, there are four sites within 0.25 mile of the Project right-of-way that indicate a past or present hazardous materials release or contamination, as discussed below.

- **CRM Automotive Repair** – This site is located at 821 Rancho Santa Fe Road in San Marcos, approximately 150 feet south of the Segment 1 alignment on West San Marcos Boulevard (SWRCB, 2017). This site is listed as an open Leaking Underground Storage Tank (LUST) Cleanup Site. A leaking waste oil tank was removed from the site in 1992 and floating fuel and/or oil was observed on groundwater in the excavation. Site investigation has not been completed and the extent of soil and/or groundwater contamination is unknown.
- **1601 San Elijo Road Project** – This site is located at 1601 San Elijo Road in San Marcos, approximately 850 feet south of the western terminus of Segment 3 alignment and less than 300 feet from staging areas on San Elijo Road. This site is under investigation for vapor intrusion, reportedly due to its location next to the former San Marcos Landfill, discussed below (County of San Diego DEH, 2017).
- **San Marcos Landfill** – This closed landfill is located adjacent and east to the above-listed 1601 San Elijo Road site in San Marcos, approximately 850 feet south of the western terminus of Segment 3 alignment and adjacent and east of the staging areas on San Elijo Road (Geosyntec, 2018). Groundwater beneath this closed landfill contains volatile organic compounds (VOCs), which is migrating west to beneath the above-listed 1601 San Elijo Road Project site.
- **East County Sand Mine** – This site is located at 12101 Highway 67 in Lakeside, approximately 1,160 feet southwest of the staging yard at 12332 Vigilante Road. The site is an active Cleanup Program site for petroleum hydrocarbons in soil (Leighton, 2017).

Alternating Current (AC) Effects on Underground Gas Pipelines

Alternating current (AC) electrical interference effects from the existing power lines on existing underground natural gas pipelines along the Project alignment were investigated for worker safety (e.g., electrical shock) and pipeline hazards (e.g., corrosion) (ARK, 2017). The following natural gas lines were considered:

- SDG&E L-1604 16-inch pipeline
- SDG&E L-49-111 4-inch pipeline
- SDG&E L-49-111 3-inch pipeline
- SDG&E L-49-106 8-inch pipeline
- SDG&E L-49-369 4-inch pipeline

The investigation concluded that the pipelines are subject to AC electrical interference effects from the existing power lines that parallel and cross the pipeline segments. Given that the Project power lines would be on the same alignment; it is presumed that they would have similar effects on the existing pipelines. The results of the investigation concluded that the presence of the power lines does induce a current to the pipelines and exceeds acceptable design limits.

Unexploded Ordnance

Unexploded ordnance (UXO) are explosives (e.g., bombs, shells, grenades, land mines, naval mines) that did not detonate when they were deployed, but still pose a risk of detonation potentially many decades after they were used or discarded (SDG&E, 2017). Given the history of military presence in San Diego County, UXO can be a concern particularly in seldom-accessed areas, such as rugged terrain. The Project alignment is not located on or adjacent to any known UXO sites.

Schools and Day Care Centers

Schools and day care centers are considered sensitive receptors that are more at risk from potential adverse effects associated with accidental release of hazardous materials because children are more susceptible than adults to these effects. Schools that are located within 0.25 mile of the Project alignment are listed in **Table 3.9-1**.

TABLE 3.9-1
SCHOOLS WITHIN 0.25 MILE OF THE PROJECT SITE

School	Segment	Figure number Appendix A	Address
High Tech High North County	1	A-2	1420 W San Marcos Blvd, San Marcos, CA 92078
San Marcos High School	1	A-3	1615 W San Marcos Blvd, San Marcos, CA 92078
Mountain Peak Charter School	1	A-5 & A-6	3220 Executive Ridge, #160, Vista, CA 92081
Valley Christian School	1	A-2	1350 Discovery Street, San Marcos, CA 92078
San Elijo Middle School	3	A-22	1600 Schoolhouse Way, San Marcos, CA 92078
Rock Springs Elementary School	Staging Area	A-45	1155 Deodar Road, Escondido, CA 92026

Airports

The closest public airports include the McClellan-Palomar Airport, which is 1.6 miles away from the staging yards on Eagle Drive in Carlsbad, and the Montgomery-Gibbs Executive Airport, which is approximately 2 miles away from the 5488 Overland Avenue staging yard.

3.9.2 Regulatory Setting

Federal

Hazardous Materials Management

The primary federal agencies with responsibility for hazardous materials management include the U.S. Environmental Protection Agency (USEPA), U.S. Department of Labor Occupational Safety and Health Administration (OSHA), and the U.S. Department of Transportation (DOT). With respect to hazardous materials, state and local agencies often have either parallel or more stringent regulations than federal agencies. In most cases, state law mirrors or overlaps federal law and enforcement of these laws is the responsibility of the state or of a local agency to which enforcement powers are delegated. For these reasons, the requirements of the law and its enforcement are discussed under either the state or local agency section.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act of 1976 (RCRA) is the principal law governing the management and disposal of hazardous wastes. RCRA regulates the generation, transportation, treatment, storage, and disposal of hazardous waste, referred to as from "cradle to grave." Under RCRA, individual states may implement their own hazardous waste programs in lieu of RCRA as long as the state program is at least as stringent as federal RCRA requirements and is approved by the USEPA. The USEPA approved California's RCRA program, referred to as the Hazardous Waste Control Law in 1992.

Hazardous and Solid Waste Act

The Hazardous and Solid Waste Act (HSWA) amended RCRA in 1984, affirming and extending the "cradle to grave" system of regulating hazardous wastes. The amendments specifically prohibit the use of certain techniques for the disposal of some hazardous wastes.

Emergency Planning and Community Right-to-Know Act

The Emergency Planning and Community Right-to-Know Act (EPCRA) from the Superfund Amendments and Reauthorization Act (SARA) Title III improved community access to information regarding chemical hazards and facilitated the development of business chemical inventories and emergency response plans. EPCRA also established reporting obligations for facilities that store or manage specified chemicals. EPCRA applies to this program because the contractors that conduct cleanup, remove hazardous materials from the project site, and construct remediation systems will be required to prepare and implement written emergency response plans to properly manage hazardous materials and respond to accidental spills.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act of 1975 (49 USC §§ 5101-5127) empowered the Secretary of Transportation to designate as hazardous materials that may pose an unreasonable risk to health and safety or property. The U.S. Department of Transportation (USDOT), in conjunction with the USEPA, is responsible for enforcement and implementation of federal laws

and regulations pertaining to safe storage and transportation of hazardous materials. USDOT Regulations implementing the Act at Title 49, Parts 171–180 of the Code of Federal Regulations regulate the transportation of hazardous materials, types of material defined as hazardous, and the marking of vehicles transporting hazardous materials. This Act applies to this program because contractors would be required to comply with its storage and transportation requirements that would reduce the possibility of spills. Federal and state agencies determine driver-training requirements, load labeling procedures, and container specifications. Although special requirements apply to transporting hazardous materials, requirements for transporting hazardous waste are more stringent, and hazardous waste haulers must be licensed to transport hazardous waste on public roads.

Occupational Safety

The Occupational Safety and Health Administration (OSHA) is the agency responsible for assuring worker safety in the handling and use of chemicals in the workplace. The federal regulations pertaining to worker safety are contained in Title 29 of the Code of Federal Regulations, as authorized in the Occupational Safety and Health Act of 1970. They provide standards for safe workplaces and work practices, including standards relating to hazardous materials handling. At sites known or suspected to have soil or groundwater contamination, construction workers must receive training in hazardous materials operations and a site health and safety plan must be prepared. The health and safety plan establishes policies and procedures to protect workers and the public from exposure to potential hazards at the contaminated site.

Clean Water Act

The purpose of the Clean Water Act (CWA; 33 USC § 1251 et seq.), described in greater detail in Section 3.10, Hydrology and Water Quality, in Section 3.10.2, Regulatory Setting, is to protect and maintain the quality and integrity of the nation's waters by requiring states to develop and implement state water plans and policies.

Oil Pollution Prevention

Under the authority of CWA Section 311, the Oil Pollution Prevention regulation in Title 40, Part 112 of the Code of Federal Regulations (40 CFR 112) establishes procedures, methods, equipment, and other requirements to prevent discharges from non-transportation-related onshore and offshore facilities into the waters of the United States. These regulations require facilities with a single tank or cumulative aboveground storage capacities of 1,320 gallons or greater of petroleum to prepare and implement a Spill Prevention, Control, and Countermeasure (SPCC) Plan (40 CFR § 112.1). The purpose of an SPCC Plan is to form a comprehensive federal/state spill prevention program that minimizes the potential for discharges. The SPCC Plan must address all relevant spill prevention, control, and countermeasures necessary at the specific facility for which the SPCC Plan is written.

Federal Aviation Regulations 14 CFR Part 77

The Federal Aviation Administration (FAA) is the federal agency that identifies potential impacts related to air traffic and related safety hazards. The FAA's Federal Aviation Regulation (FAR) at 14 CFR Part 77 establishes standards and notification requirements for objects affecting

navigable airspace. This notification serves as the basis for evaluating the effect of the proposed construction or alteration on operating procedures; determining the potential hazardous effect of the proposed construction on air navigation; identifying mitigating measures to enhance safe air navigation; and charting of new objects. Part 77 includes the establishment of imaginary surfaces (airspace that provides clearance of obstacles for runway operation) that allows the FAA to identify potential aeronautical hazards in advance, thus preventing or minimizing adverse impacts to the safe and efficient use of navigable airspace. The regulations identify three-dimensional imaginary surfaces through which no object should penetrate.

State

California Code of Regulations

The California Code of Regulations (CCR), Title 22, Sections 66261.20-24, contains technical descriptions of characteristics that would classify wasted material, including soil, as hazardous waste. Excavated soils with concentrations of contaminants higher than certain regulatory standards must be handled and disposed as a hazardous waste.

CCR Title 22, Section 67386 et seq. includes the Alternative Management Standards regulations for Treated Wood Waste, which became effective on July 1, 2007. The regulations include storage, accumulation, shipment, and disposal requirements that are specific to the handling, transportation, and disposal of treated wood waste.

Department of Toxic Substances Control

The Department of Toxic Substances Control (DTSC) is responsible for regulating the use, storage, transport, and disposal of hazardous substances in the state. The hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; prescribe management of hazardous waste; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous waste that cannot be disposed of in landfills. DTSC also maintains a Hazardous Waste and Substances Site List for site cleanup. This list is commonly referred to as the Cortese List. Government Code Section 65962.5 requires the California Environmental Protection Agency (CalEPA) to update the Cortese List at least annually. DTSC is responsible for a portion of the information contained in the Cortese List. Other state and local government agencies are required to provide additional hazardous material release information for the Cortese List.

State Water Resources Control Board

The State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) administer the requirements of the Clean Water Act that regulate pollutant discharges into waterways of the U.S. The Project is proposed within the jurisdiction of the San Diego RWQCB.

Construction of the Project would disturb more than one acre of land surface affecting the quality of stormwater discharges into waters of the U.S. The Project would therefore be subject to the *NPDES General Permit for Stormwater Discharges Associated with Construction and Land*

Disturbance Activities (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). The Construction General Permit regulates discharges of pollutants in stormwater associated with construction activity to waters of the U.S. from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface. The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including installation of water pipelines and other utility lines. For additional details of the NPDES Construction General Permit see Section 3.10, *Hydrology and Water Quality*.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

In January 1996, CalEPA adopted regulations implementing a Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The program has six elements: hazardous waste generators and hazardous waste on-site treatment; underground storage tanks; aboveground storage tanks; hazardous materials release response plans and inventories; risk management and prevention programs; and Unified Fire Code hazardous materials management plans and inventories. The plan is implemented at the local level. The Certified Unified Program Agency (CUPA) is the local agency that is responsible for the implementation of the Unified Program. The County of San Diego Hazardous Materials Division is the certified local CUPA for the Project.

Hazardous Materials Release Response Plans and Inventory Law

The California Hazardous Materials Release Response Plan and Inventory Law of 1985 (Business Plan Act) requires businesses that store or use hazardous materials to prepare a Hazardous Materials Business Plan (HMBP) and submit it to the local CUPA, discussed above. The HMBP must include details of the facility and business conducted at the site, an inventory of hazardous materials that are handled and stored on-site, an emergency response plan, and a safety and emergency response training program for new employees with an annual refresher course.

Aboveground Storage of Petroleum Products

The Aboveground Petroleum Storage Act of 1990 requires owners or operators of facilities that store petroleum products with a capacity of 1,320 gallons or more to file a storage statement with the SWRCB and prepare a SPCC plan. The plan must identify appropriate spill containment or equipment for diverting spills from sensitive areas, as well as discuss facility-specific requirements for the storage system, inspections, recordkeeping, security, and personnel training.

The SWRCB requires registration of an aboveground storage tank at a construction site only if the tank is 20,000 gallons or larger, or if the aggregate volume of aboveground petroleum storage is over 100,000 gallons, which would not be applicable to the Project. For smaller temporary tanks used during construction, methods for controlling a release and measures to clean up an accidental release and prevent degradation of water quality are addressed in the construction stormwater pollution prevention plan (SWPPP) that would be prepared for the Project, as described in Section 3.10, *Hydrology and Water Quality*.

Underground Storage Tanks

State laws governing underground storage tanks (USTs) specify requirements for permitting, monitoring, closure, and cleanup associated with these facilities. Regulations set forth construction and monitoring standards for existing tanks, release reporting requirements, and closure requirements. In the study area, the County of San Diego Hazardous Materials Division has regulatory authority for permitting, inspection, and removal of USTs. Any entity proposing to remove a UST must submit a closure plan to the regulating agency prior to tank removal. Upon approval of the UST closure plan, the regulating agency would issue a permit, oversee removal of the UST, require additional subsurface sampling if necessary, and issue a site closure letter when the appropriate removal and/or remediation has been completed.

Hazardous Materials Transportation

In addition to the USDOT regulations, the State regulates the transportation of hazardous waste originating in the State and passing through the State. Both regulatory programs apply in California.

The two state agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are CHP and Caltrans. The CHP enforces hazardous materials and hazardous waste labeling and packing regulations to prevent leakage and spills of material in transit and to provide detailed information to cleanup crews in the event of an accident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are the responsibility of the CHP, which conducts regular inspections of licensed transporters to assure regulatory compliance. Caltrans has emergency chemical spill identification teams at as many as 72 locations throughout the state that can respond quickly in the event of a spill.

Occupational Safety

The California Department of Industrial Relations Division of Occupational Safety and Health (Cal/OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations in California. Because California has a federally approved OSHA program, it is required to adopt regulations that are at least as stringent as those found in Title 29 of the CFR.

Cal/OSHA regulations concerning the use of hazardous materials in the workplace require employee safety training, safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces hazard communication program regulations, which contain training and information requirements, including procedures for identifying and labeling hazardous substances, and communicating hazard information relating to hazardous substances and their handling. The hazard communication program also requires that Material Safety Data Sheets (MSDSs) be available to employees, and that employee information and training programs be documented. These regulations also require preparation of emergency action plans (escape and evacuation procedures, rescue and medical duties, alarm systems, and training in emergency evacuation).

Emergency Response

Pursuant to the Emergency Services Act (Government Code §8550 et seq.), California has developed an Emergency Plan to coordinate emergency services provided by federal, state, and local governmental agencies and private persons. Response to hazardous materials incidents is one part of this plan. The plan is administered by the State Office of Emergency Services (OES). The OES coordinates the responses of other agencies, including the USEPA, CHP, California Department of Fish and Wildlife (CDFW), the RWQCBs (in this case, the San Diego RWQCB), the local air districts (in this case, the San Diego Air Pollution Control District) and local agencies. The State Emergency Plan defines the "policies, concepts, and general protocols" for the proper implementation of the California Standardized Emergency Management System (SEMS). The SEMS is an emergency management protocol that agencies within the State of California must follow during multi-agency response efforts whenever state agencies are involved.

California Public Utilities Code

California Public Utilities Code Section 21658 prohibits structural hazards associated with utility poles and lines near airports. Should a power line be located in the vicinity of an airport or exceed 200 feet in height, a Notice of Proposed Construction or Alteration (Form 7460-1) is required by the FAA in accordance with Federal Aviation Regulation, Part 77 "Objects Affecting Navigable Airspace."

Local

McClellan-Palomar Airport Land Use Compatibility Plan

The San Diego County Regional Airport Authority, acting in its capacity as the San Diego County Airport Land Use Commission (ALUC) in accordance with section 21670.3 of the California Public Utilities Code, has published the McClellan-Palomar Airport Land Use Compatibility Plan to fulfill its purpose of promoting airport land use compatibility (San Diego County ALUC, 2010). Under this plan, the Airport Influence Area is the area where airport-related noise, safety, airspace protection, and overflight factors may significantly affect land use compatibility or necessitate restrictions on certain land uses as determined by the ALUC. Land use actions that affect property within the Airport Influence Area are subject to the compatibility policies and criteria in this Compatibility Plan.

Emergency Response

The San Diego County OES coordinates the County-wide response effort in the event of a disaster situation and also implements the Multi-Jurisdictional Hazard Mitigation Plan (MJHMP). The MJHMP identifies hazards that could potentially affect any or all portions of the County as well as measures for the prevention and minimization of such hazards. San Diego County OES is responsible for notifying appropriate agencies in the event of a disaster, as well as coordinating all responding agencies. The City of San Diego Fire-Rescue Department oversees emergency management within the City. It also participates in disaster preparedness through the San Diego County MJHMP. Mutual aid, response, and emergency management are available from state government agencies where appropriate or by direct request of the local agency.

The Operational Area Emergency Operations Plan is one of the County documents that was reviewed during the planning process for the MJHMP. The Emergency Operations Plan includes specific information regarding evacuation routes and procedures, and the agencies that are in charge of coordinating these emergency situations (OES, 2018). The Emergency Operations Plan indicates that in the event of an evacuation, ground transportation routes will be the primary means of evacuation and major evacuation routes will be major ground transportation corridors.

3.9.3 Applicant Proposed Measures

SDG&E proposes to implement the following Applicant Proposed Measures (APMs) for hazards and hazardous materials as part of the project.

APM HAZ-1: A Health and Safety Plan will be prepared and implemented during construction. The Health and Safety Plan will describe the anticipated hazards that construction workers may encounter while working on the Project, the safety measures that must be taken to address those hazards, and the necessary training requirements for personnel working on the Project. Safety hazards and applicable federal and state occupational standards will be identified in conjunction with the development of appropriate response actions, as well as a protocol for accident reporting. The Health and Safety Plan will also identify security and safety requirements for staging areas, storage yards, excavation areas, and any other areas of the Project where hazards may exist during construction activities. In addition, information regarding medical kits, safety equipment, and evacuation procedures will be outlined in the Health and Safety Plan. A qualified safety field representative will be present on site to observe and document adherence to the Health and Safety Plan as needed. The Health and Safety Plan will be prepared by the SDG&E construction contractor and will be available immediately prior to construction.

APM TRA-1: If construction requires lane closures, traffic delays, or other encroachment of construction activities within public travelways, the Applicant will adhere to local traffic control regulations and establish a traffic control plan as needed to comply with local ordinances. Traffic control plans will describe signage, flaggers, or other controls to be used to regulate traffic where necessary and to maintain a safe transportation corridor during construction.

APM TRA-2: The Applicant will coordinate with local emergency response agencies during construction within existing public roadways to allow safe passage and access by emergency vehicles and equipment.

3.9.4 Environmental Impacts

Discussion

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials: *LESS THAN SIGNIFICANT IMPACT*.

Construction

Construction would require the use of limited quantities of common hazardous substances, such as gasoline and diesel fuel, oils and lubricants, hydraulic fluid, and solvents to maintain vehicles and motorized equipment; and cartridges containing primer for ignition and nitrocellulose propellant for

gas production in the unlikely event that blasting is necessary (see Chapter 2, *Project Description*, for details). An accidental spill of any of these substances could occur during handling and transfer from one container to another and could impact localized air, soil, water, and/or groundwater quality. Depending on the relative hazard of the material, an accidental spill could pose a hazard to people or the environment and would be considered potentially significant. Blasting agents, if needed, also could present a hazard of injury, mortality, or property damage if improperly handled.

The use of hazardous materials and substances during construction would be subject to the federal, state, and local health and safety requirements for the handling, storage, transportation, and disposal of hazardous materials, as summarized above in Section 3.9.2, *Regulatory Setting*. Implementation of a construction SWPPP in compliance with the state Construction General Permit would reduce the chance of a spill/accidental release and would have provisions to contain spills to avoid contamination of water bodies and groundwater. For further information regarding the construction SWPPP, refer to Section 3.10, *Hydrology and Water Quality*. Construction contractors would be required to prepare and implement a HMBP describing procedures for transporting, storing, and using hazardous materials in a safe and legal manner. The HMBP would include typical best management practices (BMPs), including spill response procedures such as use of absorbent pads for spill containment and specified locations for vehicle refueling, as proscribed in SDG&E's *BMP Manual for Water Quality Construction* (SDG&E, 2011). In addition, as noted in Section 3.9.3, *Applicant Proposed Measures*, the applicant would require all contractors to comply with **APM HAZ-1**, which would require the development and implementation of a Health and Safety Plan. Compliance with applicable federal, state, and local regulations, the State Construction General Permit and its required SWPPP, applicable BMPs, and APM HAZ-1 would further ensure that the Project's potential construction-phase impact would be less than significant.

The Project would replace numerous wood poles with steel poles. The wood poles to be removed in Segment 1 have been treated with chemicals that likely include pentachlorophenol, creosote, or chromated copper arsenate. These treatment chemicals are used in pressure treated wood to protect wood from rotting due to insects and microbial agents. Additionally, the base of some of the treated wood poles may be wrapped with copper naphthenate paper. This paper has been accepted as a wood preservative for several decades and is typically used in non-pressure treatments of wood and other products. These chemicals, for certain uses and quantities, can be considered hazardous materials, and as a result, disposal of wood poles would require specific handling procedures prescribed by state and federal regulations (DTSC, 2011). In compliance with state and federal regulations, all non-reusable treated wood would be disposed of in a composite-lined portion of a municipal solid waste landfill approved by the San Diego RWQCB and, therefore, impacts related to Project construction would be less than significant.

Within the existing Escondido Substation, a concrete oil containment wall and a concrete circuit breaker pad would be removed. The existing oil circuit breaker would be replaced with a gas (sulfur hexafluoride or SF_6) circuit breaker, which does not require a containment wall. The existing circuit breaker at the Escondido Substation contains mineral oil, which would not be classified as hazardous. Mineral oil (other commonly used names are paraffin oil and/or white mineral oil mist) does not appear on the list of hazardous substances provided by Cal/OSHA (Cal/OSHA, 2018), and therefore the removal of the oil circuit breaker facilities would not result

in any significant hazardous materials-related impact. Nonetheless, this Project construction activity would be subject to the State Construction General Permit and its required SWPPP, which outlines BMPs to avoid runoff of stormwater and pollutants.

Air quality issues from diesel particulate matter are analyzed in Section 3.3, *Air Quality*, and are not discussed in this section.

Operations – Hazardous Materials

Project operation and maintenance may require the limited use of certain materials such as fuels, oils, solvents, and other chemical products that could pose a potential hazard to the public or the environment during routine transport, use, or disposal. SDG&E currently maintains and operates existing electric transmission, power, distribution and substation facilities throughout the study area. Operation and maintenance activities for the Project would therefore be substantially similar to current conditions.

During operation and maintenance, vehicles and equipment used for routine inspections and emergency repair would require the use of fuel and lubricants. Routine maintenance activities would include washing or replacing insulators, repairing or replacing other hardware components, tree trimming, and brush and weed control. Furthermore, as described in Section 2.6.4, *Application of Herbicides*, an application of herbicides may follow the mechanical trimming of vegetation to prevent vegetation from recurring. This activity would generally involve one person in a pickup truck spraying around the base of the pole structure with a radius of up to 10 feet. The employee would either walk from the nearest access road to apply the herbicide or drive a pickup truck directly to each pole structure location, as access permits. This would occur annually during the "wet season" (i.e., fall through spring), prior to the last rains of the season. SDG&E practices application according to its annual "Pest Control Recommendation," which includes guidance on quantity, pesticide mix, hazards, restrictions, etc. While the Project would not require long-term operational use, storage, treatment, disposal, or transport of significant quantities of hazardous materials, such materials would be used during maintenance activities.

Hazardous materials needed for maintenance activities would be stored and used in accordance with the product specifications and applicable regulations. Product specifications are described in detail on Safety Data Sheets (SDS), which accompany every batch of materials considered to be hazardous. Information in the SDS includes instructions on proper use and application of the material, accidental release measures, and handling and storage requirements. Hazard communication programs regulations enforced by Cal/OSHA requires SDS be available to employees, and that employee information and training programs be documented. Applicable regulations specify storage and handling requirements such as proper container types and usage methods. Compliance with the measures prescribed in these regulations would ensure that potential impacts associated with hazardous product use would be adequately mitigated. Applicable regulations under Caltrans and the CHP described in Section 3.9.2, *Regulatory Setting*, regulate the transportation of hazardous materials and wastes, including container types and packaging requirements, as well as licensing and training for truck operators, chemical handlers, and hazardous waste haulers. All transport of hazardous materials for the Project would be in undertaken compliance with applicable laws, rules,

and regulations, including the acquisition of required shipping papers, package marking, labeling, transport vehicle placarding, training, and registrations.

Compliance with applicable federal, state, and local regulations and the applicable BMPs and SPCC plan would ensure that the impact would be less than significant during Project operation and maintenance.

Operations – Pipeline Conflicts

As discussed in Section 3.9.1, induced AC interference effects from the existing power lines on the existing underground natural gas pipelines along the Project alignment were investigated for worker safety and pipeline damage. The proximity of the power lines to the natural gas pipelines could create hazards, including subjecting personnel to electric shock up to a lethal level, accelerated corrosion, arcing through pipeline coating, arcing across insulators, disbondment or degradation of coating, or possibly perforation of the pipeline.

To maintain the induced AC interference effects within acceptable design limits, the Project includes an AC interference mitigation system, described in detail in Section 2.4.3. This system would include 11 deep wells, solid state decouplers, and three coupon test stations. See Figure 2-10 in the *Project Description* for more information on the location of the deep wells and coupon test stations. Each well would contain a copper grounding rod connected to a copper wire, in turn connecting the well to a solid state decoupler, and then backfilled with conductive concrete. The solid state decouplers and the coupon test stations would be locked and secured from the public. The Project AC interference mitigation system would reduce the current to the pipelines located within the Project to acceptable design limits, and increase worker safety. Therefore, implementation of the AC interference mitigation system component of the Project would ensure that potential pipeline conflict impacts would remain less than significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment: *LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED*.

Construction

Accidents or mechanical failure involving heavy equipment could result in the accidental release of small quantities of fuel, lubricants, hydraulic fluid, or other hazardous substances. These types of spills on construction sites are typically in small quantities, localized, and are cleaned up in a timely manner. Construction contractors are contractually responsible for their hazardous materials and are required under their contract to properly store and dispose of these materials in compliance with state and federal laws, including implementing a HMBP with procedures for transporting, storing, and using hazardous materials in a safe and legal manner. As discussed in Section 3.10, *Hydrology and Water Quality*, the Project would require coverage under the State Construction General Permit and its required SWPPP, which outlines BMPs to avoid runoff of stormwater and pollutants. The BMPs would include protection measures to contain a potential release and to prevent any such release from reaching an adjacent waterway or stormwater collection system. These would minimize the potential adverse effects to groundwater and soils.

Project construction activities would involve excavating, trenching, and grading, as well as the use of hazardous materials such as gasoline, diesel fuel, oils, lubricants, solvents, and glues. Although implementation of the Health and Safety Plan in APM HAZ-1 would reduce the risk of accidental release of or exposure to hazardous materials, if hazardous materials were present in excavated soil or are inadvertently released into the environment, this could expose people to contaminated soil and groundwater and chemical vapors during construction. Depending on the nature and extent of any contamination encountered, adverse health effects could result.

Data obtained from the DTSC's EnviroStor and SWRCB's GeoTracker databases indicate four hazardous materials sites within 0.25 mile of the Project alignment. The sites include one LUST Cleanup Site, two Cleanup Program Sites, and one closed landfill. The CRM Automotive Repair Site is identified as having a drinking water aquifer potentially contaminated with gasoline and wastes from oil, motor, hydraulic, and lubricating activities. The 1601 San Elijo Road site requires additional assessment to evaluate the potential vapor intrusion exposure to groundwater, reportedly originating from the adjacent closed landfill under ongoing monitoring. The East County Sand Mine is currently undergoing remediation. The footprint of contamination from these four site may extend to the Project alignment. Therefore, during construction, there is the potential to encounter previously known and unknown contaminated soil, and, if dewatering is needed, groundwater. Construction workers, the public, and the environment could be exposed to hazardous materials and the impact could be significant. The impact would be reduced to less than significant with the implementation of **Mitigation Measure HAZ-1**, described below.

> **Mitigation Measure HAZ-1: Soil and Dewatering Management Plan.** SDG&E and the contractor conducting soil excavation and (if needed) dewatering shall develop and implement a Soil and Dewatering Management Plan (SDMP) that describes the procedures for managing excavated soil and groundwater generated from dewatering activities. The SDMP shall include procedures for monitoring soil for possible contamination, identifying the specific stockpiling locations and measures to contain the stockpiled soil to prevent run on and run off, and materials disposal specifying how the construction contractor(s) will remove, handle, transport, and dispose of all excavated materials in a safe, appropriate, and lawful manner. The SDMP shall specify the contractor will segregate and dispose of soil with chemical concentrations above regulatory standards. Soil with chemical concentrations below regulatory standards may be reused or recycled. Soil with chemical concentrations above regulatory standards shall be disposed of in accordance with the applicable provisions of Cal. Code Regs. Title 22, Chapter 11, Article 3, Section 66261 (i.e., Class III (non-hazardous waste), Class II (non-hazardous and "designated" waste), or Class I (non-hazardous and hazardous waste)). The SDMP must identify protocols for soil testing and disposal, identify the approved disposal sites, and include written documentation that the disposal site can accept the waste. The contractor shall include procedures for the safe and legal disposal of groundwater generated from dewatering, if any. The procedures shall include water sampling and testing procedures to quantify chemical concentrations in the water, and dispose of the water in a safe and legal manner. Note that the disposal of groundwater generated from dewatering may be disposed of under the state's VOC and Fuel General Permit, depending on chemical concentrations and local sanitary sewer acceptance criteria. Contract specifications shall mandate full compliance with all applicable local, State, and federal regulations related to the identification, transportation, and disposal of hazardous materials, including those encountered in soil and

groundwater. This SDMP shall be submitted to CPUC for review and approval prior to commencement of construction.

Significance after Mitigation: Mitigation Measure HAZ-1 would ensure that soil and water are monitored and that soil and/or water with chemical concentrations that exceed regulatory standards would be properly tested, contained, and disposed of in a safe and legal manner. This would reduce the potential for adverse effects on construction workers, the public, and the environment. With compliance with existing federal, state, and local regulations, and the implementation of this mitigation measure, impacts would be reduced to a less-than-significant level.

Operations

As described under Question a, operation and maintenance activities for the Project would be substantially similar to current conditions. Compliance with applicable federal, state, and local regulations and the applicable BMPs and SPCC plan would ensure that the impact would be less than significant during Project operation and maintenance.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school: *LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.*

Construction

As shown in Table 3.9-1, six schools are located within 0.25 mile of the Project. No new schools are currently proposed in this area. Project construction would require the short-term use of various hazardous materials. Impacts from the routine use of hazardous materials are analyzed above in Question a and from accidental spills in Question b. As noted under Question b, compliance with existing federal, state, and local regulations and implementation of APM HAZ-1 would reduce the risk of emitting hazardous emissions or wastes, but impacts may remain significant. Thus, **Mitigation Measure HAZ-1** has been incorporated to reduce this impact to a less-than-significant level.

Mitigation Measure HAZ-1: Soil and Dewatering Management Plan. See full text for this Mitigation Measure under Question b, above.

Significance after Mitigation: Mitigation Measure HAZ-1 would ensure that encountered potentially contaminated soil and groundwater are monitored and that soil and/or groundwater with chemical concentrations that exceed regulatory standards would be properly tested, contained, and disposed of in a safe and legal manner. This would reduce the potential for adverse effects on construction workers, the public, and the environment. With compliance with existing regulations and the implementation of this mitigation measure, this impact would be reduced to a less-than-significant level.

Operations

As described in Section 2.6.4, *Application of Herbicides*, an application of herbicides may follow the mechanical trimming of vegetation to prevent vegetation from recurring. Impacts from the routine use and accidental release of herbicides is analyzed above in Question a. Compliance with applicable federal, state, and local regulations and the applicable BMPs and SPCC plan would ensure that the impact would be less than significant during Project operation and maintenance.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment: *LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.*

Construction

As discussed in Section 3.9.1, *Environmental Setting*, there are four open hazardous materials sites in proximity to Project segments and components, and the extent of contamination at one or more of these sites may extend to the Project alignment. Impacts from encountering contaminated soil or water are analyzed above under Question b. During construction, compliance with existing federal, state, and local regulations and APM HAZ-1 would reduce the risk of creating a significant hazard to the public or environment but not to a less-than-significant level. Implementation of **Mitigation Measure HAZ-1** would reduce construction impacts to less than significant.

> **Mitigation Measure HAZ-1: Soil and Dewatering Management Plan.** See full text for this Mitigation Measure under Question b, above.
>
> **Significance after Mitigation:** With the implementation of Mitigation Measure HAZ-1, contaminated soils would be properly contained and disposed of in a safe and legal manner. With compliance with existing federal, state, and local regulations, and the implementation of this mitigation measure, impacts would be reduced to a less-than-significant level.

Operations

During operation and maintenance, the risk of encountering contaminated soil or water would be greatly reduced compared to construction because there would be little to no ground disturbance. Therefore, compliance with applicable federal, state, and local regulations and the applicable BMPs and SPCC plan would ensure that the impact would be less than significant during Project operation and maintenance.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area: *LESS THAN SIGNIFICANT IMPACT.*

Construction and Operations

The closest public airports are the McClellan-Palomar Airport 1.6 miles away from the staging yards on Eagle Drive in Carlsbad and the Montgomery-Gibbs Executive Airport approximately 2 miles away from the staging yard at an existing SDG&E facility at 5488 Overland Avenue in San Diego. The staging yards on Eagle Drive fall within the FAR Part 77 Airspace Surfaces as designated in the McClellan-Palomar Airport Land Use Compatibility Plan (San Diego County ALUC, 2010). However, the staging yard on Eagle Drive would be used for the laydown of materials only and would adhere to height restrictions per FAR Part 77, *Safe, Efficient Use and Preservation of the Navigable Airspace*. While the Airport Master Plan for the Montgomery-Gibbs Executive Airport is currently being developed (SD Airport Plans, 2018), a safety hazard as a result of the proximity of the staging yard at 5488 Overland Avenue to Montgomery-Gibbs Executive Airport is highly unlikely as the staging yard would be used for the laydown of materials only. This impact would be less than significant. Finally, some Project work would use

helicopters that would use the McClellan-Palomar Airport. However, helicopters take off and land in a vertical manor and within the operational surfaces defined for the airport pursuant to FAR Part 77 and would not result in physical hazards around the airport.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan: *LESS THAN SIGNIFICANT IMPACT.*

Construction

The Emergency Operations Plan for San Diego County does not include any specific evacuation routes; these would be identified and coordinated by local law enforcement and emergency service responders as needed during an emergency situation. Segment 1 would include approximately 2 miles of rebuilding on West San Marcos Boulevard and work on Segment 3 ends at West Mission Road. These roads are public ground transportation routes and Project construction could affect the traffic in these areas by adding congestion to the roads or reducing the capacity of a given roadway. APM TRA-1 includes implementation of traffic control measures that would be used during construction to ensure safety and minimize congestion, and APM TRA-2 requires the Applicant to coordinate with local agencies in the event of an emergency, to allow access for emergency vehicles and equipment. The likelihood that construction would impair or physically interfere with emergency response teams or an evacuation plan is low and the impact would be less than significant.

Operations

As described under Question a, operation and maintenance activities for the Project would be substantially similar to current conditions. Therefore, the Project would not introduce substantially different or new operation and maintenance activities that could result in impacts on emergency response plans or emergency evacuation plans. As a result, the impact from operation and maintenance would be less than significant.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires: *LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.*

Please see Question b in Section 3.20, *Wildfire*, for a detailed discussion of the Project's potential to expose people or structures to a significant risk of loss, injury, or death involving wildland fires. As explained in that section, this impact would be less than significant with incorporation of **Mitigation Measure WIL-1**.

> **Mitigation Measure WIL-1: Fire Safety.** See full text of this Mitigation Measure under Question b in Section 3.20, *Wildfire.*
>
> **Significance after Mitigation:** Mitigation Measure WIL-1 would implement a Project-specific Construction Fire Prevention Plan (CFPP) to ensure the health and safety of construction workers and the public from fire-related hazards. The CFPP would reduce the potential and risk of ignition for wildland fires and reduce the impact to a less-than-significant level.

3.9.5 References

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3.10 Hydrology and Water Quality

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
10. HYDROLOGY AND WATER QUALITY — Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☒	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
(iv) impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

This section describes the existing environmental and regulatory setting of the Project, including the hydrology in the Project vicinity, and evaluates the potential for construction, operation, and maintenance of the Project to result in impacts to hydrology and water quality. For the purposes of the evaluation of hydrology and water quality, the study area includes the Project site and vicinity, including the footprint of all areas of Project-related temporary and/or permanent ground disturbance, as well as water features and drainages potentially influenced by the Project.

3.10.1 Environmental Setting

The Project is located within San Diego County, predominantly in the Carlsbad Watershed but also in the San Diego Watershed, where existing SDG&E staging areas are located at 12332 Vigilante Road in Lakeside and at 5488 Overland Avenue in San Diego. The Project study area ranges in elevation from approximately 400 to 1,100 feet above mean sea level. The southwest coastal region of California is generally arid and characterized by hot, dry summers, and mild winters, typical of a Mediterranean climate. The region normally receives very little annual rainfall, with the majority of

precipitation typically falling between October and May and averaging a total of 10 to 13 inches intermittently over this timeframe (San Diego RWQCB, 2016).

Surface Water Hydrology

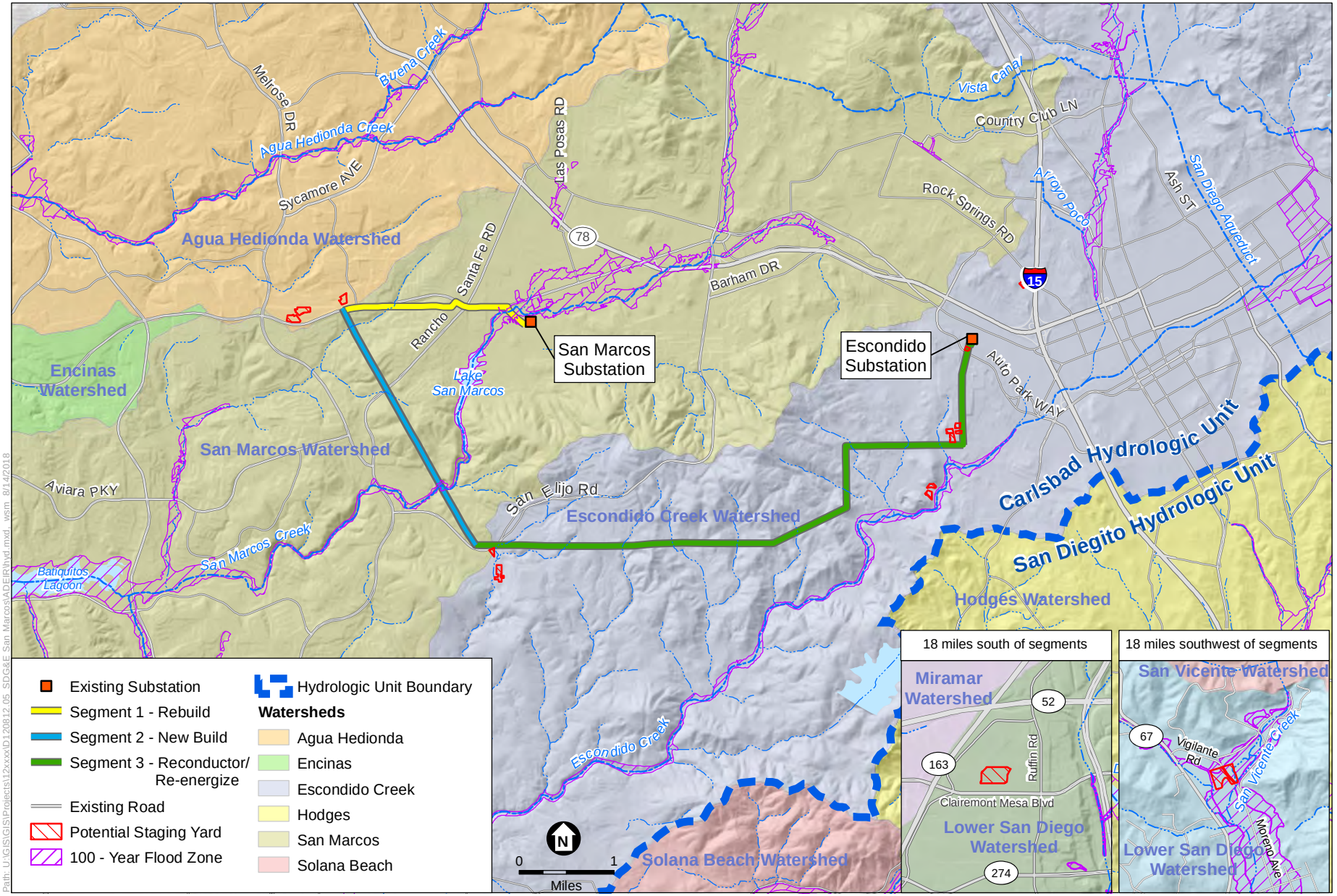
Surface waters and drainages in the Project study area are shown in **Figure 3.10-1**, *Surface Hydrology and 100 Year Flood Zones in the Project Vicinity*. The Project would be located in the Carlsbad and San Diego watersheds. The Carlsbad Watershed is divided into six hydrologic areas: Loma Alta, Buena Vista Creek, Agua Hedionda, Encinas, San Marcos Creek, and Escondido Creek. This watershed encompasses approximately 210 square miles and includes Escondido Creek and its tributaries and major waterbodies such as Lake Wohlford, Dixon Reservoir, and Olivenhain Reservoir. The watershed is drained by Buena Vista, Agua Hedionda, San Marcos, and Escondido creeks (San Diego RWQCB, 2016). Subwatershed areas draining the study area include Escondido, San Elijo, Batiquitos, and Richland. The San Diego Watershed is divided into four hydrologic areas: Lower San Diego, San Vicente, El Capitan, and Boulder. This watershed comprises about 440 square miles and is drained by the San Diego River. El Capitan, San Vicente, Cuyamaca, Jennings, and Murray reservoirs are the major water storage facilities.

Segments 1 and 2 would be constructed adjacent to or near Lake San Marcos and San Marcos Creek, which drains into Batiquitos Lagoon. San Marcos Creek flows generally westward to the Batiquitos Lagoon where it meets the Pacific Ocean. Segment 3 and staging yards north and south of Harmony Grove Village Parkway would be located adjacent to or near Escondido Creek, which originates in Bear Valley and flows to San Elijo Lagoon where it meets the Pacific Ocean (Escondido Creek Conservancy, 2018). The staging yard at 12332 Vigilante Road in Lakeside would be located near the San Vicente Reservoir, in an area that drains to San Vicente Creek.

Groundwater

The Project would partially overlie the San Marcos Valley, Escondido Valley, and San Diego River Valley groundwater basins. None of the water-bearing formations in these basins are in contact with the ocean. All three basins are bounded by contacts with semi-permeable or impermeable geologic formations (California Department of Water Resources [DWR], 2004). Recharge of the San Marcos Valley groundwater basin occurs chiefly by percolation of rainfall and stream flow (DWR, 2004). Recharge of the Escondido Valley groundwater basin occurs by percolation of rainfall and from water bearing deposits such Quaternary-age alluvium[1] and residuum.[2] Recharge of the San Diego River Valley groundwater basin occurs by dam releases, underflow past the El Capitan and San Vicente dams, stream-flow, precipitation onto the valley floor, and discharges from wastewater treatment plants (DWR, 2004). Groundwater quality in these basins varies, and is locally degraded, due to previous land uses. For example, a contaminant plume may be present within the San Marcos Valley groundwater basin due to previous automotive land uses (SWRCB, 2017).

1 Deposits of sediment transported by a stream or river and deposited on the floodplain.
2 Weathered material remaining in place after soluble materials have been removed by the action of water.



SOURCE: SDGE, 2018; FEMA, 2018; DWR

TL 6975 San Marcos to Escondido Project

Figure 3.10-1
Surface Hydrology

Flooding

Most of the study area would be located outside flood hazard zones as designated by the Federal Emergency Management Agency (FEMA). However, a portion of Segment 1 near the San Marcos Substation, a portion of Segment 2 near San Marcos Creek, and the staging yard at 12332 Vigilante Road would be located in an area mapped within the 1 percent annual chance (100-year) flood zone, as shown on Figure 3.10-1. The study area is not located within an area identified by the California Office of Emergency Services (Cal OES) as a tsunami inundation zone. However, the northeast portion of Segment 1 and the San Marcos substation are located within the dam inundation zone of South Lake (City of San Marcos, 2012), a small portion of the potential staging area north and south of Harmony Grove Village Parkway is within the Lake Wohlford dam inundation zone, and the staging area at 12332 Vigilante Road is within the San Vicente dam inundation zone (Cal OES, 2018).

3.10.2 Regulatory Setting

Federal and State

Federal Clean Water Act

The federal Clean Water Act (CWA), enacted by Congress in 1972 and amended several times since its inception, is the primary federal law regulating water quality in the United States and forms the basis for several State and local laws throughout the country. Its objective is to reduce or eliminate water pollution in the nation's rivers, streams, lakes, and coastal waters. The CWA authorizes the U.S. Environmental Protection Agency (USEPA) to implement federal water pollution control programs, such as setting water quality standards for contaminants in surface water, establishing wastewater and effluent discharge limits for various industry categories, and imposing requirements for controlling nonpoint-source pollution. At the federal level, the CWA is administered by the USEPA and U.S. Army Corps of Engineers (USACE). At the State and regional levels, the act is administered and enforced by the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCB).

The SWRCB provides State-level coordination of the water quality control program by establishing statewide policies and plans for the implementation of State and federal regulations. The RWQCBs in California adopt and implement water quality control plans that recognize the unique characteristics of each region with regard to natural water quality, actual and potential beneficial uses, and water quality problems. The study area is located in the San Diego RWQCB, Region 9. The San Diego RWQCB adopts and implements a Water Quality Control Plan for the San Diego Basin (more commonly known as the "Basin Plan") that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan (California Water Code §§13240-13247).

Beneficial Use and Water Quality Objectives (CWA §303)

The San Diego RWQCB is tasked with developing and enforcing water quality objectives and implementing plans to protect the waters within its jurisdiction. The RWQCB designates beneficial uses of water bodies in the San Diego Region and establishes water quality objectives

through implementation of the Basin Plan. The designation of beneficial uses for the waters of the State by the RWQCB is mandated under Water Code Section 13240. CWA Section 303 requires that the State adopt designated beneficial uses for surface waters. The most recent version of the Basin Plan for the San Diego region was published in 1994 with amendments effective on or before May 17, 2016.

In accordance with State policy for water quality control, the RWQCB employs a range of beneficial use definitions for surface waters and groundwater basins that serve as the basis for establishing water quality objectives and discharge conditions and prohibitions. The Basin Plan identifies existing and potential beneficial uses supported by the key surface water drainages throughout its jurisdiction (San Diego RWQCB, 2016). **Table 3.10-1** identifies beneficial uses designated in the Basin Plan for the surface water bodies relevant to the study area. The Basin Plan also includes water quality objectives that are protective of the identified beneficial uses; the beneficial uses and water quality objectives collectively make up the water quality standards for a given region and Basin Plan. The Basin Plan also includes actions necessary to maintain these water quality standards.

TABLE 3.10-1
DESIGNATED BENEFICIAL USES OF WATER BODIES IN THE STUDY AREA

Water Body	Designated Beneficial Uses
Lake San Marcos	AGR, REC1, REC2, WARM, WILD
San Marcos Creek	MUN, AGR, REC1, REC2, WARM, WILD
Escondido Creek	MUN, AGR, IND, REC1, REC2, WARM, COLD, WILD
San Vicente Creek	MUN, IND, REC1, REC2, WARM, WILD

NOTES:

Existing and Potential Beneficial Uses Key:

MUN (Municipal and Domestic Supply); AGR (Agricultural Supply); REC1 (Body Contact Recreation); REC2 (Noncontact Recreation); WARM (Warm Freshwater Habitat); COLD (Cold Freshwater Habitat), WILD (Wildlife Habitat); IND (Industrial Service Supply).

SOURCES: San Diego RWQCB, 2016, 2017

Section 303(d) of the CWA requires that each state identify water bodies or segments of water bodies that are "impaired" (i.e., do not meet one or more of the water quality standards established by a state, even after point sources of pollution have been equipped with the minimum required levels of pollution control technology). USEPA must approve the Section 303(d) List of Impaired Water Bodies before it is considered final. Inclusion of a water body on the 303(d) List triggers development of a Total Maximum Daily Load (TMDL) for that water body and a plan to control the associated pollutant/stressor on the list. The TMDL is the maximum amount of a pollutant/stressor that a water body can assimilate and still meet the water quality standards. Typically, a TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. **Table 3.10-2** lists the impaired water bodies in the study area, including the pollutants that cause the impairments.

TABLE 3.10-2
303(D) LIST OF IMPAIRED WATER BODIES IN THE STUDY AREA

Impaired Water Bodies	Pollutants
Lake San Marcos	Ammonia as Nitrogen, Copper, Nutrients, Phosphorus, Indicator Bacteria
San Marcos Creek	DDE, Indicator Bacteria, Phosphorus, Selenium
Escondido Creek	Bifenthrin, DDT, Indicator Bacteria, Malathion, Manganese, Nitrogen, Phosphate, Selenium, Sulfates, total dissolved solids
San Vicente Creek	Ammonia as Nitrogen, Indicator Bacteria, Phosphorus, Total Nitrogen as N

SOURCE: San Diego RWQCB, 2016

National Pollutant Discharge Elimination System Program CWA Section 402

Under CWA Section 402, the National Pollutant Discharge Elimination System (NPDES) storm water permitting program controls water pollution by regulating point sources of pollution to waters of the United States. The RWQCB administers the NPDES program in the San Diego region.

NPDES General Permit for Discharges of Stormwater Associated with Construction Activities (Order 2009-0009-DWQ)

Because the Project would result in the disturbance of 1.0 acre or more of soil, it would be subject to the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ), commonly referred to as the Construction General Permit. The permit regulates storm water discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including installation of water pipelines and other utility lines.

In addition to storm water discharges, the Construction General Permit also covers other non-storm water discharges including irrigation of vegetative erosion control measures, water to control dust, uncontaminated ground water from dewatering, and other discharges not subject to a separate general NPDES permit adopted by the Regional Water Board. The discharge of non-storm water is authorized under the following conditions:

- The discharge does not cause or contribute to a violation of any water quality standard;
- The discharge does not violate any other provision of the General Permit;
- The discharge is not prohibited by the applicable Basin Plan;
- The discharger has included and implemented specific Best Management Practices (BMPs) required by the General Permit to prevent or reduce the contact of the non-storm water discharge with construction materials or equipment.
- The discharge does not contain toxic constituents in toxic amounts or (other) significant quantities of pollutants;
- The discharge is monitored and meets the applicable numeric action levels; and
- The discharger reports the sampling information in the Annual Report.

The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific BMPs designed to prevent sediment and other pollutants from contacting storm water and from moving offsite into receiving waters. The BMPs fall into several categories, including erosion control, sediment control, waste management and good housekeeping, and are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area. Routine inspection of all BMPs is required under the provisions of the Construction General Permit. In addition, the SWPPP is required to contain a visual monitoring program and a chemical monitoring program for non-visible pollutants.

A SWPPP would be implemented for the Project and at a minimum, would include:

- Description of construction materials, practices, and equipment storage maintenance;
- List of pollutants likely to contact storm water and site specific erosion and sedimentation control practices;
- List of provisions to eliminate or reduce discharge of materials to storm water;
- BMPs for fuel and equipment storage;
- Non-storm water management measures, such as installing specific discharge controls during activities such as paving operations and vehicle and equipment washing and fueling; and
- Commitment that equipment, materials, and workers would be available for rapid response to spills and/or emergencies. All corrective maintenance or BMPs would be performed as soon as possible, depending upon worker safety.

The SWPPP provides specific construction-related BMPs to prevent soil erosion and loss of topsoil. BMPs implemented could include, but would not be limited to: physical barriers to prevent erosion and sedimentation, construction of sedimentation basins, limitations on work periods during storm events, use of swales, protection of stockpiled materials, and a variety of other measures that would substantially reduce or prevent erosion from occurring during construction. Post-construction requirements necessitate that construction sites be restored to pre-project hydrological conditions to ensure that the physical and biological integrity of aquatic ecosystems are sustained in their existing condition.

Oil Pollution Prevention

Under the authority of CWA Section 311, the Oil Pollution Prevention regulation in Title 40, Part 112 of the Code of Federal Regulations (40 CFR 112) establishes procedures, methods, equipment, and other requirements to prevent discharges from non-transportation-related onshore and offshore facilities into the waters of the United States. These regulations require facilities with a single tank or cumulative aboveground storage capacities of 1,320 gallons or greater of petroleum to prepare and implement a Spill Prevention, Control, and Countermeasure (SPCC) Plan (40 CFR § 112.1). The purpose of an SPCC Plan is to form a comprehensive federal/state spill prevention program that minimizes the potential for discharges. The SPCC Plan must address all relevant spill prevention, control, and countermeasures necessary at the specific facility for which the SPCC Plan is written.

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) determines flood elevations and floodplain boundaries and distributes the flood insurance rate maps used in the National Flood Insurance Program. These maps identify the locations of special flood hazard areas, including 100-year floodplains (i.e., areas that would have a 1 percent annual chance of flooding).

Federal regulations governing development in a floodplain are set forth in Title 44, Part 60 of the Code of Federal Regulations. Those regulations enable FEMA to require municipalities participating in the National Flood Insurance Program to adopt certain flood hazard reduction standards for construction and development in 100-year floodplains. As shown in Figure 3.10-1, portions of Segments 1 and 2 and the staging area at 12332 Vigilante Road in Lakeside would be located within the 100-year floodplain.

California Fish and Game Code Section 1602

Section 1602 of the Fish and Game Code protects the natural flow, bed, channel, and bank of any river, stream, or lake under the jurisdiction of the California Department of Fish and Wildlife (CDFW). For projects affecting the bed, bank, or flow of water under CDFW jurisdiction, applicants must submit a notification of lake or streambed alteration to CDFW. CDFW may issue a Lake and Streambed Alteration Agreement if it determines that the activity may substantially adversely affect fish and wildlife resources. The Project would include construction near Lake San Marcos and San Marcos and Escondido creeks.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act, the SWRCB has authority over waters of the State and water quality. The RWQCBs have local and regional authority. The Project is proposed in an area under the jurisdiction of the San Diego RWQCB. The San Diego RWQCB prepares and periodically updates the Basin Plan described under the heading *Beneficial Use and Water Quality Objectives (CWA §303)*, above. Pursuant to the CWA NPDES program, the Porter-Cologne Act also delegates the authority to the RWQCBs to issue NPDES permits.

Waste Discharge Requirements

Actions that involve or are expected to involve discharge of waste may be subject to waste discharge requirements (WDR) under the Porter-Cologne Act. Chapter 4, Article 4 of the Act (Water Code §§13260-13274) states that persons discharging or proposing to discharge waste that could affect the quality of waters of the State (rather than into a community sewer system) shall file a Report of Waste Discharge with the applicable RWQCB. However, the RWQCB has issued a waiver for certain types of discharges, as discussed below.

Waiver for Specific Types of Discharges (San Diego RWQCB Order Number R9-2014-0041)

California Water Code Section 13269 gives each Regional Water Board the authority to conditionally waive the prescription of waste discharge requirements for a specific discharge or type of discharge. In order to do so, a Regional Water Board must determine that a waiver for a

specific discharge or type of discharge is consistent with the Basin Plan and is not against the public interest. The types of discharges which may be eligible for a waiver only include discharges to land and groundwater, and discharges to surface waters that are not otherwise subject to National Pollutant Discharge Elimination System (NPDES) regulations. The RWQCB has adopted a waiver of waste discharge requirements (Resolution R9-2014-0041, *Conditional Waivers of Waste Discharge Requirements for Low Threat Discharges in the San Diego Region*) for specific types of low-threat discharges to the land surface within the San Diego region. Discharges to land of recycled water, construction dewatering, and dredged material disposal to land are among the activities covered by this waiver, providing the subject activities meet the conditions specified within the waiver. Waivers serve much the same purpose as general permits (i.e., they are intended to describe a range of protective measures that could be applied to a broad category of activities). This waiver must be obtained from the RWQCB for any actions that would involve use of recycled water during construction and dewatering and/or long-term storage of excavated material on the land surface.

Dewatering may be necessary in some locations for the Project that would be subject to the adopted waiver. Conditions on use of the waiver for short-term construction dewatering operations include:

- The discharge of groundwater pumped from any well or excavation that is used in a soil and/or groundwater contamination investigation or corrective action may not be discharged to land, unless the discharger has filed a complete NOI containing monitoring data demonstrating that the quality of the proposed discharge would not cause the groundwater to exceed water quality objectives.
- For dewatering operations discharging in excess of an average of 5,000 gallons per day for any continuous 180-day period, the discharger must file a complete NOI containing information about the operator, location, planned period and rate of discharge, and measures that will be taken to minimize or eliminate the discharge of pollutants that might affect groundwater quality. Written notice of enrollment in the Waiver must be received by the San Diego Water Board prior to initiating the discharge.
- Discharge under this waiver from short term construction dewatering operations are prohibited from entering MS4s and any surface waters including, but not limited to, ephemeral streams or vernal pools.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act of 2014 (SGMA, Water Code §10723) provides a framework for sustainable management of groundwater resources. Sustainable groundwater management means the management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results. Undesirable results in this context are one or more of the following:

- Chronic lowering of groundwater levels
- Significant and unreasonable reduction of groundwater storage
- Significant and unreasonable seawater intrusion

- Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies
- Significant and unreasonable land subsidence that substantially interferes with surface land uses
- Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water

In groundwater basins designated by DWR as medium and high priority, local public agencies and locally-controlled groundwater sustainability agencies (GSAs) are required to develop and implement groundwater sustainability plans (GSPs) or alternatives to GSPs. Each GSP or alternative must include measurable objectives and interim milestones for achieving sustainability goals for the given groundwater basin. Plans must also include a physical description of the basin, including information on groundwater levels, groundwater quality, subsidence and groundwater-surface water interaction, historical and projected water demand and supply data, monitoring and management provisions, and a description of how the plan will affect other plans. The State has designated four groundwater basins in San Diego County as medium-priority groundwater basins within the context of SGMA, including the San Diego River Valley Basin (County of San Diego, 2018). The Escondido Valley and San Marcos Area basins are ranked very low (DWR, 2018). GSPs have not been completed for these basins.

3.10.3 Applicant Proposed Measures

No Applicant Proposed Measures (APMs) have been identified that would address potential impacts to hydrology and water quality.

3.10.4 Environmental Impacts

Discussion

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality: *LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED.*

Construction

As noted in Table 2-7, *Temporary Working Areas*, construction activities would disturb more than 1 acre of ground surface. Water quality impacts would most likely occur during construction and installation of replacement poles as part of Segment 1, construction and installation of new poles as part of Segment 2, and the removal of existing poles outside of the Escondido substation. Construction could cause erosion that may contaminate runoff primarily as a result of ground disturbance, grading, and removal of vegetation, and during the preparation of construction staging areas and new access roads. In addition to impacts from erosion, contamination from fuels or other hazardous materials used during construction could also adversely affect water quality. Dewatering may be necessary in some locations. The geotechnical study conducted for the Project indicated groundwater levels ranging from 4 to 20 feet below ground surface (GEOCON Inc., 2017). Pole foundation excavations could yield up to 111,000 gallons, while no dewatering

is anticipated for the trenches (SDG&E, 2018). Dewatered groundwater could affect water quality if it is not adequately treated or controlled.

Construction activities would be undertaken in accordance with the SDG&E BMP Manual for Water Quality Construction (SDG&E, 2011). Many of the construction activities of SDG&E are linear in nature, unique to utility work, and do not correspond to typical large development project BMPs. This manual tailors typical BMPs as applicable to utility type work and utility work crews. SDG&E would be required to obtain coverage for the Project under the NPDES Construction General Permit and adhere to permit requirements, including the implementation of a SWPPP. The SWPPP would include detailed BMPs designed to avoid water quality impacts of all construction activities, including groundwater dewatering, materials staging, and equipment washing at staging yards, such that project construction would not violate water quality standards, worsen existing water quality violations, or otherwise adversely affect water quality in Lake San Marcos, San Marcos Creek, Escondido Creek, or San Vicente Creek.

Prior to construction, SDG&E would obtain coverage from the RWQCB under the wavier of WDRs, Resolution R9-2014-0041, *Conditional Waivers of Waste Discharge Requirements for Low Threat Discharges in the San Diego Region*. Construction dewatering and dredged material disposal to land are among the activities covered by this waiver. However, this would not exempt SDG&E from also including groundwater dewatering BMPs in the SWPPP.[3]

Within the existing Escondido Substation, a concrete oil containment wall and a concrete circuit breaker pad would be removed. The existing mineral oil circuit breaker would be replaced with a gas (sulfur hexafluoride or SF6) circuit breaker, which would not require containment. The removal of these facilities, along with other Project construction activities, would be subject to the State Construction General Permit and the SWPPP.

Section 3.9, *Hazards and Hazardous Materials*, lists the locations of potentially contaminated sites within 0.25 mile of the Project components. Of the four open sites listed, staging without ground disturbance or dewatering would occur at three (1601 San Elijo Road Project, San Marcos Landfill, and East County Sand Mine). Construction dewatering near the CRM Automotive Repair site (listed by GeoTracker as an open Leaking Underground Storage Tank (LUST) Cleanup Site) could encounter contaminated groundwater, although the duration and volume of dewatering would be limited to that required for replacement of two pole foundations (poles 20 and 21). The untreated release of contaminated dewatered groundwater could significantly adversely affect water quality. Potentially significant impacts associated with the potential release of hazardous materials-contaminated groundwater during dewatering are evaluated in Section 3.9, *Hazards and Hazardous Materials*. With implementation of **Mitigation Measure HAZ-1**, Soil and Groundwater Management Plan, impacts on surface water quality related to construction dewatering would be less than significant.

[3] Water Code Section 13269 does not authorize the San Diego Water Board to issue waivers of WDRs for waste discharges subject to federal regulations implementing the federal Clean Water Act and the federal National Pollutant Discharge Elimination System (NPDES) regulations.

Construction dewatering at poles 20 and 21 could also affect groundwater quality by causing migration of a suspected groundwater contamination plume from the CRM Automotive Repair site. However, there are no public water system wells within 1 mile of poles 20 and 21; furthermore, if the CRM Automotive Repair contaminant plume is present, it is likely to already be in contact with the San Marcos Valley aquifer (SWRCB, 2018). As discussed above, should the contaminant plume migrate such that contaminated groundwater is encountered during construction dewatering, the groundwater would be handled in compliance with BMPs and Mitigation Measure HAZ-1. Thus, the Project would not substantially degrade groundwater quality due to migration of a contaminant plume compared to existing conditions.

Accidental releases of hazardous materials that are used during construction, such as diesel fuel, hydraulic fluid, or oils and grease, could have an adverse effect on water quality. Potential spills of hazardous materials would be minimized through hazardous materials management measures (see Section 3.9, *Hazards and Hazardous Materials*). Adherence to the BMPs, as outlined in the SWPPP, and the conditions of Resolution R9-2014-0041 would reduce potential impacts to water quality to less-than-significant levels. This potential impact is discussed in Section 3.9, *Hazards and Hazardous Materials.* As discussed there, impacts related to accidental releases of hazardous materials would be less than significant with implementation of APM HAZ-1 and Mitigation Measure HAZ-1.

> **Mitigation Measure HAZ-1: Soil and Dewatering Management Plan.** See full text for this Mitigation Measure in Section 3.9, *Hazards and Hazardous Material,* Question b.
>
> **Significance after Mitigation:** Mitigation Measure HAZ-1 would ensure that soil and water are monitored and that soil and/or water with chemical concentration that exceed regulatory standards would be properly tested, contained, and disposed of in a safe and legal manner. This would reduce the impact of accidental releases of hazardous materials during construction that could have an adverse effect on water quality. The implementation of Mitigation Measure HAZ-1 would reduce the impact to a less-than-significant level.

Operations and Maintenance

Project operation and maintenance could result in impacts on surface water and/or groundwater quality as a result of accidental release of pollutants. For example, oils, fuels, and hazardous substances used during routine operation and maintenance of the three substations could adversely affect water quality if such pollutants were to contact storm water or non-storm runoff or infiltrate into groundwater. Potential spills of hazardous materials would be minimized through hazardous materials management measures contained in the SPCC Plan (see Section 3.9, *Hazards and Hazardous Materials*), resulting in a less-than-significant impact.

In addition, as described in Section 2.6.4, *Application of Herbicides*, an application of herbicides may follow the mechanical trimming of vegetation to prevent vegetation from recurring. This occurs annually under baseline conditions during the “wet season” (i.e., fall through spring), prior to the last rains of the season, and would continue to occur under Project conditions. SDG&E practices application according to its annual Pest Control Recommendation, which includes guidance on quantity, pesticide mix, hazards, and use restrictions (Wilbur-Ellis Company, 2017).

As shown in Table 3.10-2, the surface water bodies in the study area on the 303(d) List are not listed as impaired due to the ingredients included in the herbicide mixture; thus, these ingredients would not contribute to existing impairments. When applied in accordance with the SDG&E Pest Control Recommendation, the impact of herbicides on water quality would be less than significant.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin: *LESS THAN SIGNIFICANT IMPACT.*

Construction

Project construction would require water for dust control on roads, washing off equipment, pad grading, grout mixing, pole backfill and concrete wash out, drinking water and sanitation, and restoration activities. SDG&E anticipates that most of the Project water supply would come from the Vallecitos Water District (VWD), which has sufficient water supply to support the needs of the Project (VWD, 2017). The VWD obtains its water supply primarily from the Colorado River and the State Water Project (i.e., surface water sources); therefore, construction water use would not appreciably decrease groundwater supplies (VWD, 2018).

As described above under Question a., pole foundation excavations could result in dewatering of 111,000 gallons. The San Marcos Valley groundwater basin is ranked by the State as very low priority for sustainable groundwater management (DWR, 2018). Permanent wells would not be installed during construction, and the amount of water pumped would be equivalent to pumping from the water bearing units of the aquifer for 31 hours total.[4] The Project therefore would not result in chronic lowering of groundwater levels or unreasonable reductions in groundwater storage. For these reasons, the project would not impede the sustainable groundwater management of the San Marcos Valley groundwater basin and impacts would be less than significant.

Operations and Maintenance

Project operation would result in some water use for dust control and other maintenance needs; however, as described in Section 2.6.1, the Project would eliminate the existing need for insulator washing. Therefore, the change in water consumption would be negligible. Water would be sourced from the VWD and therefore would not affect groundwater supplies.

As noted in Table 2-6, *Permanent Work Areas*, the Project would add 60 permanent work pads upon completion totaling 1.92 acres, four new spur roads totaling 0.12 acre, and one permanent access road totaling 0.18 acre. These new permanent impervious surfaces would be designed to meet post-construction requirements of the Construction General Permit, including that construction sites be restored to pre-project hydrological conditions, which would reduce Project impacts on groundwater recharge such that no chronic groundwater lowering, significant and unreasonable reduction of groundwater storage, significant and unavoidable land subsidence, or

[4] The water bearing units in the San Marcos Valley basin are up to 175 feet thick, and wells screened in these units produce water at 60 gallons per minute.

depletions of interconnected surface water would result. Impacts of the Project on groundwater supplies and recharge during operations would be less than significant.

c.i) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site: *LESS THAN SIGNIFICANT IMPACT.*

Construction

The Project would not alter the course of any stream or river. Project construction would include ground disturbing activities that could expose soils to erosion or siltation. Cut and fill would be required at some structure locations to create construction and line maintenance pads, as noted in Section 2.5.3, *Pre-Construction Preparation*. Construction activities would include the implementation of required BMPs in accordance with the implementation of a SWPPP and SDG&E's BMP Manual, which include erosion control measures to minimize the potential for erosion and siltation. Implementation of these required BMPs would reduce the potential impact related to drainage patterns causing erosion or siltation to less than significant.

Operations and Maintenance

Once constructed, drainage patterns would be relatively similar to existing conditions other than a slight increase in runoff as a result of an increase in new impervious surfaces (less than 2.5 acres spread out over more than 60 sites). Operation and maintenance of the Project facilities would not require further changes to surface grades that could significantly alter existing drainage patterns. If grading is needed to preserve surface contours in unpaved areas, it would occur with BMPs implemented per the SDG&E BMP Manual and NPDES Construction General Permit requirements to return runoff to existing drainage patterns and to stabilize surface disturbances. For these reasons, the potential impact from changes to drainage patterns causing erosion or siltation would be less than significant.

c.ii) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite: *LESS THAN SIGNIFICANT IMPACT.*

Construction

As noted under Question c.i, the Project would include approximately 2.5 acres of new impervious surface area. The Project would also be required to adhere to post-construction drainage control standards under the Construction General Permit, which requires that construction sites be restored to pre-project hydrologic conditions. By restoring sites to pre-project hydrologic conditions, the rate and amount of surface runoff generated would not substantially increase. In addition, the Project would not require the substantial modification of any upland sites to an extent that it could alter drainage patterns in a way that would increase the potential for on- or off-site flooding. Therefore, based on the Project characteristics and the implementation of required post-construction standards, the impact would be less than significant.

Operations and Maintenance

For the same reasons provided under Question c.i, Project operation and maintenance would not alter the existing drainage pattern of the site or area. Therefore, it would have a less-than-significant impact with respect to increasing the rate or amount of surface runoff in a manner which would result in flooding on- or offsite.

c.iii) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff: *LESS THAN SIGNIFICANT IMPACT.*

Construction

The Project would include only minor additions of impervious surfaces such that the additional amount of storm water runoff would be small. SDG&E would also implement a SWPPP and BMPs during operation and maintenance in accordance with its BMP Manual. During construction, implementation of a SWPPP would limit runoff volume and control pollutants to ensure there would be no adverse effects on water quality. Project impacts on runoff volumes would be negligible and would not result in an exceedance of the capacity of existing or planned storm water drainage systems or cause a substantial increase in the amount of polluted runoff. Impacts would be less than significant.

Operations and Maintenance

For the same reasons provided under Question c.i, Project operation and maintenance would not alter the existing drainage pattern of the site or area. Therefore, it would have a less-than-significant impact with respect to creating or contributing runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.

c.iv) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows: *NO IMPACT.*

Construction

While the majority of the Project site is not located within a 100-year flood hazard area, a portion of Segment 1 near the San Marcos Substation, a portion of Segment 2 near San Marcos Creek, and the staging yard at 12332 Vigilante Road would be located in an area mapped within the 1 percent annual chance (100-year) flood zone. Construction and staging activities would not substantially alter existing drainage patterns in these areas. There would be no impact.

Operations and Maintenance

The affected portion in Segment 1 would involve overhead work on an existing power line and replacing existing wood poles structures with steel poles and existing porcelain insulators with polymer. The affected portion in Segment 2 includes overhead work on a new power line. No new permanent structures are proposed to be placed within the 100-year flood hazard area. For

the same reasons provided under Question c.i, Project operation and maintenance would not alter the existing drainage pattern of the site or area. Therefore, it would have no impact with respect to impeding or redirecting flood flows.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation: *LESS THAN SIGNIFICANT IMPACT.*

The Project is not located in a tsunami or seiche zone.

Construction

Dam inundation maps indicate that a small portion of the potential staging area north and south of Harmony Grove Village Parkway is within the Lake Wohlford dam inundation zone; and the staging area at 12332 Vigilante Road is within the San Vicente dam inundation zone (Cal OES, 2018). Any Project-related materials located at the staging areas would only be present on a temporary basis, and storm water BMPs designed to control pollutants would be installed in these areas pursuant to the CGP. The Project therefore would not place substantial new pollutant sources within these dam inundation zones and the impact would be less than significant.

Operations and Maintenance

Dam inundation maps indicate that the northeast portion of Segment 1 and the San Marcos substation are located within the dam inundation zone of South Lake (City of San Marcos, 2012). The Project would not permanently expand the footprint of the San Marcos Substation and would not add to the existing number of power poles in the area. Therefore, the Project would have a less-than-significant risk of releasing pollutants if Project sites are inundated by flooding.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? *LESS THAN SIGNIFICANT IMPACT.*

There is no sustainable groundwater management plan relevant to the groundwater basins underlying the study area.

Construction

Project construction would not conflict with or obstruct implementation of the Basin Plan because SDG&E would dewater groundwater consistent with the requirements of *Conditional Waivers of Waste Discharge Requirements for Low Threat Discharges in the San Diego Region*. The Project would also implement BMPs selected to be protective of surface and groundwater quality as part of a SWPPP, in compliance with the CGP, as discussed in Question a. The impact would be less than significant.

Operations and Maintenance

The new impervious areas created by the project would be restored to pre-project hydrological conditions as required by the CGP, and would be used only for vehicle and equipment access as needed during operations and maintenance; runoff from these areas therefore would not contain sediment or fuel pollutants at levels that would substantially affect water quality objectives

identified for nearby surface water bodies. The herbicide mixture to be used does not contain ingredients for which nearby surface water bodies are listed as impaired, as discussed in Question a. For these reasons, Project operations would not conflict with or obstruct implementation of the Basin Plan, and the impact would be less than significant.

3.10.5 References

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3.11 Land Use and Planning

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
11.	**LAND USE AND PLANNING — Would the project:**				
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

This section evaluates the potential for Project construction, operation, and maintenance to result in impacts related to land use and planning in the study area. For the purposes of the evaluation of potential land use impacts, the study area was defined as the footprint of all Project components, including all areas of temporary and/or permanent ground disturbance and the surrounding communities within which the Project would be constructed, operated, and maintained.

3.11.1 Environmental Setting

The Project is located in northern San Diego County and would include the cities of Carlsbad, San Marcos, Vista, and Escondido and parts of unincorporated San Diego County. Land use within the study area is predominantly residential, commercial, industrial, public/institutional, open space, and undeveloped. The Project would be built primarily within existing SDG&E rights-of-way (ROWs). However, approximately 1.2 acres of additional ROW would be required to accommodate the re-build along Segment 1. The City of San Marcos General Plan land use and zoning designations that would occur within and adjacent to the Project site are described below.

- **San Marcos Substation:** The San Marcos substation is the western terminus of the Project. This facility is walled to separate it from the surrounding single-family residential area. The San Marcos General Plan land use and zoning designations at this site are both Public/ Institutional (P-I). The General Plan land use and zoning designations for the immediately surrounding area are Low Density Residential and Residential-2 (R-2), respectively.
- **Segment 1:** From the San Marcos Substation, Segment 1 continues generally westward in the City of San Marcos along Discovery Street and West San Marcos Boulevard/Palomar Airport Road, ending west of White Sands Drive in the City of Carlsbad. Between Avenida de Las Rosas and the Carlsbad city limit, the Project is located along the common border between the cities of Vista and San Marcos.

  Portions of the Project that pass through the City of San Marcos are designated, by the General Plan, as Public/Institutional (PI), Commercial (C), Medium Density Residential 1 (MDR1), Very Low Density Residential (VLDR), Open Space (OS), and Specific Plan Areas (SPA). Portions of the Project that cross the City of San Marcos are zoned, by the San Marcos Zoning Ordinance, as Public/Institutional (P-I), Commercial (C), Residential-2 (R-2), Residential Low, (R-1-10), Open Space (OS), and Specific Plan Area (SPA). Specific Plan Areas through which Segment 1 passes include, from east to west, San Marcos Creek, Laurels, Meadowlark Canyon, and Rancho Dorado (residential developments).

The portions of Segment 1 in the City of Carlsbad are in undeveloped spaces along Palomar Airport Road. Open Space (OS) is the only City of Carlsbad General Plan designation included in the Project study area, although Planned Industrial (PI) designations are adjacent to the east and west. The zoning designations at this location mirror the General Plan, with the Project components in an Open Space (OS) zone and Planned Industrial (P-M) zones to the east and west.

The City of Vista General Plan designations include General Commercial (GC), Research Light Industrial (RLI), and Mixed Use (MU). The zoning designations in this area are provided in the Vista Business Park Specific Plan, and the Project would be located within Specific Plan Area A and the mixed use overlay.

Approximately 1.2 acres of new ROW would be required along Segment 1. The legal parcels that would be affected by the proposed additional ROW area are located along the south side of West San Marcos Boulevard at San Marcos High School (i.e., Poles 11-20) and from the vicinity of Viewpoint Drive west to the vicinity of Acacia Drive (i.e., Poles 26-37). The land use within and adjacent to the new ROW is characterized as open space, commercial buildings, vacant and undeveloped land, and single-family residential homes.

- **Segment 2:** From its junction with Segment 1 in Carlsbad, Segment 2 proceeds southeast within SDG&E ROW back into and through the City of San Marcos, crossing unincorporated portions of San Diego County (Lake San Marcos area), and ending at Meadowlark Junction in the San Elijo area in San Marcos. In the City of Carlsbad, the General Plan and zoning designation along Segment 2 is Open Space (OS).

  Portions of the Project that include the City of San Marcos are designated as Open Space (OS), Agricultural/Residential (AG), Rural Residential (RR), Light Industrial (LI), Open Space – SPA Limited Use, and the Specific Plan Areas of Rancho Dorado, University Commons, and San Elijo Hills. The City of San Marcos zoning designations along Segment 2 include Open Space (O-S), Agricultural-1 (A-1), Estate (R-1-20), and Light Manufacturing (L-1).

  The San Diego County General Plan designates the area of unincorporated County traversed by Segment 2 as Village Residential. The zoning designations are Rural Residential (RR) and Single-Family Residential (RS).

- **Segment 3:** From Meadowlark Junction in San Marcos, the Segment 3 travels within SDG&E ROW eastward primarily over undeveloped land and then northward, ending at the Escondido Substation. Segment 3 includes the City of San Marcos, City of Escondido, and unincorporated parts of San Diego County. The portion of the Project that crosses the City of San Marcos has the land use designations of Open Space – SPA Limited Use, Open Space (OS), Public/Institutional (PI), and the San Elijo Hills Specific Plan Area. City of San Marcos zoning designations along this portion of Segment 3 include Open Space (O-S) and San Elijo Hills Specific Plan Area.

  Portions of the Project within the City of Escondido are designated as General Industrial, Light Industrial, Industrial Office, Residential Rural II, Residential Estate I, Residential Estate II. City of Escondido zoning designations along this portion of Segment 3 include Industrial Park/Office (I-P-O), Residential Estates (R-E), Industrial Park (I-P), and Specific Plan (S-P).

  In unincorporated San Diego County, the Project crosses areas designated as Rural Lands, Open Space, Neighborhood Commercial, Semi Rural Residential, Village Residential, and Specific Plan. Segment 3 would include the Harmony Grove Specific Plan Area. County

zoning designations along in this area include Rural Residential (RR), Open Space (S80), Agriculture (A70), and Specific Planning Areas (S88).

Two existing auxiliary staging yards would be used for Project purposes. Both are located outside of the primary study area. The Kearny Mesa staging yard is located approximately 25 miles south of the study area within the City of San Diego. The Icon 3PL Material Yard is located approximately 25 to 30 miles southeast of the study area in unincorporated San Diego County and would serve as a potential vendor drop for material and site delivery in Lakeside. Because both of these sites are existing SDG&E staging yards and the Project would not change the land use of either site, neither is discussed further in this section.

3.11.2 Regulatory Setting

Federal

No federal regulations related to land use and planning apply to the Project.

State

California Public Utilities Commission General Order No. 131-D

The CPUC has sole and exclusive jurisdiction over the siting and design of the Project because it authorizes the construction, operation, and maintenance of investor-owned public utility facilities. Although such projects are exempt from local land use and zoning regulations and discretionary permitting (i.e., they would not require discretionary approval from a local decision-making body such as a planning commission, county board of supervisors or city council), General Order No. 131-D, Section XIV.B requires that in locating a project "the public utility shall consult with local agencies regarding land use matters." The public utility would be required to obtain any required non-discretionary local permit (CPUC, 1995).

Local

It is noted that while local jurisdictions are preempted from regulating the Project with respect to land use, the land use plans, policies, and regulations described below are used in the impact analysis to determine whether any actual adverse environmental impact could occur as a result of a conflict with these plans, policies, and regulations.

San Diego County

General Plan

The San Diego County General Plan Land Use Element provides a framework for managing future development of the existing character of the current communities and sensitive natural resources in the County. In order to maximize the effectiveness of the existing infrastructure, the Land Use Element encourages development in the existing unincorporated communities. General Plan Land Use Designations in San Diego County are described in the Land Use Element of the General Plan (County of San Diego, 2011).

Zoning Ordinance

The San Diego County Zoning Ordinance is the primary mechanism for the implementation of the General Plan's general land use designations; it identifies specific uses and development standards within these land use designations. The zoning ordinance categorizes utility lines and/or poles within the "Essential Services" use type and allows such services without a use permit under the Use Regulations for the following designations: Rural Residential (§2182), Single Family Residential (§2102), Open Space (§2802), Agriculture (§2702), and Specific Planning Areas (§2882).

City of San Marcos

General Plan

The following policies from the Land Use and Community Design Element (LU) and Conservation and Open Space Element (COS) of the City of San Marcos General Plan pertain to electrical facilities (City of San Marcos, 2013):

> ***Policy LU-17.1*:** Coordinate with all communications and utility companies (electrical, gas, telephone, cable, satellite and future utilities) in the provision of services throughout the community and the installation and maintenance of facilities in their respective franchise areas.
>
> ***Policy COS-4.6*:** Promote efficient use of energy and conservation of available resources in the design, construction, maintenance and operation of public and private facilities, infrastructure and equipment.
>
> ***Policy COS-4.8*:** Encourage and support the generation, transmission and use of renewable energy.

Zoning Ordinance

The purpose of the San Marcos Zoning Ordinance is to protect and promote the public health, safety, comfort, convenience, and general welfare of the San Marcos community; to implement the policies of the general plan; and to provide the physical, environmental, economic, and social advantages that result from the orderly planned use of land resources. The general provisions chapter of the zoning ordinance indicates that "The provision of this Zoning Ordinance shall not be construed to limit or interfere with the installation, maintenance, or operation of…electric, telephone, or telegraph transmission lines when installed, maintained, and operated in accordance with all other applicable laws" (§20.100.040).

City of Carlsbad

General Plan

The City of Carlsbad General Plan Chapter 2, Land Use & Community Design, and Chapter 4, Open Space, Conservation and Recreation, contain the following goals and policies relating to public facilities and utility infrastructure (City of Carlsbad, 2015):

> **Goal 2-G.21:** Ensure that adequate public facilities and services are provided in a timely manner to preserve the quality of life of residents.

***Policy 4-P.5*:** Require compliance with the Growth Management Plan open space performance standard specified in the Citywide Facilities and Improvements Plan, and maintain appropriate criteria, standards, and classifications. The following open space areas shall not be utilized to meet the open space performance standard:

d. Power line easements, except where the land within the easement is identified by the OSCRMP [Open Space and Conservation Resource Management Plan] as an open space priority, such as a trail or greenway, and the granting of the open space credit will not adversely impact the city's ability to achieve all of the open space priorities identified for the LFMZ [Local Facility Management Zones] by the OSCRMP. Major power line easements that provide key links to the Carlsbad trail system shall receive credit toward the open space performance standard.

Zoning Code

Chapter 21.53 (Uses Generally) of the City of Carlsbad Zoning Code states, "The provisions of this title shall not be construed to limit or interfere with the installation, maintenance and operation of…electric or telephone transmission lines, or railroads, when located in accordance with the applicable rules and regulations of the public utilities commission of the State of California within rights-of-way, easements, franchises or ownerships of such public utilities" (§21.53.080).

City of Vista

General Plan

The City of Vista General Plan, Land Use and Community Identity Element contains the following policies that pertain to electric transmission facilities (City of Vista, 2014).

***LUCI Policy 1.6*:** Encourage undergrounding of utilities, and discourage new electric and communications lines to be added to existing aboveground utility systems.

***LUCI Policy 3.1*:** Require all new development to be designed to minimize impacts to adjoining residential neighborhoods.

Vista Business Park Specific Plan

Zoning within the portion of the Project within the City of Vista is governed by the Vista Business Park Specific Plan (City of Vista, 1993). The specific plan contains requirements to install electrical conductor facilities underground, but exempts high voltage lines and substations from this requirement.

City of Escondido

General Plan

The City of Escondido General Plan Mobility and Infrastructure Element contains one policy relevant to the provision of electrical utilities (City of Escondido, 2012).

***Policy 16.2*:** Continue to work with local utility providers to ensure that adequate electricity and natural gas services and facilities are available for new and existing development.

Zoning Code

The Zoning Code establishes land uses and regulates buildings and use within designated zones in order to preserve the public health, safety, comfort, convenience, and general welfare of the City of Escondido. The zoning code allows utility facilities under the Residential Estates (§33-94) use regulations with a conditional use permit. However, the Project would not be subject to local use permits. The zoning code lists utilities as a permitted use under the Industrial-Office designation, but not the Industrial Park designation (§33-564), and does not list transmission facilities as a permitted use.

3.11.3 Applicant Proposed Measures

No Applicant Proposed Measures (APMs) have been proposed to address Project impacts relevant to land use and planning.

3.11.4 Environmental Impacts

Discussion

a) Physically divide an established community: *NO IMPACT*.

The Project alignment would include some residential areas; however, the rebuild, new build, and reconductoring/re-energizing components of the Project would be located within the same ROW as existing similar infrastructure and structures in each residential area affected. Thus, the Project would not create a new physical barrier that would divide existing communities and there would be no impact.

The 1.2 acres of additional ROW required for Segment 1 along and south of San Marcos Boulevard would widen the ROW by approximately 10 feet to a total of 20 feet in some residential areas (see Appendix Route Map Figure A-4 through A-6). However, the portions of the Project that would be located within this widened ROW would consist of replacement of existing poles and would not establish a new physical barrier that would divide an established community. There would be no impact.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect: *NO IMPACT.*

The new Proposed Updates to the CEQA Guidelines submitted by the Governor's Office of Planning and Research requires analysis of "significant environmental impacts due to conflicts with any plans and policies adopted for the purpose of avoiding or mitigating an environmental effect" (OPR, 2017). There are numerous plans, policies, and regulations that either are implicated by relevant Appendix G checklist questions or were adopted for the purpose of avoiding or mitigating and environmental effect and, thus, are evaluated under the appropriate resource-specific section of this IS/MND. As an example, Section 3.4, *Biological Resources*, evaluates whether the Project would conflict with the provisions of an adopted Habitat Conservation Plan or similar plan. Thus, environmental impacts that would occur due to conflicts

with plans, policies, and regulations are discussed in each appropriate topical section of this IS/MND. Provided below is a discussion and analysis of environmental impacts specifically related to any conflict within a land use plan, policy, or regulation within the study area.

San Diego County. The Project would be consistent with the zoning ordinance because as discussed in Section 3.11.2, the ordinance allows "essential services," including utility lines, within all zones through which the Project would pass. Because the zoning ordinance implements the General Plan land use designations and policies, the Project would be consistent with the General Plan and would avoid any significant environmental impact due to a conflict with any land use plan, policy, or regulation in San Diego County.

City of San Marcos. The Project would be consistent with the zoning ordinance's provision that allows electric transmission lines "when installed, maintained, and operated in accordance with all other applicable laws." Because the zoning ordinance implements the General Plan land use designations and policies, the Project also would be consistent with the General Plan and would avoid any significant environmental impact due to a conflict with any land use plan, policy, or regulation in the City of San Marcos.

City of Carlsbad. The Project would be consistent with the zoning ordinance's provision that allows electric transmission lines "when located in accordance with the applicable rules and regulations of the public utilities commission of the State of California within rights-of-way, easements, franchises or ownerships of such public utilities." Because the zoning ordinance implements the General Plan land use designations and policies, the Project also would be consistent with the General Plan and would avoid any significant environmental impact due to a conflict with any land use plan, policy, or regulation in the City of Carlsbad.

City of Vista. The Project would be consistent with the City of Vista General Plan since implementation of the Project would include overhead work on existing poles or removal of poles and would not introduce new electric transmission lines within the City of Vista. Therefore, no new developments would be included in the City of Vista and there would be no need to minimize impacts to adjoining residential neighborhoods, as discussed in LUCI Policy 3.1. The Project would also be consistent with LUCI Policy 1.6 with the removal of new electric and communications lines, while discouraging additions to existing aboveground utility systems. No restrictions in the Vista Business Park Specific Plan would apply to the Project; therefore, no conflict with this plan would occur.

City of Escondido. The Project would be consistent with the City of Escondido General Plan, which encourages the provision of adequate electricity facilities. Although the City of Escondido Zoning Code does not specifically permit or conditionally permit electric transmission facilities within all applicable zones, it does not disallow such use or identify any environmental impacts that would occur as a result of the placement of an electric transmission facility within any particular zone.

The Project would not conflict with the above-listed general plans, zoning ordinances, and municipal codes. Therefore, no impact would occur.

3.11.5 References

California Public Utilities Commission, 1995. General Order No. 131-d. Available online at http://docs.cpuc.ca.gov/PUBLISHED/Graphics/589.PDF. Accessed on August 14, 2018.

City of Carlsbad, 2015. City of Carlsbad General Plan, Land use and Community Design Element. Available online at http://www.carlsbadca.gov/civicax/filebank/blobdload.aspx?BlobID=24087. Accessed on July 3, 2018.

City of Escondido, 2012. City of Escondido General Plan Chapter X, Implementation Program. Available online at https://www.escondido.org/Data/Sites/1/media/PDFs/Planning/GPUpdate/GeneralPlanChapterX.pdf. Accessed on August 14, 2018.

City of San Marcos, 2013. City of San Marcos General Plan, Land Use and Community Design Element. Available online at http://www.san-marcos.net/work/economic-development/general-plan. Accessed on July 2, 2018.

City of Vista, 1993. Vista Business Park Specific Plan. Available online at https://records.cityofvista.com/weblink/DocView.aspx?dbid=0&id=1490819&page=1&cr=1. Accessed on August 8, 2018.

City of Vista, 2014. City of Vista General Plan, Land Use and Community Identity Element. Available online at https://records.cityofvista.com/WebLink/DocView.aspx?dbid=0&id=712581&page=1&cr=1. Accessed on July 6, 2018.

County of San Diego, 2011. County of San Diego General Plan Land Use Element. Available online at http://www.sandiegocounty.gov/pds/generalplan.html. Accessed on July 6, 2018.

County of San Diego, 2017. San Diego County MSCP website. Available online at http://www.sandiegocounty.gov/pds/mscp/. Accessed on July 20, 2018.

Governor's Office of Planning and Research (OPR), 2017. Proposed Updates to the CEQA Guidelines. November. Available online at: http://opr.ca.gov/docs/20171127_Comprehensive_CEQA_Guidelines_Package_Nov_2017.pdf. Accessed November, 2018.

SanGIS, 2017. North MSCP. Available online at http://www.sangis.org/. Accessed on August 3, 2018.

3.12 Mineral Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
12. MINERAL RESOURCES — Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☒	☐
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

This section describes the existing mineral resources in the study area and evaluates whether Project construction, operation, and maintenance would result in impacts on mineral resources of regional or statewide significance or locally important mineral resource recovery sites. For the purposes of this analysis, the study area is defined as the footprint of all Project components, including all areas of temporary and/or permanent ground disturbance.

3.12.1 Environmental Setting

Mineral Resources

The Project would be located within the Peninsular Ranges, which are made up of Cretaceous-age, intrusive igneous (volcanic) rocks that intruded the Jurassic-age metasedimentary and metavolcanic basement rocks. The igneous and metamorphosed bodies are overlain by Eocene- and Holocene-age sedimentary deposits (Kennedy & Tan, 2007). The topography ranges from flat throughout the urban and suburban areas of Segments 1 and 3 to relatively steep throughout the San Elijo Hills, where Segment 2 and most of Segment 3 would be developed. Due to the types of rocks found in western San Diego County, the area has been continuously studied and evaluated for its aggregate resources (i.e., sand, gravel, and crushed stone) since the 1980s (CGS, 2017a).

The California Department of Conservation, Division of Mine Reclamation (CDC DMR) provides mine location information and reflects information reported by mine owners in annual reports. An interactive map search showed that there were three quarries within a 2-mile radius of the Project alignment, all of which are now closed. San Marcos Quarry, located 1.8 miles from Segment 1, produced sand and gravel until closing in or before 2017. The Ashland Granite Quarry and the Harmony Mine, both located about 0.7 mile from Segment 3, are both reported as closed and reclaimed (restored) as of 1996 and 2012, respectively. (CDC DMR, 2018)

Additionally, the California Geological Survey (CGS) maps and regulates the locations of potential mineral resources in California. In order to protect these potential mineral resources, the CGS has classified the regional significance of mineral resources into Mineral Resource Zones (MRZs) and mapped them. Descriptions of the MRZ categories are provided in **Table 3.12-1**, below. The Project alignment is located within areas designated MRZ-2, MRZ-3, and MRZ-4 (CGS, 2017b), with a majority of the Project within areas designated MRZ-3. A very small length of Segment 1

(on Discovery Street in San Marcos) is designated MRZ-4 and a small area between Melrose Drive and of MRZ-2 exists just south of Lake San Marcos.

TABLE 3.12-1
CALIFORNIA MINERAL LAND CLASSIFICATION SYSTEM

Mineral Resource Zone Category	Category Description
MRZ-1	Areas where available geologic information indicates that little likelihood exists for the presence of significant mineral resources
MRZ-2	Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists
MRZ-3	Areas containing known or inferred mineral occurrences of undetermined mineral resource significance
MRZ-4	Areas where available information is inadequate to assign to any other MRZ category

SOURCE: CGS, 2017a

There are no locally important mineral resource recovery sites delineated in local general plans, specific plans, or zoning. San Diego County has a use regulation that is intended to identify and preserve areas with valuable mineral deposits until extraction can take place (S82); however, the Project would not cross any lands subject to this use regulation.

Oil, Gas, and Geothermal Resources

The California Division of Oil, Gas, and Geothermal Resources (DOGGR) oversees the drilling, operation, maintenance, and plugging and abandonment of oil, natural gas, and geothermal wells in California, and tracks every known oil and gas field in the state. Maps maintained by DOGGR indicate that there are two active sites near the study area. An oil and gas field operated by Davenport Oil & Gas Development Co. is located approximately 2 miles from Segment 1 and another operated by Stanley S. Turner is approximately 1.6 miles from Segment 3 (DOGGR, 2018).

3.12.2 Regulatory Setting

Federal

No federal regulations apply to mineral resources within the study area.

State

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act of 1975 (SMARA) (Public Resources Code §§ 2710-2796) and its implementing regulations (14 Cal. Code Regs. § 3500 et seq.) establish a comprehensive state policy for the conduct of surface mining operations and for the reclamation of mined lands to a usable condition that is readily adaptable for alternative land uses. SMARA encourages the production, conservation, and protection of the state's mineral resources and recognizes that "the state's mineral resources are vital, finite, and important natural resources and

the responsible protection and development of these mineral resources is vital to a sustainable California" (Pub. Res. Code § 2711). Under SMARA, the term "minerals" includes "any naturally occurring chemical element or compound, or groups of elements and compounds, formed from inorganic processes and organic substances, including, but not limited to, coal, peat, and bituminous rock, but excluding geothermal resources, natural gas, and petroleum" (14 Cal. Code Regs. § 3501). SMARA directs the State Geologist to classify the regional or statewide significance of areas containing mineral deposits based solely of geologic factors, and without regard to existing land use and land ownership. The State Geologist provides these classifications (MRZs) to local jurisdictions which must then establish general plan mineral resource management policies that assist in the management of land use that affects access to areas of statewide and regional significance and emphasize the conservation and development of identified mineral deposits.

Local

The City of Escondido General Plan (2012), City of Vista General Plan 2030 (2012), and City of Carlsbad General Plan (2015) do not identify any goals or policies related to mineral resources (City of Escondido, 2012; City of Vista, 2012; City of Carlsbad, 2015).

San Diego County General Plan

San Diego County generally recognizes mineral resources as essential to community development and economic prosperity. The Conservation and Open Space Element within the County's General Plan outlines goals and policies intended to conserve and develop identified mineral deposits consistent with SMARA requirements (San Diego County, 2011).

> **Goal COS-10: Protection of Mineral Resources.** The long-term production of mineral materials adequate to meet the local County average annual demand, while maintaining permitted reserves equivalent to a 50-year supply, using operational techniques and site reclamation methods consistent with SMARA standards such that adverse effects on surrounding land uses, public health, and the environment are minimized.
>
> > ***Policy COS-10.1: Siting of Development.*** Encourage the conservation (i.e., protection from incompatible land uses) of areas designated as having substantial potential for mineral extraction. Discourage development that would substantially preclude the future development of mining facilities in these areas. Design development or uses to minimize the potential conflict with existing or potential future mining facilities.
> >
> > ***Policy COS-10.2 Protection of State-Classified or Designated Lands.*** Discourage development or the establishment of other incompatible land uses on or adjacent to areas classified or designated by the State of California as having important mineral resources (MRZ-2), as well as potential mineral lands identified by other government agencies. The potential for the extraction of substantial mineral resources from lands classified by the State of California as areas that contain mineral resources (MRZ-3) shall be considered by the County in making land use decisions.
> >
> > ***Policy COS-10.3 Road Access.*** Prohibit development from restricting road access to existing mining facilities, areas classified MRZ-2 or MRZ-3 by the State Geologist, or areas identified in the County Zoning Ordinance for potential extractive use in accordance with SMARA Section 2764.a.

City of San Marcos General Plan

The City of San Marcos recognizes mineral resources as essential to community development and economic prosperity. The Conservation and Open Space Element within the City's General Plan outlines the following goals and policies related to mineral resources (City of San Marcos, 2012).

> **Goal COS-2:** The City is committed to conserving, protecting, and maintaining open space, agricultural, and limited resources for future generations. By working with property owners, local organizations, and state and federal agencies, the City can limit the conversion of resource lands to urban uses.
>
> > ***Policy COS-2.4*:** Ensure compliance with State of California requirements for mineral resources contained in the State Surface Mining and Reclamation Act.

3.12.3 Applicant Proposed Measures

No Applicant Proposed Measures (APMs) have been proposed to address Project impacts on mineral resources.

3.12.4 Environmental Impacts

Discussion

a) Whether the Project would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state: *LESS THAN SIGNIFICANT IMPACT.*

There are no active mines within 2 miles of the Project alignment. The study area is almost entirely located with an MRZ-3 classification (minerals of undetermined significance), with a small portion of Segment 1 located in MRZ-4 (inadequate information). Approximately 0.5 mile of Segment 2 is directly adjacent to a MRZ-2 (significant mineral deposits are or are likely to be present). As described in Section 3.12.2, San Diego County General Plan Policy COS-10.2 discourages development in areas on or adjacent to areas designated as MRZ-2. While Segment 2 includes the installation of new poles and the replacement of existing poles, Project construction and operation would not result in the loss of availability of these resources because work would be conducted in SDG&E's existing right-of-way, an area already unavailable for mineral resource extraction. In addition, San Diego County General Plan Policy COS-10.3 prohibits development from restricting road access to existing mining facilities and areas designated as either MRZ-2 or MRZ-3. However, construction and operation would not affect road access to the MRZ-2 or MRZ-3 areas because the Project would not block access to these areas or otherwise alter public facilities supporting potential mining operations. While the Project would be constructed in areas mapped as having known mineral resources, the availability of these resources would not substantially change as a result of the Project; therefore, the impact would be less than significant.

b) Whether the Project would result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan: *NO IMPACT.*

As discussed in Section 3.12.1, *Environmental Setting*, there are no locally important mineral resource recovery sites delineated on any local land use plans. The Project, therefore, would have no impact.

3.12.5 References

California Department of Conservation, Division of Mine Reclamation (CDC DMR), 2018. Mines Online Interactive Map. Available online at: http://maps.conservation.ca.gov/mol/index.html. Accessed October 29, 2018.

California Geological Survey (CGS), 2017a. Special Report 240. Update of Mineral Land Classification: Portland Cement Concrete-Grade Aggregate in the Western San Diego County Production-Consumption Region, California.

CGS, 2017b. Updated Mineral Land Classification Map for Portland Cement Concrete-Grande Aggregate in the Western San Diego County Production-Consumption Region, California. California Geological Survey. Map. Scale 1:125,000.

City of Carlsbad, 2015. Carlsbad General Plan – Open Space, Conservation, and Recreation.

City of Escondido, 2012. City of Escondido General Plan - Chapter VII—Resource Conservation.

City of San Marcos, 2012. City of San Marcos General Plan – Conservation and Open Space Element.

City of Vista, 2012. Vista General Plan 2030 – Resource Conservation and Sustainability Element.

County of San Diego, 2011. San Diego County General Plan – Conservation and Open Space Element.

Division of Oil, Gas, and Geothermal Resources (DOGGR), 2018. Division of Oil, Gas, and Geothermal Resources Well Finder Application. Accessed on July 6, 2018.

Kennedy, Michael P., and Siang S. Tan, 2007. Geological Map of the Oceanside 30’ x 60’ Quadrangle, California. California Geological Survey. Map. Scale 1:100,000.

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3.13 Noise

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
13. NOISE — Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

This section evaluates potential impacts associated with noise levels from Project construction, operation, and maintenance. For the purpose of this analysis, the study area is defined as the area surrounding the Project where Project construction and operational noise may be heard.

3.13.1 Environmental Setting

Noise Background

Sound is energy transmitted by pressure waves through a medium such as air. Noise can be defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. Sound pressure level is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). When all the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequency spanning 20 to 20,000 Hz. The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential Noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies instead of the frequency mid-range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA).

Noise Exposure and Ambient Noise

An individual's noise exposure is a measure of the noise experienced by the individual over a period of time. A noise level is a measure of noise at a given instant in time. However, noise levels rarely persist consistently over a long period of time. In fact, ambient noise varies continuously with time with respect to the contributing sound sources of the ambient noise environment. Ambient noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. Background noise levels change throughout a typical day, but do so gradually, corresponding with the addition and subtraction of distant noise sources and atmospheric conditions. The addition of short duration single event noise sources (e.g., helicopter and other aircraft flyovers, horns, sirens) makes ambient noise constantly variable throughout a day.

These successive additions of sound to the ambient noise environment vary the ambient noise level from instant to instant requiring the measurement of noise exposure over a period of time to legitimately characterize an ambient noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. Noise descriptors discussed in this analysis are summarized below:

L_{eq}: The equivalent sound level is used to describe noise over a specified period of time, in terms of a single numerical value. The L_{eq} is the constant sound level which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).

L_{dn}: The day-night noise level (L_{dn}) or the energy average of the A-weighted sound levels occurring during a 24-hour period and which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night ("penalizing" nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dBA to take into account the greater annoyance of nighttime noises.

L_{max}: The instantaneous maximum noise level measured during the measurement period of interest.

CNEL: The Community Noise Equivalent Level (CNEL) is a 24-hour L_{eq} that adds a 5 dB penalty to noise occurring during evening hours from 7:00 p.m. to 10:00 p.m., and a 10 dB penalty to sounds occurring between the hours of 10:00 p.m. to 7:00 a.m. to account for the increased sensitivity to noise events that occur during the quiet late evening and nighttime periods.

Effects of Noise on People

There is no universally acceptable way to measure the subjective effects of noise, or the corresponding reactions of annoyance, break in concentration (e.g., student's ability to study) and dissatisfaction. A wide variation exists in the individual thresholds of annoyance and different tolerances to noise tend to develop based on an individual's past experiences with noise. Thus, an important way of predicting a human reaction to a new noise environment is the way the new noise compares to the existing noise levels to which one has adapted: the so called "ambient noise" level. In general, the more a new noise exceeds the previously existing ambient noise

level, the less acceptable the new noise would be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1 dB generally cannot be perceived;
- Outside of the laboratory, a 3 dB change is considered a just-perceivable difference when the change in noise is perceived but does not cause a human response;
- A change in level of at least 5 dB is required before any noticeable change in human response would be expected; and
- A 10 dB change is subjectively heard as approximately a doubling in loudness and can cause an adverse response.

These relationships occur in part because of the logarithmic nature of sound and the decibel system. A ruler is a linear scale: it has marks on it corresponding to equal quantities of distance. One way of expressing this is to say that the ratio of successive intervals is equal to one. A logarithmic scale is different in that the ratio of successive intervals is not equal to one. Each interval on a logarithmic scale is some common factor larger than the previous interval. A typical ratio is 10, so that the marks on the scale read: 1, 10, 100, 1,000, 10,000, etc., doubling the variable plotted on the x-axis. The human ear perceives sound in a non-linear fashion; hence, the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather they combine logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA. However, where ambient noise levels are high in comparison to a new noise source, there would be a small change in noise levels. For example, when 70 dBA ambient noise levels are combined with a 60 dBA noise sources, the resulting noise level equals 70.4 dBA.

Nighttime noise can potentially affect sleep. According to a study conducted by the United States Air Force Research laboratory, noise can make it difficult to fall asleep, can create momentary disturbances of natural sleep patterns by causing shifts from deep to lighter stages, and can cause awakening (Fidell et al., 2010). Although nighttime awakenings occur independent of noise, the study provided the following summary of night awakenings: “Depending on the definition adopted for ‘awakening,’ people may awaken for reasons having nothing to do with noise many times per night, at moments which may or may not closely coincide in time with the occurrence of noise events.” In addition, based on the study, “people exhibit an average of 21 electro physiologically detectable arousals per hour of sleep, or about 144 spontaneous arousals per night.” Counting both shifts from deeper to lighter sleep states and momentary awakenings, the study reported about 45 “awakenings or arousals” per night, of which only 40 percent were thought to represent even momentary awakenings. People commonly attain full waking consciousness two or three times per night for reasons having nothing to do with noise exposure (Fidell et al., 2010).

Health effects from noise have been studied around the world for nearly 30 years. Scientists have attempted to determine if high noise levels can adversely affect human health apart from auditory

damage. These research efforts have covered a broad range of potential impacts from cardiovascular response from fetal weight to mortality. While a relationship between noise and health effects seems plausible, it has yet to be convincingly demonstrated—that is, shown in a manner that can be repeated by other researchers while yielding similar results. In a review of 30 studies conducted worldwide between 1993 and 1998, a team of international researchers concluded that, while some findings suggest that noise can affect health, improved research concepts and methods are needed to verify or discredit such a relationship. The team of international researchers called for more study of the numerous environmental and behavioral factors than can confound, mediate, or moderate survey findings. Until science refines the research process, a direct link between a single source noise exposure and non-auditory health effects remains to be demonstrated. (Lercher et al., 1998)

Noise Attenuation

Sound level naturally decreases (attenuates) with more distance from the source. This basic attenuation rate is referred to as the *geometric spreading loss*. The basic rate of geometric spreading loss depends on whether a given noise source can be characterized as a point source or a line source. Point sources of noise, including stationary mobile sources such as idling vehicles or on-site construction equipment, attenuate at a rate of 6 dB per doubling of distance from the source. In many cases, noise attenuation from a point source increases to 7.5 dB for each doubling of distance due to ground absorption and reflective wave canceling. These factors are collectively referred to as *excess ground attenuation.* The basic geometric spreading loss rate is used where the ground surface between a noise source and a receiver is reflective, such as parking lots or a smooth body of water. The excess ground attenuation rate (7.5 dB per doubling of distance) is used where the ground surface is absorptive, such as soft dirt, grass, or scattered bushes and trees.

Widely distributed noises such as a street with moving vehicles (a “line” source) typically would attenuate at a lower rate of approximately 3 dB for each doubling of distance between the source and the receiver. If the ground surface between source and receiver is absorptive rather than reflective, the nominal rate increases to 4.5 dB for each doubling of distance. Atmospheric effects, such as wind and temperature gradients, can also influence noise attenuation rates from both line and point sources of noise. However, unlike ground attenuation, atmospheric effects are constantly changing and difficult to predict.

Trees and vegetation, buildings, and barriers reduce the noise level that would otherwise occur at a given receptor distance. However, for a vegetative strip to have a noticeable effect on noise levels, it must be dense and wide. For example, a stand of trees must be at least 100 feet wide and dense enough to completely obstruct a visual path to the roadway to attenuate traffic noise by 5 dB (Caltrans, 2013). A row of structures can shield more distant receivers depending upon the size and spacing of the intervening structures and site geometry. Similar to vegetative strips discussed above, noise barriers, which include natural topography and sound walls, reduce noise by blocking the line of sight between the source and receiver. Generally, a noise barrier that breaks the line of sight between source and receiver will provide at least a 5 dB reduction in noise.

Noise-Sensitive Receptors

Human response to noise varies considerably from one individual to another. Effects of noise at various levels can include interference with sleep, concentration, and communication, and can cause physiological and psychological stress and hearing loss. Given these effects, some land uses are considered more sensitive to ambient noise levels than others. In general, residences, schools, hospitals, and nursing homes are considered to be the most sensitive to noise. Places such as churches, libraries, and cemeteries, where people tend to pray, study, and/or contemplate are also sensitive to noise. Commercial and industrial uses are considered the least noise-sensitive.

The Project components would traverse the jurisdictions of Carlsbad, San Marcos, Vista, and Escondido, and unincorporated San Diego County. The area in the vicinity of the Project consists of residential, institutional, parks, industrial, and commercial land uses. The San Marcos Substation is located in an area surrounded by single-family residences, the nearest of which are approximately 20 feet from the property boundary. The Escondido Substation is located in an area surrounded by industrial uses. The nearest residences are located approximately 875 feet east of the property boundary.

Sensitive receptors adjacent to Segment 1 include single-family residences, High Tech High North County (a high school) and San Marcos High School. The closest single-family residence is located approximately 30 feet from construction areas along Segment 1. High Tech High North County is located 260 feet from onsite construction areas along Segment 1 and occupied portions of San Marcos High School are located approximately 220 feet from onsite construction areas along Segment 1. Sensitive receptors adjacent to Segment 2 consist of clusters of single-family residences. The closest single-family residence is located approximately 30 feet from construction areas along Segment 2. Sensitive receptors adjacent to Segment 3 also consist of clusters of single-family residences. The closest single-family residence is located approximately 35 feet from construction areas along Segment 3.

The summaries of sensitive receptors provided below are not intended to list every specific individual sensitive receptor, but are intended to provide an overview of the types of uses in the vicinity of the Project. As noted below, the noise measurement locations in Tables 3.13-1 and 3.13-2 are considered representative of other sensitive receptors located throughout the vicinity of the Project site. Potential noise and vibration impacts on wildlife are addressed in Section 3.4, *Biological Resources*.

Existing Noise Environment

The built noise environment in the vicinity of the Project area is characterized by urban roadways, and residential, industrial, and commercial uses. A baseline noise survey to characterize ambient noise levels in the Project area was conducted from March 31 through April 3, 2017 in the vicinity of the San Marcos Substation and Escondido Substation and along the Project alignment. The result of these 24-hour long-term and 30-minute short-term noise measurements are presented in **Table 3.13-1** and **Table 3.12-2**, respectively. The measurement locations are shown in **Figure 3.13-1**. During the short-term noise surveys, it was noted that the dominant ambient

noise sources in the vicinity of the Project were primarily attributed to vehicular traffic noise along San Marcos Boulevard, South Rancho Santa Fe Road, San Elijo Road, Country Club Drive, Citracado Parkway, and Auto Park Way. Vehicular traffic noise was measured to be as high as 68.7 dBA L_{eq}. Additional sources include distant propeller aircraft, commercial shopping plazas, outdoor uses at several schools, and distant traffic on State Route 78 and Interstate 15.

TABLE 3.13-1
24-HOUR LONG-TERM AMBIENT NOISE MEASUREMENTS

Site	Start Date and Time	L_{dn} (dBA)
LT-1 (approximately 220 feet east of the intersection of Calle Venado and Via Allondra)	March 31, 2017 10:00 a.m.	57.1
	April 1, 2017 10:00 a.m.	56.5
	April 2, 2017 10:00 a.m.	55.8
LT-2 (approximately 300 feet east of the intersection of Harmony Heights Rd. and County Club Dr.)	March 31, 2017 10:00 a.m.	57
	April 1, 2017 10:00 a.m.	55.2
	April 2, 2017 10:00 a.m.	54.1

SOURCE: SDG&E, 2017

Vibration

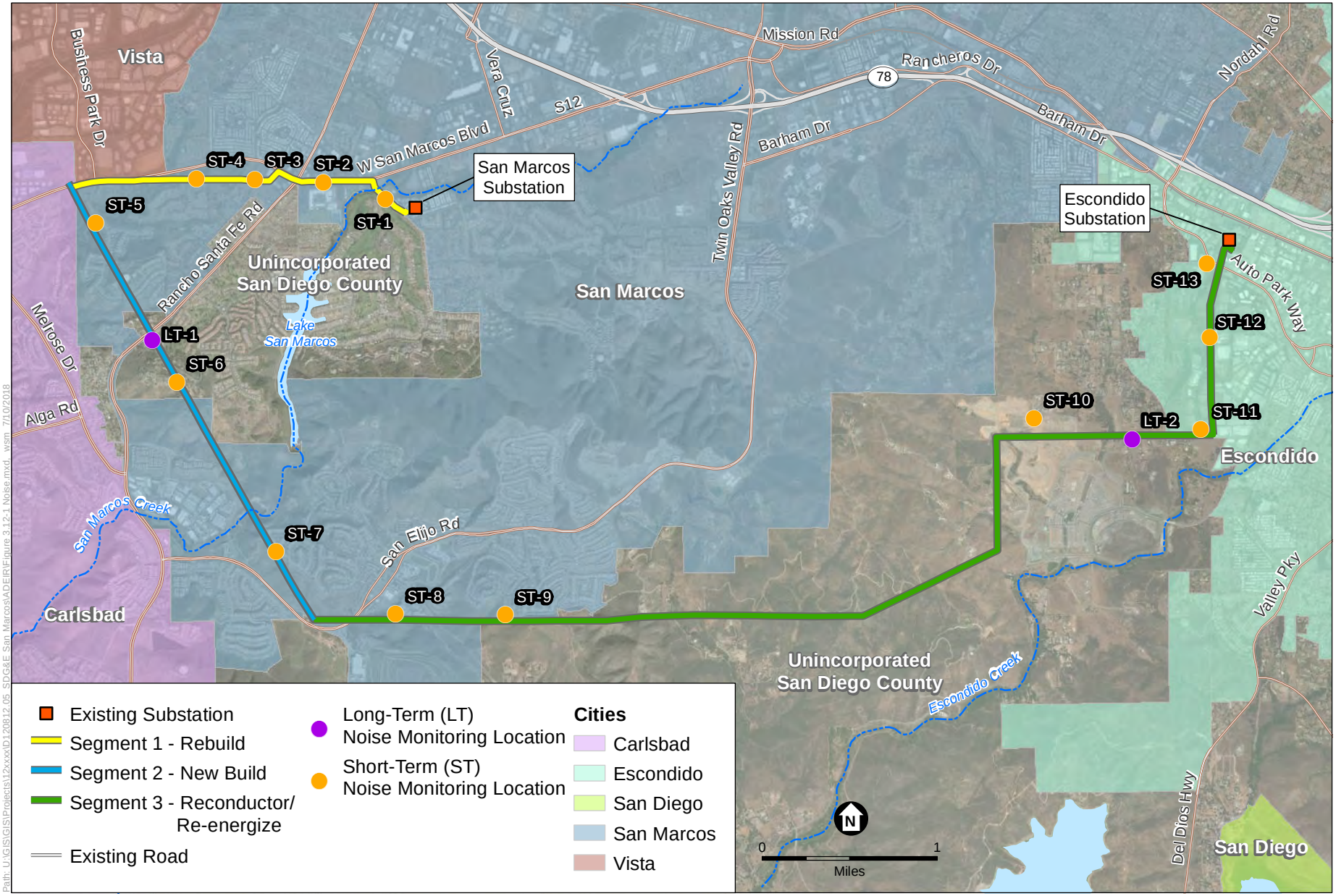
Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal and is typically expressed in units of inches per second (in/sec). The PPV is most frequently used to describe vibration impacts on buildings. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to measure RMS. The decibel notation acts to compress the range of numbers required to describe vibration (FTA, 2006). Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration.

Some common sources of ground-borne vibration are trains, heavy trucks traveling on rough roads, and construction activities such as blasting, pile driving, and operation of heavy earth-moving equipment. The effects of ground-borne vibration include movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction.

TABLE 3.13-2
30-MINUTE SHORT-TERM AMBIENT NOISE MEASUREMENTS

Site	Start Date and Time	L_{eq} (dBA)	L_{max} (dBA)	L_{min} (dBA)	Noise Sources
ST-1 (approximately 85 feet south of the intersection of San Pablo Drive and Discovery Street)	April 3, 2017 9:35 a.m.	63.3	80.5	50.1	Local traffic, school yard, golf carts, landscaping
ST-2 (approximately 305 feet west of the intersection of San Marcos Boulevard and Knights Realm)	April 3, 2017 10:37 a.m.	68.7	90.7	56.4	Local traffic, large parking lot, school yards
ST-3 (approximately 545 feet south of the intersection of San Marcos Boulevard and Viewpoint Drive, within the Highlands Condominiums)	April 3, 2017 11:25 a.m.	54.2	65.4	48.9	Local traffic, birds
ST-4 (approximately 600 feet south east of the intersection of San Marcos Boulevard and Acacia Drive)	April 3, 2017 12:08 p.m.	56.7	74.3	34.2	Local traffic, birds, leaves rustling
ST-5 (approximately 515 feet north west of the intersection of Sun Valley Road and White Sands Drive)	April 3, 2017 12:57 p.m.	55.1	72.9	38.6	Local traffic birds, distant aircraft
ST-6 (approximately 570 feet west of the intersection of Via Allondra and Via Del Corvo)	April 3, 2017 2:45 p.m.	52.8	74.2	34.4	Distant traffic, birds, leaves rustling, distant aircraft
ST-7 (approximately 120 feet west of the cul-de-sac)	April 3, 2017 3:33 p.m.	51.2	70.1	42.4	Distant aircraft, birds, dogs barking
ST-8 (Copper Creek Apartments)	March 31, 2017 2:49 p.m.	52.2	65.9	30.2	Distant traffic, distant aircraft, birds
ST-9 (Trenton Way cul-de-sac)	March 31, 2017 2:01 p.m.	46.4	65.8	32.8	Distant aircraft, birds, dogs barking, neighborhood landscaping/other maintenance activity
ST-10 (approximately 670 feet south west of the Mt. Whitney Road dead end)	March 31, 2017 1:05 p.m.	47	64.6	35.3	Distant aircraft, birds, leaves rustling, dogs barking
ST-11 (approximately 140 feet south of the intersection of Andreasen Drive and Citracado Parkway)	March 31, 2017 10:47 a.m.	58.6	73.3	45.5	Local traffic, local construction
ST-12 (approximately 290 feet north east of the intersection of Harveson Place and Citracado Parkway)	March 31, 2017 11:29 a.m.	51.9	62.9	43.5	Local traffic, adjacent industry, birds
ST-13 (approximately 240 feet west of the intersection of Auto Parkway and Citracado Parkway)	March 31, 2017 12:13 p.m.	60.2	80.7	47.9	Local traffic, nearby water feature

SOURCE: SDG&E, 2017



Path: U:\GIS\GIS\Projects\12xxxx\D120812_05_SDG&E San Marcos\ADEIR\Figure 3.12-1 Noise.mxd wsm 7/10/2018

SOURCE: SDGE, 2018

TL 6975 San Marcos to Escondido Project

Figure 3.13-1

Noise Measurement Locations

ESA

3.13.2 Regulatory Setting

Federal, State, and local agencies regulate different aspects of environmental noise. Federal and State agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, and are not directly relevant to this environmental review, while regulation of stationary sources and development of land use noise compatibility policy is left to local agencies. There are no specific federal or State noise regulations that are applicable to the Project. Local regulation of noise involves implementation of General Plan policies and noise ordinance standards. Local General Plans tend to identify general principles intended to guide and influence development plans; local noise ordinances and codes establish standards and procedures for addressing specific operational noise sources and activities.

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction." It is noted that while local jurisdictions are preempted from regulating the Project with respect to noise limits, the noise limits related to sensitive receptors that have been established by local jurisdictions including the City of Escondido, City of Vista, and County of San Diego are used in the impact analysis to determine the significance of short-term daytime and nighttime construction noise levels relative to the potential to cause a substantial temporary increase in ambient noise levels in the Project vicinity above levels existing without the Project. Therefore, these noise limits are discussed below.

Local

San Diego County

The County of San Diego General Plan's Noise Element contains policies that define maximum allowable exterior noise level standards for transportation and non-transportation noise sources (County of San Diego, 2011). The following noise and vibration-related policies are identified in the Noise Element of the County of San Diego General Plan.

> **Policy N-1.1: Noise Compatibility Guidelines.** Use the Noise Compatibility Guidelines (Table N-1) [shown here as **Table 3.13-3**] and the Noise Standards (Table N-2) [shown here as Table 3.13-3] as a guide in determining the acceptability of exterior and interior noise for proposed land uses.
>
> **Policy N-3.1: Groundborne Vibration.** Use the Federal Transit Administration and Federal Railroad Administration guidelines, where appropriate, to limit the extent of exposure that sensitive uses may have to groundborne vibration from trains, construction equipment, and other sources.
>
> **Policy N-6.2: Recurring Intermittent Noise.** Minimize impacts from noise in areas where recurring intermittent noise may not exceed the noise standards listed in Table N-2 [shown here as **Table 3.13-4**], but can have other adverse effects.

Policy N-6.4: Hours of Construction. Require development to limit the hours of operation as appropriate for non-emergency construction and maintenance, trash collection, and parking lot sweeper activity near noise sensitive land uses.

TABLE 3.13-3
COUNTY OF SAN DIEGO NOISE COMPATIBILITY GUIDELINES

Land Use	Community Noise Exposure - CNEL (dBA)													
	50		55		60		65		70		75		80	
A. Residential—single family residences, mobile homes, senior housing, convalescent homes														
B. Residential—multi-family residences, mixed-use (commercial/ residential)														
C. Transient lodging—motels, hotels, resorts														
D. Schools, churches, hospitals, nursing homes, child care facilities														
E. Passive recreational parks, nature preserves, contemplative spaces, cemeteries														
F. Active parks, golf courses, athletic fields, outdoor spectator sports, water recreation														
G. Office\professional, government, medical\dental, commercial, retail, laboratories														
H. Industrial, manufacturing, utilities, agriculture, mining, stables, ranching, warehouse, maintenance/repair														

☐ ACCEPTABLE—Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal construction, without any special noise insulation requirements.

☐ CONDITIONALLY ACCEPTABLE—New construction or development should be undertaken only after a detailed noise analysis is conducted to determine if noise reduction measures are necessary to achieve acceptable levels for land use. Criteria for determining exterior and interior noise levels are listed in Table 3.13-3, Noise Standards. If a project cannot mitigate noise to a level deemed acceptable, the appropriate county decision-maker must determine that mitigation has been provided to the greatest extent practicable or that extraordinary circumstances exist.

■ UNACCEPTABLE—New construction or development shall not be undertaken.

SOURCE: County of San Diego, 2011

TABLE 3.13-4
COUNTY OF SAN DIEGO NOISE COMPATIBILITY GUIDELINES

1.	The exterior noise level (as defined in Item 3) standard for Category A shall be 60 CNEL, and the interior noise level standard for indoor habitable rooms shall be 45 CNEL.
2.	The exterior noise level standard for Categories B and C shall be 65 CNEL, and the interior noise level standard for indoor habitable rooms shall be 45 CNEL.
3.	The exterior noise level standard for Categories D and G shall be 65 CNEL and the interior noise level standard shall be 50 dBA L_{eq} (one-hour average).
4.	For single-family detached dwelling units, "exterior noise level" is defined as the noise level measured at an outdoor living area which adjoins and is on the same lot as the dwelling, and which contains at least the following minimum net lot area: (i) for lots less than 4,000 square feet in area, the exterior area shall include 400 square feet, (ii) for lots between 4,000 square feet to 10 acres in area, the exterior area shall include 10 percent of the lot area; (iii) for lots over 10 acres in area, the exterior area shall include 1 acre.
5.	For all other residential land uses, "exterior noise level" is defined as noise measured at exterior areas which are provided for private or group usable open space purposes. "Private Usable Open Space" is defined as usable open space intended for use of occupants of one dwelling unit, normally including yards, decks, and balconies. When the noise limit for Private Usable Open Space cannot be met, then a Group Usable Open Space that meets the exterior noise level standard shall be provided. "Group Usable Open Space" is defined as usable open space intended for common use by occupants of a development, either privately owned and maintained or dedicated to a public agency, normally including swimming pools, recreation courts, patios, open landscaped areas, and greenbelts with pedestrian walkways and equestrian and bicycle trails, but not including off-street parking and loading areas or driveways.
6.	For non-residential noise sensitive land uses, exterior noise level is defined as noise measured at the exterior area provided for public use.
7.	For noise sensitive land uses where people normally do not sleep at night, the exterior and interior noise standard may be measured using either CNEL or the one-hour average noise level determined at the loudest hour during the period when the facility is normally occupied.
8.	The exterior noise standard does not apply for land uses where no exterior use area is proposed or necessary, such as a library.
9.	For Categories E and F the exterior noise level standard shall not exceed the limit defined as "Acceptable" in Table N-1 (see Table 3.12-2) or an equivalent one-hour noise standard.

SOURCE: County of San Diego, 2011

The County's noise ordinance is contained in the County's Municipal Code, Title 3, Division 6, Chapter 4, Noise Abatement and Control.

Section 36.404: General Sound Level Limits. Restricts any person to cause or allow the creation of any noise, which exceeds the one-hour average sound level limits in Table 36.404 (see **Table 3.13-5**) of the County's noise ordinance as measured at the property line of the property on which the noise is produced or at any location on a property that is receiving the noise.

Section 36.408: Hours of Operation of Construction Equipment. Limits the hours of operation of construction equipment to between 7:00 a.m. to 7:00 p.m. Monday through Saturday.

Section 36.409: Sound Level Limitations on Construction Equipment. Provides sound level limits for construction equipment to not exceed and average sound level of 75 dBA for an eight-hour period, between 7:00 a.m. and 7:00 p.m., when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received.

TABLE 3.13-5
COUNTY OF SAN DIEGO SOUND LEVEL LIMITS

Land Use Zone	Time of Day	One-Hour Average Sound Level (dBA)
Residential, Agricultural, and Semi-Rural Zones with a General Plan Land Use Designation Density of Less than 10.9 Dwelling Units per Acre	7:00 a.m. to 7:00 p.m.	50
	7:00 p.m. to 10:00 p.m.	45
Residential, Agricultural, and Semi-Rural Zones with a General Plan Land Use Designation Density of 10.9 or More Dwelling Units per Acre	7:00 a.m. to 7:00 p.m.	55
	7:00 p.m. to 10:00 p.m.	50
Commercial Zones	7:00 a.m. to 7:00 p.m.	60
	7:00 p.m. to 10:00 p.m.	55
Industrial Zones	7:00 a.m. to 7:00 p.m.	70-75[1]

[1] Varies according to exact designation of zone.

SOURCE: County of San Diego Municipal Code, Section 36.404 General Sound Level Limits, Table 36.404

Section 36.410: Sound Level Limitations on Impulsive Noise. Provides sound level limits of impulsive noise generated by construction equipment to those provided in **Table 3.13-6** when measured at the boundary line of the property where the noise source is located or on any occupied prosperity where the noise is received. The impulsive noise limits provided in Table 3.13-6 are for a 25 percent of the minutes in the measurement period.

TABLE 3.13-6
MAXIMUM SOUND LEVEL LIMITS FOR IMPULSIVE NOISE

Occupied Property Use	Impulsive Noise limit (L_{25} dBA)
Residential, village or civic use	82
Agricultural, commercial or industrial use	85

SOURCE: County of San Diego Municipal Code, Table 36.410B

Section 36.423: Variances. As it relates to non-emergency work on a public utility facility, an application for a variance may be made to the county noise control officer, who evaluates the request and determines if a variance will be issued, based on the potential impact the noise may have on each property that would be affected, the value to the community of the work being done, and other factors.

The San Diego County Code Noise limits contained under Chapter 4, Section 36.401 et seq. are not applicable to activities which are preempted by State or federal law. (San Diego County Code Section 36.417(a)(6))

City of Escondido

The City of Escondido General Plan's Noise Element includes policies that define maximum allowable exterior noise level standards single- and multi-family uses (City of Escondido, 2012). Noise Policy 5.2 established a goal of 60 dBA CNEL or less for single-family and 65 dBA CNEL

or less for multi-family housing developments. Where outdoor use is a major consideration (back yards and single family housing developments, and recreation areas in multifamily housing developments).

The City of Escondido noise ordinance is found in the City's Municipal Code, Chapter 17, Article 12 (Noise Abatement and Control).

Section 17-229: Sound Level Limits. Unless a variance has been applied for and granted pursuant to this article, it shall be unlawful for any person to cause or allow the creation of any noise to the extent that the one-hour average sound level, at any point on or beyond the boundaries of the property on which the sound is produced, exceeds the applicable limits set forth in the following table [shown here in **Table 3.13-7**], except that construction noise level limits shall be governed by Section 17-234 of this article.

TABLE 3.13-7
CITY OF ESCONDIDO SOUND LEVEL LIMITS

Location	Time	One-Hour Average Sound Level Limits (dBA)
Residential Zones	7:00 a.m. to 10:00 p.m.	50
	10:00 a.m. to 7:00 a.m.	45
Multi-Residential Zones	7:00 a.m. to 10:00 p.m.	55
	10:00 a.m. to 7:00 a.m.	50
Commercial Zones	7:00 a.m. to 10:00 p.m.	60
	10:00 a.m. to 7:00 a.m.	55
Industrial Zones	Any time	70-75[1]

[1] Varies according to exact designation of zone

SOURCE: City of Escondido Municipal Code. Section 17-229. Sound Level Limits

Section 17-234: Construction Equipment. Except for emergency work, it shall be unlawful for any person, including the City of Escondido, to operate construction equipment as follows:

(a) It shall be unlawful for any person, including the City of Escondido, to operate construction equipment at any construction site, except on Monday through Friday during a week between the hours of 7:00 a.m. and 6:00 p.m. and on Saturdays between the hours of 9:00 a.m. and five 5:00 p.m., and provided that the operation of such construction equipment complies with the requirements of subsection (d) of this section.

(b) It shall be unlawful for any person, including the City of Escondido, to operate construction equipment at any construction site on Sundays and on days designated by the president, governor or city council as public holidays.

(c) No construction equipment or combination of equipment, regardless of age or date of acquisition, shall be operated so as to cause noise in excess of a one-hour average sound level limit of 75 dBA at any time, unless a variance has been obtained in advance from the city manager.

(d) Persons engaged in construction for profit or as a business shall post signs at conspicuous places on a construction site, indicating hours of work as prescribed by this article or authorized by permit and the applicable noise level limits.

The City of Escondido Municipal Code Noise limits contained under Chapter 17, Article 12, are not applicable to activities which are preempted by State or Federal law. (Escondido Municipal Code Section 17-242(c))

City of San Marcos

The City of San Marcos General Plan's Noise Element includes policies related to noise and land use compatibility, transportation related noise, and non-transportation related noise including construction, maintenance, and nuisance noise (City of San Marcos, 2012). The following noise-related policy in the Noise Element of the City of San Marcos General Plan provides numeric standards for noise:

Policy N-1.1: Address the potential for excessive noise levels when making land use planning decisions in accordance with Table 7-3 Land Use Compatibility Noise Standards [see Table 3.13-4].

The City of San Marcos noise ordinance is found in the City's Municipal Code, Chapters 10.24 (Noise) and 20.300.70 (Performance Standards), and contains the following noise standards:

Chapter 10.24.020(b)(9): Erection or demolition of buildings, excluding owner resident additions or remodeling, and the grading and excavation of land including the use of blasting, the start-up and use of heavy equipment such as dump trucks and graders and the use of jack hammers except on week days Monday through Friday between the hours of 7:00 a.m. and 6:00 p.m. and on Saturdays 8:00 a.m. to 5:00 p.m. The City Manager may waive any or all of the provisions of this subsection in cases of urgent necessity, or in the interest of public health and safety. The provisions of this subsection may also be waived or modified pursuant to a Conditional Use Permit or other development entitlement processed and issued in accordance with the applicable City requirements and procedures.

Chapter 20.300.70(F)(2): No person shall create or allow the creation of exterior noise that causes the noise level to exceed the noise standards established by Table 20.300-4 [see Table 3.13-5]. Increases in allowable noise levels listed in Table 20.300-4 may be permitted in accordance with the standards outlined in Table 20.300-5 [shown here as **Table 3.13-8**].

Chapter 20.300.070(F): Increases in allowable noise levels listed in Table 20.300-5 may be permitted in accordance with the standards outlined in Table 20.300-5.

The City of San Marcos Municipal Code Noise limits contained under Chapter 17, Article 12, are not applicable to activities which are preempted by State law. (San Marcos Municipal Code Section 10.24.040.)

TABLE 3.13-8
CITY OF SAN MARCOS SOUND LEVEL LIMITS

Location	Time	One-Hour Average Sound Level Limits (dBA)	L_{25}	$L_{8.33}$	$L_{1.67}$	L_{max}
Single-Family Residential (A, R-1, R-2)	7:00 a.m. to 10:00 pm.	60	65	70	75	80
	10:00 p.m. to 7:00 a.m.	50	55	60	65	70
Multi-Family Residential (R-3)	7:00 a.m. to 10:00 pm.	65	70	75	80	85
	10:00 p.m. to 7:00 a.m.	55	60	65	70	75
Commercial Zones (C, O-P, S-R)	7:00 a.m. to 10:00 pm.	60	65	70	75	80
	10:00 p.m. to 7:00 a.m.	55	60	65	70	75
Industrial Zones	7:00 a.m. to 10:00 pm.	65	70	75	80	85
	10:00 p.m. to 7:00 a.m.	60	65	70	75	80

SOURCE: City of San Marcos Municipal Code, Chapter 20.300.70(F)(2), Table 20.300-5

City of Carlsbad

The City of Carlsbad General Plan's Noise Element presents policies related to noise and land use compatibility, motor vehicle/roadway noise, airport noise, railroad noise and work-related noise (City of Carlsbad, 2015). The following noise and vibration-related policies identified in the Noise Element of the City of Carlsbad General Plan would otherwise be relevant to the Project:

> **Policy 5-P.4: Exterior Noise Levels Exceeding Acceptable Level.** If the noise analysis shows that exterior noise levels cannot be mitigated to an acceptable level as identified in Table 5-2 [shown here as **Table 3.13-9**], the development should not be approved without one or more of the following findings:
>
> a. Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the noise.
>
> b. Changes or alterations to avoid or substantially lessen noise are within the responsibility and jurisdiction of another public agency and not the City of Carlsbad. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
>
> c. Specific economic, social, or other considerations make infeasible the mitigation measures or project alternatives to avoid or substantially lessen noise.
>
> If a project is approved with exterior noise levels exceeding the acceptable noise level, all purchasers of the impacted property shall be notified in writing prior to purchase, and by deed disclosure in writing, that the property they are purchasing is, or will be, impacted by noise and does not meet City of Carlsbad noise standards for residential property.
>
> **Policy 5-P.5: Noise Generation.** As part of development project approval, require that noise generated by a project does not exceed standards established in Table 5-3 [shown here as **Table 3.13-10**].

TABLE 3.13-9
CITY OF CARLSBAD ALLOWABLE NOISE EXPOSURE

Land Use[1]	Outdoor Activity Areas (dBA CNEL)[2,3]	Interior Spaces (dBA CNEL)
Residential	60[4]	45
Motels, Hotels	65	45
Hospitals, Residential Care Facilities, Schools, Libraries, Museums, Churches, Day Care Facilities	65	45
Playgrounds, Parks, Recreation Uses	65	50
Commercial and Office Uses	65	50
Industrial Uses	70	65

NOTES:
1 Development proposed within the McClellan-Palomar Airport Area of Influence shall also be subject to the noise compatibility policies contained in the ALUCP.
2 For non-residential uses, where an outdoor activity area is not proposed, the standard does not apply. Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving use.
3 Where it is not possible to reduce noise in outdoor activity areas to the allowable maximum, levels up to 5 dB higher may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.
4 An exterior noise exposure level of 65 dBA CNEL is allowable for residential uses in a mixed-use project and for residential uses within the McClellan-Palomar Airport Area of Influence, pursuant to the noise compatibility policies contained in the ALUCP.

SOURCE: City of Carlsbad, 2015

TABLE 3.13-10
CITY OF CARLSBAD PERFORMANCE STANDARDS FOR NON-TRANSPORTATION SOURCES

Noise Level Descriptor	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Hourly L_{eq}, dBA	55	45
Maximum Level, dBA	75	65

NOTES: Each of the noise levels specified above shall be lowered by 5 dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. Standards reflect as measured at property line of source/sensitive use)

SOURCE: City of Carlsbad, 2015

The City of Carlsbad noise ordinance is found in the City's Municipal Code, Chapter 8.48 (Noise). The following noise standards would otherwise apply to the Project:

Chapter 8.48.010: Construction hour limitations. It shall be unlawful to operate equipment or perform any construction in the erection, demolition, alteration, or repair of any building or structure or the grading or excavation of land during the following hours, except as hereinafter provided:

A. After 6:00 p.m. on any day, and before 7:00 a.m., Monday through Friday, and before 8:00 a.m. on Saturday;

B. All day on Sunday; and

C. On any federal holiday.

Chapter 8.48.020(B): Exceptions. The building official, city engineer, or other official designated by the city manager may modify the hours of construction specified in Section 8.48.010. In making a determination to lengthen or shorten the hours of construction, the city official shall consider the following:

1. Whether the project is an emergency repair required to protect the health and safety of any member of the community;
2. Whether the construction would be less objectionable at night than during daylight hours;
3. The character and nature of the neighborhood in the vicinity of the work site;
4. The potential for great economic hardship;
5. If the work is in the interest of the general public;
6. Whether there is a previously unforeseen effect on the health, safety or welfare of the public; and
7. Any history of complaints regarding compliance with the limitation on hours of construction.

The City of Carlsbad exempts certain activities from land use regulations including installation, maintenance and operation of mutual water companies or public utility pipe lines and electric or telephone transmission lines, or railroads, when located in accordance with the applicable rules and regulations of the public utilities commission of the State of California within rights-of-way, easements, franchises or ownerships of such public utilities. (Carlsbad Municipal Code Section 21.53.080.)

City of Vista

The City of Vista General Plan's Noise Element identifies noise-sensitive land uses and noise sources, define areas of noise impacts, presents noise contour maps and establishes policies and programs to protect the community from excessive noise (City of Vista, 2011). There are no goals or policies identified in the City of Vista General Plan that provide numeric standards against which to analyze the Project's noise impacts.

The City of Vista noise ordinance is found in the City's Municipal Code, Chapter 8.32 (Noise Control).

Section 8.32.040: Adoption of County Regulations Relating to Noise Control.

A. There is adopted by the City Council, for the purpose of controlling noise, that certain code known as the San Diego County Code of Regulatory Ordinances, Chapter 4 of Division 6 of Title 3, relating to control of noise, excepting therefrom the table set out in Section 36.404 and replacing it with the following [shown here as **Table 3.13-11**].

B. The one-hour average sound level limit specified in paragraph A shall be reduced by five decibels for a noise which, in the judgment of the noise control officer, constitutes a whine, screech, hum, or a repetitive noise such as hammering or riveting.

TABLE 3.13-11
CITY OF VISTA APPLICABLE EXTERIOR PROPERTY LINE LIMITS

Zone	Time	Applicable Limit One-hour Average Sound Level (dBA)
A-1, E-1, O & OSR, R-1B, MHP, R-M	7:00 a.m. to 10:00 p.m.	50
	10:00 p.m. to 7:00 a.m.	45
R-M	7:00 a.m. to 10:00 p.m.	55
	10:00 p.m. to 7:00 a.m.	50
C-1, C-2, O-3, C-T, OP, M-U and Downtown Specific Plan	7:00 a.m. to 10:00 p.m.	60
	10:00 p.m. to 7:00 a.m.	55
M-1, I-P, all areas Vista Business Park Specific Plan and Specific Plan 14	Any Time	70

SOURCE: City of Vista Municipal Code, Section 8.32.040 Adoption of County Regulations Relating to Noise Control

C. One copy of the County Code is filed in the Office of the City Clerk, and it is adopted and incorporated as though fully set out at length in this chapter. From the date on which the ordinance codified in this section takes effect, the provisions thereof are controlling within the limits of the city.

D. The provisions of Section 8.32.010 and paragraph A of this Section are not applicable to entertainment conducted under a valid permit issued pursuant to Chapter 5.24 when the entertainment satisfies all conditions for sound generation and sound attenuation imposed by Section 5.24.110 and the applicable permit, including operating hours of the entertainment. Failure to satisfy the noise generation or attention conditions imposed by an entertainment permit or this Chapter constitutes a violation of this Chapter.

The City of Vista has adopted the San Diego County Code, Chapter 4, Division 6 of Title 3 Noise regulations. (Vista Municipal Code 8.32.040.) As noted above, the San Diego County Code Noise limits contained under Chapter 4, Section 36.401 et seq. are not applicable to activities which are preempted by State or Federal law. (San Diego County Code Section 36.417(a)(6))

3.13.3 Applicant Proposed Measures

SDG&E has proposed the following Applicant Proposed Measures (APMs) to address noise and vibration generated by Project construction. Based on the following impact analyses, APM NOI-3 has been superseded by Mitigation Measure NOI-2 put forth by the CPUC.

APM NOI-1: Construction activities will occur during the times established by the local ordinances, with the exception of certain activities where nighttime and weekend construction activities are necessary, including, but not limited to, construction work timeframes mandated by permit, pouring of foundations, and pulling of the conductor, which require continuous operation or must be conducted during off-peak hours per agency requirements. SDG&E will meet and confer with the applicable jurisdiction to discuss temporarily deviating from the requirements of the noise ordinance, as described in the noise variance process.

APM NOI-2: SDG&E will provide notice of the construction plans to all property owners within 300 feet of the Project by mail at least one week prior to the start of construction activities. The announcement will state the anticipated construction start window, anticipated

completion window, and hours of operation, as well as provide a telephone contact number for receiving questions or complaints during construction. SDG&E will maintain functional mufflers and/or silencers on all equipment to minimize noise levels as well as evaluate the potential use of portable noise barriers.

APM NOI-3: If blasting is deemed necessary for the construction of Project components, SDG&E will prepare a blasting plan. The blasting plan will be site specific, based on the location(s) of required blasting and location-specific conditions. The blasting plan will include a description of the planned blasting methods and a schedule for the blasting activities. The blasting plan will include measures to minimize noise related to blasting to the extent feasible.

3.13.4 Environmental Impacts

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. *LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.*

As discussed in Section 3.13.2, the City of Vista and County of San Diego have established construction noise limits of 75 dBA averaged over an 8-hour period and the City of Escondido has a construction noise limit of 75 dBA averaged over a 1-hour period. The 1-hour standard is more conservative than the 8-hour standard because an 8-hour L_{eq} calculation accounts for more periods of reduced activity (e.g., lunch breaks), which results in an overall decreased average noise level compared to 1-hour L_{eq} calculations. Therefore, for a consistent conservative analysis of the environmental noise impacts throughout the Project area, the 75 dBA hourly L_{eq} limit is used to determine the significance of short-term daytime and nighttime construction noise levels relative to the potential to cause a substantial temporary increase in ambient noise levels regardless of the local jurisdiction where the construction activities would occur. Pursuant to APM NOI-1, SDG&E would meet and confer with the applicable jurisdictions to discuss temporarily deviating from the requirements of the noise ordinance, as described in the noise variance process.

Construction

As noted in Section 2.5.1, *Construction Schedule and Sequencing*, construction activities would occur during the times established by the local ordinances, with the exception of certain activities where nighttime, weekend, and/or holiday construction activities are necessary, including, but not limited to, construction work timeframes mandated by permit requirements, pouring of foundations (e.g., continuous concrete pour), and pulling of the conductor, which require continuous operation or must be conducted during off-peak hours per agency requirements.

As part of the CPUC's Permit to Construct application process, SDG&E provided a list of typical construction equipment that would be used during the construction of the Project. Using the Project construction equipment list provided in Table 2-5, *Anticipated Construction Equipment*, in Chapter 2, *Project Description*, and the respective reference noise levels, the maximum and 1-hour L_{eq} noise levels per construction phase were calculated from distances of 50 to 1,000 feet (see **Tables 3.13-12** and **3.13-13**, respectively). The noise levels presented in Tables 3.13-12 and 3.13-13 are representative construction noise levels that would occur along Segments 1, 2, and 3

and at the substations. All equipment noise levels beyond 50 feet were calculated using the excess ground attenuation rate (7.5 dB per doubling of distance), except helicopter noise levels, which were estimated using the basic rate of geometric spreading loss (6 dB per doubling of distance) since the helicopter would not be grounded in the Project area. The equipment usage factors to estimate the 1-hour L_{eq} noise levels account for the fact that equipment would not continuously operate at full throttle during the 1-hour period. To account for the potential that some pieces of equipment may operate at the same time and location, Table 3.13-13 includes a combined noise level for the loudest two pieces of equipment that could operate at the same place during any 1-hour period for each construction phase. As shown in Table 3.13-13, sensitive receptors within 50 feet of off-road Project construction equipment (e.g., excavators, forklifts) would be exposed to noise levels exceeding the 1-hour 75 dBA L_{eq} temporary noise increase significance threshold. Since sensitive receptors were identified within 20 feet of on-site construction areas and there is potential for construction activities outside of daytime hours (i.e., nighttime, weekend, holiday), construction noise could constitute a substantial temporary increase in ambient noise levels in the Project vicinity.

TABLE 3.13-12
TYPICAL MAXIMUM CONSTRUCTION EQUIPMENT NOISE LEVELS

Phase/Equipment Type	Estimated Equipment Noise Levels (L_{max}, dBA)				
	50 feet	100 feet	200 feet	500 feet	1,000 feet
Staging Yard Setup, Road Refreshing, Vegetation Trimming, BMP Installation)					
Excavator	81	73	66	56	48
Forklift	85	77	70	60	52
Grader	85	77	70	60	52
Loader	79	71	64	54	46
Mower	85	77	70	60	52
Pickup Truck	75	67	60	50	42
On-road Truck	76	68	61	51	43
Direct-Bury Pole Construction					
Air Compressor	78	70	63	53	45
Boom Truck	75	67	60	50	42
Drill Rig/Truck-mounted Auger	79	71	64	54	46
Pickup Truck	75	67	60	50	42
On-road Truck	76	68	61	51	43
Pier Foundation Construction					
Air Compressor	78	70	63	53	45
Boom Truck	75	67	60	50	42
Drill Rig/Truck-mounted Auger	79	71	64	54	46
Excavator	81	73	66	56	48
Forklift	85	77	70	60	52
Generator	81	73	66	56	48
Loader	79	71	64	54	46
Pickup Truck	75	67	60	50	42
On-road Truck	76	68	61	51	43
AC Interference Mitigation System Installation					
Mud Rotary Drill Rig	79	71	64	54	46
Support Truck	75	67	60	50	42
Desander	80	72	65	55	47

TABLE 3.13-12 (CONTINUED)
TYPICAL MAXIMUM CONSTRUCTION EQUIPMENT NOISE LEVELS

Phase/Equipment Type	Estimated Equipment Noise Levels (L_{max}, dBA)				
	50 feet	100 feet	200 feet	500 feet	1,000 feet
AC Interference Mitigation System Installation (cont.)					
Hydro Vacuum Truck	82	74	67	57	49
Water Truck	77	69	62	52	44
Vacuum Truck	85	77	70	60	52
Service Truck	75	67	60	50	42
Micropile Foundation Construction					
Air Compressor	78	70	63	53	45
Backhoe	78	70	63	53	45
Crane	81	73	66	56	48
Crew Truck	75	67	60	50	42
Flatbed Truck	74	66	59	49	41
Forklift	85	77	70	60	52
Fuel Truck	77	69	62	52	44
Generator	81	73	66	56	48
Pickup Truck	75	67	60	50	42
Tractor/Trailer Unit	77	69	62	52	44
Structure Installation and Assembly					
Boom Truck	75	67	60	50	42
Helicopter	-	-	83	75	69
Pickup Truck	75	67	60	50	42
On-road Truck	77	69	62	52	44
Stringing/Transfer Conductor/Sagging Activity					
Boom Truck	75	67	60	50	42
Helicopter	-	-	83	75	69
Forklift	85	77	70	60	52
Pickup Truck	75	67	60	50	42
On-road Truck	77	69	62	52	44
Wire-pulling Machine (pulling rig)	85	77	70	60	52
Trenching for Installation of Underground Cables					
Backhoe	78	70	63	53	45
Dozer	82	74	67	57	49
Concrete Truck	79	71	64	54	46
Crane	81	73	66	56	48
On-road Truck	77	69	62	52	44
Wire-pulling Machine (pulling rig)	85	77	70	60	52
Demobilization/Right-of-way Restoration and Cleanup/Road Refreshing					
Backhoe	78	70	63	53	45
Excavator	81	73	66	56	48
Grader	85	77	70	60	52
Mower	85	77	70	60	52
Pickup Truck	75	67	60	50	42
On-road Truck	77	69	62	52	44

SOURCE: FHWA, 2008; FTA, 2006; SDG&E, 2017, 2018; USDOT, 2013; ESA, 2019

TABLE 3.13-13
CONSTRUCTION EQUIPMENT NOISE LEVELS

Phase/Equipment Type	Estimated Equipment Noise Levels (1-hour L_{eq})				
	50 feet	100 feet	200 feet	500 feet	1,000 feet
Staging Yard Setup, Road Refreshing, Vegetation Trimming, BMP Installation					
Excavator	**77**	69	62	52	44
Forklift	**82**	74	67	57	49
Grader	**81**	73	66	56	48
Loader	75	67	60	50	42
Mower	**82**	74	67	57	49
Pickup Truck	71	63	56	46	38
On-road Truck	73	65	58	48	40
Grader and Excavator	**82**	75	67	57	50
Direct-Bury Pole Construction					
Air Compressor	74	66	59	49	41
Boom Truck	68	60	53	43	35
Drill Rig/Truck-mounted Auger	72	64	57	47	39
Pickup Truck	71	63	56	46	38
On-road Truck	73	65	58	48	40
Air Compressor and On-road Truck	**77**	69	61	52	44
Pier Foundation Construction					
Air Compressor	74	66	59	49	41
Boom Truck	68	60	53	43	35
Drill Rig/Truck-mounted Auger	72	64	57	47	39
Excavator	**77**	69	62	52	44
Forklift	**82**	74	67	57	49
Generator	**78**	70	63	53	45
Loader	75	67	60	50	42
Pickup Truck	71	63	56	46	38
On-road Truck	73	65	58	48	40
Generator and Forklift	**83**	**76**	68	58	51
AC Interference Mitigation System Installation					
Mud Rotary Drill Rig	72	64	57	47	39
Support Truck	71	63	56	46	38
Desander	**77**	69	62	52	44
Hydro Vacuum Truck	72	64	57	47	39
Water Truck	73	65	58	48	40
Vacuum Truck	**81**	73	66	56	48
Service Truck	71	63	56	46	38
Vacuum Truck and Desander	**82**	75	67	57	50
Micropile Foundation Construction					
Air Compressor	74	66	59	49	41
Backhoe	74	66	59	49	41
Crane	73	65	58	48	40
Crew Truck	71	63	56	46	38
Flatbed Truck	70	62	55	45	37
Forklift	**82**	74	67	57	49
Fuel Truck	73	65	58	48	40
Generator	**78**	70	63	53	45
Pickup Truck	71	63	56	46	38
Tractor/Trailer Unit	73	65	58	48	40
Generator and Forklift	**83**	**76**	68	58	51

TABLE 3.13-13 (CONTINUED)
CONSTRUCTION EQUIPMENT NOISE LEVELS

Phase/Equipment Type	Estimated Equipment Noise Levels (1-hour L_{eq})				
	50 feet	100 feet	200 feet	500 feet	1,000 feet
Structure Installation and Assembly					
Boom Truck	68	60	53	43	35
Helicopter	-	-	77	69	63
Pickup Truck	71	63	56	46	38
On-road Truck	73	65	58	48	40
Helicopter or Boom Truck and On-road Truck*	74	67	77	69	63
Stringing/Transfer Conductor/Sagging Activity					
Boom Truck	68	60	53	43	35
Helicopter	-	-	**77**	69	63
Forklift	**82**	74	67	57	49
Pickup Truck	71	63	56	46	38
On-road Truck	73	65	58	48	40
Wire-pulling Machine (pulling rig)	**82**	74	67	57	49
Helicopter or Boom Truck and Wire Pulling Machine*	**82**	75	**77**	69	63
Trenching for Installation of Underground Cables					
Backhoe	74	66	59	49	41
Bulldozer	**78**	70	63	53	45
Concrete Truck	**75**	67	60	50	42
Crane	73	65	58	48	40
On-road Truck	73	65	58	48	40
Wire-pulling Machine (pulling rig)	**82**	74	67	57	49
Wire Pulling and Crane	**83**	75	67	58	50
Demobilization/Right-of-way Restoration and Cleanup/Road Refreshing					
Backhoe	74	66	59	49	41
Excavator	**77**	69	62	52	44
Grader	**81**	73	66	56	48
Mower	**82**	74	67	57	49
Pickup Truck	71	63	56	46	38
On-road Truck	73	65	58	48	40
Grader and Excavator	**82**	75	67	57	50

NOTE: **Bold** = Exceeds the noise significance threshold of 75 dBA L_{eq}.

* Since it is assumed helicopter activities associated with the Structure Installation and Assembly and Stringing/Transfer Conductor/Sagging Activity phases would not occur within 50 feet or 100 feet of sensitive receptors locations, the combined noise levels for these phases at 50 feet and 100 feet reflect on-site construction equipment, while maximum noise levels beyond those distances would be associated with the helicopter.

SOURCE: FHWA, 2006; FTA, 2006; SDG&E, 2017, 2018; ESA, 2019

To reduce construction-generated noise, SDG&E proposed APMs NOI-1 and NOI-2 requiring work to occur during daytime hours, obtaining a variance for nighttime work, notices to property owners, maintaining a noise "hotline," maintaining noise-reduction control measures, and evaluation of the use of portable noise barriers. Based on this analysis, these APMs are supplemented by **Mitigation Measure NOI-1**, which identifies specific measures and standards that would reduce potential impacts to less than significant.

Mitigation Measure NOI-1: Construction Noise Reduction and Mitigation Plan. To reduce daytime noise impacts due to construction of the Project near sensitive receptors, SDG&E shall develop and implement a Construction Noise Reduction and Mitigation Plan (Plan). The Plan shall be submitted to the CPUC at least 14 days prior to the commencement of construction activities for review and approval. The Plan shall include a requirement for SDG&E to administer a noise monitoring program when construction activities are conducted within 100 feet of sensitive receptor locations to ensure that the provisions of the Plan, including those identified below, are effective in reducing construction noise levels at sensitive receptor locations to 75 dBA L_{eq} or less. The Plan shall present specific measures that identify how construction noise limits of 75 dBA as an hourly L_{eq} at nearby sensitive receptor locations will be adhered to, how potential exceedances will be documented and corrected, and how impacts on sensitive receptors from exceedances that cannot be corrected or avoided will be mitigated, including but not limited to the following measures:

Noise Reduction

The following measures shall apply to construction activities within 100 feet of sensitive receptor locations:

- Impact tools (e.g., jack hammers, pavement breakers, and rock drills) shall be hydraulically or electrically powered where feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dB. External jackets on the tools themselves shall be used where feasible; this could achieve a reduction of 5 dB. Quieter procedures, such as use of drills rather than impact tools, shall be used whenever feasible.

- When construction activities that could potentially exceed 75 dBA are conducted, construction equipment and trucks shall be equipped with enhanced noise control measures (where feasible and reasonably available). Enhanced noise control measures shall be identified in the Plan and could include, but are not limited to, improved exhaust mufflers and intake silencers, engine enclosures, noise shields or shrouds, etc.

- When construction activities that could potentially exceed 75 dBA are conducted, noise barriers such as noise shields, barriers, blankets, or enclosures shall be used, where feasible, adjacent to or around noisy construction equipment. Noise control shields/barriers/blankets shall be made featuring weather-protected, sound-absorptive material on the construction-activity side of the noise shield/barrier/blanket. The noise barrier must be installed in a location that completely blocks line-of-sight between the construction noise source (e.g., generator, backhoe) and sensitive receptors located within 100 feet of the noise source.

- Stationary construction noise sources shall be located as far from adjacent receptors as possible. They shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or other measures to the extent this does not interfere with construction.

Notification and Correction

- Distribute to the potentially affected residences within 100 feet of Project construction an informational pamphlet, and post signs at conspicuous publicly accessible places at each construction site, that indicate the hours of construction

work and applicable noise level limits and provide a "hotline" telephone number, which shall be attended during active construction working hours and record messages outside of working hours, for use by the public to register complaints. SDG&E shall identify whether posted hours and/or the 75 dBA L_{eq} threshold have been exceeded, take action to keep to posted hours and/or reduce noise levels below 75 dBA, and notify CPUC within 24 hours. With regard to any noise complaints received citing project construction, SDG&E shall ensure that all complaints received during or outside of working hours shall be logged noting date, time, complainant's name, nature of complaint, and any corrective action taken, and shall submit such information to the CPUC Project Manager within 48 hours of receiving the complaint.

- For construction activities that involve a helicopter (e.g., sock line installation, movement of materials), at least one week prior to the start of such activity, additional notice shall be issued or delivered [by a means which provides proof of delivery] by SDG&E and/or its contractor to sensitive receptors within 300 feet of planned helicopter activity. This notice shall include the estimated date and time of the proposed work, as well as the estimated duration of the work both in terms of overall duration per segment, and duration per pole location.

Relocation

- The Plan shall provide for temporary relocation of residents in the event that the Plan or the noise monitoring program identifies the potential for construction noise to exceed 75 dBA L_{eq} within 100 feet of such receptors.

Significance after Mitigation: Mitigation Measure NOI-1 would ensure that potential construction-related noise impacts would be reduced through implementation of the Construction Noise Reduction Plan, which would be subject to the review and approval of CPUC. With the implementation of this mitigation measure, this impact would be reduced to a less-than-significant level.

Although not likely, it is possible that hydraulic rock drilling or rock blasting may be used during construction. As previously discussed, the threshold of 75 dBA L_{eq} averaged over 1 hour is used to determine the significance of short-term daytime and nighttime construction noise levels relative to the potential to cause a substantial temporary increase in ambient noise levels in the Project vicinity above levels existing without the Project. Blasting, if used, would be impulsive and occur infrequently (e.g., once or twice a day); however, the potential blasting activities could expose nearby residences to impulsive noise that could exceed the applied 1-hour average 75 dBA threshold. Since blasting could exceed the 75 dBA 1-hour L_{eq} threshold, SDG&E proposed APM NOI-3 to require a blasting plan. Based on this analysis, that APM is superseded by **Mitigation Measure NOI-2**, which identifies specific measures and standards that would reduce potential impacts to less than significant.

Mitigation Measure NOI-2: Blasting Plan. Prior to conducting any blasting activities, SDG&E shall develop a Blasting Plan in coordination with an acoustical analyst, geotechnical engineer, and construction contractor. The Plan shall be submitted to the CPUC at least 14 days prior to the commencement of construction activities for review and approval to ensure that all components of this measure have been included and all required reviews, signatures, and permits obtained. The plan shall include a current/valid copy of the Explosives Permit issued by the San Diego County Sheriff's Office, as well

as documentation that all local blasting requirements have been adhered to. The Blasting Plan shall include at a minimum the following measures:

- Methods of matting or covering of blast area to prevent excessive air blast pressure.
- Description of air blast monitoring program.
- If necessary, SDG&E and/or its contractors shall use portable noise barriers between the source and affected occupied properties to reduce excessive noise impacts.
- Blasting shall be limited to between the hours of 7:00 a.m. and 7:00 p.m. daily.
- Blasting notification procedures, lead times, and list of those notified. Public notification to potentially affected sensitive receptors describing the expected extent and duration of the blasting.
- Verification that explosives are not being proposed for use within 300 feet of the boundary of any occupied parcels zoned for residential. In the event that blasting activities are proposed within this distance, SDG&E will provide verification to the CPUC that residences affected by noise are notified of the date and time of blasting and offered temporary relocation assistance.

Significance after Mitigation: Mitigation Measure NOI-2 would ensure that SDG&E would have a plan in place if conditions are encountered in the field which calls for blasting and that it occur under controlled circumstances. With the implementation of this mitigation measure, this impact would be reduced to a less-than-significant level.

As discussed in Chapter 2, *Project Description*, helicopters may be used during pole installation, stringing, and delivering supplies and equipment. The use of the helicopters would be intermittent and would not require landing zones within the Project area. It is anticipated that the helicopter used during construction would be staged at the nearby airport, McClellan-Palomar Airport. As shown in Table 3.13-12, the operation of a helicopter could generate a noise level of 83 dBA L_{max} from a distance of 200 feet (USDOT, 2013). Helicopter activities would require up to 8 hours of total operation throughout Project construction. When in use, the helicopter is anticipated to hover for several minutes at each installation after delivering a pole and then promptly leave. It would not remain in the same place for the entire installation. As shown in Table 3.13-15, assuming a helicopter would be used for 15 minutes per hour, sensitive receptors would be exposed to 1-hour average noise levels exceeding 75 dBA. Since noise generated during the use of the helicopter could expose nearby sensitive receptors to noise levels that could exceed the 75 dBA 1-hour average threshold, noise generated by helicopter use during Project construction could expose nearby sensitive receptors to a substantial temporary increase in ambient noise levels in the Project vicinity, a significant impact. However, implementation of **Mitigation Measure NOI-1** would reduce this impact to a less-than-significant level by providing written notices and a noise complaint "hotline" to all property owners within 300 feet of planned helicopter activity, and by providing for temporary relocation of residents in the event that the Plan or the noise monitoring program identifies the potential for construction noise to exceed 75 dBA L_{eq} within 100 feet of sensitive receptors.

Operation and Maintenance

Given the passive nature of the permanent Project components, they would not produce sound in excess of the applied 1-hour average 75 dBA L_{eq}. Maintenance activities would include periodic inspections and repairs conducted on an as-needed, short-term basis. The Project's slight increase in maintenance activities and related miles traveled would be offset by the decrease in maintenance activities resulting from the proposed pole replacement and reconductoring/re-energizing of the existing de-energized line, which would result in a net decrease in heavy truck use and mileage. With the exception of unanticipated repairs to reestablish service, these activities and resulting noise would not vary substantially from that currently conducted and experienced along the Project as noted in Section 2.6.1, *General Practice Operation and Maintenance Activities and Practice*. Therefore, this would be a less-than-significant impact.

b) Generation of, excessive groundborne vibration or groundborne noise levels? *LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.*

Construction

Some types of construction equipment and methods can produce vibration levels that can cause architectural damage to structures and human annoyance.[1] Vibration levels generated during construction of the Project would vary during the construction period, depending upon the construction activity and the types of construction equipment used. Typical vibration levels for the construction equipment types that would generally result in the highest vibration levels (e.g., drill rig, large bulldozers) are presented in **Table 3.13-14**.

TABLE 3.13-14
VIBRATION SOURCE LEVELS FROM CONSTRUCTION EQUIPMENT

Distance (feet)	Peak Particle Velocity (in/sec)
	Drill Rig, Large Bulldozer
50	0.031
75	0.017
100	0.011
150	0.006

SOURCE: FTA, 2006

This analysis relies on a vibration thresholds established by the Federal Transit Administration (FTA). According to the FTA's *Transit Noise and Vibration Impact Assessment*, residential land uses exposed to a vibration level of 80 VdB could result in human annoyance and residential buildings exposed to a vibration level of 0.2 PPV (inch/second) could result in building damage (FTA, 2006).

As previously discussed, there are sensitive receptors located within 20 feet of on-site construction areas. However, the use of a drill rig or large auger to excavate holes during concrete pier

[1] Human annoyance refers to an unpleasant mental state that is characterized by such effects as irritation and distraction from one's conscious thinking. It can lead to emotions such as frustration and anger.

foundation construction would be located approximately 50 feet from the nearest residences. As shown in Table 3.13-14, the operation of a drill rig could expose the nearest residences to a vibration level of 0.031 PPV or 79 VdB, which is below the 80 VdB threshold for human annoyance and the 0.2 PPV (inch/second) threshold for building damage. Therefore, the use of off-road construction would expose nearby sensitive receptor to vibration levels that would result in a less-than-significant impact.

As noted earlier, blasting may be used during construction of the Project and the exact locations of where blasting may be required is currently unknown. Ground vibration that occurs from blasting is dependent on the type of rock, type of explosive, and depth below ground that explosives are placed. Blasting in various industries use different techniques and may result in different PPV. Using Oriard's basic formula for predicting blast vibration found in Caltrans' *Transportation and Construction Vibration Guidance Manual*, vibration levels from various charge weights and distances were approximated and are presented in **Table 3.13-15** (Caltrans, 2013). The vibration levels presented in Table 3.13-13 represent the worst case vibrations that could be experienced at the nearest sensitive receptor.

TABLE 3.13-15
VIBRATION SOURCE LEVELS FROM BLASTING

Distance (feet)	Peak Particle Velocity (in/sec) by Pounds of Explosive			Vibration Level (VdB) by Pounds of Explosive		
	1	5	10	1	5	10
50	**0.46**	**1.68**	**2.92**	**101**	**112**	**117**
75	**0.24**	**0.88**	**1.53**	**96**	**107**	**112**
100	0.15	**0.55**	**0.96**	**92**	**103**	**108**
125	0.11	**0.39**	**0.67**	**89**	**100**	**105**
150	0.08	**0.29**	**0.50**	**86**	**97**	**102**
175	0.06	**0.23**	**0.39**	**84**	**95**	**100**
200	0.05	0.18	**0.32**	**82**	**93**	**98**
300	0.03	0.10	0.17	76	**88**	**92**
400	0.02	0.06	0.10	72	**84**	**88**
500	0.01	0.04	0.07	69	**80**	**85**
600	0.01	0.03	0.05	67	78	**83**
700	0.01	0.02	0.04	65	76	**81**
800	0.01	0.02	0.03	63	74	79

NOTES: **Bold** = Exceeds 0.2 PPV for building damage threshold or 80 VdB human annoyance threshold

[1] $PPV = K(Ds)^{-1.6}$
K = K Factor, The combined K factor for Oriard's upper and lower bounds are 242 and 24, respectively. Assumed a K factor of 242.
Ds = Square-root scaled distance (distance to receiver in feet divided by square root of charge weight in pounds).

SOURCE: Caltrans, 2013

Human response to blasting is subjective, as two people may react differently to the same vibration event depending on where they are in a structure. When residents feel a blast, they may become concerned about damage to their home. If blasting is required to remove dense rock, residences could be located within 50 feet of a blast area. Residences located 50 feet from the

blast area could be exposed to a vibration levels ranging from 0.46 to 2.92 PPV or 101 to 117 VdB depending on the explosive yield, which would exceed the applied 80 VdB threshold for human annoyance and the 0.2 PPV (inch/second) threshold for building damage. Therefore, CPUC proposes **Mitigation Measure NOI-3**, to ensure that blasting activities would not expose the nearest sensitive receptor to vibration levels that would result in human annoyance or building damage.

> **Mitigation Measure NOI-3: Vibration Reduction Plan.** Prior to any blasting construction, the applicant shall develop a Vibration Reduction Plan in coordination with an acoustical analyst, geotechnical engineer, and construction contractor, and submit the Plan to the CPUC for approval at least 14 days prior to any proposed blasting. The Vibration Reduction Plan shall include vibration reduction measures to ensure that surrounding buildings will be exposed to less than 0.2 PPV to prevent building damage. At a minimum, the plan shall consider the following measures:
>
> - Evidence of licensing, experience, and qualifications of blasting contractors.
> - The Plan shall establish a vibration limit of 0.2 PPV at nearby structures in order to protect structures from blasting activities and identify specific locations for monitoring. A pre-blast survey shall be conducted of any potentially affected structures.
> - The Plan shall identify the appropriate size of the explosive charge to ensure that a vibration level of 0.2 PPV is not exceeded at nearby structures.
> - Impacted property owners shall be notified at least 48 hours prior to the visual inspections.
> - Post-construction inspection of structures shall be performed to identify (and repair if necessary) any damage from blasting vibrations. Any damage shall be documented by photograph, video, etc. This documentation shall be reviewed with the individual property owners and SDG&E shall arrange and fund any needed repairs. Documentation of these efforts shall be provided to the CPUC.
>
> **Significance after Mitigation:** Mitigation Measure NOI-3 would ensure that if conditions are encountered in the field which requires blasting, SDG&E would have a plan in place to implement to ensure that it occurs under controlled circumstances. With the implementation of this mitigation measure, this impact would be reduced to a less-than-significant level.

Operation and Maintenance

Since the operation and maintenance of the Project would not introduce any new sources of groundborne vibration, there would be no impact under this criterion.

c) For a project located within the vicinity of a private airstrip or an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels? *NO IMPACT.*

The Project does not involve the development of new noise sensitive land uses and, thus, implementation of the Project would not expose people to excessive aircraft noise. In addition,

there is no public airport located within 2 miles of any of the Project components. The closest airport is the McClellan-Palomar Airport, located approximately 2.4 miles west of the study area. Therefore, the Project would result in no impact relating to this criterion.

Mitigation: None required.

3.13.5 References

California Department of Transportation (Caltrans), 2013. Transportation and Construction Vibration Guidance Manual. September.

City of Carlsbad, 2015. City of Carlsbad General Plan. September.

City of Escondido, 2012. Escondido General Plan Community Protection. May.

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3.14 Population and Housing

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
14. POPULATION AND HOUSING — Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

This section evaluates the potential for construction, operation, and maintenance of the Project to result in impacts related to population and housing in the study area. For the purposes of the evaluation of potential population and housing impacts, the study area is defined as the footprint of all components of the Project, including all areas of temporary and/or permanent ground disturbance and the surrounding communities within which the Project would be constructed and operated, as described below.

3.14.1 Environmental Setting

The Project would be constructed in northern San Diego County. Portions of the Project would be located within the cities of Carlsbad, Escondido, Vista, San Marcos and in unincorporated San Diego County. The Project would be located in an area that is predominantly residential with some light industrial and commercial development, mixed-use, and open space (see Section 3.11, *Land Use and Planning*).

Population

Table 3.14-1 summarizes projected population growth from 2010 to 2050 for the study area municipalities, including unincorporated San Diego County. As demonstrated in the table, the population in this area is expected to increase substantially over the next 30 to 35 years. The amount of population growth from 2012 to 2050 (the most recent projections available) is expected to range from approximately 16 percent in Carlsbad to approximately 35 percent in the City of San Diego.

Housing

Table 3.14-2 presents housing data for San Diego County, the City of San Diego, and other study area jurisdictions. As reflected in Table 3.14-2, vacancy rates in the study area range from approximately 4.4 percent in the City of Escondido to 7.0 percent in the unincorporated areas of San Diego County. In addition to permanent housing options, there are numerous hotels, motels, and other temporary housing options in the area which could be available for construction workers.

TABLE 3.14-1
PROJECTED POPULATION GROWTH, 2012 – 2050

Area	2012 Population	Projected 2020 Population	Projected 2050 Population	Numeric Change 2012-2050	% Change 2012 - 2050
City of San Diego	1,321,315	1,453,267	1,777,936	456,621	35%
City of Carlsbad	107,674	118,450	124,518	16,844	16%
City of Escondido	146,089	165,214	173,625	27,536	19%
City of San Marcos	85,560	98,915	113,015	27,455	32%
City of Vista	95,034	96,993	126,455	31,421	33%
County of San Diego, Unincorporated	495,267	543,426	647,233	151,966	31%

SOURCE: San Diego Association of Governments (SANDAG), 2013.

TABLE 3.14-2
2017 HOUSING DATA ESTIMATES

Jurisdictional Area	Total Housing Units	Occupied Housing Units	Vacant Housing Units	Vacancy Rate (percent)
City of San Diego	541,140	509,216	31,924	5.9%
City of Carlsbad	46,878	43,713	3,165	6.8%
City of Escondido	48,622	46,488	2,134	4.4%
City of San Marcos	31,366	29,941	1,425	4.5%
City of Vista	32,543	31,399	1,144	3.5%
County of San Diego, Unincorporated	177,885	165,472	12,413	7.0%
San Diego County Total	1,210,138	1,139,651	70,487	5.8%

SOURCE: DOF, 2018

Employment

In 2014, it was estimated that there were approximately 63,800 individuals employed in the construction industry in San Diego County. That number is expected to increase to 85,500 by 2024, resulting in approximately a 3 percent annual increase in employment in the construction industry (EDD, 2016).

3.14.2 Regulatory Setting

Federal/State

No federal/State regulations apply to population and housing within the study area.

Local

San Diego Association of Governments

The San Diego Association of Governments is a regional planning agency comprised of representatives from 18 cities and county governments which serves a forum for regional decision making. SANDAG's Land Use and Regional Growth program produces growth forecasts for population, housing, employment, and income in the San Diego Region. Current growth forecasts project regional growth in the region through 2050 (SANDAG, 2018).

San Diego County General Plan

The Housing Element of the San Diego County General Plan (County of San Diego, 2011) includes objectives, policies, and programs supporting the County's major goals related to population and housing, which include providing a variety of housing and tenancy types at a range of prices, residential neighborhoods that respect unique local character and the natural environment, and affordable and suitable housing for all economic segments, with emphasis on the housing needs of lower income households and households with special needs.

City of Carlsbad General Plan

The Housing Element of the City of Carlsbad General Plan (City of Carlsbad, 2015) contains goals, policies, and programs intended to guide City decision making and provide a "coordinated and comprehensive strategy for promoting the production of safe, decent, and affordable housing within the community" during the planning period of 2013-2021.

City of Escondido General Plan

The Housing Element of the City of Escondido General Plan (City of Escondido, 2012) contains policies and programs which are designed to plan for quality, managed, and sustainable growth, provide a range of housing opportunities for all income groups and households with special needs, and enhance the quality of the city's housing stock and preserve the integrity of neighborhood character.

City of San Marcos General Plan

The Housing Element of the City of San Marcos General Plan (City of San Marcos, 2013) contains policies designed to implement the City's housing goals: provide a range of housing opportunities which meet the special needs of the community and persons of lower and moderate incomes, maintain the existing housing stock and preserve neighborhood character, reduce or remove governmental constraints to the development, improvement, and maintenance of housing, and promote equal opportunity for all residents to reside in housing of their choice.

City of Vista General Plan

The Housing Element 2013-2021 of the City of Vista General Plan (City of Vista, 2013) contains policies and programs intended to maintain and enhance the quality of residential neighborhoods in Vista, conserve the existing supply of affordable housing, encourage the provision of a wide range of housing by location, type of unit, and price, provide increased opportunities for home

ownership, enable homeless individuals and families to move from homelessness to self-sufficiency, remove governmental constraints on housing development, and promote fair housing practices.

City of San Diego General Plan

The Housing Element 2013-2050 of the City of San Diego General Plan (City of San Diego, 2013) includes objectives, policies, and programs for the following five major goals related to population and housing: ensure the provision of sufficient housing for all income groups maintain and upgrade the quality, safety and livability of San Diego's housing stock, and provide affordable housing opportunities consistent with a land use pattern which promotes infill development and socioeconomic equity.

3.14.3 Applicant Proposed Measures

No Applicant Proposed Measures (APMs) have been proposed to address potential effects on population and housing.

3.14.4 Environmental Impacts

Discussion

a) The Project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure): *LESS THAN SIGNIFICANT IMPACT.*

The Project does not include the construction of new homes or business and, as a result, would not directly induce substantial temporary or permanent population growth in the study area. The Project could indirectly induce population growth in the study area if it resulted in an increase in local population. During the 11-month construction period, the Project would employ up to 80 construction workers working in several different crews concurrently at various project locations. As mentioned in Section 3.14.1, *Environmental Setting*, there are approximately 63,800 individuals employed in the construction industry in San Diego; therefore, there would be a sufficiently large labor pool from which the Project could draw. Because construction workers are likely to be a mix of SDG&E employees and general construction workers residing in San Diego County, the Project would not require workers to relocate to the area for construction of the Project. Therefore, Project construction is not expected to induce in-migration. Project operation and maintenance activities are expected to be similar as existing operation and maintenance activities and would not require substantial numbers of additional full-time employees.

As described in Section 2.6, *Operation and Maintenance*, maintenance of the Project would be substantially similar to existing maintenance activities along the Project alignment. Therefore, operation and maintenance activities would not result in any direct impact to unplanned population growth due to the in-migration of operation and maintenance staff.

Regarding indirect impacts to population growth due to the extension of infrastructure, operation of the Project would not provide access to previously inaccessible areas, extend public services to previously unserved areas, or cause new development elsewhere. As described in Section 2.1, Introduction, the Project is designed to meet NERC reliability criteria, eliminate NERC violations, and alleviate congestion at the Escondido/San Marcos Substations. As noted in Proponents Environmental Assessment (PEA) Section 5.4, *Growth Inducement*, the Project is not proposed to advance growth in the area, but to address these existing service issues (SDG&E, 2017). SDG&E would continue to meet its obligation, as the area's electric utility provider, to accommodate growth already contemplated by the local land use jurisdictions in its service area. Therefore, the Project is intended to bring the Escondido/San Marcos substations into compliance, improve reliability for the existing population in the service area, and provide service for planned, projected growth within the service area. As a result, construction and operation of the Project are not likely to directly or indirectly induce in-migration during construction or operation and maintenance. The Project would have a less than significant indirect impact on population growth associated with extension of infrastructure.

b) The Project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere: *NO IMPACT.*

The Project would be constructed primarily within existing SDG&E right-of-way and would run along existing roads and power lines. Where the Project would require new right-of-way for Segment 1, the expanded right-of-way would include land uses such as open space, commercial buildings, vacant and undeveloped land, and single-family residential homes. Within the expanded right-of-way, the Project would involve replacing existing poles or removing existing poles from service. Therefore, construction of the Project would not result in the displacement of existing homes and would have no impact under this criterion.

As described above, the Project would not displace any housing; nor would it displace any people or any structures that are currently inhabited. As a result, the Project would have no impact associated with the displacement of people or the construction of replacement housing.

3.14.5 References

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San Diego Association of Governments (SANDAG), 2013. Series 13 Regional Growth Forecast, selected geographies. Available online at: http://datasurfer.sandag.org/ Accessed May 8, 2018.

SANDAG, 2018. Growth Forecasts. Available online at https://www.sandag.org/index.asp?subclassid=84&fuseaction=home.subclasshome. Accessed on September 21, 2018.

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3.15 Public Services

		Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
15.	**PUBLIC SERVICES — Would the project:**				
a)	Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:				
	i) Fire protection?	☐	☒	☐	☐
	ii) Police protection?	☐	☐	☒	☐
	iii) Schools?	☐	☐	☐	☒
	iv) Parks?	☐	☐	☐	☒
	v) Other public facilities?	☐	☐	☐	☒

For an impact related to public services to be considered significant, the Project would have to result in adverse physical impacts to the environment not already addressed in the other individual resource sections of this CEQA document.

Existing public services including fire protection, police protection, schools, parks, libraries, and other public facilities within the study area are discussed by municipality in this section. For the purposes of the evaluation of public services, the study area is defined as public service facilities within 1 mile of the footprint of Project components including all areas of temporary and permanent ground disturbance, as well as Project staging areas. As components of the Project are located in the cities of Carlsbad, Escondido, Vista, and San Marcos, as well as unincorporated San Diego, including Lake San Marcos, this section discusses public services for all of these jurisdictions.

3.15.1 Environmental Setting

Fire Protection

California Department of Fire and Forestry (CAL FIRE)

The San Diego Unit of the Southern Region of Cal Fire supports regional fire protection with a seasonal fire station, CAL FIRE Del Dios Fire Station #77, located at 2323 Felicita Avenue in Escondido, within 2.5 miles of Segment 3 of the Project. CAL FIRE crews support local municipalities in wildland fire protection and emergency response. See Section 3.20, Wildfire, for a description of the State Responsibility Areas (SRAs) in which CAL FIRE has primary legal and financial responsibility for the prevention and suppression of wildland fires.

San Diego County Fire Authority

The San Diego County Fire Authority supports the delivery of emergency medical and fire response services to a 1.5 million-acre area of unincorporated San Diego County. Emergency service response teams are provided through a combination of professionally trained volunteer and career staff. The San Diego County Fire Authority also coordinates regional fire prevention for unincorporated San Diego County (County of San Diego, 2018a). The unincorporated portions of the study area would be served by the San Diego County Fire Authority in coordination with CAL FIRE and other regional response teams.

City of Carlsbad Fire Department

The City of Carlsbad Fire Department provides 24-hour fire, rescue, and emergency services to portions of the study area. The closest station to Project components is Fire Station 6, serving the southeast section of the city, including La Costa Canyon High School. Fire Station 6, located at 7201 Rancho Santa Fe Road, has a crew of three including a captain, an engineer, and a firefighter/paramedic (City of Carlsbad, 2018a).

City of Escondido Fire Department

Fire Protection in the City of Escondido is provided by the Escondido Fire Department co-located with the Police Department at 1163 North Centre City Parkway in Escondido and additionally, by contractual arrangement through the Rincon Del Diablo Fire Protection District. The mission of the Escondido Fire Department is to serve the public and to safeguard the community form the impact of fire, medical, and environmental emergencies through education emergency services and enforcement (City of Escondido, 2018). Escondido and Rincon Del Diablo serve a 50-square-mile area in northern San Diego County utilizing a force of 93 personnel including: 18 full-time non-safety staff members, 10 full-time administrative staff, 3 part-time administrative staff, and 27 senior volunteers. Escondido Fire Department Station #1 is located approximately 1.5 miles east of the Escondido Substation.

City of Vista Fire Department

Fire protection and other emergency response services in the City of Vista are provided by the Vista Fire Department. The City fire protection staff includes management/executive staff, operations personnel, emergency medical staff, and trained volunteers. The department serves a population of more than 120,500 in a combined service area encompassing 36.5 square miles including the City of Vista and the Vista Fire Protection District, extending to the northeast of the city limits. The Vista Fire Department is a full service department, providing services ranging from fire prevention and suppression, to emergency medical services, to technical rescue and hazardous materials mitigation (City of Vista, 2018). The closest station to the study area is Station #5, located at 2009 South Melrose Drive in Vista, approximately 1.75 miles north of Segment 1.

City of San Marcos Fire Department

The San Marcos Fire Department, located at 1 Civic Center Drive, is a full-service department responsive to the City of San Marcos and the San Marcos Fire Protection District, which covers an area of 33 square miles and a population of approximately 95,000 residents. In addition to

protecting a diverse community consisting of residential development, commercial/retail, industrial, and educational facilities, the San Marcos Fire Department provides fire protection for several thousand acres of wildland and wildland urban interface lands in the region. San Marcos has four fire stations, five (24-hour) paramedic ambulances, a shift battalion, and an on call duty Chief. The Fire Department also provides staff support for three wildland fire engines and a California Office of Emergency Services (CalOES) wildland fire engine (City of San Marcos, 2018a). The closest station to the Project is San Marcos Fire Department Station #4, located at 204 San Elijo Road, less than 1mile north of Segment 3.

Rancho Santa Fe Fire Protection District

The Rancho Santa Fe Fire Protection District spans approximately 50 square miles and protects over 33,000 residents. Staff consists of one Chief, One Deputy Chief, two Division Chiefs, one Battalion Chief/Training Officer, three Shift Battalion Chiefs, 48 paid fire suppression positions, and three fire prevention positions, as well as administrative and support staff. The district currently operates out of five full-time fire stations, one part-time fire station, and one administration office serving communities within and surrounding Rancho Santa Fe, 4S-Ranch, Fairbanks Ranch, Cielo, Crosby, Elfin Forest, and Harmony Grove. The two stations closest to the study area are Station 5, located at 2604 Overlook Point Road in Escondido, and Station 6, located at 20223 Elfin Forest Road in Elfin Forest. Station 5 is located near the new planned community of Harmony Grove Village and is currently a temporary facility. Station 6 was formerly operated by the Elfin Forest/Harmony Grove Fire Department, which merged with the Rancho Santa Fe Fire Protection District in 2016 (Rancho Santa Fe Fire Protection District, 2019).

Police/Public Safety

San Diego County Sheriff's Department

The San Diego County Sheriff's Department, the chief law enforcement agency in San Diego County, is comprised of approximately 4,000 employees, including both sworn officers and professional support staff. The department provides law enforcement, detention, and court services for San Diego County in a service area of approximately 4,200 square miles. In addition to providing specialized regional services to the entire county, the department provides law enforcement, traffic, patrol, and investigative services by contract, to the incorporated cities of San Marcos and Vista within the study area (County of San Diego, 2018b).

City of Carlsbad Police Department

The City of Carlsbad Police Department provides crime prevention and law enforcement services to the residents in Carlsbad, and employs 170 full-time equivalent personnel, including 115 sworn officers and 55 civilian staff members (City of Carlsbad, 2018b). The Carlsbad Police Department is located at 2560 Orion Way in Carlsbad, approximately 2 miles west of the Project.

City of Escondido Police Department

Law enforcement and public safety services are provided in Escondido by the City of Escondido Police Department. Its patrol, safety services, and investigative bureaus serve residents from its headquarters located at 1163 North Centre City Parkway, approximately 1.5 miles east of the Escondido Substation. Under its General Plan Police Service Quality of Life Standard,[1] the City of Escondido has established thresholds for initial response times of 5 minutes for "Priority 1" calls (involving crimes in progress or life threatening incidents), and 6.5 minutes for "Priority 2" calls (serious calls not involving life-threatening incidents). Resources are adjusted to maintain staff levels capable of meeting this standard as the City of Escondido expands and changes (City of Escondido, 2012).

City of San Marcos

The City of San Marcos contracts with the San Diego County Sheriff's Department for public safety and law enforcement services, provided mainly through the San Marcos Station located at 182 Santar Place, approximately 2 miles west of the Escondido Substation. The station provides service to a 100-square-mile area including San Marcos, and the unincorporated communities of Lake San Marcos, Elfin Forest, Harmony Grove, Hidden Meadows, Ivy Dell, Del Dios, Lake Hodges, and the San Pasqual Valley. The Sheriff's station has a dedicated captain and a staff of over 100 deputies, professional staff members, and volunteers serving more than 111,000 area residents (San Diego County Sheriff's Department, 2018). The City of San Marcos provides additional crime prevention and neighborhood services to its residents through the Public Safety Center, located at 1 Civic Center Drive in San Marcos (City of San Marcos, 2018b).

City of Vista

The City of Vista also contracts with the San Diego County Sheriff's Department for the provision of law enforcement and related public services (County of San Diego, 2018a). The Vista Sheriff's Department provides a range of services from a station, substation and storefront in the city. Services include general patrol, investigation, narcotics and gang investigations, crime prevention, juvenile intervention, community policing, and administrative services. The Vista Patrol Station is located at 325 South Melrose Drive, approximately 4 miles northwest of Segment 1.

Schools

There are numerous public school districts serving the study area including the San Marcos Unified School District and the Escondido Union School District, with several schools in close proximity to the Project. Residents in the study area may also attend schools in other districts in the neighboring communities such as Carlsbad Unified, Vista Unified, or the San Dieguito Union School District through inter-district transfers. Residents of the unincorporated areas of the county may attend Rancho Santa Fe School District. In addition, there are numerous private and

[1] For the purposes of the environmental analysis, the Escondido Police Service Standard will be considered to be a reasonable standard for performance objectives pertaining to police response times in the study area, as the general plans from other the jurisdictions (in the study area) have not identified specific performance objectives for police response.

charter schools as well as the California State University (San Marcos) in the study area. Refer to **Table 3.15-1**, for existing school districts in the designated study area.

TABLE 3.15-1
EXISTING SCHOOL DISTRICTS IN THE STUDY AREA

School District	Jurisdiction	Nearest School to Project Component	Number of Schools in District
Carlsbad Unified School District	City of Carlsbad	La Costa Meadows Elementary - Segment 2	15
Encinitas Union School District	City of Carlsbad Encinitas	La Costa Heights Elementary - Segment 2	10
Escondido Union School District	City of Escondido	Rock Springs Elementary - Escondido Substation, Segment 1	24
Rancho Santa Fe School District	San Diego County (unincorporated)	R. Roger Rowe Elementary and Middle Schools- Segment 3	2
San Dieguito Union High School District	Carlsbad, North San Diego County	La Costa Canyon High School - Segment 2	10
San Marcos Unified School District	City of San Marcos	San Marcos High School and Middle Schools - Segment 1 San Elijo Elementary -Segment 3	19
San Pasqual Union School District	City of Escondido	Escondido Substation	2
Vista Unified School District	City of Vista	Segment 1	29

SOURCES: Carlsbad Unified School District, Encinitas Union School District, Escondido Union School District, Rancho Santa Fe School District, San Dieguito Union High School District San Marcos Unified School District, San Pasqual Union School District, Vista Unified School District, 2018.

Parks, Trails, and Other Public Facilities

There are numerous public parks and trails in the study area of the Project maintained by the County of San Diego, as well as the cities of San Marcos, Escondido, Carlsbad, and Vista. More details about these public facilities are provided in Section 3.16, *Recreation*.

Although there are no libraries in the immediate study area, there are a number of libraries in the surrounding communities. The closest libraries to the Project include the Kellogg Library at Cal State San Marcos, the San Marcos Branch Public Library, the Carlsbad City Library, and the Escondido Public Library, each located approximately 2.5 miles from Project elements. These libraries provide reading events for children, adult literacy programs, bookmobiles, and after-hours access to reading materials through the internet (County of San Diego, 2018c).

Emergency Medical Services

The nearest emergency medical center to the Project is the Palomar Medical Center Escondido, currently located on a 56-acre campus (2185 Citracado Parkway) in Escondido. An expansion of this existing facility is planned to occur in phases to ultimately double the size of the facility to meet the needs to the growing population in North San Diego County (Palomar Health, 2018).

3.15.2 Regulatory Setting

Federal/State

There are no federal or State regulations related to public services that would be applicable to the Project.

Local

San Diego County General Plan

The San Diego County General Plan Land Use and Safety Elements contain the following goals and policies relevant to provision of public services for unincorporated areas of the Project. (County of San Diego, 2011).

Goal LU-12: Infrastructure and Services Supporting Development. Adequate and sustainable infrastructure, public facilities, and essential services that meet community needs and are provided concurrent with growth and development.

Policy LU-12.3: Infrastructure and Services Compatibility. Provide public facilities and services that are sensitive to the environment with characteristics of the unincorporated communities. Encourage the collocation of infrastructure facilities, where appropriate.

Policy LU-12.4: Planning for Compatibility. Plan and site infrastructure for public utilities and public facilities in a manner compatible with community character, minimize visual and environmental impacts, and whenever feasible, locate any facilities and supporting infrastructure outside preserve areas.

Goal S-2: Emergency Response. Effective emergency response to natural or human-induced disasters that minimizes the loss of life and damage to property, while also reducing disruptions in the delivery of vital public and private services during and following a disaster.

Policy S-2.2: Participation in Mutual Aid Systems. Maintain participation in local, regional, State, and national mutual aid systems to ensure that appropriate resources are available for response and recovery during and following a disaster.

Goal S-3: Minimized Fire Hazards. Minimize injury, loss of life, and damage to property resulting from structural or wildland fire hazards.

Policy S-3.5: Access Roads. Require development to provide additional access roads when necessary to provide for safe access of emergency equipment and civilian evacuation concurrently.

Goal S-5: Regional Fire Protection. Regional coordination among fire protection agencies.

Goal S-6: Adequate Fire and Medical Services. Adequate levels of fire and emergency medical services (EMS) in the unincorporated County.

City of Carlsbad General Plan

The City of Carlsbad's General Plan contains the following goals and policies that pertain to the provision of public services (City of Carlsbad, 2015).

Goal 6-G.3: Maintain safety services that are responsive to citizens' needs to ensure a safe and secure environment for people and property in the community.

***Policy 6-P.28*:** Maintain adequate Police and Fire Department staff to provide adequate and timely response to all emergencies.

***Policy 6-P.29*:** Ensure Fire Department facilities and service are provided consistent with the minimum performance standards of the city's Growth Management Plan.

***Policy 6-P.32*:** Consider site constraints in terms of hazards and current levels of emergency service delivery capabilities when making land use decisions. In areas where population or building densities may be inappropriate to the hazards present, take measures to mitigate the risk of life and property loss.

***Policy 6-P.38*:** Inform the public and contractors of the danger involved and the necessary precautions that must be taken when working on or near pipelines or utility transmission lines.

***Policy 6-P.39*:** Ensure all new development complies with all applicable regulations regarding the provision of public utilities and facilities.

City of Escondido General Plan

The Community Protection Element of the City of Escondido's General Plan contains the following goals and policies that pertain to the provision of public services (City of Escondido, 2012).

Goal 2: Protection of life and property through adequate fire protection and emergency medical services.

***Fire Protection Policy 2.2*:** Provide Fire Department response times for no less than 90 percent of all emergency responses with engine companies by achieving the following service standard:

- Provide an initial response time of seven and one-half (7½) minutes for all structure fire and emergency Advanced Life Support (ALS) calls and a maximum response time of ten (10) minutes for supporting companies in urbanized areas of the city.

***Fire Protection Policy 2.3*:** Provide a minimum total of seven (7) fire stations each sized and staffed with facilities, services and equipment to meet current and anticipated needs including, but not limited to, engine and truck units and crews and Advanced Life Support (ALS) staff prior to General Plan build out to the extent economically feasible.

Goal 3: Protection of life and property, and enforcement of law that enhances personal safety in the community.

***Police Services Policy 3.1*:** Regularly review and implement appropriate plans for police protection and services that address staffing, facility needs, and service goals to ensure that the community's needs are met.

***Police Services Policy 3.2*:** Maintain an initial response time for Priority 1 calls of no more than five (5) minutes and an initial response time for Priority 2 calls of no more than six and one-half (6½) minutes. Constantly review these standards to ensure their adequacy and appropriateness in consideration of resource availability.

***Police Services Policy 3.3*:** Maintain adequate levels of sworn officers and civilian personnel to support law enforcement operations based on community needs in order to meet response time standards.

City of Vista General Plan

The Public Safety, Facilities, and Services Element of the City of Vista's General Plan contains the following goals that pertain to the provision of public services (City of Vista, 2011).

PSFS Goal 2: Prepare for and provide adequate and effective emergency response services to respond to natural and human-made emergencies and disasters, and acts of terrorism.

PSFS Goal 5: Protect life, property, and the environment from structural, wildland-urban, and wildland fire damage.

PFSF Goal 12: Continue to provide fire protection and related emergency services to protect persons and property from fire and other community hazards.

PSFS Goal 14: Continue to provide an adequate level of law enforcement services to protect persons and property from criminal activity and provide a safe community environment.

PSFS Goal 15: Provide and maintain public facilities, including the Civic Center, maintenance and warehouse facilities, as well as City welcome signs and other community identifiers, to serve the citizens of Vista and meet their existing and anticipated needs.

City of San Marcos General Plan

The Safety Element of the City of San Marcos' General Plan includes the following goals and policies that pertain to the provision of public services (City of San Marcos, 2012).

***Policy S-3.2*:** Provide sufficient level of fire protection service to reduce risk from urban and wildland fire. Advocate and support regional coordination among fire protection and emergency service providers.

Goal S-5: Establish and maintain an effective emergency response program to respond to disasters and maintain continuity-of-life support functions during an emergency.

***Policy S-5.2*:** Continue to enhance and strengthen communication and coordinate participation among and within public agencies, citizens, school districts, water districts, utilities, non-profit organizations, business, and industry to foster a vested interest in implementation.

Goal S-6: Provide neighborhood safety through effective law enforcement.

***Policy S-6.1*:** Continue to maintain demand-based law enforcement service levels to reduce the risk of criminal activity.

3.15.3 Applicant Proposed Measures

The following measure pertaining to public services has been proposed by SDG&E and would be implemented for the Project.

APM TRA-2: The Applicant will coordinate with local emergency response agencies during construction within existing public roadways to allow safe passage and access by emergency vehicles and equipment.

3.15.4 Environmental Impacts

Discussion

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

a.i) Fire protection: *LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED*.

The Project would not include or require the provision of new or altered fire protection facilities; nor would the Project include or require increases in staff levels for local or regional fire protection. Project construction would include installation of power poles and structures to support a new transmission line between San Marcos and Escondido; some segments of the Project would cross through canyons prone to wildfires, as identified in Section 3.20, *Wildfire*. As with operation and maintenance of the existing transmission lines in the study area, operation of the Project could involve a risk of situations requiring fire protection, should accidents involving the new transmission line and associated structures occur. Project maintenance would include maintaining required vegetation clearances and other fire safety rules in compliance with CPUC General Order 95, and applicable fire safety standards, as outlined in Section 2.6.3, *Pole Structure Brushing and Tree Trimming*. Measures including vegetation surveys, management, and clearance would take place along the Project alignment to reduce Project-related fire risks. As stated in Section 3.20, *Wildfire*, SDG&E has prepared a fire prevention plan in compliance with CPUC Decision 12-01-032 (Fire Safety Order) and Standard 1.E of General Order 166. Standard 1.E requires SDG&E to prepare and submit plans to minimize the risk of catastrophic wildfire posed by overhead electric lines and equipment during extreme fire-weather events.

Additionally, in the event of an emergency, APM TRA-2 would support safe passage and access by emergency response vehicles during construction. Such measures would support the maintenance of appropriate emergency response times, if an accident in the study area of the Project were to occur.

As identified in Section 3.20, *Wildfire*, construction and operation of the Project could increase risks associated with wildfires in a fire prone region, and impacts could be significant. However, through the implementation of SDG&E's Electric Standard Practice 113.1, Operations and Maintenance Wildland Fire Prevention and **Mitigation Measure WIL-1** fire risks and safety impacts would be reduced to a less-than-significant level by including on-site fire prevention measures during construction.

> **Mitigation Measure WIL-1: Fire Safety.** See full text of this Mitigation Measure in Section 3.20, *Wildfire*, Question b.
>
> **Significance after Mitigation:** Implementation of Mitigation Measure WIL-1 would include requirements for consultation with emergency services providers and develop a Project-specific construction fire prevention plan. Mitigation Measure WIL-1 would also

ensure that resources for fire protection and emergency services would be in place to address possible risks associated with the use of equipment during the construction period. This impact would be reduced to a less-than-significant level.

SDG&E's BMPs for safety and fire prevention including vegetation maintenance along the Project alignment along with appropriate maintenance of the Project structures would ensure ongoing safe operation of the Project. The Project would comply with tree and power line clearance requirements per Public Resources Code Section 4292 and CCR Title 14, Section 1254, such that the utility corridors would provide a fire break in the event of a wildfire. As described in Section 3.20, *Wildfire*, during construction, SDG&E would implement standard fire prevention and protection measures, including but not limited to: carrying emergency fire suppression equipment, conducting fire prevention outreach and safety training, restricting smoking and idling of vehicles, engaging in fire threat and risk area mapping, building resiliency (including a Wood-to-Steel program), implementing appropriate field practice guidelines, and monitoring the Fire Potential Index. Operational practices to reduce the risk of fires are in place, as SDG&E standard operating procedures include regular inspection and vegetation clearance to reduce the risks associated with the Project structures.

Increases in long-term demand for fire protection services are typically associated with substantial increases in population. The Project would temporarily employ up to 80 construction workers; operation and maintenance activities would not require increases in permanent staff. Neither construction nor operation and maintenance would increase population beyond what is projected to occur in the region, as discussed in Chapter 2, *Project Description*. Moreover, with implementation of Mitigation Measure WIL-1, the Project would not generate substantial increased risks such that service ratios, response times, or other performance objectives for fire protection would be compromised. Access routes for new infrastructure would be maintained to be accessible in the event of an emergency, consistent with APM TRA-2, the goals outlined in the County of San Diego's General Plan, and in the general plans of the municipalities in the study area, as stated in the regulatory setting. Thus, the Project would not result in the need for new or expanded fire stations. Therefore, impacts under Question a.i would be less than significant with the incorporation of Project mitigation.

a.ii) Police protection: ***LESS THAN SIGNIFICANT IMPACT*.**

Project construction would include staging and use of materials and heavy equipment that could theoretically generate minor increases in crime or accidents in the local area. Such incidents and/or accidents could lead to a negligible increase in the need for police, sheriff, or other emergency service personnel during the timeframe for construction. However, this possible increase in the need to public safety support would be temporary, limited to the 11-month duration of construction, and would not be expected to result in the need for new police facilities to maintain acceptable levels of service. Project construction would require the use of guard structures for overhead conductor crossings potentially impacting traffic conditions and thereby delaying public safety response for various roadways in all segments, in addition to lane closures along South San Marcos Boulevard, to facilitate pole installation. Such traffic control measures, as outlined in Section 3.17, *Transportation and Traffic*, could present challenges for acceptable public safety response times. However, per APM TRA-2, the applicant would coordinate with local emergency

response agencies during construction within existing public roadways to allow safe passage and access by emergency vehicles and equipment. The Project would not increase population beyond what is projected to occur in the region, nor would the Project include nor require new or expanded public safety facilities. Impacts would be temporary, mainly associated with construction, and less than significant.

a.iii) Schools: *NO IMPACT.*

The Project would not include or require the construction of new schools or expansion of existing schools. Although at the peak of construction, the Project would employ up to 80 construction workers, operation and maintenance of the Project would not result in any long-term staff increases. Given that an increased demand for public school services is ordinarily associated with population increases and the Project neither includes housing nor would it require long-term staff increases, no increases in local population beyond what is already projected for the region would occur. Therefore, physical impacts associated with new or existing schools would not result from construction of the Project. There would be no impact.

a.iv) Parks: *NO IMPACT.*

An increased need for parks is usually associated with increases in population. The Project would not increase population beyond what is already projected to occur in the region. No housing is proposed to be constructed as part of the Project. Although the study area is rapidly increasing in population, the County of San Diego and the City of San Marcos are providing a sufficient number of parks to the expanding communities, consistent with the goals outlined in Section 3.16, *Recreation*. The Project would not add to nor result in the need for construction of additional parks or expanded parks in the study area. There would be no impact.

a.v) Other public facilities: *NO IMPACT*.

As previously stated, the Project would not increase the population beyond levels already projected to occur in the region. No other public facilities such as libraries or emergency medical facilities are proposed or would be required as a result of construction and operation of the Project. There would be no impact.

3.15.5 References

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3.16 Recreation

		Potentially Significant Impact	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
16.	**RECREATION:**				
a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒
c)	Would the project disrupt access to existing recreational opportunities?	☐	☒	☐	☐

In order to assess impacts on recreation, the Project's construction schedule and workforce was reviewed in Section 2.5, *Project Construction* of the Project Description to determine whether the Project would be likely to increase population potentially contributing to an increase in the use of the region's parks, trails, and other recreational facilities during construction and operation of the Project. In addition to the checklist questions in Appendix G of the CEQA Guidelines, an additional question was added to assess the potential for impacts from disruption of existing recreational resources:

c) Would the project disrupt access to existing recreational opportunities?

Existing recreational facilities including parks and open space resources that could be affected by the Project are discussed by jurisdiction below. For the purposes of evaluation of recreational resources, the study area is defined as the footprint of all Project components including all areas of temporary and/or permanent ground disturbance as well as neighboring parks, open space, and other lands used for recreational purposes within 0.5 mile of the Project alignment.

3.16.1 Environmental Setting

No federal or State lands provide recreational opportunities in close proximity to the Project. The closest lands owned or managed by the federal government include the Cleveland National Forest located approximately 18 miles northeast of the Project. The closest State recreational lands to the Project include South Carlsbad State Beach, located approximately 6 miles west of Segment 2, and San Pasqual Battlefield State Historic Park, located 8 miles east of the Escondido Substation.

County of San Diego Parks and Preserves

The County of San Diego operates and maintains over 100 parks, preserves, historic sites, and other recreational sites throughout the County providing hiking, cycling, horseback riding, backpacking, water sports, and other activities in an area covering more than 50,000 acres (County of San Diego, 2018a).

In addition to parks, numerous County preserves and protected open space areas are utilized for hiking, mountain biking, and other outdoor activities. Del Dios Highlands County Preserve, located 2 miles south of the Escondido Substation, covers an area of 774 acres of open space providing trails between Del Dios and Elfin Forest. This preserve is part of the County of San Diego's Multiple Species Conservation Program (MSCP), formed in a partnership with Escondido Creek Conservancy and the San Dieguito River Park Joint Powers Authority (County of San Diego, 2018b).

Located just west of Del Dios Highland Preserve and south of Segment 3 is the 784-acre Elfin Forest Ecological Reserve, a conservation area owned by San Diego County Water Authority and managed by the Olivenhain Municipal Water District. The Elfin Forest Ecological Reserve contains 11 miles of trails, and allows public use for hiking, mountain biking, and horseback riding (Olivenhain Municipal Water District, 2018).

Rancho La Costa Preserve is comprised of 1,035 acres of non-contiguous protected areas in Carlsbad and San Marcos. The southern section of Segment 2 would cross through this preserve. Sage Hill Preserve, also part of the protected lands of the County's MSCP, does not include recreational lands open to the public (County of San Diego SanGIS, 2014). Overhead work, reconductoring, and access roads in Segment 3 would cross through the northern portion of this preserve.

City Parks

There are numerous parks and recreational facilities owned and managed by the municipalities in the study area, as shown in **Table 3.16-1**. Additionally, there are several private recreational facilities in the study area. Any city parks within the study area potentially affected by the Project are located within the City of San Marcos. There are no such facilities in the cities of Escondido, Carlsbad, or Vista. Parks and recreational facilities in the study area are described in more detail below.

The City of San Marcos currently has more than 340 acres of developed parks and other recreational facilities with plans for future expansion of these recreational facilities to approach 700 acres, in addition to nearly 2,500 acres of open space preserves located in the City (City of San Marcos, 2012).

Discovery Lake/ Lakeview Park, located approximately 0.4 mile south of Segment 1 in San Marcos, offers a connection to trails, shore fishing, and picnic facilities. Simmons Family Park, a 6-acre community park, also offers trail connections, picnic areas, and sports facilities, and is located within 0.25 mile of the proposed new pier foundation, staging, and access road sites along Segment 2. San Elijo Park provides an off-leash dog park, two playgrounds, three lighted ball fields, a community building, and water play, and connects to trails. The park is located on San Elijo Road, approximately 0.45 mile north of Segment 3. Questhaven Park, a small private community park, also connects to trails in the study area near Segment 3.

TABLE 3.16-1
PARKS AND RECREATIONAL TRAILS IN THE STUDY AREA

Park or Trail	Location	Nearest Project Component	Ownership
Discovery Lake/ Lakeview Park	San Marcos	Segment 1	City of San Marcos
Simmons Family Park	San Marcos	Segment 2	City of San Marcos
The Laurels Park	Acacia Drive San Marcos	Segment 2	City of San Marcos
Questhaven Park	San Marcos	Segment 3	Private
Bradley Park	San Marcos	Segment 1	City of San Marcos
San Elijo Park	South San Marcos	San Marcos Substation/ Segment 3	City of San Marcos
St. Marks Golf Club	Lake San Marcos	San Marcos Substation/ Segment 1	Private
Old Creek Ranch Trail	Via Del Corvo to Melrose Drive	Segment 2	City of San Marcos/ Carlsbad
Rancho Dorado Trail	White Sands Drive south to S. Santa Fe Road connects to Simmons Park	Segment 2	City of San Marcos
Rancho Santa Fe Trail	Rancho Santa Fe Road	Segment 1	City of San Marcos
Carrillo Trail	West San Marcos Blvd across White Sands Drive west to Carlsbad	Segment 1 shared access route	City of San Marcos
Elfin Forest Trail	Elfin Forest Road Southern border of San Marcos, unincorporated San Diego County	Segment 2	County of San Diego
Canyon Trail	South San Marcos	Segment 2	City of San Marcos
Quarry Trail	South San Marcos	Segment 2	City of San Marcos
Questhaven Trail	South San Marcos	Segment 3	City of San Marcos

SOURCE: City of San Marcos, 2012.

Trails

With one exception noted below, any recreational trails within the study area potentially affected by the Project are located within the City of San Marcos. There are no such facilities in the cities of Escondido, Carlsbad, or Vista.

Recreational trails connecting rural open spaces and urban areas span the study area. The City of San Marcos Trails Guide identifies existing and proposed trails and bikeways, many of which are within the study area. Recreational trails used by hikers, cyclists, and equestrians, provide public access to natural landscapes, allow for the protection wildlife corridors, and enable pedestrian linkages between communities (City of San Marcos, 2007). Bicycle facilities in the study area including several Class II and III routes with a shared roadside lane are discussed in Section 3.17, *Transportation and Traffic*. Numerous existing trails in the study area are adjacent or near Project elements including trails identified below.

Near Segment 2, Rancho Dorado is a wide, soft surface trail which provides a route connecting the habitat corridor off of West Sands Drive to Simmons Family Park in San Marcos (City of San Marcos, 2007). Old Creek Ranch/Canyon Trail connects southeast Carlsbad to the City of San Marcos' San Elijo Park, located on San Elijo Road. San Elijo Trail is a combination of urban (paved surfaces), and soft surfaces also along San Elijo Road. Elfin Forest Trail is a soft surface trail extending along Elfin Forest Road to the unincorporated county lands south of Segment 2. Questhaven Trail is a soft surface trail extending from San Elijo Road to Questhaven Park and south beyond the San Marcos city limits into unincorporated San Diego County.

3.16.2 Regulatory Setting

Federal/State

There are no federal or State regulations related to recreation that would be applicable to the Project.

Local

County of San Diego General Plan

The Conservation and Open Space Element of the County of San Diego's General Plan includes the following goals and policies that pertain to recreation (County of San Diego, 2011).

> **Goal COS-21: Park and Recreational Facilities.** Park and recreation facilities that enhance the quality of life and meet the diverse active and passive recreational needs of County residents and visitors, protect natural resources, and foster an awareness of local history, with approximately ten acres of local parks and 15 acres of regional parks provided for every 1,000 persons in the unincorporated County.

City of Carlsbad General Plan

The Conservation and Open Space element of the City of Carlsbad's General Plan includes the following goals and policies that pertain to recreational resources (City of Carlsbad, 2015).

> **Goal 4-G.5:** Maintain a diversified, comprehensive system of open space for outdoor recreation, including, but not limited to: parks; beaches; areas for organized sports; connecting corridors containing trails; water recreation areas (beaches, lagoons, lakes); unique conservation areas for nature study; and, semi-developed areas for camping.

City of Escondido General Plan

The Community Health and Services and Resource Conservation elements of the City of Escondido's General Plan includes goals and policies that pertain to recreational resources (City of Escondido, 2012).

> **CHS Goal 2:** A complete system of parks and recreational facilities and programs to serve all users.

City of San Marcos General Plan

The Parks, Recreation and Community Health Element of the City of San Marcos' General Plan includes the following goals and policies pertaining to recreational resources (City of San Marcos, 2012).

Goal PR-1: Plan for, acquire, develop, and maintain a system of local parks connected through an integrated network of trails and high quality recreational facilities.

***Policy PR-1.1*:** Develop and maintain a complete system of public parks and recreational amenities that provide opportunities for passive and active recreation at a minimum standard of 5 acres per 1,000 residents. Parks, trails and recreational facilities will enhance community livability, public health, and safety; should be equitably distributed throughout the City; and be responsive to the needs and interests of residents, employees, and visitors.

***Policy PR-1.3*:** Ensure that the development of parks, trails, and recreation facilities and services keeps pace with development and growth within the City.

***Policy PR-1.4*:** Promote increased access to parks and open spaces, pedestrian- and bike-oriented routes to parks and open space, greening of public rights of-way, and a variety of active and passive uses of parks and open space.

Goal PR-2: Become a leader in building healthy communities by supporting recreation and community service programs that promote wellness, fun, lifelong learning, skill development, personal enrichment, and positive relationships.

***Policy PR-2.2*:** Implement the trail network per the Trails Master Plan to increase opportunities for physical activity (e.g., walking, biking), healthy lifestyles, and to reduce reliance on cars.

City of Vista General Plan

The following goals and policies pertaining to recreation are identified in the Resource Conservation and Sustainability Element of the City of Vista's General Plan (City of Vista, 2011).

RCS Goal 9: Continue to provide parkland to effectively serve the recreational needs of the community.

***RCS Policy 9.3*:** Continue to work with the Parks and Recreation Commission, citizens, organizations, volunteer groups, and community partners to identify and provide needed park, recreation, trail, and open space amenities that address changes in the City' s population and demographics, based on the Park, Recreation, Open Space, and Greenway Guidelines (Guidelines) that were developed by the National Recreation and Park Association (NRPA), and pursuant to the Quimby Act.

***RCS Policy 9.2*:** Provide three acres of community parks per 1,000 residents; two acres of neighborhood parks per 1,000 residents, and an overall average park standard of 4. 49 acres per 1,000 residents

RCS Goal 10: Continue to provide and maintain recreational facilities that serve the needs and enjoyment of residents

3.16.3 Applicant Proposed Measures

SDG&E has proposed the following Applicant Proposed Measures (APMs) to address impacts on recreational resources attributable to Project construction, operations, and/or maintenance.

APM PS-1: SDG&E will provide the public with advance notification of construction activities. Concerns related to dust, noise, and access restrictions with construction activities will be addressed within this notification.

APM PS-2: All construction activities will be coordinated with the property owner or authorized agent for each affected park, trail, or recreational facility prior to construction in these areas.

APM PS-3: As needed, signs will be posted directing vehicles to alternative park access and parking, if available, in the event construction temporarily affects parking near trailheads.

APM PS-4: All parks, trails, and recreational facilities that are physically impacted during construction activities and are not directly associated with the new permanent facilities, will be returned to an approximate pre-construction state, while still allowing for SDG&E to safely operate and maintain the facilities, following the completion of the Project. SDG&E will replace or repair any damaged or removed public equipment, facilities, and infrastructure in a timely manner.

3.16.4 Environmental Impacts

Discussion

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated: *LESS THAN SIGNIFICANT IMPACT.*

Construction

Temporary access restrictions associated with the Project's construction could lead to limits in the public use of recreational facilities, such as parks and trailheads, adjacent to the Project. Such Project-related closures, obstructions, and related impacts could inadvertently lead to a temporary increase in the public's use of other recreational areas in the region during the 11-month construction period.

A temporary increase in use of other, unaffected existing facilities could lead to short-term indirect impacts on parks and trails during construction. However, the region provides an array of opportunities for public recreation, so it is reasonable to expect that increased use resulting from Project-related displacement would be spread among several parks and trails such as Discovery Lake, Double Peak, or Elfin Forest Recreational Reserve, among others during construction, and the potential for substantial physical deterioration to occur at any one location would be negligible. Therefore, impacts related to an increased use of these recreational facilities would be less than significant.

Operation

Operation and maintenance activities would occur near recreational areas providing trails and parks between the cities of Carlsbad and San Marcos in Segment 2. Segment 2 would include installation of new power line structures parallel to an existing power line, both within SDG&E right-of-way. Overall, Project operation and maintenance would occur in the same manner as existing procedures, with possible minor increases to maintenance requirements along Segment 2 due to the new Project structures. As Segment 2 would be co-located with an existing power line within the existing utility right-of-way, operation and maintenance activities would be similar to existing activities and would have a less-than-significant impact on recreational resources related to vegetation management and other maintenance of the utility corridor in close proximity to trails.

As discussed in Section 2.6, *Operation and Maintenance*, the Project would not result in substantial long-term increases in area residents or employees beyond what is projected to occur in the region. Therefore, future operation and maintenance activities would not result in a measurable change in the existing level of use of neighborhood and regional parks or other recreational facilities, and so would not contribute to substantial physical deterioration of those facilities. Impacts related to operation of the Project would also be less than significant.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment: *NO IMPACT.*

The Project would not require or include recreational facilities, nor would it increase population, necessitating construction or expansion of existing recreational facilities in order to maintain the recreational service goals defined in county or city policies. Therefore, the Project would have no impact.

c) Would the project disrupt access to recreational opportunities: *LESS THAN SIGNIFICANT IMPACT WITH MITIGATION.*

Segments 2 and 3 would include the use of several temporary work areas in close proximity to trails, such that temporary disruptions in access to existing recreational resources could occur. Temporary closures and/or use of guard structures and flaggers would occur along portions of Rancho Dorado, Carrillo, Canyon, Quarry, Copper Creek, Rancho Santa Fe, Elfin Forest, and Old Ranch Creek trails (SDG&E, 2017). Per APMs PS-1 and PS-3, SDG&E would provide public notification identifying access restrictions. As explained in Section 2.5.1, actual construction activity at any given point along the segments would occur in distinct periods of activity lasting no longer than three weeks at a time for each construction phase (i.e., construction activities would not occur constantly along the entire Project alignment for the full 11-month construction period). APM PS-4 stipulates that physically impacted recreational facilities would be returned substantially to their pre-construction state at the conclusion of construction. Therefore, direct and indirect impacts on recreational access would be temporary and would be limited to at most three-week durations during the construction period. Because these disruptions would be short-term and public notice would be provided in advance, they would not affect substantial numbers of people, and users would have other options for recreational trail use nearby. Impacts would be less than significant.

Additionally, construction would cause noise and vibration resulting from the use of heavy equipment near public access trailheads and parks listed in Table 3.15-1. Impacts on trail users are not considered significant because the nature of recreational trail use is such that users would only be within the area affected by construction noise and vibration for a relatively short period before passing out of the audible range. However, ongoing construction noise and vibration occurring at or near a park could result in significant access impacts because park users would be subject to construction noise and vibration for the entire duration of their activities at an affected park. Implementation of **Mitigation Measure NOI-1**, which requires a construction noise reduction and mitigation plan, and **Mitigation Measure NOI-2,** which requires a blasting plan, would reduce impacts to a less-than-significant level.

> **Mitigation Measure NOI-1: Construction Noise Reduction and Mitigation Plan.** See full text of this Mitigation Measure in Section 3.13, *Noise*, Question a.
>
> **Mitigation Measure NOI-2: Blasting Plan.** See full text for this Mitigation Measure in Section 3.13, *Noise*, Question a.
>
> **Significance after Mitigation:** With the implementation of construction noise and vibration reduction measures in Mitigation Measures NOI-1 and NOI-2, recreational access impacts on park users would be reduced to a less-than-significant level.

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3.17 Transportation and Traffic

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
17. TRANSPORTATION/TRAFFIC — Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☒	☐	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☒	☐
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☒	☐	☐

The Governor's Office of Planning and Research (OPR) has proposed, and the California Natural Resources Agency has adopted, revisions to CEQA Guidelines Appendix G that ask whether a land use project would "conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(1)" (Natural Resources Agency, 2018). New Section 15064.3(b)(1) in turns ask whether the project would exceed applicable vehicle miles traveled (VMT) thresholds. However, statewide application of that new section is not required until January 1, 2020 (OPR, 2017). Further, none of the study area jurisdictions have adopted VMT thresholds at this time. Therefore, this IS/MND uses the checklist questions set forth in the previously adopted version of CEQA Guidelines Appendix G for the analysis of transportation and traffic impacts.

The analysis included in this section was developed primarily based on project-specific construction and operational features described in Chapter 2, *Project Description*. Project operation and maintenance activities would be very similar to existing conditions and is not expected to result in an increase in vehicle trips. As such, the analysis and discussion below is focused on the potential construction impacts resulting from implementation of the Project, while the impact evaluation for operation and maintenance activities is predominantly qualitative in nature. For the purposes of the transportation and traffic analysis, the study area is defined for each of the three segments as follows:

- **Segment 1 Rebuild:** this 1.8-mile segment mostly follows West San Marcos Boulevard in the City of San Marcos, beginning at Discovery Street/La Sombra Drive in the east and the San Marcos/ Carlsbad city limit to the west, where West San Marcos Boulevard turns into Palomar Airport Road;
- **Segment 2 New Build:** beginning at the western terminus of Segment 1, Segment 2 is a 2.8-mile segment in the City of San Marcos bounded by the San Marcos/Carlsbad city limit to the west, Palomar Airport Road to the north, and San Elijo Road to the south and east;
- **Segment 3 Reconductoring/Re-energizing:** this 7.4-mile segment runs from the City of San Marcos in the west to the City of Escondido to the east, with much of the alignment running across unincorporated San Diego County. Beginning at the southern terminus of Segment 2, Segment 3 is bounded by San Elijo and Elfin Forest roads to the south and west, West Mission Road to the north, and Citracado Parkway and Enterprise Street to the east.

3.17.1 Environmental Setting

Roadway Network

Regional transportation around the study area is facilitated primarily by Interstate 15 (I-15) and State Route (SR) 78. I-15 is a major north-south route in the Interstate Highway System that runs between San Diego and the Canadian Border in Montana; it is located less than 1.0 mile east of the eastern terminus of Segment 3 (Escondido Substation). SR 78, also known as Ronald Packard Parkway, is an east-west route of the California state highway system located 1.75 miles north and east of the eastern terminus of Segment 1 (San Marcos Substation) and 1.2 miles north of the eastern terminus of Segment 3 (Escondido Substation) via local roadways. SR 78 connects I-5 in Oceanside to I-10 near the Arizona border. These roadways, which are under the jurisdiction of the California Department of Transportation (Caltrans), would be used to access the Project during construction and operation. The local transportation system in the study area includes roads maintained by the City of San Marcos, the City of Escondido and the County of San Diego. While portions of the Project would be located in the cities of Vista and Carlsbad, no components or work would occur within roadways maintained by these cities. **Table 3.17-1** summarizes the characteristics of the relevant regional an d local roadways in the study area.

Existing Roadway Levels of Service

Level of service (LOS) is a qualitative measure that describes operational conditions as they relate to the traffic stream and perceptions by motorists and passengers, in terms of factors such as speed and travel time, delays, freedom to maneuver, traffic interruptions, comfort, convenience, and safety. There are six levels of operational service, given letter designations from LOS A to LOS F, with LOS A representing the best operating conditions (free-flow) and LOS F the worst (severely congested flow with high delays). The ratio of a road's traffic volume to its capacity is computed, and the resulting volume/capacity (v/c) ratio is assigned an LOS grade, indicative of traffic conditions (see **Table 3.17-2** for the range of v/c ratios for each LOS, and Table 3.17-1 for existing levels of service on study area roadways).

TABLE 3.17-1
SUMMARY OF STUDY AREA ROADWAY CHARACTERISTICS

Roadway Segment	Jurisdiction	Classification	No. of Lanes	Average Daily Traffic Volume[1]	Level of Service[2]
I-15 at SR 78 Junction	Caltrans	CMP Freeway	12	243,000	D
SR 78 at I-15 Junction	Caltrans	Highway	8	168,000	E
Discovery Street at San Marcos Boulevard	City of San Marcos	Arterial	4	9,900	A
San Marcos Boulevard/Palomar Airport Road at Rancho Santa Fe Road	City of San Marcos	Arterial	6	42,100	C
Rancho Santa Fe Road at San Marcos Boulevard	City of San Marcos	Arterial	6	33,100	B
San Elijo Road at Rancho Santa Fe Road	City of San Marcos	Arterial	4	22,500	B
Elfin Forest Road	County of San Diego	Collector	2	2,200	A
Country Club Drive at Citracado Parkway	City of Escondido	Local Collector	2	3,400	B
Harmony Grove Road at Enterprise Street	City of Escondido	Local Collector	2	9,000	C
Auto Park Way at Hale Avenue	City of Escondido	Collector	2	25,000	E

NOTES:

1 Average Daily Traffic (ADT) values given are the most current year (from range of 2013-2016) and correspond with each listed roadway at the listed cross street. Where ADT values were available for multiple segments for a given roadway, ADT values are given for those segments closest to the proposed study area.

2 See following page for definition. Where published LOS values are used, LOS values represent only segments in the vicinity of the proposed Project.

3 The values for this segment were taken from a segment of Camino Del Norte directly east of Camino San Bernardo.

CMP = Congestion Management Program

SOURCES: Caltrans, 2017; SANDAG, 2013; Florida Department of Transportation, 2012

TABLE 3.17-2
LEVEL OF SERVICE DEFINITIONS

LOS	v/c Ratio	Description
A	0.00 – 0.60	Free-flow conditions with unimpeded maneuverability. Stopped delay at signalized intersections is minimal.
B	0.61 – 0.70	Reasonably unimpeded operations with slightly restricted maneuverability. Stopped delays are not bothersome.
C	0.71 – 0.80	Stable operations with somewhat more restrictions in making mid-block lane changes than LOS B. Motorists will experience appreciable tension while driving.
D	0.81 – 0.90	Approaching unstable operations where small increases in volume produce substantial increases in delay and decreases in speed.
E	0.91 – 1.00	Operations with significant intersection approach delays and low average speeds.
F	>1.00	Operations with extremely low speeds caused by intersection congestion, high delay, and adverse signal progression.

SOURCE: Transportation Research Board, 2000

Bicycle Facilities

The cities of Carlsbad, Escondido, and San Marcos each have bicycle plans to address design, policy, program, and infrastructure needs pertaining to this specific mode of transportation. Additionally, the County of San Diego has a detailed bicycle plan, certain community bicycle plans, and priority projects within the county (see Section 3.17.2, *Regulatory Setting*). Bicycle facilities in all jurisdictions are classified as Class I, Class II, or Class III facilities, as defined by the State in Streets and Highway Code Section 890.4. Class I facilities are bike paths with exclusive right-of-way for use by bicyclists or pedestrians. Class II facilities are bike lanes striped with the paved areas of roadways and established for the preferential use of bicycles, while Class III facilities are signed bike routes that allow bicycles to share streets or sidewalks with vehicles or pedestrians.

No Class I bike routes would be affected by the Project. There are Class II and Class III bike routes on Discovery Street, San Marcos Boulevard/Palomar Airport Road, Rancho Santa Fe Road, San Elijo Road, Morgan Trails, Elfin Forest Road, Citracado Parkway, and Auto Park Way within the study area. Trails with designated bike use near the Project are discussed in further detail in Section 3.15, *Recreation*.

Pedestrian Facilities

Along Segment 1 where the Project alignment runs adjacent and parallel to public roadways, sidewalks are present on both sides of West San Marcos Boulevard and on Discovery Street between the San Marcos Substation and the Valley Christian School. No sidewalks are provided along the portion of Segment 1 that runs adjacent and parallel to Discovery Street between the Valley Christian School and West San Marcos Boulevard.

In addition, there are a number of trails in the study area of the Project maintained by the County of San Diego, as well as the cities of San Marcos, Escondido, Carlsbad, and Vista. Recreational trails connecting rural open spaces and urban areas span the study area. The City of San Marcos Trails Guide identifies existing and proposed trails and bikeways, many of which are within the

study area. Recreational trails used by hikers, cyclists, and equestrians, provide public access to natural landscapes, allow for the protection wildlife corridors, and enable pedestrian linkages between communities (City of San Marcos, 2007). Numerous existing trails in the study area are adjacent or near Project elements including trails identified below.

Near Segment 2, Rancho Dorado is a wide, soft surface trail that provides a connection to the habitat corridor off of West Sands Drive to Simmons Family Park in San Marcos (City of San Marcos, 2007). Old Creek Ranch/Canyon Trail connects southeast Carlsbad to the City of San Marcos' San Elijo Park, located on San Elijo Road. San Elijo Trail is a combination of urban (paved surfaces), and soft surfaces also along San Elijo Road. Elfin Forest Trail is a soft surface trail extending along Elfin Forest Road to the unincorporated county lands south of Segment 2. Questhaven Trail is a soft surface trail extending from San Elijo Road to Questhaven Park and south beyond the San Marcos city limits into unincorporated San Diego County.

Parking Facilities

Along Segment 1 where the Project alignment runs adjacent and parallel to public roadways, on-street parking is permitted on Discovery Street between the San Marcos Substation and the Valley Christian School. On-street parking is not permitted along the portion of Segment 1 that runs adjacent and parallel to Discovery Street between the Valley Christian School and West San Marcos Boulevard, or along West San Marcos Boulevard. Off-street parking facilities located along the Project alignment include the Albertson's parking lot on West San Marcos Boulevard (Segment 1) and a parking lot serving a commercial building at 1998 Citracado Parkway (Segment 3).

Vehicle parking for construction workers and construction equipment would occur within the project's 10 staging yards. Because the Project would not use public parking spaces, no impacts on existing parking would occur, and parking is not discussed further.

Air Traffic Facilities

The closest public airports include the McClellan-Palomar Airport 1.6 miles away from the staging yards on Eagle Drive in Carlsbad and the Montgomery-Gibbs Executive Airport approximately 2 miles away from the staging yard at an existing SDG&E facility at 5488 Overland Avenue in San Diego. The closest private airport to the Project is at the Marine Corps Air Station (MCAS) Miramar located approximately 2 miles to the north of the staging yard at the existing SDG&E facility at 5488 Overland Avenue in San Diego.

Public Transit and Rail Services

Bus services in the study area are provided by the North County Transit District (NCTD), which operates BREEZE, the main bus system serving north San Diego County including the cities of Escondido and San Marcos. NCTD also operates Sprinter, a light rail line running east-west along the SR 78 corridor that traverses both Escondido and San Marcos. The closest Sprinter stop to the Project is the Nordahl Road Station in Escondido, less than 1 mile from the eastern terminus of Segment 3 (Escondido Substation). In total, three bus routes and one light rail route operate in the study area, as shown in **Table 3.17-3**.

TABLE 3.17-3
TRANSIT LINES WITHIN THE STUDY AREA

Proposed Project Element	Roadway/Route	Transit Line(s)
Segment 1	San Marcos Boulevard	445 (Carlsbad Poinsettia COASTER Connection to Palomar College)
	Rancho Santa Fe Road	304 (Encinitas to San Marcos)
Segment 2	Palomar Airport Road	445 (Carlsbad Poinsettia COASTER Connection to Palomar College)
Segment 3	Citracado Parkway/Auto Park Way	353 (Escondido Transit Center to Nordahl Marketplace)
	Mission Road/SR 78	Sprinter

SOURCE: North County Transit District, 2017

3.17.2 Regulatory Setting

Federal

Federal Aviation Administration

All airports and navigable airspace not administered by the U.S. Department of Defense are under the jurisdiction of the Federal Aviation Administration (FAA). Federal Regulation Title 14 Section 77 establishes the standards and required notification for objects affecting navigable airspace. In general, projects involving features exceeding 200 feet in height above ground level or extending at a ratio greater than 50:1 (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, the FAA requires a Congested Area Plan for operating a helicopter (with external load) near residential dwellings.

Hazardous Materials Transportation

The U.S. Department of Transportation regulates hazardous materials transportation on all interstate roads. Within California, the state agencies with primary responsibility for enforcing federal and state regulations and for responding to transportation emergencies are the California Highway Patrol (CHP) and Caltrans. Together, federal and state agencies determine driver-training requirements, load labeling procedures, and container specifications. Although, special requirements apply to transporting hazardous materials, requirements for transporting hazardous waste are more stringent, and hazardous waste haulers must be licensed to transport hazardous waste on public roads.

State

Caltrans owns the rights-of-way (ROWs) for State highways, including any on- and off-ramps that provide access to the study area. Any Project-related work within the State ROWs requires a ministerial Encroachment Permit from Caltrans. Caltrans is also the administrating agency for regulations related to traffic safety, including the licensing of drivers, oversized (weight and load)

vehicle limitations, transportation of hazardous and combustible materials, and the safe operation of vehicles.

Any work within the existing Caltrans ROW would have to comply with Caltrans permitting requirements. This includes a traffic control plan that adheres to the standards set forth in the California Manual of Uniform Traffic Control Devices (MUTCD) (Caltrans, 2018). As part of these requirements, there are provisions for coordination with local emergency services, training for flagmen for emergency vehicles traveling through the work zone, temporary lane separators that have sloping sides to facilitate crossover by emergency vehicles, and vehicle storage and staging areas for emergency vehicles. MUTCD requirements also provide for construction work during off-peak hours and flaggers. Since the Project would not require the use of Caltrans ROW for construction or operation/maintenance activities, no Caltrans permitting requirements, including an Encroachment Permit, would be applicable.

For freeways and highways, Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans. If an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE should be maintained (Caltrans, 2002). Caltrans does not typically apply this guidance to construction trips. On November 9, 2016, Caltrans issued the Local Development Intergovernmental Review Project Interim Guidance Implementing Caltrans Strategic Management Plan 2014-2020 Consistent with Senate Bill (SB) 743 (Interim Guidance). This document provides guidance to Caltrans staff in regard to commenting on local EIRs in a manner consistent with SB 743. Among other things, it suggests that Caltrans should provide recommendations that strive to reduce VMT generation and improve pedestrian, bike, and transit service rather than providing recommendations that primarily accommodate motor vehicle travel. In addition, comments related to the State Highway System should focus on VMT and not vehicle delay or a project's effects on road capacity.

Local

It is noted that while local jurisdictions are preempted from regulating the Project, the plans, policies, and regulations described below are used in the impact analysis to determine whether any actual adverse environmental impact could occur as a result of a conflict with these plans, policies, and regulations.

San Diego Association of Governments

San Diego Association of Governments (SANDAG) serves as the regional planning agency for all of San Diego County. SANDAG is responsible for planning and allocating local, State, and federal funds for the region's transportation network. State law and the California Transportation Commission require SANDAG to adopt a 20-year regional transportation plan every four years, which considers improvements to freeways, State highways, transit, and regional bicycle and pedestrian routes. SANDAG prepares and administers a number of key plans that relate to regional transportation infrastructure and planning, such as the Regional Transportation Plan (RTP). These plans are generally utilized to identify and address current and projected future transportation

planning and congestion management through traffic monitoring, traffic mitigation, transportation system planning, specific transportation project identification and funding, and transportation system management. The RTP addresses large-scale transportation planning and projects and does not generally address small-scale construction project planning.

State Proposition 111, passed by voters in 1990, established a requirement that urbanized areas prepare and regularly update a Congestion Management Program (CMP). Although SANDAG provided regular updates for the state CMP from 1991 through 2008, in 2009 the San Diego region elected to opt out of (be exempt from) the state CMP as allowed by Proposition 111, while continuing to comply with applicable federal congestion management requirements through incorporation of a congestion management process in its RTP (SANDAG, 2015).

County of San Diego

The County of San Diego prepares and administers two key plans that relate to the local transportation infrastructure and planning of unincorporated areas of San Diego County where the Project is proposed: the General Plan (2011a) and the Bicycle Master Plan (2008). Specifically, the County's General Plan Mobility Element discusses the transportation network, policies, goals, maintenance, and management for a balanced, multi-modal transportation system. Specific goals and policies within the County's Mobility Element include:

> **Policy M-2.1:** Requires development projects to provide associated road improvements necessary to achieve a level of service of "D" or higher on all Mobility Element roads except for those where a failing level of service has been accepted by the County pursuant to the criteria specifically identified.
>
> **Policy M-3.1:** Requires development to dedicate right-of-way for public roads and other transportation routes. It requires the provision of sufficient right-of-way width to adequately accommodate all users, including transit riders, pedestrians, bicyclists, and equestrians.
>
> **Policy M-3.2:** Requires development to contribute its fair share toward financing transportation facilities, including mitigating the associated direct and cumulative traffic impacts caused by their project on both the local and regional road networks.

The County of San Diego does not apply these policies to temporary construction traffic (County of San Diego, 2011b).

City of Carlsbad

The City of Carlsbad prepares and administers three key plans that relate to local transportation infrastructure and planning with specific plans and policies detailing bicycle and pedestrian transportation: the General Plan (2015), the Bikeway Master Plan (2007), and the Pedestrian Master Plan (2008). The City's General Plan Mobility Element discusses specific transportation policies to improve vehicle travel and increase bicycle and public transportation use as well as overall transportation connectivity. Specific policies include:

> **Policy 3-P.4:** Maintain an LOS of "D" or higher for all modes of transportations.
>
> **Policy 3-P.32:** Requires developers to improve pedestrian and bicycle connectivity.

The Bikeway and Pedestrian master plans expand further on the goals and policies regarding bicycle and pedestrian transportation discussed in the City's Mobility Element. The Bikeway Master Plan provides an analysis of the existing system and provides recommendations for an efficient, safe, and convenient bicycle network. The Pedestrian Master Plan provides a framework for expanding and enhancing the pedestrian network for greater connectivity throughout the City. The Plan contains recommendations for future networks and future programs to enhance the pedestrian experience.

The City of Carlsbad does not apply these policies to temporary construction traffic (City of Carlsbad, 2017).

City of Escondido

The City of Escondido prepares and administers two key plans that relate to local transportation infrastructure and planning: the General Plan (2012a) and the Bicycle Facilities Master Plan (2012b). These plans are generally used to identify and address current and projected future transportation planning and congestion management through traffic monitoring, transportation system planning, and transportation system management. The Mobility and Infrastructure Element of the Escondido General Plan discusses further transportation policies, including:

Bicycle Network Policy 4.2: Maintain an acceptable LOS detailed in the Master Bicycle Plan, Transit System Policy.

Transit System Policy 5.1: Collaborate with the NCTD to facilitate effective, convenient, and efficient transit modes to meet the needs of residents and visitors including seniors, disabled persons, and transit-dependent persons.

Transit System Policy 5.2: Work alongside the NCTD to increase the use of transit by maintaining services within the city that are timely and cost effective, locating routes and access points effectively, and developing short and long term service plans.

Transit System Policy 5.8: Require that new developments incorporate transit-supporting facilities into the project design, where appropriate.

Street Network Policy 7.3: Maintain an LOS of "C" or higher throughout the city except for the urban core. Establish LOS "D" as the threshold for determining significant impacts and appropriate mitigation.

Street Network Policy 7.7: Require development projects to analyze local traffic impacts and construct and implement the improvements required for that development.

Street Network Policy 7.8: Require new development projects to analyze traffic impacts on the regional transportation system, and pay a fair-share contribution to regional transportation improvements.

The Bicycle Plan is a more comprehensive plan discussing in further detail topics addressed in the Mobility and Infrastructure Element. The Plan serves as an implementation tool for the General Plan. The applicable goals include:

Goal 1: Expand and enhance Escondido's bikeway network and eliminate barriers to bicycling.

Goal 2: Plan for the needs of bicyclists.

The City of Escondido does not apply these policies to temporary construction traffic (City of Escondido, 2017).

City of San Marcos

The City of San Marcos prepares and administers two key plans that relate to local transportation infrastructure and planning: the General Plan (2012) and the Bicycle and Pedestrian Master Plan (2015). Policies specific to transportation are found in the General Plan Mobility Element, including:

> **Policy M-1.3:** Requires new development to create a Transportation Demand Management program to minimize generated trips for construction projects.
>
> **Policy M-1.4:** Maintain an LOS of "D" or higher for vehicle and bicycle transportation and an LOS of "C" or higher for pedestrians.

The Bicycle and Pedestrian Master Plan is a more comprehensive plan that discusses in further detail topics addressed in the Mobility Element. The Plan identifies existing and proposed bikeway facilities in San Marcos and provides goals for the City for future development of bikeways and pathways. These goals include developing the bicycle system to be more destination-oriented, and locally and regionally connected.

The City of San Marcos does not require detailed LOS analysis for temporary construction traffic (City of San Marcos, 2017).

City of Vista

The Circulation Element of the Vista General Plan 2030 (City of Vista, 2012) provides a guide for the planning of the future circulation network, and provides goals and policies for the development of the circulation system to best achieve the City's vision for the planning period. The Circulation Element includes the following relevant policies:

> **CE Policy 1.10:** Require necessary conditions of approval on development projects to achieve LOS standards prescribed in this element. Develop a checklist for development and redevelopment projects to ensure the inclusion of infrastructure that provides safe travel for all users and enhances project outcomes and community impact.
>
> **CE Policy 1.11:** Require all new development projects to participate in the City's transportation fee programs. These fee programs will be designed to ensure that all development projects fund their fair share of the necessary long-term transportation improvements identified in this Element.
>
> **CE Policy 1.12:** Require all new development projects to either fund or install their fair share of all required feasible transportation improvements necessary to achieve a multi-modal LOS identified in this Element as mitigation for the direct impacts on the circulation network from the proposed project.
>
> **CE Policy 6.2:** Require proposed development to provide bike facilities within the right-of-way for Class II bikeways in the project vicinity on all arterial roadways where deemed appropriate. Where Class II bikeways are not feasible, require Class III bike routes to be provided as a temporary measure.

CE Policy 6.3: Require proposed developments, where feasible to dedicate easements for Class I bikeways or hiking trails in the project vicinity where deemed appropriate.

CE Policy 6.4: Require proposed developments to install sidewalks and wheelchair ramps that comply with Americans with Disabilities Act (ADA) standards adjacent to all roadways within each development.

The City of Vista does not apply these policies to temporary construction traffic (City of Vista, 2018).

Public Utility Standards

The California Joint Utility Traffic Control Manual (California Joint Utility Traffic Control Committee, 2010) provides standards and principles to consider when constructing in a road. The document states it is the responsibility of the contractor performing work on or adjacent to a road to implement traffic control devices and procedures to ensure the safe passage of motorists, bicyclists, and pedestrians. This manual does not establish a legal standard; rather, it provides information and guidance.

3.17.3 Applicant Proposed Measures

The following transportation-specific applicant-proposed measures (APMs) would be implemented for the Project.

APM TRA-1: If construction requires lane closures, traffic delays, or other encroachment of construction activities within public travelways, the Applicant will adhere to local traffic control regulations and establish a traffic control plan as needed to comply with local ordinances. Traffic control plans will describe signage, flaggers, or other controls to be used to regulate traffic where necessary and to maintain a safe transportation corridor during construction.

APM TRA-2: The Applicant will coordinate with local emergency response agencies during construction within existing public roadways to allow safe passage and access by emergency vehicles and equipment.

3.17.4 Environmental Impacts

Discussion

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit: *LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.*

Project construction would result in minor temporary increases in average daily traffic (ADT) along road segments where construction personnel, equipment, and other construction-related trips would access work areas and staging yards. Due to the nature of transmission and power line construction, multiple work areas would be active simultaneously, so construction traffic would

be spread out among existing roadways and SDG&E access roads within the study area. Traffic-generating construction activities would consist of the daily arrival and departure of workers to each work site, and trucks hauling equipment and materials to the work sites. The roadways that would be potentially affected by construction-related traffic are listed in Table 3.17-1.

To evaluate the potential worst case scenarios, potential effects on roadway LOS were analyzed assuming that all Project-related trips could occur on a single roadway where that roadway could represent a common travel route for multiple project elements (such as SR 78 and I-15). This analysis is considered to be conservative as, in reality, construction trips would be dispersed along roadways adjacent to the 12-mile-long alignment. The peak number of construction-related vehicle trips would occur in June 2020 while the following phases would overlap:

- Segment 2 Foundation Construction (Pier)
- Segment 3 Auger Holes, Direct Bury Poles
- Segment 2 Structure Installation and Assembly
- Segment 1 Stringing Activities/Transfer Conductor/Sagging Activities
- Segment 3 Foundation Construction (Pier)
- Segment 3 Structure Installation and Assembly
- Escondido Substation Work (below grade)
- Escondido Substation Work (above grade)
- Segment 2 Stringing Activities/Transfer Conductor/Sagging Activities
- Segment 1 Demobilization/ROW Restoration and Cleanup/Road Refreshing

Further detail on the construction phasing is provided in Section 2.5.1 of the *Project Description*. During this peak construction period in which several phases could be underway concurrently, it is estimated that a maximum of 268 one-way daily would occur[1] (SDG&E, 2018). This would include 160 one-way worker trips to various staging yards and work sites and 108 passenger car equivalent one-way truck trips for hauling materials.

As shown in Table 3.17-1, I-15 and SR 78 currently experience LOS D and LOS E conditions, respectively, in the study area. The additional traffic resulting from Project construction would not represent a significant increase in the total ADT or v/c ratio and, consequently, would not create a significant impact on level of service. For example, existing ADT on I-15 in the study area is approximately 243,000, to which Project-related construction traffic would add no more than 268 daily trips. Existing ADT on SR 78 in the study area is approximately 168,000, to which construction would also add no more than 268 daily trips. On Auto Park Way in Escondido, which currently operates at LOS E, construction would add no more than 268 daily trips. Based on professional judgement, the magnitude of these increases is within the range of typical daily variation in traffic levels (usually on the order of ± 5 percent) that might be expected on the major roadways serving the Project, and roadway operating conditions on these roadways would remain

[1] Due to the size and greater effect on traffic that larger vehicles (such as hauling and cement trucks) have, a passenger car equivalent of 3.0 was applied to such trips for the purpose of the analysis (e.g., 18 one-way tuck trips were evaluated as 90 one-way car trips).

substantially similar to current conditions. On the study area local roadways that currently operate at LOS A, B, or C, the addition of construction-related trips would not result in any degrading of LOS to an unacceptable level. As noted previously, this analysis conservatively assumes that *all* construction traffic would travel on these facilities, which is highly unlikely on local roadways considering that construction traffic would be dispersed across the 12-mile-long Project alignment. Therefore, the addition of construction-related trips would result in a less-than-significant impact on the performance of study roadway segments.

Construction activities would include installation of guard structures for overhead conductor crossings of nine roadways along Segment 1, nine roadways along Segment 2, and eight roadways along Segment 3.[2] Construction of the guard structures would affect traffic by temporarily reducing the capacity of a given roadway by using flaggers to temporarily hold traffic for brief periods of time while the overhead line is installed at road crossings. The applicant has identified which of these crossings would require a guard pole or boom truck and which would have a specific traffic plan for either guard poles or boom trucks at each specific pole or stringing site. In addition, pole installation along the south side of West San Marcos Boulevard could require the temporary closure of up to two traffic lanes at each pole site. To address these temporary disruptions to traffic, the applicant would implement APM TRA-1, which would establish traffic control plans to address circulation of motor vehicles, bicycles, and pedestrians, and would maintain the flow of traffic around the construction area. Furthermore, encroachment permits required for any work conducted in city or county roadway ROW would include provisions for proper signage, safety cones, flaggers, and other traffic control measures as necessary. Therefore, the impact of temporary delays to vehicular traffic due to construction activities would be less than significant.

Construction activities could temporarily close Class II and III bike lanes in roadways adjacent to the Project, or where the power line crosses roads where bicycle facilities are present. This could temporarily affect access to the bicycle facilities on Discovery Street, San Marcos Boulevard/ Palomar Airport Road, Rancho Santa Fe Road, San Elijo Road, Morgan Trails, Elfin Forest Road, Citracado Parkway, and Auto Park Way. Detours would be implemented per the Traffic Control Plan where appropriate, consistent with APM TRA-1. Similarly, sidewalks may be temporarily closed near construction activities to protect public safety. Alternative pedestrian routes would be implemented where appropriate, consistent with APM TRA-1. Project construction would be located primarily within the existing and proposed SDG&E ROW in Segment 1, and would not conflict with future plans for bikeway connectivity either locally or regionally. Therefore, Project construction would result in a less-than-significant impact on bicycle and pedestrian facilities.

However, APM TRA-1 does not fully address the potential impact of Project construction on public transit. As noted above, pole installation along the south side of West San Marcos Boulevard could require the temporary closure of up to two traffic lanes at each pole site. Installation of AC interference mitigation system deep wells also could result in lane closures on West San Marcos Boulevard. Drilling for the AC mitigation deep wells is estimated to take two to three days, and an additional two to three days is anticipated for the structure connection and

[2] Two driveways along Segment 1 and one trail along Segment 3 would also require guard structures.

solid state decoupler installation after the deep well is completed. BREEZE Line 445 (Carlsbad Poinsettia COASTER Connection to Palomar College) operates along this affected segment of West San Marcos Boulevard, which includes up to 11 curbside bus stops. In order to minimize disruptions to BREEZE Line 445 operations along West San Marcos Boulevard, **Mitigation Measure TRA-1** is proposed to address impacts on public transit operations during Project construction.

> **Mitigation Measure TRA-1: Coordination with North County Transit District (NCTD):** SDG&E and its contractor shall:
>
> - Minimize interruptions to transit services and facilities. In the event that a temporary removal or relocation of a bus stop is necessary, coordinate with NCTD to ensure that any such action is consistent with the transit operator's needs.
> - The applicant shall coordinate with NCTD at least 30 days in advance of right-of-way construction work to ensure that any such construction activities are consistent with maintaining the transit services' operations.
>
> **Significance after Mitigation:** Mitigation Measure TRA-1 would ensure that potential disruptions to BREEZE Line 445 resulting from pole installation along the south side of West San Marcos Boulevard would be minimized. With the implementation of this mitigation measure, this impact would be reduced to a less-than-significant level.

Project operation and maintenance would be similar to the operation and maintenance of existing facilities. As stated in Section 2.6.1, *General Project Operation and Maintenance Activities and Practice*, it is anticipated that the overall miles required for maintenance would slightly increase from 247 miles per month to 252 miles per month due to the installation of new structures on Segment 2. However, the Project's slight increase in maintenance activities and related miles traveled would be offset by the decrease in maintenance activities resulting from the proposed pole replacement and reconductoring/re-energizing of the existing de-energized line, which would decrease heavy truck use and mileage, from 91 down to 84 miles per month. Since operation and maintenance activities would result in, on balance, the same amount of truck traffic and vehicle miles traveled as the existing system, the operational impacts on all study area roadway segment users (i.e., vehicles, buses, and pedestrians) would be less than significant.

See additional discussion under Question f with regard to impacts on public transit riders and operators, pedestrians, and bicyclists.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways: *NO IMPACT.*

For the reasons described in Section 3.17.2, the state CMP requirements are no longer applicable to the San Diego Region; therefore, no impact would occur with respect to conflicting with a state CMP. SANDAG's congestion management process, which is intended to meet federal congestion management requirements and incorporated into its RTP, monitors and addresses long-term traffic impacts due to future development that do not apply to temporary construction-related

impacts such as those that would result from Project construction. The Project's changes to existing operation and maintenance activities would be negligible. Therefore, the Project would not generate new long-term traffic, and consideration of traffic impacts on covered roadways is not relevant; no impact would occur.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks: *LESS THAN SIGNIFICANT IMPACT.*

None of the permanent structures or the equipment used to construct the Project would be taller than 200 feet; therefore, none would result in any hazards to air navigation. As noted in Section 2.5.7, *Helicopter Use during Construction*, helicopters may be used for specific Project construction activities, including – but not limited to – stringing of overhead conductor (Segment 2), installation or removal of structures, and transportation of equipment. Helicopter flight paths would be limited to the existing SDG&E ROW, except for ingress and egress from the helicopter landing staging area at McClellan-Palomar Airport. No incidental landing areas are proposed. Helicopter activities would require up to 8 hours of total operation throughout Project construction. Based on the limited duration and flight path controls described above, Project construction would have a less-than-significant impact on air traffic.

Project operation and maintenance would occur in the same, or essentially the same, locations as operation and maintenance of the existing lines occur today. Helicopter use beyond that currently required for existing facilities would not be necessary to operate or maintain the Project (see Section 2.6.6, *Use of Helicopters* for more detail). As a result, there would be no impact on air traffic due to Project operation and maintenance.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment): *LESS THAN SIGNIFICANT IMPACT.*

Construction would not require any permanent modifications to existing public roadways or other transportation infrastructure. As a standard practice, SDG&E utilizes guard structures for conductor stringing over roadways. Furthermore, SDG&E would be required to obtain encroachment permits in order to complete work within or over roadways would implement. In accordance with APM TRA-1 and City and County requirements, the encroachment permits would include traffic control plans that would ensure work is completed in a safe manner, in accordance with applicable local regulations, including proper signage, safety cones, flaggers, and other traffic control measures as necessary. Therefore, construction of the Project would result in a less-than-significant impact with respect to increased hazards and incompatible uses.

Operation and maintenance activities for the Project would be similar to the operation and maintenance of existing facilities. As indicated above in the impact discussion for Question a, operation and maintenance activities would result in, on balance, the same amount of truck and vehicle traffic as the existing system. Furthermore, while routine maintenance activities, which occur under existing conditions, may cause temporary road closures, these road and lane closures would be minimal, as few areas of the Project would be located along public ROWs. APM TRA-1

would be implemented when necessary, and would include measures such as the use of guard structures, proper signage, safety cones, flaggers, and other traffic control measures. The Project would be within existing SDG&E ROW and operations would not conflict with transportation routes.

Therefore, the Project's operation and maintenance would have a less-than-significant impact on hazards due to design features or incompatible uses.

e) Result in inadequate emergency access: *LESS THAN SIGNIFICANT IMPACT.*

As noted previously, construction of the Project would potentially increase vehicle traffic temporarily and would potentially result in temporary lane closures during construction activities. Construction within public roadways would be conducted pursuant to Caltrans' MUTCD requirements, including approved traffic control plans (APM TRA-1) and would be coordinated with emergency response agencies (APM TRA-2) to ensure that emergency vehicle access is preserved during construction activities. Therefore, construction of the Project would result in a less-than-significant impact on emergency access.

Operation and maintenance activities for the Project would be similar to the operation and maintenance of existing facilities. As indicated above in the impact discussion for Question a, operation and maintenance activities would result in, on balance, the same amount of truck traffic and VMT as the existing system. Maintenance visits to facilities along Segments 1, 2, and 3 would be conducted pursuant to jurisdictional encroachment permit requirements, including traffic control measures. Emergency access would be preserved. Therefore, operation and maintenance of the Project would result in a less-than-significant impact on emergency access.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities: *LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.*

The Project would not result in any long-term impact on demand for alternative transportation or on alternative transportation facilities (i.e., for public transit, pedestrians, and bicyclists). Operation and maintenance of the Project would not eliminate alternative transportation corridors or facilities pertaining to bicycle lanes or public transit, nor would it include changes in policies or programs that support modes of alternative transportation. However, as indicated above in the impact discussion for Question a, construction along study area roadways could disrupt bicycle facilities on Discovery Street, San Marcos Boulevard/Palomar Airport Road, Rancho Santa Fe Road, San Elijo Road, Morgan Trails, Elfin Forest Road, Citracado Parkway, and Auto Park Way; and access to bus stops for bus routes provided by the NCTD (BREEZE Line 445 - Carlsbad Poinsettia COASTER Connection to Palomar College).

As described above in the impact discussion for Question a, implementation of **Mitigation Measure TRA-1** (Coordination with North County Transit District [NCTD]) Construction Traffic Control/Traffic Management Plan) would require the construction contractor to establish methods for minimizing construction effects on transit service. The specific requirements of NCTD coordination are identified under Mitigation Measure TRA-1.

Mitigation Measure TRA-1: Coordination with North County Transit District (NCTD). See full text of this Mitigation Measure under Question a, above.

Significance after Mitigation: With implementation of Mitigation Measure TRA-1, impacts related to effects on alternative transportation or alternative transportation facilities would be mitigated to a less-than-significant level.

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3.18 Tribal Cultural Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
18. Tribal Cultural Resources —				
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☐	☒
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

This section provides an assessment and identification of tribal cultural resources pursuant to Assembly Bill (AB) 52. During the AB 52 process, the CPUC conducted a formal outreach process (discussed in more detail below), and reviewed all relevant materials consisting of tribal maps, tribal consultation meetings, and California Register Historical Resources (CRHR) eligible archaeological site assessments.

For the purposes of this analysis, the resource-specific study area includes a 150-foot buffer on either side of the center line of the entire Project alignment, including all Project components, access roads, staging yards, substation locations, pole replacement sites, and all areas of temporary and/or permanent ground disturbance.

3.18.1 Environmental Setting

As noted in Section 3.5, *Cultural Resources*, the Project alignment encompasses the ethnographic territories of the Luiseño and Kumeyaay peoples. Detailed descriptions for these two ethnographic groups can be found in Section 3.5.1.

Identification of Tribal Cultural Resources

Pursuant to AB 52 (discussed below in Section 3.18.2, *Regulatory Settings*), which requires government-to-government consultation within the CEQA process, CPUC as the CEQA Lead Agency sent AB 52 consultation notification letters via certified mail on March 27, 2018 to 21 Native American groups affiliated with the general study area (**Table 3.18-1**). The letters included a description of the Project and provided a map figure depicting the Project alignment.

TABLE 3.18-1
SUMMARY OF AB 52 CONSULTATION

Contact	Tribe/Organization	Date Notification Sent	Response Received	CPUC Response	Meetings
Bo Mazzetti, Chairperson	Rincon Band of Luiseño Indians	3/27/2018	4/30/2018 - Email requesting AB 52 consultation	4/30/2018 - email initiating AB 52 consultation	6/12/2018
Cami Mojado, Cultural Resources Manager	San Luis Rey Band of Mission Indians	3/27/2018	4/17/2018 - Letter requesting AB 52 consultation	4/19/2018 - email initiating AB 52 consultation	4/27/2018, 7/9/2018
Cody J. Martinez, Chairperson	Sycuan Band of Kumeyaay Nation	3/27/2018	-	-	-
Gwendolyn Parada, Chairperson	La Posta Band of Diegueno Mission Indians	3/27/2018	-	-	-
Joyce Perry, Tribal Manager	Juaneño Band of Mission Indians Acjachemen Nation	3/27/2018	-	-	-
Robert J. Welch, Chairperson	Viejas Band of Mission Indians	3/27/2018	4/9/2018 - Letter recommending San Pasqual be contacted	4/30/2018 - Letter thanking Viejas for recommendation	-
Shasta Guaghen, Tribal Historic Preservation Officer	Pala Band of Mission Indians	3/27/2018	10/12/2018 – Letter declining AB 52 consultation	10/17/2018 -- Letter thanking Pala for response	-
Temet Aguilar, Chairperson	Pauma Band of Luiseno Indians	3/27/2018	-	-	-
Tribal Council	San Luis Rey Band of Mission Indians	3/27/2018	-	-	-
Erica Pinto, Chairperson	Jamul Indian Village of California	3/27/2018	-	-	-
Joseph Ontiveros, Cultural Resources Department	Soboba Band of Luiseno Indians	3/27/2018	-	-	-
Ralph Goff, Chairman	Campo Band of Mission Indians	3/27/2018	-	-	-
Thomas Rodriguez, Chairperson	La Jolla Band of Luiseno Indians	3/27/2018	-	-	-
Michael Garcia, Chairperson	Ewiiaapaayp Band of Kumeyaay Indians	3/27/2018	-	-	-
Leroy J. Elliott, Chairperson	Manzanita Band of Kumeyaay Nation	3/27/2018	-	-	-
Robert Pinto, Chairperson	Ewiiaapaayp Band of Kumeyaay Indians	3/27/2018	-	-	-
Anna Hoover, Cultural Analyst	Pechanga Cultural Resources Dept.	3/27/2018	-	-	-
Clinton Linton, Director Cultural Resources	Santa Ysabel Band of the Iipay Nation	3/27/2018	7/24/2018 - Email recommending Kumeyaay monitors	7/24/2018 – Email stating Santa Ysabel's recommendations to be included in admin record	-
Matias Belardes, Chairperson	Juaneño Band of Mission Indians Acjachemen Nation	3/27/2018	-	-	-
Sonia Johnson, Chairperson	Juaneño Band of Mission Indians	3/27/2018	-	-	-
Teresa Romero, Chairperson	Juaneño Band of Mission Indians Acjachemen Nation	3/27/2018	-	-	-

In addition to the AB 52 notification letters, courtesy CEQA notification letters were sent to nine Native American groups included on a list of tribal contacts provided to CPUC by the California Native American Heritage Commission (NAHC) on February 28, 2018 (**Table 3.18-2**). The letters included a project description, a map figure depicting the Project alignment, and a statement indicating that the notification is a courtesy outreach separate from the CPUC's formal AB 52 obligations.

TABLE 3.18-2
SUMMARY CEQA COURTESY OUTREACH

Contact	Tribe/Organization	Date Notification Sent	Response Received	CPUC Response	Meetings
Allen E. Lawson, Chairperson	San Pasqual Band of Mission Indians	3/27/2018	-	-	-
Edwin Romero, Chairperson	Barona Group of the Capitan Grande	3/27/2018	-	-	-
Jeff Grubbe, Chairperson	Agua Caliente Band of Cahuilla Indians	3/27/2018	-	-	-
Jim McPherson, Tribal Historic Preservation Officer	Rincon Band of Mission Indians	3/27/2018	-	-	-
Mario Morales, Cultural Resources Representative	Mesa Grande Band of Mission Indians	3/27/2018	-	-	-
Javaughn Miller, Tribal Administrator	La Posta Band of Mission Indians	3/27/2018	-	-	-
Carmen Lucas	Kwaaymii Laguna Band of Mission Indians	3/27/2018	-	-	-
Rebecca Osuna, Chairperson	Inaja Band of Mission Indians	3/27/2018	-	-	-
Virgil Oyos, Chairperson	Mesa Grande Band of Mission Indians	3/27/2018	-	-	-

To date, CPUC has received responses to the AB 52 notification letters from five groups including the San Luis Rey Band of Mission Indians, Rincon Band of Luiseño Indians, Santa Ysabel Band of the Iipay Nation, Viejas Band of Mission Indians, and Pala Band of Mission Indians.

San Luis Rey Band of Mission Indians

In a letter dated April 17, 2018, the Legal Counsel for the San Luis Rey Band of Mission Indians, requested formal consultation pursuant to AB 52 and asked that the tribe's Tribal Cultural Resources Manager, be contacted to coordinate the consultation. CPUC's Tribal Liaison, responded initiating formal consultation. Two AB 52 consultation meetings between CPUC and the San Luis Rey Band of Mission Indians were held on April 27, 2018 and July 9, 2018. As part of the April 27 meeting, San Luis Rey stated that previously recorded archaeological resource P-37-032160, a CRHR-eligible prehistoric archaeological site containing intact subsurface deposits as described in Section 3.5.1, was capped with sterile soil and an open-space easement was established in the central portion of the site to ensure that it is afforded protection from future ground disturbing activities. Portions of this resource overlap the Project alignment. Resource P-37-032160 has been previously evaluated for listing in the CRHR under Criterion 4 (data potential) and therefore qualifies as a historical resource under CEQA. However, this resource

has not been evaluated for its eligibility for listing in the CRHR as a tribal cultural resource. Pursuant to California Public Resources Code (PRC) Section 21074(a)(2), resource P-37-032160 will, however be treated as a tribal cultural resource in the discretion of the Lead Agency based on substantial evidence put forth by the San Luis Rey during consultation. The San Luis Rey also indicated the potential for the presence of subsurface archaeological deposits within the Project alignment, particularly the entirety of Segment 3 (in the area along Citracado Parkway), and the easternmost 500 feet of Segment 2.

During the July 9 meeting, map figures were reviewed depicting the locations of known prehistoric archaeological resources on, adjacent to, or within 150 feet of the Project alignment relative to the Project footprint for permanent and temporary impacts. Each resource within and adjacent to the Project alignment was discussed, as were potential mitigation measures that would reduce Project impacts to the resources. For many of the known resources, the San Luis Rey indicated that construction monitoring and the establishment of exclusionary fencing was appropriate. For resource P-37-032160, the San Luis Rey indicated that construction monitoring and the preparation and implementation of a data recovery plan would constitute appropriate mitigation for impacts that could result from Project-related ground disturbing activities. San Luis Rey also requested review of the research design to be included in the data recovery plan. The San Luis Rey also reiterated that the portion of the Project alignment, particularly the entirety of Segment 3 (in the area along Citracado Parkway), and the easternmost 500 feet of Segment 2, is sensitive for the presence of subsurface archaeological deposits.

Rincon Band of Luiseño Indians

In an email dated April 30, 2018, the Cultural Resources Director for the Rincon Band of Luiseno Indians, requested formal AB 52 consultation between CPUC and Rincon. In an email dated April 30, 2018, CPUC responded initiating AB 52 consultation. On June 12, 2018, an AB 52 consultation meeting was held between CPUC and the Rincon Band of Luiseño Indians. Rincon indicated that monitoring would be warranted for Project-related ground disturbing activities in the vicinity of archaeological sites P-37-032160 and -012209 (see site descriptions in Section 3.5). Rincon also indicated a number of Luiseño resource and placenames are present in the vicinity of the Project alignment, and offered to share that information. Following the meeting, GIS data for the Project alignment were emailed to Rincon on June 12, 2018, and, on June 14, 2018, Rincon provided a map figure depicting the Luiseño placenames relative to the Project alignment.

Santa Ysabel Band of Iipay Nation

In an email dated July 24, 2018, the Director of Cultural Resources for the Santa Ysabel Band of Iipay Nation, recommended that Kumeyaay Native American monitors be retained to monitor Project construction, and that avoidance be the primary means of mitigating impacts for prehistoric archaeological resources inadvertently discovered during Project construction. In an email dated July 24, 2018, CPUC responded Santa Ysabel's recommendation would be included in the Project's administrative record.

Viejas Band of Mission Indians

In a letter dated April 9, 2018, the Cultural Resources Manager for the Viejas Band of Mission Indians stated the Project alignment is located in an area of cultural significance to the Kumeyaay

and recommended that the San Pasqual Band of Mission Indians be contacted. Viejas also recommended that all relevant environmental laws be followed. In a letter dated April 30, 2018 CPUC responded to the Cultural Resources Manager's letter thanking him for the recommendations and informing him that the San Pasqual Band of Mission Indians were contacted via letter as part of the notification process.

Pala Band of Mission Indians

In a letter dated October 12, 2018, the Tribal Historic Preservation Officer for the Pala Band of Mission Indians stated the Project alignment is located outside the tribe's traditional use area and defers to tribal groups located in closer proximity to the Project alignment. Pala declined AB 52 consultation at this time, but does not waive the right to request consultation under other applicable laws in the future.

3.18.2 Regulatory Setting

State

Assembly Bill 52 and Related Public Resources Code Sections

The passage of AB 52 in 2014 amended California PRC Section 5097.94, and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. The primary intent of AB 52 was to include California Native American Tribes early in the environmental review process and to establish a new category of resources related to Native Americans that require consideration under CEQA, known as tribal cultural resources. PRC Sections 21074(a)(1) and (2) define tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe" that are either included or determined to be eligible for inclusion in the CRHR or included in a local register of historical resources, or a resource that is determined to be a tribal cultural resource by a lead agency, in its discretion and supported by substantial evidence. The final text for the tribal cultural resources update to CEQA Guidelines Appendix G was approved in 2016.

PRC Section 21080.3.1 requires that within 14 days of a lead agency determining that an application for a project is complete, or a decision by a public agency to undertake a project, the lead agency provide formal notification to the designated contact, or a tribal representative, of California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the project (as defined in PRC §21073) and who have requested in writing to be informed by the lead agency (PRC §21080.3.1(b)). Tribes interested in consultation must respond in writing within 30 days from receipt of the lead agency's formal notification and the lead agency must begin consultation within 30 days of receiving the tribe's request for consultation (PRC §§21080.3.1(d) and 21080.3.1(e)).

PRC Section 21080.3.2(a) identifies the following as potential consultation discussion topics: the type of environmental review necessary; the significance of tribal cultural resources; the significance of the project's impacts on the tribal cultural resources; project alternatives or appropriate measures for preservation; and mitigation measures. Consultation is considered

concluded when either: (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC §21080.3.2(b)).

If a California Native American tribe has requested consultation pursuant to Section 21080.3.1 and has failed to provide comments to the lead agency, or otherwise failed to engage in the consultation process, or if the lead agency has complied with Section 21080.3.1(d) and the California Native American tribe has failed to request consultation within 30 days, the lead agency may certify an EIR or adopt an MND (PRC §§21082.3(d)(2) and (3)).

PRC Section 21082.3(c)(1) states that any information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is submitted by a California Native American Tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public without the prior consent of the tribe that provided the information. If the lead agency publishes any information submitted by a California Native American Tribe during the consultation or environmental review process, that information shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.

3.18.3 Applicant Proposed Measures

The following measure pertaining to tribal cultural resources has been proposed by SDG&E and would be implemented for the Project.

> **APM CUL-4:** Native American monitoring may be implemented for portions of the Project that have the potential to affect unidentified TCRs. The role of the Native American monitor will be to observe Project construction in mapped sensitive areas and facilitate communication of tribal concerns to the qualified archaeologist, the SDG&E Cultural Resources Specialist, and/or construction personnel and tribal council.

3.18.4 Environmental Impacts

Discussion

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a.i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k): *NO IMPACT.*

Construction

One resource (P-37-032160) potentially eligible for listing in the CRHR as a tribal cultural resource has been identified as a result of AB 52 consultation. Because of its tribal values, this

resource has been capped with sterile sediments and protected by an easement agreement. Although P-37-032160 has been previously recommended eligible for listing in the CRHR for its archaeological data potential, it has not been formally evaluated for its eligibility for listing in the CRHR or local register for its significance and cultural value to a California Native American Tribe as a tribal cultural resource pursuant to PRC Section 21074(a)(1). Rather, pursuant to PRC Section 21074(a)(2), resource P-37-032160 is being treated as a tribal cultural resource at the discretion of the lead agency based on substantial evidence put forth by the San Luis Rey during consultation (see Question b, below). Therefore, no tribal cultural resources listed or eligible for listing in the CRHR or for local register listing as defined in PRC Section 21074(a)(1) would be impacted by construction of the Project; therefore, no mitigation is required.

Operations and Maintenance

As previously described, resource P-37-032160 has not been formally evaluated for its eligibility for listing in the CRHR or local register for its significance and cultural value to a California Native American Tribe as a tribal cultural resource pursuant to PRC Section 21074(a)(1), but rather is being treated as a tribal cultural resource at the discretion of the lead agency based on substantial evidence put forth by the San Luis Rey during consultation pursuant PRC Section 21074(a)(2) (see Question b, below). Therefore, no tribal cultural resources listed or eligible for listing in the CRHR or for local register listing as defined in PRC Section 21074(a)(1) would be impacted by the operations and maintenance of the Project; therefore, no mitigation is required.

a.ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe: *LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.*

Construction

Pursuant to PRC Section 21074(a)(2), resource P-37-032160 is being treated as a tribal cultural resource at the discretion of the lead agency based on substantial evidence put forth by the San Luis Rey during consultation. Ground disturbing activities associated with Project construction have the potential to physically impact this resource and, as a result, could cause a substantial adverse change in the significance of a tribal cultural resource. As indicated by the San Luis Rey Band of Mission Indians during the AB 52 consultation meetings, data recovery and construction monitoring would be considered effective measures for reducing Project impacts to P-37-032160.

To address impacts on tribal cultural resources, SDG&E proposed APM CUL-4 requiring a Native American monitor to be present in areas of potential sensitivity. The CPUC has determined that this APMs would not reduce or avoid substantial adverse changes in the significance of resource P-37-032160 to below the level of significance. Therefore, APM CUL-4 is superseded by **Mitigation Measures CUL-1** through **CUL-4**, which identify specific measures and standards that would reduce potential impacts to less than significant.

> **Implement Mitigation Measure CUL-1 through CUL-4.** See full text for these Mitigation Measures in Section 3.5, *Cultural Resources,* under Question a.

Significance after Mitigation: PRC Section 21082.3 requires any mitigation measures agreed upon in the consultation conducted pursuant to Section 21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to paragraph (2) of subdivision (b), and shall be fully enforceable. The measures should be feasible to avoid or substantially lessen the impact on the identified tribal cultural resource. Mitigation Measures CUL-1 through CUL-4 provide are feasible measure that will substantially lessen the impact on the identified tribal cultural resource.

Operations and Maintenance

Resource P-37-032160 is located within a developed area where Project operations and maintenance activities that include ground disturbance, such as pole brushing and road maintenance, would not be conducted. Therefore, Project operations and maintenance would not impact resource P-37-032160 and an adverse change in the significance of a tribal cultural resource would not occur.

3.19 Utilities and Service Systems

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
19.	**UTILITIES AND SERVICE SYSTEMS — Would the project:**				
a)	Require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒
b)	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☐	☒
c)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d)	Generate solid waste in excess of state or local standards or in excess of the capacity of local infrastructure?	☐	☒	☐	☐
e)	Negatively impact the provision of solid waste services or impair the attainment of solid waste reduction goals?	☐	☒	☐	☐
f)	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☒	☐	☐

This section describes the existing environmental and regulatory setting of the Project and addresses the impacts on water, wastewater, storm drainage, electric power, natural gas, telecommunications, and solid waste systems that would result from construction, operation, and maintenance of the Project. For the purposes of this analysis, the study area includes the Project site and vicinity, including the footprint of all areas of Project-related temporary and/or permanent ground disturbance.

3.19.1 Environmental Setting

Water Services

In addition to the Vallecitos Water District (VWD), described below, which would provide all of the water for the Project, communities near the Project receive water services through the Carlsbad Municipal Water District, Olivenhain Municipal Water District, the City of Escondido Water Division, and the Vista Irrigation District. However, because these water districts would not supply the Project with water, they are not described in detail below.

San Diego County Water Authority

The San Diego County Water Authority (SDCWA) is a water wholesaler made up of 24 member water agencies including several that serve communities near the study area: the Carlsbad

Municipal Water District, the City of Escondido Water Division, the Vista Irrigation District, the Olivenhain Municipal Water District, and the VWD. SDCWA purchases approximately 40 percent of its water from the Metropolitan Water District of Southern California and approximately 21 percent of its water supply from Imperial Irrigation District. The remaining 39 percent of SDCWA water supply comes from a mix of sources including water conserved by lining parts of the Coachella and All-American Canals, water from the Carlsbad Desalination Plant managed by SDCWA, recycled water, groundwater, and local surface water (SDCWA, 2018).

Vallecitos Water District

The VWD serves a population of over 98,000 customers within its 45-square-mile area, which includes the City of San Marcos (VWD, 2018a). The VWD purchases all of its potable water supply from the SDCWA. The VWD also provides recycled water through the Meadowlark Water Reclamation Facility (VWD, 2016).

Wastewater Services

San Diego County

The majority of wastewater treatment and disposal in unincorporated San Diego County is handled by regional systems managed by public water or sewer districts, small wastewater treatment facilities operated by independent districts or the County, or through onsite underground sewage disposal systems septic tanks (San Diego County Department of Public Works, 2018; SDG&E, 2017).

City of Carlsbad

The City of Carlsbad provides wastewater collection services through 288 miles of sanitary sewer pipelines that deliver wastewater to the Encina Wastewater Authority (EWA). At EWA, the wastewater is treated and either released into the ocean or treated further at the Encina Water Pollution Control Facility (EWA, 2018). Wastewater collection and treatment in the southern portions of the city are provided by the Leucadia Wastewater District or the VWD (City of Carlsbad, 2018). The City of Carlsbad jointly owns two large-capacity pump stations with the City of Vista; wastewater infrastructure in the City of Vista is described below.

City of Escondido

The Wastewater Division of the City of Escondido is responsible for the collection, treatment, and disposal of wastewater within its service area. Wastewater is collected through approximately 360 miles of pipelines and 11 pumping stations and is treated at the Hale Avenue Resource Recovery Facility, which produces approximately 9.0 mgd of tertiary treated recycled water that is used for landscape and industrial uses. Water that is not beneficially reused elsewhere is discharged to the Pacific Ocean (City of Escondido, 2018).

City of Vista

The City of Vista operates over 215 miles of sewer collection pipelines, as well as one small-capacity pump station. Additionally, the City of Vista and the City of Carlsbad jointly own and

operate two large-capacity pump stations and associated pipelines. The Buena Sanitation District, an entity of the City of Vista, owns and operates 101 miles of wastewater pipelines and one large capacity pump station. These collection systems deliver sewage to the Encina Water Pollution Control Facility in the City of Carlsbad, described above (City of Vista, 2018).

City of San Marcos

Wastewater services in the City of San Marcos are provided by the VWD, which has 270 miles of pipelines. Approximately 74 percent of wastewater generated in the district served by VWD is treated and recycled at the Meadowlark Water Reclamation Facility. Recycled water produced at the facility is then sold to neighboring water districts and is used for irrigation (VWD, 2018b).

Solid Waste and Recycling Services

Solid waste in San Diego County may be disposed of locally at one of three active and permitted landfills, listed below in **Table 3.19-1**. Additionally, San Diego County operates eight transfer stations and various recycling programs (San Diego County, 2017). SDG&E has identified the Otay Landfill in Chula Vista as a landfill that is approved to accept treated wood waste (SDG&E, 2017, page 83). The Otay Landfill, West Miramar Landfill, and Las Pulgas Landfill are all approved by the San Diego RWQCB to accept treated wood waste (Department of Toxic Substances Control, 2013); however, for this report it is assumed that SDG&E would use Otay Landfill for treated wood waste disposal. As of 2016, the Otay Landfill had approximately 21,194,000 cubic yards of capacity remaining, or approximately 34 percent of the landfill's maximum permitted capacity (CalRecycle, 2018).

TABLE 3.19-1
STUDY AREA LANDFILLS

Facility	Type of Waste Accepted	Location	Distance from the Project	Remaining Capacity (cy)	Daily Capacity tons/day
Sycamore	Asbestos, Contaminated soil, Mixed municipal, Sludge (BioSolids), Agricultural, Dead Animals, Tires, Shreds, Wood waste, Other designated, treated wood	San Diego	18 miles southeast	113,972,637 (as of December 31, 2016)	5,000
West Miramar Sanitary Landfill	Construction/demolition, Mixed municipal, Tires	San Diego	12.7 miles southwest	15,527,878 (as of June 30, 2014)	8,000
Otay Landfill	Nonhazardous. Agricultural, Ash, Construction/demolition, Contaminated soil, Dead Animals, Green Materials, Industrial, Inert, Mixed municipal, Other designated, Sludge (BioSolids), Tires, Treated Wood	Chula Vista	35 miles south	21,194,008 (as of May 31, 2016)	6,700

SOURCE: CalRecycle, 2018

3.19.2 Regulatory Setting

Federal

No federal regulations pertaining to utilities and service systems apply to the Project.

State

Porter-Cologne Water Quality Control Act

The State of California's Porter-Cologne Water Quality Control Act gives the authority of water quality regulation to the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs). The San Diego RWQCB serves the study area. The San Diego RWQCB prepares and updates the Water Quality Control Plan for the San Diego Basin (Basin Plan). Additionally, the San Diego RWQCB issues National Pollutant Discharge Elimination System (NPDES) permits and Waste Discharge Requirements in accordance with the Clean Water Act NDPES program. See Section 3.9.2, *Hydrology and Water Quality*, where the Porter-Cologne Water Quality Control Act is described in more detail.

NPDES Construction General Permit

Construction activities disturbing one acre or more of land, which includes the Project, are subject to the permitting requirements of the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (Construction General Permit) and must apply for Construction General Permit coverage. For all new projects, applicants must electronically file permit registration documents using the Stormwater Multiple Applications and Report Tracking Systems (SMARTS), and must include a Notice of Intent (NOI), risk assessment, site map, and stormwater pollution prevention plan (SWPPP) to be covered by the General Construction Permit prior to beginning construction. The risk assessment and SWPPP must be prepared by a State-Qualified SWPPP Developer (QSD). See Section 3.9, *Hydrology and Water Quality*, for more detailed discussion relative to water quality.

SWRCB Order WQ-2016-0068-DDW

This SWRCB-adopted order permits temporary and permanent uses of tertiary-treated recycled water for allowed construction activities including dust control, soil compaction, concrete mixing, housekeeping (e.g., street sweeping), and hydrostatic testing (SWRCB, 2016).

San Diego RWQCB Waiver No. 2 – "Low Threat" Discharges to Land

This waiver facilitates the discharge of recycled water to land in the area subject to the jurisdiction of the San Diego RWQCB. Temporary uses of tertiary-treated recycled water, including dust control, soil compaction, concrete mixing, and housekeeping (e.g., street sweeping), are permitted via this wavier.

California Integrated Waste Management Act

The Integrated Waste Management Act of 1989 (Pub. Res. Code Section 40050 et seq.), as amended, required each local agency to divert 50 percent of all solid waste generated within the

local agency by January 1, 2000. The Act requires local agencies to maximize the use of all feasible source reduction, recycling, and composting options before using transformation (incineration of solid waste to produce heat or electricity) or land disposal. The Act also resulted in the creation of the State agency now known as CalRecycle. Under the Act, local governments develop and implement integrated waste management programs consisting of several types of plans and policies, including local construction and demolition ordinances described in more detail below. The Act also set into place a comprehensive statewide system of permitting, inspections, and maintenance for solid waste facilities, and authorized local jurisdictions to impose fees based on the types and amounts of waste generated.

Title 22 California Code of Regulations Division 4.5

Title 22 of the California Code of Regulations, Division 4.5, discusses an array of requirements with respect to the disposal and recycling of hazardous and universal wastes. Specific standards and requirements are included for the identification, collection, transport, disposal, and recycling of hazardous wastes. Additional standards are included for the collection, transport, disposal, and recycling of universal wastes, identified in Section 66273.9 of Title 22 of the California Code of Regulations. Requirements include recycling, recovery, returning spent items to the manufacturer, or disposal at an appropriately permitted facility. Division 4.5 of Title 22 also provides restrictions and standards relevant to waste destination facilities, and provides authorization requirements for various waste handlers.

Title 22 also regulates the treatment and use of recycled water. It lists 40 specific allowed uses of disinfected tertiary recycled water (such as irrigating parks), 24 specific allowed uses of disinfected secondary recycled water (such as irrigating animal feed and other unprocessed crops), and seven specific allowed uses of undisinfected secondary recycled water (such industrial uses). Certain Project-related construction activities that could utilize recycled water include dust suppression, soil compaction, and street cleaning.

2016 California Green Building Standards Code

As amended, California's Green Building Standards Code (CALGreen; Title 24 Cal. Code Regs., Part 11) requires that nonresidential building projects recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste, or meet a local construction and demolition waste management ordinance, whichever is more stringent (§ 5.408.1). Additionally, 100 percent of trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing must be reused or recycled unless contaminated by disease or pest infestation (§ 5.408.3). The 2016 version of the code increased the minimum diversion requirement for nonhazardous construction and demolition waste to 65 percent from 50 percent (in the 2013 and earlier versions) in response to Assembly Bill 341, which declared that it is the policy goal of the State that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020. Therefore, some local ordinances still list minimums that are less stringent than (and therefore overridden by) the statewide requirement. Of the local jurisdictions in the study area, only San Diego County has adopted more stringent construction and demolition waste diversion requirements than the CALGreen code; therefore, only that ordinance is described below.

Local

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction." Thus, discretionary actions by local jurisdictions would not apply to the Project. However, details that relate to local policies and regulations regarding discretionary actions are provided below for informational purposes.

County of San Diego

General Plan

The following general plan goals and policies are potentially relevant to public utilities and services:

> **Goal LU-13:** Adequate Water Quality, Supply, and Protection. A balanced and regionally integrated water management approach to ensure the long-term viability of San Diego County's water quality and supply.
>
> > ***Policy LU-13.2*:** Commitment of Water Supply. Require new development to identify adequate water resources, in accordance with State law, to support the development prior to approval.
>
> **Goal LU-14:** Adequate Wastewater Facilities. Adequate wastewater disposal that addresses potential hazards to human health and the environment.
>
> > ***Policy LU-14.1*:** Wastewater Facility Plans. Coordinate with wastewater agencies and districts during the preparation or update of wastewater facility master plans and/or capital improvement plans to provide adequate capacity and assure consistency with the County's land use plans. (San Diego County, 2011)

Construction and Demolition Debris Recycling Ordinance

San Diego County's Construction and Demolition Debris Recycling Ordinance (Ordinance No. 9840) applies to projects greater than 40,000 square feet in area and requires that 90 percent of inert materials and 70 percent of all other materials be recycled or reused. The ordinance is enforced through a building or demolition permitting process; however, per County Code Section 91.1.105.2(a)(15), public utility towers and poles do not require a building permit.

City of Carlsbad General Plan

The following general plan goals and policies in the Sustainability Element and Open Space, Conservation, and Recreation Element are potentially relevant to public utilities and services:

> ***Policy 9-P.5*:** Undertake measures to expand the use of recycled water for landscape irrigation and commercial and industrial process water. Encourage potential future customers identified in the latest Recycled Water Master Plan to retrofit their water systems to utilize recycled water as it becomes available and cost-effective to do so.

***Policy 9-P.9*:** Adopt a construction and demolition waste recycling ordinance that requires, except in unusual circumstances, all construction, demolition and renovation projects meeting a certain size or dollar value, to divert from landfills 100 percent of all Portland cement concrete and asphalt concrete and an average of at least 50 percent of all remaining non-hazardous debris from construction, demolition, and renovation projects.

***Policy 4-P.57*:** Work with the stakeholders in the community and region, such as but not limited to the San Diego Regional Water Quality Control Board, California Fish and Wildlife, US Fish and Wildlife, Coastal Commission, Army Corps of Engineers, Environmental Protection Agency, neighboring cities, counties, businesses, residents, and non-profit groups, to comply with applicable federal, state, and local regulations related to water quality in our region, consistent with the city's current NPDES Municipal Storm Water Permit issued by the RWQCB or other related regulations. Prepare and implement any applicable plans such as a Water Quality Improvement Plan, Integrated Regional Water Management Plan, Load Reduction Plan, or others as needed to comply with applicable regulations.

***Policy 4-P.58*:** Require developments to incorporate structural and non-structural best management practices (BMPs) to mitigate or reduce the projected increases in pollutant loads. Do not allow post-development runoff from a site that would cause or contribute to an exceedance of receiving water quality objectives or has not been reduced to the maximum extent practicable. (City of Carlsbad, 2015)

City of San Diego General Plan

The following general plan goals and policies in the Public Facilities and Services Element are potentially relevant to public utilities and services:

Goal: Maximum diversion of materials from disposal through the reduction, reuse, and recycling of wastes to the highest and best use.

***Policy PF-I.2*:** Maximize waste reduction and diversion.

a) Maximize the separation of recyclable and compost materials.

b) Reduce and recycle Construction and Demolition (C&D) debris. Strive for recycling of 100 percent of inert C&D materials and a minimum of 50 percent by weight of all other material.

c) Use recycled, composted, and post-consumer materials in manufacturing, construction, public facilities and in other identified uses whenever appropriate. (City of San Diego, 2008)

City of Escondido General Plan

The City of Escondido General Plan Mobility and Infrastructure element establishes goals and policies for the appropriate development of water, wastewater, and sewer systems to meet growth needs. The following policies pertain to wastewater and stormwater:

Water System Policy 12.2: Maintain adequate water supply, treatment, and distribution capacity to meet normal and emergency situations to provide a minimum standard of 540 gallons per day per household. This standard should be periodically reviewed and

modified by updates to the Water Master Plan to account for changes in water supply, demands, and conservation practices.

***Water System Policy 12.5*:** Require new development to provide adequate water facilities and/or finance the costs of improvements necessary to serve the demands created by the development and/or anticipated growth determined by the city, as appropriate. Establish a system for the reimbursement of construction costs for backbone water system improvements in master planned development projects involving multiple phases and developers.

***Wastewater System Policy 13.5*:** Require new development to provide adequate wastewater facilities and finance the costs of improvements necessary to serve the additional demands created by the development and/or anticipated growth determined by the city, as appropriate. Establish a system for the reimbursement of construction costs for backbone wastewater system improvements in master planned development projects involving multiple phases and developers.

***Storm Drainage Policy 14.4*:** Require new development to create a mechanism to finance and fund ongoing maintenance of stormwater facilities. Storm Drainage Policy 14.5: Require new development to prepare drainage studies and improvement plans that demonstrate no net increase in stormwater runoff and compliance with adopted stormwater plans.

***Storm Drainage Policy 14.7*:** Require new development and redevelopment to minimize stormwater runoff and contaminants entering drainage facilities by incorporating low impact development measures and other on-site design features such as bio-swales, retention ponds, and cisterns for storage and infiltration, treatment of flows, and appropriate best management practices (BMP) consistent with the National Pollutant Discharge Elimination System (NPDES) (City of Escondido, 2012)

City of San Marcos General Plan

The City of San Marcos General Plan Land Use and Community Design Element provides goals, and policies intended to guide the planning of water, wastewater, and sewer systems:

***Policy LU-13.1*:** Work closely with local and regional water providers to ensure high quality water supplies are available for the community.

***Policy LU-13.2*:** Actively promote water conservation programs aimed at reducing demand.

***Policy LU-14.1*:** Work closely with local service providers to ensure an adequate wastewater system for existing and future development is in place.

***Policy LU-14.2*:** Ensure development approval is directly tied to commitments for the construction or improvement of primary water, wastewater, and circulation systems.

***Policy LU-15.4*:** Retain drainage courses in their natural condition, to the extent possible. Consider smaller-scale drainage improvements to protect the environment and avoid disturbing natural drainage courses; consider detention areas and raised building pads.

***Policy LU-16.1*:** Work closely with local service providers to ensure adequate solid waste disposal, collection, and recycling services.

***Policy LU-16.2*:** Increase recycling, composting, source reduction, and education efforts throughout the city to reduce the amount of solid waste requiring disposal at landfills.

***Policy LU-17.1*:** Coordinate with all communications and utility companies (electrical, gas, telephone, cable, satellite and future utilities) in the provision of services throughout the community and the installation and maintenance of facilities in their respective franchise areas. (City of San Marcos, 2012)

City of Vista General Plan

The City of Vista General Plan Public Safety, Facilities, and Services Element provides goals and policies to provide acceptable levels of public safety and infrastructure to the people of the city.

PSFS Goal 9: Continue to provide sanitary sewer facilities to accommodate the safe, efficient, and cost-effective disposal of waste, commensurate with existing and proposed development.

PSFS Goal 10: Continue to provide drainage facilities to adequately collect surface runoff to mitigate flooding and improve water quality.

PSFS Goal 11: Continue to ensure that the City has an adequate, safe, and reliable water supply to meet the existing and planned needs of the community.

PSFS Goal 16: Provide and maintain public infrastructure and utilities that support existing and planned land uses and development in a cost-effective and responsible manner.

***PSFS Policy 16.1*:** Determine public infrastructure and utility needs to implement the General Plan and prioritize them through the City's Capital Improvement Projects (CIP).

***PSFS Policy 16.2*:** Evaluate existing public infrastructure and utilities to determine deficiencies and identify ongoing maintenance and/or replacement needs, and prioritize and implement them through the CIP and Operation and Maintenance (O&M) investment (City of Vista, 2012)

3.19.3 Applicant Proposed Measures

No Applicant Proposed Measures (APMs) have been identified that would address potential impacts on utilities or service systems.

3.19.4 Environmental Impacts

Discussion

a) The Project would not require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects: *NO IMPACT.*

Water and Wastewater Treatment

The Project would not require or result in the relocation or construction of new or expanded water or wastewater treatment facilities. The Project would require water use during construction for

dust control on access roads, soil compaction during grading, and establishment of landscaping. This water would be supplied by VWD as discussed under Question b. and would not require the construction of new or expanded water facilities. Therefore, no impact would occur.

Construction activities, such as ground excavations, have the potential to damage existing utilities, including water mains, storm drains, and sewer lines. As described in Section 2.5.9, *Belowground Construction,* underground Project components would be constructed within duct banks. In locations where these banks cross or run parallel to other utility lines, a minimum radial clearance of 12 inches would be required. In locations where the distribution duct bank would be installed parallel to other substructures, a minimum radial clearance of 24 inches would be required, as described in Section 2.5.9, *Belowground Construction.* The radial clearance of the duct banks would, therefore, prevent any impacts of the Project on ongoing water or wastewater treatment for which such nearby water utility lines would be used. No operation- or maintenance-related activity is expected to displace or destroy existing infrastructure related to water or wastewater treatment facilities such as water wells, pipelines, or other facilities.

The Project would generate minimal wastewater. During construction, portable sanitary systems would be provided at staging areas and would not be connected to the local wastewater system. Construction activities would be temporary, lasting approximately 12 months. As described in Section 2.5.1, *Construction Workforce and Equipment,* the Project would employ a maximum of 80 employees who would work in crews working concurrently at separate locations. As a result, wastewater generated from portable worker facilities during construction would be limited and would be handled by a licensed sanitation contractor which would dispose of the waste at an offsite location in compliance with San Diego RWQCB standards.

As described in Section 2.5.9, *Belowground Construction*, dewatering may be necessary in some locations. If dewatering related to pier foundation installation were to occur, it is estimated not to exceed 550 cubic yards or 111,000 gallons. The SWPPP would detail proposed dewatering procedures, ensuring that they are completed in accordance with relevant San Diego RWQCB standards and requirements. It is anticipated that water from dewatering would be disposed of on land and not to wastewater infrastructure.

Project operation and maintenance activities would be substantially similar to operation and maintenance of existing facilities. Once the Project is operational, some maintenance activities would no longer be necessary, such as insulator washing. Additionally, no changes or additions to existing staffing for operation and maintenance activities are proposed. Therefore, no additional wastewater would be generated during operation and maintenance. Therefore, Project construction, operation, and maintenance would not require the construction of additional water or wastewater treatment infrastructure. The Project would have no impact with respect to these facilities. Thus, no impact would occur.

Storm Water Drainage

The Project would not substantially increase the amount of impervious surfaces within the study area. As a result, the Project would not generate a substantial amount of additional storm water runoff. Grading could result in small changes to the existing drainage patterns on site. However,

construction sites within the study area would be graded similarly to existing slopes along the Project alignment. Therefore, grading would not substantially increase the existing velocity or volume of stormwater flows either onsite or in offsite areas. Additionally, the implementation of the Stormwater Pollution Prevention Plan (SWPPP) would include BMPs designed to control stormwater flows resulting from the Project. As described in Section 2.6.3, *Wastewater and Surface Water Runoff*, the BMPs would be monitored and revised as needed, in order to respond to construction conditions. The Project would not require the construction of a new stormwater drainage facility; therefore, there would be no impact with regard to stormwater drainage.

Electric Power, Natural Gas, and Telecommunications

As described in Section 3.6, *Energy*, the Project consists of constructing new overhead power line structures, rebuilding existing structures, and reconductoring and re-energizing approximately 12 miles of a 69 kV overhead electric power line to address projected reliability issues. The Project in itself would not generate new electric energy demand or demand for natural gas and, thus, would not require or result in the construction of additional energy facilities to meet its energy demand. Additionally, the Project would not result in the need for new telecommunications facilities, although existing telecommunication lines co-located on existing SDG&E structures would need to be relocated onto the new structures. This relocation is expected to be a routine task and would not result in the disruption of service. Therefore, no impact would occur.

b) The Project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years: *NO IMPACT.*

As described in Section 2.5.10, *Water Supply and Use*, the Project would require up to 3,077,000 gallons of water (less than one acre-foot) for construction activities such as dust control, grading, and concrete preparation. Water for such activities would be supplied by VWD. VWD provided a Will Serve Letter to SDG&E on October 19, 2017, which confirmed the availability of potable VWD water resources for Project construction at that time, but acknowledged that as VWD's water source is 100 percent imported, it is possible that adequate water may not be available when the Project is ultimately constructed (VWD, 2017). VWD's 2015 Urban Water Management Plan acknowledges that supply shortfalls could occur in dry and multiple dry year scenarios, but indicates that based on information provided by the SDCWA, the water supply available to VWD is considered to be reliable. Additionally, the plan notes that the purchase of 3,500 acre-feet per year of contracted desalinated seawater supply through SDCWA from the Carlsbad Desalination Plant will improve the overall reliability of VWD's available water supply during multiple dry-year scenarios (VWD, 2015). The Project's short-term demand for water during construction represents less than 0.03 percent of that annual water purchase, and would not be a recurring demand. Operation and maintenance activities would be substantially similar to operation and maintenance of existing facilities, and changes in operational water needs would be negligible. Therefore, Project construction and operation would have no effect on water supplies available to serve reasonably foreseeable future development, and no impact would occur.

c) The Project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments: *NO IMPACT.*

As described under Questions a and b, the primary use of water during Project construction would be for dust control, in which case water would either evaporate or be absorbed into the ground and would not require treatment as wastewater. Additional runoff generated by other construction activities or increases in impervious surfaces would be managed and controlled by the SWPPP. Construction would generate small volumes of sanitary wastewater, which would be disposed of by a licensed provider with capacity to meet the Project's needs.

Wastewater generation during operation and maintenance would be similar to existing conditions. No new wastewater-generating facilities would be constructed or operated as part of the Project. The Project would not cause a wastewater treatment provider to determine that it has inadequate capacity to serve the Project's projected demand in addition to its existing commitments; therefore, no impact would occur.

d) The Project would not generate solid waste in excess of state or local standards or in excess of the capacity of local infrastructure: *LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.*

Construction activities would generate various waste materials including concrete, plastic, metals, utility poles, utility line cables, and general waste such as paper, soil, vegetation, treated wood, conductors, insulators, and other pole hardware. As described in Section 2.5.12, *Waste Management, Cleanup, and Post-Construction Restoration* and in Table 2-12, SDG&E would reuse or recycle any salvageable structures, poles, materials, and components. Any material that cannot be reused or recycled would be collected and properly disposed of off-site. Wooden poles removed during construction would be disposed of in a composite-lined portion of a municipal solid waste landfill approved by the San Diego RWQCB. As described in Section 3.19.1, *Environmental Setting, Solid Waste and Recycling Services*, SDG&E intends to use Otay Landfill to dispose of treated wood poles. Otay Landfill has sufficient permitted capacity to accommodate the needs of the Project. A relatively small amount of hazardous or otherwise regulated waste would be generated during construction and demolition activities. Impacts related to hazardous wastes are discussed in Section 3.8, *Hazards and Hazardous Materials*.

There are no State or local standards limiting the amount of solid waste that can be generated by a project of this nature. However, there are statutes, goals, and policies directing the diversion of a percentage of all wastes generated. As described in Section 3.19.2, *Regulatory Setting*, compliance with the CALGreen code requires that nonresidential building projects recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste *or* meet a local construction and demolition waste management ordinance, whichever is more stringent. San Diego County has adopted a more stringent requirement of recycling or reusing 90 percent of inert materials and 70 percent of all other materials. Because the Project would not be required to obtain a building permit from San Diego County, no mechanism exists to require or enforce the Project's compliance with the County's construction and demolition waste diversion requirements. However, because these requirements are more stringent than the CALGreen

requirement of 65 percent of nonhazardous construction and demolition waste, per CALGreen Section 5.408, the Project would have the potential to impair the attainment of solid waste reduction goals unless it meets the more stringent requirements of this ordinance.

A significant impact would occur if the Project did not comply with the CALGreen code by meeting these more stringent diversion requirements, because the Project would not meet regionally appropriate sector-specific targets for complying with the California Integrated Waste Management Act. Therefore, in order to achieve compliance with State regulations, the Project would incorporate **Mitigation Measure US-1** and would recycle and/or reuse 90 percent of inert materials and 70 percent of all other materials, as well as 100 percent of trees, stumps, rocks, and other vegetation. This would ensure that the Project is in compliance with the requirements of the CALGreen code. With implementation of this mitigation measure, impacts would be less than significant.

> **Mitigation Measure US-1: Construction and Demolition Debris Recycling Ordinances.** SDG&E and its contractors shall recycle and/or reuse 90 percent of inert materials and 70 percent of all other materials, as well as 100 percent of trees, stumps, rocks, and other vegetation. In order to document and track such diversions, the applicant shall provide the following:
>
> - Prior to construction, the Applicant shall provide a preliminary Construction and Demolition Debris Register (Preliminary Debris Register) that lists all anticipated construction and demolition solid waste streams (by weight) along with how the project will dispose/divert each waste. The Preliminary Debris Register shall also list the anticipated destination(s) (i.e., location or facility) for each waste stream. The Preliminary Register shall document how the project shall achieve the minimum waste diversion percentages.
> - During construction activities, the Applicant shall keep records (e.g., a log) on site documenting the disposal and/or diversion of all construction and demolition debris that leaves the project site. The Applicant shall also keep copies of all corresponding receipts or similar documentation from solid waste facility, recycling center, green waste facility, or other permitted facility.
> - During construction activities, the Applicant shall provide updates for solid waste diversion to the CPUC as part of the Quarterly Project Status Reports required by the Mitigation Monitoring, Reporting, and Compliance Program (MMRCP).
> - Following the completion of construction activities, the Applicant shall provide a Final Debris Register that documents the final construction and demolition debris totals, destinations, and diversion percentages. The Final Debris Register shall document the Project's final compliance with the minimum diversion percentages.
>
> **Significance after Mitigation:** With the incorporation of Mitigation Measure US-1, the Project would not generate solid waste in excess of state or local standards. Therefore, the Project's impact would be less than significant.

e) The Project would not negatively impact the provision of solid waste services or impair the attainment of solid waste reduction goals: *LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.*

The Project would have no effect on the provision of solid waste services within the Project vicinity. As described under Question d, the Project could have a significant impact on the attainment of solid waste reduction goals by failing to comply with the most stringent applicable waste diversion requirements. However, in order to comply with the California Integrated Waste Management Act, the Project would adopt **Mitigation Measure US-1** which would require that the Project divert at least 90 percent of inert wastes and at least 70 percent of all other non-hazardous solid waste from disposal at landfills. This would include: wood poles and associated hardware, conductors, and insulators; scrap steel, copper, and other metals; concrete; soils; and batteries. Surplus soils would be minimal and would be used to refill holes left after the removal of poles. As shown in Table 3.19-1, landfills near the Project have been identified to have sufficient capacity for waste generated during construction. Project operation and maintenance would generate negligible waste and would not significantly differ from existing conditions. As described in Section 3.19.1, *Environmental Setting, Solid Waste and Recycling Services,* landfills near the Project would have enough capacity to accept any generated hazardous and nonhazardous waste from the Project.

> **Mitigation Measure US-1: Construction and Demolition Debris Recycling Ordinances.** See full text of this Mitigation Measure under Question d, above.
>
> **Significance after Mitigation:** With the incorporation of waste diversion requirements identified in Mitigation Measure US-1, the Project would not impair the attainment of solid waste reduction goals or negatively impact the provision of solid waste services. Therefore, impacts would be less than significant.

f) The Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste: *LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.*

As discussed above, the Project would generate waste during construction and minimal waste during operation and maintenance. The Project could have a significant impact if it did not comply with federal, state, and local management and reduction statutes and regulations related to solid waste. However, through the implementation of **Mitigation Measure US-1** the impact would be less than significant.

> **Mitigation Measure US-1: Construction and Demolition Debris Recycling Ordinances.** See full text of this Mitigation Measure under Question d, above.
>
> **Significance after Mitigation:** With the incorporation of Mitigation Measure US-1, the Project would comply with federal, State, and local management and reduction statutes and regulations related to solid waste. Therefore, the impacts would be less than significant.

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3.20 Wildfire

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
20.	**WILDFIRE — If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:**				
a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b)	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☒	☐	☐
c)	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d)	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☒	☐	☐

This section identifies and evaluates issues related to wildfire in the context of the Project. It includes a description of designated wildfire hazard zones that the Project crosses through as well as a discussion of the existing fire environment. This section further provides a discussion of applicable State, regional, and local plans and programs, and an evaluation of potential impacts associated with implementation of the Project. For the purposes of this analysis of wildfire risk, the study area is defined as the SDG&E right-of-way (ROW), existing access roads, and areas where housing and structures are located downstream or downslope of the Project. This area was chosen as the study area because the SDG&E ROW corresponds with the vegetation and wire clearance requirements identified in Section 3.20.2, *Regulatory Setting*.

3.20.1 Environmental Setting

Fire Protection Services

Section 3.15, *Public Services*, describes the fire protection services provided by a number of different State and local entities, including Battalion 7 of the San Diego Unit of the Southern Region of the California Department of Forestry and Fire Protection (CAL FIRE), the San Diego County Fire Authority, the fire departments of the cities of Carlsbad, Escondido, San Marcos, and Vista, and the Rancho Santa Fe Fire Protection District. These agencies would have responsibility for responding to fires in the study area.

CAL FIRE-Designated Wildfire Hazard Zones

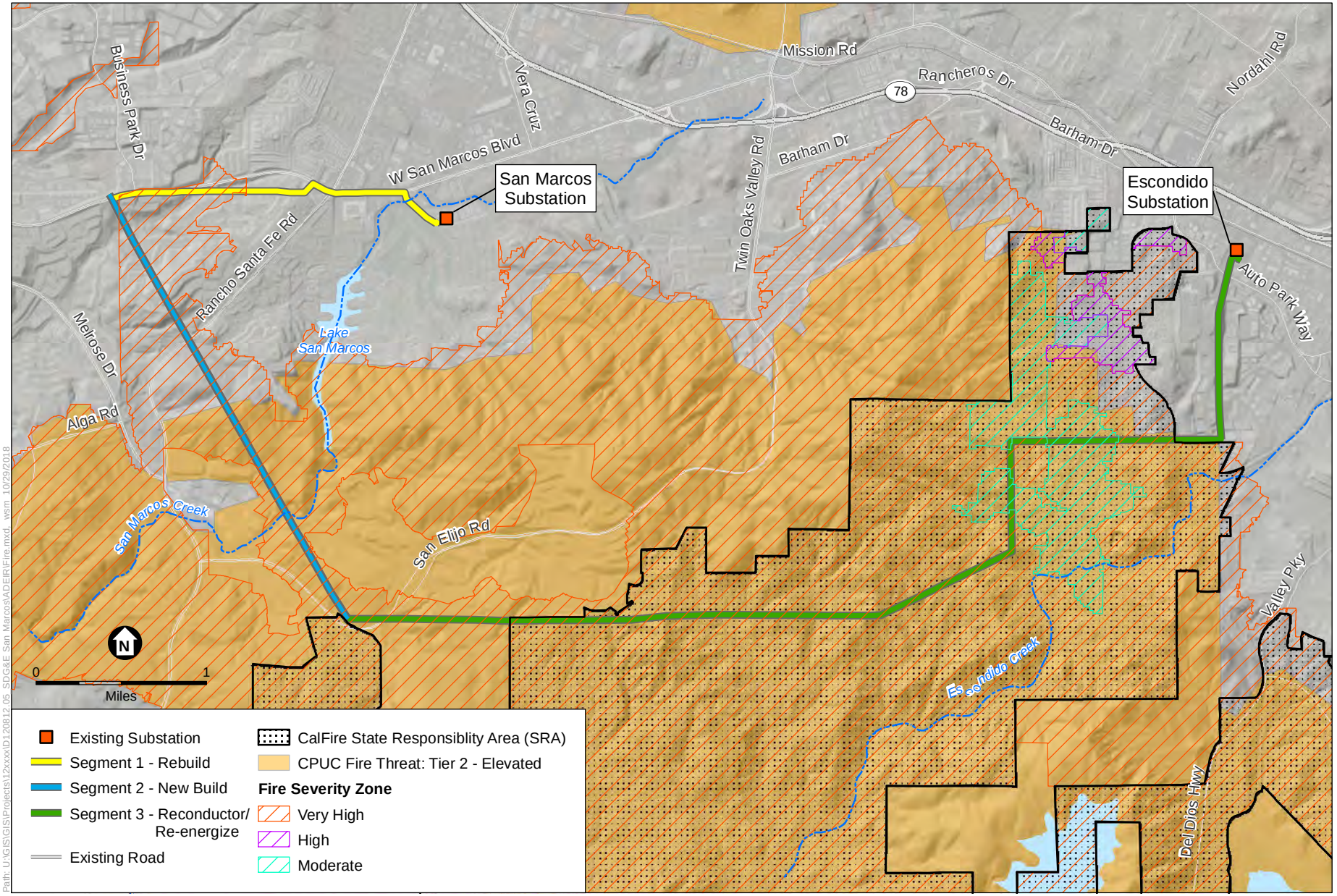
CAL FIRE has published Draft Fire Hazard Severity Zones for both Local Responsibility Areas (LRAs) and State Responsibility Areas (SRAs). SRAs are the official boundaries where the State

of California (through CAL FIRE) has the primary legal and financial responsibility for the prevention and suppression of wildland fires. In the vicinity of the Project, SRA boundaries are approximately contiguous with unincorporated San Diego County, with the exception of the Lake San Marcos neighborhood, as shown in **Figure 3.20-1**. CAL FIRE provides a basic level of wildland fire prevention and protection services for these designated areas (CAL FIRE, 2012a). LRAs include incorporated cities and densely populated areas. Fire protection within these areas is typically provided by city fire departments, fire protection districts, counties, and by CAL FIRE under contract to local governments (CAL FIRE, 2012b). These maps give fire hazards either a "moderate," "high," or "very high" rating classification. As identified in Figure 3.20-1, CAL FIRE has mapped a majority of the Project, excluding the Escondido substation, as being in moderate to very high fire hazard severity zones (CAL FIRE, 2007, 2009). The portions of the Project alignment which would be located in a very high fire hazard severity zone would pass through San Marcos, the community of Lake San Marcos, the community of San Elijo, the communities of Elfin Forest and Harmony Grove, and would be located adjacent to the City of Vista and the community of Olivenhain. The staging yard at 12332 Vigilante Road in Lakeside is in a very high fire hazard severity zone. The majority of Segment 3 is located in a CAL FIRE SRA.

CPUC-Designated Wildfire Hazard Zones

In response to the CPUC's Fire Safety Rulemaking, the CPUC mapped high fire threat areas where more stringent requirements would be implemented due to the elevated risk for power line fires. The CPUC High Fire Threat District Map identifies three tiers of elevated risk for fires associated with utilities. As shown in Figure 3.20-1, the majority of Segment 2 and 3 are located in an area designated as Tier 2 within the High Fire-Threat District. Tier 2 areas are defined as areas "where there is an elevated risk (including likelihood and potential impacts on people and property) from wildfires associated with overhead utility power lines" (CPUC, 2017a). Tier 2 areas are subject to more restrictive fire safety standards, as described in Section 3.20.2, *Regulatory Setting*. The portions of the Project alignment which would be located in a Tier 2 Fire Threat District would pass through San Marcos, the community of Lake San Marcos, the community of San Elijo, the communities of Elfin Forest and Harmony Grove, and would be located adjacent to the community of Olivenhain.

SDG&E has adopted and implemented the High Fire Threat District Map (SDG&E, 2018). While the CPUC developed the High Fire District Map, SDG&E created an interim map of its service territory to identify areas with particularly high risk for wildfire. Using CAL FIRE data, SDG&E established Fire Threat Zones (FTZ) and Highest Risk Fire Areas (HRFA). FTZs include the geographic areas most prone to wildfire due to local environmental conditions and features such as fuel rank and expected fire frequency. The FTZs include areas described in CAL FIRE's Fire Hazard Severity Zone as having an "extreme" or "very high" risk, as well as some areas with a "high" risk (SDG&E, 2017a). SDG&E's Electric Standard Practice 113.1 (described in Section 3.20.2, *Regulatory Setting*, uses the FTZ and HRFA zones to establish more restrictive standards for areas with an elevated risk for utility related wildfires. The majority of Segment 2 and 3 are located within a Fire Threat Zone. Segment 1 and both the San Marcos Substation and Escondido Substation are located outside of designated FTZ and HRFAs.



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3.20-3

SOURCE: SDGE, 2018; CalFire, 2009; CPUC, 2018

TL 6975 San Marcos to Escondido Project

Figure 3.20-1

Designated Wildfire Hazard Zones

ESA

Fire Environment

Climate

The Project region has a Mediterranean climate characterized by warm to hot, dry summers and mild to cool winters. Summer temperatures range from mid- to upper 90 degrees Fahrenheit. Hot dry spells occasionally occur near the coastline and mountainous areas. The region receives an annual average of 12 to 15 inches of precipitation. Southern California's climate leads to two types of wildfire: wildfires driven by Santa Ana winds which typically spread rapidly and occur from September through December, and wildfires which typically occur during hot and dry weather from June to September, outside of the Santa Ana season (Jin et al., 2015). Santa Ana winds are a characteristic weather phenomenon in southern California. These strong, dry winds can occur in any time of the year but typically occur during the drier period of late summer and fall. Santa Ana winds are created when a pressure difference exists between a cold, interior air mass in the Great Basin and the pressure along the California Coast. This occurrence causes dry air from the Great Basin to move south around the Sierras and then westward toward Southern California, warming as they move toward the coast. These winds blow westward through canyons, often exceeding 40 miles per hour (CNAP, 2015). Due to the low humidity and high temperatures these winds bring with them, Santa Ana winds have the potential to severely exacerbate forest or brush fires (CAL FIRE, 2018a).

Topography and Vegetation/Fuels

The terrain in the study area is characterized by mesas, valleys, inland canyons, and small mountains. Terrain type has a strong influence over fire behavior.[1] Steep terrain can often increase fire behavior. The Project components cross various types of terrain and slopes of varying steepness. At some locations along Segments 2 and 3, housing is located downslope from the study area.

Vegetation in the inland canyon areas of the San Diego County typically contains chaparral species. Chaparral types of vegetation account for at least 70 percent of the vegetation in San Diego County. Vegetative cover type and species composition have a direct effect on fire behavior. The native shrub species that compose the majority of the chaparral vegetation types present a high potential fire hazard based on their structure and fuel loading (CAL FIRE, 2018a).

Impact of Wildfire on Air Quality

As wildfires burn fuel, large amounts of carbon dioxide, black carbon, brown carbon, and ozone precursors are released into the atmosphere. Additionally, wildfires emit a substantial amount of volatile and semi-volatile organic materials and nitrogen oxides that form ozone and organic particulate matter. These emissions can lead to harmful exposures for first responders, nearby residents, and populations in regions which are further from the wildfires (NOAA, 2018). Exposure to these pollutants can cause asthma attacks, coughing, and shortness of breath. Chronic exposure to these pollutants can increase the risk of developing chronic health conditions such as

[1] The U.S. Forest Service defines fire behavior as "The manner in which a fire reacts to the influences of fuel, weather, and topography" (USFS, 2018).

heart disease, diabetes, and cancer (Hamers, 2018; Milman, 2018). These pollutants are described in more detail in Section 3.3, *Air Quality*.

Fire History

The topography, vegetation, and climatic conditions in San Diego County often create a scenario of "fuel alignment" where individual conditions such as temperature, humidity, fuel type, wind conditions, and topography support large wildfires (CalFire, 2018a). These fuel and weather conditions help CAL FIRE administrators determine what times of the year conditions will be conducive to the ignition and spread of wildfire and; therefore, what the designated fire season should be.[2] In 2017, the fire season for the San Diego Unit was designated from June 12, 2017 to January 22, 2018 (CAL FIRE, 2017). The 2003 and 2007 Fire Siege burned over half a million acres of coastal sage, chaparral, and forest lands in San Diego County. Over the past 50 years, San Diego County has had a significant history of major fire incidents. From 2013 to 2017, 36 percent of fire ignition causes were unknown or "miscellaneous," while the leading known causes of ignition included smoking (23 percent), vehicles (14 percent), campfires (7 percent), equipment use and playing with fire (each 6 percent), and lightning (5 percent). Electrical power was responsible for approximately 1 percent of overall ignitions. In addition to the influence of readily available fuels, a rugged topography, and Santa Ana winds, the number of homes in the wildland-urban interface presents a challenge to fire management in the region. (CAL FIRE, 2018a)

Future Fire Regime

As the large-scale fires throughout Northern California and Southern California in 2017 and 2018 demonstrated, fires are getting bigger and more destructive and massive quick-spreading fires are becoming more frequent (Syphard, 2018). Many factors contribute to this change including long-term drought, changes in vegetation type and fuel loading, changing temperature and meteorological conditions, more homes in the wildland-urban interface, and increases in the numbers of human caused ignitions. Together, these climatic changes and human-driven changes has led to a shift in the fire regime in California. Continual pressures on the factors listed above such as rising temperatures, longer-term drought conditions, and continual expansion of human influence in perimeter wildland areas are expected to intensify wildfires in Southern California by the middle of the 21st century (Jin et al., 2015).

Emergency Response

As described in Section 3.9, *Hazards and Hazardous Materials*, emergency response is San Diego County is coordinated by the Office of Emergency Services (OES). OES also drafts and produces the Operational Area Emergency Operations Plan (OA EOP), a County document which includes specific information about existing evacuation routes, the development of evacuation routes, interagency coordination, and mutual aid agreements during fire and rescue operations. The OA EOP indicates that in the event of an evacuation, ground transportation routes will be the primary means of evacuation and major evacuation routes will be major ground transportation corridors.

[2] CAL FIRE defines the fire season as: "That portion of the year, generally 6 to 8 months in the summer and fall in California, declared such by the responsible public agency fire administrator. Declaration is based on fuel and weather conditions conducive to the ignition and spread of wildland fires" (CAL FIRE, 2016).

The OES has outlined primary evacuation routes as major interstates, highways, and prime arterials. Out of these major highways and arterials, Route 78 is located approximately 0.3 miles from the eastern terminus of the Project alignment and Interstate 15 is located approximately 0.6 miles from the eastern terminus of the Project alignment. The OA EOP does not designate specific evacuation routes and explains that these routes would be identified and coordinated by local law enforcement and emergency responders in an emergency situation. (OES, 2018)

In the 2011 Elfin Forest and Harmony Grove Community Plan, Issue CM-3.1 identified that many private roads in Elfin Forest are not adequately named or identified for adequate public safety responses (San Diego County, 2011). In order to address this, the community plan created a policy that the Elfin Forest- Harmony Grove Town Council create a naming system to name and map unnamed streets that could be used as emergency evacuation routes. The Rancho Santa Fe Fire Protection District identifies evacuation routes and wildfire emergency guides for communities within the designated Fire District boundaries. The Elfin Forest and Harmony Grove communities are both protected and served by the Rancho Santa Fe Fire Protection District (Rancho Santa Fe Fire Protection District, 2019). Further information on this Fire District can be found in Section 3.15, *Public Services*.

3.20.2 Regulatory Setting

Federal

There are no federal laws, regulations, or policies that are relevant to this analysis of wildfires.

State

California Public Utilities Code Section 702

This code section states that "Every public utility shall obey and comply with every order, decision, direction, or rule made or prescribed by the [CPUC] … in any way relating to or affecting its business as a public utility, and shall do everything necessary or proper to secure compliance therewith by all of its officers, agents, and employees."

California Public Utilities Commission General Orders

General Order 95

CPUC General Order 95 applies to construction and reconstruction of overhead electric lines in California. The replacement of poles, towers, or other structures is considered reconstruction and requires adherence to all strength and clearance requirements of this order. The CPUC has promulgated various Rules to implement the fire safety requirements of General Order 95, including:

- Rule 18A, which requires utility companies take appropriate corrective action to remedy Safety Hazards and General Order 95 nonconformances. Additionally, this rule requires that each utility company establish an auditable maintenance program.

- Rules 31.2, which requires that lines be inspected frequently and thoroughly. Rule 35, which requires that vegetation management activities be performed in order to establish necessary and reasonable clearances. These requirements apply to all overhead electrical supply and communication facilities that are covered by this General Order, including facilities on lands owned and maintained by California state and local agencies.
- Rule 38, which establishes minimum vertical, horizontal, and radial clearances of wires from other wires.
- Rule 43.2.A.2 which requires that for lines located within Tier 2 or Tier 3 zones, the wind loads required in Rule 43.2.A.1 be multiplied by a wind load factor of 1.1. (CPUC, 2018)

General Order 165

General Order 165 establishes requirements for the inspection of electric distribution and transmission facilities that are not contained within a substation. Utilities must perform "Patrol" inspections, defined as a simple visual inspection of utility equipment and structures that is designed to identify obvious structural problems and hazards, at least once per year for each piece of equipment and structure. "Detailed" inspections, where individual pieces of equipment and structures are carefully examined, are required every five years for all overhead conductor and cables, transformers, switching/protective devices, and regulators/capacitors. By July 1st of each year, each utility subject to this General Order must submit an annual report of its inspections for the previous year under penalty of perjury. (CPUC, 2017b)

General Order 166

General Order 166 Standard 1.E requires that IOUs develop a Fire Prevention Plan which describes measures that the electric utility will implement to mitigate the threat of power-line fires generally. Additionally, this standard requires that IOUs outline a plan to mitigate power line fires when wind conditions exceed the structural design standards of the line during a Red Flag Warning[3] in a high fire threat area. Fire Prevention Plans created by IOUs are required to identify specific parts of the utility's service territory where the conditions described above may occur simultaneously. Standard 11 requires that utilities report annually to the CPUC regarding compliance with General Order 166 (CPUC, 2017c). In compliance with Standard 1.E of this General Order, SDG&E adopted a Fire Prevention Plan on October 31, 2017 and updated the plan on October 31, 2018. As described in Section 3.20.1, Environmental Setting, SDG&E developed an interim map of FTZ and HRFA zones in order to establish stricter standards for power lines within areas of elevated risk (SDG&E, 2017a).

SDG&E Fire Prevention Plan

SDG&E has prepared a Fire Prevention Plan in compliance with CPUC Decision 12-01-032 (Fire Safety Order), Standard 1.E of General Order 166, and Senate Bill 1028. The Fire Prevention Plan describes SDG&E's fire prevention and safety procedures and programs which include, but are not limited to: fire threat and risk area mapping, building resiliency (including a Wood-to-Steel program), operational practices to reduce the risk of fires, fire prevention outreach and

[3] A Red Flag Warning is issued by the National Weather Service to alert fire departments of the onset, or possible onset, of critical weather and dry conditions that could lead to rapid or dramatic increases in wildfire activity.

training programs, field practice guidelines, advanced vegetation management, Fire Potential Index, and fire-hardening practices (SDG&E, 2017a, 2018). The Fire Prevention Plan was updated in October 2018 to adopt the CPUC High Fire Threat District mapping (SDG&E, 2018). SDG&E's Fire Prevention Plan is designed to reduce wildfire risk for the SDG&E service area and has designed prevention and response strategies specific to the geography of the service area. SDG&E's operational practices consider environmental conditions such as vegetation type, vegetation moisture content, relative humidity, temperature, and wind conditions. Considering these variables, in the case of extreme operating conditions, SDG&E deploys monitors and personnel to provide immediate response to potential incidents.

Electrical Standard Practice 113.1

SDG&E has developed operating protocols and safety standards that minimize the risk of wildland fires during SDG&E operation and maintenance activities. SDG&E's Fire Prevention Plan references and incorporates Electric Standard Practice 113.1 (Revised), Operations and Maintenance Wildland Fire Prevention into its overall plan for operational wildland fire prevention (SDG&E, 2014). This document contains requirements and guidance for all SDG&E operation and maintenance activities and contains additional requirements for projects within Fire Threat Zones and High Risk Fire Areas. The purpose of Electric Standard Practice 113.1 is to formalize standard operating procedures that would improve SDG&E's ability to prevent the ignition of any fire. Electric Standard Practice 113.1 sets minimum requirements for emergency suppression equipment to be carried by crews working in a Fire Threat Zone; restricts the type of work that can be conducted during elevated temperatures and extreme or Red Flag Warning operating conditions; incorporates federal, State and local requirements into standard business practices; requires formal "tailboard" safety discussions in order to identify dedicated fire patrol and extinguishment plans; restricts smoking and idling of vehicles to designated areas; and requires the use of spark arrestors and additional safety precautions when using equipment. As an SDG&E standard practice included in the Applicant's PEA, Electric Standard Practice 113.1 is considered a component of the Project proposed by the Applicant in the PEA (SDG&E, 2017a).

Senate Bill 1028

Senate Bill 1028 (2016) requires each electrical corporation to construct, maintain, and operate its electrical lines and equipment in a manner that will minimize the risk of catastrophic wildfire posed by those electrical lines and equipment, and makes a violation of these provisions by an electrical corporation a crime under state law. The bill also requires each electrical corporation to annually prepare a wildfire mitigation plan and submit to CPUC for review. The plan must include a statement of objectives, a description of preventive strategies and programs that are focused on minimizing risk associated with electric facilities, and a description of the metrics that the electric corporation uses to evaluate the overall wildfire mitigation plan performance and assumptions that underlie the use of the metrics.

2018 Strategic Fire Plan for California

Developed by the Board of Forestry and Fire Protection (the Board), the Strategic Fire Plan outlines goals and objectives to implement CAL FIRE's overall policy direction and vision. The 2018 Plan demonstrates CAL FIRE's focus on: 1) fire prevention and suppression activities to

protect lives, property, and ecosystem services; and 2) natural resource management to maintain the State's forests as a resilient carbon sink to meet California's climate change goals and to serve as important habitat for adaptation and mitigation. Unit Plans are developed and updated in order to implement the programs and goals of the 2018 Plan. Through the Strategic Plan, CAL FIRE implements and enforces the policies and regulations set forth by the Board and carries forth the mandates of the Governor and the Legislature (CAL FIRE, 2018b)

The 2018 San Diego Unit Strategic Fire Plan is a local wildfire planning document. The San Diego Unit Fire Plan outlines strategies for how the San Diego Unit will implement and meet the goals in the overall Strategic Fire Plan. The San Diego Unit is divided into battalions, the Project is located in Battalion 7, the Valley Center Battalion. (CAL FIRE, 2018a).

California Emergency Response Plan

Pursuant to the Emergency Services Act (Gov't Code §8550 et seq.), California has developed an Emergency Plan to coordinate emergency services provided by federal, State, and local governmental agencies and private persons. Response to hazardous materials incidents is one part of this plan. The plan is administered by the State Office of Emergency Services (OES). The OES coordinates the responses of other agencies, including the United States Environmental Protection Agency (USEPA), California Highway Patrol (CHP), California Department of Fish and Wildlife (CDFW), the RWQCBs (in this case, the San Diego RWQCB), the local air districts (in this case, the San Diego Air Pollution Control District) and local agencies. The State Emergency Plan defines the "policies, concepts, and general protocols" for the proper implementation of the California Standardized Emergency Management System (SEMS). The SEMS is an emergency management protocol that agencies within the State of California must follow during multi-agency response efforts whenever state agencies are involved.

Fire Protection in California Fire Code and Public Resources Code

The California Fire Code is contained within Title 24, Chapter 9 of the California Code of Regulations. Based on the International Fire Code, the California Fire Code is created by the California Buildings Standards Commission and regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. Similar to the International Fire Code, the California Fire Code and the California Building Code (CBC) use a hazards classification system to determine the appropriate measures to incorporate to protect life and property.

The California Public Resources Code includes fire safety provisions that apply to State responsibility areas (SRAs) during the time of year designated as having hazardous fire conditions. During the fire hazard season, these regulations restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on equipment that has an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire-suppression equipment that must be provided on-site for various types of work in fire-prone areas. Additional codes require that any person who owns, controls, operates, or maintains any electrical transmission or distribution line must maintain a firebreak clearing around and adjacent to any pole, tower, and conductors that carry electric current as specified in Public Resources Code Sections 4292 and 4293. Section 4292 requires that a 10-foot clearance be

maintained around the base of poles be cleared of all flammable vegetation. The State's Fire Prevention Standards for Electric Utilities (14 Cal. Code Regs. §§1250-1258) provide specific exemptions from electric pole and tower firebreak and electric conductor clearance standards and specifies when and where standards apply.

3.20.3 Applicant Proposed Measures

No Applicant Proposed Measures (APMs) have been identified to address potential impacts related to wildfires.

3.20.4 Environmental Impacts

Discussion

a) Substantially impair an adopted emergency response plan or emergency evacuation plan: *LESS THAN SIGNIFICANT IMPACT.*

As described in detail in Section 3.9, *Hazards and Hazardous Materials,* under Question f, the Project would have a less-than-significant impact on emergency response and evacuation plans during construction and operation. As described in Section 3.20.1, under the heading "Emergency Response," the OES does not designate specific evacuation routes in the OA EOP. Major highways interstates and highways are identified as primary evacuation routes in this plan. The Project Specific evacuation routes would be developed by emergency responders in the event of an emergency. APM TRA-1 includes implementation of traffic control measures that would be used during construction to ensure safety and minimize congestion, and APM TRA-2 requires the Applicant to coordinate with local agencies in the event of an emergency, to allow access for emergency vehicles and equipment. With the incorporation of these APMs, the Applicant would coordinate with and respond to the needs of emergency responders during construction and would not interfere with evacuation routes in the event of an emergency.

As described in Section 3.20.1, the Elfin Forest Harmony Grove Community Plan identifies an existing inadequacy in the mapping and identification of roads used for emergency response and evacuation within the community. This community is located along Segment 3 which includes existing poles that would be re-energized as part of the Project. The Project would not result in significant construction activity along Segment 3 which would have the potential to impair emergency access. Additionally, the implementation of APM TRA-2 would ensure that the Applicant would coordinate with local agencies during construction in the event of an emergency to allow for sufficient emergency access. During Project operation, in accordance with Electric Standard Practice 113.1, described in Section 3.20.2, the Project would retain a Fire Coordinator who would serve as a conduit or liaison to emergency service agencies. Coordination with local emergency responders during construction and operation would ensure that the Project would not conflict with emergency response or evacuation in this community.

As described in Section 3.20.2, *Regulatory Setting,* the 2018 Strategic Fire Plan for California outlines overarching goals for CAL FIRE. The state strategic plan focuses on promoting interagency coordination, participating in the development of regional and local planning efforts,

sharing risk assessment data, integrating fuels management practices across jurisdictions, and providing the appropriate level of resources and preparedness to enable fire suppression activities and post-fire recovery at the unit level. A review of the goals and objectives outlined in the 2018 Strategic Fire Plan for California demonstrated that the objectives in the Plan focus on improving CAL FIRE's internal organization and coordination with other agencies and stakeholders. The goals and objectives within the Plan would not be applicable to the Project; therefore, the proposed Project would not conflict with or impair the implementation of the 2018 Strategic Fire Plan for California.

The 2018 San Diego Unit Strategic Fire Plan outlines a number of goals and objectives to implement the statewide strategic plan. The San Diego Unit plan and Battalion 7 objectives focus on coordination with relevant stakeholders, conducting and refining risk assessments, increasing communication and planning coordination with communities, and monitoring the effectiveness of projects and programs. A review of the goals and objectives outlines in the San Diego Unit Strategic Fire Plan demonstrated that the objectives in the Plan focus on improving San Diego Unit's collaboration with other agencies, participation in local planning processes, evaluating high risk areas in the County, and educating the public about overall fire risk. These goals and objectives would not be applicable to the Project.

The San Diego Unit Strategic Fire Plan and Battalion 7 plan identify the implementation of vegetation management treatments in high risk areas and priority areas in the wildland urban interface as an objective of the San Diego Unit and Battalion 7. The Project would be required by law to comply with Public Resources Code Sections 4292 and 4293 (described in Section 3.20.2, *Regulatory Setting*) which outlines the vegetation clearance required for electrical transmission lines. As a result of the Project's compliance with Public Resources Code, the Project would conduct the vegetation clearance and treatment required for transmission lines and would not conflict with San Diego Unit and Battalion 7's objective of conducting vegetation treatment in high risk areas. Therefore, the Project would not conflict with or impair the implementation of any of the goals or objectives listed in the San Diego Unit Strategic Fire Plan. The Project's impact on adopted emergency response plans would be less than significant.

Additionally, as described in SDG&E's Electric Standard Practice 113.1 'SDG&E Operations & Maintenance Wildland Fire Prevention Plan,' an SDG&E Fire Coordinator would be responsible for communicating and coordinating with local fire prevention and emergency response agencies throughout operation and maintenance activities (SDG&E, 2014). The Fire Coordinator would provide fire training to work crews and would coordinate fire prevention measures with local emergency response providers. This coordination would ensure that Project operation would not conflict with the implementation of the 2018 Strategic Fire Plan for California or the 2018 San Diego Unit Strategic Fire Plan.

Furthermore, although not necessary to reduce the impact on emergency response or evacuation, which is less than significant, Mitigation Measure WIL-1: Fire Safety (described below under Question b) would ensure that while developing a Construction Fire Prevention Plan, SDG&E would coordinate with and consult CAL FIRE and local fire protection agencies to determine what emergency fire equipment should be provided at the construction site. This early

coordination with emergency response agencies during both construction and operation would ensure that the Project's specific Fire Prevention Plans are coordinated with state and local emergency response efforts.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire: *LESS THAN SIGNIFICANT WITH MITIGATION INCOPORATED.*

The Project structures are not intended for and would not be used for occupation and therefore would not expose project occupants to increased risks associated with wildfire. However, Project segments do pass through existing communities. Therefore, the following analysis focuses on the potential for Project construction and operation to increase the exposure of these communities to wildfire risks.

Construction

As discussed in Section 3.20.1, *Environmental Setting,* parts of the Project, excluding the Escondido substation and staging yards along Segment 3, are within moderate to very high fire hazard severity zones. The staging yard at 12332 Vigilante Road in Lakeside is in a very high fire hazard severity zone. Additionally, segments of the Project have also been mapped within an SDG&E Fire Threat Zone. The primary fire hazards from Project construction would involve the use of vehicles and equipment. Heat or sparks from construction vehicles and equipment could ignite dry vegetation and cause a fire, particularly during the dry, hot conditions from June to September and from September to December when dry, Santa Ana winds are more likely to occur. Additionally, construction activities that could result in sparks, such as welding or grinding, have a greater likelihood of creating a source of ignition. Therefore, depending on the time of year (as seasonality may affect climate conditions, prevailing winds, and vegetation/fuels) and the location of construction activities, the increase in sources of potential ignition associated with Project construction could exacerbate the risk of wildfire in the area. As discussed in Section 3.20.1, wildfires release large amounts of air pollutants which can lead to harmful exposure for first responders, nearby communities, as well as populations that are located further away. Therefore, due to the increase in potential sources of ignition, Project construction could increase the risk of surrounding communities' exposure to pollutant concentrations from wildfire and the uncontrolled spread of wildfire, which would result in a potentially significant impact.

As part of the PEA, SDG&E prepared TL 6975 Construction Fire Prevention Plan, a project-specific fire prevention plan which describes broadly which types of fire safety and emergency preparedness measures may be required during Project construction (SDG&E, 2017a). To ensure that wildland fire impacts during construction are reduced to less than significant, implementation of **Mitigation Measure WIL-1** would be required. The implementation of a Final Project-specific Construction Fire Prevention Plan would reduce potential sources of ignition. The plan would require that when a Red Flag Warning is issued by the National Weather Service (an alert that high winds and dry conditions could lead to rapid or dramatic increases in wildfire activity) that SDG&E and its contractor cease all non-emergency work in order to respond to changes in fire risk. Additionally, the plan would prepare work crews with emergency suppression

equipment and plans in order to respond quickly to any onsite incidents caused by construction activities. The incorporation of a Final Project-specific Construction Fire Prevention Plan would reduce impacts from Project construction to a less-than-significant level.

Mitigation Measure WIL-1: Fire Safety. SDG&E and/or its contractors shall prepare and implement a Final Project-specific Construction Fire Prevention Plan (CFPP) to ensure the health and safety of construction workers and the public from fire-related hazards. The Final Project-Specific Construction Fire Prevention Plan shall include the provisions in the TL 6975 Construction Fire Prevention Plan provided in Appendix 4.8-B of the Proponent's Environmental Assessment (SDG&E, 2017b), as well as the requirements listed below. Prior to construction, SDG&E shall contact and consult with the San Diego Unit of CAL FIRE, the San Diego County Fire Authority, and the fire departments of the cities of Carlsbad, Escondido, San Marcos, and Vista to determine the appropriate amounts of fire equipment to be carried on the vehicles and appropriate prevention measures to be taken. SDG&E shall submit verification of its consultation with the appropriate fire departments to the CPUC Project Manager. SDG&E shall submit the CFPP to the CPUC Project Manager for approval 60 days prior to commencement of construction activities and shall make the approved Final CFPP available to all construction crew members prior to construction of the Project. The Final CFPP shall list fire safety measures including fire prevention and extinguishment procedures, as well as specific emergency response and evacuation measures that would be followed during emergency situations; examples are listed below. The Final CFPP also shall provide fire-related rules for smoking, storage and parking areas, usage of spark arrestors on construction equipment, and fire-suppression tools and equipment. The Final CFPP shall include or require, but not be limited to, the following:

- SDG&E and/or its contractors shall have water tanks, water trucks, or portable water backpacks (where space or access for a water truck or water tank is limited) sited/available in the study area for fire protection.
- All construction vehicles shall have fire suppression equipment.
- SDG&E shall ensure that all construction workers receive training on the proper use of fire-fighting equipment and procedures to be followed in the event of a fire.
- As construction may occur simultaneously at several locations, each construction site shall be equipped with fire extinguishers and fire-fighting equipment sufficient to extinguish small fires.
- SDG&E shall instruct construction personnel to park vehicles within roads, road shoulders, graveled areas, and/or cleared areas (i.e., away from dry vegetation) wherever such surfaces are present at the construction site.
- SDG&E and its contractor shall cease work during Red Flag Warning events in areas where vegetation would be susceptible to accidental ignition by Project activities (such as welding or use of equipment that could create a spark).
- At each construction site, after construction has been completed for the day, the project contractor and/or the SDG&E Contract Administrator will perform visual inspections to ensure that all ignition risks are minimized or eliminated before leaving the work site.

- Successful implementation of Mitigation Measure WIL-1: Fire Safety would be demonstrated by the development of a Final CFPP in consultation with local fire authorities which is documented and submitted to the CPUC for final approval. Additionally, successful implementation of Mitigation Measure WIL-1 would require that SDG&E and its contractor comply with all components of the Final CFPP, that ignition from project construction activities is promptly reported to the fire department(s) with jurisdiction, and that when it is safe to do so, any project-caused ignition is suppressed immediately.

Significance after Mitigation: Implementation of Mitigation Measure WIL-1 would ensure that the risk of fire from Project construction is managed through collaboration with area fire protection agencies and that SDG&E and its contractors implement fire safety measures to prevent fire and are prepared to respond immediately if a fire should ignite. This impact would be reduced to a less-than-significant level.

Operations

The Project would include a rebuild of approximately 1.8 miles of an existing line, improvements to the existing San Marcos substation, the construction of a new 69kV power line parallel to an existing 138kV power line, and the reconductoring of 7.4 miles of an existing power line. Therefore, the majority of the Project would involve work on existing power lines and would not involve building or establishing power lines in previously undisturbed wildland areas. The 1.8 mile rebuild along Segment 1 would involve the replacement of wooden poles, which are associated with fire risk, with steel poles as part of SDG&E's "Wood to Steel Program" (SDG&E, 2017a, 2018). Steel poles are designed to withstand higher wind speeds than wooden poles. Therefore, this component of the Project would significantly reduce existing ignition risk along Segment 1. The Segment 2 New Build would involve constructing a new power line; however, this line would be constructed within an existing ROW where an existing power line is located. Therefore, once operational, the Project would not introduce a substantial new source of wildfire risk associated with operation and maintenance activities. Although there would be sufficient separation (30 feet) between the existing 138 kV Tie Line 13811/13825 and the Segment 2 New Build to prevent the two lines from crossing and creating an arc, due to the addition of the Segment 2 line, operation of the Project could result in a minor increase in the risk of wildland fires in the area.

Electrical lines can start a fire if an object such as a tree limb, kite, or mylar balloon simultaneously contacts the power line conductors and a second object, such as the ground or a portion of the supporting pole. System component failures and accidents during maintenance activities can also cause line faults that result in arcing on power lines. Power lines are also subject to conductor-to-conductor contact, which can occur when extremely high winds force two conductors on a single pole to oscillate so excessively that they contact one another. This contact can result in arcing (sparks) that could ignite nearby vegetation. As described above, the addition of the Segment 2 New Build and the ongoing operation of Segments 1 and 3 have the potential to result in a minor increase in the risk of ignition from the power lines.

SDG&E's Fire Prevention Plan is described in Section 3.20.2. The overall inspection, maintenance, risk management, emergency suppression, and response programs outlined in the Fire Prevention

Plan would apply to the Project and would be incorporated into operation and maintenance protocols as required by CPUC General Orders 95, 165, and 166, CPUC Decision 12-01-032, and California Public Utilities Code Section 702.

As described in Section 3.20.2, Electric Standard Practice 113.1 outlines specific fire prevention measures to be taken when performing maintenance activities in elevated risk conditions. Adherence to Electric Standard Practice 113.1 would ensure that operation and maintenance crews minimize ignition risk and are prepared for emergency suppression in the event of an incident.

Additionally, in accordance with applicable firebreak clearance requirements (Pub. Res. Code §4292; 14 Cal. Code Regs. §1254), SDG&E would trim or remove flammable vegetation in the area surrounding power line poles to reduce potential fire and other safety hazards. SDG&E typically inspects poles on an annual basis to determine if brushing is required. Also, in accordance with tree and power line clearance requirements (Pub. Res. Code §4293; 14 Cal. Code Regs. §1256; CPUC GO 95), SDG&E would regularly inspect and trim trees and vegetation to manage fire and safety hazards and ensure electrical reliability. SDG&E typically inspects trees in its service area for trimming needs annually.

The Project would consist primarily of reenergizing and rebuilding existing power lines. A portion of the Project would involve constructing a new power line parallel to an existing power line. Therefore, once operational, the Project would not significantly increase exposure to wildfire risk for surrounding communities. However, given the new build of Segment 2 and the inherent potential for ignition risk associated with power lines, SDG&E's Operation and Maintenance Fire Prevention Plan and Standard Practices would be incorporated into the Project's daily operation, as required by CPUC GO 166. These practices would ensure that potential sources of ignition are minimized during maintenance activities and would deploy precautionary measures during extreme operating conditions. The implementation of these measures would reduce the risk of exposing surrounding communities to exacerbated risk of the uncontrolled spread of a wildfire and associated impacts to a less-than-significant level.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment: *LESS THAN SIGNIFICANT IMPACT.*

As described in Section 2.5.3, *Pre-Construction Preparation*, a new permanent access road and four new permanent spur roads would be established as part of the Project. Additionally, Section 2.5.3 describes vegetation clearances that would be required during construction and operation. These access roads and vegetation clearances would aid in reducing wildfire risk and facilitating emergency suppression of fires should they occur. These components are considered a part of the Project and the environmental impacts that would result from the inclusion of these components are analyzed throughout this document on a resource-by-resource basis.

As discussed under Question b and Mitigation Measure WIL-1, Project construction and maintenance activities would require that construction crews and maintenance crews (depending

on operating conditions) have emergency water sources onsite in order to respond to fires. Electric Standard Practice 113.1 recommends that a minimum of 150 gallons be available onsite for maintenance activities, with a maximum of 1,500 gallons (SDG&E, 2014). Therefore, crews can be expected to require at least 150 gallons of water per crew during construction and maintenance activities. In comparison to the amount of water that would be required for the Project (3,079,000 gallons), this amount of water represents a negligible amount and would not have an impact on water supply. Therefore, the Project would not require the installation or maintenance of infrastructure that has not been considered in this document. As a result, impacts would be less than significant.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes: *LESS THAN SIGNIFICANT WITH MITIGATION INCOPORATED.*

As identified in Section 3.9, *Hydrology and Water Quality*, under Question c, during construction, the implementation of a SWPPP and BMPs related to erosion control would reduce potential impacts related to drainage patterns during construction to a less-than-significant level. Additionally, Question c explains that, following construction, drainage patterns onsite would be relatively similar to existing conditions. Therefore, the Project would not result in changes to runoff or drainage patterns which could exacerbate downslope or downstream flooding and thereby expose people or structures to associated risks.

As discussed under Question b, Project construction has the potential to increase wildfire risk as a result of increased sources of ignition. Unmitigated, this could result in a significant increased risk of post-fire flooding and landslides. However, the incorporation of **Mitigation Measure WIL-1: Fire Safety**, would require the implementation of a Construction Fire Prevention Plan that would require SDG&E and its contractors to consult with CAL FIRE and emergency response providers, use fire prevention measures such as requiring the use of spark arrestors and the restriction of work during Red Flag Warnings. Additionally, **Mitigation Measure WIL-1** would require that construction vehicles are prepared with emergency fire suppression equipment and plans which would equip construction crews to conduct emergency suppression in the event of an incident. The incorporation of this Construction Fire Prevention Plan would reduce the risk of wildfire to less than significant. As a result, the incorporation of this plan would reduce the potential for post-fire flooding or landslides to a less-than-significant level.

> **Mitigation Measure WIL-1: Fire Safety.** See full text for this Mitigation Measure under Question b, above.
>
> **Significance after Mitigation:** With implementation of Mitigation Measure WIL-1, the risk of flooding, mudslides, and slope instability associated with post-fire conditions would be addressed with a detailed Construction Fire Prevention Plan. Therefore, this impact would be less than significant.

As discussed in Question b, above, the incorporation of SDG&E's Fire Prevention Plan, Electric Standard Practice 113.1, and compliance with other vegetation clearance and maintenance requirements during operation would ensure that the Project would not substantially increase the risk of wildfire. Because the Project would have a low potential to exacerbate wildfire risk, it also

would not pose a substantial risk of causing post-fire slope instability in the study area. Therefore, the potential for Project operation to exacerbate the risk of flooding and mudslides as a result of post-fire slope instability would be less than significant.

Finally, the Project does not include any housing or structures, and therefore would not expose people or structures to increased risk associated with flooding, landslides, or post-fire slope instability as a result of locating them near such existing risks.

3.20.5 References

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3.21 Mandatory Findings of Significance

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
21. MANDATORY FINDINGS OF SIGNIFICANCE —				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

3.21.1 Mandatory Findings of Significance Discussion

Would the Project:

a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory: *LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.*

With the mitigation identified in this Draft IS/MND, the Project would not have the potential to substantially degrade the quality of the environment. As analyzed in Section 3.3, *Air Quality*, the Project would not conflict with or obstruct the implementation of the applicable air quality plan, and would result in less than significant impacts related to potential violation of air quality standards or cumulatively considerable net increases in existing or projected air quality, the exposure of sensitive receptors to substantial pollutant concentrations, and the generation of other emissions (such as objectionable odors) adversely affecting a substantial number of people.

As analyzed in Section 3.10, *Hydrology and Water Quality*, the Project would not alter existing drainage patterns in a manner that would impede or redirect flood flows. The Project would cause less-than-significant impacts related to depletion of groundwater supplies and interference with groundwater recharge, alteration of existing drainage patterns, increase of impervious surface, and risk of release of pollutants due to project inundation; and would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

With the implementation of Mitigation Measure HAZ-1, which would ensure that soil and water are monitored and that soil and/or water with chemical concentration that exceed regulatory standards would be properly tested, contained, and disposed of in a safe and legal manner, impacts related to the violation of water quality standards or waste discharge requirements would be reduced to a less-than-significant level.

As analyzed in Section 3.4, *Biological Resources*, the Project would not conflict with local policies or ordinances protecting biological resources and would result in a less-than-significant impacts on species identified as a candidate, sensitive, or special-status, and on riparian habitat or other sensitive natural community. It also would cause a less-than-significant impact related to interference with the movement of native resident or migratory fish or wildlife species and with established native resident or migratory wildlife corridors, it would not impede the use of native wildlife nursery sites, or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved habitat conservation plan. Mitigation Measure BIO-1, which requires Project compliance with the Federal and California Endangered Species Acts, would assure that adequate mitigation is achieved in the event that SDG&E's Natural Communities Conservation Plan (NCCP) does not have available mitigation credits. With the implementation of Mitigation Measure BIO-2, which requires the establishment of a three-dimensional cylindrical construction buffer around nests, impacts on protected and nesting avian species resulting from ground-based construction and helicopter activities would be reduced to a less-than-significant level. Implementation of Mitigation Measure BIO-3, which requires the avoidance of jurisdictional resources, would reduce the Project's impacts on federally protected wetlands to less than significant.

Further, as analyzed in Section 3.5, *Cultural Resources*, the Project would not eliminate important examples of the major periods of California history or prehistory. With the implementation of Mitigation Measures CUL-1 through CUL-7, the Project would have a less-than-significant impact on archaeological deposits that do or could qualify as historical resources pursuant to CEQA Guidelines Section 15064.5.

Finally, as analyzed in Section 3.7, *Geology, Soils, Seismicity, and Paleontological Resources*, with the implementation of Mitigation Measures PALEO-1 through PALEO-4, the Project would have a less-than-significant impact related to the destruction of a unique paleontological resource or site or unique geologic feature.

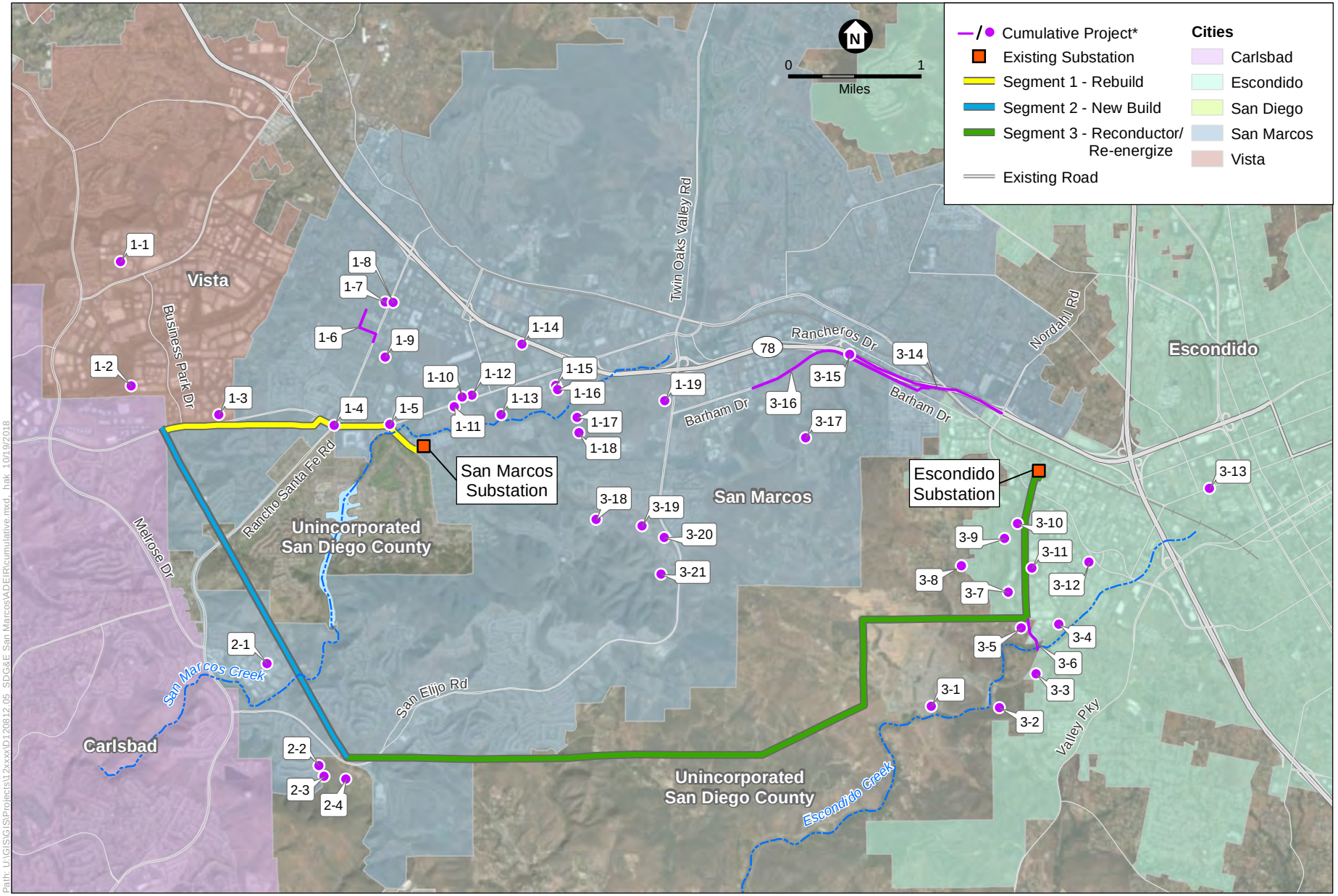
b) Have impacts that are individually limited, but cumulatively considerable: *LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED.*

CEQA Guidelines Section 15130 requires a discussion of the cumulative impacts of a project when the project's incremental contribution to a significant cumulative effect is "cumulatively considerable." This means that the project's incremental effects are considerable when viewed in connection with the effects of past, current, and probable future projects. An incremental, project-specific contribution to a cumulative impact is less than cumulatively considerable and is not significant if, for example, the project is required to implement or fund its fair share of a mitigation measure(s) designed to alleviate the cumulative impact.

Consistent with CEQA Guidelines Section 15130(b), the CPUC has prepared a list of past, present, and reasonably foreseeable future projects that could result in related or cumulative impacts. This list includes projects outside the control of CPUC (the Lead Agency). The analysis of cumulative impacts also considers projections contained in planning documents designed to evaluate regional or area-wide conditions. Specifically, this "projections approach" is used at least in part in the cumulative analyses for Air Quality, Energy, Greenhouse Gas Emissions, Noise, and Recreation. Existing conditions within the cumulative impacts area of effect reflect a combination of the natural condition and the effects of past actions in the affected area. The following factors also were used to determine an appropriate list of projects to be considered in this cumulative analysis:

- **Similar Environmental Impacts** – The analysis considers "reasonably foreseeable" projects that would contribute to effects on resources also affected by the Project. These include, for example, other electric transmission, or public utility-related projects.
- **Geographic Scope** – The appropriate geographic area of cumulative analysis is identified on a resource-by-resource basis as dictated by relevant physical and/or environmental boundaries (such as the extent of the groundwater basin or the roadways traveled by Project vehicles).
- **Timing and Temporal Scope** – Incremental impacts of the Project could combine with the incremental impacts of other projects to cause or contribute to cumulative effects if the Project's construction, operation, and maintenance periods coincide in terms of timing with the effects of the other projects.

San Diego County, San Diego Gas and Electric (SDG&E), and the cities of San Marcos, Vista, Carlsbad, and Escondido were contacted for information on projects within their respective jurisdictions (refer to Section 3.21.2, *References*); information about non-CPUC projects was also derived from city and county websites. The projects considered to be part of the potential cumulative scenario are presented in **Table 3.21-1**, which also describes the approximate geographic location of each project (see also **Figure 3.21-1**). Most of these projects are located in San Marcos and Escondido. The projects in the potential cumulative scenario include a range of project types. They primarily consist of infrastructure and capital improvement projects, as well as private site development projects. These projects are considered reasonably likely to be constructed and/or operated in a similar timeframe as the proposed Project and are projects that could contribute incremental impacts that are similar to those of the proposed Project. It should be noted that a number of the residential, commercial/office, and industrial projects identified as cumulative projects are market-driven. The status and construction dates for these projects are not determined. Therefore, for the purposes of this cumulative analysis, the CPUC assumes these projects would occur concurrently with this Project.



* For detailed list of cumulative projects see Table 3.21-1

SOURCE: SDGE, 2018; ESA, 2018

TL 6975 San Marcos to Escondido Project

Figure 3.21-1
Cumulative Projects

TABLE 3.21-1
CUMULATIVE SCENARIO

ID	Project Name	Project Location	Approximate Distance from Project	Jurisdiction	Project Description	Status/ Construction Start Date	Status/ Construction End Date
Segment 1							
1-1	Chandler's Sand and Gravel	Pipeline Drive and Engineer Street	1.3 miles from Segments 1 and 2	City of Vista	4.5 acre materials recovery facility for sand, gravel, and asphalt.	Application submitted July, 2018	Withdrawn
1-2	Keystone Victory Industrial Park	Western terminus of Keystone way	0.35 mile from Segments 1 and 2	City of Vista	Two industrial buildings on 10.3 acres.	Under construction	Summer 2019
1-3	Vista Palomar	2100 West San Marcos Boulevard	Along Segment 1	City of Vista	198 condos, 100-room hotel on 17.2 acres east of Business Park Drive	Under construction	Spring 2019
1-4	San Marcos High School Traffic Improvements	East of intersection of San Marcos Boulevard and South Rancho Santa Fe Road.	Adjacent to Segment 1	City of San Marcos	Pedestrian safety improvements at the intersection at San Marcos Boulevard and South Rancho Santa Fe Road.	2015	2016
1-5	San Marcos Boulevard at Discovery Street Intersection Improvements	Intersection of San Marcos Boulevard and Discovery Street	Adjacent to proposed poles Segment 1	City of San Marcos	Eliminate free right turn at Discovery Street, replace existing traffic signal, and reconfigure intersection	Funded through 2018	Pending
1-6	Starstone/La Rosa Road Drainage Improvements	Starstone Drive to La Rosa Drive and Rancho Santa Fe Road to Linda Vista Drive.	0.75 mile from Segment 1	City of San Marcos	Construct 48-inch concrete storm drain system from Starstone to La Rosa and Rancho Santa Fe Road to Linda Vista Drive intersection.	2015	2016
1-7	Shane Park Plaza	200 Rancho Santa Fe Road	0.9 mile from Segment 1	City of San Marcos	Mixed-use project, 19 apartments and approximately 6,000 square feet retail space.	Unknown	2016
1-8	Pacifica San Marcos	South Rancho Santa Fe Road and Creek Street, between Pawnee Street and South Rancho Santa Fe Road	1 mile north of San Marcos Substation	City of San Marcos	Three-story, mixed-use development with approximately 5,000 square feet commercial/retail space on the ground floor and approximately 31 residential units on the upper floors.	Approved	Summer 2019
1-9	Bradley Park Channel Improvements	Bradley Park, 1587 Linda Vista Drive	0.36 mile from Segment 1	City of San Marcos	Channel rehabilitation and drainage improvements, water quality protection and erosion control between the upper and lower mesas of the park.	2016	2017
1-10	The McDonald Group	1100 West San Marcos Boulevard	0.50 mile from Segment 1	City of San Marcos	85 units with up to approximately 5,000 square feet of commercial ground level.	Approved	Tentative 2019
1-11	Main Square (San Marcos Creek Specific Plan)	San Marcos Creek District, 1167 West San Marcos Boulevard	0.4 mile from Segment 1	City of San Marcos	Proposed mixed-use development with 42,305 square feet of commercial space, 519 apartments, 22 live/work units, and 820 surface and underground parking space on 4.5 acres.	2015	Under review

TABLE 3.21-1 (CONTINUED)
CUMULATIVE SCENARIO

ID	Project Name	Project Location	Approximate Distance from Project	Jurisdiction	Project Description	Status/ Construction Start Date	Status/ Construction End Date
Segment 1 (cont.)							
1-12	Venturepoint Development	1020 West San Marcos Boulevard	0.5 mile from Segment 1	City of San Marcos	Modify/reconfigure the parking lot, driveway locations and onsite improvements. Offsite improvements to West San Marcos Boulevard.	2011	Under review
1-13	San Marcos Creek Specific Plan, Bent Avenue Bridge and Street Improvements	Between intersections of Discovery Street with Via Vera Cruz and South Bent Avenue.	0.65 mile from Segment 1	City of San Marcos	New 4-lane bridge spanning San Marcos Creek on Via Vera Cruz, a 2-lane bridge on Bent Avenue, widening of Discovery Street to 4-lane secondary arterial standards between the bridges, a portion of the Creekside Promenade Park and habitat and flood protection improvements. Also, relocate the historic "Pink House."	2016	2017
1-14	Channel Widening South of Grand Avenue	South of Grand Avenue and west of Linda Vista Drive	1 mile from Segment 1	City of San Marcos	Widening of the existing drainage channel south of Grand Avenue, west of Linda Vista Drive, creation of riparian habitat and grading of city lots. Construction of a precast bridge over the widened channel for future access to Linda Vista Drive and Grand Avenue.	2015	2016
1-15	East Gate	16 Creekside Drive, northwest corner of Grand Avenue and Creekside Drive.	1.15 miles from Segment 1	City of San Marcos	42-unit affordable housing complex with 11,600 square feet of commercial space on a 2.85-acre lot.	2015	Under review
1-16	The Promenade @ Creekside	2 Creekside Drive, south side of Creekside Drive between Bent Avenue and Grand Avenue	1.3 miles from Segment 1	City of San Marcos	Phase 1 complete. Phase 2 will be the construction of a two-story and three-story 43 affordable housing units and more than 11,000 square feet of retail/commercial space in two phases.	2015	Phase 2 to begin 2018
1-17	H.G. Fenton North (Discovery Village North)	Discovery Street	1.15 miles from Segment 1	City of San Marcos	Within the University District Specific Plan, on the north side of the future Discovery Street, proposing a Tentative Subdivision Map to allow mixed use development consistent with the approved specific plan (residential and office uses).	2016	Approved 2018
1-18	H.G. Fenton South (Discovery Village South)	Future Discovery Street	1 mile from Segment 1	City of San Marcos	Development of 250 single-family residential homes on approximately 38 acres.	2016	Approved 2018
1-19	North City (University District Specific Plan)	200 East Barham Drive, connecting SR-78 on both sides of Twin Oaks Valley Road to San Marcos Boulevard at Discovery Street.	2.25 miles west of San Marcos Substation	City of San Marcos	2,600 mixed use residential units, 800 student housing units, hotel use (up to 450 rooms), 652,000 square feet of general office, 300,000 square feet of medical office, 700,000 square feet of mixed use retail/commercial, and 30,000 square feet of civic/community use.	Under construction	Summer 2019

TABLE 3.21-1 (CONTINUED)
CUMULATIVE SCENARIO

ID	Project Name	Project Location	Approximate Distance from Project	Jurisdiction	Project Description	Status/ Construction Start Date	Status/ Construction End Date
Segment 2							
2-1	Hunter Industries, Inc.	Opal Street	0.15 mile from Segment 2	City of San Marcos	67,657 square foot, 2-story light industrial/office building	Under Review	TBD
2-2	San Elijo Hills	1084 San Elijo Road	0.25-0.50 mile from Segments 2 and 3	City of San Marcos	Maximum of 3,466 total homes in community, 150 left to be built. San Elijo Hills Town Center consists of 23,000 square feet of retail space and 12 residential townhomes, currently under construction. Final Phase consists of 2 commercial buildings with a combined 11,972 square feet and 12 residential townhomes.	2016	2018
2-3	Questhaven-SAB, LLC	San Elijo Road near former landfill	0.25 mile from Segments 2 and 3	San Diego County	351 condominium units, commercial buildings, and 14 vacant lots.	Proposal submitted 2012	Unknown
2-4	Copper Hills Specific Plan	San Elijo Road	0.25 mile from Segments 2 and 3	City of San Marcos	189 residential apartments, 120 attached condominiums, 42 detached condominiums, and 138,710 square feet of commercial/light industrial buildings on 49 acres; 20 acres of biological open space.	Under Review	TBD
Segment 3							
3-1	Harmony Grove Village South Project	Intersection of Harmony Grove Road and Country Club Drive	0.56 mile from Segment 3	San Diego County	Expand the contiguous Harmony Grove Village (HGV) to include a residential component providing a mix of residential and community center/limited commercial uses.	Approved	Under construction
3-2	Wismer TM, Johnston Road	Western end of Avenida Del Diablo	0.5 mile from Segment 3	City of Escondido	Annexation and single-family residential subdivision	Approved 2018	TBD
3-3	HARRF Collections Facility	Intersection of Avenida Del Diablo and Citracado Parkway	0.45 mile from Segment 3	City of Escondido	Three maintenance buildings, 14,875 square feet	Approved 2018	TBD
3-4	Innovative Industrial	Intersection of Harmony Grove Road and Howard Avenue, adjacent to Escondido Creek	0.35 mile from Segment 3	City of Escondido	210,000 square foot industrial.	Under construction	TBD
3-5	Harmony Grove Specific Plan	Empty lot where Kauana Loa Drive becomes Harmony Grove Road	Adjacent to Segment 3 and staging areas	City of Escondido	Industrial subdivision.	Anticipated	TBD
3-6	Citracado Parkway Extension	Citracado Parkway from Harmony Grove Village Parkway to Andreasen Drive.	Adjacent to Segment 3 and staging areas	City of Escondido	This project extends Citracado Parkway south from Harmony Grove Village Parkway to Andreasen Drive.	2017	2022

TABLE 3.21-1 (CONTINUED)
CUMULATIVE SCENARIO

ID	Project Name	Project Location	Approximate Distance from Project	Jurisdiction	Project Description	Status/ Construction Start Date	Status/ Construction End Date
Segment 3 (cont.)							
3-7	ERTC Kidney Dialysis Center	1955 Citracado Parkway	Adjacent to Segment 3 and staging areas	City of Escondido	12,000 square feet medical office and dialysis center.	Review completed	TBD
3-8	Valiano Project	Located in unincorporated San Diego County within the San Dieguito Community Planning Area near Escondido.	0.9 mile from Segment 3	San Diego County	Residential development of 326 homes on 239 acres. Includes 36.5 acres of agriculture easement and 28.2 acres of biological open space.	Planning Commission 2018	TBD
3-9	Office Condos (Jungman Specific Plan)	West side of Citracado Parkway, across Harveson Place	Approximately 800 feet from Segment 3	City of Escondido	Mixed use: 20,000 square feet of office space, 36 condominiums	Anticipated	TBD
3-10	ERTC Medical Office (EAST)	East side of Citracado Parkway, adjacent to Harveson Place	Approximately 100 feet from Segment 3	City of Escondido	74,000-square-foot medical office, part of the Escondido Research and Technology Center.	Approved 2015	In Progress
3-11	Stone Brewery Hotel	Directly across the street from 1999 Citracado Parkway	Approximately 200 feet from Segment 3	City of Escondido	99-room boutique hotel	Held at applicants request	TBD
3-12	Ford/Hyundai Dealership	Intersection of South Auto Parkway and Howard Avenue	0.55 mile from Segment 3	City of Escondido	Two showrooms and a wash/detail building.	Under construction	TBD
3-13	Public Works Yard Relocation	West Washington Street and North Spruce Street	1.3 miles **from** Segment 3	City of Escondido	Future relocation of the Public Works Yard. Project components include site selection, acquisition, environmental documentation, and design for the future site. Current yard site as a high priority area targeted for redevelopment.	October 2013	Dependent on funding (budget through 2020)
3-14	SR-78 Eastbound Auxiliary Lane Improvement	SR-78 between Woodland Parkway and Nordahl Road, and East Mission Road.	0.45 mile from Segment 3 and 1.0 mile from Staging Area	City of San Marcos	Construct an eastbound auxiliary lane on SR-78 between Woodland Parkway and Nordahl Road including the widening of the Mission Road undercrossing and an additional merging lane between Barham Drive on-ramp and the Nordahl Road on-ramp.	2015	2018
3-15	Woodland Parkway SR-78 interchange	Woodland Parkway, Barham Drive, Rancheros Drive, SR 78 Interchange.	1.65 miles east of Escondido Substation, 3.35 miles west of San Marcos Substation and Segment 1	City of San Marcos	Reconstruction of SR-78 overcrossing, reconfigure on/off ramps, widen and realign adjacent portions of Woodland Parkway, Barham Drive and Rancheros Drive.	2016	2018

TABLE 3.21-1 (CONTINUED)
CUMULATIVE SCENARIO

ID	Project Name	Project Location	Approximate Distance from Project	Jurisdiction	Project Description	Status/ Construction Start Date	Status/ Construction End Date
Segment 3 (cont.)							
3-16	Barham Drive Widening and Street Improvements	West La Moree to eastbound SR-78 Barham Drive off-ramp.	2.1 miles from Segment 3	City of San Marcos	Widening to 6-lane prime arterial from West La Moree to eastbound SR-78 Barham Drive off-ramp.	2015	2018
3-17	Sandy Lane Estates	La Moree Road and Shady Lane	1.7 miles from Segment 3 and Escondido Substation	City of San Marcos	8 single-family residences, subdivision of 8.19-acre parcel	Under review	TBD
3-18	Rancho Coronado Park	West of South Twin Oaks Valley Road and north of San Elijo Road.	1.45 miles from Segment 3	City of San Marcos	Create multi-use park at former Hanson quarry site.	2018	2019
3-19	Brookfield Residential Properties (Rancho Tesoro)	South Twin Oaks Valley Road South of Craven Road	2.75 miles west of Escondido Substation	City of San Marcos	346 single-family homes.	Approved	Under construction
3-20	Brookfield Residential Multi-Family	Twin Oaks Valley Road	2.75 miles west of Escondido Substation	City of San Marcos	Construction of 220 residential condominium units on 23.22 acres.	Approved 2017	TBD
3-21	South Lake Community Park	South Lake off of South Twin Oaks Valley Road	2.0 miles from Segment 1 and 3.0 miles from Segment 3	City of San Marcos	Construct park entry road, parking spaces, restroom, new trail on city property to connect to existing trail surrounding the lake and install self-contained restroom and other amenities at lake grounds.	2015	2018

SOURCES: City of Carlsbad, 2018a, 2018b; Conley, 2018; del Solar, 2018; City of Escondido, 2018a, 2018b; Farace, 2018; San Diego County, 2018; City of San Marcos, 2018a, 2018b; SDG&E, 2017; Tasher, 2018; City of Vista, 2018.

Aesthetics

As explained in Section 3.1, *Aesthetics*, the Project would have no impact pertaining to substantial damage to scenic resources. Therefore, the Project would not cause or contribute to any cumulative impact related to such resources. (No Impact)

Section 3.1, *Aesthetics*, defines the study area for the aesthetics analysis as encompassing the landscapes directly affected by the Project and the surrounding areas from which the Project would be visible. Within this area, construction, operation, and maintenance of the Project would cause a less-than-significant impact on scenic vistas, the existing visual character or quality of public views of the site and its surroundings, and applicable zoning and other regulations governing scenic quality, and from creating a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.

The ongoing environmental effects of past projects are reflected in the baseline environmental conditions described in Section 3.1.1, *Environmental Setting*. For example, although there are no officially-designated scenic vistas in the study area, scenic views are available from informal recreation areas in Rancho La Costa Preserve, Diamond Trail Preserve, and Escondido Creek Preserve. The area's visual character is depicted in Figures 3.1-2 through 3.1-10, which present nine photographs showing existing representative visual conditions and views from publicly-accessible points within the Project area. Regarding light and glare, the summary of existing conditions notes that much of the Project area is developed and urbanized lands where nighttime lighting (e.g., from vehicle headlights, street lighting, parking lot lighting, security lighting, and building illumination) is part of the built environment. By contrast, light conditions in the open space areas, preserves, and undeveloped lands crossed by the Project are typically darker with the primary light source being associated with nearby streets and vehicles.

In each Project segment, there are existing utility transmission structures. While the changes attributable to the Project would be visually apparent (i.e., new, taller steel poles), the character of the new structures would not substantially affect the existing visual character or quality in the Project area. No permanent lighting is included in the Project. Of the potentially cumulative projects shown on Figure 3.21-1 and summarized in Table 3.21-1, some would cause impacts that could combine with those of the Project to cause or contribute to cumulative impacts within the Project area. For example, project 2-1, a two-story light industrial building on Opal Street in San Marcos, would be within the same viewshed as the Project and could affect the scenic views available from publicly-accessible areas and informal trails in the vicinity of Key Observation Point E (KOP E) along Segment 2. All of the projects involving structures (e.g., residential, office, light industrial) could generate new sources of light or glare. Although nighttime construction may occur, it would be on an as-needed basis and with approval of variances conditionally permitting nighttime work from the affected jurisdiction. The cumulative impacts of these projects, together with the incremental impacts of the Project, would not be significant, because there would not be a substantial change in the visual quality or character of the study area. Therefore, the Project's impacts would not combine with the impacts of other projects to cause or contribute to a significant cumulative effect. (Less than Significant Impact)

Agriculture and Forestry Resources

As explained in Section 3.2, *Agriculture and Forestry Resources*, the Project would have no impact pertaining to the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use; conflict with existing zoning for agricultural use or a Williamson Act contract; conflict with existing zoning for, or rezoning of, forest land, timberland, or timberland zoned Timberland Production; loss of forest land or conversion of forest land to non-forest use; or other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use. Therefore, the Project would not cause or contribute to any cumulative impact related to Agriculture and Forestry Resources. (No Impact)

Air Quality

As explained in Section 3.3, *Air Quality*, the Project would not conflict with or obstruct implementation of the applicable air quality plan. Therefore, the Project would not cause or contribute to any cumulative impact in this respect. (No Impact)

Section 3.3 defines the regional study area for the air quality analysis as the San Diego Air Basin, the boundaries of which are contiguous with the political boundaries of San Diego County. For impacts related to exposing sensitive receptors to substantial pollutant concentrations and emissions of dust, odors, and other potential nuisance emissions, the local study area consists of areas surrounding Project work sites. Within these regional and local study areas, the Project would result in less-than-significant impacts related to potential violation of an air quality standard or cumulatively considerable net increases in existing or projected air quality; the exposure of sensitive receptors to substantial pollutant concentrations; and other emissions adversely affecting a substantial number of people. The Project would contribute to cumulative conditions from the point when construction emissions commence and lasting through the operation and maintenance activities.

The ongoing environmental effects of past projects are reflected in the baseline environmental conditions described in Section 3.3.1, *Environmental Setting*. As explained in that section, criteria pollutants of concern in the study area include ozone, respirable particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$), carbon monoxide (CO), and sulfur dioxide (SO_2). The Air Basin is classified as a non-attainment area for the State 1-hour and 8-hour ozone standards, as well as the federal 8-hour ozone standard. The Air Basin is also a non-attainment area relative to the State $PM_{2.5}$ and PM_{10} standards. For all other criteria pollutants, San Diego County is classified as either unclassified or as attainment with respect to State and federal standards (SDAPCD, 2018). See Table 3.3-2 for the current attainment status of the study area.[1] Other emissions that could adversely affect a substantial number of people include dust: Valley Fever is an infection caused

[1] "Attainment" and "non-attainment status is assigned to geographic areas, such as air basins, based on the area's ability to meet the National or State Ambient Air Quality Standards for certain criterion pollutant, such as carbon monoxide, ozone, etc. This is explained in detail in Section 3.2.2, *Air Quality, Regulatory Setting.*

by the inhalation of *Coccidioides immitis* and *Coccidioides posadasii* spores that have become airborne when dry, dusty soil or dirt is disturbed (e.g., by construction activities).

The San Diego Air Pollution Control District's approach to thresholds of significance is relevant to whether a project's individual emissions would result in a cumulatively considerable adverse contribution to the Air Basin's existing air quality conditions. If a project's emissions would be less than these levels, then the project would not result in a cumulatively considerable contribution to the significant cumulative impact. Here, the Project's incremental contribution to nonattainment conditions would not be cumulatively considerable because the Project's emissions would not exceed the District's established thresholds. (Less than Significant Impact)

Biological Resources

The geographic scope for the analysis of cumulative impacts associated with biological resources is the biological study area (BSA) used for the analysis presented in Section 3.4, *Biological Resources*. Within this 500-foot buffer from the limits of Project activity, construction, operation, and maintenance of the Project would cause potentially significant impacts on several special-status plant and wildlife species, sensitive natural communities, and federally protected wetlands/waters, primarily over the course of Project construction. However, there would also be direct permanent impacts attributable to the presence of Project structures.

The Project would not conflict with any local policies or ordinances protecting biological resources and would not conflict with the provisions of a conservation plan. Therefore, the Project could not cause or contribute to potential cumulative impacts associated with these considerations. Further, the Project would be constructed within existing SDG&E right-of-way (ROW), which may function as a wildlife corridor. No other cumulative Project would be constructed within this area. Therefore, there is no potential for a cumulative impact to occur with respect to movement of wildlife or use of habitat as a wildlife nursery site. (No Impact)

With respect to federally- and State-protected wetlands (i.e., jurisdictional areas), although construction of the Project would not cause direct impacts, indirect impacts could occur. Such impacts could combine with impacts from other Projects to cause cumulative impacts. Project-specific compliance with water quality limits and other relevant thresholds that have been set by the U.S. Army Corps of Engineers, the California Department of Fish and Wildlife, and San Diego Regional Water Quality Control Board (RWQCB), as well as APMs BIO-1 through BIO-5, NCCP Operational Protocols, and Mitigation Measures BIO-1 and BIO-3, would ensure a less-than-significant impact attributable to the Project. The implementation of these mitigative actions, which include avoidance, restoration/enhancement, and use of mitigation credits, would ensure that the Project would result in a net-zero effect on jurisdictional areas. Therefore, the Project would not result in a cumulatively considerable contribution to a significant cumulative impact on these jurisdictional areas. (No Impact)

Additionally, operation and maintenance activities for the Project would be substantially the same as, and in the same locations as, current operation and maintenance activities for the existing infrastructure. Throughout the operation and maintenance of the Project, SDG&E would continue to implement the NCCP Operational Protocols, as described in Section 3.4.2, *Regulatory Setting*.

For work near jurisdictional areas, SDG&E would implement the appropriate NCCP Operational Protocols, which would require obtaining resource permits and complying with those conditions. With implementation of these NCCP Operational Protocols, incremental Project-specific impacts on sensitive natural communities from operation and maintenance activities would be negligible and, therefore, not considerable when take with other cumulative projects identified in this analysis. (No Impact)

The ongoing environmental effects of past projects or natural events are reflected in the baseline environmental conditions described in Section 3.4.1, *Environmental Setting*. For instance, in the southwestern portion of the Project area, areas of sensitive habitat, such as coastal sage scrub and southern maritime chaparral, were burned during the 2014 Poinsettia Fire. At the same time, the new town center development of San Elijo Hills (project 2-2) was in its planning stages, with construction starting in 2016. Other current projects in the vicinity which could have cumulatively considerable effects on biological resources include Harmony Grove Village (project 3-5), Harmony Grove Village South (project 3-1), and Valiano (project 3-8). These projects are large, master-planned residential and mixed-use development located in previously undeveloped areas. These large-scale projects could affect biological resources also directly and indirectly affected by the Project. In addition to the sensitive habitats previously mentioned, these resources include special-status plant species (Nuttall's scrub oak, wart-stemmed ceanothus), special-status mammal and reptile species, and special-status and nesting bird species.

The Project would traverse both urban and undeveloped areas and open space that provide habitat for special-status plants and birds, nesting birds, and other wildlife species. Construction of the Project could impact this habitat. There is also the potential for similar impacts from ongoing and future development projects identified in Table 3.21-1 and Figure 3.21-1. These include projects 2-2, 2-3, 2-4, 3-1, 3-5, 3-8, 3-18, 3-19, and 3-20. These projects would be located in similar areas and, in combination with impacts from the Project, could cause a cumulatively significant impact on species-status plants, nesting birds and special-status avian species, as well as special-status reptile and mammal species.

As mitigated, the installation of new utility poles and structures, extension of access roads, and use of temporary stringing and staging sites would cause a less-than-significant impact with regard to the loss of undeveloped habitat in the Project area. This loss of native habitat primarily would occur in Segments 2 and 3, and could combine with impacts on habitat from other cumulative projects to cause a significant cumulative impact.

With respect to special-status plants, including those in federally- and State-protected wetlands, impacts would be avoided or minimized with the implementation of APMs BIO-1 through BIO-5 and Mitigation Measures BIO-1 and BIO-3, which includes implementation of NCCP Operational Protocols and habitat reclamation procedures approved by USFWS and CDFW. As noted in the discussion of Permitting Agreements in Section 3.4.2, *Regulatory Setting*, in approving the SDG&E Subregional NCCP, these agencies determined that its implementation would avoid potential impacts and provide appropriate mitigation for impacts that could not be avoided. The analysis addressing Question a indicates that the Project would impact less than 1 percent of any area occupied by a special-status plant species within the Project's biological study area (BSA).

When considered in the larger area encompassing the cumulative projects identified in Table 3.21-1 and Figure 3.21-1, this would constitute a smaller percentage when compared to the whole. In this context, the Project's incremental less-than-significant impact would not cause or have a cumulatively considerable contribution to any significant cumulative effect relating to special-status plant species. (Less than Significant Impact)

The analysis presented in Section 3.4, *Biological Resources*, indicates that five special-status mammal species and six special-status reptile species have a moderate or high potential for occurrence in the Project area. With the implementation of APMs BIO-1 through BIO-5, BIO-8, and BIO-9, NCCP Operational Protocols, and Mitigation Measure BIO-1, impacts of the Project on these reptiles and mammals would be less than significant. As noted in the preceding paragraph, in approving the NCCP, USFWS, and CDFW determined that it provides appropriate avoidance and minimization measures. The combined temporary and permanent impact of 2.2 acres of habitat within the BSA and larger area encompassed in this cumulative analysis constitutes less than 1 percent. In this context, the Project's incremental less-than-significant impact would not cause or have a cumulatively considerable contribution to any significant cumulative effect relating to special-status reptile and mammal species. (Less than Significant Impact)

Regarding nesting birds and special-status avian species, although the Project would result in the removal of some areas of vegetation along the Project alignment and have the potential to disrupt mating, nesting, and foraging activities during nesting seasons, disturbance in the majority of these areas would be temporary and areas would be restored post-construction (see Section 2.5.12, *Waste Management, Cleanup, and Post-Construction Restoration*). With the implementation of APMs BIO-1 through BIO-6, BIO-8, and BIO-9, NCCP Operational Protocols and habitat reclamation procedures, and Mitigation Measures BIO-1 and BIO-2, impacts from the Project on these nesting birds and sensitive avian species would be less than significant. As noted in the preceding paragraphs, in approving the NCCP, USFWS and CDFW determined that it provides appropriate avoidance and minimization measures. In this context, the Project's incremental less-than-significant impact would not cause or have a cumulatively considerable contribution to any significant cumulative effect relating to nesting birds and special-status avian species. (Less than Significant Impact)

Like this Project, the cumulative projects considered in this analysis are required to comply with federal and State regulations protecting special-status plant and animal species through implementation of mitigation measures during construction and/or participation in the local habitat conservation plans currently in force. The approval and implementation of these projects consistent with the San Diego County Multiple Habitat Conservation Program and the Draft North County Multiple Species Conservation Program in the areas where these plans govern would avoid a significant cumulative impact on special-status plants and animals to which the Project could contribute. (Less than Significant Impact)

Cultural Resources

The geographic scope for cumulative impacts on historical and archeological resources includes a 1-mile radius from the Project footprint. While the study area for the Project-specific analysis was limited to the Project footprint and a corridor extending 150 feet on either side of the centerline of

the Project alignment, as described in Section 3.5, *Cultural Resources*, this geographic scope of analysis is appropriate for cumulative impacts because the cultural resources within this radius are expected to be similar to those in the study area because their proximity, similar environments, landforms, and hydrology would result in similar land-use types and thus, site types.

The Project vicinity contains a significant archaeological and historical record that, in many cases, has not been well documented or recorded. Thus, there is the potential for ongoing and future development projects in the vicinity, such as those identified in Table 3.21-1 and Figure 3.21-1, to disturb landscapes that may contain known or unknown cultural resources. Environmental analysis is either underway or completed for many of these projects. Some of the potentially cumulative projects would result in ground disturbance and development within the geographic scope of this analysis, including projects 1-3, 1-4, and 1-5.

The Project-specific analysis determined that the Project could adversely affect 18 historic or archaeological sites by causing a substantial adverse change in their significance. Additionally, Project-related ground-disturbing activities would result in a potentially significant impact relating to inadvertent impacts on unknown resources that may qualify as historical and archaeological resources. Although these impacts would be limited to areas within the study area, when combined with the potential impacts of other projects proposed within the cumulative geographic scope, cumulative impacts on historic and/or unique archaeological resources could be cumulatively significant if multiple projects were to adversely affect the significance of similar types of resources. Implementation of Mitigation Measures CUL-1 through CUL-8 would ensure that excavation would cease if a cultural or historical resource (including human remains) is uncovered during Project construction or operation-related ground disturbance. Because mitigation is designed to avoid a change in the significance of historic or unique archaeological resources, the residual Project impact after mitigation would not result in a cumulatively considerable contribution to potential cumulative impacts. (Less than Significant Impact)

Energy

As explained in Section 3.6, *Energy*, the Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Therefore, the Project would not cause or contribute to any cumulative impact related to this consideration. (No Impact)

As explained in Section 3.6, the Project would cause a less-than-significant impact related to the consumption of transportation fuel during construction because it would not result in inefficient, wasteful, or unnecessary energy use compared with the energy use for other construction projects in the region.

The ongoing environmental effects of past projects are reflected in the baseline environmental conditions described in Section 3.6, *Energy*. As noted there, the State Board of Equalization reports that approximately 15.5 billion gallons of gasoline, including aviation gasoline, and 3.1 billion gallons of diesel, including off-road diesel, were sold in California in 2017 (BOE 2018a, 2018b). In San Diego County, an estimated 1.37 billion gallons of gasoline and 102 million gallons of diesel were sold in 2016 (CEC, 2018).

Conservatively assuming that all of the cumulative projects that could generate a demand for transportation fuel (whether for construction, operation, maintenance, or decommissioning, and whether for cars, trucks, or helicopters) would require fuel at the same time as the construction of the Project, there is no evidence that the resulting fuel consumption would be wasteful, inefficient, and unnecessary. As explained in Section 3.6.1, *Environmental Setting*, most petroleum supply disruptions or shortage events are resolved by the energy industry before they become significant (NASEO, 2018); further, price spikes rather than fuel outages would likely be the market correction. No significant cumulative effect related to wasteful, inefficient, and unnecessary consumption of energy would result. (Less than Significant Impact)

Geology, Soils, Seismicity, and Paleontological Resources

As explained in Section 3.7, *Geology, Soils, Seismicity, and Paleontological Resources*, the Project would have no impact related to the use of septic tanks or alternative wastewater disposal systems. Therefore, the Project would not cause or contribute to any cumulative impact related to the consideration of whether site soils are capable of supporting such systems. (No Impact)

Section 3.7 defines the study area for geology, soils, and seismicity as the Project footprint and vicinity, including all areas of temporary and/or permanent ground disturbance. Impacts on geology and soils are generally localized and do not result in regionally cumulative impacts. Geologic conditions can vary significantly over short distances creating entirely different effects elsewhere. Unless a project would alter the soils and rock underlying other adjacent projects or affect surrounding land due to landslides, impacts related to geologic, soils, and seismic hazards would be limited to the Project site. The geographic scope of cumulative impacts related to geologic, soils, or seismic hazards therefore includes the Project sites and alignments and any projects immediately adjacent to them.

The ongoing environmental effects of past projects generally are reflected in the baseline environmental conditions described in Section 3.7.1, *Environmental Setting*. With regard to seismic hazards, the entire Southern California region, including the study area, could be subject to very strong ground shaking, and the Project sites and alignments could experience liquefaction and related effects in the event of an earthquake on a nearby fault. With regard to soil stability hazards, excavation and grading could destabilize soils at the Project sites and alignments. However, as discussed in Section 3.7 and required by the California Building Code (CBC) and Mitigation Measure GEO-1, all applicable Project components (i.e., pole/tower foundations, retaining walls, substations, etc.) would be designed and constructed in accordance with the recommendations presented in the Project's supplemental geotechnical report and most current engineering standards for seismic safety and soil stability, which would reduce the potential for damage. In addition, the cumulative projects within the study area would be required to be designed and built according to the CBC. For these reasons, the Project along with the cumulative projects identified within or immediately adjacent to the Project alignment (i.e., projects 1-3, 1-4, 1-5, 3-5, 3-10, and 3-11) would not cause a significant cumulative impact to which the Project could have a cumulatively considerable incremental contribution. (Less than Significant Impact)

Regarding soil erosion or the loss of topsoil, any ground-disturbing activities, including construction of the cumulative projects identified in Table 3.21-1 and Figure 3.21-1, could

increase the risk of erosion or sediment transport. The effectiveness of the regulatory regime governing soil erosion within the study area is demonstrated by the fact that none of the waterways in the study area is sediment-impaired. See Section 3.7.2, *Regulatory Setting*, for a summary of Construction General Permit requirements, and Table 3.9-2, *303(d) List of Impaired Water Bodies in the Project Vicinity*. In this context, the Project's incremental less-than-significant contribution would not cause or contribute to any significant cumulative effect relating to soil erosion or the loss of topsoil. (Less than Significant Impact)

As analyzed in Section 3.7.4, *Environmental Impacts and Mitigation Measures*, there is potential for the Project, unless mitigated, to create substantial direct or indirect risks to life or property along the portion of Segment 1 that would be located on soils that exhibit medium expansion potential or due to the anchoring of steel poles in a concrete-pier foundation that would be exposed to soils that are moderately corrosive to concrete. For these risks to be cumulatively significant, past, other present, or future projects would have to be in the same "fall zone"[2] as Project infrastructure. No other structures are located or are proposed to be located in the right-of-way that could contribute incrementally to the incremental risk to life or property. Therefore, with the implementation of Mitigation Measure GEO-1, the Project's less-than-significant impact related to location on expansive or corrosive soil would not cause or contribute to any significant cumulative impact in this regard. (Less than Significant Impact)

For paleontological resources, the study area includes all areas within 1 mile of the immediate Project alignment, and in particular, the Santiago Formation. For paleontological resources, the geographic scope for the cumulative impact analysis includes all areas underlain by the Santiago Formation, which occurs in the northwestern portion of the Project alignment and has a high potential for paleontological resources, because projects disturbing ground within this formation have the potential to destroy the same types of resources that may be destroyed by Project ground disturbance.

As analyzed in Section 3.7.4, *Environmental Impacts and Mitigation Measures*, the Project may have the potential to destroy a unique paleontological resource or site while working in the Santiago Formation, which is considered to have a high potential for containing significant paleontological resources, or in young alluvial floodplain deposits, which have low paleontological potential at the surface that increases to high potential in the subsurface. The Santiago Formation underlies Segment 1 and a portion of Segment 2. Young Holocene alluvium overlies Santiago Formation where Segment 1 begins on Discovery Street, and so maintains a high potential for paleontological resources at depth. See Figure 3.7-1 in Section 3.7, *Geology, Soils, Seismicity, and Paleontological Resources.* To cause incremental impacts that could combine with those of the Project to cause or contribute to significant cumulative effects, past, present, or reasonably foreseeable future projects would need to disturb the surface at necessary depths in either or both of these locations. Of the potential cumulative projects identified in Table 3.21-1 and on Figure 3.21-1, those along West San Marcos Boulevard west of Discovery Street and along Rancho Santa Fe Road north of West San Marcos Boulevard (i.e., projects 1-2 through 1-9) overlay these areas. Grading and excavation activities for these projects, in

[2] A "fall zone" is that area surrounding a structure within which debris from that structure would be deposited during a seismic event.

combination with Project-related surface disturbance, could contribute to the progressive loss of fossil remains, as-yet unrecorded fossil sites, associated geologic site data, and the fossil-bearing strata. Compliance with the regulations for the protection and recovery of paleontological resources in combination with the implementation of Mitigation Measures PALEO-1 through PALEO-4 that would be implemented for the Project would reduce potentially significant Project-specific impacts to a less-than-significant level. Because the Project, with mitigation, would produce scientific and cultural benefits by increasing access to paleontological artifacts and related scientific knowledge, its residual effects would not result in a cumulatively considerable contribution to a significant cumulative impact related to the loss of unique paleontological resources. (Less than Significant Impact)

Greenhouse Gas Emissions

As noted in Section 3.8, *Greenhouse Gas Emissions*, the California Air Pollution Control Officers Association (CAPCOA) considers greenhouse gas (GHG) impacts to be exclusively cumulative impacts (CAPCOA, 2008); therefore, assessment of significance is based on a determination of whether the GHG emissions from a project represent a cumulatively considerable contribution to the global atmosphere. Although the geographic scope of cumulative impacts related to GHG emissions is global, this analysis focuses on impacts associated with potential conflicts with California's reduction goals set forth in Executive Order S-3-05, Executive Order B-30-15, Assembly Bill (AB) 32 and the Project's direct and/or indirect generation of GHG emissions. The Project would result in less-than-significant emissions of GHGs and would not conflict with the state's GHG reduction goals. Therefore, the Project-specific incremental impact associated with GHG emissions would not contribute to a significant cumulative impact, and the incremental impact would not be cumulatively considerable. (Less than Significant Impact)

Hazards and Hazardous Materials

As noted in Section 3.9, *Hazards and Hazardous Materials*, depending on the pathway of migration, the geographic scope for cumulative effects relating to hazards and hazardous materials would be the air basin, watershed boundary, groundwater basin, or extent of affected soils. Materials delivery routes also would be included in the event of a traffic accident-related spill or use of evacuation routes. Cumulative hazards and hazardous materials-related effects could arise at any point during Project construction or operation and maintenance-related activities. Other projects (including those identified in Table 3.21-1 and on Figure 3.21-1) could create hazardous materials-related effects that would be similar to those of the Project.

As noted in Questions a and b of Section 3.9.4, *Environmental Impacts*, with mitigation incorporated, the Project would result in less than significant impacts regarding the transport, use, disposal of hazardous materials; upset and accident conditions involving the release of hazardous materials; and sites included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Current and reasonably foreseeable projects would be required to comply with measures that would minimize and/or avoid such impacts. In addition, per APM HAZ-1 and Mitigation Measure HAZ-1, the Project's risk of impacts related to the use of hazardous materials or to existing recorded sites would not exacerbate those of cumulative projects. Accordingly, the Project's incremental impact would not cause or contribute to any

significant cumulative impact regarding the transport, use, disposal of hazardous materials; upset and accident conditions involving the release of hazardous materials; or sites currently identified pursuant to Government Code Section 65962.5. (Less than Significant Impact)

The Project would result in a less-than-significant impact regarding hazardous emissions, wastes, or materials within 0.25 mile of six existing schools, as noted in Question c of Section 3.9.4. San Marcos High School, High Tech High North County, and Valley Christian School would be in the immediate vicinity of two cumulative projects (projects 1-5 and 1-4) and the Project. Project 1-4 (San Marcos High School Traffic Improvements) was completed in 2016 and has been considered within the Project baseline. Project 1-5 (San Marcos Boulevard at Discovery Street Intersection Improvements) is schedule for 2018. Depending on the timing of construction, hazardous emissions from these cumulative projects and the Project could combine and pose a significant cumulative health risk to people at these schools. However, the impact associated with the Project would be reduced to less than significant with implementation of APM HAZ-1 and Mitigation Measure HAZ-1; therefore, the Project would not be cumulatively considerable. (Less than Significant Impact)

As described in Section 3.9.4, under Question e, the Project would result in a less-than-significant impact regarding the potential for safety hazards related to public-use airports (i.e., the McClellan-Palomar Airport). There are no known cumulative projects that would require the use of helicopters in the area of the Project or that would occur simultaneously. When considered together with timing of other actions in the area of the Project, there is no significant cumulative condition relative to airport hazards to which the Project could contribute. Therefore, the Project's impact would not be cumulatively considerable. (Less than Significant Impact)

As described in Section 3.9.4, under Question f, the Project would result in a less-than-significant impact regarding interference with adopted emergency response or evacuation plans. Much of the Project construction in Segment 1 would occur along West San Marcos Boulevard, which would require lane closures during periods of active Project construction and potentially affect emergency response and evacuation plans. APMs TRA-1 and TRA-2 would require the preparation of traffic control plans in coordination with local ordinances, as well as coordination with local emergency service providers to provide safe access and passage to emergency vehicles and equipment. Other cumulative projects along West San Marcos Boulevard include the improvement of its intersection with Discovery Street which was scheduled for 2018 (project 1-5), as well as two development projects (projects 1-10 and 1-11) totaling approximately 625 residential units of various types and approximately 48,000 square feet of commercial space. The development projects are currently in the planning stages with no construction date determined. When considered together with timing of other actions in the area of the Project, there is no significant cumulative condition relative to emergency response/evacuation plans to which the Project could contribute. Therefore, the Project's impact would not be cumulatively considerable. (Less than Significant Impact)

Hydrology and Water Quality

As analyzed in Section 3.10, *Hydrology and Water Quality*, the Project would have no impact relating to substantial alteration of existing drainage patterns in a manner which would impede or redirect flood flows. There are no sustainable groundwater management plans in place for the

San Marcos Valley and Escondido Valley groundwater basins. Therefore, the Project would not cause or contribute to any cumulative impact related to these considerations. (No Impact)

The geographic scope of cumulative impacts related to hydrology and water quality encompasses the watersheds, flood hazard areas, and groundwater basins affected by the Project. The Project and cumulative projects are located in the Carlsbad Watershed and the San Marcos Valley and Escondido Valley groundwater basins. The consideration of these impacts includes all past, present, and reasonably foreseeable cumulative projects listed in Table 3.21-1 and Figure 3.21-1. The ongoing environmental effects of past projects are reflected in the baseline environmental conditions described in Section 3.10.1, *Environmental Setting*.

The Project would cause less-than-significant impacts regarding substantial depletion of groundwater supplies or substantial interference with groundwater recharge; substantial alteration of existing drainage patterns in a manner which would result in substantial erosion or siltation, substantially increase surface runoff resulting in flooding, or create runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; risk of release of pollutants due to project inundation; or conflict with or obstruction of implementation of a water quality control plan or sustainable groundwater management plan. With the implementation of Mitigation Measure HAZ-1, which would ensure that soil and water are monitored and that soil and/or water with chemical concentration that exceed regulatory standards would be properly tested, contained, and disposed of in a safe and legal manner, impacts related to the violation of water quality standards or waste discharge requirements would be reduced to a less-than-significant level.

The Project would not substantially alter drainage patterns in the study area. As discussed in Section 3.10.4, *Environmental Impacts*, Question c.i, Project construction would comply with SDG&E's BMP Manual for Water Quality Construction and the NPDES Construction Stormwater General Permit to limit soil erosion and siltation. Compliance with the post-construction drainage control standards set forth in the Construction Stormwater General Permit would require the construction sites be restored to pre-project hydrologic conditions. The Project would add less than 2.5 acres of new impervious surface spread out over more than 60 sites along the 12-mile Project alignment. Operation and maintenance of the Project facilities would not require further changes to surface grades that could significantly alter existing drainage patterns. Considering the small size and fragmented distribution of new impervious surfaces, along with the required erosion and siltation controls and return to pre-project conditions, the Project would not cause or contribute to any cumulative impact related to alteration of drainage patterns.

The Project-specific analysis of groundwater found that the Project would not significantly impact area groundwater basins. During construction and maintenance, water would be provided by the Vallecitos Water District, which obtains its water primarily from surface water sources. While pole foundation excavations could result in dewatering, the San Marcos Valley groundwater basin is a ranked as a very low priority by the State for sustainable groundwater management. Construction sites would be restored to pre-construction conditions, as required by the Construction General Permit. When considered with the production rate of the groundwater unit, as well as the small size and fragmented distribution of new impervious surfaces, the Project

would not impede the sustainable groundwater management of the San Marcos Valley groundwater basin and would not cause or contribute to any cumulative impact related to these considerations. (No Impact)

Project construction would include surficial soil disturbance of up to 9.6 acres. As discussed in Section 3.10.4, *Environmental Impacts*, Question a, Project construction would comply with SDG&E's BMP Manual for Water Quality Construction and Mitigation Measure HAZ-1, coupled with required coverage under the NPDES Construction Stormwater General Permit and RWQCB Resolution R9-2014-0041, *Conditional Waivers of Waste Discharge Requirements for Low Threat Discharges in the San Diego Region*. Although this would be a Project-specific less-than-significant impact on surface water quality, it could be cumulatively considerable when taken with other present projects under a similar construction schedule and/or future projects in the Project vicinity. The present and future cumulative projects included in this analysis are also assumed to involve soil disturbance and addition of impervious surfaces potentially affecting surface water quality through the potential for soil erosion and increased stormwater runoff in the Carlsbad Watershed. These projects could further compromise water quality by causing the untreated release of contaminated groundwater during construction. Like this Project, these cumulative projects would also be required to comply with federal, State, and local regulations and mitigative actions protecting water quality. With the implementation of similar protective measures by the cumulative projects, together with the Project's less-than-significant impact, it is not considered likely that there would be a significant adverse cumulative condition with water quality to which the Project would contribute. Therefore, as mitigated, the incremental contributions of Project-related impacts would not be cumulatively considerable. (Less than Significant Impact)

Land Use and Planning

As analyzed in Section 3.11, *Land Use and Planning*, the Project would have no impact pertaining to the physical division of an established community or to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, the Project would not cause or contribute to any cumulative impact related to Land Use and Planning. (No Impact)

Mineral Resources

As analyzed in Section 3.12, *Mineral Resources*, there are no locally important mineral resource recovery sites delineated on any local land use plans. The Project, therefore, would have no impact on and thus no contribution to a cumulative impact on the availability of such sites.

The study area for Mineral Resources is defined as the footprint of all components of the Project, including all areas of temporary and/or permanent ground disturbance. Mineral resource areas near Project disturbance include the MRZ-2 categorized land (where significant mineral deposits are or are likely to be present) adjacent to an approximately 0.5-mile stretch of SDG&E right-of-way in Segment 2, which already is unavailable for mineral resource extraction. While the Project would be constructed in areas mapped as having known mineral resources, the availability of these resources would not substantially change as a result of the Project; therefore, the impact would be less than significant. Because none of the cumulative projects would disturb land within

SDG&E's ROW (i.e., in the same locations where Project disturbance would occur), none would cause or contribute to cumulative impacts within the Project site. Further, because the Project would not cause or contribute to the loss of availability of a known mineral resource that would be of value to the region and the residents of the State, the Project would not cause or contribute to any significant cumulative impact. (Less than Significant Impact)

Noise

As analyzed in Section 3.13, *Noise*, the Project would have no impact pertaining to the exposure of people residing or working in the Project area to excessive noise levels associated with an airport or airstrip. Therefore, the Project would not cause or contribute to any cumulative impact related to these considerations. Additionally, operation and maintenance of the Project would not introduce any new sources of noise or groundborne vibration to the study area. The Project's slight increase in maintenance activities and related miles traveled would be offset by the decrease in maintenance activities resulting from the proposed pole replacement and reconductoring/re-energizing of the existing de-energized line, which would result in a net decrease in heavy truck use and mileage. Therefore, the Project would not cause or contribute to any significant cumulative impact once construction concludes. (No Impact)

As defined in Section 3.13, *Noise*, the Project-specific study area is defined as the area surrounding the Project where Project construction and operational noise may be heard. The geographic scope for the evaluation of cumulative changes in the noise and vibration environment attributable to the Project would be localized in urban areas of the cities of Carlsbad, San Marcos, Vista, and Escondido, as well as unincorporated areas of San Diego County. Within this area, Project construction, with the implementation of mitigation measures identified in Section 3.13.4, *Environmental Impacts*, would cause less-than-significant impacts related to substantial temporary increases in ambient noise levels in excess of standards and the generation of excessive groundborne vibration or groundborne noise levels during construction.

The ongoing environmental effects of past projects generally are reflected in the baseline environmental conditions. A significant cumulative impact could result if, for example, the incremental impacts of the Project and at least one other of the cumulative projects caused vibration at a combined level of 80 VdB, which could result in human annoyance, and/or cause vibration level of 0.2 PPV (inch/second), which could result residential buildings exposed to damage according to the Federal Transit Administration's *Transit Noise and Vibration Impact Assessment* (FTA, 2006). Most of the noise and vibration-producing Project activities (e.g., foundation excavation, pole replacements, etc.) would occur along Segments 1 and 2 within one construction season. As noted in the analysis, noise and vibration waves naturally attenuate with distance (see Tables 3.13-12 to 3.13-15). Also, many of the projects listed in Table 3.21-1 and shown in Figure 3.21-1 are either past projects, would not occur during the same construction period, or are currently without an estimated construction date. When considered with the proximity to, and schedules for, the cumulative projects – as well as the ambient background conditions, the Project's incremental less-than-significant contribution would not cause or contribute to any significant cumulative effect relating to noise or vibration. (Less than Significant Impact)

Population and Housing

As analyzed in Section 3.14, *Population and Housing*, the Project would have no impact pertaining to the displacement of substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere, or related to the direct inducement of substantial unplanned population growth. Therefore, the Project would not cause or contribute to any cumulative impact related to these considerations. (No Impact)

As analyzed in Section 3.14.4, *Environmental Impacts*, the Project could, however, cause a less-than-significant impact by indirectly inducing substantial unplanned long-term population growth via the extension of electrical infrastructure, or short-term growth by requiring an in-migration of construction workers. Section 3.14 defines the study area for Population and Housing as including the communities within which the Project would be constructed and operated. The geographic scope of analysis for cumulative impacts includes these same communities.

The ongoing environmental effects of past projects are reflected in the baseline environmental conditions described in Section 3.14.1, *Environmental Setting*. Projections for planned growth are also summarized in that section. As noted in Table 3.14-1, the Project area municipalities are expected to undergo substantial growth through 2050. The amount of population growth from 2012 to 2050 in the immediate area of the Project is expected to range from approximately 16 percent in Carlsbad to approximately 32 percent in the City of Vista. (SANDAG, 2013).

The projects listed in Table 3.21-1 and shown on Figure 3.21-1 include numerous residential developments and commercial developments which would serve them. These projects, as well as other future development, would be subject to the applicable city and/or county planning process, as well as environmental review on a project-by-project basis. It is reasonable to assume that these projects in combination with this Project would result in a significant cumulative impact regarding population growth. However, this Project's contribution to the cumulative impact would not be considerable as it would not include new homes or businesses; demand for temporary construction worker housing would be accommodated by existing units; and the availability of electrical capacity provided by the Project would not encourage growth. (Less than Significant Impact)

Public Services

As analyzed in Section 3.15, *Public Services*, the Project would have no impact associated with the provision of or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools, parks, or other public facilities. Therefore, the Project would not cause or contribute to any cumulative impact related to these considerations. (No Impact)

As analyzed in Section 3.15, the Project could result in a less-than-significant impact associated with the provision of or need for new or physically altered governmental facilities for fire and/or police protection. The Project-specific study area and geographic scope for the analysis of cumulative impacts related to police and fire protection facilities includes the service territories of the police and fire emergency service providers that serve the cities of Carlsbad, Escondido, Vista,

and San Marcos, as well as unincorporated San Diego (i.e., Lake San Marcos). See Section 3.15.1, *Environmental Setting*, which describes the service providers and their service areas.

The ongoing environmental effects of construction needed to provide acceptable service ratios, response times, or other performance objectives to meet the demands of past projects are reflected in the baseline environmental conditions described in Section 3.15.1. Any development that would occur in the cumulative scenario could incrementally increase the demand on police services. However, there is no evidence that these incremental increases in demand collectively would result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities. There is no existing significant adverse condition relating to response capabilities that necessitates new or modified facilities, and the development and operation of projects in the cumulative scenario, together with construction and operation of the Project, would not cause or contribute to a significant cumulative effect in this regard. Even if a significant cumulative effect were to occur to police services, the Project's incremental contribution would not be cumulatively considerable because the proposed improvements within the existing San Marcos and Escondido substation sites, pole replacement and removal, and other activities would not substantially increase existing demands on emergency services. (Less than Significant Impact)

As with police services, any development that would occur in the cumulative scenario could incrementally increase the demand on fire protection services. As noted in Question a.i in Section 3.15.4, the Project would cross areas prone to wildfires. This analysis assumes the Project's compliance with CPUC GO 95, CPUC Decision 12-01-032 (Fire Safety Order), and Standard 1.E of CPUC GO 166, in addition to tree and power line clearance requirements with PRC Section 4292 and Cal. Code Reg. Title 14, Section 1254. The analysis also assumes that the Project would include APM TRA-2 ensuring safe passage and access by emergency response vehicles (i.e., fire protection equipment). Any development that would occur in the cumulative scenario could incrementally increase the demand on fire protection services. However, there is no evidence that these incremental increases in demand collectively would result in substantial adverse physical impacts associated with the provision of or need for new or physically altered fire protection facilities. There is no existing significant adverse condition relating to response capabilities that necessitates new or modified facilities, and the development and operation of projects in the cumulative scenario, together with construction and operation of the Project, would not cause or contribute to a significant cumulative effect in this regard. Even if a significant cumulative effect were to occur to fire protection services, the Project's incremental contribution, which is limited by the compliance with applicable regulations and the APM discussed above, would not be cumulatively considerable because the proposed improvements within the existing San Marcos and Escondido substation sites, pole replacement and removal, and other activities would not substantially increase existing demands on fire protection services. (Less than Significant Impact)

Recreation

As analyzed in Section 3.16, *Recreation*, the Project would have no impact pertaining to the proposed construction or expansion of recreational facilities because the Project does not include recreational components, the construction of which might have an adverse physical effect on the

environment. Therefore, the Project would not cause or contribute to any cumulative impact related to this consideration. (No Impact)

Section 3.16 defines the study area for that analysis as including the parks, open spaces, and other lands used for recreational purposes within 0.5 mile of the Project alignment. The Project would cause a less-than-significant impact related to the potential for a temporary shift in park and recreational facility use from facilities near Project-related construction activities to other facilities. This possible short-term use could lead to temporary indirect impacts on those parks and trails during the few months of construction along each segment, thereby resulting in physical deterioration of those other facilities. The analysis also notes that a number of temporary work areas would be located in close proximity to trails. With implementation of APMs PS-1 to PS-4 – which would require facility closure notification and restoration – and Mitigation Measures NOI-1 and NOI-2 addressing potential noise effects, the analysis found that the Project would have a less-than-significant impact on recreational access.

The ongoing environmental effects of park use resulting from past projects are reflected in the baseline environmental conditions. As explained in Section 3.16.4, *Environmental Impacts*, projects can increase the use of area parks and other recreational facilities by increasing demand and by displacing use from one facility to another. These would include residential projects in the cumulative scenario, such as those included in the Copper Hills Specific Plan (project 2-4) and Harmony Grove Village South (project 3-1). The combined impacts of these and similar projects in the cumulative scenario, together with the incremental impacts of the Project, would not cause substantial physical deterioration of parks and recreational facilities in the Project area to occur or be accelerated such that a significant cumulative impact would result, in part because the specific plans include the development of new parks and recreational amenities to serve new residents. Further, the Project's incremental contribution to a cumulative impact would not be cumulatively considerable because of the limited duration of any potential shift (power line work would occur over the course of 9 months for Segment 2 and 6 months for Segment 3) and because APM PS-4 stipulates that physically impacted recreational facilities would be returned substantially to their pre-construction state at the conclusion of construction. The avoidance and correction of the Project's short-term impacts would assure that any residual incremental impact would not be cumulatively considerable. (Less than Significant Impact)

Transportation and Traffic

As analyzed in Section 3.17, *Transportation and Traffic*, because none of the other projects in the cumulative scenario would contribute to air traffic in the helicopter flight paths that would be used for the Project (i.e., SDG&E's existing ROW) or for ingress and egress from the helicopter landing staging area at the McClellan-Palomar Airport, the Project's less-than-significant impact related to an increase in air traffic levels would not cause or contribute to any significant cumulative effect in this respect. (Less than Significant Impact)

Section 3.17 defines the study area for this analysis as the local and regional transportation system, including roads maintained by the cities of Carlsbad, Vista, San Marcos, and Escondido, as well as the County of San Diego; Interstate 15 (I-15) and State Route (SR) 78. Within this area, and as analyzed in Section 3.17, the Project would have less-than-significant

impacts related to: conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system; a substantial increase in hazards due to a design feature or incompatible uses; and inadequate emergency access. With the implementation of mitigation measures, the Project also would have a less-than-significant impact with respect to conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways; as well as conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

The ongoing environmental effects of past projects are reflected in the baseline environmental conditions, including on-road congestion levels and hazards, flight patterns, and emergency access ways described in Section 3.17.1, *Environmental Setting.* For example, the ongoing impacts of past projects include significant intersection approach delays and low average speeds and/or adverse signal progression (LOS D or LOS E) on I-15 at the SR 78 Junction, on SR 78 at the I-15 Junction, and Auto Park Way at Hale Avenue (see Table 3.17-1, *Summary of Study Area Roadway Characteristics*).

Projects in the cumulative scenario that could contribute increases in average daily traffic (ADT) along road segments where the Project's construction personnel, equipment, and other construction-related trips would access work areas and staging yards would include, but not be limited to, Main Square (project 1-11), Hunter Industries (project 2-1), development in the Copper Hills Specific Plan (project 2-4), and Harmony Grove Village South (project 3-1). These same projects also would contribute to an incremental increase in construction-related roadway hazards that could be offset by the use of guard structures, proper signage, safety cones, flaggers, and other traffic control measures. Cumulative projects that could require lane closures on West San Marcos Boulevard or otherwise affect operation of the bus stops for Breeze Line 445 (the Carlsbad Poinsettia COASTER Connection to Palomar College), which operates along the segment of West San Marcos Boulevard that would be affected by construction of the Project, would include Venture Point Development (project 1-12), McDonald Group (project 1-10), Main Square (project 1-11), San Marcos Boulevard at Discovery Street Improvements (project 1-5), and Vista Palomar (project 1-3).

Implementation of APMs TRA-1 and TRA-2 would require SDG&E to consult and coordinate with local jurisdictions during preparation and implementation of a Traffic Management Plan (TMP) to ensure the safe and efficient transit of vehicles (including emergency vehicles), trains, bicyclists, and pedestrians adjacent to staging and work areas. Jurisdictions affected by the Project require traffic management measures, in the form of a TMP (prepared as part of jurisdictions' encroachment permit requirements), to reduce or avoid impacts caused by construction activities. The other construction projects identified in Table 3.21-1 would also be required to prepare and implement TMPs. Therefore, it is reasonably expected that these jurisdictions, as part of their review of TMPs, would ensure coordination of traffic management measures for concurrent construction projects. Implementation of Mitigation Measure TRA-1 would ensure that SDG&E coordinates with the North County Transit District to ensure minimal disruption to bus transit service on West San Marcos Boulevard. With implementation of the

APMs and this mitigation measure, cumulative impacts during construction would not be cumulatively considerable. (Less than Significant Impact)

Tribal Cultural Resources

As noted in Section 3.5, *Cultural Resources*, and Section 3.18, *Tribal Cultural Resources*, the Project alignment encompasses the ethnographic territories of the Luiseño and Kumeyaay peoples. The responses received by CPUC from the Project's AB 52 tribal consultation process are considered here to define the geographic scope of this cumulative analysis. The responding tribes were the San Luis Rey Band of Mission Indians, Rincon Band of Luiseño Indians, Santa Ysabel Band of the Iipay Nation, Viejas Band of Mission Indians, and the Pala Band of Mission Indians.

Accordingly, the geographic scope for cumulative impacts on tribal cultural resources includes a 1-mile radius from the Project footprint. While the focus of the Project-specific analysis was limited to a 300-foot-wide corridor centered on the Project alignment, this broader geographic scope is appropriate because the tribal cultural resources within this radius are expected to be similar to those in the Project area given their proximity, similar environments, landforms, and hydrology. This would result in similar land use types and, thus, site types.

The Project would have no impact pertaining to tribal cultural resources listed or eligible for the California Register of Historical Resources (CRHR) or in a local register as defined in Public Resources Code (PRC) Section 5020.1(k). The Project-specific analysis identified one resource (P-37-032160) as potentially eligible for the CRHR based on AB 52 consultation. However, as discussed in detail in Section 3.18.4, *Environmental Impacts*, this resource is being treated as a tribal cultural resource at the discretion of CPUC as Lead Agency pursuant to PRC Section 21074(a)(2). Therefore, the Project would not cause or contribute to any cumulative impact related to tribal cultural resources listed or eligible for the CRHR or in a local register as defined in PRC Section 5020.1(k). (No Impact)

Most past, current, and reasonably foreseeable cumulative projects listed in Table 3.21-1 and shown on Figure 3.21-1 would result in ground disturbance and development in the same area as the Project. As resource P-37-032160 is being treated in this analysis as an identified tribal cultural resource, impacts to this resource attributable to the Project, when considered together with the potential effects of cumulative projects, would be significant. The Project would implement Mitigation Measures CUL-1 through CUL-4, which would require feasible measures to substantially reduce the impact to this resource to a less-than-significant level. With the implementation of similar protective measures by other cumulative projects, it is not considered likely that there would be an existing significant adverse cumulative condition to which the Project would contribute. Therefore, as mitigated, the incremental contributions of Project-related impacts would not be cumulatively considerable. (Less than Significant Impact)

Utilities and Service Systems

As noted in Section 3.19, *Utilities and Service Systems*, the Project would have no impact pertaining to exceedance of wastewater treatment requirements of the San Diego RWQCB; the construction of new water or wastewater treatment facilities or expansion of existing facilities;

the construction of new storm water drainage facilities or expansion of existing facilities; the sufficiency of water supplies available to serve the Project from existing entitlements and resources; or the adequacy of capacity to serve the Project's projected demand in addition to the provider's existing commitments. Therefore, the Project would not cause or contribute to any cumulative impact related to these considerations. (No Impact)

With respect to existing permitted landfill capacity, Section 3.19.1, *Environmental Setting*, defines the Project area as that served by the three active and permitted landfills in San Diego County, with an emphasis on the Otay Landfill in Chula Vista. This landfill is approved to accept treated wood waste and which SDG&E has identified as a destination landfill for treated wood waste and other solid waste from the Project. Within the service area of the Otay Landfill, the Project could have a less-than-significant impact related to the sufficiency of landfill capacity to accommodate the Project's solid waste disposal needs. With the implementation of Mitigation Measure US-1, the Project also would have a less-than-significant impact related to compliance with federal, state, and local statutes and regulations related to solid waste.

The ongoing environmental effects of past projects are reflected in the baseline environmental conditions described in Section 3.19.1. As of 2016, the Otay Landfill had approximately 21,194,000 cubic yards of capacity remaining, or approximately 34 percent of the landfill's maximum permitted capacity (Table 3.19-1, *Project Area Landfills*). Many of the residential, commercial, and industrial projects included in the cumulative scenario that could contribute nonhazardous solid waste (specifically including wastes that consist of agricultural waste; ash; construction/demolition waste; contaminated soil; dead animals; green materials; industrial, inert, mixed municipal, other designated waste; sludge (biosolids); tires; or treated wood) to the Otay Landfill. With the remaining capacity at the Otay Landfill and the other two San Diego County landfills (Sycamore, with 113,972,637 cubic yards of capacity remaining as of December 31, 2016, and the West Miramar Sanitary Landfill, with 15,527,878 cubic yards of remaining capacity), there is sufficient capacity to accommodate the landfill needs of the Project and other projects in the cumulative scenario. (Less than Significant Impact)

Wildfire

As analyzed in Section 3.20, *Wildfire*, depending on the pathway of migration, the geographic scope for cumulative effects relating to wildfires would be the air basin, watershed boundary, or extent of adjacent wildlands. Cumulative wildfire hazards could arise at any point during Project construction or operation and maintenance-related activities. Potential cumulative projects (including those identified in Table 3.21-1 and on Figure 3.21-1) could involve fire ignition causes (such as smoking, vehicle or equipment use, campfires, or electrical power) that could contribute to a cumulative risk of wildfire in the Project area.

The Project would result in a less-than-significant impact regarding the interference with adopted emergency response or evacuation plans. As noted in Section 3.20.4, *Environmental Impacts*, Question a, the Project would not conflict with or impair the implementation of the 2018 Strategic Fire Plan for California or the goals or objectives listed in the 2018 San Diego Unit Strategic Fire Plan. Additionally, as described in SDG&E's Electric Standard Practice-113.1 "SDG&E Operations & Maintenance Wildland Fire Prevention Plan," an SDG&E Fire Coordinator would

be responsible for communicating and coordinating with local fire prevention and emergency response agencies throughout operation and maintenance activities, actions which align with the aforementioned plans. With its compliance with these plans and SDG&E's standard practices, the Project would not cause or contribute to any cumulative impact related to interference with adopted emergency response or evacuation plans. (Less than Significant Impact)

Although the Project would not accommodate occupants, it passes through existing communities. Therefore, the Project has the potential to expose these communities to wildfire risks. As noted in Section 3.20.4, under Question b, parts of the Project would be located in moderate-to-very high fire hazard severity zones, as well as a SDG&E Fire Threat Zone. To ensure that potentially significant wildland fire impacts are reduced to a less-than-significant level during Project construction, Mitigation Measure WIL-1 would be implemented.

A large portion of San Diego County has been designated as being within a moderate, high, or very high fire hazard severity zone (CAL FIRE, 2007, 2009). Since 2000, San Diego County has been subject to a number of large, severe fire events, such as the Cedar Fire (2003), the Witch and Harris fires (2007), and the firestorm swarm of 2014. Wildfires in the Project vicinity include the Harmony fire of 1996 and the Cocos and Poinsettia fires.

However, as noted in Section 3.20.1, *Environmental Setting (Fire History)*, electric utilities accounted for only 1 percent of wildfires in the CAL FIRE San Diego Unit from 2013 to 2017. Section 2.5.3, *Pre-Construction Preparation*, notes that the Project includes access roads and vegetation clearance provisions. These features would aid in reducing wildfire risk and facilitating emergency suppression of fires. SDG&E has developed operating protocols and safety standards that minimize the risk of wildland fires during SDG&E operation and maintenance activities. SDG&E has prepared a Fire Prevention Plan in compliance with CPUC Decision 12-01-032 (Fire Safety Order) and Standard 1.E of General Order 166, which requires SDG&E to prepare and submit plans to minimize the risk of catastrophic wildfire posed by all of SDG&E's overhead electric lines and equipment during extreme fire-weather events. The Project would be included in this plan. Also, wildland fire prevention would occur through implementation of SDG&E's Electric Standard Practice 113.1 (SDG&E, 2014). Among the many procedures presented in this standard practice, it requires emergency suppression equipment to be carried by crews working in fire threat zones. With the access roads, vegetation clearance provisions, emergency suppression equipment, etc., that would be incorporated into the Project, its incremental impact would not be cumulatively considerable. (Less than Significant Impact)

As noted in Section 3.20.4, under Question d, the Project would not include any housing or structures and; therefore, would not expose people or structures to any increased level or risk associated with flooding, landslides, or post-fire slope instability. The analysis also notes that the Project would not result in changes to drainage patterns which could exacerbate downslope or downstream flooding, nor exacerbate existing risks associated with landslides or mudslides. These less-than-significant findings are attributable to the Project's adherence to the Construction Stormwater General Permit and Mitigation Measure GEO-1 requiring the Project compliance with recommendations of the final geotechnical report, as well as Mitigation Measure WIL-1 and the fire prevention plans and practices discussed in Section 3.20.4, under Question b. Based on

this, the Project's incremental less-than-significant impact would not be cumulatively considerable. (Less than Significant Impact)

c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly: *LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.*

The Project would not have environmental effects that would cause substantial direct or indirect adverse effects on human beings with implementation of the identified mitigation measures. Implementation of the mitigation measures identified in the respective sections of this IS/MND would reduce or avoid such impacts on human beings to a less than significant level.

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CHAPTER 5

Mitigation Monitoring, Reporting and Compliance Program

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MITIGATION MONITORING, REPORTING AND COMPLIANCE PROGRAM

San Diego Gas & Electric's San Marcos to Escondido TL6975 69 kV Project

(APPLICATION NO. A.17-11-010)

Introduction

This document describes the mitigation monitoring, reporting, and compliance program (MMRCP) for ensuring the effective implementation of the mitigation measures required for approval by the California Public Utilities Commission (CPUC) of the application by the San Diego Gas and Electric Company's (SDG&E) to construct, operate and maintain the SDG&E San Marcos to Escondido Tie Line (TL) 6975 69kV Project (Project). The MMRCP includes all measures proposed by SDG&E, as well as all mitigation measures identified by the CPUC to reduce potentially significant impacts to less than significant.

If the Project is approved, this MMRCP would serve as a self-contained general reference for the MMRCP adopted by the CPUC for the Project. If and when the Project is approved, the CPUC will compile the Final MMRCP to assure that it includes all measures as adopted.

California Public Utilities Commission – MMRCP Authority

The California Public Utilities Code in numerous places confers authority upon the CPUC to regulate the terms of service and the safety, practices, and equipment of utilities subject to its jurisdiction. It is the standard practice of the CPUC, pursuant to its statutory responsibility to protect the environment, to require that mitigation measures stipulated as conditions of approval are implemented properly, monitored, and reported on. In 1989, this requirement was codified statewide as Section 21081.6 of the Public Resources Code. Section 21081.6 requires a public agency to adopt a reporting or monitoring program when it adopts a mitigated negative declaration for a project that could have potentially significant environmental effects. California Environmental Quality Act (CEQA) Guidelines Section 15097 was added in 1999 to further clarify agency requirements for mitigation monitoring and reporting.

The purpose of a MMRCP is to ensure that measures adopted to mitigate or avoid significant impacts of a project are implemented. The CPUC views the MMRCP as a working guide to facilitate not only the implementation of mitigation measures by the project proponent, but also the monitoring, compliance, and reporting activities of the CPUC and any monitors it may designate.

The CPUC will address its responsibility under Public Resources Code Section 21081.6 when it takes action on SDG&E's application. If the CPUC approves the application, it also will adopt a MMRCP that includes the mitigation measures, as well as the APMs, the implementation of which will ultimately made conditions of approval by the CPUC.

Because the CPUC must decide whether or not to approve the SDG&E application and because the application may cause either direct or reasonably foreseeable indirect effects on the environment, CEQA requires the CPUC to consider the potential environmental impacts that could occur as the result of its decision and to consider mitigation for any identified significant environmental impacts.

If the CPUC approves SDG&E's application for authority to reinforce the electric transmission and distribution system, SDG&E would be responsible for implementation of all adopted Applicant Proposed Measures (APM) and CPUC-recommended mitigation measures governing the construction, operation, and maintenance of the Project. Though other federal, State, and local agencies would have permit and approval authority over some aspects of the Project, the CPUC would continue to act as the lead agency for monitoring compliance with all mitigation measures required by the adopted IS/MND. All approvals and permits obtained by SDG&E would be submitted to the CPUC prior to commencing the activity for which the permits and approvals were obtained.

In accordance with CEQA, the CPUC reviewed the impacts that would result from approval of the application. The activities considered include installation of new overhead single-circuit electric power line structures, rebuild of existing structures from single circuit to double circuit, and the reconductoring and re-energizing of existing conductors, pursuant to CPUC General Order (GO) 131-D. This would involve removal and/or replacement of power poles, placement of new poles and other distribution line upgrades. The Project is located primarily in the cities of San Marcos and Escondido and unincorporated areas in northern San Diego County, California. It would originate at the San Marcos Substation on the west and terminate at the Escondido Substation on the east and would be located within SDG&E right-of-way (ROW). To fully accommodate the Project, 1.2 acres of additional ROW would be acquired in San Marcos.

The CPUC review concluded that implementation of the Project would not result in any significant unmitigable impacts. All impacts would be mitigated to less-than-significant levels or would be less than significant. SDG&E has agreed to incorporate all the CPUC-recommended mitigation measures into the Project. The CPUC has included the stipulated mitigation measures as conditions of approval of the application and has circulated an IS/proposed MND for public review.

The attached IS/MND presents and analyzes potential environmental impacts that would result from construction, operation, and maintenance of the Project, and recommends mitigation measures as appropriate. Based on the IS/MND, approval of the application would have no impact or less than significant impacts in the following areas:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Energy
- Greenhouse Gas Emissions
- Land Use and Planning
- Mineral Resources
- Population and Housing

The IS/MND indicates that approval of the application would result in potentially significant impacts in the areas listed below, and so identifies adopted APMs and mitigation measures that have been accepted by SDG&E to reduce the significance below established thresholds.

- Biological Resources
- Cultural Resources
- Geology, Soils, Seismicity, and Paleontological Resources
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise
- Public Services
- Recreation
- Transportation and Traffic
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

Roles and Responsibilities

As the lead agency under CEQA, the CPUC is required to monitor the Project, if approved, to ensure that the required mitigation measures and adopted APMs are implemented. The CPUC will be responsible for ensuring full compliance with the provisions of this MMRCP and has primary responsibility for implementation of the monitoring program. The purpose of the monitoring program is to document that the mitigation measures and APMs required and relied upon by the CPUC are implemented and that mitigated environmental impacts are reduced to a less-than-significant level. The CPUC has the authority to halt any activity associated with the Project if the activity is determined to be a deviation from the approved Project or the adopted APMs and mitigation measures.

Consistent with CEQA Guidelines section 15097(a), the CPUC may delegate duties and responsibilities for monitoring to other mitigation monitors or consultants as deemed necessary. The CPUC will ensure that the person(s) delegated any duties or responsibilities are qualified to monitor compliance.

The CPUC, along with its mitigation monitor, will ensure that any minor Project refinement process, which will be designed specifically for the Project, or deviation from the procedures identified under the monitoring program is consistent with CEQA requirements; no minor Project refinement will be approved by the CPUC if it creates new significant environmental impacts. As defined in this MMRCP, a minor Project refinement should be strictly limited to minor Project changes that will not trigger other permit requirements, that does not increase the severity of an impact or create a new impact, and that clearly and strictly complies with the intent of the mitigation measure. A change to the Project that has the potential for creating significant environmental effects will be evaluated to determine whether supplemental CEQA review is required. Any proposed deviation from the approved Project and adopted APMs or mitigation measures, including correction of such deviation, shall be reported immediately to the CPUC and the mitigation monitor assigned to the construction for their review and CPUC approval. In some cases, a minor Project refinement also may require approval by a CEQA responsible agency.

Enforcement and Responsibility

The CPUC is responsible for enforcing the procedures for monitoring through the mitigation monitor. The mitigation monitor shall note any problems with implementation of mitigation, notify appropriate agencies or individuals about such problems, and report the problems to the CPUC. The CPUC has the authority to halt any construction, operation, or maintenance activity associated with the Project if the activity is determined to be a deviation from the approved Project or adopted APMs or mitigation measures. The CPUC may assign its authority to its mitigation monitor.

Mitigation Compliance Responsibility

SDG&E is responsible for successfully implementing all of the adopted APMs and mitigation measures in this MMRCP. The MMRCP contains criteria that define whether mitigation is successful. Standards for successful mitigation also are implicit in many mitigation measures that include such requirements as obtaining permits or avoiding a specific impact entirely. Additional mitigation success thresholds will be established by applicable agencies with jurisdiction through the permit process and through the review and approval of specific plans for the implementation of mitigation measures.

SDG&E shall inform the CPUC and its mitigation monitor in writing of any mitigation measures that are not or cannot be successfully implemented. The CPUC in coordination with its mitigation monitor will assess whether alternative mitigation is appropriate and specify to SDG&E the subsequent actions required.

Dispute Resolution Process

The following procedure will be observed for dispute resolution between CPUC staff and the applicant:

- Disputes and complaints should be directed to the CPUC's designated Project Manager for resolution.
- Should this informal process fail, the CPUC Project Manager may initiate enforcement or compliance action to address deviations from the approved Project.

General Monitoring Procedures

Mitigation Monitor

Many of the monitoring procedures will be conducted during the construction phase of the Project. The CPUC and the mitigation monitor are responsible for integrating the mitigation monitoring procedures into the construction process in coordination with SDG&E. To oversee the monitoring procedures and to ensure success, the mitigation monitor assigned to the construction must be on site during that portion of construction that has the potential to create a significant environmental impact or other impact for which mitigation is required. The mitigation monitor is responsible for ensuring that all procedures specified in this MMRCP are followed.

Construction Personnel

A key feature contributing to the success of mitigation monitoring will be obtaining the full cooperation of construction personnel and supervisors. Many of the mitigation measures and APMs require action on the part of the construction supervisors or crews for successful implementation. To ensure success, the following actions, detailed in specific mitigation measures included in this MMRCP, will be taken:

- SDG&E shall require all contractors to comply with the conditions of Project approval, including all adopted APMs and mitigation measures.
- One or more pre-construction meetings will be held to inform all and train construction personnel about the requirements of the MMRCP.
- A written summary of mitigation monitoring procedures will be provided to construction supervisors for all adopted APMs and mitigation measures requiring their attention.

SDG&E will also be responsible for retaining the qualified archaeologists, qualified biologists/biological monitors, qualified paleontologists, licensed engineers, qualified environmental trainers, Lead Environmental Inspectors, etc., specified in the adopted APMs and mitigation measures.

General Reporting Procedures

Site visits and specified monitoring procedures performed by other individuals will be reported to the mitigation monitor assigned to the construction. A monitoring record form will be submitted to the mitigation monitor by the individual conducting the visit or procedure so that details of the visit can be recorded and progress tracked by the mitigation monitor. A checklist will be developed and maintained by the mitigation monitor to track all procedures required for each mitigation measure and to ensure that the timing specified for the procedures is adhered to. The mitigation monitor will note any problems that may occur and take appropriate action to rectify the problems. SDG&E shall provide the CPUC with written quarterly reports of the Project, which shall include progress of construction, resulting impacts, mitigation implemented, and all other noteworthy elements of the Project. Quarterly or annual reports shall be required as long as mitigation measures are applicable.

Public Access to Records

The CPUC will make monitoring records and reports available for public inspection upon request. The CPUC and SDG&E will develop a filing and tracking system.

Condition Effectiveness Review

In order to fulfill its statutory mandates to mitigate or avoid significant effects on the environment and to design a MMRCP to ensure compliance during project implementation (Pub. Res. Code §21081.6):

- The CPUC may conduct a comprehensive review of measures which are not effectively mitigating impacts at any time it deems appropriate, including as a result of the Dispute Resolution Process outlined above; and
- If in either review, the CPUC determines that any conditions are not adequately mitigating significant environmental impacts caused by the Project, or that recent proven technological advances could provide more effective mitigation, then the CPUC may impose additional reasonable conditions to effectively mitigate these impacts.

These reviews will be conducted in a manner consistent with the CPUC's rules and practices.

Mitigation Monitoring, Reporting and Compliance Program

The table attached to this MMRCP presents a compilation of the adopted APMs and mitigation measures in the IS/MND. The purpose of the table is to provide a single comprehensive list of impacts, mitigation measures, adopted APMs, monitoring and reporting requirements, and timing. SDG&E proposed APMs to minimize impacts to the environment from implementation of the Project. In some instances, those APMs have been superseded by CPUC-recommended mitigation measures, as described in the IS/MND. The table below identifies only those APMs that have not been superseded and will be implemented as part of the Project.

TABLE 5-1
MITIGATION MONITORING, REPORTING, AND COMPLIANCE PROGRAM FOR THE SDG&E SAN MARCOS TO ESCONDIDO TL6975 69KV PROJECT

Environmental Impact	Applicant Proposed Measures (APMs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
Aesthetics				
	No mitigation required.			
Agriculture and Forestry Resources				
	No mitigation required.			
Air Quality				
	No mitigation required.			
Biological Resources				
Sensitive and Special-status areas and species	**APM BIO-1:** SDG&E will conduct all construction and operation and maintenance activities in accordance with NCCP Operational Protocols to avoid and minimize impacts on biological resources.	SDG&E and its contractors to implement measure as defined.	CPUC mitigation monitor to inspect compliance	During construction, operation and maintenance of the Project
	APM BIO-2: All earth-moving equipment will be free of mud and vegetative material before being mobilized onto work areas associated with the Project.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to inspect compliance	Prior to and during construction
	APM BIO-3: Except when not feasible due to physical or safety constraints, all Project construction vehicle movement will be restricted to the Project work areas, existing roads, and access roads constructed as a part of the Project and mapped by SDG&E in advance of construction. Approval from a biological monitor will be obtained prior to vehicle travel off of existing access roads.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to inspect compliance	Prior to and during construction
	APM BIO-4: Civil and land survey personnel will keep survey vehicles on existing roads. During Project surveying activities, brush clearing for footpaths, line-of-sight cutting, and land surveying panel point placement in sensitive habitat prior approval will be required from the Project's biological monitor. Hiking off roads or paths for survey data collection will be allowed year-round as long as all of the other applicable APMs are met.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to inspect compliance	During Project surveying activities
	APM BIO-5: Prior to the start of construction, the boundaries of sensitive plant populations that require protection will be delineated with clearly visible flagging or fencing by a qualified biologist. The flagging and/or fencing will be maintained in place for the duration of construction. Flagged and fenced areas will be avoided to the extent practicable during construction activities in that area. If impacts on sensitive plant species are unavoidable, SDG&E will perform soil and plant salvage activities to enhance recovery of these special-status plants, consistent with the provisions in the Enhancement Section 7.2.1 of the NCCP. These include the stockpiling of native soil in the area where Nuttall's scrub oak and wart-stemmed Ceanothus occur and top soil replacement after construction. Quality assurances and success criteria milestones for the restoration area as a whole will conform to the standards provided in Enhancement Section 7.2.1 of the NCCP.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to inspect compliance	Prior to and during construction

TABLE 5-1 (CONTINUED)
MITIGATION MONITORING, REPORTING, AND COMPLIANCE PROGRAM FOR THE SDG&E SAN MARCOS TO ESCONDIDO TL6975 69KV PROJECT

Environmental Impact	Applicant Proposed Measures (APMs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
Biological Resources (cont.)				
Sensitive and Special-status areas and species *(cont.)*	**APM BIO-6:** ***Coastal California Gnatcatcher.*** Prior to construction, SDG&E shall retain a qualified biologist to conduct surveys for the coastal California gnatcatcher in suitable habitat, to determine if any active nests are within or in the immediate vicinity of proposed construction activities. If feasible, SDG&E will avoid construction during the peak breeding season (February 15 – August 31) for coastal California gnatcatcher and migratory birds. When it is not feasible to avoid trimming or removal of vegetation or during the peak breeding season, SDG&E will perform a site survey in the area where the work is to occur. Trimming or removal of vegetation during the peak breeding season will require a preconstruction survey by a qualified biologist to confirm that active nests will not be affected. This survey will be performed to determine the presence or absence of nesting birds. If an active nest (i.e., containing eggs or young) is identified within the construction area during the survey, work will be temporarily halted and redirected away from the site. The qualified biologist in the field will determine a no-work buffer zone around the nest of sufficient size and dimensions that construction activities will not result in disturbance or direct removal of the active nest, or will not cause a breeding bird to abandon its nest. If the nesting and/or breeding activities are being conducted by a federal or state-listed species, SDG&E will consult with the USFWS and CDFW as necessary. Monitoring of the nest will continue until the birds have fledged or construction is no longer occurring on site. **Migratory Birds.** Trimming or removal of vegetation during the peak breeding season (February 15 to August 31) will require a pre-construction survey by a qualified biologist to confirm that active nests will not be affected. If an active nest is detected within the construction area during the survey, work will be temporarily halted and redirected away from the site. The qualified biologist in the field will determine a no-work buffer zone around the nest of sufficient size and dimensions that construction activities will not result in disturbance or direct removal of the active nest, or will not cause a breeding bird to abandon its nest.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to inspect compliance	Prior to construction
	APM BIO-7: If a raptor nest is observed during preconstruction surveys, a qualified biologist would determine if it is active. If the nest is determined to be active, the biological monitor would monitor the nest to ensure nesting activities and/or breeding activities are not substantially adversely affected. If the biological monitor determines that Project activities are disturbing or disrupting nesting and/or breeding activities, the monitor will make recommendations to reduce the noise and/or disturbance in the vicinity of the nest.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to inspect compliance	Prior to and during construction
	APM BIO-8: A biological monitor will be present during all ground-disturbing and vegetation removal activities. Immediately prior to initial ground-disturbing activities and/or vegetation removal, the biological monitor will survey the site to ensure that no special-status species will be impacted.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to inspect compliance	During all ground disturbing and vegetation removal activities
	APM BIO-9: Wherever possible, vegetation will be left in place or mowed, instead of grubbed, to avoid excessive root damage and to allow for regrowth and to minimize soil erosion.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to inspect compliance	During all project activities

TABLE 5-1 (CONTINUED)
MITIGATION MONITORING, REPORTING, AND COMPLIANCE PROGRAM FOR THE SDG&E SAN MARCOS TO ESCONDIDO TL6975 69KV PROJECT

Environmental Impact	Applicant Proposed Measures (APMs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
Biological Resources (cont.)				
Special-Status Species	**Mitigation Measure BIO-1: Project Compliance with the Federal and California Endangered Species Acts.** Prior to approval of the Notice to Proceed (NTP), SDG&E shall provide CPUC with a written commitment to implement its 1995 Subregional Natural Community Conservation Plan (NCCP) or 2017 Low Effect HCP (LEHCP), including proof that sufficient mitigation/take credits are assigned to the Project to cover potential impacts on all special-status plant and animal species present in the BSA or having moderate or high potential to occur in the biological study area (BSA). If there are not sufficient mitigation/take credits available in the NCCP or LEHCP at the time of NTP approval, then prior to the commencement of Project construction, SDG&E shall secure take authorization from the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW), as appropriate, for all federal and State-listed special-status plant and animal species present in the BSA or having moderate or high potential to occur in the BSA that are impacted by the Project. The conditions of these authorizations shall be equally or more effective than the protocols and practices included in the NCCP/LEHCP. SDG&E shall provide the CPUC with copies of these authorizations to show that compliance with permitting conditions would be equal to or more effective than the approved NCCP/LEHCP protocols and practices. SDG&E shall also submit to CPUC any monitoring reports, incident reports, etc., required by USFWS and/or CDFW when submitted to those agencies.	SDG&E and its contractors to implement measure as defined	SDG&E to provide written documentation to CPUC Project Manager and mitigation monitor in order to confirm compliance	Prior to construction
Active Nests	**Mitigation Measure BIO-2: Establishment of Cylindrical Construction Buffers.** The biological monitor shall establish a three-dimensional cylinder-shaped buffer around active nests that have the potential to be affected by helicopter use or ground-based activities associated with helicopter use. A vertical buffer shall extend at least 300 feet vertically above the location of the nest and at least 300 feet horizontally for passerines (or 500 feet vertically and horizontally for raptors and 500 feet vertically and 0.5 mile horizontally for white-tailed kite). The biological monitor and SDG&E project manager shall monitor the helicopter tracks (i.e., flight patterns, durations) daily to ensure compliance with these established buffers. This buffer assumes the helicopter activities are temporary or infrequent in nature (no longer than one minute [e.g., pass-by] or visit the site once in a day) If helicopter work occurs in the vicinity of an active nest for an extended period of time, the biological monitor may determine, based on the nature of the work and nest monitoring observations, that the buffer is insufficient for the nest and adjust the buffer distance appropriately.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to inspect compliance	Prior to and during construction and helicopter use
Jurisdictional Areas	**Mitigation Measure BIO-3: Avoid Jurisdictional Resources.** To avoid impacts on jurisdictional areas, SDG&E and its contractor shall flag work area limits and work shall be restricted to the flagged limits. Additionally, silt fencing shall be installed on the side of the work area closest to the jurisdictional feature, to minimize construction-generated run-off or sedimentation. A qualified biologist shall verify that silt fencing and construction work is properly installed and are located outside of jurisdictional areas to confirm their avoidance. Monitoring shall take place during rain events to confirm the integrity of silt fencing and verify runoff does not enter jurisdictional areas.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to inspect compliance	Prior to and during construction

TABLE 5-1 (CONTINUED)
MITIGATION MONITORING, REPORTING, AND COMPLIANCE PROGRAM FOR THE SDG&E SAN MARCOS TO ESCONDIDO TL6975 69KV PROJECT

Environmental Impact	Applicant Proposed Measures (APMs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
Cultural Resources				
Historical and Archaeological Resources	**Mitigation Measure CUL-1: Retention of Qualified Archaeologist.** Prior to the start of any ground disturbing activity, a Qualified Archaeologist, defined as an archaeologist meeting the Secretary of the Interior's Standards for professional archaeology (U.S. Department of the Interior, 2008) shall be retained by SDG&E to carry out all APMs and mitigation measures related to archaeological resources.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to confirm compliance	Prior to construction
	Mitigation Measure CUL-2: Pre-Construction Cultural Resources Sensitivity Training. Prior to the start of any ground-disturbing activity, the Qualified Archaeologist shall prepare cultural resources sensitivity training materials for use during Project-wide Worker Environmental Awareness Training (or equivalent). The cultural resources sensitivity training shall be conducted by a qualified environmental trainer (often the Lead Environmental Inspector [LEI] or equivalent position) working under the supervision of the Qualified Archaeologist. The Qualified Archaeologist shall determine and ensure the suitability of the qualified environmental trainer. The cultural resources sensitivity training shall be conducted for all construction personnel. Construction personnel shall be informed of the types of archaeological resources that may be encountered, and of the proper procedures to be implemented in the event of an inadvertent discovery of archaeological resources or human remains. SDG&E shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to confirm compliance	Prior to construction
	Mitigation Measure CUL-3: Development and Implementation of Cultural Resources Monitoring Plan. Prior to the start of any Project-related ground disturbing activities the Qualified Archaeologist shall prepare a Cultural Resources Monitoring Plan (CRMP). The CRMP shall stipulate the location and timing of archaeological and Native American monitoring, including, but not limited to, the monitoring of all ground disturbing activities within 250 feet of P-37-032160 and within 100 feet of the remaining 10 archaeological resources (P-37-004495, -004499, -005501, -007306, -010551, -010550, -011442, -012209, -034831, and TL6975-S-5) that have the potential to contain or are known to contain subsurface archaeological deposits, as well as all ground disturbing activities within Segment 3 and the easternmost 500 feet of Segment 2. The CRMP shall include monitoring protocols to be carried out during Project construction. The CRMP shall stipulate that a Native American monitor associated with one or more of the Native American groups that have expressed interest in the Project (i.e. San Luis Rey Band of Mission Indians, Rincon Band of Luiseno Indians, and/or Santa Ysabel Band of the Iipay Nation) be retained to monitor all Project-related ground disturbance stipulated in the CRMP. In preparing the CRMP, the Native American groups that have expressed interest in monitoring shall be consulted regarding the scheduling of monitors. A Native American monitoring schedule shall be incorporated into the CRMP. The CRMP shall contain an allowance that the Qualified Archaeologist, based on observations of subsurface soil stratigraphy or other factors during initial grading, and in coordination with the Native American monitor(s) and SDG&E, may reduce or discontinue monitoring as warranted if it is determined that the possibility of encountering archaeological deposits is low. The CRMP shall outline the appropriate measures to be followed in the event of unanticipated	SDG&E and its contractors to implement measure as defined	CPUC to review and approve CRMP. CPUC mitigation monitor to confirm compliance	Prior to any Project-related ground disturbing activities and during construction

TABLE 5-1 (CONTINUED)
MITIGATION MONITORING, REPORTING, AND COMPLIANCE PROGRAM FOR THE SDG&E SAN MARCOS TO ESCONDIDO TL6975 69KV PROJECT

Environmental Impact	Applicant Proposed Measures (APMs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
Cultural Resources (cont.)				
Historical and Archaeological Resources *(cont.)*	discovery of cultural resources during Project implementation, including that all ground disturbance within 100 feet of an unanticipated discovery shall cease until a treatment plan is developed by the Qualified Archaeologist in coordination with SDG&E and the Native American monitor(s) and which will consider the resources archaeological and tribal value. The CRMP shall identify avoidance as the preferred manner of mitigating impacts to cultural resources. The CRMP shall establish the criteria utilized to evaluate the significance (per CEQA) of the discoveries, methods of avoidance consistent with CEQA Guidelines Section 15126.4(b)(3), as well as identify the appropriate treatment to mitigate the effect of the Project if avoidance of a significant resource is determined to be infeasible. The CRMP will also include provisions for the treatment of archaeological sites that qualify as unique archaeological resources pursuant to PRC Section 21083.2, which places limits on the costs of mitigation for unique archaeological resources. The plan shall also include reporting of monitoring results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and State repositories. The CRMP shall be submitted to SDG&E and CPUC for review and approval prior to the start of Project-related ground disturbance, as well as to the Native American groups that have expressed interest in the Project (i.e. San Luis Rey Band of Mission Indians, Rincon Band of Luiseno Indians, and/or Santa Ysabel Band of the Iipay Nation) for review and comment.			
	Mitigation Measure CUL-4: Data Recovery Excavations at P-37-032160. Prior to the start of any Project-related ground disturbing activities within 250 feet of archaeological site P-37-032160, data recovery excavations shall be carried out to collect scientifically consequential data associated with known resource P-37-032160 where Project-related ground disturbing activities including but not limited to pole replacement, trenching, potholing, and AC mitigation well and test station installations will be carried out. Prior to the start of the data recovery excavations, a research design shall be prepared by the Qualified Archaeologist outlining the research questions to be addressed as part of the data recovery, as well as the field and lab methods and any special studies proposed to obtain the scientifically consequential information. The research design shall be submitted to SDG&E and CPUC for review and approval prior to the start of the data recovery excavations, as well as to the San Luis Rey Band of Mission Indians for review and comment. A data recovery report presenting the methods and results of the data recovery excavations shall be prepared and reviewed by the CPUC and SDG&E, and submitted to the San Luis Rey Band of Mission Indians for review and comment. The final data recovery report shall be placed on file at the South Coast Information Center.	SDG&E and its contractors to implement measure as defined	CPUC to review and approve CRMP. CPUC mitigation monitor to confirm compliance	Prior to any Project-related ground disturbing activities and data recovery excavations
	Mitigation Measure CUL-5: Exclusionary Fencing. Prior to Project-related ground disturbing activities, exclusionary fencing shall be installed to ensure that the five previously recorded archaeological sites within or immediately adjacent to the Project alignment that have surface manifestations (P-37-004495, -004499, -007306, -012209, and TL6975-S-5) are not inadvertently impacted during Project implementation. The exclusionary fencing shall encompass the mapped site boundaries plus a 25-foot radius to ensure an appropriate buffer is maintained between the sites and Project-related ground disturbing activities. For the four archaeological resources bisected by Project access roads (P-37-004495, -004499, -007306,	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to inspect compliance	Prior to Project-related ground disturbing activities

TABLE 5-1 (CONTINUED)
MITIGATION MONITORING, REPORTING, AND COMPLIANCE PROGRAM FOR THE SDG&E SAN MARCOS TO ESCONDIDO TL6975 69KV PROJECT

Environmental Impact	Applicant Proposed Measures (APMs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
Cultural Resources (cont.)				
Historical and Archaeological Resources *(cont.)*	and TL6975-S-5), the exclusionary fencing shall be established along the shoulder of the existing roads. To ensure avoidance, the exclusionary fencing shall be marked with signs indicating that staff associated with the Project are not to go beyond the limits of the fencing. The exclusionary fencing shall not identify the protected areas as demarcating archaeological resources in order to discourage unauthorized disturbance, vandalism, or collection of artifacts.			
	Mitigation Measure CUL-6: Pre-Construction Surveys. Prior to the start of Project-related ground disturbing activities, pre-construction surveys of the four archaeological sites bisected by existing access roads (P-37-004495, -004499, -007306, and TL6975-S-5) shall be conducted to map and collect all artifacts located within the road beds. Artifact mapping shall be conducted using a hand held GPS unit capable of sub-meter accuracy, and the final disposition of the artifacts shall be determined by SDG&E in coordination with the San Luis Rey Band of Mission Indians.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to confirm compliance	Prior to Project-related ground disturbing activities
	Mitigation Measure CUL-7: Road Maintenance within Archaeological Sites. During Project implementation, routine road maintenance, including but not limited to grading and blading, shall be avoided within the four archaeological sites bisected by existing access roads (P-37-004495, -004499, -007306, and TL6975-S-5). Should maintenance activities such as drainage or culvert repairs be required to stabilize the access road, all ground disturbing activities within 100 feet of the four archaeological sites shall be monitored as stipulated in the CRMP.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to inspect compliance	During construction
Human Remains	**Mitigation Measure CUL-8: Inadvertent Discovery of Human Remains.** If human remains are uncovered during Project construction, all work within 100 feet of the find shall be immediately halted, and the San Diego County coroner shall be contacted to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5(e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the County Coroner shall contact the California Native America Heritage Commission (NAHC), in accordance with Health and Safety Code Section 7050.5(c), and Public Resources Code Section 5097.98 (as amended by AB 2641). The NAHC shall then identify a Most Likely Descendant (MLD) of the deceased Native American, who shall then help determine what course of action should be taken in the disposition of the remains. Per Public Resources Code Section 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section, with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to confirm compliance	During construction
Energy				
	No mitigation required.			

TABLE 5-1 (CONTINUED)
MITIGATION MONITORING, REPORTING, AND COMPLIANCE PROGRAM FOR THE SDG&E SAN MARCOS TO ESCONDIDO TL6975 69KV PROJECT

Environmental Impact	Applicant Proposed Measures (APMs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
Geology, Soils, Seismicity, and Paleontological Resources				
Ground Failure, Slope Instability, and Landslides	**Mitigation Measure GEO-1: Geotechnical Report.** The structural requirements of the California Building Code (CBC) are applicable to certain structural components of the Project, including retaining walls, screen walls, fences, and control shelters. SDG&E and/or its contractors shall design such structures to comply with such CBC standards and shall adhere to and implement all design recommendations and parameters established in the Project's Geotechnical Investigation Report by GEOCON Inc. and the AC Interference Analysis & Mitigation System Design by ARK Engineering & Technical Services. In addition, SDG&E shall retain a California registered professional engineer(s) to prepare a supplemental geotechnical report. This report shall address specific geotechnical hazards that were not addressed in the Geotechnical Investigation Report, and provide recommendations for mitigating such hazards. The analysis in that report shall include, but not be limited to, the following: • recommendations to address the liquefaction risk within the Quaternary alluvium along Segment 1 and 3, if any; • recommendations to address the corrosive soils that are present along Segments 1 and 2, if any, which pose a risk to the concrete pier foundations and direct bury poles; • recommendations to address the landslide potential along Segment 2, if any, where planned ground disturbing activities could trigger landslides; and, • evaluation of the site-specific conditions and recommendations specific to micropiles where proposed, if final design includes the use of micropiles. The recommendations shall ensure that when incorporated, the Project shall not increase the potential for ground failure, slope instability, and/or landslides, and shall be resistant to damage from ground shaking, ground failure, corrosive soils, unstable slopes, and landslides. SDG&E shall submit the supplemental geotechnical report to the CPUC Project Manager for review and approval at least 30 days prior to the start of construction.	SDG&E and its contractors to implement measure as defined	CPUC PM to review and approve supplemental report. CPUC mitigation monitor to confirm compliance	At least 30 days prior to construction
Paleontological Resources	**Mitigation Measure PALEO-1: Project Paleontologist.** SDG&E or its contractor shall retain a qualified professional paleontologist (qualified paleontologist) meeting the Society of Vertebrate Paleontology (SVP) standards as set forth in the "Definitions" section of Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (2010) prior to the approval of demolition or grading permits. The qualified paleontologist shall attend the Project kick-off meeting and Project progress meetings on a regular basis, shall report to the site in the event potential paleontological resources are encountered, and shall implement the duties outlined in Mitigation Measures PALEO-2 through PALEO-4.	SDG&E and its contractors to implement measure as defined	SDG&E qualified paleontologist to inspect compliance. CPUC mitigation monitor to confirm compliance	Project meetings (i.e., kick-off and regular basis meetings) and during all project activities (i.e., construction, operation, and maintenance)

TABLE 5-1 (CONTINUED)
MITIGATION MONITORING, REPORTING, AND COMPLIANCE PROGRAM FOR THE SDG&E SAN MARCOS TO ESCONDIDO TL6975 69KV PROJECT

Environmental Impact	Applicant Proposed Measures (APMs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
Geology, Soils, Seismicity, and Paleontological Resources				
Paleontological Resources *(cont.)*	**Mitigation Measure PALEO-2: Worker Training.** Prior to the start of any ground disturbing activity (including vegetation removal, pavement removal, etc.), the qualified paleontologist shall prepare paleontological resources sensitivity training materials for use during Project-wide Worker Environmental Awareness Training (or equivalent). The paleontological resources sensitivity training shall be conducted by a qualified environmental trainer (often the Lead Environmental Inspector [LEI] or equivalent position) working under the supervision of the qualified paleontologist. In the event construction crews are phased, additional trainings shall be conducted for new construction personnel. The training session shall focus on the recognition of the types of paleontological resources that could be encountered within the Project site and the procedures to be followed if they are found, as outlined in the approved Paleontological Resources Monitoring and Mitigation Plan in Mitigation Measure PALEO-3. SDG&E and/or its contractor shall retain documentation demonstrating that all construction personnel attended the training prior to the start of work on the site, and shall provide the documentation to the CPUC Project Manager upon request.	SDG&E and its contractors to implement measure as defined	SDG&E qualified paleontologist to confirm compliance and provide specified documentation to CPUC PM	Prior to any ground disturbing activities
	Mitigation Measure PALEO-3: Paleontological Monitoring. The qualified paleontologist shall prepare, and SDG&E and/or its contractors shall implement, a Paleontological Resources Monitoring and Mitigation Plan (PRMMP). SDG&E shall submit the plan to the CPUC Project Manager for review and approval at least 30 days prior to the start of construction. This plan shall address specifics of monitoring and mitigation and comply with the recommendations of the SVP (2010), as follows. • The qualified paleontologist shall identify, and SDG&E or it contractor(s) shall retain, qualified paleontological resource monitors (qualified monitors) meeting the SVP standards (2010). • The qualified paleontologist and/or the qualified monitors under the direction of the qualified paleontologist shall conduct full-time paleontological resources monitoring for all ground-disturbing activities in previously undisturbed sediments in the Project site that have high paleontological sensitivity. This includes any depth of excavation into the Santiago Formation, as well as excavations that exceed 10 feet in depth in areas mapped as young alluvial floodplain deposits that overlie the Santiago Formation. The PRMMP shall clearly map these portions of the Project based on final design provided by SDG&E and/or its contractor(s). • If many pieces of heavy equipment are in use simultaneously but at diverse locations, each location will need to be individually monitored. • Monitors shall have the authority to temporarily halt or divert work away from exposed fossils in order to evaluate and recover the fossil specimens, establishing a 50-foot buffer. • If construction or other Project personnel discover any potential fossils during construction, regardless of the depth of work or location and regardless of whether the site is being monitored, work at the discovery location shall cease in a 50-foot radius of the discovery until the qualified paleontologist has assessed the discovery and made recommendations as to the appropriate treatment.	SDG&E and its contractors to implement measure as defined	SDG&E qualified paleontologist to confirm compliance and provide specified documentation to CPUC PM	30 days prior to construction

TABLE 5-1 (CONTINUED)
MITIGATION MONITORING, REPORTING, AND COMPLIANCE PROGRAM FOR THE SDG&E SAN MARCOS TO ESCONDIDO TL6975 69KV PROJECT

Environmental Impact	Applicant Proposed Measures (APMs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
Geology, Soils, Seismicity, and Paleontological Resources (cont.)				
Paleontological Resources (cont.)	• The qualified paleontologist shall determine the significance of any fossils discovered, and shall determine the appropriate treatment for significant fossils in accordance with the SVP standards. The qualified paleontologist shall inform SDG&E of these determinations as soon as practicable. See Mitigation Measure PALEO-4 regarding significant fossil treatment. • Monitors shall prepare daily logs detailing the types of activities and soils observed, and any discoveries. The qualified paleontologist shall prepare a final monitoring and mitigation report to document the results of the monitoring effort and any curation of fossils. SDG&E shall provide the daily logs to the CPUC Project Manager upon request, and shall provide the final report to the CPUC Project Manager upon completion.			
	Mitigation Measure PALEO-4: Significant Fossil Treatment. If any find is deemed significant, as defined in the SVP standards (2010) and following the process outlined in Mitigation Measure PALEO-3, the qualified paleontologist shall salvage and prepare the fossil for permanent curation with a certified repository with retrievable storage following the SVP standards.	SDG&E, its contractors, and qualified paleontologist to implement measure as defined	CPUC mitigation monitor to confirm compliance	During construction, operation, and maintenance of the Project
Greenhouse Gas Emissions				
	No mitigation required.			
Hazards and Hazardous Materials				
Construction Hazards	**APM HAZ-1:** A Health and Safety Plan will be prepared and implemented during construction. The Health and Safety Plan will describe the anticipated hazards that construction workers may encounter while working on the Project, the safety measures that must be taken to address those hazards, and the necessary training requirements for personnel working on the Project. Safety hazards and applicable federal and state occupational standards will be identified in conjunction with the development of appropriate response actions, as well as a protocol for accident reporting. The Health and Safety Plan will also identify security and safety requirements for staging areas, storage yards, excavation areas, and any other areas of the Project where hazards may exist during construction activities. In addition, information regarding medical kits, safety equipment, and evacuation procedures will be outlined in the Health and Safety Plan. A qualified safety field representative will be present on site to observe and document adherence to the Health and Safety Plan as needed. The Health and Safety Plan will be prepared by the SDG&E construction contractor and will be available immediately prior to construction.	SDG&E and its contractors to implement measure as defined	SDG&E safety field representative to provide specified documentation. CPUC mitigation monitor to confirm compliance	Prior to and during construction
	APMs TRA-1 and **TRA-2**, described below.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to confirm compliance	Prior to and during construction activities

TABLE 5-1 (CONTINUED)
MITIGATION MONITORING, REPORTING, AND COMPLIANCE PROGRAM FOR THE SDG&E SAN MARCOS TO ESCONDIDO TL6975 69KV PROJECT

Environmental Impact	Applicant Proposed Measures (APMs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
Hazards and Hazardous Materials				
Soil Excavation and Dewatering	**Mitigation Measure HAZ-1: Soil and Dewatering Management Plan.** SDG&E and the contractor conducting soil excavation and (if needed) dewatering shall develop and implement a Soil and Dewatering Management Plan (SDMP) that describes the procedures for managing excavated soil and groundwater generated from dewatering activities. The SDMP shall include procedures for monitoring soil for possible contamination, identifying the specific stockpiling locations and measures to contain the stockpiled soil to prevent run on and run off, and materials disposal specifying how the construction contractor(s) will remove, handle, transport, and dispose of all excavated materials in a safe, appropriate, and lawful manner. The SDMP shall specify the contractor will segregate and dispose of soil with chemical concentrations above regulatory standards. Soil with chemical concentrations below regulatory standards may be reused or recycled. Soil with chemical concentrations above regulatory standards shall be disposed of in accordance with the applicable provisions of Cal. Code Regs. Title 22, Chapter 11, Article 3, Section 66261 (i.e., Class III (non-hazardous waste), Class II (non-hazardous and "designated" waste), or Class I (non-hazardous and hazardous waste)). The SDMP must identify protocols for soil testing and disposal, identify the approved disposal sites, and include written documentation that the disposal site can accept the waste. The contractor shall include procedures for the safe and legal disposal of groundwater generated from dewatering, if any. The procedures shall include water sampling and testing procedures to quantify chemical concentrations in the water, and dispose of the water in a safe and legal manner. Note that the disposal of groundwater generated from dewatering may be disposed of under the State's VOC and Fuel General Permit, depending on chemical concentrations and local sanitary sewer acceptance criteria. Contract specifications shall mandate full compliance with all applicable local, State, and federal regulations related to the identification, transportation, and disposal of hazardous materials, including those encountered in soil and groundwater. This SDMP shall be submitted to CPUC for review and approval prior to commencement of construction.	SDG&E and its contractors to implement measure as defined	CPUC to approve and CPUC mitigation monitor to inspect compliance	Prior to construction
Hydrology and Water Quality				
Soil Excavation and Dewatering	**Mitigation Measure HAZ-1: Soil and Dewatering Management Plan**, described above.	SDG&E and its contractors to implement measure as defined	CPUC to approve and CPUC mitigation monitor to inspect compliance	Prior to construction
Land Use and Planning				
	No mitigation required.			
Mineral Resources				
	No mitigation required.			

TABLE 5-1 (CONTINUED)
MITIGATION MONITORING, REPORTING, AND COMPLIANCE PROGRAM FOR THE SDG&E SAN MARCOS TO ESCONDIDO TL6975 69KV PROJECT

Environmental Impact	Applicant Proposed Measures (APMs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
Noise				
Construction Noise	**APM NOI-1:** Construction activities will occur during the times established by the local ordinances, with the exception of certain activities where nighttime and weekend construction activities are necessary, including, but not limited to, construction work timeframes mandated by permit, pouring of foundations, and pulling of the conductor, which require continuous operation or must be conducted during off-peak hours per agency requirements. SDG&E will meet and confer with the applicable jurisdiction to discuss temporarily deviating from the requirements of the noise ordinance, as described in the noise variance process.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to inspect compliance	During construction activities
	APM NOI-2: SDG&E will provide notice of the construction plans to all property owners within 300 feet of the Project by mail at least one week prior to the start of construction activities. The announcement will state the anticipated construction start window, anticipated completion window, and hours of operation, as well as provide a telephone contact number for receiving questions or complaints during construction. SDG&E will maintain functional mufflers and/or silencers on all equipment to minimize noise levels as well as evaluate the potential use of portable noise barriers.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to confirm compliance	One week prior to construction activities
	Mitigation Measure NOI-1: Construction Noise Reduction and Mitigation Plan. To reduce daytime noise impacts due to Project construction near sensitive receptors, SDG&E shall develop and implement a Construction Noise Reduction and Mitigation Plan (Plan). The Plan shall be submitted to the CPUC at least 14 days prior to the commencement of construction activities for review and approval. The Plan shall include a requirement for SDG&E to administer a noise monitoring program when construction activities are conducted within 100 feet of sensitive receptor locations to ensure that the provisions of the Plan, including those identified below, are effective in reducing construction noise levels at sensitive receptor locations to 75 dBA L_{eq} or less. The Plan shall present specific measures that identify how the construction noise limit of 75 dBA as an hourly L_{eq} at nearby sensitive receptor locations will be adhered to, how potential exceedances will be documented and corrected, and how impacts on sensitive receptors from exceedances that cannot be corrected or avoided will be mitigated, including but not limited to the following measures: ***Noise Reduction*** The following measures shall apply to construction activities within 100 feet of sensitive receptor locations: • Impact tools (e.g., jack hammers, pavement breakers, and rock drills) shall be hydraulically or electrically powered where feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dB. External jackets on the tools themselves shall be used where feasible; this could achieve a reduction of 5 dB. Quieter procedures, such as use of drills rather than impact tools, shall be used whenever feasible.	SDG&E and its contractors to implement measure as defined	CPUC PM to review and approve. CPUC mitigation monitor to inspect compliance	14 days prior to construction activities

TABLE 5-1 (CONTINUED)
MITIGATION MONITORING, REPORTING, AND COMPLIANCE PROGRAM FOR THE SDG&E SAN MARCOS TO ESCONDIDO TL6975 69KV PROJECT

Environmental Impact	Applicant Proposed Measures (APMs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
Noise (cont.)				
Construction Noise *(cont.)*	• When construction activities that could potentially exceed 75 dBA are conducted, construction equipment and trucks shall be equipped with enhanced noise control measures (where feasible and reasonably available). Enhanced noise control measures shall be identified in the Plan and could include, but are not limited to, improved exhaust mufflers and intake silencers, engine enclosures, noise shields or shrouds, etc. • When construction activities that could potentially exceed 75 dBA are conducted, noise barriers such as noise shields, barriers, blankets, or enclosures shall be used, where feasible, adjacent to or around noisy construction equipment. Noise control shields/barriers/blankets shall be made featuring weather-protected, sound-absorptive material on the construction-activity side of the noise shield/barrier/blanket. The noise barrier must be installed in a location that completely blocks line-of-sight between the construction noise source (e.g., generator, backhoe) and sensitive receptors located within 100 feet of the noise source. • Stationary construction noise sources shall be located as far from adjacent receptors as possible. They shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or other measures to the extent this does not interfere with construction. ***Notification and Correction*** • Distribute to the potentially affected residences within 100 feet of Project construction an informational pamphlet, and post signs at conspicuous publicly accessible places at each construction site, that indicate the hours of construction work and applicable noise level limits and provide a "hotline" telephone number, which shall be attended during active construction working hours and record messages outside of working hours, for use by the public to register complaints. SDG&E shall identify whether posted hours and/or the 75 dBA L_{eq} threshold have been exceeded, take action to keep to posted hours and/or reduce noise levels below 75 dBA, and notify CPUC within 24 hours. With regard to any noise complaints received citing project construction, SDG&E shall ensure that all complaints received during or outside of working hours shall be logged noting date, time, complainant's name, nature of complaint, and any corrective action taken, and shall submit such information to the CPUC Project Manager within 48 hours of receiving the complaint. • For construction activities that involve a helicopter (e.g., sock line installation, movement of materials), at least one week prior to the start of such activity, additional notice shall be issued or delivered [by a means which provides proof of delivery] by SDG&E and/or its contractor to sensitive receptors within 300 feet of planned helicopter activity. This notice shall include the estimated date and time of the proposed work, as well as the estimated duration of the work, both in terms of overall duration per segment and duration per pole location. ***Relocation*** • The Plan shall provide for temporary relocation of residents in the event that the Plan or the noise monitoring program identifies the potential for construction noise to exceed 75 dBA Leq within 100 feet of such receptors.			

TABLE 5-1 (CONTINUED)
MITIGATION MONITORING, REPORTING, AND COMPLIANCE PROGRAM FOR THE SDG&E SAN MARCOS TO ESCONDIDO TL6975 69KV PROJECT

Environmental Impact	Applicant Proposed Measures (APMs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
Noise (cont.)				
Blasting	**Mitigation Measure NOI-2: Blasting Plan.** Prior to conducting any blasting activities, SDG&E shall develop a Blasting Plan in coordination with an acoustical analyst, geotechnical engineer, and construction contractor. The Plan shall be submitted to the CPUC at least 14 days prior to the commencement of construction activities for review and approval to ensure that all components of this measure have been included and all required reviews, signatures, and permits obtained. The plan shall include a current/valid copy of the Explosives Permit issued by the San Diego County Sheriff's Office, as well as documentation that all local blasting requirements have been adhered to. The Blasting Plan shall include at a minimum the following measures: • Methods of matting or covering of blast area to prevent excessive air blast pressure. • Description of air blast monitoring program. • If necessary, SDG&E and/or its contractors shall use portable noise barriers between the source and affected occupied properties to reduce excessive noise impacts. • Blasting shall be limited to between the hours of 7:00 a.m. and 7:00 p.m. daily. • Blasting notification procedures, lead times, and list of those notified. Public notification to potentially affected sensitive receptors describing the expected extent and duration of the blasting. • Verification that explosives are not being proposed for use within 300 feet of the boundary of any occupied parcels zoned for residential. In the event that blasting activities are proposed within this distance, SDG&E will provide verification to the CPUC that residences affected by noise are notified of the date and time of blasting and offered temporary relocation assistance.	SDG&E and its contractors to implement measure as defined	CPUC PM to review and approve. CPUC mitigation monitor to inspect compliance	14 days prior to construction activities
Vibrations	**Mitigation Measure NOI-3: Vibration Reduction Plan.** Prior to any blasting construction, the applicant shall develop a Vibration Reduction Plan in coordination with an acoustical analyst, geotechnical engineer, and construction contractor, and submit the Plan to the CPUC for approval at least 14 days prior to any proposed blasting. The Vibration Reduction Plan shall include vibration reduction measures to ensure that surrounding buildings will be exposed to less than 0.2 PPV to prevent building damage. At a minimum, the plan shall consider the following measures: • Evidence of licensing, experience, and qualifications of blasting contractors. • The Plan shall establish a vibration limit of 0.2 PPV at nearby structures in order to protect structures from blasting activities and identify specific locations for monitoring. A pre-blast survey shall be conducted of any potentially affected structures. • The Plan shall identify the appropriate size of the explosive charge to ensure that a vibration level of 0.2 PPV is not exceeded at nearby structures. • Impacted property owners shall be notified at least 48 hours prior to the visual inspections.	SDG&E and its contractors to implement measure as defined	CPUC PM to review and approve. CPUC mitigation monitor to inspect compliance	14 days prior to any blasting activities

TABLE 5-1 (CONTINUED)
MITIGATION MONITORING, REPORTING, AND COMPLIANCE PROGRAM FOR THE SDG&E SAN MARCOS TO ESCONDIDO TL6975 69KV PROJECT

Environmental Impact	Applicant Proposed Measures (APMs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
Noise (cont.)				
Vibrations *(cont.)*	• Post-construction inspection of structures shall be performed to identify (and repair if necessary) any damage from blasting vibrations. Any damage shall be documented by photograph, video, etc. This documentation shall be reviewed with the individual property owners and SDG&E shall arrange and fund any needed repairs. Documentation of these efforts shall be provided to the CPUC.			
Population and Housing				
	No mitigation required.			
Public Services				
Fire Hazards	**Mitigation Measure WIL-1: Fire Safety,** described in *Wildfire* below.	SDG&E and its contractors to implement measure as defined	CPUC PM to review and approve. CPUC mitigation monitor to inspect compliance	60 days prior to construction activities
Recreation				
Temporary Recreation Effects	**APM PS-1:** SDG&E will provide the public with advance notification of construction activities. Concerns related to dust, noise, and access restrictions with construction activities will be addressed within this notification.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to confirm compliance	Prior to and during construction
	APM PS-2: All construction activities will be coordinated with the property owner or authorized agent for each affected park, trail, or recreational facility prior to construction in these areas.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to inspect compliance	Prior to construction
	APM PS-3: As needed, signs will be posted directing vehicles to alternative park access and parking, if available, in the event construction temporarily affects parking near trailheads.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to confirm compliance	Prior to and during construction
	APM PS-4: All parks, trails, and recreational facilities that are physically impacted during construction activities and are not directly associated with the new permanent facilities, will be returned to an approximate pre-construction state, while still allowing for SDG&E to safely operate and maintain the facilities, following the completion of the Project. SDG&E will replace or repair any damaged or removed public equipment, facilities, and infrastructure in a timely manner.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to confirm compliance	Following construction
	No CPUC-recommend mitigation measures apply.			

TABLE 5-1 (CONTINUED)
MITIGATION MONITORING, REPORTING, AND COMPLIANCE PROGRAM FOR THE SDG&E SAN MARCOS TO ESCONDIDO TL6975 69KV PROJECT

Environmental Impact	Applicant Proposed Measures (APMs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
Transportation and Traffic				
Road Closures and Transit Services	**APM TRA-1:** If construction requires lane closures, traffic delays, or other encroachment of construction activities within public travelways, the Applicant will adhere to local traffic control regulations and establish a traffic control plan as needed to comply with local ordinances. Traffic control plans will describe signage, flaggers, or other controls to be used to regulate traffic where necessary and to maintain a safe transportation corridor during construction.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to confirm compliance	Prior to and during construction activities
	APM TRA-2: The Applicant will coordinate with local emergency response agencies during construction within existing public roadways to allow safe passage and access by emergency vehicles and equipment.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to confirm compliance	During construction
	Mitigation Measure TRA-1: Coordination with North County Transit District (NCTD). SDG&E and its contractor shall: • Minimize interruptions to transit services and facilities. In the event that a temporary removal or relocation of a bus stop is necessary, coordination with NCTD shall occur to ensure that any such action is consistent with the transit operator's needs. • The applicant shall coordinate with NCTD at least 30 days in advance of right-of-way construction work to ensure that any such construction activities are consistent with maintaining the transit services' operations.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to inspect compliance	30 days prior to construction activities
Tribal Cultural Resources				
Archaeological and Historical Resources	**Mitigation Measure CUL-1 through CUL-4,** described in *Cultural Resources*, above.			
Utilities and Service Systems				
Construction and Demolition Debris	**Mitigation Measure US-1: Construction and Demolition Debris Recycling Ordinances.** SDG&E and its contractors shall recycle and/or reuse 90 percent of inert materials and 70 percent of all other materials, as well as 100 percent of trees, stumps, rocks, and other vegetation. In order to document and track such diversions, the applicant shall provide the following: • Prior to construction, the Applicant shall provide a preliminary Construction and Demolition Debris Register (Preliminary Debris Register) that lists all anticipated construction and demolition solid waste streams (by weight) along with how the project will dispose/divert each waste. The Preliminary Debris Register shall also list the anticipated destination(s) (i.e., location or facility) for each waste stream. The Preliminary Register shall document how the project shall achieve the minimum waste diversion percentages. • During construction activities, the Applicant shall keep records (e.g., a log) on site documenting the disposal and/or diversion of all construction and demolition debris that leaves the project site. The Applicant shall also keep copies of all corresponding receipts or similar documentation from solid waste facility, recycling center, green waste facility, or other permitted facility.	SDG&E and its contractors to implement measure as defined	CPUC mitigation monitor to inspect compliance	Prior, during, and following construction

TABLE 5-1 (CONTINUED)
MITIGATION MONITORING, REPORTING, AND COMPLIANCE PROGRAM FOR THE SDG&E SAN MARCOS TO ESCONDIDO TL6975 69KV PROJECT

Environmental Impact	Applicant Proposed Measures (APMs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
Utilities and Service Systems (cont.)				
Construction and Demolition Debris *(cont.)*	• During construction activities, the Applicant shall provide updates for solid waste diversion to the CPUC as part of the Quarterly Project Status Reports required by the Mitigation Monitoring, Reporting, and Compliance Program (MMRCP). • Following the completion of construction activities, the Applicant shall provide a Final Debris Register that documents the final construction and demolition debris totals, destinations, and diversion percentages. The Final Debris Register shall document the Project's final compliance with the minimum diversion percentages.			
Wildfire				
Wildfire and Fire Hazards	**Mitigation Measure WIL-1: Fire Safety.** SDG&E and/or its contractors shall prepare and implement a Final Project-specific Construction Fire Prevention Plan (CFPP) to ensure the health and safety of construction workers and the public from fire-related hazards. The Final Project-Specific Construction Fire Prevention Plan shall include the provisions in the TL 6975 Construction Fire Prevention Plan provided in Appendix 4.8-B of the Proponent's Environmental Assessment (SDG&E, 2017b), as well as the requirements listed below. Prior to construction, SDG&E shall contact and consult with the San Diego Unit of CAL FIRE, the San Diego County Fire Authority, and the fire departments of the cities of Carlsbad, Escondido, San Marcos, and Vista to determine the appropriate amounts of fire equipment to be carried on the vehicles and appropriate prevention measures to be taken. SDG&E shall submit verification of its consultation with the appropriate fire departments to the CPUC Project Manager. SDG&E shall submit the CFPP to the CPUC Project Manager for approval 60 days prior to commencement of construction activities and shall make the approved Final CFPP available to all construction crew members prior to construction of the Project. The Final CFPP shall list fire safety measures including fire prevention and extinguishment procedures, as well as specific emergency response and evacuation measures that would be followed during emergency situations; examples are listed below. The Final CFPP also shall provide fire-related rules for smoking, storage and parking areas, usage of spark arrestors on construction equipment, and fire-suppression tools and equipment. The Final CFPP shall include or require, but not be limited to, the following: • SDG&E and/or its contractors shall have water tanks, water trucks, or portable water backpacks (where space or access for a water truck or water tank is limited) sited/available in the study area for fire protection. • All construction vehicles shall have fire suppression equipment. • SDG&E shall ensure that all construction workers receive training on the proper use of fire-fighting equipment and procedures to be followed in the event of a fire. • As construction may occur simultaneously at several locations, each construction site shall be equipped with fire extinguishers and fire-fighting equipment sufficient to extinguish small fires. • SDG&E shall instruct construction personnel to park vehicles within roads, road shoulders, graveled areas, and/or cleared areas (i.e., away from dry vegetation) wherever such surfaces are present at the construction site.	SDG&E and its contractors to implement measure as defined	CPUC PM to review and approve. CPUC mitigation monitor to inspect compliance	60 days prior to construction activities

TABLE 5-1 (CONTINUED)
MITIGATION MONITORING, REPORTING, AND COMPLIANCE PROGRAM FOR THE SDG&E SAN MARCOS TO ESCONDIDO TL6975 69KV PROJECT

Environmental Impact	Applicant Proposed Measures (APMs) and Mitigation Measures (MMs) Identified in the IS/MND	Implementing Actions	Monitoring/ Reporting Requirements	Timing
Wildfire (cont.)				
Wildfire and Fire Hazards *(cont.)*	• SDG&E and its contractor shall cease work during Red Flag Warning events in areas where vegetation would be susceptible to accidental ignition by Project activities (such as welding or use of equipment that could create a spark). • At each construction site, after construction has been completed for the day, the project contractor and/or the SDG&E Contract Administrator will perform visual inspections to ensure that all ignition risks are minimized or eliminated before leaving the work site. • Successful implementation of Mitigation Measure WIL-1: Fire Safety would be demonstrated by the development of a Final CFPP in consultation with local fire authorities which documented and submitted to the CPUC for final approval. Additionally, successful implementation of Mitigation Measure WIL-1 would require that SDG&E and its contractor comply with all components of the Final CFPP, that ignition from project construction activities is promptly reported to the fire department(s) with jurisdiction, and that when it is safe to do so, any project-caused ignition is suppressed immediately.			